DRAFT ENVIRONMENTAL IMPACT STATEMENT

Elwood Orchard
Northeast Corner of Jericho Turnpike and Manor Road, Elwood

Town of Huntington
Suffolk County, NY

PREPARED FOR

Syndicated Ventures, LLC
536 Middle Neck Road
Great Neck, NY 11023

PREPARED BY

100 Motor Parkway, Suite 135
Hauppauge, NY 11788

November 2015

DRAFT ENVIRONMENTAL IMPACT STATEMENT
ELWOOD ORCHARD
NORTHEAST CORNER OF JERICHO TURNPIKE AND MANOR ROAD
ELWOOD, TOWN OF HUNTINGTON
SUFFOLK COUNTY, NEW YORK

PROJECT LOCATION: 56.01±-acre parcel situated at the northeast corner of Jericho Turnpike and Manor Road, Elwood, Town of Huntington, Suffolk County, New York

TAX MAP NUMBERS: District 0400, Section 209, Block 2, Lots 3, 4.1, and 5.6

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Executive Summary

Introduction

This document is a Draft Environmental Impact Statement (DEIS) prepared in accordance with Article 8 of the New York State Environmental Conservation Law (the New York State Environmental Quality Review Act [SEQRA]) and the implementing regulations promulgated in 6 New York Code of Rules and Regulations (NYCRR) Part 617 by the New York State Department of Environmental Conservation (NYSDEC). This DEIS evaluates the potential environmental impacts from the construction of a commercial center (the proposed action, or) Elwood Orchard on approximately 56.01 acres located on the north side of Jericho Turnpike, between Manor Lane and Warner Road, in the hamlet of Elwood, Town of Huntington (the Town), Suffolk County, New York (the subject property or project site). The subject property is designated as Suffolk County Tax Map Parcel No. 400-209-2-3, 4.1 and 5.6.

This DEIS has been prepared to evaluate the application of Syndicated Ventures, LLC, which includes a subdivision of the 56.01±-acre subject property, rezoning of a 49.28±-acre portion of the subject property to C-5 (Planned Shopping Center) Zoning District from its current R-40 (Residential) and C-6 (General Business) Zoning Districts, as well as site plan approval for a 486,000-square-foot (sf), mixed-use commercial development on the subject property. Additionally, the proposed action includes an amendment to the Comprehensive Plan of the Town of Huntington such that the subject property (specifically, the westernmost 49.28±-acre portion) is identified for rezoning to C-5 and recommended for development with a high-quality, mixed-use commercial development in accordance with said district. The remaining 6.73± acres will be subdivided from the overall property, and will retain its existing R-40 zoning and single-family residential use.

This *Executive Summary* is designed solely to provide an overview of the proposed action, a brief summary of the potential adverse impacts identified and mitigation

measures proposed, as well as, alternatives considered. Review of the *Executive Summary* is not a substitute for the full evaluation of the proposed action performed in Sections 2.0 through 7.0 of this DEIS.

Existing Site Conditions

The subject property has approximately 2,807 feet of frontage along the north side of Jericho Turnpike and approximately 667 feet of frontage on the east side of Manor Road. The majority of the subject property is currently undeveloped and vacant. The north-central and western portions of the subject property (along Manor Road) are generally wooded, and contain areas of steep slopes. The south-central portion of the subject property had previously been mined for sand and now consists of barren sandy slopes with some vegetation.

The southwestern portion of the subject property, at the intersection of Jericho Turnpike and Manor Road contains a 7,535-sf retail strip center in a single structure consisting of four storefronts (i.e., a nail salon, restaurant, laundromat, and a vacant space), and paved areas that can accommodate parking for approximately 12 cars. On this portion of the subject property there is no landscaping. The southeastern portion of the subject property contains a 3,095±-square-foot (sf) single-family residence surrounded by open fields, wooded areas, and other vegetation.

Project Description

General Description of the Proposed Action

The proposed action consists of the rezoning of 49.28 acres of the 56.01-acre subject property to the C-5 District from its current R-40 and C-6 Districts, as well as other approvals (e.g., subdivision, comprehensive plan amendment), and the construction of a high-quality, mixed-use commercial center containing 486,000 sf of retail, office, supermarket, restaurant, and fitness center uses. Surface parking, and landscaping, are also proposed. The proposed action also includes a 15,000±-sf space to be utilized by the Elwood Public Library. The easternmost 6.73 acres would retain the current R-40 zoning and use as a single-family residence.

Proposed Rezoning

The proposed action includes rezoning portions of the subject property to C-5 from R-40 and C-6. As stated in §198-26 of the Town of Huntington Zoning Code, the purpose of the C-5 (Planned Shopping Center) District is to:

…provide for retail shopping facilities composed principally of groups of retail and service establishments of integrated design, intended to serve community-wide or regional needs as well as those of local neighborhoods.

The primary goal of the requested rezoning is to apply the C-5 District to portions of the subject property in order to provide a visually appealing and integrated development at a scale that can serve the community, as well as the broader region. By doing so, valuable economic development opportunities will be provided for the Town, including tax revenues and jobs.

Comprehensive Plan Amendment

As part of the proposed action, an amendment to the Town of Huntington Comprehensive Plan is proposed such that the subject property (specifically, the westernmost 49.28±-acre portion) is identified for rezoning to C-5 and recommended for development with a high-quality, mixed-use commercial development in accordance with said district. A complete Planning and Zoning Analysis has been prepared to consider this Comprehensive Plan Amendment.

General Layout

As indicated on the preliminary site plan prepared by Nelson & Pope (N&P), development on the site will be oriented in an east-west direction, parallel to Jericho Turnpike. This alignment will maximize the visibility of the developed area for drivers approaching and/or passing the site, for the convenience and safety of patrons accessing the proposed development.

The single, larger retail structure will be the dominant visual feature on the site. It will occupy the rear (north side) of the developed area, with steep, vegetated slopes rising behind it. In the forefront of the site will be five smaller standalone structures, which will be widely spaced so that views of the main structure are not impaired. Four of the five smaller retail buildings will be one-story, and the one farthest west will be two-stories. An attractive community entrance sign with landscaping and spotlighting will be placed at the development's entrance on Jericho Turnpike.

The proposed action has been configured to preferentially occupy the lower slopes in the site's southern frontage, to preserve the steep slope area farther to the north. In general, it is expected that the proposed action will re-grade the lower portion of the site to create a "bench" that slopes downward gently to the south (toward Jericho Turnpike), where the majority of the drainage system will be located – designed in conformance with all applicable Town requirements, and sized to exceed the minimum capacity required.

Site Access

The subject property has frontage on two roadways: Jericho Turnpike and Manor Road. As the Applicant seeks to minimize potential traffic impacts on the adjacent local residential streets, the proposed action has been designed with its three primary vehicle access points oriented onto Jericho Turnpike, with only one, secondary access onto Manor Road. In this way, traffic to the site will be preferentially directed to use Jericho Turnpike, which is a major east-west regional artery that has significantly more capacity than Manor Road.

The Jericho Turnpike access points will consist of (described in order from east to west) one right in/right out driveway (to be controlled by a "STOP" sign for existing movements); a new, signalized full movement driveway; and a full movement driveway opposite Old Country Road (this intersection is currently signalized). The single Manor Road access will be a full-movement driveway, to be controlled by a STOP sign for exiting movements.

Note that the existing vehicle access serving the residence at the easternmost portion of the subject property will remain undisturbed, and will not be connected to or provide access in any way to the proposed mixed-use development.

Parking

Parking calculations for the proposed action are presented below.

Required and Proposed Parking

Component (Yield)	Parking Space Rate (per Town Code)	Minimum Required Spaces	Parking Spaces Provided
Retail Space (180,680 sf)	1 space/200 sf	903	2,249[1]
Fitness Center (1,800 patrons)	1 space/5 patrons	360	
Library (15,000 sf)	10 spaces + 1 space/300 sf above 2,000 sf[2]	53	
Restaurant (17,700 sf)	1 space/200 sf	89	
Supermarket (42,500 sf)	1 space/200 sf	213	
Office (129,800 sf)	1 space/250 sf	519	
Other a Management Office (10,700 sf)	1 space/250 sf	43	
TOTALS	---	2,180	

Notes: [1] Includes 545 landbanked spaces.
[2] For the 15,000 sf library, the calculation would be 10 spaces + 43 spaces (1 space per 300 sf [13,000 sf] above 2,000 sf).

As can be seen in Table 1, per Town Code § 198-47, a total of 2,180 parking spaces are required for the proposed action. The preliminary site plan (see Figure 3) shows that

on-site parking for 2,249 cars will be provided, of which 545 spaces will be landbanked.

Landscaping, Lighting, and Open Space

Landscaping

An important element of the proposed action is to provide an attractive, visually-pleasing mixed-use development. In general, the landscaping will be distributed: 1) on the islands within the parking areas, 2) along the buildings, and 3) between the buildings and site boundaries. The species chosen will be non-invasive, and native to Long Island or otherwise compatible with regional climatic conditions. Whatever combination of vegetation types is ultimately chosen, all types of landscape vegetation will be used to provide an attractive aesthetic transition between the natural vegetation on adjacent properties and developed areas of the subject property.

Lighting

In general, illumination will not extend beyond the property boundaries and diffuse lighting will not occur. The proposed action will illuminate internal roadways, parking spaces, sidewalks, and building exteriors. Lighting will be typical for a quality mixed-use facility with regards to locations, pole heights, and type and power of fixtures and will conform to the applicable requirements of Town Zoning Code Chapter 143 (Outdoor Lighting).

Open Space

As required by Article X, Town Zoning Code Chapter 198 (Steep Slopes Conservation Law), at a minimum, an estimated 7.81 acres of steep slopes in the subject property's north-central and western portions must be preserved in an undisturbed condition. In conformance with this requirement, the proposed action will preserve a total of 7.85 acres of these areas via a covenant (to run with the land) to be filed with the Suffolk County Clerk.

Purpose, Benefit, and Need

Site Application History

In 2004, the westerly 35.27 acres of the subject property were the subject of an application known as "Orchard Park," which consisted of a request to rezone that portion of the property and develop it with:

- 192,730 sf of retail
- 14,960 sf of office

- Eight-screen/1,500-seat movie theater
- 7,500 sf day care
- 7,500 sf fitness center
- 65,000 sf mini-storage
- 360 rental apartment units

The Town Board decided not to entertain that proposal.

Purpose, Benefit, and Need

The purpose of the proposed action is to develop a high quality, mixed-use development that will promote economic development along the Jericho Turnpike corridor, and the Town of Huntington as a whole. The subject property's location along Jericho Turnpike, connecting to Route 110, the Sunken Meadow Parkway, and the Northern State Parkway, provides easy access to the broader region and sits at the eastern end of the commercial portions of this part of Jericho Turnpike, which makes it a prime location for a mixed-use development, as a transition between uses.

The proposed action will provide economic development opportunities, not only for the Town, but for Long Island in general. As such, the proposed action was formulated as a private developer response to a need for new tax revenue by providing high-quality retail, office, and service space in a mixed-use development that will help strengthen and complement the other commercial sites along the Jericho Turnpike corridor. In addition, the proposed action is anticipated to generate approximately 750 construction jobs and approximately 950 permanent jobs, which will strengthen the local and regional economy. In this way, its purpose and benefits extend beyond site development, to the greater region.

The proposed action will be a local and regional economic development project that will increase retail and commercial opportunities and in turn, increase in tax revenues, all without generating any additional schoolchildren. As presented in Section3.8, the proposed action is expected to generate approximately $4,069,162 in total tax revenues per year, including $3,036,066 for the Elwood Union Free School District (UFSD), as well as additional tax revenues for other special district jurisdictions.

A proposed 15,000±-sf space for the Elwood Public Library would provide a benefit and service to the community, increasing its present 9,000±-sf space, and would be an amenity as a public space. The retail, office, and other uses on the site will bring a more active presence to this portion of the Jericho Turnpike corridor and the Elwood area. Further, the proposed action will help to upgrade the appearance of the Jericho Turnpike corridor, notably by replacing the existing sand mounds on-site with a well-designed, attractively landscaped, high-quality mixed-use development—something that is called for along Jericho Turnpike, where many portions are devoted to strip retail development at risk of obsolescence.

Construction

Construction of the proposed action is anticipated to occur in one, 18-month phase, and will begin as soon as practicable following the completion of the rezoning and site plan approval processes and building permit issuance. While the precise construction schedule cannot be determined at this time, upon securing site plan approval and a building permit(s), it is anticipated that construction will commence on the two outermost standalone buildings simultaneously with that of the main structure. The main building will be constructed from east to west, followed by the two-story westerly and the easterly "end cap" standalone structures, concluded by the remaining three standalone structures. Construction activities will not occur outside of weekday daytime hours (7 AM to 6 PM) per Chapter 141 of the Town Code, such that construction-related noise impacts would be minimized.

Required Permits and Approvals

The permits and approvals that are required for implementation of the proposed action are presented below:

Permits and Approvals Required

Applicable Board/Agency	Permit/Approval Type
Town Board	Change of Zone(A)
	Amendment to Town of Huntington Comprehensive Plan
Town Zoning Board of Appeals	Variance (Sec. 198-10(G) &198-70(B); more than one building on lot)
Town Planning Board	
	Change of Zone Review
	Site Plan
	Lot Line Change and Subdivision
Town Building Department	Building Permits (incl. sign permits)
	239f Review (to Suffolk County Department of Public Works [SCDPW])
Town Engineering Department	Roadwork Permit
Town Fire Marshal	Site Plan Review
Suffolk County Department of Health Services	Article 6 (Wastewater Disposal System Design) and Article 4 (Water Supply System Design) permits
Suffolk County Planning Commission	239-m Referral
GWD	Water Supply and Connection Approvals
New York State Department of Transportation (NYSDOT)	Highway Work Permit
NYSDEC	SPDES General Permit for Stormwater (GP-0-15-002)

Note (A) – Amendment of the Town of Huntington Comprehensive Plan by the Town Board is also sought in connection with the proposed action.

Anticipated Impacts

Land Use

As the property where the existing single-family residence exists would be subdivided from the overall property and would retain its existing R-40 zoning and single-family residential use, this analysis focuses on the 49.28±-acre portion of the subject property proposed to be rezoned to C-5 (Planned Shopping Center) Zoning District from its current R-40 (Residential) and C-6 (General Business) Zoning Districts.

The proposed action will change the land use of the subject property from retail and vacant to mixed-use (e.g., retail, restaurant, supermarket, office, fitness center, library). The subject property is located within the mixed-use, largely commercial Jericho Turnpike corridor. Specifically, the area immediately adjacent to the subject property, to the southwest, contains a mix of retail and service uses, while just beyond Manor Road to the west, fronting along Jericho Turnpike, are numerous commercial uses including retail, office, automobile uses, fast food restaurants, etc., with single-family residential uses farther off of the corridor. Further, along the Jericho Turnpike corridor, to both the east and west of the subject property, there are no fewer than eight shopping centers identified that range from neighborhood centers of 52,950 square feet in Huntington Station to the largest, a regional shopping center of 345,000 s.f. in Commack. Low vacancy rates in these existing shopping centers indicates a relatively strong market demand for retail and commercial services along the corridor. The provision of an additional mix of uses, including the proposed retail, restaurant, and supermarket uses on the subject property will be consistent with this pattern and will begin to fill in the commercial gap between Manor Road and Warner Road.

The proposed action will introduce a new land use to all but the southwestern portion of the subject property, which is currently developed with retail uses. The proposed action would establish a mix of commercial uses, consistent with the mixed-use nature of Jericho Turnpike commercial corridor that extends a greater distance from the roadway (variable, typically between 680± and 730± feet) than several other developed commercial uses along the corridor. However, commercial properties with similar and greater depths are identifiable throughout the area.

Although the proposed mix of uses will not continue the patterns of the adjacent areas to the north, east, and south, which are primarily residential or open space uses, the topography of the subject property and the design and landscaping of the proposed action will minimize any impacts resulting from the change in land use

from vacant and retail. In addition, Berkeley Jackson County Park, as well as the proposed vegetated setback areas, will also serve as a buffer between the proposed mix of commercial uses and existing residential developments.

Zoning

As stated, the proposed action involves rezoning the central and western 49.28± acres from its current mix of C-6 and R-40 to the C-5 District. The eastern 6.73 acres zoned R-40 and occupied by a single-family residence, will remain unchanged and will be subdivided from the remaining property.

Appropriateness of the C-5 District for the Subject property

§ 198-26 of the Town Code states regarding the C-5 District:

> *The regulations set forth in this section or set forth elsewhere and referring to this section are established to provide for retail shopping facilities composed principally of groups of retail and service establishments of integrated design, intended to serve community-wide or regional needs as well as those of local neighborhoods.*

As can be seen from its intent, the C-5 District has been designed by the Town to provide for the type of land uses represented by the proposed mixed-use development (i.e., a mix of retail, restaurant, supermarket, office, fitness center, and library within an integrated design that would serve the existing community and local neighborhoods).

The existing zoning of the subject property is less desirable than the C-5 District as Jericho Turnpike is a high volume commercial corridor and the current R-40 District zoning, allowing single-family residential uses, would be in conflict with the uses and zoning pattern found along the corridor to the east and west of the subject property. In addition, as noted in Horizons 2020, the C-6 District is a general business district that does not promote high-quality development whereas the C-5 District promotes architectural and design quality that would be achieved by the proposed project. Moreover, rezoning the subject property from its existing zoning to the C-5 District is justified based on several aspects: 1) the size of the site; 2) the steep slopes present on-site; and 3) its location along Jericho Turnpike.

The 6.73-acre portion of the subject property to remain within the R-40 zone would be contiguous to nearly 50 additional acres of property to the east that are also zoned R-40. The balance of the large R-40 district that is developed with various residential and agricultural uses extends to the north, east, south and northwest.

In sum, the proposed action is consistent with local zoning patterns and will not have a significant adverse impact on local zoning.

Compliance with the C-5 Zoning District

The proposed uses—retail, office, supermarket, restaurant, fitness center, library, parking—are all permitted and/or accessory uses within the C-5 District and the proposed design would be in conformance with all applicable lot and bulk requirements of the C-5 District, as set forth below.

C-5 District Requirements

Zoning Requirements	Required/Allowed	Proposed
Minimum Lot Area	2 acres	49.28 acres
Maximum Building Coverage	25%	13%
Minimum Yards		
Front	50 feet	85 feet
1 Side	35 feet	255 feet
1 Side (corner lot)	50 feet	90 feet
Rear	35 feet	250 feet
Maximum Height	2 stories/36 feet	2 stories

Pursuant to §198-70(B) of the Code of the Town of Huntington, "[i]n the case of commercial and industrial districts, there shall be only one (1) main building on a lot." A similar provision is set forth in §198-10(G), however, more than one main building may be permitted (by the Planning Board and after a public hearing) if, among other things, improved site design may be achieved by locating more than one building.

A total of six main buildings are proposed, arranged in a campus-type layout. This layout is intended to maximize the benefits of shared parking among the uses on the site, and reduce overall pedestrian activity within parking areas, as parking is provided in proximity to each of the individual proposed uses. Additionally, this layout provides for improved vehicular access and site circulation, as compared with a design that provides separate ingress/egress onto the roadway for each proposed building (as may be the condition if separate lots were created). The proposed action includes three standalone buildings with less than 10,000 square feet, which requires a variance from the Zoning Board of Appeals.

Public Policy

Town of Huntington

Horizons 2020 consists of a vision statement, seven focus areas (or elements), a section on Geographic Focus Areas where future development can be concentrated, and an Implementation Plan to guide the Town in achieving their vision for 2020. The proposed action would comply with relevant goals of Horizons 2020 by the following:

- The proposed project, which will provide a high-quality mixed-commercial development, at an underutilized site, has been designed to be an aesthetically pleasing, mixed-used development that will complement and improve the character of the subject property and the Jericho Turnpike corridor through strategic building massing and location, landscaped islands, and native vegetation placed around the site.

- A library on site would help the local neighborhood and community achieve part of the vision for improved quality of life and access to community facilities stated in Horizons 2020.

- The Town's employment base would be improved by providing for a mix of short- and long-term employment opportunities including construction, retail, and professional positions.

- A sustainable stormwater infrastructure system would be installed, as part of the proposed project that includes distributed infiltration throughout the site to promote groundwater recharge. The proposed drainage system will utilize subsurface leaching pools distributed throughout the developed area of the subject property to take advantage of the site's natural topography.

- The Jericho Turnpike corridor would be revitalized in that the proposed project will improve site aesthetics, make beneficial use of an underutilized parcel, and provide a mix of high quality commercial uses along an existing commercial corridor that will serve the local surrounding neighborhoods and community while supporting economic vitality.

- The proposed action has been configured to occupy the lower slopes in the southern portion of the subject property to minimize the impact to the steep slope area farther to the north. The proposed development includes the clearing and grading of the subject property to create a "bench" that slopes downward gently to the south (toward Jericho Turnpike), where the majority of the drainage system will intercept and recharge stormwater runoff.

- Site disturbance will be minimized to the maximum extent practicable, including delineating tree-clearing limits, prior to construction to avoid inadvertent clearing. In addition to protecting 7.85 acres adjacent to Berkeley Jackson County Park as open space, the proposed project will not harm any of the Town's systems, fragile habitat or native plant or animal species.

- An in-ground irrigation system, one of the most efficient systems, will be installed, as this type of irrigation system minimizes evaporative loss to the greatest practicable degree. Water-conserving plumbing fixtures, mechanical systems, and rain sensors on irrigation systems will be utilized in construction, which will further minimize the volume of water required from the public water supply.

- The proposed project will minimize impacts to groundwater and surface water through a sustainable stormwater infrastructure system. The proposed drainage system will utilize subsurface leaching pools distributed throughout the proposed development to take advantage of the site's natural topography as well as the anticipated grading program.

- The proposed project will not harm any of the Town's systems, fragile habitat or native plant or animal species. In fact, some of the land that will be cleared for the proposed project largely consists of invasive species.

- The proposed project will create a high quality mixed-use development that is energy efficient and environmentally sustainable. It will utilize energy efficient design standards to minimize energy consumption at the site. In addition, the proposed project will meet the Town's Energy Code standards and the State of New York's Energy Conservation Construction Code.

- The proposed action would include the existing commercial and disturbed portions of the site within the proposed development area, and set aside 7.85 acres (12% of the subject property) as open space. This portion of the subject property will not only remain undeveloped and be protected in perpetuity, but it directly abuts Berkley Jackson County Park, a large, passive recreation site that is also undisturbed open space, thereby contributing to the network of greenways the Town is hoping to preserve.

- Lighting will be designed in accordance with the Town's new lighting ordinance. In addition, only "dark sky" compliant luminaries will be used. These fixtures will minimize the adverse impacts of viewing the nighttime sky onsite, as well as in the surrounding neighborhoods.

- The proposed project will be a local and regional economic development project that will increase retail and commercial opportunities and in turn, increase tax revenues, all without generating additional school-aged children or potentially increasing property taxes.

- The proposed project meets four of the five node criteria, set forth in Horizons 2020,including good north-south and east-west access from Manor Road and Jericho Turnpike, respectively; larger, deeper lots with minimal environmental constraints as portions of the subject property have been previously disturbed from prior sand mining and existing commercial development; compatibility with adjacent land uses as major commercial/mixed use activity centers are located to the east and west of the project site and with the exception of the project site and the residential and institutional (utility) uses to the south of the site, the entire Jericho Turnpike corridor is recognized as a major commercial/mixed use corridor; and redevelopment of previously developed properties due to prior on-site disturbance and development.

- The section of Jericho Turnpike where the project site is located is not identified as a major commercial/mixed use corridor, although a major commercial retail shopping center (Dix Hills Plaza), which comprises a supermarket, restaurants and other retail uses, is situated directly opposite the subject property to the south and southwest. Thus, the proposed project would conform to the uses that already primarily exist along the corridor and meets most of the criteria to be identified as an established commercial node along an already established commercial/mixed use corridor.

- The proposed project will act as an extension and infill of the commercial corridor and is consistent with the overall vision for Jericho Turnpike as a major commercial and mixed use corridor.

- The proposed project will increase retail and commercial opportunities available along a major commercial corridor identified by the Town and improve the economic viability, visual quality, and pedestrian character of a major automobile-oriented commercial corridor. The scale of the development is consistent with the uses along the Jericho Turnpike corridor and includes high-quality building design, distributed and native landscaping, attractive signage, improvements to site access and traffic flow, and provides goods and services to surrounding neighborhoods.

- The proposed project will help the Town accomplish its economic vitality goal by: 1) bringing additional employment opportunities, including service and office jobs, to help revitalize the Jericho Turnpike commercial corridor; 2) contributing to the area's retail base through a variety of stores and services, and 3) encouraging positive reinvestment in Jericho Turnpike. The proposed project will create 1,700 new jobs and offer a one-stop site containing goods and services for the surrounding neighborhoods, regional visitors and employees on-site. This diversity is a necessary element for a strong, sustainable economy in any community.

- The proposed access plan includes construction of a new traffic signal, as well as improvements to existing traffic signals.

- It is anticipated that the mix of uses within the Elwood Orchard will result in a significant level of combined trips to one site, rather than a number of individual trips to separate and distinct sites. Site design incorporates pedestrian walkways throughout which promote walkability within the center.

- When compared to other commercial development on Jericho Turnpike, the proposed number of driveways along this stretch of roadway is relatively small. Existing curb cuts at Jericho Turnpike and Manor Road, which are in close proximity to the signalized intersection, will be eliminated. In addition, all conflicting movements in and out of the site (left turns and through movements) on Jericho Turnpike will be made under the protection of an existing or proposed traffic signal.

- The subject property is an underutilized site with large barren and previously-disturbed areas, and containing an existing commercial (strip retail) use.

- The subject property has an enhanced lot depth and contains natural, wooded areas at the rear and side portions of the property. Such lot depth would allow for commercial development to be centered around the existing on-site commercial use and disturbed areas, while retaining natural buffer areas at the side and rear portions of the site.

- The subject property is adjacent to the Berkeley Jackson County Park on the north, which provides a significant natural buffer to residential neighborhoods that are present in surrounding areas. Together with natural, wooded areas that could be retained within the subject property, future commercial development could be buffered from surrounding non-commercial uses in a meaningful way.

- The rezoning and development of the subject property with mixed-use commercial center would not alter or adversely impact the established agricultural, wooded and buffered residential character of the remainder of the aforementioned break (continuing for a half-mile east to Warner Road).

Suffolk County

The proposed project is consistent with the relevant policies and goals established within *Framework for the Future, Suffolk County Comprehensive Plan 2035*.

- The proposed commercial center would conveniently locate a mix of uses on one property, located along Jericho Turnpike/NYS Route 25, a major east/west arterial that is served by both Suffolk County Transit and Huntington's HART system. As such, it could provide "one-stop" shopping opportunities, thereby reducing the number of vehicle trips and potential gas emissions.

- The proposed mixed-use commercial center would be expected to generate approximately 750 FTE, short term construction jobs, and approximately 950 FTE, permanent jobs upon completion of the proposed action.

Proposed Mitigation

No significant adverse impacts are expected to result from the proposed action with regard to surrounding land uses, zoning, and public policy. Regardless, a number of mitigation measures have been incorporated into the project design to enable greater cohesiveness between the proposed action and the land uses that surround it, especially along the Jericho Turnpike corridor. In particular, the provision of a mix of high quality uses, including retail, restaurant, supermarket, office, fitness center, and library on one location will integrate the proposed action with the existing mix of uses that characterize the Jericho Turnpike corridor. In addition, such mixed use will encourage the subject property to become a place, rather than a set of storefronts,

where individuals will be able to shop, eat, exercise, and work without having to utilize an automobile to access another location.

The design of the proposed action has taken into account the need for landscaping and site design so as to promote this cohesiveness. For example, vegetative species that will be utilized in the landscaping will be similar to other species that occur along the corridor. Similarly, the buildings will be setback to a depth of many of the other buildings along Jericho Turnpike.

Visual Resources and Community Character

Anticipated Impacts

The proposed action will be visible to observers to the south, when driving along Jericho Turnpike from both the east and west. This view will be of a mixed-use development, with buildings designed to incorporate high-quality architecture. The landscaping will result in open views of these buildings and the wooded areas to the north. For observers approaching the site from the northwest, when southbound on Manor Road, it is expected that the developed area will be partially visible, through the retained natural vegetation on the site's western portion. The topography of the area will, to a large extent, minimize the visual impact of the proposed development from most vantage points. In addition, the proposed development will retain some of the site's topography and vegetation in order to provide natural screening and buffering.

Buildings and Site Design

It is proposed that the subject property will contain six buildings: a two-story mixed use building on the northern portion of the site, fronted by five standalone buildings oriented in an east-west direction such that they will face Jericho Turnpike. The westernmost standalone building will be two stories, with the remaining four as one-story structures. The buildings will be setback from the roadway at approximately the same depth as many of the other buildings along Jericho Turnpike (i.e., 85± feet). This, in conjunction with the proposed landscaping, will result in open views of the proposed development and the wooded areas to the north.

The rear portions of the subject property will remain undeveloped and will continue to contain slopes, topography, vegetation, and tree coverage. The northern portion of the developed area on the site will contain a number of stepped retaining walls. Due to the commercial structure's height, and the significant setback of the retaining walls from the roadway, the building will effectively screen the wall, wholly or partially, from nearly all off-site vantage points. The wall along the west side of the building that decreases in elevation from north to south, would be visible from Jericho Turnpike.

Landscaping along the buildings and between the buildings and site boundaries will soften views and will include a diverse mix of trees and vegetation, which will be native to Long Island or those compatible to the regional climate. This landscaping will provide screening and a transition to the natural vegetation of the surrounding properties and the developed portions of the subject property.

There will be three new access points on Jericho Turnpike, with an additional access point on Manor Road essentially replacing the existing access point. The primary access will be at the center of the site along Jericho Turnpike and will contain an attractive community entrance sign with landscaping. The existing access point serving the residence on the eastern portion of the site will remain undisturbed.

The design and mix of uses serves to avoid the impression of traditional strip commercial shopping centers that characterize Jericho Turnpike. The proposed development will include traditional retail, restaurant, and supermarket development, among others, built to a tenant's brand image as amplified by local aesthetics, with well-landscaped surface parking areas and signage and façade design that incorporates corporate logos and color palettes.

Visibility of the Project from Surrounding Areas

The proposed action will improve visual conditions on the site by eliminating the existing sand mounds and unauthorized ATV use and will improve visual conditions in the Jericho Turnpike corridor by providing high-quality building and site design, coupled with attractive landscaping. Overall, based on the above, the proposed action is not expected to result in a significant adverse visual impact.

Proposed Mitigation

Although the proposed development will alter aesthetic resources on and off of the subject property, the proposed action is designed to mitigate any visual changes to the maximum extent practicable, by working the design and layout into the existing visual characteristics of the subject property, with enhanced plantings and landscaping within the site and at site edges.

Topography, Soils and Geology

Anticipated Impacts

Topography and Steep Slopes

All grading and development will occur on the central and western portions of the subject property; the eastern portions of the subject property will remain undisturbed and, therefore, no impacts to topography will occur due to development in this part of the subject property.

The proposed action has been configured to occupy the lower slopes in the southern portion of the subject property in order to minimize the impact to the steep slope area farther to the north. However, since the majority of the subject property is comprised of rolling topography, extensive grading will be required and steep slopes located in the southwestern quadrant and southern end of the property will be altered for building and parking lot construction. A portion of these slopes are unvegetated man-made features that are highly erodible and are visually unappealing. Development will stabilize these areas, thereby preventing further erosion of the property. In general, it is expected that the proposed action will clear and grade the subject property in order to create a "bench" that slopes downward gently to the south (toward Jericho Turnpike), where the majority of the drainage system will intercept and recharge stormwater runoff.

It is anticipated that a number of stepped retaining walls will be necessary north of the developed area, in order to reduce the amount of earthwork needed to provide proper grades for development, as well as to facilitate preservation of the steep slopes. In sum, as a result of the site design techniques, it is expected that topographic impacts will be minimal and will be minimized to a maximum extent practicable.

Soils

Soil Impacts

The design of the proposed action will provide significant slope stabilization features and grading design to address soil limitations related to slopes which affect sewage disposal, streets and parking lots and landscaping. Sandy surface layers which primarily affect landscaping and vegetation will be addressed through the introduction and use of drought resistant species and the relocation of on-site topsoil and/or import of adequate topsoil materials to promote moisture retention.

Among the soil types found on-site, only the MkB soils present severe limitations to sanitary disposal related to moderately slow permeability. MkB soils are present in a larger portion of the northeastern portion of the property and may impact the installation of on-site sanitary systems in this portion of the site. Impacts will be mitigated, however, by avoiding these soils to the greatest extent practicable, or by using adequate filter materials to enhance and promote efficient filtration and recharge. The design and installation of sanitary disposal systems will conform to SCDHS Article 6 (Wastewater Disposal System design) review and approval.

A majority of steep areas of the site will accommodate development and consist of unvegetated man-made slopes created during former sand removal activities. In their present state these slopes are highly erodible features and provide an unappealing vista to pedestrians and traffic along Jericho Turnpike. Development of the proposed action will either remove or stabilize these portions of the site though the installation

of buildings, grading, structural retaining measures, paved surfaces, and landscaping.

Grading and Excavation

Grading discussions are based on review of the topographic plan as compared with the proposed site design and the need to maintain suitable road and development grades. Grading for the proposed action is currently conceptual and will require a detailed engineering plan at the time of site plan review.

It is anticipated that a significant quantity of soil will be excavated within the site; the volume disturbed will depend on the final grading plan and site design. Due to the quantity of soil available from these operations, a portion of this material will be used to satisfy the need for any fill required in specific areas of the site. Nonetheless, it is anticipated that excess cut material will be exported from the site. If the excavated material is not acceptable as fill, it will be disposed of in an approved construction and demolition landfill, or as otherwise required pursuant to prevailing regulations; however, this is not expected given the quality of exposed soils on the site. The greatest area of cut required on the site is expected to be in the areas of the proposed building and parking lot. During its review of the proposed action, based on detailed engineering plans, the Town may require soil testing at portions of the subject property. As necessary, an approved Health and Safety Plan or other appropriate measures would be implemented at the site prior to any land disturbance associated with the proposed action.

It is anticipated that a number of stepped retaining walls will be necessary north of the developed area, in order to reduce the amount of earthwork needed to provide proper grades for development, as well as to facilitate preservation of the steep slopes. Details regarding the retaining walls will be finalized during preparation of the grading and drainage plans, as part of the site plan approval process.

Grading, site elevations, retaining structures, and overall site design will be subject to detailed site engineering, site plan and grading review. The proposed action will conform to applicable engineering standards through the design engineer and Town review. All created soil slopes will be 1:3 or less and will be stabilized using ground cover material. As a result, it is expected that topographic impacts will be minimized to the maximum extent practicable.

The grading will occur over a finite period of time and will involve the removal of soils from the site. Not more than 10 to 12 trucks over an eight-hour day will export material from the site to soil disposal or re-use locations by way of the state highways. Activity will be conducted within property boundaries and staging of loading operations will be on the interior of the site. A construction stabilized access will be utilized to prevent the tracking of flowing of sediment onto the public right-of-way and a water truck will be available to wet excessively dry soils.

Subsurface Geology

It is not anticipated that the geology of the subject property will present any limitations on development of the proposed action. The subject property is situated on the kame moraine deposits of the Ronkonkoma Ground Moraine, and, due to its surface elevation, thickness of the Upper Glacial aquifer ranges from 443 to 5,465 feet beneath the subject property. Excavation activities will occur within the soil strata and it is not anticipated that cut and/or fill will result in significant impacts related to or from subsurface geological features. Further, no blasting or ripping of bedrock is anticipated to occur as a result of the proposed action.

Proposed Mitigation

Erosion preventative measures will be implemented during the construction period and will include a combination of the following: groundcovers (vegetative or artificial), drainage diversions, soil traps, minimizing the area of soil exposed to erosive elements at one time, and minimizing the time span that soil is exposed to erosive elements. Soil removed during grading and from the excavation for the building foundations will be used as backfill (if it displays acceptable bearing capacity and leaching characteristic) to produce acceptable slopes for construction. Applicable Town standards and construction practices specified by the appropriate Town agencies will be followed. Excess acceptable material will be removed from the site by truck and sold. All unacceptable material will be removed and taken to an approved landfill for disposal.

To minimize the volume of material to be removed from the site, the Applicant proposes to re-use the excavated soil on-site, as fill, to the greatest extent practicable. Given the existing grades and the development program which involves retail and mixed-use development, the amount of cut will exceed the amount of fill, such that soil will need to be removed from the site as part of the grading program. It is estimated that between 650,000 and 750,000 cubic yards (CY) of net cut will result from site regrading. Truck activity will occur during normal daytime weekday work hours and will occur over a limited period of time.

Dust raised during grading operations will be minimized and controlled by the use of water sprays, truck cleaning stations at the construction exit, and implementation of any dust suppression systems specified by the appropriate Town agencies.

The proposed action represents construction activity on a site greater than one acre in size and, therefore, the Applicant will obtain a SPDES Stormwater/Construction permit from the NYSDEC under GP-0-15-002 requirements. A Stormwater Pollution Prevention Plan (SWPPP) will be prepared, as well as an Erosion Control Plan. In accordance with NYSDEC requirements, a Notice of Intent (NOI) will be filed more than 60 days prior to construction.

Anticipated Impacts

Surface Water and Wetlands

There are no surface water or wetland features presently on or adjacent to the subject property. In addition, no off-site surface water features or wetlands will be impacted by the construction of the proposed action. Therefore, no significant adverse impacts are anticipated as a result of the proposed action.

Floodplains

Since the subject property is not within any Special Flood Hazard Areas, no impacts to floodplains are anticipated as a result of the proposed action.

Groundwater

Impervious Surfaces

The proposed action will include a mix of retail, restaurant, office, and other commercial or service uses. As a result, the only impacts to groundwater resources underlying the site will result from sanitary discharge, naturally-fertilized, landscaped areas and recharge from impervious surface areas. Article 6 of the Suffolk County Sanitary Code allows up to 600 gpd/acre for sanitary flow in Groundwater Management Zone I, without sewage treatment. For the subject property, the maximum allowed sanitary flow under Article 6 is 33,606 gpd. It is assumed that the proposed action will consume this amount of water. The proposed action will utilize on-site septic systems to treat and recharge all wastewater generated, and such systems will comply with Article 6 of the SCSC.

Development of the site will result in an increase in impermeable surface area and, since all wastewater will be recharged on-site, groundwater recharge will increase from the existing 37.93 to 56.04 MGY. Due to the depth of groundwater and the rapid permeability of soils, it is not anticipated that this increase will result in a significant alteration in groundwater flow due to mounding in the area surrounding the subject property.

Groundwater Quality

Building materials are anticipated to be inert, and therefore, are not expected to have an adverse impact on groundwater quality at the site. Equipment stored on-site which will be utilized during clearing and construction activities will be required for

any land use on the site. Reputable contractors will be used and the construction company will be responsible to properly maintain and operate equipment and address any potential water quality threats pursuant to State laws. In addition, construction activities will occur over a limited time period and as a result no significant or long-term construction impacts to groundwater quality are anticipated.

The operation of the proposed action will not utilize any toxic/hazardous industrial chemicals or solvents. The only discharges anticipated to occur will be comprised of runoff from impervious surface areas and sanitary discharges from the proposed development's on-site sanitary systems, which will be designed and constructed in conformance with prevailing permitting requirements. This, combined with the significant depth to water underlying the site, is not anticipated to result in any discharges which will adversely impact groundwater quality underlying the site.

A total of 27.78 inches of stormwater are anticipated to be recharged annually on the site, which represents 75.4 percent of all recharge water generated on the property. However, based upon information presented in the NURP Study (see Section 3.4.1), this volume is not anticipated to contain significant concentrations of pollutants due to the following reasons:

- The study found that stormwater runoff concentrations of most of the inorganic chemical constituents for which analysis were performed were generally low and in most cases, fell within the permissible ranges

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

- The number of coliform and fecal streptococcal indicator bacteria in stormwater range from 10° MPN to 10^{10} MPN per acre per inch of precipitation

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

The depth to water underlying the site ranges from 112 to 216 feet below surface grade (bsg). This provides a large unsaturated zone through which recharge can percolate prior to reaching the water table and will result in the attenuation or filtration of any pollutants that it may possess. Therefore, the proposed action is in conformance with the applicable recommendations of the NURP Study in regard to the proposed stormwater recharge system.

<u>Water Balance and Nitrogen</u>

The water balance and concentration of nitrogen in recharge was calculated for the proposed action by NPV utilizing their SONIR computer model. The results indicate that a total of 56.04 MGY of water will be recharged on the site. This represents a 47.7

percent increase in recharge generated on the property, as compared with the existing recharge volume of 37.93 MGY. Of this anticipated recharge volume, stormwater will account for 75.4 percent, wastewater recharge for 21.9 percent and irrigation for 2.7 percent. This anticipated recharge volume represents 36.85 inches of water distributed annually over the 56.01-acre site.

The concentration of nitrates (as nitrogen) in this recharge is anticipated to be increased by the proposed commercial center, due primarily to the presence of nitrogen in wastewater. In addition, the predicted overall nitrogen concentration will be increased to 5.43 mg/l. This is less than the 10 mg/l nitrogen standard for drinking water and therefor is not expected to cause an adverse impact upon groundwater. Wastewater will account for 95.0 percent of nitrogen in the recharge on-site. In addition, other recharge sources which contribute to nitrogen concentrations include stormwater which will account for 0.1 percent, irrigation which will account for 0.3 percent and fertilization which will account for 4.6 percent.

The proposed action will utilize public water, to be supplied by the GWD via the existing 12-inch water main beneath Jericho Turnpike. It is anticipated that the total volume of potable water required will not adversely impact the ability of the GWD to serve the site or the public in the vicinity.

- The proposed action will generate approximately 33,606 gpd of sanitary and kitchen effluent which complies with the 600 gpd/acre effluent rate allowed for the site under Article 6 of the Suffolk County Sanitary Code. As a result, the proposed action will utilize conventional on-site sanitary systems for disposal of sanitary waste which will produce nitrogen concentrations of 5.43 mg/l. The anticipated concentration is less than the NYSDEC drinking water standard of 10 mg/l and therefore, the proposed action is not expected to result in significant adverse effects to groundwater quality with regard to nitrogen loading.

- SONIR computer model results for the proposed action indicate that a total of 56.04 MGY of water will be recharged on the site. This represents a 47.7 percent increase in recharge generated on the property, as compared with the existing recharge volume under existing site conditions.

- In conformance with the Town of Huntington Engineering and Subdivision requirements, all stormwater runoff generated on developed surfaces will be retained on-site, to be recharged to groundwater in a proposed catch basin and drywells.

- The proposed action will utilize public water, to be supplied by the GWD via an existing 12-inch main beneath Jericho Turnpike. The total potable water requirement of the proposed action, 33,606 gpd, is not anticipated to impact the ability of the GWD to serve the public.

Stormwater Management

The drywells installed for the retention of surface runoff from impermeable surface areas proposed for the site will promote groundwater recharge. The creation of impermeable surfaces will increase surface runoff, which will require the retention provided by the proposed facilities. The soils present at the site are of adequate quality to allow the efficient and rapid infiltration of run-off to the underlying groundwater system. The depth to water underlying the site ranges from 112 to 216 feet bsg and provides adequate depth for the recharge of groundwater resources.

In conformance with Town requirements, all stormwater runoff generated on the developed portion of the property will be retained and recharged in an on-site drainage system designed to accommodate three inches of stormwater. The proposed action's drainage system will utilize subsurface leaching pools distributed through the developed area, to take advantage of the site's natural topography as well as the anticipated degrading program.

The amount of runoff will be reduced through the installation of roadside catch basins to direct runoff to stormwater drywells, in accordance with best management practices identified in the NURP Study.

A total of 27.78 inches of stormwater are anticipated to be recharged annually on the site, which represents 75.4 percent of all recharge water generated on the property. This volume is not anticipated to contain significant concentrations of pollutants. Therefore, the proposed action is in conformance with the applicable recommendations of the NURP Study in regard to the proposed stormwater recharge system.

Proposed Mitigation

In order to mitigate any groundwater or groundwater quality impacts, water efficiency measures and reduced irrigation with native species will be integrated into the final site design and operation. The proposed action will adhere to the relevant recommendations of the 208 Study, NURP Study, Nonpoint Source Management Handbook, as well as the requirements of the Suffolk County Sanitary Code, etc. With regard to stormwater, the proposed action includes a sustainable drainage system, and an oil and grease separator could be considered.

Anticipated Impacts

Water Supply

Potable water will be provided to the proposed action from the GWD distribution system. The final determination of this connection will be made as part of the site plan review process. All necessary system improvements (including system upsizing to meet fire flow demand), connections, meters, easements, and installations will be provided to ensure adequate water supply.

With regard to groundwater recharge, recharge generated by the proposed development is not anticipated to adversely impact groundwater quality beneath the site. As a result, it will not be expected that the quality of groundwater pumped by the GWD will be adversely impacted, as the quality of this recharge will be subject to the oversight of the SCDPW and NYSDEC, and this water will be resident in the subsurface soil matrix for a substantial period of time (during which natural cleansing and dilution effects will remove any impurities) before it will reach these wells. As a result, no significant impact to the GWD or water supply is anticipated.

Sanitary Sewer

For the 56.01-acre subject property, the maximum allowed sanitary flow under Article 6 is 33,606 gpd. In order to provide a conservative analysis of impacts, it is assumed that the proposed action will consume this amount of water. As a result, the proposed action will utilize on-site septic systems, which will comply with SCSC and will be maintained, to treat and recharge all wastewater generated.

The operation and maintenance of these systems, as well as their design and construction, will be performed in conformance with all applicable standards and requirements of the SCDHS. In order to ensure continued compliance with Article 6 of the SCSC, the Applicant proposes to maintain a tenant mix which limits sanitary wastewater flow to no more than 33,606 gpd, in accordance to SCSC Article 6 requirements.

Other Utilities

The proposed action will use PSEG and National Grid to supply energy resources to the subject property. Connections will be made to each utility through the creation of an internal distribution network within the proposed development. It is anticipated that both of these energy supply companies maintain adequate resources to supply the proposed action. In addition, energy-saving devices will be utilized where

practical to reduce the total energy demand that will be required by the subject property upon completion.

Proposed Mitigation

The following mitigation measures are proposed to minimize any impacts on water, sewer, and other utilities, to the extent practicable:

- It is anticipated that an in-ground irrigation system will be installed. It is expected that the most efficient system will be used to avoid expense associated with water use, and will include drip irrigation or a similar system where appropriate. A separate irrigation well on-site will not be necessary. Potable water will be used for irrigation.

- Water-conserving plumbing fixtures, mechanical systems, and rain sensors on irrigation systems will be utilized in construction, which will further minimize the volume of water required from the public water supply.

- Use of energy-conserving equipment and building materials will minimize the increase in the use of electrical and natural gas resources.

- As the proposed action will conform to SCSC Article 6 requirements, it will use on-site septic systems to handle all wastewater generated. Design and installation of such systems will be subject to the review and approval of the SCDHS.

Ecology

Anticipated Impacts

Vegetation

Habitat

The subject property is approximately 56.01 acres in size, of which approximately 88 percent (49.28 acres) will be developed with a mixed-use development. In total, the developed portion of the overall site will consist of 23.94 acres of impervious surfaces (buildings and pavement) and 17.88 acres of landscaping/turf. The remaining 14.19 acres will consist of existing habitats to be retained, as 12.16 acres of Coastal Oak-Laurel Forest, the majority of the area of Brushy Cleared Land (1.43 acres), 0.47 acres of Unvegetated surfaces, and a small area of Successional Old Field (0.13 acres).

While the proposed action will impact the existing natural vegetation and the associated wildlife habitat it currently provides, regional impacts are expected to be

small due to the larger amount of other available habitat in the area. Similar forested habitat is found to the north and in the general area. The majority of the southern portion of the property has been disturbed and is dominated by bare soil and successional vegetation. Although limited successional habitat is found throughout the general area, the regional impacts to this habitat type are not expected to be significant.

The development of the site will reduce the successional habitats on-site by a total of 6.40 acres and will reduce the coastal oak forest found on-site by 21.80 acres. Following the construction of the proposed development, landscaping and turf will be found in the areas surrounding the proposed buildings and within the parking lot islands and native or non-invasive ornamental species will be utilized. Although landscaped areas will provide some habitat, there will be a direct change and loss of the habitat presently found on-site. Planting of native species in landscaped areas such as pines, oaks, maples, blueberry, bayberry and mountain laurel will help accelerate the process of succession, while minimizing the potential for colonization by introduced species (or other edge effects), thereby providing some mitigation for the loss of habitat.

Rare and Endangered Species

The subject property is not expected to act as a refuge for rare native flora, so direct impacts to these species will be expected to be minimal. Several exploitably vulnerable, protected species (mountain laurel and bayberry) were identified on the property. Mountain Laurel is relatively abundant, particularly in the northern and northwestern portion of the site, with the remaining species listed above found only in isolated patches.

Wildlife

Habitat

The successional habitats and mature woodland found on-site provide habitat for a variety of wildlife species. The surrounding development, adjacent roadways and disturbance within the site partially fragment the site under existing conditions. Given these conditions, the site is generally not expected to provide habitat for some species found in larger tracts of contiguous forests and open space, although its location with respect to the adjoining undeveloped habitats increases the likelihood that some of these species may be found in the general area. Most of the species expected on the property are at least somewhat tolerant of human activity, and most are expected to be impacted to some degree by the proposed development, resulting in the loss and further fragmentation of the existing habitat, with an increase in human activity. It is also expected that certain species of wildlife (particularly avian species) will migrate to undeveloped portions of the site and surrounding area; however, it is noted that less available habitat has the potential to decrease the population of individual species.

A total of 12.16 acres of coastal oak forest is proposed to remain, thereby continuing to provide habitat on-site. A total of 0.13-acre of successional habitats will be retained on-site, which will also provide some habitat, albeit habitat of lesser quality than that of the coastal oak forest, as the successional habitats are impacted by the presence of invasive plant species. Retention of both the coastal oak forest and successional vegetation is expected to allow for wildlife corridors and habitat for those species that are tolerant and/or dependent on human activity.

Rare and Endangered Species

Potential exists for the northern long eared bat to utilize the site. Guidance from the USF&WS (USF&WS, 2015) and communication with the NYSDEC were utilized to determine potential impacts from the proposed project on the species. Generally, the guidance indicates the following:

- If known hibernacula are present, do not clear cut trees within ¼ mile of the hibernacula.
- If roost trees are identified, do not cut the roost tree during the bat maternity season, between June 1 and July 31.
- If roost trees are identified, do not clear cut within ¼ mile of the roost tree during the maternity season, between June 1 and July 31.

As no hibernacula are present on site, this condition does not apply. Site specific surveys for roost trees and to determine the presence/absence of the species have not been conducted. If roost trees and/or presence/absence surveys are not conducted prior to construction, cutting of trees will not be permitted during the maternity season (June 1 to July 31) to ensure that pups are not impacted by construction activities. If a survey is conducted that results in a determination that the species is not utilizing the site, seasonal clearing restrictions will not apply. Additionally, approximately 12 acres of existing natural woodland will be retained and will continue to provide suitable habitat for the species. As a result, impacts to this species as a result of the proposed development are mitigated through the use of the above described measures.

As noted above, no threatened or endangered species were observed on-site. Of the species listed as being likely on the site, the common nighthawk, horned lark, whip-poor-will, eastern spadefoot toad, eastern box turtle and eastern hognose snake are listed as special concern species. Although there is documented concern about their welfare in New York State, these special concern species receive no additional legal protection under ECL Section 11-0535. This category is presented primarily to enhance public awareness of these species, which bear additional attention (NYSDEC, 2007).

Proposed Mitigation

The following mitigation measures are proposed to minimize any impacts on ecological resources, to the extent practicable:

- Disturbance will be minimized to the maximum extent practicable, including delineating tree-clearing limits, prior to construction in order to avoid inadvertent clearing
- Native plant species that provide food and shelter to wildlife will be utilized in some of the landscaped areas
- No known invasive plant species will be utilized, including those species listed in Resolution 614-2007 enacted by the Suffolk County Legislature. A copy of Resolution 614-2007 is included in Appendix D

Transportation

Build Condition

To estimate the traffic impacts of the proposed action, it is necessary to determine the traffic volumes expected to be generated by the proposed action.

Project-Generated Traffic Volumes

To estimate the project-generated traffic for the proposed development, a review was undertaken of available trip generation data sources, including the reference published by the Institute of Transportation Engineers (ITE), Trip Generation, 9th Edition.

The result is that the proposed action will generate 593 trips (410 entering and 183 exiting) during the weekday AM peak hour, 1,446 trips (658 entering and 788 exiting) during the weekday PM peak hour and 1,649 trips (842 entering and 807 exiting) during the Saturday midday peak hour.

Trip Distribution and Assignment

The net trips generated by the proposed multi-use development were distributed to the adjacent roadways based on the location of the access points, area demographics and the characteristics of the roadway system in the vicinity of the site. Two different distribution patterns were developed: one for the retail/fitness/library and one for office land uses. These were treated separately to account for the difference in trip making activity between employment based travel and the other components.

It is noted that there is currently approximately 7,500 square feet or retail and restaurant space located on the site near the corner of Jericho Turnpike and Manor Road. With the development of the site as proposed, this existing space will be eliminated. However, to present a high-side conservative estimate of potential traffic impacts, no credit was taken for the elimination of existing trips from this space.

To determine the 2017 Build traffic volumes, the net trips generated by the site were added to the No-Build traffic volumes at the key intersections.

Traffic Operations Analysis

Level of Service Analysis Results

LOS analyses were conducted for the Existing, 2017 No-Build and 2017 Build conditions for each of the key intersections. The results of the capacity analyses for each of the signalized study intersections for the weekday AM, PM, and Saturday midday peak periods reveals that, within the peak hours analyzed, a number of intersections experience changes in levels of service as a result of background growth and/or the traffic projected for proposed action.

The intersection levels of service for Jericho Turnpike at Old Country Road/Westerly site access changes from LOS B to LOS C from No-Build to Build in all three time periods. This is due to the addition of a fourth leg to an existing three-legged intersection and the additional signal phase required to service the new approach. Level of Service C is considered a good LOS on a major arterial such as Jericho Turnpike.

It is also noted that during the weekday PM peak hour the intersection of Jericho Turnpike at Manor Road is shown to improve from LOS B to LOS A from the No-Build to Build conditions. The improvement in traffic service with the addition of site traffic is unusual and worthy of explanation. As noted in this study, this intersection is controlled by the same controller as the intersection of Jericho Turnpike and Old Country Road. When the proposed action is developed, a forth leg of that intersection will be constructed on the north side of Jericho Turnpike. This new configuration precludes the use of a single controller and results in two intersections, controlled by distinct controllers, but coordinated. This change, and the flexibility in signal phasing that it provides is what results in an improvement in traffic service over the no-build condition.

Proposed Mitigation

The following study intersections were re-analyzed with capacity and signal timing mitigation to improve their operation:

- Jericho Turnpike & Deer Park Road/Park Avenue
- Jericho Turnpike & Manor Road

- Jericho Turnpike & Old Country Road/Site Access
- Deer Park Road & Old Country Road
- Jericho Turnpike & Warner Road
- Jericho Turnpike & Stowe Avenue
- East Deer Park Road (CR 66) & Deforest Road North
- Deer Park Road (CR 35) & East Deer Park Road (CR 66)

The analysis reveals that with the exception discussed below, the mitigation measures identified result in an improvement in operating LOS at the study intersections where mitigation was deemed necessary. The intersection operation in the No-Build condition is restored in most cases and in a few cases, improved.

At the intersection of Deer Park Road and Old Country Road the analysis results indicate that, with the proposed mitigation, the intersection operation drops one LOS designation during the a.m. peak hour and operates at a slightly higher overall delay during the p.m. and the Saturday midday peak hours. The intersection however, continues to operate at an acceptable LOS (considered to be LOS D or better). The operation of this intersection is unique in that it is affected by its proximity to the intersection of Old Country Road with Jericho Turnpike, as well as Deer Park Road with Jericho Turnpike. These roadways are mitigated to operate in a coordinated manner and changes in operations, such as signal timing for example, have an effect on the other signals in the area. The analysis performed indicated a potential vehicle queuing problem on the southbound approach, as well as difficulty performing westbound left turns during the weekday PM peak hour at the intersection. The mitigation proposed here addresses and improves both of these issues with redesignation of lanes and installation of a left turn arrow. However, while the installation of the left turn arrow greatly improves the operation of that particular movement, it does take time away from competing movements at the intersection. The change in phasing and lane allocation at the intersection, which is necessary for one time period, will be present during the others as well, and may cause an effect on operations in those other time periods. The proximity of the other intersections noted precludes additional changes to timing that could improve the overall LOS, as the other intersections would be adversely affected. It is important to note again, however, that the intersection would still operate under acceptable conditions.

Site Access

The proposed action will be served by four access driveways: three on Jericho Turnpike and one on Manor Road. The proposed westerly access on Jericho Turnpike would be lined up opposite Old Country Road to form the southbound and fourth leg of the intersection. The central access is proposed approximately 800 feet east of Old Country Road, would be signalized, and form a three-legged intersection. The easterly access is proposed approximately 600 feet farther east. This access would provide right in and right out access points only. The site access on Manor Road would be an unsignalized three-legged intersection with the westbound approach being stop controlled. Tables 20, 21 and 22 summarize the analysis results of the two signalized site access points for the AM, PM, and Saturday midday peak hours,

respectively. Table 23 summarizes the analysis results for the two unsignalized site accesses for the three time periods in the build scenario.

The four site accesses operate well, after the measures of mitigation are applied to the other network study intersections. The intersection of Jericho Turnpike and Old Country Road operates at a good LOS (C or better) and at a slightly increased overall delay. This is a result of, not only the additional site traffic associated with the proposed development, but is associated with the additional traffic signal phasing complications necessary to accommodate the new fourth leg of the intersection. Additional traffic signal phases and clearance times reduce the green times that were previously allocated to vehicle movement.

The analysis revealed a somewhat unexpected result in regard to the westbound approach at the intersection of Jericho Turnpike at Old Country Road and the Westerly Site Access that requires further explanation. In the final condition, the westbound through movement at this location operates with less delay (sometimes significantly less) than during the no-build condition. The reason for this occurrence is related to the creation of the new signalized intersection at the site driveway to the east, and the proposed installation of a separate dedicated traffic signal controller at this location which is currently controlled by the same controller as the Manor Road intersection. This results in a significant improvement in handling westbound through vehicles and the resulting reductions in delay.

The access plan for the project includes the construction of a fourth leg at the intersection of Jericho Turnpike at Old Country Road to allow for site ingress and egress at this existing signalized intersection. Review of the analysis reveals that, in large part due to the very light westbound left turn volume into the existing shopping center opposite Manor Road, the available 200 feet of left turn lane between these intersections will be more than sufficient to accommodate both queues, even during peak periods.

Parking

The total off-street parking requirement for the uses incorporated in the plan, according to Town of Huntington Code, is 2,180 spaces. The site plan shows that a total of 2,249 spaces have been provided which include 545 land-banked stalls. Review of the concept plan reveals that the site layout and circulation are adequate to serve the needs of the site.

Public Transportation

The project area is served by Suffolk County Transit Bus Routes. In addition to Suffolk County Transit, Huntington's HART H40 bus travels between Northport and Walt Whitman Mall daily and Saturday and will stop to board and discharge passengers at any intersection along the route where it is safe to do so. This route passes the subject property on Jericho Turnpike.

The potential provision of bus shelters on either Jericho Turnpike or Manor Road, along the sites frontages, will be reviewed with the two bus providers in the course of site plan development. In addition, should the bus providers wish to modify a route such that an internal stop is provided, the developer will work to provide such accommodation.

While no credit was taken for the use of public transportation in the TIS, it is anticipated that some employees and patrons of the proposed development will take advantage of the presence of this option.

Conclusions

Based on the results of the analyses conducted for the purpose of this report, the TIS concludes the following:

- The proposed development is estimated to generate approximately 593 new vehicle trips (410 entering trips and 183 exiting trips) during the weekday AM peak hour, 1,446 new trips (658 entering trips and 788 exiting trips) during weekday PM peak hour, and 1,649 new trips (842 entering trips and 807 exiting trips) during the Saturday midday peak hour.

- A total of 10 existing intersections and three new access points were evaluated for operation and potential impacts.

- Eight signalized intersections were identified as to the need for mitigation under the Build Condition which includes both capacity and signal timing changes.

- It was found that four of the impacted intersections can be mitigated with changes in signal timing parameters, such as cycle, phase-splits and signal progression. Three others would require physical changes such as widening, additional lanes and changes to lane designations. Recommendations to this effect have been included in the report.

- The proposed site access plan contains four points of access which will allow traffic to and from the site to enter and exit the site at various locations, reducing the additional traffic at any one point. The access plan proposed is more than adequate to serve the site and will provide good traffic service.

- The proposed central access on Jericho Turnpike meets warrants for signalization and should be signalized.

- The traffic generated by the development is not expected to unduly affect the accident rates on the adjacent roadways.

- The proposed number of parking spaces is adequate to meet Town code requirements, as well as the projected needs of the development.
- Based on the results of the analysis herein, it can be concluded that the roadways and intersections in the study area can accommodate the additional traffic due to the proposed Elwood Orchard, given the implementation of the proposed mitigation described in this DEIS.

Socioeconomics

Anticipated Impacts

Fiscal Impact Analysis

The proposed action is estimated to generate $4,069,162 in tax revenues for all taxing jurisdictions, which represents a $3,873,535 (1,980 percent) increase over existing tax revenues. The proposed action is estimated to generate $2,933,201 in tax revenues for the School District, a $2,792,706 (1,988 percent) increase over existing tax revenues. As a non-residential development, the proposed development will not generate additional students and will not require the services of the school system.

There may be a need for some increased police, fire, and emergency services related to the proposed action. However, this mixed-use development is situated within a fully-developed commercial corridor that is already covered by these services (including the existing use on the subject property). Any increased costs that may be associated with emergency services' protection of the additional developed area will likely be offset by additional tax revenue generated by the proposed action. Note that the proposed action will include safety and security measures such as smoke, fire and security alarms, and lighting systems, and may extend to on-site security personnel and/or security camera systems in both building interiors and exterior public areas, which will also supplement emergency services.

Employment

The proposed action will generate both short-term and long-term employment opportunities, as follows:

- **Short-term**—Approximately 750 FTE construction related jobs will be created throughout the site development process. This need for construction workers is viewed as a beneficial impact to the construction industry. In addition, during the construction phase, many of the building materials will be purchased locally in Suffolk County, and many of the construction workers will be area residents. The purchase of construction materials will not only aid area merchants, but will also represent an important source of sales tax revenue to the County.

- **Long-term**—Approximately 950 FTE permanent employees are expected as a result of the proposed action. This represents a significant increase over the existing 29 employees currently on the subject property. These additional jobs are not considered to be sufficient to generate new residential construction in the area or have any other significant impact on the local and regional housing market.

Proposed Mitigation

The proposed action will provide a large socioeconomic benefit through the generation of property taxes and employment opportunities. As a result, no mitigation is required. Notwithstanding this, the proposed mixed-use development will provide safety and security measures such as smoke, fire and security alarms, and lighting systems, and may extend to on-site security personnel and/or security camera systems in both building interiors and exterior public areas to minimize potential impacts to emergency service providers.

Community Facilities and Services

Anticipated Impacts

Schools

Since the proposed action does not contain a residential component, no school-aged children will be generated on-site, and, therefore, there will be no enrollment impact to the Elwood UFSD. Further, the proposed action will provide a significant increase in the tax revenues to the Elwood UFSD (from $145,422 to $2,933,201), with no associated additional expenditures for additional students. Thus, the proposed action represents a significant beneficial fiscal impact to the Elwood UFSD.

Police, Fire, and Emergency Services

Police Protection

The developed and occupied nature of the subject property following construction will increase the potential need for services associated with an occupied property that may include site security and safety, medical emergency assistance, automobile accident investigation and the like. The proposed action will also minimize the potential need for the SCPD current patrol duties with respect to trespassing and unauthorized debris dumping. Tax revenues generated by the proposed action will contribute to the funding of any staffing and equipment that could be needed as a result of the proposed development and will further contribute to local police services, off-setting any additional increase in service costs.

Fire Protection and Emergency Services

It is not expected that the proposed commercial center will present a new type or magnitude of concern for the Greenlawn Fire Department, particularly in consideration of the types and range of safety measures to be incorporated, and the fact that it is within a developed commercial corridor. The buildings will be constructed using up-to-date building materials and safety systems per the New York State Building Code (e.g., fire and smoke alarms, carbon monoxide alarms, fire-resistant materials, etc.). It is expected that the buildings will be sprinklered. The proposed action is designed with suitable access for emergency vehicles and will include installation of fire hydrants as directed through the site plan review process. In addition, tax revenues generated by the proposed action will contribute to the funding of any additional staffing and equipment that may be necessary for the GFD and Greenlawn Fire Department, and will further contribute to local fire protection services, off-setting any additional increase in service costs.

Solid Waste

The proposed action is anticipated to generate approximately 5,308 pounds-per-day of solid waste, which will be stored in closed containers in exterior areas at the rear of the proposed structures. This solid waste generation represents a 0.87 percent increase in the amount of solid waste handled at the Town RRF, which is not considered a significant adverse impact on the usage or capacity of this facility.

Libraries

The Elwood Public Library provides services to the residents of the Elwood community. As there is no residential component to the proposed project, there would not be a demand for services. Therefore the proposed action will not result in any significant adverse impacts to libraries. The proposed action would create a new space for the Elwood Public Library, 67 percent larger than its existing location, which represents a substantial benefit to local library services.

Proposed Mitigation

The following mitigation measures are proposed to minimize any impacts on community facilities and services, to the extent practicable:

- Provision of safety/security alarms will increase the level of security on the property, thereby reduction the potential need for services of the SCPD and/or Greenlawn Fire Department.

- Use of fire/smoke alarms and fire resistant building materials, as well as adherence to the New York State Fire Code, will increase the level of safety from fires and minimize the potential for use of ambulance services.

- The proposed action will reduce the burden on community service providers through the proposal to maintain the internal road and parking areas, sanitary systems and recharge facilities privately, thereby reducing the need for Town highway maintenance, snow plowing, and sanitary treatment and drainage system maintenance and related efforts.

Cultural Resources

Anticipated Impacts

As recommended in the Phase IA Study, the Applicant prepared a Phase IB Study for those portions of the site that had not previously been disturbed (and will not be disturbed by the proposed action). The Phase IB Study did not determine the presence of cultural resources, and did not recommend further investigation, indicating that there were no cultural resources on the portion of the site to be disturbed by the proposed action. Therefore, no impacts to such resources will occur.

Proposed Mitigation

As no significant or adverse impacts to cultural resources are expected, no mitigation measures are necessary or proposed.

Construction Impacts

Potential Impacts Related to Construction

Impacts associated with construction are not anticipated to be significantly adverse; rather, the impacts will be temporary and unavoidable. A summary follows:

- Localized noise impacts resulting from construction activity will be from heavy equipment such as backhoes, bulldozers, dump trucks, cranes, and boom trucks. Noise typically comes from the diesel engines that power equipment. Construction activity would be limited to non-sensitive time periods in accordance with the relevant restrictions of the Code of the Town of Huntington.

- Construction-related traffic will include delivery and export of construction-related materials and debris and the related construction equipment entering and leaving the site. The number of vehicles coming and leaving will depend on the phase of construction.

- During construction, air quality may be affected by dust during dry periods and construction vehicle emissions.

- Localized clearing and grading will result in disturbance to presently stable soils and removal of vegetation, which could result in water quality impacts due to raised sedimentation levels. Additionally, contamination of surface waters by petroleum products (e.g., fuels, grease, oils) could occur from construction equipment used during construction activities.

- Minor temporary impacts to flora and fauna will occur due to the removal of vegetation and disturbance of certain habitat areas. This loss of habitat will result in temporary wildlife displacement.

- Routine project construction activity will yield quantities of waste that must be disposed of separately from daily operational waste.

Proposed Mitigation, Including Erosion and Sedimentation Control Measures

In general, sediment will not be transported off-site by stormwater runoff and, as a result of proper grading procedures, drainage system design, erosion and sedimentation control measures and permit compliance that will be implemented during construction (both discussed below), no impact on local water quality is expected. A request for coverage under the NYSDEC General Permit will be filed in accordance with NYSDEC requirements, prior to the initiation of construction activities at the subject property.

Conformance to the Town Code and to the requirements of NYSDEC SPDES review of stormwater control measures is necessary to be consistent with Phase II stormwater permitting requirements for construction sites in excess of one-acre (the SPDES GP-0-15-002 permit). Under this program, a site-specific SWPPP must be prepared and submitted to the Town for review and approval prior to final site plan approval. Once the SWPPP has been prepared and approved by the Town, the Applicant will need to file a NOI with the NYSDEC to obtain coverage under GP-0-15-002. Additionally, the GP-0-15-002 permit requires that inspections of the construction site be performed under the supervision of a qualified professional to ensure that erosion controls are properly maintained during the construction period.

Efforts will be made to prevent sediment from being transported off-site by stormwater runoff and, as a result of the erosion and sedimentation control measures and permit compliance that will be implemented during construction, no impact on local water quality is expected. However, should any sediment escape from the site, it will be swept back onto the site by manual or mechanical means (depending upon the amount of fugitive sediments), under the direction of the construction manager. It is expected that the erosion control plan will incorporate recommended measures of the NYSDEC Technical Guidance Manual, such as:

- Silt fence, storm drain inlet protection, hay bales, and good housekeeping procedures will be used

- Construction equipment and vehicles will be parked and loaded/unloaded within the site

- "Rumble strips" at the site entrance will prevent soil on truck tires from being tracked onto the public road system

- The construction process will begin with establishment of flagged clearing limits, followed by installation of the erosion control measures

- The drainage system will provide permanent stormwater controls once construction is completed

Appropriate measures will be adopted to ensure that post-construction stormwater management controls are provided, in accordance with the SWPPP. Maintenance of all permanent stormwater management controls and drainage structures will be the responsibility of the site owner upon the completion of construction activities. Routine maintenance responsibilities for permanent stormwater structures and practices include:

1. Monitoring of the drainage inlets should be completed routinely, particularly following rainfall events with significant rainfall (defined as 0.5-inches of rainfall over a 24-hour period, or greater is recommended as a minimum).

2. Drainage grates should be kept free from obstruction of leaves, trash, and other debris.

3. Drainage structures are to be initially inspected annually to determine if sediment removal is necessary to ensure drainage structures are property functioning and permitting adequate conveyance throughout the system and establish the frequency of future maintenance.

4. All seeded and landscape areas are to be maintained, reseeded, and mulched as necessary to maintain a dense vegetative cover.

Other mitigation measures include, but are not limited to:

- Properly maintaining all construction equipment and vehicles to control noise impacts and vehicle emissions

- Requiring dust control on-site during construction

- Limiting construction to designated daytime hour

Discussion of Potential Impacts

In the case of the subject property, only one additional project is currently under consideration in its vicinity:

- ***The Seasons***—An approved 256-unit senior housing residential community located on a 37.05-acre site on the west side of Elwood Road, approximately 1,250 feet north of Cuba Hill Road.

Land Use and Zoning

The patterns of land use in the vicinity of each of the proposals conform to or complement the projects. As a result, construction of these two proposals will not adversely impact their respective local land use patterns; the subject property lies along the Jericho Turnpike commercial corridor and is mixed-use in nature. Both the Seasons and the proposed action involve zoning changes, and generally will conform to the setback and bulk standards of their respective proposed zonings. Thus, no cumulative zoning impacts are anticipated from these two projects.

Visual Resources and Community Character

As each of the projects will change the use and appearance of their sites, there will be a cumulative change to the visual resources and character of the two communities involved. It is anticipated that site and building design and landscaping associated with the proposed action will enhance the appearance of Jericho Turnpike. For the Seasons project, it will be located in an established residential neighborhood and would include substantial building setbacks (to preserve the open character of the site). This, along with extensive landscaping plantings to complement the proposed building architecture, will result in an attractive and appropriate visual character.

Topography and Soils

It is expected that, in order to comply with Town and NYSDEC SWPPP requirements, the minimum necessary disturbances to steep slopes will be made for these projects. Such conformance will also minimize the potential for impacts to steep slope resources and simultaneously minimize the potential for impacts for erosion of steep slopes both during construction and afterwards.

Infrastructure

The volumes of wastewater anticipated for the proposed action are within the applicable SCDHS design requirements (as determined by SCSC Article 6). The

Seasons proposal requires and proposes a new, on-site sewage treatment plant. Both the Seasons' sewage treatment plant and the proposed action's septic system will be subject to the review and approval of SCDHS. Finally, groundwater recharge nitrogen calculations for each project are well within the New York State drinking water standard of 10 mg/l.

Ecology

It is acknowledged that there will be impacts to natural vegetation (and impacts to wildlife from the losses in habitat area) on the two project properties, due to clearing for buildings, paved surfaces, and landscaping. However, these impacts will be minimized by limiting clearing areas, installation of landscaping, and similar measures. It is noted that no significant types of vegetated/habitat area are present on these sites, and that clearing has been minimized as much as practicable.

Transportation

Individually and cumulatively, these two proposals will increase the amounts of vehicle trips generated on each site, as well as increasing usage of local roadways and local intersections. For each of the projects a number of mitigation measures are proposed, including new turning lanes, new lane configurations, and signal timing changes, among others. The Town will have the ability to review each of the projects' traffic impact studies to determine individual and cumulative impacts to traffic conditions in the area.

Community Facilities and Services/Socioeconomics

The development of these projects will combine to increase the demand upon some of the local community services (e.g., fire and police protection, solid waste), but will not adversely impact the school districts concerned, as no enrollment increases will occur (the proposed action does not contain any residential uses and the Seasons project is senior residential in nature). However, each of these projects will provide significant increases in funding to school and municipal service districts to adequately compensate for any potential increased costs.

In conclusion, while each of these projects will result in changes to the natural and human environment, it is not anticipated that they will combine to cumulatively result in any significant adverse impacts.

Use and Conservation of Energy

An increase in the consumption of energy resources will occur due to development of the subject property from the small retail strip to the proposed mixed-use development. Construction of the proposed action will result in the consumption of gasoline, oil, and electricity used in the operation and maintenance of construction

equipment. Upon completion of construction, operation of the development will result in use of fuel (electricity, natural gas, and other fuels) for heating, lighting, air conditioning, and other operational utilizations. The proposed action will connect to the power grid, as opposed to generating power on-site.

Alternatives

No Action Alternative

The No Action Alternative, which assumes no development under existing zoning, is commonly utilized in SEQRA as a baseline of comparison for an action. Under the No Action Alternative, the 56.01-acre subject property would remain in its current state, with 0.35-acre dedicated to a retail strip, one residential dwelling, and the remaining acres undeveloped. With this alternative, there would be no physical changes in the site: no grading or alteration of topography; no loss of existing vegetation; and no construction activities. In addition, no square footage of retail space, or related uses would result. The site would generate no additional traffic, additional population, or additional school-aged children; there would be no visual impact; there would be no effects on community facilities or services; etc. However, while this alternative would eliminate any potential adverse impacts of the proposed action, it would not yield any beneficial effects expected to result from the construction of the development, such as increased tax ratables for the Town and Elwood UFSD; increased retail and commercial opportunities for the Town; increased employment opportunities in the Town, both short- and long-term; improvements to the visual character of this portion of Jericho Turnpike; and removal of the piles of sand on the subject property and the attractiveness of the subject property as a location for ATV, paintball, and other unauthorized activities.

The No Action Alternative, however, is unrealistic because the subject property is currently privately owned and unlikely to remain undeveloped in the future. Therefore, the potential would remain for the subject property to be developed under current C-6 and R-40 District Zoning.

Development Under Existing Zoning

Description of Alternative

The subject property is currently zoned C-6 and R-40. The C-6 District permits a number of commercial uses, but does not permit residential; the R-40 District permits single-family dwellings on minimum 40,000 sf lots. Given that, the Development under the Existing Zoning Alternative would consist of 45 residential units (given the steep slopes on the subject property, such units would be clustered to allow for a similar limit of disturbance as the proposed action), as well as 7,535 sf of commercial space (for the purposes of this analysis assumed to be retail).

Given the minimum lot size of 40,000 sf and the assumption that 25 percent of a development site is set aside for roadway right-of-way and parking, the maximum residential yield resulted in 45 single-family dwellings. With regard to the C-6 portion of the subject property, the existing 7,535 sf of retail would remain.

Considering the presence of steep slopes on the site, as well as the requirements of Article X, Chapter 198 of the Town Code, it is assumed that the 45 new residences would be developed in the form of an attached-unit condominium development. Retaining walls would be necessary, to roughly the same degree as the proposed action.

Similar to the proposed action, it is anticipated that extensive site grading would be required to the R-40 portion of the site, necessitating clearing some of the site's natural vegetation. The existing vacant land area would be replaced with buildings, roadways, and landscaping. Landscaped areas would be distributed around and between the condominium structures, as well as the perimeter of this area. Only a minimal amount of landscaping is currently found in the C-6 portion of the property; it is expected that this area would be upgraded. In order to minimize potential groundwater impacts from fertilizers and similar to the proposed action, it is expected that 8.4 acres would be maintained landscaping (i.e., fertilized and irrigated).

It is expected that two new vehicle access points would be provided for the new residential area, of which one would be located on Jericho Turnpike and the other on Manor Road. As Manor Road experiences a relatively low level of usage, this access would be controlled by a simple STOP sign for exiting movements. The T-intersection of Old Country Road and Jericho Turnpike is presently signalized; it is expected that the new residential portion of this scenario would install its Jericho Turnpike access at this location, to create a four-leg intersection. The existing traffic signal would be re-configured to provide full movements at this location. The commercial area would retain its two existing vehicle access points, along Jericho Turnpike and Manor Road.

Land Use, Zoning, and Public Policy

Development under this alternative would be consistent with existing zoning and, therefore, in accordance with the provisions of the existing residential (R-40) and commercial (C-6) regulations. No amendments to the existing zoning regulations would be necessary. The retail use would continue the commercial land use pattern of Jericho Turnpike.

Visual Resources and Community Character

The topographic characteristics of the site relative to the surrounding areas would remain the same. Therefore, views of this development would remain minimal from the north and northwest, but would be visible from the south, west, and east along

Jericho Turnpike. Based upon the parking constraints, the retail use at the northeast corner of Jericho Turnpike and Manor Road would be limited to one-story, which would be lower than both the existing building and many of the planned buildings as part of the proposed action. As with the proposed action, retaining walls would be necessary at the rear of the development, but would be obscured by the proposed uses.

Natural Resources

It is expected that this alternative would result in similar disturbances and impacts to natural resources (including soils, topography, and steep slopes; flora and fauna; and, waterbodies and wetlands), as compared to the proposed action since similar portions of the subject property would need to be disturbed. However, given that much of the development of this alternative would be residential, which would have greater amounts of grassed and planted areas, this alternative would have greater potential to accommodate wildlife habitats to host flora and fauna species.

Stormwater Management

The Development under Existing Zoning Alternative would have less impervious surfaces than the proposed action.

Water Supply

Based on SCDHS design criteria of 300 gpd/residence, the 45 residences would consume 13,500 gpd of water, to be recharged to groundwater through each unit's septic system. Combined with the existing wastewater systems on the retail area (13,238 gpd consumption) and the annualized average irrigation demand of 9,998 gpd, total water use in this scenario would be 26,738 gpd. This represents a lower water demand and projected sanitary flow than the proposed action.

Other Utilities

As with the proposed action, it would be expected that PESG Long Island and National Grid would be able to extend electrical/gas and communication services, respectively, to accommodate this alternative.

Socioeconomics

It is estimated that this alternative would result in a population increase of approximately 139 persons, representing an approximate 0.08 percent increase to the Town's overall population (estimated at 203,264 in 2010). This alternative would also retain its current 29 employees, but would not provide any additional temporary or permanent employment opportunities.

This alternative is estimated to generate $719,384 in tax revenues, about 70 percent of which ($508,181) would be generated for the Elwood UFSD. This is significantly less than the approximately $4.07 million in taxes than the proposed action will generate, including $3.04 million in taxes for the Elwood UFSD.

Community Facilities and Services

Approximately 28 school-age children would be expected to result from the Existing Zoning Alternative, representing an approximate 1.1 percent increase in the Elwood UFSD overall enrollment (estimated at 2,479 in 2012-2013). These additional school-age children would result in additional costs to the Elwood UFSD.

The 45 units and the estimated population generation of 139 persons from the Development under Existing Zoning Alternative would increase the demand for police, fire, and emergency services.

It is estimated that the Development under Existing Zoning Alternative would generate approximately 524 pounds of solid waste per day, which is less than the 5,308 pounds per day anticipated with the proposed action.

Traffic and Transportation
The Existing Zoning Alternative would result in fewer impacts than the proposed action and would require fewer mitigation improvements, due to its size and the introduction of residential use.

Reduced Density Alternative

Description of Alternative

The reduced density alternative would still require the change of zone and site plan approval for the mixed-use commercial development of the subject property. The overall square footage would be reduced to 392,975 sf (from 486,000 sf), and the number and location of site access points from Jericho Turnpike have changed.

Specifically, the reduced density alternative would include the following:

181,250 sf of retail space within one main building
8,000 sf restaurant (two-standalone 4,000 sf buildings)
120,000 sf fitness center in the main building
15,000 sf library in the main building
14,000 sf of retail standalone (existing commercial lot redeveloped)
54,725 sf of office space in the main building
Associated parking areas providing 1,984 spaces
Landscape areas

Consistent with the proposed action, this reduced alternative would concentrate development toward the center portion of the property, away from the steep slopes. In this way, the steep slopes that occupy the northern and western portions of the site would be preserved. For this scenario, it is assumed that the same or similar amounts of the site would be cleared/graded and developed, as with the proposed action. Retaining walls would be necessary, to roughly the same degree as the proposed action.

This alternative, although a reduced density with less gross square footage and fewer standalone buildings than the proposed action, would also require extensive site grading, necessitating clearing some of the site's natural vegetation. Potential groundwater impacts from fertilizers would be minimized similar to the proposed action, with a similar amount (i.e., approximately 8.4 acres) of maintained landscaping (i.e., fertilized and irrigated).

The proposed site access points, east to west, would include: 1) a new signalized driveway would be located proximate to the eastern border of the redeveloped property, providing one lane in and one lane out; 2) a right turn in/right turn out access point would be located to the west; 3) the "main" entrance would be signalized and would provide one lane in and three lanes out (two right turn lanes and one left turn lane) of the subject property; 4) the westernmost site access would be a right turn in only, with no exit onto Jericho Turnpike. As with the proposed action, there will also be an access point (one lane in and one lane out) on Manor Road.

Land Use, Zoning, and Public Policy

Development under this alternative would be consistent with the proposed action, which would include the rezoning of the same portions of the subject property from R-40 and C-6 to C-5, and amending the Town's Comprehensive Plan. The proposed mix of uses, including retail, fitness and restaurant, would be consistent with existing development patterns throughout most of the Jericho Turnpike corridor. The reduced density of this alternative would still provide a mix of uses set back from Jericho Turnpike, but would reduce the overall gross square footage from 486,380 sf to 392,975 sf, and instead of three, free-standing retail stores (7,400 sf, 6,100 sf and 5,200 sf), a combined office/retail building (28,000 sf) and a restaurant (17,700 sf) use along the frontage of Jericho Turnpike, the combined office retail would be one-story, retail (14,000 sf), and there would be only two smaller restaurants (i.e., 4,000 sf, each) proposed at the frontage. The northern portion of the property would continue to serve as a buffer to the open space and residential uses north of the subject property. Thus, this alternative would be consistent with local land use patterns, and would have less of an impact on the surrounding area, with regard to land uses, than the proposed action, as the overall gross square footage of the development would be less than that of the proposed action (i.e., from 486,380 sf to 392,975 sf), and would reduce the gross square footage and number of buildings proximate to Jericho Turnpike (i.e., from 36,400 sf to 8,000 sf).

With regard to zoning, the proposed change of zone would still be required for this alternative. The reduced density alternative would reduce the number of buildings from six to four, with two small restaurant uses proposed on the southern portion of the property, and would provide for an improved design for the redeveloped (retail) southwestern corner of Jericho Turnpike and Manor Road, as compared with the proposed action.

Visual Resources and Community Character

The site would be cleared and developed to a similar extent to the proposed action under this reduced density alternative, such that views of the site would be altered. With regard to the proposed buildings, the retail use at the northeast corner of Jericho Turnpike and Manor Road would be limited to one-story, unlike the proposed action, and there would be two small restaurant uses along Jericho Turnpike, as opposed to a total of five buildings, under the proposed action. Similar to the proposed action, retaining walls would be necessary at the rear of the development, but would be obscured by the proposed uses.

Natural Resources

It is expected that this alternative would result in similar disturbances and impacts to natural resources (including soils, topography, and steep slopes; flora and fauna; and, waterbodies and wetlands), as compared to the proposed action since similar portions of the subject property would need to be disturbed.

Stormwater Management

As with the proposed action, all stormwater runoff generated under the reduced density alternative will be retained and recharged in an on-site drainage system, designed to accommodate a minimum of three inches of stormwater. The drainage system would utilize subsurface leaching pools distributed throughout the areas to be developed in order to take advantage of the site's natural topography, as well as any necessary grading. The drainage system would have a capacity in excess of the minimum volume required by the Town, and would be designed to comply with relevant State Pollutant Discharge Elimination System (SPDES) requirements under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002) for post-development stormwater quality and quantity control.

Groundwater Resources

This alternative, similar to the proposed action, will include a mix of retail, restaurant, office, and other commercial or service uses. As a result, the only impacts to groundwater resources underlying the site will result from sanitary discharge, naturally-fertilized, landscaped areas and recharge from impervious surface areas. Article 6 of the Suffolk County Sanitary Code allows up to 600 gpd/acre for sanitary

flow in Groundwater Management Zone I, without sewage treatment. It is anticipated that sanitary flow would be similar or less than that proposed, under this alternative. On-site septic systems to treat and recharge all wastewater generated, and such systems would comply with Article 6 of the SCSC.

Development of the site, under this alternative, would also result in an increase in impermeable surface area and all wastewater would be recharged on-site.

Other Utilities

As with the proposed action, it would be expected that PESG Long Island and National Grid would be able to extend electrical/gas and communication services, respectively, to accommodate this alternative.

Socioeconomics

The reduced density alternative represents an approximate 19 percent reduction in gross square footage proposed to be developed. This alternative would be expected to generate a similar increase in property tax revenues (proportionally reduced) as compared with the proposed action, which was expected to generate approximately $2.9 million in revenues to the Elwood UFSD of $4.07 million in total property tax revenue (see detailed discussion in Section 3.8.2). As with the proposed action, no school children would be generated by the proposed development, such that the entire increase in school tax revenues represents a pure benefit. Although the density would be reduced, this alternative would still provide substantial economic benefits to the Town and various taxing districts located therein.

Community Facilities and Services

Schools

This alternative does not contain a residential component, and as such, no school-aged children will be generated by the proposed development, and there would be no enrollment impact to the Elwood UFSD. Tax revenues would still increase significantly over the current condition, and there would be no associated additional expenditures for additional students. Thus, this alternative represents a significant beneficial fiscal impact to the Elwood UFSD.

Police, Fire, and Emergency Services

Any development of the subject property, which is currently largely vacant, would be expected to increase the potential need for services, such as site security, medical emergency assistance, etc. This alternative, as with the proposed action, would include on-site safety and security measures such as smoke, fire and security alarms, and lighting systems, and may also extend to on-site security personnel and/or security camera systems. Additional tax revenues would help offset any additional costs associated with the additional services provided.

The reduced density alternative would be constructed using up-to-date building materials and safety systems per the New York State Building Code (e.g., fire and smoke alarms, carbon monoxide alarms, fire-resistant materials, etc.). It is expected that the buildings will be sprinklered. The development is designed with suitable access for emergency vehicles, including an additional site access point from the proposed action, and will include installation of fire hydrants, as directed through the site plan process.

In addition, although this is a reduced density alternative, there would still be a proportional increase in tax revenue that would contribute to the funding of any additional staffing and/or equipment that may be necessary for the GFD and Greenlawn Fire Department.

As such, the reduced density alternative would not have significant adverse impacts on police, fire and emergency services, and would provide additional revenue to such service providers.

Traffic and Transportation

This alternative would generate (unadjusted) 466 trips (292 entering and 174 exiting) during the weekday a.m. peak hour, 1,580 trips (772 entering and 808 exiting) during the weekday p.m. peak hour and 1,845 trips (938 entering and 907 exiting) during the Saturday midday peak hour.

It is noted that there is currently approximately 7,500 square feet of retail and restaurant space located on the site near the corner of Jericho Turnpike and Manor Road. With the development of the site as proposed, this existing space will be eliminated. However, to present a high-side conservative estimate of potential traffic impacts, no credit was taken for the elimination of existing trips from this space.

Pass-by Trips

ITE presents the following pass-by rates of the land uses proposed with the study development:

- Retail – 34% for p.m. peak and 26% for the Saturday midday peak.
- Restaurant – 43% for p.m. peak

As previously done, to provide a more high-side conservative analysis, the following percentages for pass-by were used for all three land uses:

- Weekday a.m. peak – 0%
- Weekday p.m. peak – 25%
- Saturday midday peak – 20%

These percentages were applied to the total number of trips generated by the site to determine the volume of primary trips to the site. The pass-by trips were included in the volumes expected at the site access points during subsequent analysis.

The primary trips generated by the retail component of the project site would be 195 trips (121 entering and 74 exiting) during the weekday a.m. peak hour, 723 trips (347 entering and 376 exiting) during the weekday p.m. peak hour and 1,109 trips (577 entering and 532 exiting) during the Saturday midday peak hour.

The primary trips generated by the retail component of the project site were then combined with the trips generated by the office, fitness club and library portions to develop the total net site generated trips for the project site.

The projected total trip generation for the project site under the alternative, after adjustments for pass-by trips. It is estimated that the primary trips generated by the site would be approximately 466 trips (entering trips 292 and exiting trips 174) during the AM peak hour, 1,339 trips (entering trips 656 and exiting trips 683) during the PM peak hour, and 1,568 trips (entering trips 794 and exiting trips 774) during the Saturday midday peak hour. It is noted that the alternative development scenario is expected to result in 127 fewer weekday a.m. peak hour trips, 107 fewer weekday p.m. peak hour trips and 81 fewer Saturday midday peak hour trips than the proposed action.

The development would be served by five access points (four on Jericho Turnpike and one on Manor Road). The site generated traffic will be distributed to and from these driveways in all directions. The directional distribution developed for the alternative is discussed and presented below. It should be noted that given the fact that the site traffic is distributed in all directions, through numerous driveways, that the traffic increases at any point on Jericho Turnpike will be much less than the trip generation figures. The assignment of site generated traffic to the various intersections and roadway segments, in the study area, is also discussed and presented below.

Alternative Development Scenario Access

In the Alternative plan Elwood Orchard would be served by five access driveways: four on Jericho Turnpike and one on Manor Road. On Jericho Turnpike, just east of Old Country Road is the first of the four accesses, an unsignalized free westbound right-turn in only into the site. Approximately 630 feet east of Old Country Road is the second and signalized westerly access. This access provides two eastbound left-turn lanes and a westbound right-turn lane for entering traffic and two southbound left-turn lanes and a right turn lane for exiting traffic.

Approximately 540 feet farther east is proposed a third and unsignalized Center Site Access which would be a rights in / rights out only access. This access provides a westbound right-turn lane for entering traffic and a southbound right-turn lane for

exiting traffic. The fourth and the East Site Access on Jericho Turnpike is located 460 feet east of the unsignalized site access. The East Site Access is proposed to be signalized and would provide one eastbound left-turn lane and a westbound right-turn lane for entering traffic and one southbound left-turn lane and a right-turn lane for exiting traffic. The site access on Manor Road would be an unsignalized three-legged intersection with the westbound approach stop controlled, and it is located approximately 280 feet north of Jericho Turnpike. This access would provide a northbound shared through/right-turn lane and a southbound left-turn lane for entering traffic and one left-turn lane and a right-turn lane for exiting traffic.

Level of Service Analysis

Analysis Results – Signalized Intersections

The analysis reveals that, within the peak hours analyzed, a number of intersections experience changes in levels of service, as a result of background growth and/or the traffic projected for this reduced density alternative.

The changes at Jericho Turnpike and Manor Road and Jericho Turnpike and Old Country Road from No-Build to Build condition are due not only to the site generated traffic, but also because of the fact that the two intersections are currently controlled by one signal controller, and have been revised in Build Condition, for this alternative, to each having individual controllers.

Mitigation

As part of this alternative analysis, methods of improving poor operating conditions and mitigating impacts were evaluated for the following intersections:

- Jericho Turnpike & Deer Park Road/Park Avenue
- Jericho Turnpike & Manor Road
- Jericho Turnpike & Old Country Road/Site Access
- Deer Park Road & Old Country Road
- Jericho Turnpike & Warner Road
- Jericho Turnpike & Stowe Avenue
- East Deer Park Road (CR 66) & Deforest Road North
- Deer Park Road (CR 35) & East Deer Park Road (CR 66)

These study intersections were re-analyzed with capacity and signal timing mitigation to improve their operation.

The analysis reveals that with the exception discussed below, the mitigation measures identified result in an improvement in operating LOS at the study intersections where mitigation was deemed necessary. The intersection operation in the No-Build condition is restored in many cases and in a few cases, improved.

At the intersection of Deer Park Road and Old Country Road the analysis results indicate that, with the proposed mitigation, the intersection operates with a slightly higher overall delay, but with the same LOS designation, during the p.m. and Saturday midday time periods and drops from C to D during the a.m. time period. The intersection however, continues to operate at an acceptable LOS (considered to be LOS D or better). The operation of this intersection is unique in that it is affected by its proximity to the intersection of Old Country Road with Jericho Turnpike, as well as Deer Park Road with Jericho Turnpike. These roadways are mitigated to operate in a coordinated manner and changes in operations, such as signal timing/progression, for example, have an effect on the other signals in the area. The analysis performed indicated a potential vehicle queuing problem on the southbound approach, as well as difficulty performing westbound left-turns during the weekday p.m. peak hour, at the intersection. The mitigation proposed here addresses and improves both of these issues with re-designation of lanes and installation of a left-turn arrow. However, while the installation of the left-turn arrow greatly improves the operation of that particular movement, it does take time away from competing movements at the intersection. The change in phasing and lane allocation at the intersection, which is necessary for one time period, will be present during the others as well, and may cause an effect on operations in those other time periods. The proximity of the other intersections noted precludes additional changes to timing that could improve the overall LOS as the other intersections would be adversely affected. It is important to note again, however, that the intersection would still operate within acceptable conditions.

The four site accesses operate well, after the measures of mitigation are applied to the other network study intersections.

Parking and Circulation

As shown in the Alternative conceptual site plan prepared by VHB, the total off-street parking requirement for the uses incorporated in the plan, according to Town of Huntington Code, is 1,769 spaces. The site plan shows that a total of 1,984 spaces have been provided, exceeding Code requirements. As such, more than sufficient parking would be provided to serve the uses proposed on site. Review of the concept plan reveals that the site layout and circulation, as designed, are adequate to serve the needs of the site

Conclusions

- The proposed development of Elwood Orchard under the Reduced Density Plan is estimated to generate approximately 466 trips (292 entering trips and 174 exiting trips) during the a.m. peak hour, 1,339 trips (656 entering trips and 683

exiting trips) during p.m. peak hour, and 1,568 trips (794 entering trips and 774 exiting trips) during the Saturday midday peak hour.

- Eight signalized intersections were identified as to the need for mitigation under the Build Condition which includes both capacity and signal timing changes.

- It was found that four of the impacted intersections can be mitigated with changes in signal timing parameters, such as cycle, phase-splits and signal progression. Three others would require physical changes such as widening, additional lanes and changes to lane designations. Recommendations to this effect have been included in the report.

- The alternative site plan contains five points of access which will allow traffic to and from the site to enter and exit the site at various locations, reducing the additional traffic at any one point. The access plan proposed is more than adequate to serve the site and will provide good traffic service.

- The proposed two major access points on Jericho Turnpike meet warrants for signalization and should be signalized.

- The traffic generated by the development is not expected to unduly affect the accident rates on the adjacent roadways.

- The proposed number of parking spaces is adequate to meet Town code requirements, as well as the projected needs of the development.

- Based on the results for the Reduced Density Alternative, which is anticipated to generate lower levels of peak hour traffic, when compared to the proposed action, it can be concluded that the roadways and intersections in the study area can accommodate the additional traffic due to the proposed Elwood Orchard, given the implementation of the proposed mitigation described in this DEIS.

Cultural Resources

As with the proposed action, no impacts to cultural resources would be anticipated.

Construction

Construction impacts for this alternative are not anticipated to be significantly adverse, and are temporary and unavoidable, include but are not limited to: localized noise from construction activity, construction-related traffic, localized clearing and grading will disturb soils and remove vegetation, and construction waste generation that must be disposed of separately from daily operational waste.

Comparison of Alternatives

A comparison of the alternatives indicates that the reduced density alternative, as presented in this DEIS, is the more desirable alternative by providing a high quality, mixed-use development, with economic benefits to the Town, Elwood UFSD, and others, while reducing the gross square footage and number of buildings contemplated in the proposed action.

Comparative Table of Project Alternatives

Alternative	Proposed Action	No Action Alternative	Development Under Existing Zoning	Reduced Density Alternative
Zoning	C-5, R-40	C-6, R-40	C-6, R-40	C-5, R-40
Retail Use	240,880 sf[1]	7,535 sf	7,535 sf	203,250 sf[1]
Office Use	129,800 sf	--	--	60,600
Residential Use	1 unit	1 unit	45 units	1 unit
Other Use	115,700 sf[2]	--	--	129,125 sf[2]
Gross Floor Area	486,380 sf	7,535 sf	7,535 sf	392,975 sf
Density[4]	0.23 FAR 1.0 unit per 6.73 acres		0.49 FAR 0.81 unit/acre	0.18 FAR 1.0 unit per 6.73 acres
Residents	5	5	139	5
School-Age Children	2	2	28	2
Impervious Surfaces	28.7 acres	0.3 acres	9± acres	28.7 acres
Water Usage	33,606 gpd	13,538 gpd	26,738 gpd	33,606 gpd
Solid Waste	5,308 lbs/day	225 lbs/day	524 lbs/day	7,755 lbs/day

Notes:
[1] Includes retail space, supermarket, and restaurant.
[2] Includes fitness center, library, and management office.
[3] Should a Suffolk County Industrial Development Agency (IDA) tax abatement be applied to the Proposed Action (see Appendix E, Section 5.3), the first year (representing the highest abatement period) property taxes levied for the Elwood UFSD would total nearly $1.40 million. This would still represent an increase of nearly $1.26 million over existing conditions.
[4] Density for commercial portions of the subject property is expressed in FAR, and units per acre for the residential portion.

2.0

Description of the Proposed Action

2.1 Introduction

This DEIS has been prepared to evaluate the application of Syndicated Ventures, LLC, which includes a subdivision of the 56.01±-acre subject property, rezoning of a 49.28±-acre portion of the subject property to C-5 (Planned Shopping Center) Zoning District from its current R-40 (Residential) and C-6 (General Business) Zoning Districts, as well as site plan approval for a 486,000-square-foot (sf), mixed-use commercial development on the subject property. Additionally, the proposed action includes an amendment to the Comprehensive Plan of the Town of Huntington such that the subject property (specifically, the westernmost 49.28±-acre portion) is identified for rezoning to C-5 and recommended for development with a high-quality, mixed-use commercial development in accordance with said district. The remaining 6.73± acres will be subdivided from the overall property, and will retain its existing R-40 zoning and single-family residential use.

Specifically, the proposed action includes the demolition of the existing improvements on the subject property (i.e., the existing retail building) and the redevelopment of a portion of the subject property with the following:

- 180,680 sf of retail space within a main mixed-use building and four standalone buildings
- 129,800 sf of office space within the main mixed-use building and one additional standalone building
- A 42,500-sf supermarket in the main mixed-use building
- A 17,700-sf restaurant in a standalone building
- A 90,000-sf fitness center in the main mixed-use building
- A 15,000-sf space within the main building for the library
- A 10,700 sf management office on the second story of the main mixed-use building

- Associated parking areas providing 2,249 spaces, including 545 landbanked spaces
- Landscaped areas

The subject property is situated on the north side of Jericho Turnpike (New York State Route 25), east of its intersection with Manor Road, in the hamlet of Elwood, Town of Huntington, Suffolk County (see Figure 1). The subject property is comprised of three tax lots designated on the Suffolk County Tax Map as follows (see Figure 2):

- District 0400 – Section 209 – Block 2 – Lot 3
- District 0400 – Section 209 – Block 2 – Lot 4.1
- District 0400 – Section 209 – Block 2 – Lot 5.6

This DEIS has been prepared to describe the proposed action, to identify and evaluate the potential environmental impacts that may result from implementation of the proposed action, and to explain those mitigation measures that have been incorporated into the proposed action to minimize potential adverse environmental impacts. Specifically, this DEIS addresses the relevant environmental and planning issues identified within the Parts 2 and 3 – Environmental Assessment Form (EAF) and Positive Declaration (see Appendix A) prepared by the Lead Agency. These include:

- Land Use, Zoning, and Comprehensive Plans
- Visual Resources and Community Character
- Topography, Soils, and Geology
- Water Resources
- Water, Sewer, and Other Utilities
- Ecology
- Transportation
- Socioeconomics
- Community Facilities and Services
- Cultural Resources
- Construction Impacts
- Cumulative Impacts

This DEIS is divided into several sections, the first of which is the Executive Summary. This section, Section 2.0, provides a description of all components of the proposed action, including a complete description of the proposed plan; a history of the site; the project's purpose, need and benefits; proposed demolition and construction; and required permits and approvals.

Each of the subsections of Section 3.0 (i.e., Sections 3.1 through 3.11) identifies, with respect to each area of potential environmental impact identified above, the existing conditions at the subject property (and, as applicable, the relevant impacts of the existing uses thereof) and the potential beneficial and adverse environmental impacts

of the proposed action. Aspects of the proposed action that mitigate or avoid potential impacts are also identified and discussed in each corresponding subsection. Section 4.0 discusses cumulative and growth inducing impacts that may result from implementation of the proposed action. Section 5.0 enumerates those short-term and long-term impacts described within the preceding section that cannot be fully mitigated. Section 6.0 presents a brief discussion of natural resources consumed as a result of project implementation. Section 7.0 discusses the use and conservation of energy associated with the proposed action. Alternatives to the proposed action, and their impacts, are discussed in Section 8.0 of the DEIS. Among these alternatives are the "No-Action" alternative, required pursuant to SEQRA and its implementing regulations at 6 NYCRR Part 617; another alternative, representing development of the subject property in accordance with prevailing zoning; and a third alternative, a Reduced Density Alternative, where several elements of the proposed development are modified to reduce its density and associated impacts. The findings and conclusions of this DEIS are summarized in Section 9.0. The final section, Section 10.0, presents a list of references used in this DEIS.

VILLADOM-ELWOOD ORCHARD
Huntington, New York

Site Location

Figure
1

COUNTY OF SUFFOLK © Real Property Tax Service Agency
County Center Riverhead, N Y 11901
SCALE IN FEET 0 200 400

KEY MAP

TOWN OF HUNTINGTON
VILLAGE OF
DISTRICT NO 0400
SECTION NO 209
PROPERTY MAP

CONVERSION DATE: Mar 23, 2011

VILLADOM-ELWOOD ORCHARD
Huntington, New York

Tax Map

Figure **2**

2.2 Existing Site Conditions

The subject property has approximately 2,807 feet of frontage along the north side of Jericho Turnpike and approximately 667 feet of frontage on the east side of Manor Road. As indicated on Figure 1, the majority of the subject property is currently undeveloped and vacant. The north-central and western portions of the subject property (along Manor Road) are generally wooded, and contain areas of steep slopes. The south-central portion of the subject property had previously been mined for sand and now consists of barren sandy slopes with some vegetation. It appears that a number of unauthorized activities may regularly occur on the subject property, including off-road all-terrain vehicles (ATV), paintball gaming, and illegal dumping.

Wooded portion of site with steep slopes

Barren sandy slopes on the subject property

The southwestern portion of the subject property, at the intersection of Jericho Turnpike and Manor Road contains a 7,535-sf retail strip center in a single structure consisting of four storefronts (i.e., a nail salon, restaurant, laundromat, and a vacant space), and paved areas that can accommodate parking for approximately 12 cars. On this portion of the subject property there is no landscaping. The southeastern portion of the subject property contains a 3,095±-square-foot single-family residence surrounded by open fields, wooded areas, and other vegetation.

Existing retail strip

View into existing single-family residence

2.3 Project Description

2.3.1 General Description of the Proposed Action

As previously noted, the proposed action consists of the rezoning of 49.28 acres of the 56.01-acre subject property to the C-5 District from its current R-40 and C-6 Districts, as well as other approvals (e.g., subdivision, comprehensive plan amendment), and the construction of a high-quality, mixed-use commercial center containing 486,000 sf of retail, office, supermarket, restaurant, and fitness center uses, and also including a new space for the Elwood Public Library, which is a substantial public benefit. Surface parking, and landscaping, are also proposed. The easternmost 6.73 acres would retain the current R-40 zoning and use as a single-family residence.

2.3.2 Proposed Rezoning

The proposed action includes rezoning portions of the subject property to C-5 from R-40 and C-6. As stated in §198-26 of the Town of Huntington Zoning Code, the purpose of the C-5 (Planned Shopping Center) District is to:

> *…provide for retail shopping facilities composed principally of groups of retail and service establishments of integrated design, intended to serve community-wide or regional needs as well as those of local neighborhoods.*

The primary goal of the requested rezoning is to apply the C-5 District to portions of the subject property in order to provide a visually appealing and integrated development at a scale that can serve the community, as well as the broader region. By doing so, valuable economic development opportunities will be provided for the Town, including tax revenues and jobs.

2.3.3 Comprehensive Plan Amendment

As part of the proposed action, an amendment to the Town of Huntington Comprehensive Plan is proposed such that the subject property (specifically, the westernmost 49.28±-acre portion) is identified for rezoning to C-5 and recommended for development with a high-quality, mixed-use commercial development in accordance with said district. A complete Planning and Zoning Analysis has been prepared to consider this Comprehensive Plan Amendment. The Planning and Zoning Analysis is included in this DEIS as Appendix B.

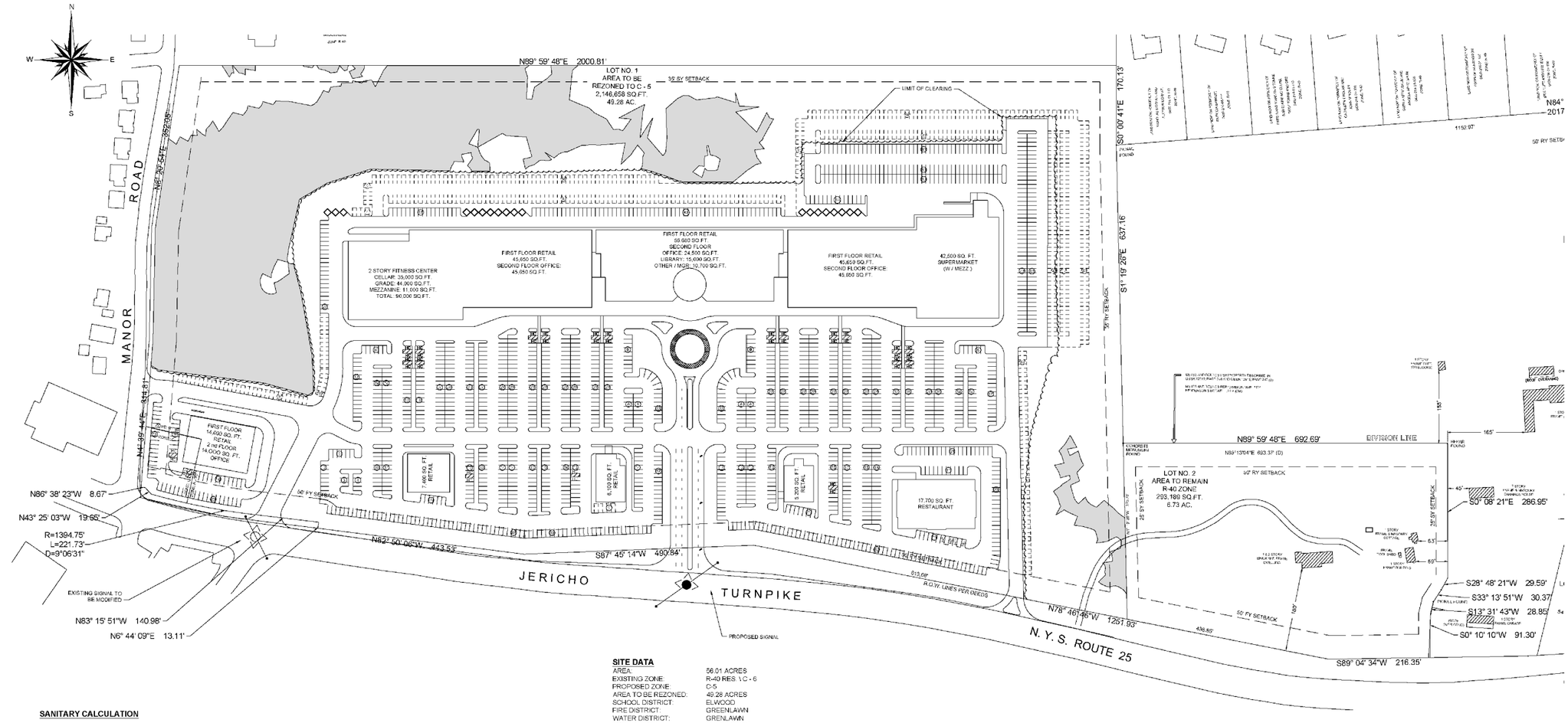
2.3.4 General Layout

As indicated on the preliminary site plan (see Figure 3) prepared by Nelson & Pope (N&P), development on the site will be oriented in an east-west direction, parallel to Jericho Turnpike. This alignment will maximize the visibility of the developed area for drivers approaching and/or passing the site, for the convenience and safety of patrons accessing the proposed development.

The single, larger retail structure will be the dominant visual feature on the site. It will occupy the rear (north side) of the developed area, with steep, vegetated slopes rising behind it. In front of the structure will be the parking area, which will be broken up aesthetically by landscaped islands oriented north-south. In the forefront of the site will be five smaller standalone structures, which will be widely spaced so that views of the main structure are not impaired. The main structure is expected to be mostly two stories. The easternmost component of the building will be one-story. Four of the five smaller retail buildings will be one-story, and the one farthest west will be two-stories. An attractive community entrance sign with landscaping and spotlighting will be placed at the development's entrance on Jericho Turnpike.

The proposed action has been configured to preferentially occupy the lower slopes in the site's southern frontage, to preserve the steep slope area farther to the north. In general, it is expected that the proposed action will re-grade the lower portion of the site to create a "bench" that slopes downward gently to the south (toward Jericho Turnpike), where the majority of the drainage system will be located – designed in conformance with all applicable Town requirements, and sized to exceed the minimum capacity required.

It is anticipated that stepped retaining walls will be necessary north of the developed area, in order to reduce the amount of earthwork needed to provide proper grades for development, as well as to facilitate preservation of the steep slopes. The maximum height of the retaining walls will be approximately 38 feet. However, this will occur directly behind and west of the main structure where it will be obscured from view. Along the eastern portion of the site, the retaining wall will decrease from 38 feet in height to approximately 20 feet in height as it descends along the line of existing topography. Similarly, along the western portion of the site, the wall will decrease to 10 feet in height. Details regarding the retaining walls will be finalized during preparation of the grading and drainage plans, as part of the site plan approval process.



SITE DATA

AREA:	56.01 ACRES
EXISTING ZONE	R-40 RES. \ C - 5
PROPOSED ZONE:	C-5
AREA TO BE REZONED:	49.28 ACRES
SCHOOL DISTRICT:	ELWOOD
FIRE DISTRICT:	GREENLAWN
WATER DISTRICT:	GRENLAWN
POST OFFICE:	HUNTINGTON

PARKING:

REQUIRED:			
RETAIL:	180,680 SQ.FT. x 1 STALL/200 SQ.FT.	=	903.40 STALLS
FITNESS:	1,800 PERSONS x 1 STALL / 5 PERSONS	=	360.00 STALLS
LIBRARY:	10 STALLS + 13,000 SQ.FT. x 1 STALL / 300 SQ.FT.	=	53.30 STALLS
RESTAURANT:	17,700 SQ.FT. x 1STALL / 200 SQ.FT.	=	88.50 STALLS
SUPERMARKET:	42,500 SQ.FT. x 1 STALL / 200 SQ.FT.	=	212.50 STALLS
OFFICE:	129,800 SQ.FT. x 1 STALL / 250 SQ.FT.	=	519.20 STALLS
OTHER / MGR:	10,700 SQ.FT. x 1 STALL / 250SQ.FT.	=	42.80 STALLS
TOTAL REQUIRED:		=	2,179.7 STALLS = (2,180 STALLS)

PROVIDED:	
STANDARD	1,658
LANDBANKED	545
ADA	46
TOTAL STALLS PROVIDED	2,249

AREA OF STEEP SLOPE REQUIRED TO BE PRESERVED: 7.81 ACRES
AREA OF STEEP SLOPE TO BE PRESERVED : 7.85 ACRES

BUILDING AREAS:

CELLAR:

FITNESS -	35,000 SQ.FT.

ON GRADE:

FITNESS -	44,000 SQ.FT.
RETAIL -	180,680 SQ.FT.
SUPERMARKET -	42,500 SQ.FT.
RESTAURANT -	17,700 SQ.FT.
TOTAL -	284,880 SQ.FT.

SECOND STORY:

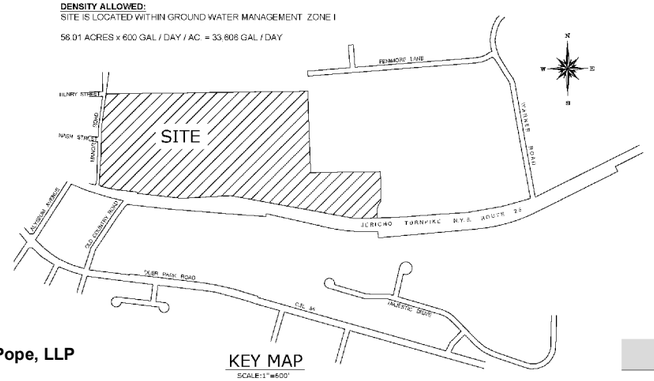
FITNESS -	11,000 SQ.FT.
LIBRARY -	15,000 SQ.FT.
OFFICE -	129,800 SQ.FT.
OTHER / MGR. -	10,700 SQ.FT.
TOTAL -	166,500 SQ.FT.

TOTAL BUILDING AREA
(FOOTPRINT): 284,880 SQ.FT.
(G.F.A.) 466,380 SQ.FT.

SANITARY CALCULATION

DENSITY ALLOWED:
SITE IS LOCATED WITHIN GROUND WATER MANAGEMENT ZONE I

56.01 ACRES x 600 GAL / DAY / AC. = 33,606 GAL / DAY



AREA OF STEEP SLOPE TO BE PRESERVED

SCALE: 1" = 100'
0 50 100 200 400

Source: Nelson & Pope, LLP

vhb

VILLADOM-ELWOOD ORCHARD

Huntington, New York

Site Plan **Figure 3**

2.3.5 Site Access and Parking

Site Access

The subject property has frontage on two roadways: Jericho Turnpike and Manor Road. As the Applicant seeks to minimize potential traffic impacts on the adjacent local residential streets, the proposed action has been designed with its three primary vehicle access points oriented onto Jericho Turnpike, with only one, secondary access onto Manor Road. In this way, traffic to the site will be preferentially directed to use Jericho Turnpike, which is a major east-west regional artery that has significantly more capacity than Manor Road.

As shown in Figure 3, the Jericho Turnpike access points will consist of (described in order from east to west) one right in/right out driveway (to be controlled by a "STOP" sign for existing movements); a new, signalized full movement driveway; and a full movement driveway opposite Old Country Road (this intersection is currently signalized). The single Manor Road access will be a full-movement driveway, to be controlled by a STOP sign for exiting movements.

Note that the existing vehicle access serving the residence at the easternmost portion of the subject property will remain undisturbed, and will not be connected to or provide access in any way to the proposed mixed-use development.

Parking

Parking calculations for the proposed action are presented in Table 1.

Table 1 – Required and Proposed Parking

Component (Yield)	Parking Space Rate (per Town Code)	Minimum Required Spaces	Parking Spaces Provided
Retail Space (180,680 sf)	1 space/200 sf	903	2,249[1]
Fitness Center (1,800 patrons)	1 space/5 patrons	360	
Library (15,000 sf)	10 spaces + 1 space/300 sf above 2,000 sf[2]	53	
Restaurant (17,700 sf)	1 space/200 sf	89	
Supermarket (42,500 sf)	1 space/200 sf	213	
Office (129,800 sf)	1 space/250 sf	519	
Other a Management Office (10,700 sf)	1 space/250 sf	43	
TOTALS	---	2,180	

Notes: [1] Includes 545 landbanked spaces.
[2] For the 15,000 sf library, the calculation would be 10 spaces + 43 spaces (1 space per 300 sf [13,000 sf] above 2,000 sf).

As can be seen in Table 1, per Town Code § 198-47, a total of 2,186 parking spaces are required for the proposed action. The preliminary site plan (see Figure 3) shows that

on-site parking for 2,249 cars will be provided, of which 545 spaces will be landbanked.

2.3.6 Landscaping, Lighting, and Open Space

Landscaping

An important element of the proposed action is to provide an attractive, visually-pleasing mixed-use development. In general, the landscaping will be distributed: 1) on the islands within the parking areas, 2) along the buildings, and 3) between the buildings and site boundaries. The species chosen will be non-invasive, and native to Long Island or otherwise compatible with regional climatic conditions. Whatever combination of vegetation types is ultimately chosen, all types of landscape vegetation will be used to provide an attractive aesthetic transition between the natural vegetation on adjacent properties and developed areas of the subject property. A detailed landscape plan will be prepared during the site plan approval process, which will be subject to the review and approval of the Town.

Lighting

Appropriate lighting is also an important element of the proposed action in order to establish a safe and secure environment with illumination only in those areas where it is necessary. In general, illumination will not extend beyond the property boundaries and diffuse lighting will not occur. The proposed action will illuminate internal roadways, parking spaces, sidewalks, and building exteriors. Lighting will be typical for a quality mixed-use facility with regards to locations, pole heights, and type and power of fixtures and will conform to the applicable requirements of Town Zoning Code Chapter 143 (Outdoor Lighting). In addition, only "dark sky" compliant luminaries[1] will be used. By use of such fixtures, the potential for adverse impacts to the visibility of the nighttime sky for site patrons, as well as impacts to the neighboring properties, will be minimized. A lighting plan for the proposed action will be prepared as part of the site plan application, and will be subject to the review and approval of the Town.

Open Space

As required by Article X, Town Zoning Code Chapter 198 (Steep Slopes Conservation Law), at a minimum, an estimated 7.81 acres of steep slopes in the subject property's north-central and western portions must be preserved in an undisturbed condition. In conformance with this requirement and as depicted in Figure 3, the proposed action will preserve a total of 7.85 acres of these areas via a covenant (to run with the land) to be filed with the Suffolk County Clerk.

▼

[1] "Dark Sky" compliant fixtures are equipped with a full cut-off shroud that directs all illumination downward.

2.3.7 Utilities and Stormwater Management

Potable Water

Potable water will be provided by the Greenlawn Water District's (GWD) distribution system. As indicated by the GWD (see Appendix F), service can be provided from the existing 10-inch main beneath Manor Road to the west, the 8-inch main beneath Jericho Turnpike (along the site's frontage), and/or the 16-inch main beneath the south side of Jericho Turnpike. The final determination of this connection will be made as part of the site plan review process. All necessary system improvements (e.g., system upsizing to meet fire flow demand), connections, meters, easements, and installations will be provided to ensure adequate water supply. The GWD letter includes a request that a portion of the subject property be dedicated to the GWD for a future well site. The Applicant is the ground lessee, not the landowner, and is not in a position to dedicate a portion of the site for this purpose. This issue may be addressed as part of the site plan application review process.

Sanitary Waste

Sanitary wastewater flow and discharge requirements are determined by the Suffolk County Department of Health Services (SCDHS), pursuant to Article 6 of the Suffolk County Sanitary Code (SCSC), in order to limit the loading of nitrogen to groundwater. The subject property is located within the Groundwater Management Zone I as defined by the SCDHS. Based on the requirements of SCSC Article 6, no more than 600 gallons per day (gpd) may be discharged per acre within this zone if an on-site septic system is to be used. For the subject property, the maximum permissible sanitary flow under Article 6 is 33,606 gpd (i.e., 56.01 acres x 600 gpd per acre). In order to provide a conservative analysis of impacts, it is assumed that the proposed action will consume this amount of water. As a result, the proposed action will utilize on-site septic systems to treat and recharge all wastewater generated. In order to ensure continued compliance with Article 6 of the SCSC, the Applicant proposes to maintain a tenant mix which limits sanitary wastewater flow to no more than 33,606 gpd, in accordance to SCSC Article 6 requirements.

Stormwater Management

In conformance with Town requirements, all stormwater runoff generated as a result of the proposed action will be retained and recharged in an on-site drainage system, designed to accommodate a minimum of three inches of stormwater. The proposed action's drainage system will utilize subsurface leaching pools distributed throughout the areas proposed to be developed in order to take advantage of the site's natural topography as well as the anticipated grading program. The drainage system will have a capacity in excess of the minimum volume required by the Town. In addition, the drainage system will be designed to comply with relevant State Pollutant Discharge Elimination System (SPDES) requirements under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit

for Stormwater Discharges from Construction Activity (GP-0-15-002) for post-development stormwater quality and quantity control.

Solid Waste

It is anticipated that all solid waste will be stored in closed bins in exterior areas at the rear of the proposed structures, screened from view and out of sight of passersby, until it is picked up on a regular basis by a commercial carter operating under contract with the property owner. The Applicant anticipates that an on-site recycling program will be employed. Based on the uses anticipated (e.g., retail, restaurant, supermarket, office, fitness center, potentially a community facility), with the exception of standard commercial cleaning materials, it is not expected that toxic or hazardous materials or substances will be used on the subject property. Since solid waste will be stored in closed containers and picked up on a regular basis, the potential for odors or attraction of vectors will be minimized.

2.4 Purpose, Benefit, and Need

Site Application History

In 2004, the westerly 35.27 acres of the subject property were the subject of an application known as "Orchard Park," which consisted of a request to rezone that portion of the property and develop it with:

- 192,730 sf of retail
- 14,960 sf of office
- Eight-screen/1,500-seat movie theater
- 7,500 sf day care
- 7,500 sf fitness center
- 65,000 sf mini-storage
- 360 rental apartment units

The Town Board decided not to entertain that proposal.

Purpose, Benefit, and Need

The purpose of the proposed action is to develop a high quality, mixed-use development that will promote economic development along the Jericho Turnpike corridor and the Town of Huntington as a whole. The subject property's location along Jericho Turnpike, connecting to Route 110, the Sunken Meadow Parkway, and the Northern State Parkway, provides easy access to the broader region and sits at the eastern end of the commercial portions of this part of Jericho Turnpike, which makes it a prime location for a mixed-use development as a transition between uses.

Moreover, the proposed action will provide economic development opportunities, not only for the Town, but for Long Island in general. As such, the proposed action was formulated as a private developer response to a need for new tax revenue by providing high-quality retail, office, and service space in a mixed-use development that will help strengthen and complement the other commercial sites along the Jericho Turnpike corridor. In addition, the proposed action is anticipated to generate approximately 750 construction jobs and approximately 950 permanent jobs, which will strengthen the local and regional economy. In this way, its purpose and benefits extend beyond site development, to the greater region.

The proposed action will be a local and regional economic development project that will increase retail and commercial opportunities and in turn, increase in tax revenues, all without generating any additional schoolchildren. As presented in Section 3.8, the proposed action is expected to generate approximately $4,069,162 in total tax revenues per year, including $2,933,201 for the Elwood Union Free School District (UFSD), as well as additional tax revenues for other special district jurisdictions. As noted above, the proposed action will also increase local and regional employment opportunities, both temporary and permanent, which in turn spin-off various secondary economic benefits.

Given the nature of the proposed uses, the generated property taxes are expected to exceed any service costs by affected taxing jurisdictions, based on the information gathered for this DEIS (see Section 3.9). A proposed 15,000 sf space for the Elwood Public Library would increase its area by approximately 67 percent (from its current location), to better provide resources and services to the community and would be an amenity as a public space. As noted above, the proposed action will also result in an increase of employment, both short-term construction jobs and long-term job opportunities. The retail, office, and other uses on the site will bring a more active presence to this portion of the Jericho Turnpike corridor and the Elwood area. Further, the proposed action will help to upgrade the appearance of the Jericho Turnpike corridor, notably by replacing the existing sand mounds on-site with a well-designed, attractively landscaped, high-quality mixed-use development—something that is called for along Jericho Turnpike, where many portions are devoted to strip retail development at risk of obsolescence.

Finally, the proposed action will also end the unauthorized use of the subject property by operators of ATVs, paintball enthusiasts, and similar uses that represent safety and security concerns for the community.

2.5 Construction

Construction of the proposed action is anticipated to occur in one, 18-month phase, and will begin as soon as practicable following the completion of the rezoning and site plan approval processes and building permit issuance. While the precise construction schedule cannot be determined at this time, upon securing site plan

approval and a building permit(s), it is anticipated that construction will commence on the two outermost standalone buildings simultaneously with that of the main structure. The main building will be constructed from east to west, followed by the two-story westerly and the easterly "end cap" standalone structures, concluded by the remaining three standalone structures. Construction activities will not occur outside of weekday daytime hours (7 AM to 6 PM) per Chapter 141 of the Town Code, such that construction-related noise impacts would be minimized. Further details with regard to construction are included in Section 3.11.

2.6 Required Permits and Approvals

The permits and approvals that are required for implementation of the proposed action are presented in Table 2:

Table 2 – Permits and Approvals Required

Applicable Board/Agency	Permit/Approval Type
Town Board	Change of Zone(A)
	Amendment to Town of Huntington Comprehensive Plan
Town Zoning Board of Appeals	Variance (Sec. 198-10(G) &198-70(B); more than one building on lot)
Town Planning Board	
	Change of Zone Review
	Site Plan
	Lot Line Change and Subdivision
Town Building Department	Building Permits (incl. sign permits)
	239f Review (to Suffolk County Department of Public Works [SCDPW])
Town Engineering Department	Roadwork Permit
Town Fire Marshal	Site Plan Review
Suffolk County Department of Health Services	Article 6 (Wastewater Disposal System Design) and Article 4 (Water Supply System Design) permits
Suffolk County Planning Commission	239-m Referral
GWD	Water Supply and Connection Approvals
New York State Department of Transportation (NYSDOT)	Highway Work Permit
NYSDEC	SPDES General Permit for Stormwater (GP-0-15-002)

Note (A) – Amendment of the Town of Huntington Comprehensive Plan by the Town Board is also sought in connection with the proposed action.

3.0

Existing Conditions, Anticipated Impacts and Proposed Mitigation

3.1 Land Use, Zoning, and Public Policy

3.1.1 Existing Conditions

3.1.1.1 Land Use

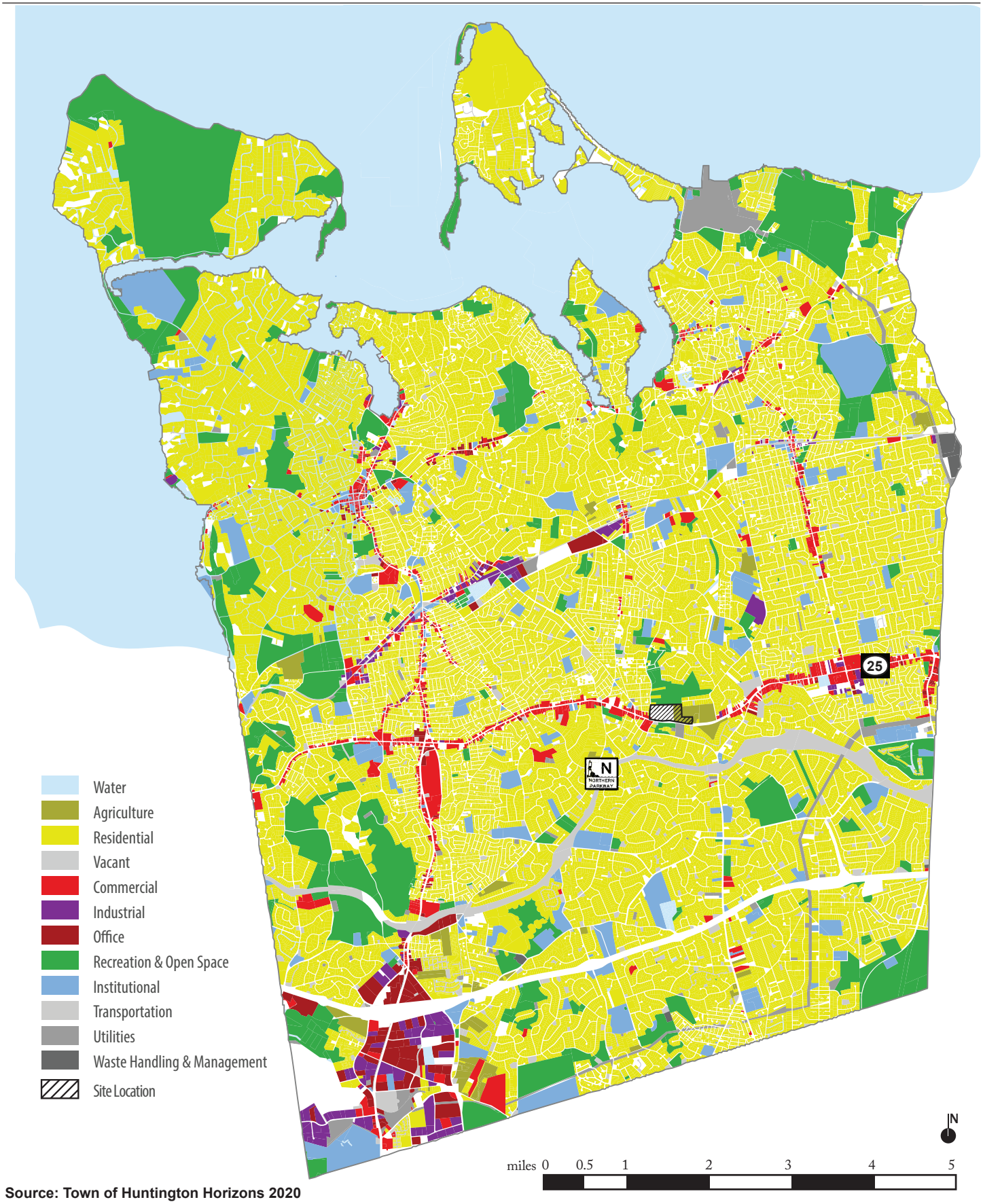
Land use information is based on existing conditions that were identified from a combination of field surveys, the use of aerial photographs through GoogleEarth, and the analyses put forth in the Town of Huntington's *Horizons 2020: Comprehensive Plan Update* (December 2008) (hereinafter referred to as, "Horizons 2020"). Generalized existing land use taken from Horizons 2020 is presented in Figure 4. As depicted on Figure 4, the Town has not categorized the existing land use on the majority of the subject property but shows it as a blank land use area straddled between the commercial uses that dominate the corridor to the west, including the southwest corner of the subject property, and the agricultural and open space uses immediately to the east. The Town's generalized existing land use map (Figure 6-1 of the Horizons 2020 plan) shows the easternmost portion of the subject property that is currently occupied by a single-family residence and undeveloped land as an agricultural use, which is not the existing condition nor was it the existing condition when the Town approved Horizons 2020.

More specifically, the majority of the subject property is undeveloped, outside of the commercial uses located at the northeastern corner of the intersection of Manor Road and Jericho Turnpike, which consist of a nail salon, restaurant, laundromat, and a vacant space and a single-family residence located at the southeastern portion of the subject property. It is noted that the subject property is not entirely undeveloped and

wooded but has areas of disturbance, largely within the central and southern portions, associated with historic grading and sand mining.

There are well-defined boundaries that physically separate the subject property from adjacent uses, notably Manor Road, Jericho Turnpike, and the topography to the north and east. Land uses immediately adjacent to the subject property to the west, fronting along Jericho Turnpike are commercial (including retail, office, automobile uses, fast food restaurants, etc.), with single-family residential uses farther off of the corridor. To the north of the subject property is an open space and recreational use, Berkeley Jackson County Park. South of the subject property are residential uses and open space owned by a homeowners association. Immediately to the east of the subject property are agricultural uses until approximately Warner Road. On the south side of Jericho Turnpike to the east of the subject property are institutional (utility) uses, including an office building for AT&T, as well as a water tower for GWD. Appendix B presents a detailed land use and zoning analysis for the subject property and includes photographs of the site and surrounding land uses.

It is noteworthy that the subject property falls essentially within the only portion of the Jericho Turnpike corridor, a well-established commercial corridor, (from its border in the west with Woodbury in the Town of Oyster Bay in Nassau County to its border with the Town of Smithtown in the east) that is not dominated by commercial uses. Although the types of commercial uses vary along that corridor, it can be generally characterized as typical suburban automobile-oriented commercial. Further, the subject property abuts the eastern end of the established Jericho Turnpike commercial corridor to the west, is situated opposite an existing commercial retail shopping center, and has a depth similar to neighboring business uses to the west. Residential uses dominate the areas surrounding the Jericho Turnpike corridor only after one travels beyond the commercial retail and business uses. A variety of sporadic land uses such as institutional, recreational, and industrial, etc., are scattered amongst those residential areas.



Source: Town of Huntington Horizons 2020

vhb

VILLADOM-ELWOOD ORCHARD
Huntington, New York

Generalized Existing Land Use

Figure **4**

3.1.1.2 Zoning

Existing zoning on and in the surrounding area is illustrated in Figure 5 and described below.

Existing Zoning

Of the 56.01-acre subject property, the existing strip retail center within the southwest portion of the site is zoned C-6 (General Business) (approximately 0.35-acre), with the remaining 55.66 acres zoned R-40 (Residence).

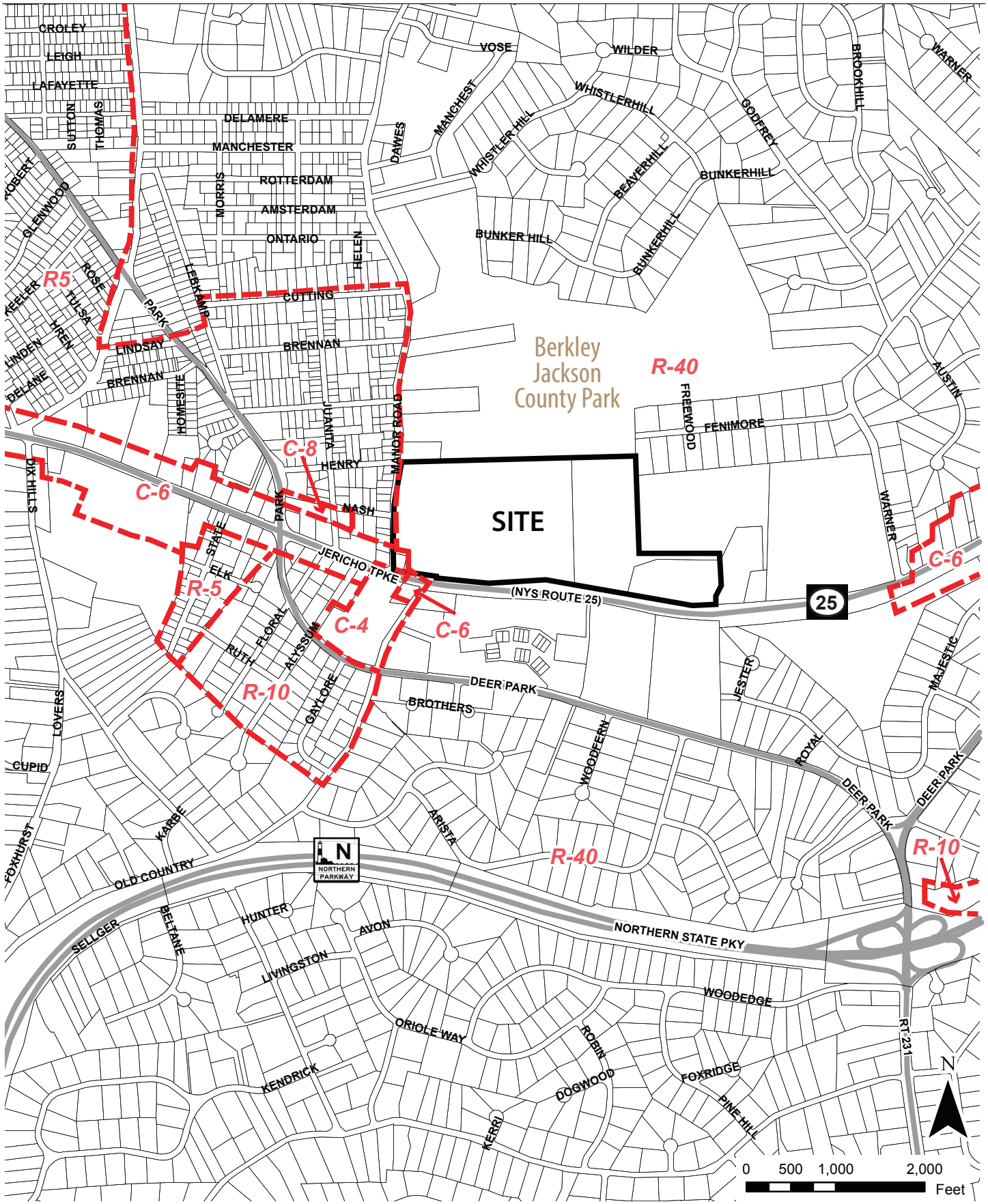
As Figure 5 indicates, properties to the west of the subject property along Jericho Turnpike are located within the C-6 District, outside of the shopping center south of the subject property (which is within the C-4 [Neighborhood Business] District) and a small area off of Juanita Avenue west of the subject property (which is within the C-8 [General Business A] District). Farther off of Jericho Turnpike, residential properties to the west of the subject property are within the R-5 (Residence), R-10 (Residence), and R-40 (Residence) Districts. The properties north and south of the subject property are primarily within the R-40 District, outside of the properties immediately off of Jericho Turnpike beginning approximately at Warner Road. As with land use, the subject property contains a different zoning pattern than the rest of the Jericho Turnpike corridor (i.e., residential zoning as compared to commercial zoning for the remainder of the corridor).

Description of Zoning Districts

What follows is a brief description of each of the zoning districts within the Town of Huntington that are in the vicinity of the subject property.

Commercial Districts

- **C-4 (Neighborhood Business):** The C-4 District is one of 14 commercial districts in the Town of Huntington. Permitted uses in this district include: single-family dwellings, retail stores, personal service establishments, restaurants (without drive-in), business and professional offices, day-care centers, and convenience markets. Conditional uses include dry-cleaning and Laundromats, drive-in food shops, other retail or personal service uses with drive-in, including banks. The C-4 District has a maximum building height of 2 stories or 35 feet. Maximum building coverage for non-residential uses is 40 percent. The residential uses that are permitted are limited to single-family homes on minimum 5,000 sf lots.



VILLADOM-ELWOOD ORCHARD
Huntington, New York

Exisiting Zoning

Figure
5

- **C-6 (General Business):** The C-6 District is one of 14 commercial districts in the Town of Huntington. Permitted uses in the C-6 District include: places of worship, hospitals, municipal and community service uses, public utilities, cultural and recreational facilities, professional and medical offices, banks, public service establishments, restaurants (without drive-in), automobile parking lots, research and development, game rooms, mixed-use, day-care centers, and convenience markets. Conditional uses include outdoor storage and displays, automobile sales, lumber yards, car washes, animal hospitals, theaters, and places of entertainment. Residential is prohibited within the C-6 District. The C-6 District has a maximum building height of 3 stories or 45 feet and no other bulk or lot controls.

- **C-8 (General Business A):** The C-8 District is one of 14 commercial districts in the Town of Huntington. Permitted uses in the C-8 District include: single-family dwellings, retail stores, personal service establishments, restaurants (without drive-in), business and professional offices, day-care centers, convenience markets, and game rooms. Conditional uses include dry-cleaning and Laundromats, drive-in food shops, other retail or personal service uses with drive-in, including banks. The C-8 District has a maximum building height of 2 stories or 35 feet. Maximum building coverage for non-residential uses is 50 percent. The residential uses that are permitted in the C-8 District are limited to single-family homes on minimum 5,000 sf lots.

Residential Districts

- **R-40 (Residence):** The R-40 District is one of 10 residential districts in the Town of Huntington. Permitted uses in the R-40 District include: single-family dwellings, farms and other agricultural uses, places of worship, schools, libraries, museums, art galleries, Town recreational uses, municipal parking fields, fire stations, and municipal water supply. The R-40 District has a maximum building height of two stories or 35 feet. The residential uses that are permitted in the R-40 District are limited to single-family homes on minimum two-acre lots.

- **R-10 (Residence):** The R-10 District is one of 10 residential districts in the Town of Huntington. Permitted uses in the R-10 District include: single-family dwellings, farms and other agricultural uses, places of worship, schools, libraries, museums, art galleries, Town recreational uses, municipal parking fields, fire stations, and municipal water supply. The R-10 District has a maximum building height of two stories or 35 feet. The residential uses that are permitted in the R-40 District are limited to single-family homes on minimum 10,000 sf lots.

- **R-5 (Residence):** The R-5 District is one of 10 residential districts in the Town of Huntington. Permitted uses in the R-5 District include: single-family dwellings, two-family dwellings, farms and other agricultural uses, places of worship, schools, libraries, museums, art galleries, Town recreational uses, municipal parking fields, fire stations, and municipal water supply. Conditional uses

include boardinghouses and conversions from single-family to two-family dwellings. The R-5 District has a maximum building height of two stories or 35 feet. The minimum lot size for single-family dwellings is 5,000 sf; for two-family dwellings it is 10,000 sf.

3.1.1.3 Public Policy

In addition to the Town's codes and regulations, the Town has also developed a comprehensive plan that relates to land use and zoning. This local document, along with County and regional documents, which contain discussions of the subject property, are presented below.

Town of Huntington

Horizons 2020: Comprehensive Plan Update

In 2008, the Town prepared a comprehensive plan update based on valuable community input, entitled Horizons 2020, which was adopted by the Town Board. The primary purpose of Horizons 2020 is to "…provide a common direction, framework, or 'roadmap' that can be used to proactively manage future change." Horizons 2020 contains a vision statement or "Vision of Huntington" targeted towards four themes:

- Community Character
- Quality of Life
- Sustainable Community Structure
- Responsive Town Government

In order to implement these themes, a number of key initiatives were identified:

- Traffic Circulation
- Open Space Preservation
- Housing
- Development Quality
- Commercial Corridors
- Sustainable Huntington

Horizons 2020 then discusses seven plan elements:

- Environmental resources/open space
- Community character
- Community facilities
- Land use
- Economic development
- Transportation
- Housing

For each plan element, the discussion includes an overview, a summary of key issues, and policies and strategies. With respect to land use policies, major objectives include:

- Improve the economic viability, visual quality, and pedestrian character of automobile-oriented commercial corridors and centers;
- Target marginal and obsolescent land uses that detract from the Town's character for reinvestment and redevelopment with new uses that support quality of life and economic vitality; and
- Minimize conflicts between incompatible land uses, particularly older industrial areas and retail corridors next to residential neighborhoods.

To achieve the land use goals and objectives, a series of land use policy recommendations were developed to target different types of land use patterns such as major commercial corridors and centers, minor commercial corridors, and arterial roadways with predominantly residential uses. Horizons 2020 recommends evaluating existing zoning within the Town's commercial areas to identify zoning designations most appropriate to local conditions. Specifically, Horizons 2020 recognizes the importance of managing change in major commercial corridors and centers that will experience obsolescence and pressure for redevelopment, including the Melville Employment Center, Jericho Turnpike, and Route 110 south of Jericho Turnpike. Land use strategies directly pertinent to the Jericho Turnpike corridor include:

- Enact regulations and standards to improve development patterns, visual character, traffic circulation, and the pedestrian environments;

- Focus more intense commercial/mixed-use development in appropriately located "nodes" along Jericho Turnpike, with less intense development between the nodes.

In addition, a number of geographic areas with the greatest potential for change where future development can be concentrated are identified in Horizons 2020 as focal areas, including hamlet areas such as Cold Spring Harbor, East Northport, Greenlawn, Huntington Station, and Huntington Village and commercial corridors such as the Melville Employment Center, Jericho Turnpike, Route 110, and minor commercial corridors. Although the subject property lies along Jericho Turnpike, as defined in Horizons 2020, only a portion of the site is located within the Jericho Turnpike Commercial Corridor (the western segment), with the remainder lying between the eastern and western segments of that commercial corridor.

Although the subject property itself is not discussed specifically within Horizons 2020, there are a number of strategies and policies that apply to the subject property, especially as a component of the Jericho Turnpike corridor. These are discussed within Section 3.1.2.3 below.

Suffolk County

In addition to local policy, Suffolk County has produced a number of reports and studies over the past few decades related to land use, zoning, development, and policy.

Framework for the Future - Suffolk County Comprehensive Master Plan 2035
Most recently, the County has adopted a comprehensive plan, entitled "*Framework for the Future - Suffolk County Comprehensive Master Plan 2035*" (Comprehensive Plan). The Comprehensive Plan states:

> *Suffolk County is at a turning point in its history; the existing pattern of low-density residential development with scattered single-use commercial areas can no longer be sustained by the network of transportation, water, and wastewater infrastructure, cannot easily accommodate any additional residential growth or economic development, and is not resilient to large scale disruption such as that caused by Superstorm Sandy.*

Among the long-term planning goals for the County identified within the Comprehensive Plan, two are relevant to the proposed action and center on "sustainable and continued growth for Suffolk County" (p. 2) to wit:

1. Provide the foundation for sustainable growth and resiliency of Suffolk County.
2. Encourage economic development that will help to retain and attract businesses and create jobs for Suffolk County residents.

The Comprehensive Plan acknowledges that such goals are "aspirational and long-term," and are discussed in more manageable objectives below.

1. ***Build a 21st Century Transit Network to Provide More Transportation Choices to Improve Mobility, Access and Safety***

   Develop a range of transportation choices to decrease household transportation costs, improve air quality, reduce greenhouse gas emissions and promote public health.

2. ***Provide Equitable, Affordable, Fair Housing***

   Expand the variety of housing choices for all people. Develop housing near transit to increase mobility and lower the combined cost of housing and transportation. Encourage energy efficient retrofits.

3. ***Enhance Economic Competitiveness and Capacity to Build an Innovation Economy***

Enhance economic competitiveness through improving access to employment centers, educational opportunities, services, and other basic worker needs, as well as expanding business access to local, regional, national, and international markets.

4. ***Support Vibrant Communities***

   Target funding toward existing communities, for transit oriented development, expanded wastewater infrastructure, and land recycling—to promote community revitalization, resiliency, and preserve natural resources.

5. ***Streamline Government, Coordinate Policies, and Leverage Investment***

   Align policies and funding to remove barriers to collaboration. Streamline and coordinate governmental efforts, policies, and programs to better enable leveraging of investment of public and private funds expended.

6. ***Protect the Environment and Enhance Our Human Capital***

   Continue to promote open space preservation, and green and sustainable energy production and conservation; invest in human capital; mitigate threats to the quality of groundwater and surface waters; and address solid wastes.

The subject property is not specifically referenced within the Comprehensive Plan, nor are there recommendations provided therein that are targeted at this property or area of Suffolk County. Nonetheless, a consistency analysis of the proposed action with the above-described elements of the Comprehensive Plan is provided in Section 3.1.2, below.

Other Studies

The County has a long history of planning on the county level. Two reports that have relevance are described below:

- *Land Available for Development and Population Analysis of Western Suffolk County* (2009)—As indicated in the title of the report, an analysis was conducted to look at available land in the western portions of the County in support of the development of the *Suffolk County Comprehensive Water Resources Management Plan*. On the Town of Huntington "Land Available for Development" map, the subject property is identified in two categories: 1) "Vacant Residentially Zoned Lots ≥6,000 sq. ft." (for the western portion of the site); and 2) "Agricultural Residentially Zoned Lots ≥6,000 sq. ft." (for the eastern portion of the site). It is noted that the existing retail strip is not accounted for by either of these land categories although it was developed at the time of publication.

- *2007 Existing Land Use Inventory Western Suffolk County* (2007)—This study was performed so that the County could have a consistent inventory of land use. On the 2007 Existing Land Use Map for the Town of Huntington, the existing land

use of the subject property is classified in three categories: 1) "Commercial" for the retail strip; 2) "Vacant" for the western portion of the site; and 3) "Agricultural" for the eastern portion of the site. It is noted that the existing single-family residence is not categorized by any of these land use categories.

3.1.2 Anticipated Impacts

3.1.2.1 Land Use

As the property where the existing single-family residence exists would be subdivided from the overall property and would retain its existing R-40 zoning and single-family residential use, this analysis focuses on the 49.28±-acre portion of the subject property proposed to be rezoned to C-5 (Planned Shopping Center) Zoning District from its current R-40 (Residential) and C-6 (General Business) Zoning Districts. Provided below is a consistency analysis of the proposed action with local land use. In addition, a detailed land use and zoning analysis is provided in Appendix B.

The proposed action will change the land use of the subject property from retail and vacant to mixed-use (e.g., retail, restaurant, supermarket, office, fitness center, and library). As discussed in Section 3.1.1, the subject property is located within the mixed-use, largely commercial Jericho Turnpike corridor. Specifically, the area immediately adjacent to the subject property to the southwest contains a mix of retail and service uses while just beyond Manor Road to the west fronting along Jericho Turnpike are numerous commercial uses including retail, office, automobile uses, fast food restaurants, etc., with single-family residential uses farther off of the corridor. Further, along the Jericho Turnpike corridor to both the east and west of the subject property, there are no fewer than eight shopping centers identified that range from neighborhood centers of 52,950 square feet in Huntington Station to the largest, a regional shopping center of 345,000 s.f. in Commack. Low vacancy rates in these existing shopping centers indicates a relatively strong market demand for retail and commercial services along the corridor. The provision of an additional mix of uses, including the proposed retail, restaurant, and supermarket uses on the subject property will be consistent with this pattern and will begin to fill in the commercial gap between Manor Road and Warner Road.

Moreover, retail uses currently exist on the southwestern portion of the site. Therefore, that portion of the subject property will not have a change of use with the proposed action. Rather, there will be a change in the intensity of the use. Although the proposed action will introduce a new land use to the rest of the subject property, the proposed mix of uses will be consistent with the mixed-use nature of the Jericho Turnpike commercial corridor. The proposed action would establish a mix of commercial uses that extends a greater distance from the roadway (variable, typically between 680± and 730± feet) than several other developed commercial uses along the

corridor. However, commercial properties with similar and greater depths are identifiable throughout the area. Opposite the subject property, the existing Dix Hills Plaza shopping center extends between 680± and 770± feet in depth from Jericho Turnpike. The AT&T facility, also opposite the subject property, extends the full distance between Jericho Turnpike and Park Avenue, up to 880± feet. To the east, the Huntington Square retail developments are typically 675± feet in depth from Jericho Turnpike. Along the north side of the corridor in this vicinity, virtually every commercial use between Verleye Avenue and Larkfield Road extends between 600± and 880± feet in depth. The shopping center at the northeast corner of Jericho Turnpike and Larkfield Road (containing a Home Depot and other retailers) extends 875± feet from Jericho Turnpike. To the west of the subject property, the Mercedes Benz dealership extends up to 500± feet in depth, and the Stop & Shop supermarket opposite the dealership extends roughly 460 feet. Farther west, to the east of Emerald Lane, auto dealership and indoor recreational uses extend upwards of 800 feet from the roadway. Some of the uses identified above are within commercial nodes (see discussion in Section 3.1.2.3, below), and others are not. However, it is clear that commercial uses with similar or greater depths from Jericho Turnpike to those proposed at the subject property are an established component of the land use character of the corridor.

Although the proposed mix of uses will not continue the patterns of the adjacent areas to the north, east, and south, which are primarily residential or open space uses, the topography of the subject property and the design and landscaping of the proposed action will minimize any impacts resulting from the change in land use from vacant and retail. In addition, Berkeley Jackson County Park as well as the proposed vegetated setback areas will also serve as a buffer between the proposed mix of commercial uses and existing residential developments.

As such, the proposed action is consistent with local land use patterns and will not have a significant adverse impact on land use in the surrounding area.

3.1.2.2 Zoning

As stated, the proposed action involves rezoning the central and western 49.28± acres from its current mix of C-6 and R-40 to the C-5 District. The eastern 6.73 acres zoned R-40 and occupied by a single-family residence, will remain unchanged and will be subdivided from the remaining property. Provided below is an analysis of how the proposed action is appropriate for the subject property as it relates to zoning. In addition, a detailed land use and zoning analysis is provided in Appendix B.

3.1.2.2.1 Appropriateness of the C-5 District for the Subject property

> § 198-26 of the Town Code states regarding the C-5 District: *The regulations set forth in this section or set forth elsewhere and referring to this section are established to provide for retail shopping facilities composed principally of groups of retail and service establishments of integrated design, intended to serve community-wide or regional needs as well as those of local neighborhoods.*

As can be seen from its intent, the C-5 District has been designed by the Town to provide for the type of land uses represented by the proposed mixed-use development (i.e., a mix of retail, restaurant, supermarket, office, fitness center, and a library within an integrated design that would serve the existing community and local neighborhoods).

The existing zoning of the subject property is less desirable than the C-5 District as Jericho Turnpike is a high volume commercial corridor and the current R-40 District zoning allowing single-family residential uses would be in conflict with the uses and zoning pattern found along the corridor to the east and west of the subject property. In addition, as noted in Horizons 2020, the C-6 District is a general business district that does not promote high-quality development whereas the C-5 District promotes architectural and design quality that would be achieved by the proposed project. Moreover, rezoning the subject property from its existing zoning to the C-5 District is justified based on several aspects: 1) the size of the site; 2) the steep slopes present on-site; and 3) its location along Jericho Turnpike. Therefore, a plan for the subject property without the C-5 District would not allow and promote high-quality mixed-use development nor improve development patterns or visual character as noted in Horizons 2020 that would complement adjacent properties and strengthen the Jericho Turnpike corridor and the Town as a whole (this plan is represented by the Existing Zoning Alternative provided in Section 5.0).

The 6.73-acre portion of the subject property to remain within the R-40 zone would be contiguous to nearly 50 additional acres of property to the east that are also zoned R-40. The balance of the large R-40 district that is developed with various residential and agricultural uses extends to the north, east, south and northwest.

In sum, the proposed action is consistent with local zoning patterns and will not have a significant adverse impact on local zoning.

3.1.2.2.2 Compliance With the C-5 Zoning District

The proposed uses—retail, office, supermarket, restaurant, fitness center, library, parking—are all permitted and/or accessory uses within the C-5 District and the proposed design would be in conformance with all applicable lot and bulk requirements of the C-5 District, as set forth in Table 3.

Table 3 – C-5 District Requirements

Zoning Requirements	Required/Allowed	Proposed
Minimum Lot Area	2 acres	49.28 acres
Maximum Building Coverage	25%	13%
Minimum Yards		
Front	50 feet	85 feet
1 Side	35 feet	255 feet
1 Side (corner lot)	50 feet	90 feet
Rear	35 feet	250 feet
Maximum Height	2 stories/36 feet	2 stories

Pursuant to §198-70(B) of the Code of the Town of Huntington, "[i]n the case of commercial and industrial districts, there shall be only one (1) main building on a lot." A similar provision is set forth in §198-10(G), however, more than one main building may be permitted (by the Planning Board and after a public hearing) if, among other things, improved site design may be achieved by locating more than one building.

A total of six main buildings are proposed, arranged in a campus-type layout. This layout is intended to maximize the benefits of shared parking among the uses on the site, and reduce overall pedestrian activity within parking areas, as parking is provided in proximity to each of the individual proposed uses. Additionally, this layout provides for improved vehicular access and site circulation, as compared with a design that provides separate ingress/egress onto the roadway for each proposed building (as may be the condition if separate lots were created). The criteria for Planning Board consideration, with regard to this matter, is set forth at §198-10(G):

- No overall increase in building coverage results from the proposed layout, beyond what could otherwise be achieved
- No more than one main building, where more than one, of less than 10,000 square feet
- No main buildings would be located within 100 feet of a front property line
- No main buildings would be located within 50 feet of a residence district boundary

It is noted that the proposed layout does not meet the criterion whereby any additional buildings on a lot, in a commercial or industrial zoning district, may not be less than 10,000 square feet. The proposed action includes three standalone buildings with less than 10,000 square feet. As such, and as previously indicated, a variance is required from the Zoning Board of Appeals.

Town of Huntington

Provided below is a consistency analysis of the proposed project with the goals, policies, and strategies presented in the *Horizons 2020 Comprehensive Plan Update*. Horizons 2020 consists of a vision statement, seven focus areas (or elements), a section on Geographic Focus Areas where future development can be concentrated, and an Implementation Plan to guide the Town in achieving their vision for 2020. The following is a summary of the analysis of each section of the plan and the alignment between the relevant goals, policies and strategies and the proposed project.

Vision Statement

Horizons 2020 begins with a vision statement that outlines four fundamental elements, including: Community Character, Quality of Life, Sustainable Community Structure and Responsive Town Government. The proposed project is consistent with the three applicable elements as follows:

Community Character: The proposed project has been designed to be an aesthetically pleasing, mixed-used development that will complement and improve the character of the subject property and the Jericho Turnpike corridor through strategic building massing and location, landscaped islands, and native vegetation placed around the site. An attractive community entrance sign with landscaping and spotlighting will welcome visitors at the entrance at Jericho Turnpike. Further, the proposed project will provide a high-quality mixed-commercial development at an underutilized site improving on the existing commercial and disturbed portions of the subject property. The proposed project will also embrace environmental stewardship by protecting steep slopes, removing invasive species that threaten to choke out indigenous plants, and replanting the site with native species.

Quality of Life: A proposed library is part of the overall development. The Town has highlighted that quality schools, parks and other community facilities are important components of their vision for 2020. Providing a space for the Elwood Public Library on site, that is approximately 67 percent larger than its present location, would help the local neighborhood and community achieve part of the vision for improved quality of life and access to community facilities. Further, consistent with Horizons 2020, the proposed project would target a site that could be considered a marginal land use to create a new mix of high quality uses that would support quality of life and economic vitality within the neighborhood, community, and Town along a recognized primary commercial corridor.

Sustainable Community Structure: Sustainable development is an important component of the Town's vision, and the proposed project provides for sustainable development by:

- Improving the Town's employment base by providing for a mix of short- and long-term employment opportunities including construction, retail, and professional positions. It is estimated that 750 full-time equivalent (FTE) short-term (i.e., construction related) jobs will be created and 950 FTE long-term (i.e., operation related) positions will be created. This is a significant improvement over the existing 29 employees that are currently employed on the site.

- Installing a sustainable stormwater infrastructure system as part of the proposed project that includes distributed infiltration throughout the site to promote groundwater recharge. The proposed drainage system will utilize subsurface leaching pools distributed throughout the developed area of the subject property to take advantage of the site's natural topography. The amount of runoff will be reduced through the installation of roadside catch basins to direct runoff to stormwater drywells, in accordance with best management practices identified in the NURP Study.

- Revitalizing the Jericho Turnpike corridor in that the proposed project will improve site aesthetics, make beneficial use of an underutilized parcel, and provide a mix of high quality commercial uses along an existing commercial corridor that will serve the local surrounding neighborhoods and community while supporting economic vitality.

Environmental Resources and Open Space

Policy A.1.: Strengthen protection of sensitive environmental resources by applying best management practices through Huntington's development regulations

> ***Strategy A.1.4: Apply appropriate environmental criteria (e.g., sensitivity and extent of natural features, implications for water resources) in regulating development intensity/density.***
>
> The proposed action has been configured to occupy the lower slopes in the southern portion of the subject property to minimize the impact to the steep slope area farther to the north. Slopes located in the southwestern quadrant and southern end of the property will be altered for building and parking lot construction. A portion of these slopes are unvegetated man-made features that are highly erodible and are visually unappealing. Development will stabilize these areas, thereby preventing further erosion of the property. In general,

the proposed development includes the clearing and grading of the subject property to create a "bench" that slopes downward gently to the south (toward Jericho Turnpike), where the majority of the drainage system will intercept and recharge stormwater runoff. As such, as a result of the site design techniques and best management practices, it is expected that topographic impacts will be minimal and will be minimized to a maximum extent practicable.

In addition, site disturbance will be minimized to the maximum extent practicable, including delineating tree-clearing limits, prior to construction to avoid inadvertent clearing. Approximately 14.19 acres of existing habitats will be retained including approximately 12.16 acres of Coastal Oak-Laurel Forest thereby continuing to provide habitat on-site while allowing for wildlife corridors and habitat for those species that are tolerant and/or dependent on human activity. In addition to protecting 7.85 acres adjacent to Berkeley Jackson County Park as open space, the proposed project will not harm any of the Town's systems, fragile habitat or native plant or animal species. Further, planting of native species in landscaped areas such as pines, oaks, maples, blueberry, bayberry and mountain laurel will help accelerate the process of succession, while minimizing the potential for colonization by introduced species, thereby providing some mitigation for the loss of habitat.

It is anticipated that an in-ground irrigation system, one of the most efficient systems, will be installed, as this type of irrigation system minimizes evaporative loss to the greatest practicable degree. Water-conserving plumbing fixtures, mechanical systems, and rain sensors on irrigation systems will be utilized in construction, which will further minimize the volume of water required from the public water supply. Moreover, as discussed above and below, the proposed stormwater system will help to minimize any potential impacts to groundwater quality.

Policy A.2: Protect Huntington's water resources

Strategy A.2.3: Require/encourage stormwater management practices that minimize impacts on surface water, groundwater, and other natural resources, e.g.:

- ***Filtering and recharge designs for stormwater management facilities that blend into the existing landscape***

As discussed above, the proposed project will minimize impacts to groundwater and surface water through a sustainable stormwater infrastructure system. The proposed drainage system will utilize

subsurface leaching pools distributed throughout the proposed development to take advantage of the site's natural topography as well as the anticipated grading program. The drainage system's capacity will exceed the minimum volume required by the Town. The drainage system will also be designed to comply with New York State Pollutant Discharge Elimination System (SPDES) requirements.

Policy A.5: Permanently preserve Huntington's unique environmental resources

Strategy A.5.3: Promote protection of native species and prevent/remove invasive species

According to Horizons 2020, the Town has "an exceptional collection of natural systems, habitats, and indigenous plant and animal species." In addition to protecting 7.85 acres adjacent to Berkeley Jackson County Park as open space, the proposed project will not harm any of the Town's systems, fragile habitat or native plant or animal species. In fact, some of the land that will be cleared for the proposed project largely consists of invasive species. This proposed project will remove those invasive species and replace them with native species in landscaped areas, and will include pines, oaks, maples, blueberry, bayberry and mountain laurel.

Policy A.6: Provide citizen educational programs on environmental stewardship, the interrelationships of natural systems, and the need for a sustainable environment

Strategy A.6.3: Encourage the use of green building and environmentally sensitive construction principles that promote positive environmental benefits, such as reduced energy consumption and waste generation

A primary goal of the proposed project is to create a high quality mixed-use development that is energy efficient and environmentally sustainable. The proposed project will utilize energy efficient design standards to minimize energy consumption at the site. In addition, the proposed project will meet the Town's Energy Code standards and the State of New York's Energy Conservation Construction Code.

Policy A.8: Preserve open space within new developments

Strategy A.8.1: Require a minimum open space set aside within new developments, together with standards to ensure that the open space is meaningful and publicly accessible.

Policy A.9: Leverage public and private resources to create the townwide open space and greenway network

Strategy A.9.1: Work with private landowners and non-profit land conservation organizations to protect privately owned open space through techniques such as conservation easements and limited development options

Given that there is very little vacant land that remains in the Town that is natural and undeveloped, the Town has identified several policies and strategies that aim to work with developers to preserve open space and greenway networks. The subject property is identified within the Town of Huntington's Open Space Index as parcel #NE-43, designated a Priority 3 for the presence of slopes in excess of 15 percent. Within the 2008 *Town of Huntington 10-Year Environmental Open Space and Park (EOSPA) Fund and Land Conservation Progress Report with Future Recommendations* report (hereinafter, the "2008 EOSPA Report"), the subject property and adjoining property to the east, consisting of 103.5± acres, is identified as being among a total of 485.22 acres of potential open space that is unavailable. The goals and objectives of the project sponsor would not be met by preservation of the subject property. However, the proposed action would include the existing commercial and disturbed portions of the site within the proposed development area, and set aside 7.85 acres (12% of the subject property) as open space. This portion of the subject property will not only remain undeveloped and be protected in perpetuity, but it directly abuts Berkley Jackson County Park, a large, passive recreation site that is also undisturbed open space, thereby contributing to the network of greenways the Town is hoping to preserve. It should be noted that, if the adjacent property to the east of the subject property, or any portion thereof, were to become open space in the future, there would be an opportunity for any such open space to be contiguous to portions of the subject property to remain undeveloped.

Community Character

Policy B.5: "Raise the bar" on the visual character of private development through improved design standards and regulations and through targeted redevelopment.

Strategy B.5.1: Enact improved design standards for developments that exceed designated thresholds (e.g., size limits, exclusion for single-family homes). These standards should be appropriate to the local context and address design elements.

Horizons 2020 states that the Town wants to "raise the bar" and project a more positive image of Huntington through both public and private developments. Strategy B.5.1, includes several important design elements that the proposed project addresses:

- *Building design.* Jericho Turnpike is a predominantly commercial corridor with many areas of antiquated strip mall style development. The site and building design and landscaping associated with the proposed project will provide for a high-quality mixed-commercial development that will enhance the appearance of Jericho Turnpike through strategically oriented buildings in a campus setting, diverse building sizes and heights, and welcoming signage at the entrance.

- *Landscaping.* An important element of the proposed project is to create an attractive, visually pleasing, mixed-use environment. The proposed project will include landscaping that is distributed: 1) within landscaped islands throughout surface parking areas, 2) along and among the buildings, and 3) along site boundaries. The plant species will be native to Long Island or compatible with regional climatic conditions. The landscape vegetation will provide an attractive transition between the natural vegetation on adjacent properties and the developed areas of the project site.

- *Lighting.* Lighting will be designed in accordance with the Town's new lighting ordinance. In addition, only "dark sky" compliant luminaries will be used. These fixtures will minimize the adverse impacts of viewing the nighttime sky onsite, as well as in the surrounding neighborhoods.

Community Facilities

Policy C.3: Work with service providers to pursue a variety of approaches to address community facility and service costs.

Strategy C.3.1: Promote compatible economic development projects that strengthen the commercial tax base.

Strategy C.3.4: Promote partnerships among service providers and between providers and private organizations, institutions, and businesses to help meet community facility and service needs.

Horizons 2020 identified rising property taxes as a major future issue and threat to the Town. The proposed project will be a local and regional economic development project that will increase retail and commercial opportunities and in turn, increase tax revenues, all without generating additional school-aged children or potentially increasing property taxes. As discussed in detail below, the proposed project will provide an additional, $3,873,535 in total tax revenues per year, including $2,792,706 for the Elwood Union Free School District (UFSD).

Also, as noted above, the proposed project will provide additional local and regional employment opportunities, both temporary and permanent.

Land Use

Policy D.2: Manage change to achieve Comprehensive Plan goals and policies in major commercial corridors and centers that will experience obsolescence and pressures for redevelopment, including the Melville Employment Center, Jericho Turnpike, and Route 110 south of Jericho Turnpike

Strategy D.2.1: Enact regulations and standards to improve development patterns, visual character, traffic circulation (i.e., access management), and the pedestrian environment in major commercial centers and corridors.

Strategy D.2.3: Focus more intense commercial/mixed-use development in appropriately located "nodes" along Jericho Turnpike, with less intense development between the nodes.

The proposed project, as mentioned above, is consistent with the Town's objective to address how to sensitively and responsibly develop some of the remaining vacant land in Huntington by balancing the need for providing a well-designed site that provides goods and services in a major commercial corridor (Jericho Turnpike). Through diverse and environmentally sound site design, high-quality architecture, and native landscaping the proposed project will improve the Jericho Turnpike corridor's character and function.

Horizons 2020 provides examples of criteria for establishing node locations, such as those identified along Jericho Turnpike including:

- *Good north-south as well as east-west roadway access.*
- *Larger, deeper lots with minimal environmental constraints.*
- *Compatibility with adjacent land uses.*
- *Redevelopment of previously developed properties as opposed to new (greenfield) development.*
- *Coordination with transit service.*

The proposed project meets four of the five node criteria including good north-south and east-west access from Manor Road and Jericho Turnpike, respectively; larger, deeper lots with minimal environmental constraints as portions of the subject property have been previously disturbed from prior sand mining and existing commercial development; compatibility with adjacent land uses as major commercial/mixed use activity centers are located to the east and west of the project site and with the exception of the project site and the residential and institutional (utility) uses to the south of the site, the entire Jericho Turnpike corridor is recognized as a major commercial/mixed use corridor; and redevelopment of previously developed properties due to prior on-site disturbance and development.

The project site is located between the only break in identified major commercial/mixed use nodes along Jericho Turnpike—the entire Jericho Turnpike corridor within the Town, with the exception of the project site, is located within a major commercial/mixed use node with major commercial/mixed use activity centers to the east and west of the project site. Further, although the section of Jericho Turnpike where the project site is located is not identified as a major commercial/mixed use corridor, a major commercial retail shopping center (Dix Hills Plaza), which comprises a supermarket, restaurants and other retail uses, is situated directly opposite the subject property to the south and southwest. Thus, the proposed project would conform to the uses that already primarily exist along the corridor and meets most of the criteria to be identified as an established commercial node along an already established commercial/mixed use corridor.

Policy D.4: Monitor pressures for land use change and protect residential character of heavily traveled corridors that remain in predominantly single-family use.

Strategy D.4.1: Strictly limit non-residential uses to locations where traffic and other pressures make road frontage less desirable for residential use.

The proposed project is located in the R-40 district. However, the current site, and most of the sites to the east and west of it, are

comprised of commercial uses. This site is suited to address Strategy D.4.1, which seeks to limit non-residential uses to places where traffic and other issues make residential uses less feasible along their frontage. Jericho Turnpike is a fully-developed commercial corridor, outside of the proposed project site. The proposed project will act as an extension and infill of the commercial corridor and is consistent with the overall vision for Jericho Turnpike as a major commercial and mixed use corridor.

The Horizons 2020 Generalized Future Land Use map labels the subject property as a Low Density Residential land use, which is inconsistent with the intent of the residential land use categories identified in Horizons 2020. According to Horizons 2020, the intent is to maintain and preserve the established character of existing residential neighborhoods and to address undesirable change such as deteriorating housing conditions or pressure for land use conversion along heavily traveled residential arterials. Yet the subject property is neither a site of an established residential neighborhood nor located along a heavily traveled residential arterial. On the contrary, the subject property is largely vacant and contains areas of prior disturbance, and is located along an established commercial corridor with frontage on a high volume state route. The commercial corridor is primarily characterized by active retail, commercial, and mixed uses fronting a busy road and buffering residential uses from the Jericho Turnpike.

Additionally, the Low Density Residential land use designation contradicts the recommended Major Commercial Corridor/Mixed Use overlay designation of the western portion of the site identified on the Generalized Future Land Use map provided in Horizons 2020. Therefore, the Low Density Residential land use designation of the subject property as delineated on the Horizons 2020 Generalized Future Land Use map cannot be justified from a plan consistency point of view.

Moreover, the Town expressed concern in Horizons 2020 about conflicts between land uses, stating the importance of "minimizing conflicts between incompatible land uses, particularly older industrial areas and retail corridors next to residential" and ensuring the "commercial uses are buffered from residential neighborhood, natural areas are maintained to reduce the conflicts." The proposed project includes plans to minimize any impacts to residential uses, by buffering the surrounding residential neighborhood with landscaping and ensuring natural areas are maintained to reduce any potential conflicts. Further, if the project site is recognized as a major commercial/mixed use corridor and is developed as such, the proposed uses would be compatible with the primary uses that exist along the Jericho Turnpike corridor to the east and west of the

subject property and thus would address the concern of creating land use conflicts between incompatible uses.

Policy D.6: Modernize and update development regulations for greater consistency, predictability, and effectiveness.

Strategy D.6.1: Strengthen standards for design character and quality (scale of commercial development, façade/architectural treatment, access management, corridor landscaping, single-family residential compatibility, etc.) to improve economic viability and encourage walkable centers.

As mentioned, the proposed project will increase retail and commercial opportunities available along a major commercial corridor identified by the Town and improve the economic viability, visual quality, and pedestrian character of a major automobile-oriented commercial corridor. The scale of the development is consistent with the uses along the Jericho Turnpike corridor and includes high-quality building design, distributed and native landscaping, attractive signage, improvements to site access and traffic flow, and provides goods and services to surrounding neighborhoods. The proposed project is adjacent to high density residential (i.e., along the west side of Manor Road) that could be served well by the mix of uses on site, including a grocery store and library.

Economic Development

Economic Development Goal: Promote a healthy, diversified, and sustainable economy that provides a strong tax base, needed goods and services, and employment opportunities for Huntington residents.

As stated above, the subject property is located between two nodes of the well-established Jericho Turnpike commercial corridor within the Town. Consistent with the Town's stated goals to promote the economic viability and visual quality of major automobile-oriented commercial corridors and centers, the future development of the subject property with a new high-quality mixed-use commercial development (as permitted within the C-5 zoning district) at the underutilized subject property will substantially benefit the Town in achieving the economic development and quality of life goals set forth in Horizons 2020.

Horizons 2020 has recognized that, as the Town approaches build-out, there may not be enough vacant land to accommodate anticipated growth in the retail and office sectors of the economy. Strategic reinvestment and redevelopment should target marginal and obsolescent land uses that detract from the Town's character to create new uses that support quality of life and economic vitality. As one of the primary commercial corridors in the Town,

the Jericho Turnpike corridor is anticipated to accommodate a significant amount of commercial/mixed use growth. The existing strip commercial land use within the subject property, therefore, should be considered "marginal" in the context of an expanding commercial corridor, and the subject property itself should be targeted for strategic commercial/mixed use development to facilitate such growth.

Specifically, the proposed project will help the Town accomplish this goal by: 1) bringing additional employment opportunities, including service and office jobs, to help revitalize the Jericho Turnpike commercial corridor; 2) contributing to the area's retail base through a variety of stores and services, and 3) encouraging positive reinvestment in Jericho Turnpike. The proposed project will create 1,700 new jobs and offer a one-stop site containing goods and services for the surrounding neighborhoods, regional visitors and employees on-site. This diversity is a necessary element for a strong, sustainable economy in any community.

Transportation

According to the *Horizons 2020 Comprehensive Plan Update*, traffic congestion is a "key citizen concern." After thorough analysis of the site and the Jericho Turnpike corridor, traffic engineers have determined that the proposed development will have no significant adverse impact on the traffic operations on the local roadway network if proposed roadway improvements are implemented. These improvements can be found in Table 16 and include: targeted improvements such as dedicated turning lanes into and out of the site, exclusive signal controller for the intersection at Jericho Turnpike/Manor Road and Jericho Turnpike/Old Country Road/Future Westerly Site Access, and increased signal cycle lengths. In addition, this site will be served by three transit lines: Route S54, Route S29, and HART H40. Since the site will serve as a one-stop-shop for many visitors, transit is a viable option to access the proposed project site.

Policy F.1: Enhance the existing roadway network through targeted improvements and other measures.

> ***Strategy F.1.2: Work with NYSDOT and Suffolk County to coordinate traffic signals along congested roadways as part of an integrated, state-of-the-art Intelligent Transportation System***
>
> The Traffic Impact Study performed as part of this DEIS, included an evaluation of a significant number of signalized intersections under the jurisdiction of the NYSDOT and SCDPW. In addition, the proposed access plan includes construction of a new traffic signal, as well as improvements to existing traffic signals, both under the jurisdiction of the NYSDOT and SCDPW. These improvements will be put in place under permit from NYSDOT and SCDPW and will be integrated into existing coordinated traffic control systems. The

traffic signals on Jericho Turnpike are part of NYSDOT's ITS system (INFORM). The new traffic signal will be designed and incorporated into that system allowing all of the real-time monitoring and traffic signal control features available through that system.

Policy F.2: Coordinate land use and transportation planning and implementation.

Strategy F.2.1: Promote land use patterns that reduce automobile usage (e.g., compact, walkable mixed-use nodes rather than linear ("strip") commercial development along highway corridors).

The uses proposed at Elwood Orchard do not constitute strip commercial development. It is anticipated that the mix of uses within the Elwood Orchard will result in a significant level of combined trips to one site, rather than a number of individual trips to separate and distinct sites. Site design incorporates pedestrian walkways throughout which promote walkability within the center.

Strategy F.2.2: Manage access along arterial roadways to reduce congestion and increase safety, e.g.:

- Consolidate/limit individual driveways and intersections.
- Encourage shared curb cuts, connections within and between adjacent developments/parking lots, and service drives.
- Construct medians and other devices to control turning movements.

The Elwood Orchard property contains a frontage of approximately 2,653 feet along Jericho Turnpike. The development plan includes only three access points to Jericho Turnpike. The driveways, as proposed, are a minimum of approximately 850 feet apart. When compared to other commercial development on Jericho Turnpike, the number of driveways along this stretch of roadway is relatively small. Moreover, existing curb cuts at Jericho Turnpike and Manor Road, which are in close proximity to the signalized intersection, will be eliminated. In addition, all conflicting movements in and out of the site (left turns and through movements) on Jericho Turnpike will be made under the protection of an existing or proposed traffic signal.

<u>Geographical Focus Areas</u>

The Geographic Focus Area that is relevant to the proposed project is Jericho Turnpike, which is identified as a Major Commercial Corridor. Horizons 2020 deems Jericho Turnpike "one of Long Island's most important transportation and retail corridors." Retail is one of the key terms here.

Jericho Turnpike is primarily commercial, therefore a rezoning of the proposed project site from R-40 to C-5 (Planned Shopping Center) is consistent with the land uses and zoning for the remainder of the corridor (C-6 General Business). In addition, Horizons 2020 states that most of Jericho Turnpike is comprised of single story retail and strip malls. One of the stated goals for the Jericho Turnpike corridor is to "[i]mprove traffic flow, visual character, and economic viability of the…corridor." The proposed project addresses all of the goal components:

- *Traffic Flow:* as described under the Transportation Section, several major improvements are planned which would improve traffic flow on Jericho Turnpike including targeted improvements such as dedicated turning lanes into and out of the site, exclusive signal controller for two key intersections, and increased signal cycle lengths.

- *Visual Character:* the proposed project incorporates high-quality, one- and two-story building design, distributed and native landscaping, attractive signage, and a divergence from the traditional one-story, strip mall development pattern through distributed, non-linear building placement.

- *Economic Viability:* In the Economic Section, several reasons are outlined for why the Proposed Project will contribute to the Town's economic viability and sustainability: 1) additional employment opportunities, including service and office jobs; 2) contribute to the area's retail base through diverse stores and services; and 3) positive reinvestment in Jericho Turnpike.

Comprehensive Plan Amendment Consistency

The proposed action includes an amendment to the Comprehensive Plan such that the subject property (specifically, the westernmost 49.28±-acre portion) is identified for rezoning to C-5 and recommended for development with a high-quality, mixed-use commercial development in accordance with said district. The proposed amendment will ensure consistency between the Town's relevant long term vision and goals (as detailed above) and the land use and economic development actions by recognizing the strategic significance of the subject property as an integral part of the Jericho Turnpike commercial/mixed use corridor. The amendment will also facilitate necessary zoning changes of portions of the subject property from R-40 and C-6 to C-5 in order to provide a visually appealing and integrated development at a scale that can serve the community and the broader region. Section 198-26 of the Town Code states regarding the C-5 District:

> *The regulations set forth in this section or set forth elsewhere and referring to this section are established to provide for retail shopping facilities*

composed principally of groups of retail and service establishments of integrated design, intended to serve community-wide or regional needs as well as those of local neighborhoods.

Rezoning of portions of the subject property to C-5 is appropriate given the size and configuration of the property, its location along the established Jericho Turnpike commercial corridor, and the existing commercial use on a portion of the site. This district, as compared with other commercial districts of the Town (e.g., the C-6 district), would better suit the property, and would not encourage development similar to the existing strip retail facing obsolescence along much of the corridor. Furthermore, the subject property is situated opposite an existing shopping center on the southwest and several existing commercial uses to the west, which continue almost uninterrupted for roughly five miles until reaching the Town's boundary with the Town of Oyster Bay.

In addition, other physical characteristics of the subject property and its setting differentiate it from the remaining properties within the only "gap" in the Jericho Turnpike commercial corridor recommended within *Horizons 2020*. These characteristics make prominent the subject property's potential for development as an active commercial/mixed use site. These characteristics include:

- The subject property is an underutilized site with large barren and previously-disturbed areas, and containing an existing commercial (strip retail) use. Whereas, other properties adjacent to the subject property that were recommended for residential use in *Horizons 2020* comprising the "gap" are either currently occupied by housing development or established in agricultural use.

- The subject property has an enhanced lot depth and contains natural, wooded areas at the rear and side portions of the property. Such lot depth would allow for commercial development to be centered around the existing on-site commercial use and disturbed areas, while retaining natural buffer areas at the side and rear portions of the site.

- The subject property is adjacent to the Berkeley Jackson County Park on the north, which provides a significant natural buffer to residential neighborhoods that are present in surrounding areas. Together with natural, wooded areas that could be retained within the subject property, future commercial development could be buffered from surrounding non-commercial uses in a meaningful way.

Within Section 10.3, *Horizons 2020* notes that there is an R-40 zone along Jericho Turnpike that occurs between Manor Road and Warner Road - - the subject property is located within the westernmost portion of this segment of Jericho Turnpike - - which "provides a significant break in the predominantly commercial land use pattern of the corridor." As explained above, the subject property does not exhibit the same characteristics of the rest of this break. The *Horizons 2020* plan does not

elaborate as to whether there are any benefits of such a break. However, it should be noted that the rezoning and development of the subject property with mixed-use commercial center would not alter or adversely impact the established agricultural, wooded and buffered residential character of the remainder of the aforementioned break (continuing for a half-mile east to Warner Road).

The above analyses of the land uses and zoning conditions of the subject property, as well as the review of the Town of Huntington's most recent *Horizons 2020: Comprehensive Plan Update* fully supports the proposed comprehensive plan amendments and hence the necessary change of zoning for portions of the subject property from R-40 and C-6 Districts to the C-5 District.

The amendments considered are consistent with the vision and goals of Horizons 2020. The amendments will also facilitate positive changes on the subject property towards advancing the Town's land use and economic development strategies along the Jericho Turnpike commercial corridor. With amendment of the comprehensive plan and implementation of the recommended change of zoning, the subject property could realize its potential as a high-quality, mixed-use development that will promote economic development along the Jericho Turnpike corridor, resulting in social and economic benefits to the community and the Town as a whole.

Suffolk County

As previously discussed, the County recently adopted the Comprehensive Plan, with a broad range of goals for the County. As relevant to the proposed action, a consistency analysis with the objectives set forth in the Comprehensive Plan is below. The other County studies noted above express existing conditions and do not include any polices or recommendations for the subject property.

1. ***Build a 21st Century Transit Network to Provide More Transportation Choices to Improve Mobility, Access and Safety***
   Develop a range of transportation choices to decrease household transportation costs, improve air quality, reduce greenhouse gas emissions and promote public health.

   This objective is not applicable to the proposed action, as it is not designed or proposed as transportation related development. It is worth noting, however, that the proposed commercial center would conveniently locate a mix of uses on one property, located along Jericho Turnpike/NYS Route 25, a major east/west arterial that is served by both Suffolk County Transit and Huntington's HART system. As such, it could provide "one-stop" shopping opportunities, thereby reducing the number of vehicle trips and potential gas emissions. Thus, to the extent possible, the proposed action would be consistent with this objective.

2. ***Provide Equitable, Affordable, Fair Housing***
Expand the variety of housing choices for all people. Develop housing near transit to increase mobility and lower the combined cost of housing and transportation. Encourage energy efficient retrofits.

This objective is not applicable to the proposed action, which consists of a mixed-use commercial center, and does not include any residential development. A portion of the property to be subdivided, rezoned and developed would remain in the R-40 Residence zoning district.

3. ***Enhance Economic Competitiveness and Capacity to Build an Innovation Economy***
Enhance economic competitiveness through improving access to employment centers, educational opportunities, services, and other basic worker needs, as well as expanding business access to local, regional, national, and international markets.

Generally speaking, the Comprehensive Plan discusses this objective in terms of employment centers and public transportation interconnectivity. As such, this objective would not be applicable to the proposed action. However, as discussed in Section 3.8 of this DEIS, the proposed mixed-use commercial center would be expected to generate approximately 750 FTE, short term construction jobs, and approximately 950 FTE, permanent jobs upon completion of the proposed action.

4. ***Support Vibrant Communities***
Target funding toward existing communities, for transit oriented development, expanded wastewater infrastructure, and land recycling—to promote community revitalization, resiliency, and preserve natural resources.
This objective is not applicable to the proposed action, as the subject property would not be considered blighted and, is not in a downtown area in need of revitalization.

5. ***Streamline Government, Coordinate Policies, and Leverage Investment***
Align policies and funding to remove barriers to collaboration. Streamline and coordinate governmental efforts, policies, and programs to better enable leveraging of investment of public and private funds expended.

This objective would not be applicable to the proposed action.

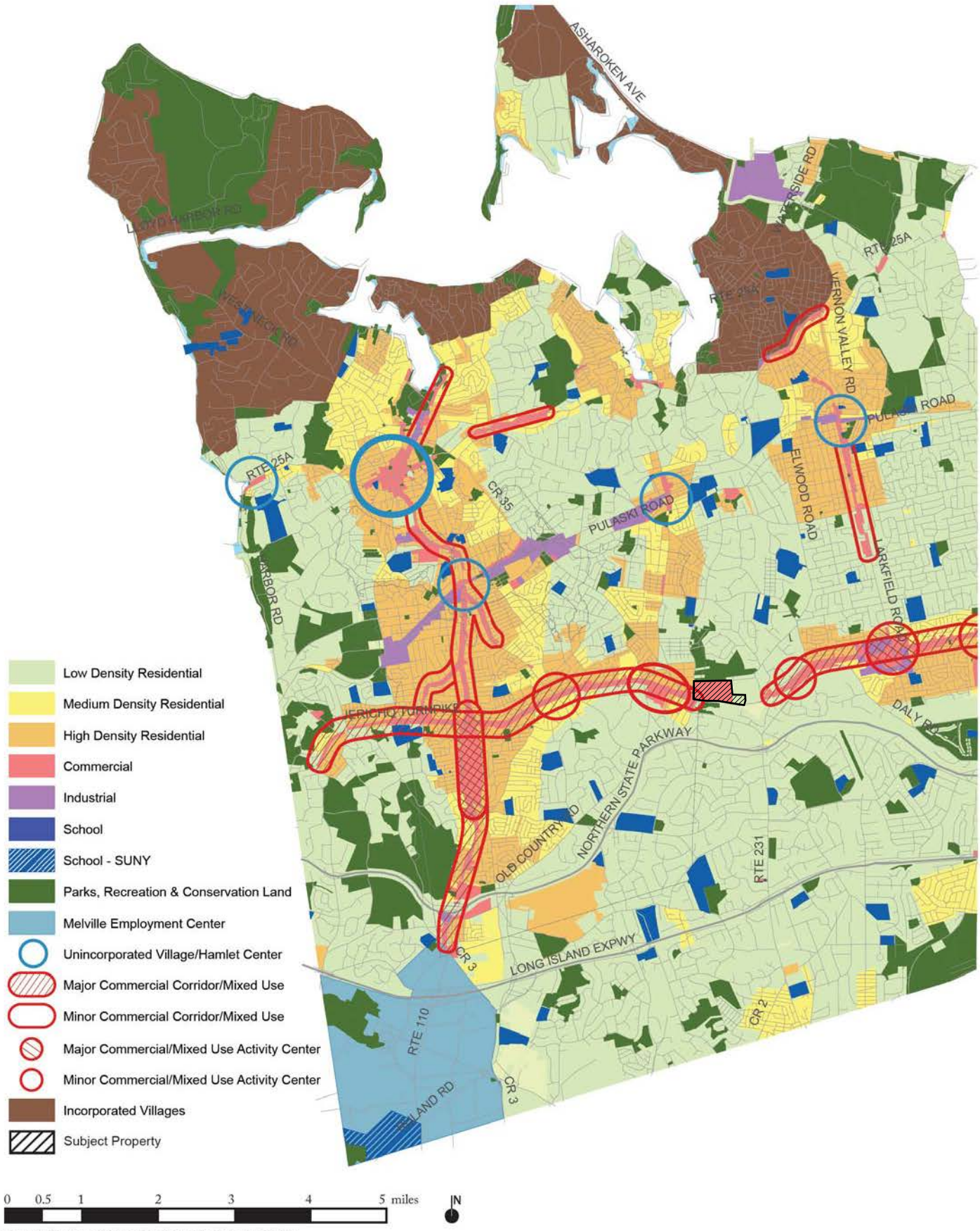
6. ***Protect the Environment and Enhance Our Human Capital***
Continue to promote open space preservation, and green and sustainable energy production and conservation; invest in human capital; mitigate threats to the quality of groundwater and surface waters; and address solid wastes.

The proposed action will include a mix of retail, restaurant, office, and other commercial or service uses. As a result, the only impacts to groundwater resources underlying the site will result from sanitary discharge, naturally-

fertilized, landscaped areas and recharge from impervious surface areas. The proposed action will utilize on-site septic systems to treat and recharge all wastewater generated, and such systems will comply with Article 6 of the SCSC.

The operation of the proposed action will not utilize any toxic/hazardous industrial chemicals or solvents. The only discharges anticipated to occur will be comprised of runoff from impervious surface areas and sanitary discharges from the proposed development's on-site sanitary systems, which will be designed and constructed in conformance with prevailing permitting requirements.

In addition, almost eight acres of steep slope area will be preserved, approximately 14 acres of natural vegetation will remain, and the property is contiguous to parkland. This, combined with the significant depth to water underlying the site, is not anticipated to result in any discharges which will adversely impact groundwater quality underlying the site. As such, the proposed action is consistent with this objective.



Source: Town of Huntington Horizons 2020

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Proposed Future Land Use **Figure 6**

3.1.3 Proposed Mitigation

No significant adverse impacts are expected to result from the proposed action with regard to surrounding land uses, zoning, and public policy. Regardless, a number of mitigation measures have been incorporated into the project design to enable greater cohesiveness between the proposed action and the land uses that surround it, especially along the Jericho Turnpike corridor. In particular, the provision of a mix of high quality uses, including retail, restaurant, supermarket, office, fitness center, and library on one location will integrate the proposed action with the existing mix of uses that characterize the Jericho Turnpike corridor. In addition, such mixed use will encourage the subject property to become a place, rather than a set of storefronts, where individuals will be able to shop, eat, exercise, and work without having to utilize an automobile to access another location.

The design of the proposed action has taken into account the need for landscaping and site design so as to promote this cohesiveness. For example, vegetative species that will be utilized in the landscaping will be similar to other species that occur along the corridor. Similarly, the buildings will be setback to a depth of many of the other buildings along Jericho Turnpike. During the site plan approval process, the Applicant will work with the Town to ensure that design techniques are integrated into the site design that enhance and promote cohesiveness with surrounding properties.

3.2 Visual Resources and Community Character

3.2.1 Existing Conditions

Photographic surveys of the undeveloped subject property and surrounding properties were conducted in January 2014. The photographs of the subject property and surrounding properties are presented in Appendix B.

3.2.1.1 Existing Views on the Subject Property

As noted earlier, the majority of the subject property is currently undeveloped and vacant. The north-central and western portions of the subject property (along Manor Road) are wooded and contain steep slopes (see Photographs 1 and 3 below and in Appendix B). The south-central portion of the subject property had previously been mined for sand and now consists of barren sandy slopes with some vegetation (Photograph 2).

Photograph 1

Photograph 2

Photograph 3

3.2.1.2 Existing Views into the Site from Surrounding Areas

View from North of the Subject Property

Views into the subject property from the north are blocked by Berkley Jackson County Park and private property along Manor Road (Photograph 4).

Photograph 4

Views from South of the Subject Property

The retail strip on the northeastern corner of Manor Road and Jericho Turnpike is also clearly visible from Jericho Turnpike and points south (Photograph 5). The primary views of the subject property are from Jericho Turnpike. The views are partially blocked by existing vegetation and tree coverage. However, due to the topography of the site on its northern portions, views from the south are primarily of the sand mounds, vegetation, and trees (Photograph 6).

Photograph 5

Photograph 6

Views from East of the Subject Property

East of the subject property is private property. Therefore, direct views from the east are not accessible to the public. The eastern portion of the subject property is visible, however, from Jericho Turnpike and from adjacent uses in Elwood. These views are of primarily wooded areas and vegetation, which block views to the interior of the site, and the hills located to the north and west of the subject property (Photograph 7).

Photograph 7

Views from West of the Subject Property

Views from west of the subject property are of the small retail strip, with the site's wooded and vegetated topography rising behind (Photograph 8). Views farther up on Manor Road are obscured by the site's vegetation and tree coverage (Photograph 9).

Photograph 8

Photograph 9

Visual Resources North of the Subject Property

The area directly north of the subject property is located within Berkley Jackson County Park and is densely vegetated with significant tree cover, as well as varied topography (Photograph 10). Interspersed along the east side of Manor Road are single-family homes, which also exist in the neighborhoods to the west of Manor Road (Photograph 11). Additional single-family residential development occurs north of the subject property along Bunker Hill Road.

Photograph 10

Photograph 11

Visual Resources South of the Subject Property

The area to the south of the subject property along Jericho Turnpike contains wooded and vegetated lands, with obscured views (Photograph 12). The area directly across from Manor Road includes a shopping center with surface parking (Photograph 13). Jericho Turnpike itself remains a dominant visual resource in this area, with two lanes in each direction, wide shoulders, and utility lines/poles lining the roadway (Photograph 14). The areas adjacent to Deer Park Avenue to the east and south are primarily single-family residential in nature.

Photograph 12

Photograph 13

Photograph 14

The area directly to the west of the subject property across Manor Road contains a car dealership, with single-family residential behind (Photograph 15). Farther to the west of the subject property along Jericho Turnpike is a commercial corridor, featuring a mix of non-residential uses. Many of the buildings are close to the roadway, although some parcels contain surface parking along the street frontage (Photograph 16).

Photograph 15

Photograph 16

Visual Resources East of the Subject Property

Directly to the east of the subject property is the Mediavilla Orchard, which contains buildings related to the orchard operation and agricultural areas, as well as a single-family home (Photograph 17). On the south side of Jericho Turnpike to the east of the subject property are two of the dominant structures in the area—the GWD water tower and the AT&T building. Both are significantly higher structures than other structures in the area and can be seen above the vegetation and trees that screen Jericho Turnpike (Photograph 18). Jericho Turnpike rises as it moves east from the subject property, before beginning to decline after the AT&T property.

Photograph 17

Photograph 18

3.2.2 Anticipated Impacts

With respect to visual impacts, the proposed action will be visible to observers to the south, when driving along Jericho Turnpike from both the east and west. This view will be of a mixed-use development, with buildings designed to incorporate high-quality architecture. The landscaping, in conjunction with the proposed building setbacks, will result in open views of these buildings and the wooded areas to the north. For observers approaching the site from the northwest, when southbound on Manor Road, it is expected that the developed area will be partially visible, through the retained natural vegetation on the site's western portion. As described above, the topography of the area will, to a large extent, minimize the visual impact of the proposed development from most vantage points. In addition, the proposed development will retain some of the site's topography and vegetation in order to provide natural screening and buffering. Despite these design elements, the proposed action will change views of the site from surrounding areas. The potential visual impacts of the proposed development are evaluated below within the context of: 1) the proposed buildings and site design; and 2) views of the subject property from surrounding areas.

3.2.2.1 Buildings and Site Design

It is envisioned that the subject property will contain six buildings: a two-story mixed use building on the northern portion of the site, fronted by five standalone buildings oriented in an east-west direction such that they will face Jericho Turnpike. The westernmost standalone building will be two stories, with the remaining four as one-story structures. Between the buildings will be surface parking. The parking areas will be broken up by landscaped islands oriented north-south. The buildings will be setback from the roadway at approximately the same depth as many of the other buildings along Jericho Turnpike (i.e., 85± feet). This, in conjunction with the proposed landscaping, will result in open views of the proposed development and the wooded areas to the north.

The rear portions of the subject property will remain undeveloped and will continue to contain slopes, topography, vegetation, and tree coverage. The northern portion of the developed area on the site will contain a number of stepped retaining walls. The maximum height of the retaining walls will be approximately 38 feet; however, this will occur directly behind and west of the proposed main structure where it will be obscured from view. Along the east part of the site, the wall will decrease in height from 38 feet to about 20 feet as it descends along the line of existing topography, and similarly, along the west part of the site the wall will decrease to about 10 feet in height. Due to the commercial structure's height, and the significant setback of the retaining walls from the roadway, the building will effectively screen the wall, wholly or partially, from nearly all off-site vantage points. Specifically, the location of the retaining wall north of the building will be such that the wall will not be visible

from the street or the parking areas of the site. The wall along the west side of the building that decreases in elevation from north to south, would be visible.

Beyond the parking areas, landscaping will be provided along the buildings and between the buildings and site boundaries. Such landscaping will soften views and will include a diverse mix of trees and vegetation, which will be native to Long Island or those compatible to the regional climate. This landscaping will provide screening and a transition to the natural vegetation of the surrounding properties and the developed portions of the subject property.

There will be three new access points on Jericho Turnpike, with an additional access point on Manor Road essentially replacing the existing access point. The primary access will be at the center of the site along Jericho Turnpike and will contain an attractive community entrance sign with landscaping. The existing access point serving the residence on the eastern portion of the site will remain undisturbed.

Although the Town has approved few solitary free-standing retail buildings within shopping centers, the proposed action has been designed not as a traditional shopping center, but as a mixed-use development or commercial center, such that each of the on-site buildings complement each other and the site. The design and mix of uses serves to avoid the impression of traditional strip commercial shopping centers that characterize Jericho Turnpike. Although the main mixed-use building will be the dominant visual structure on the site, the five free-standing buildings will align with parking areas and other landscaping features to create narrower, more intimate view corridors. Not only will these narrower corridors break up the site and the mixed-use building in the rear, but will create interest and diversity in terms of observer views. In addition, free-standing buildings have been found to be beneficial to commercial tenants in that there is increased and specific visibility. Although each of the buildings will have different tenants, there will be common design, color, and landscaping treatment throughout the site.

The proposed development will include traditional retail, restaurant, and supermarket development, among others, built to a tenant's brand image as amplified by local aesthetics, with well-landscaped surface parking areas and signage and façade design that incorporates corporate logos and color palettes. More detail on the building, site design, and landscaping, including a detailed Landscape Plan and a Lighting Plan, will be provided as part of the site approval process.

3.2.2.2 Visibility of the Project from Surrounding Areas

While the proposed action will change the visual appearance of the site for observers to the south, it will also remove the existing unattractive bare soil of the former sand mined area and the unauthorized use of the site by ATVs and others. The resulting view will be of a mixed-use development, with buildings designed to incorporate high-quality architecture. The landscaping, in conjunction with the proposed

building setbacks, will soften and screen views of these buildings and the wooded areas to the north. For observers to the east, the topography of this portion of Jericho Turnpike and the direction of the roadway focus the observer above and beyond the subject property. However, the views of those in the east will be improved—replacing the unattractive sand mounds with high-quality development and attractive landscaping.

The proposed action will not impact views across the property for observers in the Berkley Jackson County Park to the north or of residential observers to the northwest, as the internal retention of natural land in the northern and western portions of the subject property will block views of the proposed development for these observers.

Finally, as noted in the existing conditions, in general, the Jericho Turnpike commercial corridor is neither consistent in design nor aesthetically pleasing, with few exceptions. The proposed action will provide an upgrade to the visual character of the corridor, and may serve to influence other property owners to improve their sites in the future.

The proposed action will improve visual conditions on the site by eliminating the existing sand mounds and unauthorized ATV use and will improve visual conditions in the Jericho Turnpike corridor by providing high-quality building and site design, coupled with attractive landscaping. Overall, based on the above, the proposed action is not expected to result in a significant adverse visual impact.

3.2.3 Proposed Mitigation

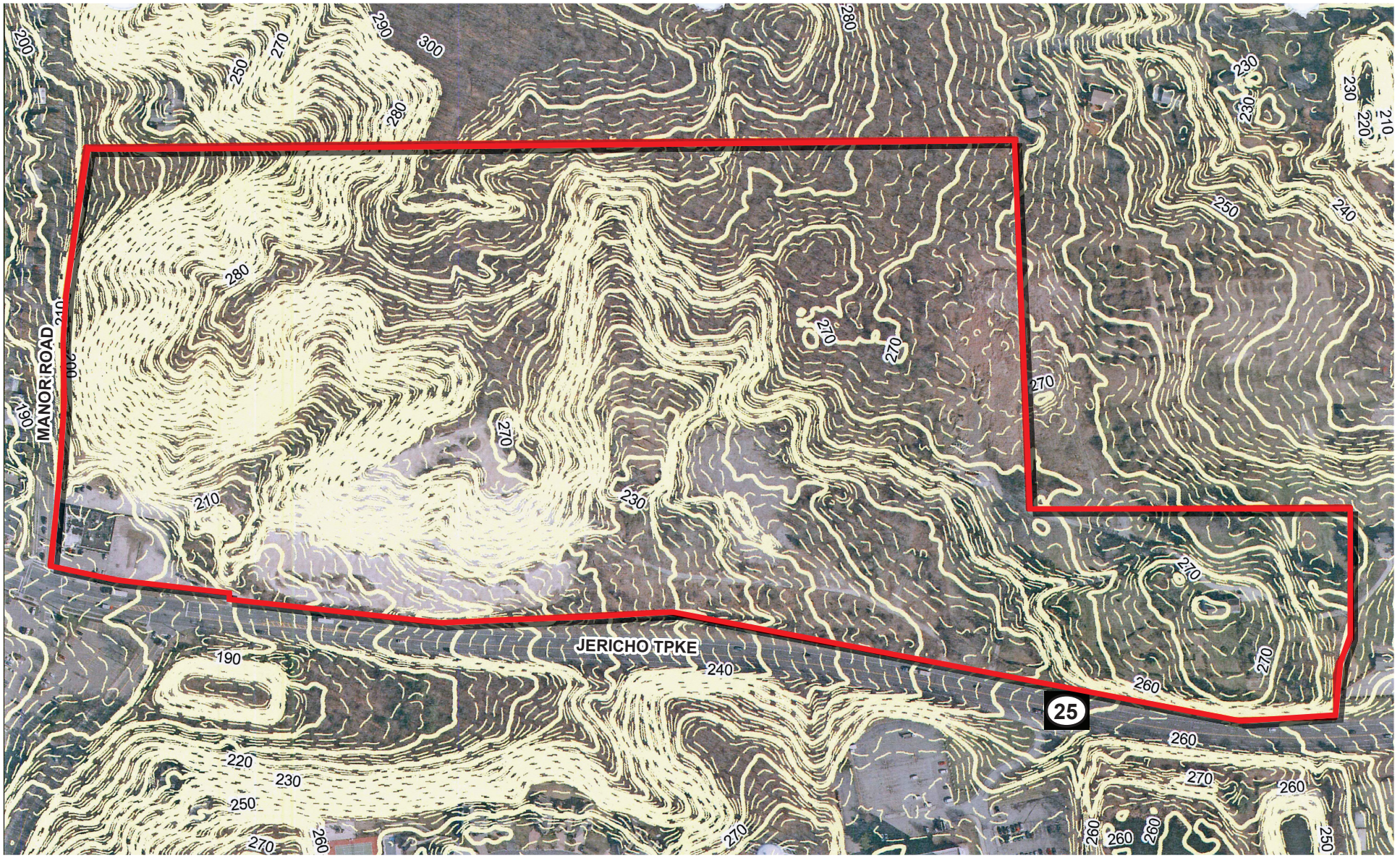
Although the proposed development will alter aesthetic resources on and off of the subject property, the proposed action is designed to mitigate any visual changes to the maximum extent practicable, by working the design and layout into the existing visual characteristics of the subject property, with enhanced plantings and landscaping within the site and at site edges. Further, the final design details (e.g., architectural treatments, design of the proposed retaining walls, etc.) would be determined in consultation with the Town of Huntington.

3.3 Topography, Soils and Geology

3.3.1 Existing Conditions

Topography and Steep Slopes

The subject property exhibits a highly irregular topography consisting of several kames and/or knolls, which rise above a minor complex of eskers and outwash channels (Figure 7). The predominant elevated features present at the subject property consist of three mounds that rise to elevations ranging from 284 to 296 feet above mean sea level (amsl), which is equivalent to approximately 100 feet above grade. Each of these mounds, which are located in the western portion of the subject property, all grade towards the south, east, and west, forming outwash channels that were likely produced during the retreat of the glacial ice sheet which formed Long Island and the Ronkonkoma terminal moraine. It should be noted that a significant portion of the southern section of the site has been subject to sand mining and excavation operations. The consequence of these activities is the formation of unvegetated steep slopes that have been further scoured by natural erosive processes and disturbed by unauthorized motorcycle and ATV activity on the subject property. Man-made slopes observed in this mined section of the subject property were found to range from 20 to 90 percent. The eastern portion of the subject property exhibits a more gradual topography with an average slope of approximately 10 percent. The highest point encountered at the subject property is in the north-central portion of the subject property and exhibits a maximum elevation of 296 feet amsl. The lowest portions of the subject property are generally along the southern property boundary and range in elevation from 192 to 250 feet amsl. Table 4 and Figure 8 present the slopes on the subject property.



Source: NYS GIS Orthoimages, 2010; Nelson, Pope & Voorhis, LLC

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Topography

Figure
7

Source: NYS GIS Orthoimages, 2010; Nelson, Pope & Voorhis, LLC

Table 4 – On-Site Slope Categories

Slope Interval	Areas (acres)	Percent of Site
0-10%	34.16	61.0
10-15%	4.38	7.8
15-20%	3.73	6.7
20-25%	3.87	6.9
25%+	9.87	17.6
Totals	56.01	100.0

Article X of the Town of Huntington Town Code is the "Steep Slopes Conservation Law." Article X defines steep slopes ("Hillside Area") as those areas where the slope is 10 percent or greater. Therefore, as noted in Table 4, approximately 39 percent of the subject property contains steep slopes.

Soils

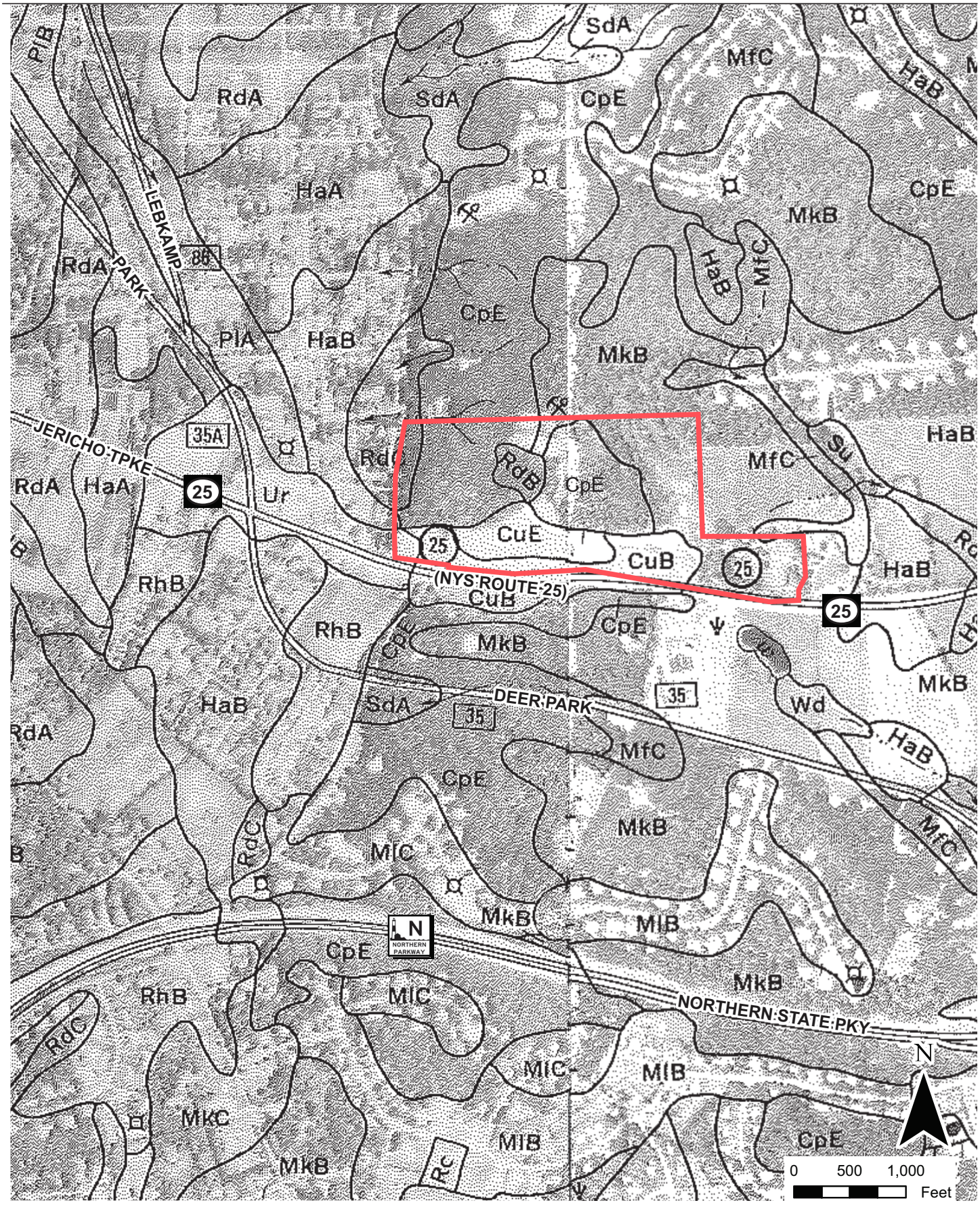
The United States Department of Agriculture (USDA) Soil Survey of Suffolk County, New York (Warner et al., 1975) provides a complete categorization, mapping, and description of soil types found in Suffolk County. Soils are classified by similar characteristics and depositional history into soil series, which are in turn grouped into associations. These classifications are based on profiles of the surface soils down to the parent material, which is little changed by leaching or the action of plant roots. An understanding of soil character is important in environmental planning as it aids in determining vegetation type, slope, engineering properties, and land use limitations. These descriptions are general, however, and soil can vary greatly within an area, particularly soils of glacial origin. The slope identifiers named in this subsection are generalized based upon regional soil types; the more detailed subsection on topography (see above) should be consulted for analysis of slope constraints.

The Soil Survey identifies the subject property as lying within an area characterized by Montauk-Haven-Riverhead association soils which are deep, nearly level to strongly sloping, well-drained to moderately well-drained, moderately coarse textured and medium textured soils on moraines.

A total of seven soils have been identified on the site; the locations of these soils are depicted in Figure 9

Specific descriptions of the soils found on-site follow (Warner et al. 1975):

Carver and Plymouth Sands (CpE)—These soils are most exclusively on moraines except for a few steep areas on side slopes along some of the more deeply cutting drainage channels on outwash plains. On morainic landforms these areas are large, and slopes generally are complex, especially on the



VILLADOM-ELWOOD ORCHARD
Huntington, New York

Soils

Figure
9

Ronkonkoma moraine. Some areas are made up entirely of Carver sand, others entirely of Plymouth sand, and still others of a combination of the two soils. The hazard of erosion is moderate to severe on the soils in this unit. These soils are droughty, and natural fertility is low. Moderately-steep to steep slopes are a limitation to use. Permeability is rapid throughout; natural fertility is very low.

Cut and fill land, gently sloping (CuB)—This soil is made up of level to gently sloping areas that have been cut and filled for non-farm uses. Slopes range from 1 to 8 percent. Cut and fill land makes up at least 75 percent of this unit. This land type has few, if any, limitations to use as building sites.

Cut and fill land, steep (CuE)—This soil is made up of moderately steep or steep areas that have been graded for building sites or areas where excess soil material from excavations has been stockpiled. Slopes range from 15 to 35 percent. Cut and fill makes up 60 to 70 percent of this unit. Areas that have not been used for homesites are severely limited for most non-farm purposes due to slope.

Montauk silt and loam, 3 to 8 percent slopes (MkB)—This gently sloping and undulating soil is found on moraines. This sold consists of deep, well-drained to moderately well-drained, moderately coarse textured to medium-textured soils that formed in fine sandy loam or in a mantle of silt loam and loam. The hazard of erosion is moderate to slight. These soils generally have a moderate to high available moisture capacity. Permeability is moderate to moderately rapid in the surface layer and in the upper part of the subsoil and moderately slow in the fragipan and underlying till. Natural fertility is low. The main concern of management is the control of runoff and erosion. Most areas containing this soil are idle and are brush and trees or they are used for homesites.

Riverhead sandy loam, 3 to 8 percent slopes (RdB)—This soil is found on moraines and outwash plains generally along shallow, intermittent drainageways. These soils consist of deep, well-drained, moderately coarse textured soils that formed in the mantle of sandy loam or find sandy loam over thick layers of sand and gravel. The hazard of erosion for this soil is moderate to slight. The main concern of management is controlling erosion and runoff as well as providing adequate moisture. Permeability is moderately rapid in the surface layer and in the subsoil and very rapid in the substratum. Natural fertility is low. Many of the areas containing these soils are used for housing and industrial development.

Riverhead sandy loam, 8 to 15 percent slopes (RdC)—This soil is found in narrow bands on outwash plains along the side slopes of deep, intermittent drainageways. Slopes are short. These soils consist of deep, well-drained, moderately coarse textured soils that formed in the mantle of sandy loam or

fine sandy loam over thick layers of sand and gravel. The hazard of erosion for this soil is moderately severe and is a major concern of management. This soil is also limited by droughtiness and by the difficulty of applying irrigation water. Conversely, these soils have a moderate to high available moisture capacity with good internal drainage. Permeability is moderately rapid in the surface layer and in the subsoil and very rapid in the substratum. Natural fertility is low. Many of the larger areas of this soil are used for housing developments where large lots are needed.

Urban land (Ur)—These lands consist of areas that are more than 80 percent covered by buildings and pavements. Examples are parking lots, business districts or larger villages and densely developed industrial parks. Examination and identification of the soils in these areas are impractical.

The Soil Survey was also consulted for information of the potential limitations on development that the soils may present. Such constraints for the on-site soils are summarized in Table 5. As noted in the table, five of these soils on the site pose "severe" limitations for development (specifically, steep slopes, sandy surface layer, and moderately slow permeability). These soils are CpE, CuB, CuE, MkB, and RdC. The limitations of these soils are related to sewage disposal fields, streets and parking lots, landscaping, trails, play areas, and athletic fields.

An area of approximately 5.39 acres of bare, sandy slopes is found in the southern portion of the subject property, along Jericho Turnpike. The surface terrain is the result of a previous sand mining operation, which ceased a number of years ago. There is no evidence of significant erosion in this area; however, some surface scouring was evident.

Table 5 – Soil Limitations

	Carver and Plymouth Sands, 15-35% slopes (CpE)	Riverhead sandy loam, 8 to 15% slopes (RdC)	Riverhead sandy loam, 3 to 8 % slopes (RdB)	Montauk silt and loam, 3 to 8% slopes (MkB)	Cut and fill land, gently sloping (CuB)	Cut and fill land, steep (CuE)	Urban Land (Ur)
Soil Features Affecting:							
Highway location	Poor trafficabilty; extensive cuts and fills likely	Extensive cuts and fills likely	None identified	Possible seepage along top of till			
Embankment foundation	Strength generally adequate for high embankments; slight settlement; moderately steep to steep slopes	Strength generally adequate for high embankments, slight settlement	Strength generally adequate for high embankments, slight settlement	Strength adequate for high embankments			
Foundation for low buildings	Low compressibility; large settlement possible under vibratory load; moderately steep to steep slopes	Low compressibility	Low compressibility	Low compressibility	No affecting features identified	No affecting features identified	No affecting features identified
Irrigation	Very low available moisture capacity; rapid water intake; moderate and moderately steep to steep slopes	Moderate to rapid water intake	Moderate to rapid water intake, moderate and moderately steep slopes	None identified			
Limitations for:							
Sewage disposal fields	Severe: slopes	Moderate: slopes	Slight	Severe: moderately slow permeability	Slight	Severe: slopes	No limitations identified
Streets and parking lots	Severe: slopes	Severe: slopes	Moderate: slopes	Moderate: slopes	Moderate: slopes	Severe: slopes	No limitations identified
Lawns and landscaping	Severe: slopes, sandy surface layer	Moderate: slopes	Slight	Slight	Severe: sandy surface layer	Sever: slopes, sandy surface layer	No limitations identified
Paths and trails	Severe: sandy surface layer; slopes	Slight	Moderate: stoniness	Slight	Moderate: sandy surface layer	Moderate to severe: slopes	No limitations identified
Picnic/play areas	Severe: sandy surface layer; slopes	Moderate: slopes	Slight	Slight	Moderate; sandy surface layer	Severe :slopes	No limitations identified
Athletic fields and intensive play area	Severe: sandy surface layer; slopes	Severe: slopes	Moderate: slopes	Moderate: moderately slow permeability	Moderate: sandy surface layer	Severe: slopes	No limitations identified

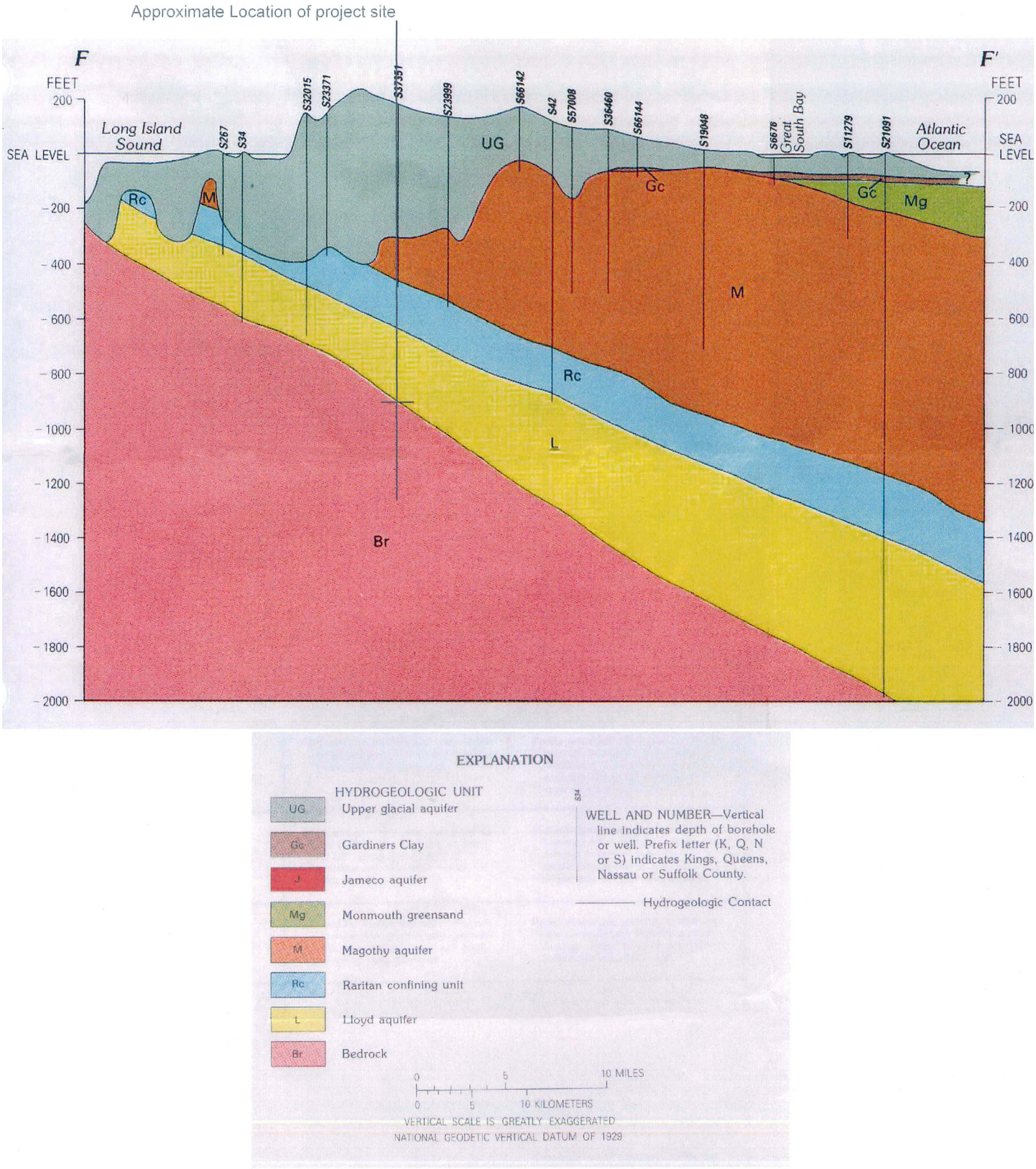
Subsurface Geology

The characteristics and lithology of subsurface geology at the subject property influence the movement of groundwater and transport of recharged runoff through the subterranean environment.

Long Island is located within the Atlantic Coastal Plain, a physiographic province in which substantial sediment deposits overlie the base, or bedrock (Fuller, 1914). The surface topography primarily reflects the glacial history of Long Island and subsequent human activity. Understanding the geologic history and stratigraphy of Long Island is important in relating potential impacts of the proposed action to hydrogeologic resources and their importance in Long Island's future.

The bedrock underlying Long Island slopes south and east at a rate of approximately 70 feet per mile, and the overlying sediments increase in thickness toward the south (Jensen and Soren, 1974; Smolensky, et al., 1989). The elevation of the top of bedrock is approximately 925 feet below sea level (bsl) in the area of the site (Smolensky, et al., 1989). Bedrock is probably of Precambrian age, and is overlain by unconsolidated sediments of Cretaceous and Quaternary age. The Cretaceous sediments contain three major groundwater aquifers: the Lloyd, Magothy, and Upper Glacial Aquifers. Figure 10 provides a cross section of Long Island for a profile running from Long Island Sound to the Atlantic Ocean in the vicinity of the subject property, with the approximate site location indicated (Jensen and Soren, 1974).

The primary Cretaceous sediments on Long Island are the Raritan and Magothy Formations, which were deposited atop bedrock during the mid/late Cretaceous period (138 to 65 million years ago) as a result of sediment transport from highlands to the north of the Island (Koszalka, 1984). The Raritan Formation consists of two members: the Lloyd Sand and the Raritan Clay. The Lloyd Sand contains the Lloyd aquifer, which is separated from the overlying Magothy aquifer by the low permeability Raritan Clay (Sutter et al., 1949; Jensen and Soren, 1974). The upper altitude of the Lloyd sand member is approximately 675 feet bsl in the vicinity of the site, indicating a thickness of 250 feet, and the top of the Raritan clay is approximately 500 feet bsl, indicating a thickness of 175 feet. The Magothy Formation and Matawan Group, which form the Magothy aquifer, were deposited in the late Cretaceous Age (approximately 75 million years ago), following a period of erosion of the Raritan clay. The base of the Magothy is composed of coarse sand, gravel and pebbles as large as two inches in diameter. These coarse sediments are interbedded with fine to clayey sands and solid clays. Locally thick clay beds have been traced to spans of up to one mile. At the site, the upper altitude of the Magothy Formation is approximately 250 feet bsl, indicating a thickness of about 250 feet (Smolensky et al., 1989).



Source: Nelson, Pope & Voorhis, LLC

During the Tertiary period (65 to 2 million years ago) there was erosion of Cretaceous deposits over much of Long Island due to hydrologic processes such as stream formation. Sea level was low and large valley formed north of Long Island in what is now Long Island Sound. Most of the surface sediments evident on Long Island were deposited during the glacial advances of the Pleistocene epoch, Quaternary Period (2 million years ago to 10,000 years ago). The Pleistocene was marked by cycles of glacial advance and subsequent retreat producing morainal and glaciofluvial (outwash) sediments on top of the Magothy Formation and Matawan Group. These Quaternary sediments, which consist of clay, silt, sand, gravel and boulders, include both the Gardiners Clay and the Upper Glacial aquifer. The Ronkonkoma and Harbor Hills Terminal Moraines were deposited as part of this Upper Glacial deposit along the spine and the North Shore of Long Island as the glaciers retreated during the Wisconsin stage of the Later Pleistocene (approximately 25,000 to 10,000 years ago: Koszalka, 1984, p. 15). Low, flat outwash plains formed southward as erosional processes carried sediments away from the moraines, and coastal processed formed barrier beaches along the south shore as sea level rose.

The subject property is situated on the kame moraine deposits of the Ronkonkoma Ground Moraine (Jensen and Soren, 1974). The sediments of the moraines typically consist of unsorted and unstratified clay, silt, sand, gravel and boulders but can also include crudely to well-sorted stratified glacial drift. In contrast, the glaciofluvial sediments of the outwash plains consist of fine to coarse sand and gravel. The surface elevation of the subject property ranges from approximately 192 to 290 feet amsl, and thus the thickness of the Upper Glacial aquifer ranges from 443 to 5,465 feet beneath the site.

3.3.2 Anticipated Impacts

Topography and Steep Slopes

All grading and development will occur on the central and western portions of the subject property; the eastern portions of the subject property will remain undisturbed and, therefore, no impacts to topography will occur due to development in this part of the subject property. The remainder of the discussion relates to impacts from the development of the central and western portions of the subject property.

The proposed action has been configured to occupy the lower slopes in the southern portion of the subject property in order to minimize the impact to the steep slope area farther to the north. However, since the majority of the subject property is comprised of rolling topography, extensive grading will be required and steep slopes located in the southwestern quadrant and southern end of the property will be altered for building and parking lot construction. As mentioned previously, a portion of these slopes are unvegetated man-made features that are highly erodible and are visually unappealing. Development will stabilize these areas, thereby preventing

further erosion of the property. In general, it is expected that the proposed action will clear and grade the subject property in order to create a "bench" that slopes downward gently to the south (toward Jericho Turnpike), where the majority of the drainage system will intercept and recharge stormwater runoff.

It is anticipated that a number of stepped retaining walls will be necessary north of the developed area, in order to reduce the amount of earthwork needed to provide proper grades for development, as well as to facilitate preservation of the steep slopes. The maximum height of the retaining walls will be approximately 38 feet. However, this will occur directly behind and west of the main structure where it will be obscured from view. Along the eastern portion of the site the retaining wall decreases from 38 feet to approximately 20 feet as it descends along the line of existing topography. Similarly, along the western portion of the site, the wall will decrease to 10 feet. Details regarding the retaining walls will be finalized during preparation of the grading and drainage plans, as part of the site plan approval process. Grading, site elevations, retaining structures, and overall site design will be subject to detailed site engineering, site plans and grading review. The proposed action will conform to applicable engineering standards through the design engineer and Town review. All created soil slopes will be 1:3 or less and will be stabilized using ground cover material.

In sum, as a result of the site design techniques, it is expected that topographic impacts will be minimal and will be minimized to a maximum extent practicable.

Soils

Soil Impacts

As noted earlier, the USDA Soil Survey of Suffolk County, New York (Warner et al., 1975) classified five of the seven soils on the property as demonstrating "severe" limitations for development due to slopes, moderately slow permeability and/or a sandy layer, depending upon the specific soil type. However, the RdC soil is found in a portion of the subject property that will not be disturbed. As a result, the four other soils that pose severe limitations (i.e., CpE, CuB, CuE and MkB) comprise the majority of the site which will underlie the building and paved areas. The presences of soils was considered and accounted for in site design.

The total area of the site underlain by these four soils is approximately 90 percent, and a significant portion of these areas will be disturbed. All developed portions of the site will first be subject to grading operations (to provide an acceptable surface on which development can take place), followed by construction features or the installation of topsoil and landscaping (to provide a means of stabilizing the soil to prevent erosion as soon as practicable following grading). In addition, the design of the proposed action will provide significant slope stabilization features and grading design to address soil limitations related to slope which affect sewage disposal,

streets and parking lots and landscaping. Sandy surface layer which primarily affect landscaping and vegetation will be addressed through the introduction and use of drought resistant species and the relocation of on-site topsoil and/or import of adequate topsoil materials to promote moisture retention. See discussion of grading and excavation below.

Among the soil types found on-site, only the MkB soils present severe limitations to sanitary disposal related to moderately slow permeability. MkB soils are present in a larger portion of the northeastern portion of the property and may impact the installation of on-site sanitary systems in this portion of the site. Impacts will be mitigated, however, by avoiding these soils to the greatest extent practicable, or by using adequate filter materials to enhance and promote efficient filtration and recharge. The design and installation of sanitary disposal systems will conform to SCDHS Article 6 (Wastewater Disposal System design) review and approval.

A majority of steep areas of the site will accommodate development consist of unvegetated man-made slopes created during former sand removal activities. In their present state these slopes are highly erodible features and provide an unappealing vista to pedestrians and traffic along Jericho Turnpike. Development of the proposed action will either remove or stabilize these portions of the site though the installation of buildings, grading, structural retaining measures, paved surfaces, and landscaping.

Grading and Excavation

Grading discussions are based on review of the topographic plan as compared with the proposed site design and the need to maintain suitable road and development grades. Grading for the proposed action is currently conceptual and will require a detailed engineering plan at the time of site plan review.

It is anticipated that a significant quantity of soil will be excavated within the site; the volume disturbed will depend on the final grading plan and site design. Due to the quantity of soil available from these operations, a portion of this material will be used to satisfy the need for any fill required in specific areas of the site. Nonetheless, it is anticipated that excess cut material will be exported from the site. If the excavated material is not acceptable as fill, it will be disposed of in an approved construction and demolition landfill or as otherwise required pursuant to prevailing regulations; however, this is not expected given the quality of exposed soils on the site. The greatest area of cut required on the site is expected to be in the areas of the proposed building and parking lot. During its review of the proposed action, based on detailed engineering plans, the Town may require soil testing at portions of the subject property. As necessary, an approved Health and Safety Plan or other appropriate measures would be implemented at the site prior to any land disturbance associated with the proposed action.

It is anticipated that a number of stepped retaining walls will be necessary north of the developed area, in order to reduce the amount of earthwork needed to provide proper grades for development, as well as to facilitate preservation of the steep slopes. The maximum height of the retaining walls will be approximately 38 feet. However, this will occur directly behind and west of the main structure where it will be obscured from view. Along the eastern portion of the site the retaining wall decrease from 38 feet to approximately 20 feet as it descends along the line of existing topography. Similarly, along the western portion of the site, the wall will decrease to 10 feet. Details regarding the retaining walls will be finalized during preparation of the grading and drainage plans, as part of the site plan approval process.

The majority of the site's proposed "stepping" will be accomplished through the positioning of buildings up against the hillside, which will allow for grade level entrances from the south from adjacent parking areas. The areas of the site where no buildings or paved surfaces are proposed, but a hillside is present, will be stabilized through the use of the aforementioned retaining walls. Retaining wall materials may include boulders presently found on the site and/or decorative masonry block systems.

Grading, site elevations, retaining structures, and overall site design will be subject to detailed site engineering, site plan and grading review. The proposed action will conform to applicable engineering standards through the design engineer and Town review. All created soil slopes will be 1:3 or less and will be stabilized using ground cover material. As a result, it is expected that topographic impacts will be minimized to the maximum extent practicable.

The grading will occur over a finite period of time and will involve the removal of soils from the site. Not more than 10 to 12 trucks over an eight-hour day will export material from the site to soil disposal or re-use locations by way of the state highways. Activity will be conducted within property boundaries and staging of loading operations will be on the interior of the site. A construction stabilized access will be utilized to prevent the tracking of flowing of sediment onto the public right-of-way and a water truck will be available to wet excessively dry soils.

Subsurface Geology

It is not anticipated that the geology of the subject property will present any limitations on development of the proposed action. The subject property is situated on the kame moraine deposits of the Ronkonkoma Ground Moraine, and, due to its surface elevation, thickness of the Upper Glacial aquifer ranges from 443 to 5,465 feet beneath the subject property. Excavation activities will occur within the soil strata and it is not anticipated that cut and/or fill will result in significant impacts related to or from subsurface geological features. Further, no blasting or ripping of bedrock is anticipated to occur as a result of the proposed action.

3.3.3 Proposed Mitigation

Erosion preventative measures will be implemented during the construction period and will include a combination of the following: groundcovers (vegetative or artificial), drainage diversions, soil traps, minimizing the area of soil exposed to erosive elements at one time, and minimizing the time span that soil is exposed to erosive elements. Soil removed during grading and from the excavation for the building foundations will be used as backfill (if it displays acceptable bearing capacity and leaching characteristic) to produce acceptable slopes for construction. Applicable Town standards and construction practices specified by the appropriate Town agencies will be followed. Excess acceptable material will be removed from the site by truck and sold. All unacceptable material will be removed and taken to an approved landfill for disposal.

To minimize the volume of material to be removed from the site, the Applicant proposes to re-use the excavated soil on-site as fill to the greatest extent practicable. Given the existing grades and the development program which involves retail and mixed-use development, the amount of cut will exceed the amount of fill, such that soil will need to be removed from the site as part of the grading program. It is estimated that between 650,000 and 750,000 cubic yards (CY) of net cut will result from site regrading. The final cut-fill analysis will be determined as part of the preparation of full engineering plans during site plan review. The regrading program will occur over the period of construction, which will be approximately 18 months. Over this period, as soil is removed from the site, it is expected that eight trucks, carrying 32 CY of material will carry six loads per day. Since the empty truck needs to return to the site, this will result in a total of 48 truck trips to and from the site each day. Hours of trucking will be from 7 AM to 5 PM, and as a result, this will result in approximately 10 truck trips per hour over the course of the day, or in the range of two-to-three trucks within a 15-minute this period. Truck activity will occur during normal daytime weekday work hours and will occur over a limited period of time. Soil removed will be transported to a distributor outside of Huntington Town. The subject property is situated on a New York State road and has convenient access to major transportation corridors in the area. It is expected trucks will travel on a short section of Old Country Road south of the site and to access New York State Route 231 which is only about a 15 minute drive time to the Long Island Expressway. Over much of its route to the Long Island Expressway, New York State Route 231 is a divided boulevard type highway with two lanes in each direction. Once at the Long Island Expressway, trucks will travel to a distributor location outside of the Town. See Section 3.11 for additional information regarding potential impact of grading activities.

Dust raised during grading operations will be minimized and controlled by the use of water sprays, truck cleaning stations at the construction exit, and implementation of any dust suppression systems specified by the appropriate Town agencies.

Grading, site elevations, retaining structures and overall site design will be subject to detailed site engineering, site plan and grading review. The proposed action will conform to applicable engineering standards through the design engineer and Town review. All created soil slopes will be 1:3 or less and will be stabilized using ground cover material.

The proposed action represents construction activity on a site greater than one acre in size and, therefore, the Applicant will obtain a SPDES Stormwater/Construction permit from the NYSDEC under GP-0-15-002 requirements. A Stormwater Pollution Prevention Plan (SWPPP) will be prepared, as well as an Erosion Control Plan. In accordance with NYSDEC requirements, a Notice of Intent (NOI) will be filed more than 60 days prior to construction.

3.4 Water Resources

This section introduces the characteristics of the subject property in relation to surface water and wetlands, floodplains, groundwater, and stormwater management.

3.4.1 Existing Conditions

Surface Water and Wetlands

NYSDEC's Freshwater Wetlands Map of Suffolk County, the United States Fish and Wildlife Service National Wetland Inventory (NWI) Wetlands Mapper, and NYSDEC's Tidal Wetlands Inventory Map Index were examined to determine the location of surface water resources on or adjacent to the subject property. Based upon this review, there are no surface waters or wetlands situated on or adjacent to the subject property. The nearest surface water body to the subject property is a small unnamed pond located approximately 8,000 feet southeast of the subject property. No other surface water bodies or wetlands are located within three miles of the subject property.

Floodplains

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map of Suffolk County was reviewed as to whether the subject property is located within any special flood hazard areas. The subject property is situated within Panel No. 36103C0630H, which is not printed by FEMA since there are no Special Flood Hazard Areas. Therefore the subject property is not within any Special Flood Hazard Area.

Groundwater

Overview

Groundwater on Long Island is derived from precipitation. Precipitation entering the soils in the form of recharge passes through the unsaturated zone to a level below which all strata are saturated. In general, the groundwater table coincides with sea level on the north and south shores of Long Island, and rises in elevation toward the center of the Island. The high point of the parabola is referred to as the groundwater divide. Differences in groundwater elevation create a hydraulic gradient, which causes groundwater to flow perpendicular to the contours of equal elevation, or generally toward the north and south shores from the middle of the Island (Freeze and Cherry, 1979). Near the shore, water entering the system tends to flow horizontally in a shallow flow system through the Upper Glacial Aquifer to be

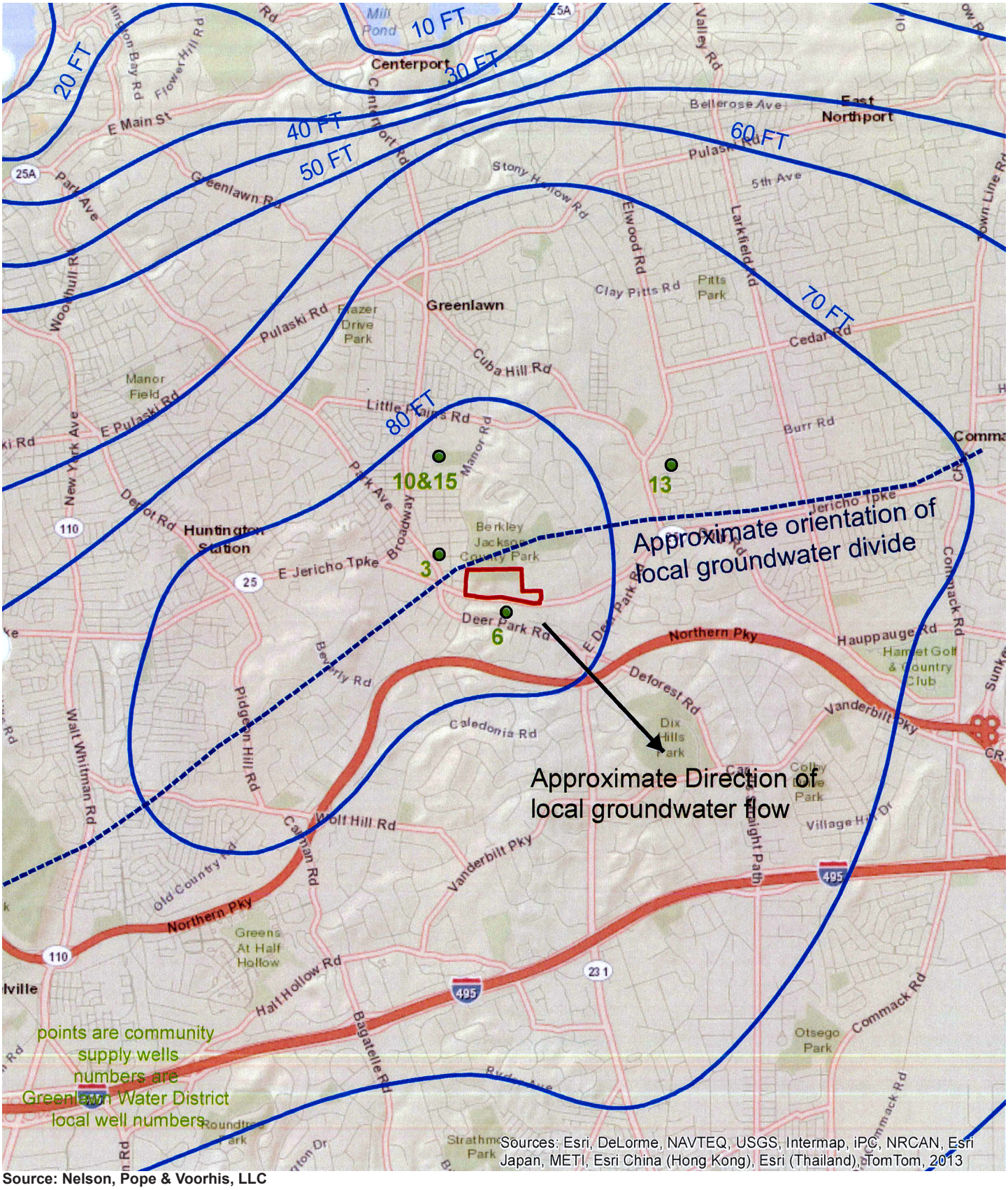
discharged from subsurface systems into streams or marine surface waters as subsurface outflow. Water that enters the system farther inland generally flows vertically to deeper aquifers before flowing toward the shore (Krulikas, 1983).

The major water-bearing units beneath the subject property include the Upper Glacial aquifer, the Magothy aquifer, and the Lloyd aquifer (Jensen and Soren, 1974; Koszalka, 1984). The top altitude of the Upper Glacial aquifer is equal to the topographic elevation of the property, which ranges from 200 to 290 feet amsl and ranges in thickness from 450 to 540 feet. The top of the Magothy aquifer is approximately 250 feet bsl and exhibits an approximate thickness of 250 feet. The Lloyd aquifer is 675 feet bsl and exhibits a thickness of about 925 feet bsl. Groundwater is encountered at an elevation of approximately 75 feet amsl. The topographic elevation across the site ranges from 200 feet to 290 feet amsl, resulting in a depth to water ranging from 125 to 215 feet below ground and a saturated thickness of 375 to 465 feet. The subject property and surrounding area lie on the Ronkonkoma terminal moraine. The parabolic profile of the water table and the elevated topography associated with the moraine has resulted in the creation of a mound in the groundwater table in the vicinity of the subject property. The combination of the proximity to the groundwater divide and the subject property's presence over a local water table mound cause water recharged on the site to flow in a southeasterly direction, as shown in Figure 11.

The Long Island Regional Planning Board (LIRPB), in conjunction with other agencies, prepared a management plan for Long Island groundwater resources in 1978 under a program funded by Section 208 of the 1972 Federal Water Pollution Control Act Amendments (the "208 Study"). The purpose of the 208 Study was to investigate waste disposal options and best practices for ground and surface water protection. The study delineated Hydrogeologic Zones for the formulation of management plans based on groundwater flow patterns and quality (Koppelman, 1978). The subject property is located in Groundwater Management Zone I, and is characterized as a deep flow system which generally contributes water to the middle and lower portions of the Magothy aquifer (SCDHS, 1985).

Groundwater Quality

Several sources of information were investigated in order to characterize the existing groundwater quality in the vicinity of the site. The Suffolk County Comprehensive Water Resources Management Plan (SCCWRMP) provides general information concerning groundwater quality in Suffolk County based upon file review at the time of preparation of the study, which was recently updated in March 2015. More specific water quality data was obtained from the GWD for the nearest public supply well field in the area of the site. The following paragraphs summarize water quality information available from these sources.



Source: Nelson, Pope & Voorhis, LLC

The *Suffolk County Comprehensive Water Resources Management Plan* (*Comprehensive Water Resources Plan)* (SCDHS, 2015[2]) provides an extensive review of Suffolk County's groundwater quality and quantity issues and surface water impairments, as well as the programs that address them. The *Comprehensive Water Resources* Plan also includes goals and objectives designed to assure a viable, high quality groundwater resource for the future. The *Comprehensive Water Resources Plan* also provides information on water quality in the Upper Glacial Aquifer, based on community and non-community supply well monitoring. With respect to nitrate within the Upper Glacial Aquifer, the Plan shows the subject property as lying within an area surrounded by wells with a nitrate concentration of 1 to 6 ppm, indicating "some impact from development" (SCDHS, 2015; Figure 3-3a). It indicates similar concentrations of nitrate occurring within the Magothy Aquifer in the vicinity of the site (SCDHS, 2015; Figure 3-3b). The *Comprehensive Water Resources Plan* also provides information regarding concentrations of the most frequently detected Volatile Organic Compounds (VOCs) in Suffolk County groundwater: tetrachloroethene (PCE), trichloroethene (TCE), and 1,1,1-trichloroethane (TCA). The results of these monitoring efforts indicate that the concentrations of these VOCs in the vicinity of the site within both the Upper Glacial and Magothy Aquifers range from non-detect (ND; <0.5 ppb) to 5 ppb (within the regulatory limit of 5 ppb) (SCDHS, 2015; Figures 3-18, 3-19 and 3-20). VOCs are synthetic organic compounds such as degreasers, oil additives, solvents and pesticides. They are typically introduced to groundwater through chemical manufacturing, dry cleaning, fuel spills, agricultural practices and improper disposal of both household and industrial wastes.

GWD provides potable water supply to the subject property; the five nearest wells in the vicinity of the site are (see Figure 11).

- Well #3 (S11803) located at the corner of Park Avenue and Stillwell Street, approximately 1,400 feet west (downgradient) of the subject property
- Well #6 (S18058) located along Jericho Turnpike, approximately 400 feet south (cross-gradient) of the subject property
- Wells #10 (S23997) and #15 (S80073) located off of Manor Road, approximately 4,200 feet northwest (generally downgradient) of the subject property
- Well #13 (S29852) located at the end of Elmo Place, approximately 7,000 feet to the northeast (downgradient) of the subject property

▼

[2] County of Suffolk, *Suffolk County Comprehensive Water Resources Management Plan*, March 2015; available from htt;://www.suffolkcountyny.gov/Departments/HealthServices/EnviornmentalQuality/WaterResources/ComprehensiveWaterResourcesManagementPlan.aspx.

Based upon groundwater monitoring test results of the GWD for the four public supply wells that operated in the vicinity of the subject property during 2012, none of the wells pump water that exceeds any New York State regulatory standard for each of the contaminant types (e.g., inorganic compounds, synthetic organic contaminants, volatile organic compounds, trihalomethanes and haloacetic acids; see Appendix I).

As the direction of groundwater flow beneath the subject property is approximately toward the southeast, and Wells #3, 10, and 15 are to the west or northwest, water recharged on the subject property flows away from these wells and is not to be pumped from them. Similarly, Wells #6 and 10 are cross-gradient (i.e., to the south and northeast of the subject property), and are also not subject to pumping from these wells for public water supply.

Long Island Segment of the Nationwide Urban Runoff Program (NURP Study)

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

- Animal wastes
- Highway deicing materials
- Decay products of vegetation and animal matter
- Fertilizers
- Pesticides
- Air-borne contaminants deposited by gravity, wind or rainfall
- General urban refuse
- By-products of industry and urban development
- Improper storage and disposal of toxic and hazardous material

In 1982, the LIRPB prepared the *L.I. Segment of the Nationwide Urban Runoff Program* (the "NURP Study"). This program attempted to address, among other things, the following:

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

The purpose of the NURP Study, carried out by the United States Geological Survey (USGS), was to determine:

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

In order to accomplish this, five recharge basins, located in areas with district land use types, were selected for intensive monitoring during and immediately following storm events. Five recharge basins, three in Nassau and two in Suffolk, were chosen for the study on the basis of type of land use from which they receive stormwater runoff. The following is a listing and description of each drainage area:

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

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

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

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

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

Findings: The number of coliform and fecal streptococcal indicator bacteria in stormwater range from 10° most probably number (MPN) to 10^{10} MPN per acre per inch of precipitation.

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

The Long Island Comprehensive Waste Treatment Management Plan (208 Study)
As mentioned above, the subject property is located in Groundwater Management Zone I. In this zone, much of the area is in low density, primarily non-agricultural, land use. It has been recommended that this zone should be protected by applying land use restrictions as well as strict pollution source controls. It is recommended in

the 208 Study that development in this zone utilize public sewers if available, or provide for wastewater collection/treatment where the wastewater generation rate is 600 gpd per acre or more. Therefore, for the 56.01-acre site, the allowable flow of untreated wastewater is 33,606 gpd[3]. In addition, the 208 Study recommends: 1) that stormwater runoff be controlled on-site by preventing sediments, nutrients, metals, organic chemicals and bacteria from reaching surface and, eventually, groundwater; 2) that on-site disposal systems should be maintained properly; and 3) fertilizer use should be minimized on lawn areas.

Water Balance and Nitrogen

Water flows downslope generally perpendicular to the lines of equal water table elevation. Therefore, as the subject property is located over the northeastern slope of a regional groundwater mound, water recharged on the subject property will initially flow toward the northeast.

The subject property is primarily vacant land and does not withdraw a significant amount of water from the underlying aquifer. In addition, recharge that occurs on the site is derived from regional precipitation.

Based on a microcomputer model developed by Nelson, Pope & Voorhis (NPV, the "Simulation of Nitrogen in Recharge" or "SONIR" model, see Appendix C), the existing water budget and nitrogen concentration in recharge was evaluated by NPV, based on current site conditions and land use coverage which includes 40.49 acres of natural area, 7.91 acres of landscaping, 5.39 acres of unvegetated land, and 0.55 acres of impervious surface area. The 56.01-acre site currently has a total site recharge of 37.93 million-gallons-per year (MGY), with a total concentration of 3.13 mg/l of nitrogen in recharge. The results of this analysis by NPV are presented in Appendix C.

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

Special Groundwater Protection Areas (SGPAs) 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, preventative 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, Central Suffolk, Southold, South Fork, and Hither Hills. The subject property is not situated within the boundaries of an SGPA.

[3] Wastewater flow in excess of this would require a sewage treatment plant.

Stormwater Management

Stormwater runoff originating on the subject property runs downslope, generally toward the south, though the northwestern portion of the site grades downward towards the northwest. Regionally, surface runoff and drainage flow along the surface topography of the area, which slopes to the east and then south along a former glacial meltwater channel.

3.4.2 Anticipated Impacts

Surface Water and Wetlands

There are no surface water or wetland features presently on or adjacent to the subject property. In addition, no off-site surface water features or wetlands will be impacted by the construction of the proposed action. Therefore, no significant adverse impacts are anticipated as a result of the proposed action.

Floodplains

Since the subject property is not within any Special Flood Hazard Areas, no impacts to floodplains are anticipated as a result of the proposed action.

Groundwater

Impervious Surfaces

The proposed action will include a mix of retail, restaurant, office, and other commercial or service uses. As a result, the only impacts to groundwater resources underlying the site will result from sanitary discharge, naturally-fertilized, landscaped areas and recharge from impervious surface areas. Article 6 of the Suffolk County Sanitary Code allows up to 600 gpd/acre for sanitary flow in Groundwater Management Zone I, without sewage treatment. For the subject property, the maximum allowed sanitary flow under Article 6 is 33,606 gpd. It is assumed that the proposed action will consume this amount of water. The proposed action will utilize on-site septic systems to treat and recharge all wastewater generated, and such systems will comply with Article 6 of the SCSC.

Development of the site will result in an increase in impermeable surface area and, since all wastewater will be recharged on-site, groundwater recharge will increase from the existing 37.93 to 56.04 MGY (see Appendix C). However, due to the depth of groundwater and the rapid permeability of soils, it is not anticipated that this increase will result in a significant alteration in groundwater flow due to mounding in the area surrounding the subject property.

Groundwater Quality

Groundwater impacts which may occur during construction activities could potentially result from building materials and equipment stored on-site. Building materials are anticipated to be inert, and therefore, are not expected to have an adverse impact on groundwater quality at the site. Equipment stored on-site which will be utilized during clearing and construction activities will be required for any land use on the site. Reputable contractors will be used and the construction company will be responsible to properly maintain and operate equipment and address any potential water quality threats pursuant to State laws. In addition, construction activities will occur over a limited time period and as a result no significant or long-term construction impacts to groundwater quality are anticipated.

The operation of the proposed action will not utilize any toxic/hazardous industrial chemicals or solvents. The only discharges anticipated to occur will be comprised of runoff from impervious surface areas and sanitary discharges from the proposed development's on-site sanitary systems, which will be designed and constructed in conformance with prevailing permitting requirements. This, combined with the significant depth to water underlying the site, is not anticipated to result in any discharges which will adversely impact groundwater quality underlying the site.

A total of 27.78 inches of stormwater are anticipated to be recharged annually on the site, which represents 75.4 percent of all recharge water generated on the property. However, based upon information presented in the NURP Study (see Section 3.4.1), this volume is not anticipated to contain significant concentrations of pollutants due to the following reasons:

- The study found that stormwater runoff concentrations of most of the inorganic chemical constituents for which analysis were performed were generally low and in most cases, fell within the permissible ranges

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

- The number of coliform and fecal streptococcal indicator bacteria in stormwater range from 10^{0} MPN to 10^{10} MPN per acre per inch of precipitation

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

The depth to water underlying the site ranges from 112 to 216 feet below surface grade (bsg). This provides a large unsaturated zone through which recharge can percolate prior to reaching the water table and will result in the attenuation or filtration of any pollutants that it may possess. Therefore, the proposed action is in

conformance with the applicable recommendations of the NURP Study in regard to the proposed stormwater recharge system.

Water Balance and Nitrogen

The water balance and concentration of nitrogen in recharge was calculated for the proposed action by NPV utilizing their SONIR computer model. The results indicate that a total of 56.04 MGY of water will be recharged on the site. This represents a 47.7 percent increase in recharge generated on the property, as compared with the existing recharge volume of 37.93 MGY. Of this anticipated recharge volume, stormwater will account for 75.4 percent, wastewater recharge for 21.9 percent and irrigation for 2.7 percent. This anticipated recharge volume represents 36.85 inches of water distributed annually over the 56.01-acre site.

The concentration of nitrates (as nitrogen) in this recharge is anticipated to be increased by the proposed commercial center, due primarily to the presence of nitrogen in wastewater. In addition, the predicted overall nitrogen concentration will be increased to 5.43 mg/l. This is less than the 10 mg/l nitrogen standard for drinking water and therefor is not expected to cause an adverse impact upon groundwater. Wastewater will account for 95.0 percent of nitrogen in the recharge on-site. In addition, other recharge sources which contribute to nitrogen concentrations include stormwater which will account for 0.1 percent, irrigation which will account for 0.3 percent and fertilization which will account for 4.6 percent.

The proposed action will utilize public water, to be supplied by the GWD via the existing 12-inch water main beneath Jericho Turnpike. It is anticipated that the total volume of potable water required will not adversely impact the ability of the GWD to serve the site or the public in the vicinity. Section 3.9 addresses community services and provides reference to letters from service providers including the GWD.

- The proposed action will generate approximately 33,606 gpd of sanitary and kitchen effluent which complies with the 600 gpd/acre effluent rate allowed for the site under Article 6 of the Suffolk County Sanitary Code. As a result, the proposed action will utilize conventional on-site sanitary systems for disposal of sanitary waste which will produce nitrogen concentrations of 5.43 mg/l. The anticipated concentration is less than the NYSDEC drinking water standard of 10 mg/l and therefore, the proposed action is not expected to result in significant adverse effects to groundwater quality with regard to nitrogen loading.

- SONIR computer model results for the proposed action indicate that a total of 56.04 MGY of water will be recharged on the site. This represents a 47.7 percent increase in recharge generated on the property, as compared with the existing recharge volume under existing site conditions.

- In conformance with the Town of Huntington Engineering and Subdivision requirements, all stormwater runoff generated on developed surfaces will be retained on-site, to be recharged to groundwater in a proposed catch basin and drywells.

- The proposed action will utilize public water, to be supplied by the GWD via an existing 12-inch main beneath Jericho Turnpike. The total potable water requirement of the proposed action, 33,606 gpd, is not anticipated to impact the ability of the GWD to serve the public.

Stormwater Management

The drywells installed for the retention of surface runoff from impermeable surface areas proposed for the site will promote groundwater recharge. The creation of impermeable surfaces will increase surface runoff, which will require the retention provided by the proposed facilities. The soils present at the site are of adequate quality to allow the efficient and rapid infiltration of run-off to the underlying groundwater system. The depth to water underlying the site ranges from 112 to 216 feet bsg and provides adequate depth for the recharge of groundwater resources.

In conformance with Town requirements, all stormwater runoff generated on the developed portion of the property will be retained and recharged in an on-site drainage system designed to accommodate three inches of stormwater. The proposed action's drainage system will utilize subsurface leaching pools distributed through the developed area, to take advantage of the site's natural topography as well as the anticipated degrading program. The drainage system will have a capacity in excess of the minimum volume required by the Town.

As noted above, a grading and drainage plan will be prepared as part of the site plan submission, which will be subject to review and approval of the Town. This will ensure that the proposed action's drainage system will operate properly and minimize potential runoff problems.

The drainage system will be designed to comply with SPDES requirements under NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002). Based on existing developments in the area, local geologic conditions, and adequate depth to groundwater, subsoils are expected to be of suitable quality to allow efficient recharge of stormwater, subject to further evaluation during subsequent project review (see Section 3.11 for additional information in regard to erosion control during construction).

- The amount of runoff will be reduced through the installation of roadside catch basins to direct runoff to stormwater drywells, in accordance with best management practices identified in the NURP Study.

- A total of 27.78 inches of stormwater are anticipated to be recharged annually on the site, which represents 75.4 percent of all recharge water generated on the property. However, based upon information presented in the NURP Study, this volume is not anticipated to contain significant concentrations of pollutants. Therefore, the proposed action is in conformance with the applicable recommendations of the NURP Study in regard to the proposed stormwater recharge system.

3.4.3 Proposed Mitigation

Since there are no impacts to surface waters, wetlands, or floodplains, no mitigation is proposed for those resource categories.

In order to mitigate any groundwater or groundwater quality impacts, water efficiency measures and reduced irrigation with native species will be integrated into the final site design and operation. The proposed action will adhere to the relevant recommendations of the 208 Study, NURP Study, Nonpoint Source Management Handbook, as well as the requirements of the Suffolk County Sanitary Code, etc. With regard to stormwater, the proposed action includes a sustainable drainage system, and an oil and grease separator could be considered.

3.5 Water, Sewer and Other Utilities

3.5.1 Existing Conditions

Water Supply

As noted in Section 2.1.6, the public water provider in the area is the GWD, which has three mains in the vicinity that can be used to supply the site; a 10-inch main beneath Manor Road, an 8-inch main beneath the north side of Jericho Turnpike and a 26-inch main beneath the south side of Jericho Turnpike. As discussed in Section 3.4.1, there are five GWD wellfields in the vicinity (see Figure 11), of which four were active in 2012:

- Well #3 (S11803) located at the corner of Park Avenue and Stillwell Street, approximately 1,400 feet west (downgradient) of the subject property
- Well #6 (S18058) located along Jericho Turnpike, approximately 400 feet south (cross-gradient) of the subject property
- Wells #10 (S23997) and #15 (S80073) located off of Manor Road, approximately 4,200 feet northwest (generally downgradient) of the subject property
- Well #13 (S29852) located at the end of Elmo Place, approximately 7,000 feet to the northeast (downgradient) of the subject property

As described earlier, groundwater flow beneath the site is toward the southeast, so that groundwater pumped from Wells #3 (when active), 6, 10, 13 and 15, which are west, south, northwest or northeast of the subject property, does not first flow beneath the subject property. This indicates that any contamination that is detected in this pumped water will not reflect conditions on the subject property. The GWD monitoring data indicates that the groundwater pumped by the four active local wells is of high quality, indicating that land uses in the vicinity of the subject property have not adversely impacted groundwater quality (see Appendix I).

Based on SCDHS design criteria for wastewater system sizing, the four existing businesses and residence on-site require an estimated 13,538 gpd of water. The quality of potable water distributed to the public by the GWD is regulated by the New York State Department of Health (NYSDOH) and SCDHS; this water meets all applicable standards of these regulating bodies.

Sanitary Sewer

As noted in Section 3.4.1, sanitary wastewater flow and discharge requirements are determined by the SCDHS, pursuant to Article 6 of the SCSC, in order to limit the loading of nitrogen to groundwater. The subject property is located within the Groundwater Management Zone I as defined by the SCDHS. Based on the requirements of SCSC Article 6, no more than 600 gpd may be discharged per acre within this zone if an on-site septic system is to be used. The estimated 13,538 gpd of wastewater currently generated by the site at present are handled on-site, in septic tank/leaching pools systems located adjacent to and to the north of the existing small strip center. Based on the types of uses and the associated Suffolk County wastewater flow rates, it is not anticipated that this volume of wastewater (including both sanitary wastewater and laundromat wastewater) has a significant impact on groundwater quality. Further, based upon the site of the subject property, the existing wastewater generation is within the 600-gpd/acre SCSC Article 6 standards.

Other Utilities

PSEG Long Island is the public electric utility in the area; National Grid provides natural gas services. The subject property is currently served with electricity and natural gas from these public utilities. Natural gas lines are present beneath the south side of Jericho Turnpike (4-inch diameter) and the west side of Manor Road (2-inch diameter). Existing electricity supply lines are located on the south side of Jericho Turnpike.

3.5.2 Anticipated Impacts

Water Supply

As discussed on Section 2.1.6, potable water will be provided to the proposed action from the GWD distribution system. The final determination of this connection will be made as part of the site plan review process. All necessary system improvements (including system upsizing to meet fire flow demand), connections, meters, easements, and installations will be provided to ensure adequate water supply. The GWD has requested that a portion of the subject property be dedicated to the GWD for a future well site. The Applicant is the ground lessee, not the landowner, and is not in a position to dedicate a portion of the site for this purpose. This issue may be addressed as part of the site plan application review process.

With regard to groundwater recharge, recharge generated by the proposed development is not anticipated to adversely impact groundwater quality beneath the site. As a result, it will not be expected that the quality of groundwater pumped by the GWD will be adversely impacted, as the quality of this recharge will be subject to the oversight of the SCDPW and NYSDEC, and this water will be resident in the

subsurface soil matrix for a substantial period of time (during which natural cleansing and dilution effects will remove any impurities) before it will reach these wells. As a result, no significant impact to the GWD or water supply is anticipated.

Sanitary Sewer

As noted above, based on the requirements of SCSC Article 6, no more than 600 gallons may be discharged per acre on a daily basis within this zone if an on-site septic system is proposed. For the 56.01-acre subject property, the maximum allowed sanitary flow under Article 6 is 33,606 gpd. In order to provide a conservative analysis of impacts, it is assumed that the proposed action will consume this amount of water. As a result, the proposed action will utilize on-site septic systems to treat and recharge all wastewater generated.

The operation and maintenance of these systems, as well as their design and construction, will be performed in conformance with all applicable standards and requirements of the SCDHS. In order to ensure continued compliance with Article 6 of the SCSC, the Applicant proposes to maintain a tenant mix which limits sanitary wastewater flow to no more than 33,606 gpd, in accordance to SCSC Article 6 requirements.

As the proposed on-site sanitary systems will comply with the SCSC and will be maintained, no significant adverse impacts to groundwater quality will result.

Other Utilities

The proposed action will use PSEG and National Grid to supply energy resources to the subject property. As indicated in a January 29, 2014 letter from PSEG Long Island, they will provide electric service to the proposed action, and any impact to their system is dependent upon load added. Written confirmation that energy services can and will be provided has been requested from National Grid, When such documentation is received, it will be forwarded to the Town. Connections will be made to each utility through the creation of an internal distribution network within the proposed development. It is anticipated that both of these energy supply companies maintain adequate resources to supply the proposed action. In addition, energy-saving devices will be utilized where practical to reduce the total energy demand that will be required by the subject property upon completion.

3.5.3 Proposed Mitigation

The following mitigation measures are proposed to minimize any impacts on water, sewer, and other utilities, to the extent practicable:

- It is anticipated that an in-ground irrigation system will be installed, as this type of irrigation system minimizes evaporative loss to the greatest practicable degree. It is expected that the most efficient system will be used to avoid expense associated with water use, and will include drip irrigation or a similar system where appropriate. A separate irrigation well on-site will not be necessary. Potable water will be used for irrigation.

- Water-conserving plumbing fixtures, mechanical systems, and rain sensors on irrigation systems will be utilized in construction, which will further minimize the volume of water required from the public water supply. The exact type of irrigation system has not yet been designed, but would be specified as part of the landscape plan during site plan review.

- Use of energy-conserving equipment and building materials will minimize the increase in the use of electrical and natural gas resources.

- As the proposed action will conform to SCSC Article 6 requirements, it will use on-site septic systems to handle all wastewater generated. Design and installation of such systems will be subject to the review and approval of the SCDHS.

3.6 Ecology

3.6.1 Existing Conditions

Vegetation

Under existing conditions, the majority of the site is wooded with the southern portion of the site having been previously disturbed, portions of which are undergoing various stages of succession. A large barren area exists along Jericho Turnpike in the central portion of the site which contains man-made steep slopes and is commonly utilized by recreational and ATVs (this activity is not authorized by the property owner). A commercial structure and associated paved areas are located in the southwest corner of the site, with additional barren areas located to the north and east of this structure. A portion of the cleared area north of the commercial structure is sparsely vegetated with early successional species. The southeast corner of the site has also been previously disturbed and is dominated by successional species. A cleared area dominated by barren soil with sparse vegetation extends into the woodland habitat and is utilized to compost landscaping debris, including grass clippings, leaves, and wood chips. A large trail network utilized by unauthorized motorcycles and ATVs traverses the majority of the site and interconnects with a trail network found off-site to the north.

The following vegetated habitat types are present on site: Successional Southern Hardwood Forest, Successional Shrubland and Successional Old Field. These habitats were defined according to a classification system developed by the NYSDEC (Edinger, 2002). Additionally, a unique Coastal Oak forest is present on site, which is described in further detail below. Figure 12 presents a map of the vegetation community types found at the site and Table 6 lists the existing site habitat quantities, as determined by aerial photography and field inspections by NPV.

Table 6 – Existing Habitat Areas

Habitat Type/Use	Acreage	Percent of Site*
Successional Habitats		
Successional Shrubland	2.98	5.32%
Successional Old Field	2.75	4.91%
Brushy Cleared Land	1.67	2.98%
Successional Southern Hardwood Forest	0.80	1.43%
Forest Habitat		
Coastal Oak-Laurel Forest	33.96	60.63%
Other Areas		
Landscaped	7.91	14.12%
Unvegetated	5.39	9.62%
Impervious	0.55	0.98%
Total	56.01	100.00%

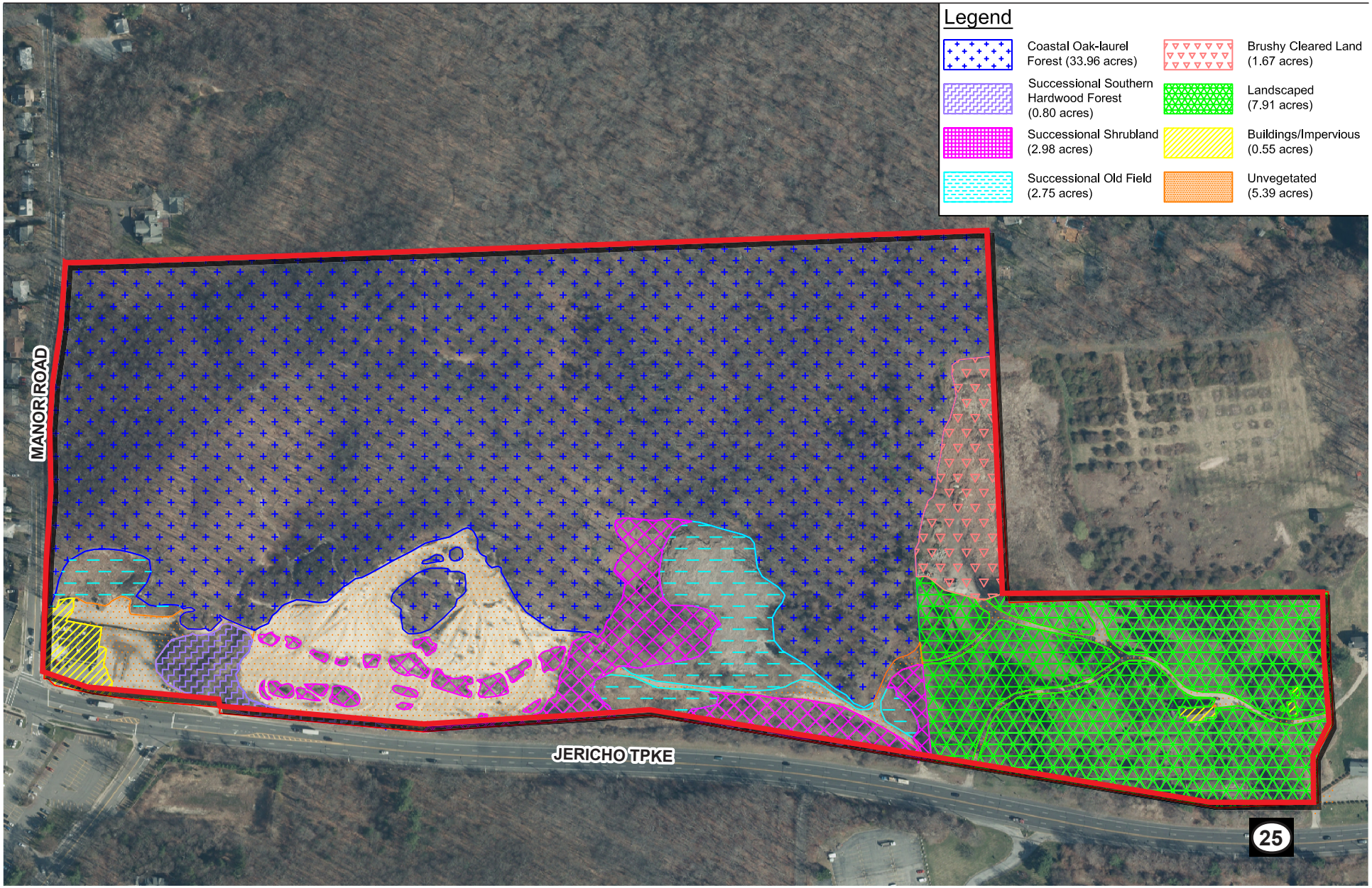
*Percentages rounded to nearest hundredth, therefore, may not total 100.00.

Below is a detailed description of the habitat communities found on-site.

Successional Habitats

Successional habitats dominate areas that have been cleared or otherwise disturbed. Following an initial disturbance, herbaceous weeds and other plants with wide seed dispersal occupy the site. Woody shrubs then replace these early successional species, as well as saplings produced by seed from nearby habitats. As sampling colonize the area and time progresses, first growth woods appear. In time, light penetration to the understory is reduced due to the increasing canopy cover, allowing more shade tolerant species to colonize the understory. The resulting forest generally resembles the original forest, although non-native species introduced into the area may be dominant.

As described in Table 6, a total of 8.20 acres of the site has been previously disturbed and is in the process of succession. These areas are characterized four different stages of successional habitats, from very early succession, to more advanced succession. Each type of successional habitat encountered on the site is described below.



Source: NYS GIS Orthoimages, 2010; Nelson, Pope & Voorhis, LLC

vhb

VILLADOM-ELWOOD ORCHARD
Huntington, New York

Vegetative Habitats

Figure
12

Brushy Cleared Land—*"…land that has been clearcut or cleared by brush-hog. There may be a lot of woody debris such as branches and slashings from trees that were logged. Vegetation is patchy, with scattered herbs, shrubs, and tree saplings. The amount of vegetative cover probably depends on soil fertility and the length of time since the land was cleared"* (Edinger, 2002). The area on-site that comprises this habitat appears to have been cleared for use as mulch. Vegetation is sparse and consists primarily of invasive species. This habitat occupies a total of 1.67 acres of land.

Successional Old Field—successional Old Field is the first stage of succession following a disturbance before reaching a climax community. An abandoned field "*usually yields a greater diversity of first succession weeds upon abandonment*" (CEQ, undated). Edinger (2002) defines successional old field as "*a meadow dominated by forbs and grasses that occurs on sites that have been cleared and plowed (for farming or development) and then abandoned*." Characteristic vegetation includes goldenrods, grasses, aster, ragweed and dandelions. Shrub coverage is less than 50 percent during this stage of succession.

This habitat occupies 2.75 acres, or 4.91 percent of the total parcel. Several species of vines, low shrubs, and weeds dominated the area. Dominant species include bluestem, ragweed, goldenrods and grasses.

Successional Shrubland—Successional shrubland follows old field vegetation in the process of succession. The two habitats are similar in species composition; however, within the shrubland, woody species dominate rather than forbs and grasses. As defined by Edinger (2002) a successional shrubland is "*a shrubland that occurs on sites that have been cleared or otherwise disturbed. This community has at least 50 percent cover of shrubs*." Trees may be present, but occupy less than 40 percent of the canopy. The typical woody species in early successional habitats on Long Island are poison ivy, dogwood, red cedar, brambles, cherry, sumac and multiflora rose. Herbaceous species found in old field habitats are also likely to be present. This habitat is located in areas that are less frequently disturbed and occupies 2.98 acres or 5.32 percent of the site.

Successional Southern Hardwood Forest—Successional Southern Hardwood Forest is defined by Edinger et al., 2002, as "*a hardwood or mixed forest that occur on sites that have been cleared or otherwise disturbed. Characteristic trees and shrubs could include any of the following: American elm, slippery elm, white ash, red maple, box elder, silver maple, sassafras, gray birch, hawthorns, eastern red cedar, and choke-cherry. Certain introduced species are commonly found in successional forests, including black locust, tree-of-heaven, and buckthorn. Any of these may be dominant or dominant in a successional southern hardwood forest*. A successional hardwood forest is generally characterized

by small trees and a dense understory, although large diameter trees may be present if the site was originally landscaped. As time progresses, the canopy begins to close, decreasing light penetration to the understory. The understory will open, allowing for colonization of more shade tolerant species. This habitat occupies 0.80 acres, or 1.43 percent of the total property.

Forest Habitat

The portion of the property that is less disturbed totals 33.96-acres and resembles a coastal oak-laurel forest which is further described below.

> ***Coastal Oak-Laurel Forest****—a large patch low diversity hardwood forest with broadleaf canopy and evergreen subcanopy that typically occurs on dry well-drained, sandy and gravelly soils of morainal hills of the Atlantic Coastal Plain. This forest is similar to the chestnut oak forest of the Appalachian Mountains; it is distinguished by lower abundance of chestnut oak (Quercus Montana) and absence of red oak (Querus rubra), probably correlated with the difference between the sand and gravel of glacial moraines versus the bedrock of mountains. The dominant tree is typically scarlet oak (Quercus coccinea). Common associates are white oak (Q. alba), black oak (Q. velutina), and chestnut oak. The shrub layer is well-developed typically with a tall, often nearly continuous cover of the evergreen heath, mountain laurel (Kalmia latifolia). Other characteristic shrubs include black huckleberry (Gaylussacia baccata) and blueberry (Vaccinium pallidum). The herbaceous layer is very sparse; characteristic species are bracken fern (Pteridium aquilinum), wintergreen (Gaultheria procumbens), and Pennsylvania sedge (Carex pensylvanica). Characteristic animals include white-tailed deer (Odocoileus virginianus)* (Edinger, 2002).

It is noted that the southern portion of this community type (the area closest to the Successional grassland, shrubland, and forest) is more heavily disturbed than the northern portion of this community. The southern portion of the community exhibits sparse mountain laurel and low bush blueberry, and a higher incidence of invasive species, while the northern portion of this habitat more closely matches the habitat definition provided by Edinger. As a result, the quality of this habitat type near the central portion of the property is diminished while the northern portion of this habitat is greater in ecological value.

Vegetation Species

Table 7 is a list of plant species found on-site or expected to be on-site given the habitat present. This list is not meant to be all-inclusive but was prepared as part of field inspections to provide a detailed representation of what is found on-site. Care was taken to identify any species that might be unusual for the area. Field inspections of the property were completed in December 2001, July 2004, December 2012, and June 2013 by NPV.

Table 7 – Vegetation Species

Common Name	Scientific Name
Trees	
*Norway maple	*Acer platanoides [i]*
*red maple	*Acer rubrum*
silver maple	*Acer saccharinum*
sugar maple	*Acer saccharum*
*tree of heaven	*Ailanthus altissima [i]*
black birch	*Betula lenta*
*white birch	*Betula papyrifera*
*gray birch	*Betula populifolia*
bitternut hickory	*Carya cordiformis*
*mockernut hickory	*Carya tomentosa*
American chestnut	*Castanea dentata*
*northern catalpa	*Catalpa bignonioides*
flowering dogwood	*Cornus florida [p]*
*American beech	*Fagus grandifolia*
*honey locust	*Gleditsia triacanthos*
*holly	*Ilex opaca [p]*
black walnut	*Juglans nigra*
*red cedar	*Juniperus virginiana*
sweetgum	*Liquidambar styraciflua*
tulip poplar	*Liriodendron tulipifera*
*mulberry	*Morus alba*
*princess tree	*Paulownia tomentosa*
*pitch pine	*Pinus rigida*
*white pine	*Pinus strobus*
bigtooth aspen	*Populus grandidentata*
*black cherry	*Prunus serotina*
sweet cherry	*Prunus avium*
*white oak	*Quercus alba*
*scarlet oak	*Quercus coccinea*
*black jack oak	*Quercus marilandica*
*chestnut oak	*Quercus montana*
*northern red oak	*Quercus rubra*
*black oak	*Quercus velutina*
*black locust	*Robinia pseudoacacia [i]*
*sassafras	*Sassafras albidum*
*hemlock	*Tsuga americana*
eastern hemlock	*Tsuga canidensis*
slippery elm	*Ulmus rubrai*
Shrubs and Vines	
*Hercules club	*Aralia spinosa*
*boxwood	*Bux sempervirens*

Common Name	Scientific Name
*Oriental bittersweet	*Celastrus orbiculatus [i]*
American bittersweet	*Celastrus scandens [p]*
*sweetfern	*Comptonea peregrine*
*autumn olive	*Eleagnus umbellate [i]*
trailing arbutus	*Epigaea repens[p]*
*burningbush	*Euonymus atropurpureus [i]*
wintercreeper	*Euonymus fortunei [i]*
black huckleberry	*Gaylussacia baccata*
*Japanese holly	*Ilex crenata*
*inkberry	*Ilex glabra [p]*
*winterberry	*Ilex verticillata*
*mountain laurel	*Kalmia latifolia [p]*
spicebush	*Lindera benzoin*
*Japanese honeysuckle	*Lonicera japonica [i]*
*trumpet honeysuckle	*Lonicera sempivirens*
*staggerbush	*Lyonia mariana*
*northern bayberry	*Myrica pensylvanica [p]*
*Virginia creeper	*Parthenocissus quinquefolia*
rhododendron	*Rhododendron sp. [p]*
*winged sumac	*Rhus copallina*
smooth sumac	*Rhus glabra*
*staghorn sumac	*Rhus typhina*
gooseberry	*Ribes sp.*
*multiflora rose	*Rosa multiflora [i]*
wild rose	*Rosa sp.*
*blackberry	*Rubus allegheniensis*
*wineberry	*Rubus phoenicolasius [i]*
common dewberry	*Rubus flagellaris*
cat briar	*Smilax glauca*
*green briar	*Smilax rotundifolia*
elderberry	*Sambucus canadensisi*
*poison-ivy	*Toxicodendron radicans*
*low bush blueberry	*Vaccinium angustifolium*
high bush blueberry	*Vaccinium corymbosum*
*grape	*Vitis sp.*
*maple-leaved viburnum	*Viburnum acerifolium*
Herbaceous Species	
*yarrow	*Achillia millefolium*
*redtop	*Agrostis gigantea*
*garlic mustard	*Alliaria petiolata [i]*
*wild onion	*Allium stellatum*
wild leek	*Allium tricoccum*
*foxtail	*Alopercurus spp.*
*ragweed	*Ambrosia artemisifolia*

Common Name	Scientific Name
*little bluestem	*Andropogon scoparius*
wood anemone	*Anemone quinquefolia*
*cress	*Arabis sp.*
wild sarsaparilla	*Aralia nudicaulis*
*common mugwort	*Artemisia vulgaris [i]*
jack-in-the-pulpit	*Arisaema triphyllum*
*butterfly weed	*Asclepias tuberosa [p]*
*aster	*Aster sp.*
Lady fern	*Athyrium filix-femina [p]*
*Pennsylvania sedge	*Carex pensylvanica*
*spotted wintergreen	*Chimaphila maculata [p]*
*chickory	*Cichorium intybus*
*enchanter's nightshade	*Circacea quadrisulcata*
creeping thistle	*Cirsium arvense*
*British soldiers	*Cladonia cristatella*
*Queen Anne's lace	*Daucus carota*
hay-scented fern	*Dennstaedtia punctilobula*
woodfern	*Dryopteris spinulosa[p]*
beech drops	*Epifagus virginiana*
*fleabane	*Erigeron philadelphicus*
*cypress spurge	*Euphorbia cyparissias [i]*
*leafy spurge	*Euphorbia esula*
*common strawberry	*Gragaria virginiana*
*shining bedstraw	*Galium concinnum*
*wintergreen	*Gaultheria procumbens [p]*
wild geranium	*Geranium maculatum*
*common St. Johnswort	*Hypericum perforatum*
*jewelweed	*Impatiens canadensis*
*peppergrass	*Lepidium virginicum*
*Chinese bushclover	*Lespedeza cuneata [i]*
*hairy bushclover	*Lespedeza hirta*
*rye grass	*Lolium sp.*
*birds foot trefoil	*Lotus corniculatus*
*trailing ground pine	*Lycopodium complanatum [p]*
tree club moss	*Lycopodium obscurum [p]*
club moss	*Lycopodium sp. [p]*
*whorled loosestrife	*Lysimachia quadrifolia*
*mayflower	*Maianthemum canadense*
Indian cucumber root	*Medeola virginiana*
Indian pipe	*Monontropa uniflora*
*common evening primrose	*Oenothera biennis*
sensitive fern	*Onoclea sensibilis*
cinnamon fern	*Osmunda cinnamomea [p]*
*pachysandra	*Pachysandra terminalis*

Common Name	Scientific Name
*switchgrass	*Panicum virgatum*
*gray beardtongue	*Penstemon canescens*
*pokeweed	*Phytolacca Americana*
*common plantain	*Plantago major*
Soloman's seal	*Polygonatum biflorum*
*Japanese knotweed	*Polyganum cuspidatum [i]*
Virginia polyploid fern	*Polyploidium virginianum[p]*
Christmas fern	*Polystichum acrostichoides [p]*
*hair cap moss	*Polytrichium sp.*
*common cinquefoil	*Potentilla simplex*
bracken fern	*Pteridium aquilinum*
shinleaf	*Pyrola sp.*
*sheep sorrel	*Rumex acetosella*
nightshade	*Solanum sp.*
*false Soloman's seal	*Smilacina racemosa*
*goldenrods	*Solidago sp.*
New York fern	*Thelypteris novaboracensis [p]*
Virginia knotweed	*Tovara virginina*
*common mullein	*Verbascum thapsus*
periwinkle	*Vinca minor*

*Species identified on-site during field visits by NPV
[e] NYS endangered species
[i] NYS invasive species (no legal status)
[p] NYS exploitably vulnerable protected plant

Rare and Endangered Species

As can be seen in Table 7, no rare, threatened, or endangered plants were observed on-site. The New York Natural Heritage Program (NHP) was contacted to determine if there is any record of rare plants or wildlife in the vicinity. Appendix D includes a copy of the correspondence received from the New York NHP.

The NHP identified featherfoil (*hottonia inflate*), a New York Threatened vascular plant, as having observed in Huntington. However, such observation was in 1967, not specifically on the subject property, and such species was not observed during recent field surveys.

In addition, American holly, mountain laurel, bayberry, trailing ground pine, spotted wintergreen, butterfly weed, and wintergreen were the only "exploitably vulnerable" species visually identified on the property. "Exploitably vulnerable" plants are species which are not currently threatened or endangered, but which are commonly collected for flower arrangements or other uses. Regardless, under New York State Environmental Conservation Law (ECL) Section 1503.3, no person may "*knowingly pick, pluck, sever, damage by the application of herbicides or defoliants or carry, without the consent of the owner thereof, protected plants"* (NYSDEC, 1975). The same ECL section

indicates that the project sponsor (i.e., owner) will not be restricted in utilizing the site for the intended purpose. Therefore, the presence of any protected plants will not restrict use of the site under the ECL.

The NHP "New York Rare Plant Status List" published in May 2010 identifies blackjack oak as being on the "watch list." The watch list further notes that this species is listed as demonstrably secure throughout its range (but possibly rare in parts) on a global scale. However, it is rare in New York State (usually 21 to 35 extant sites). It is noted that this list has no legal status, but is used by NYSDEC as a monitoring guide. This species is designated as "unprotected" in New York State as defined in regulation 6NYCRR Part 193.3 and, therefore, should it be present on the site, the presence of this or any other unprotected plants will not restrict use of the site.

Wildlife

Habitat

The successional and mature woodland found on the subject property provide habitat for a variety of wildlife species. The site and surrounding areas offer a range of habitats and are expected to provide suitable seasonal and permanent habitats due to the relative diversity of cover types, as well as ample food and shelter. As the range and diversity of habitat types increases, it can also be expected that species diversity increases. Habitat diversity is an important factor in terms of species distribution and within individual habitats; structural diversity can also be utilized to determine the range and quality of habitats on an individual species basis. The site is part of a relatively large contiguous block of undeveloped land in the general area and is therefore likely to sustain a more diverse group of species than the surrounding developed areas and smaller isolated tracts of woodland. However, the site is located at the edge of the larger tract of woodland and is adjacent to Jericho Turnpike and other intense development somewhat reducing the habitat potential found on-site. In addition, the site is a small portion of the overall abundance of permanent open space in the area.

Jericho Turnpike, a major transportation corridor in the area, abuts the southern property boundary, with a recharge basin, vacant/protected land associated with a single-family residential development and a commercial use located farther to the south. Intensely developed commercial uses front on both the north and south sides of Jericho Turnpike west of the site, with farmland uses located to the east. Small lot residential development is located west of the site and north of the Jericho Turnpike corridor, with one single-family residence located adjacent to the northwest corner of the site. Vacant undeveloped woodland is located to the north and east, with larger lot residential development to the northeast. These residences retain a relatively large amount of natural vegetation, particularly as compared to those to the west. A small strip of woodland abuts the eastern property boundary, east of which lies farmland

and associated structures. The vacant undeveloped woodland to the north is owned and operated by the County and is preserved Suffolk County parkland better known as Berkeley Jackson Park. The county park contains 100± acres of land, and along with the previously described land parcels, is part of a larger contiguous block of undeveloped land in the area that is only generally fragmented to the south and west, thereby increasing its value as wildlife habitat. Additionally, uses to the east somewhat fragment the site; however, these uses contain available land to the north and south (with the exception of Jericho Turnpike).

Wildlife Species

Most wildlife species found in woodland habitats adjust well to human activity, and the surrounding developments and heavily traveled roadways make it unlikely that an abundance of sensitive species are present. Thus, the species present on-site are likely to be relatively common suburban species, with some limited potential for forest interior species. Appendix D presents a computer-generated list of species expected on-site given the habitat available, based upon a model developed and run by NPV. This list is provided as a supplement to site specific discussions included herein, and also includes information on the biological needs of each species.

Birds—Avian species which might be expected on the property include a variety of woodpeckers, wrens, titmice, nuthatches, thrushes, creepers, flycatchers, swallows, warblers, corvids, thrashers, orioles, and blackbirds, doves, starling, grosbeaks, finches, towhees and sparrows. During the warmer months, a variety of warblers also migrate into the area.

During the site visits, a variety of avian species were observed. In order to provide a more detailed representation of the avian species potentially present on-site, the New York State Breeding Bird Atlas was reviewed to obtain data from the 2000-2005 Breeding Bird Survey for the census block encompassing the subject parcel (Appendix D). This study surveyed the entire State by 25 km^2 census blocks over a five-year period (2000 to 2004) to determine the bird species which breed within the State. Most of the species listed by the NYSDEC breeding bird survey are likely to be found on-site. Table 8 is a list of the bird species observed or expected on-site given the habitats present; it is based upon the field investigation conducted by NPV. It should be noted that several of the species listed in Table 8 will only be expected to occasionally utilize the site and will more likely be present on the adjacent farmland and wooded parcels. Relatively few avian species were sighted, although remains of songbird nests were observed within several shrubs and trees on the site. Additional information regarding these species and others can be found within Appendix D.

Table 8 – Bird Species

Common Name	Scientific Name
*gray catbird	*Dumetella carolinensis*
red-winged blackbird	*Agelaius phoeniceus*
Eastern bluebird	*Sialia sialis*
*black-capped chickadee	*Parus atricapillus*
common bobwhite	*Colinus irginainuse*
indigo bunting	*Passerina cyanea*
*Northern cardinal	*Cardinalis*
brown-headed cowbird	*Molothrus ater*
brown creeper	*Certhia familiaris*
*American crow	*Corvus brachyrhynchos*
yellow-billed cuckoo	*Coccyzus americanus*
black–billed cuckoo	*Coccyzus americanus*
*mourning dove	*Zenaida macroura*
rock dove	*Columba livia*
American goldfinch	*Carduelis tristis*
house finch	*Carpodacus mexicanus*
*common flicker	*Colaptus auratus*
great-crested flycatcher	*Myiarchus crinitus*
common grackle	*Quiscalus quiscula*
ring-necked pheasant	*Phasianus colchicus*
rose-breasted grosbeak	*Pheucticus ludovicianus*
ruby-throated hummingbird	*Archilochus colubris*
*red-tailed hawk	*Buteo jamaicensis*
American kestrel	*Falco sparverius*
*blue jay	*Cyanocitta cristatta*
*Northern (dark-eyed) junco	*Junco hyemalis*
killdeer	*Charadrius vociferus*
Eastern kingbird	*Tyrannus*
golden-crowned kinglet	*Regulus satrapa*
ruby-crowned kinglet	*Regulus calendula*
horned lark	*Eremophila alpestris [s]*
*Northern mockingbird	*Mimus polyglottos*
white-breasted nuthatch	*Sitta carolinensis*
northern oriole	*Icterus galbula*
ovenbird	*Seiurus aurocapillus*
purple martin	*Progne subis*
eastern meadowlark	*Sturnella magna*
common nighthawk	*Chordeiles minor [s]*
common screech owl	*Otus asio*
great-horned owl	*Bubo virginianus*
American redstart	*Setophaga ruticilla*
*American robin	*Turdus migratorius*
*chipping sparrow	*Spizella passerina*
field sparrow	*Spizella pusilla*
white-crowned sparrow	*Zonotrichia leucophrys*
fox sparrow	*Passerella iliaca*
house sparrow	*Passer domesticus*
Savannah sparrow	*Passerculus sandwichensis*
song sparrow	*Melospiza melodia*
white-throated sparrow	*Zonotrichia albicollis*

*European starling	*Sturnus vulgaris*
barn swallow	*Hirundo rustica*
tree swallow	*Tachycineat bicolor*
chimney swift	*Chaetura pelagica*
scarlet tanager	*Piranga olivacea*
brown thrasher	*Toxostoma rufum*
*rufous-sided towhee	*Pipilo erythrophathalmus*
wood thrush	*Hylocichla mustelina*
tufted titmouse	*Parus bicolor*
veery	*Catharus fuscescens*
yellow-throated vireo	*Vireo flavifrons*
red-eyed vireo	*Vireo olivaceus*
blue-winged warbler	*Vermivora pinus*
black-and-white warbler	*Mniotilta varia*
black-throated blue warbler	*Dendroica caerulescens*
prairie warbler	*Dendroica discolor*
yellow-rumped warbler	*Dendroica coronata*
yellow warbler	*Dendrocica petchia*
cedar waxwing	*Bombycilla cedrorum*
whip-poor-will	*Caprimulgus vociferous [s]*
American woodcock	*Philhela minor*
Eastern wood-peewee	*Contopus virens*
downy woodpecker	*Picoides pubescens*
*hairy woodpecker	*Picoides villosus*
red-bellied woodpecker	*Melanerpes carolinus*
house wren	*Troglodytes aedon*
Carolina wren	*Thryothorus ludovicianus*
common yellowthroat	*Geothlypis trichas*

*Species identified on-site during field visits by NPV
[s] NYSDEC special concern species

Mammals—The habitats found on the site are expected to support a number of mammal species. Small rodents and "insectivores" such as mice, shrews and voles are expected to be the most abundant mammals, but the subject property and surrounding area should also support larger mammals.

Table 9 lists the mammal species that are expected to occur on the subject property because of existing conditions on-site and in the surrounding area. This list is not meant to be all-inclusive but is intended to provide a list of the most common species.

Table 9 – Mammal Species

Common Name	Scientific Name
short-tailed shrew	*Blarina breuicauda*
least shrew	*Cryptotis parva*
Virginia opossum	*Didelphis virginiana*
big-brown bat	*Eptesicus fuscus*
southern-flying squirrel	*Glaucimys volans*
silver-haired bat	*Lasionycteris noctivagans*
red bat	*Lasiurus borealis*
woodchuck	*Marmota monax*
striped skunk	*Mephitis*
meadow vole	*Microtus pennsylvanicus*
pine vole	*Microtus pinetorum*
house mouse	*Mus musculus*
long-tailed weasel	*Mustela frenata*
Keen's bat	*Myotis keenii*
little-brown bat	*Myotis lucifugus*
white-tailed deer	*Odocoileus virginianus*
white-footed mouse	*Peromyscus leucopus*
Eastern pipistrelle	*Pipistrellus subflavus*
raccoon	*Procyon lotor*
Norway rat	*Rattus norvegicus*
black rat	*Rattus*
Eastern mole	*Scalopus aquaticus*
*Eastern gray squirrel	*Sciurus carolinensis*
masked shrew	*Sorex cinereus*
Eastern cottontail	*Sylvilagus floridanus*
*Eastern chipmunk	*Tamis striatus*
red fox	*Vulpes*
meadow-jumping mouse	*Zapus hudsonicus*

*Species identified on-site during field visits by NPV

Amphibians and Reptiles—No reptile or amphibian species were seen on the property, although the site may support a limited number of terrestrial herptiles.

Amphibians

Two toads are common on Long Island in the upland habitats. The spadefoot toad occurs in woods, shrublands and fields with dry, sandy loam soils, and breeds in temporary pools (Behler and King, 1979). The Fowler's toad prefers sandy areas near marshes, irrigation ditches, and temporary pools. These species are the most likely amphibians to be present on the site, although the site contains only marginal

habitat. Most frogs will not be expected on the property, as they typically require either moist woodland habitat or permanent pools.

Most salamander species require both undisturbed moist woods for foraging and standing water for breeding. The red-backed salamander is the most common salamander on Long Island, and is highly terrestrial. It prefers a dry woodland habitat with plenty of leaf litter and fallen logs to forage for insects (Bishop, 1943), and generally lays its eggs in clumps on damp logs or moss (Conant and Collins, 1991).

Reptiles

Several species of reptiles might potentially be found on the property, including the eastern garter snake, eastern hognose snake, and eastern milk snake (Wright, 1957). All of these species are terrestrial species found in a variety of habitats. The garter snake is relatively tolerant of human activity, but prefers moist soils and will be most likely to be present near the ponded basins off-site to the northeast. The hognose snake prefers dryer soils while the milk snake is found in soils of varying moisture content. These snakes are all colubrid snakes, which feed on whole animals such as worms, insects or small amphibians (Behler and King, 1979).

The only turtle species common to terrestrial habitats on Long Island is the eastern box turtle, which requires very little water (Obst, undated). The species is found in a variety of habitats, but prefers moist woodlands. The species feeds on primarily slugs, earthworms, wild strawberries and mushrooms (Behler and King, 1979). The similar wood turtle utilizes both aquatic and terrestrial habitats, but is restricted to eastern Long Island (Conant and Collins, 1991).

Table 10 is a list of amphibian and reptile species that might occur on-site given the existing habitat. This list is not intended to be all-inclusive but provides a detailed representation of what is likely to be found on-site.

Table 10 – Amphibian and Reptile Species

Common Name	Scientific Name
Amphibians	
Fowler's toad	*Bufo woodhousei fowleri*
spring peeper	*Hyla crucifer*
red-backed salamander	*Plethodon cinerus*
Eastern spadefoot toad	*Scaphiopus holbrooki[s]*
Reptiles	
eastern hognose snake	*Heterodon platyrhinos [s]*
eastern milk snake	*Lampropettis d. triangulum*
Eastern garter snake	*Thamnophis sirtalis*
Eastern box turtle	*Terrepene carolina [s]*

*Species identified on-site during field visits by NPV
[s] NYSDEC special concern species

Rare and Endangered Species

The northern long-eared bat (*Myotis septentrionalis*) was recently listed by the US Fish and Wildlife Service (USFWS) as a threatened species. This species requires woodland habitat for foraging with open areas between either the shrub layer or sub canopy layer and the canopy. Roosting habitat requires trees with peeling bark or snags, and will more rarely utilize structures for roosting. Locally, habitat for hibernation includes caves and structures that provide some insulation from the winter temperatures. As caves are not present on Long Island, a variety of other habitat types are utilized by bats, including dead or dying trees and roofs of buildings. Habitat for roosting and foraging is present on the subject site. However, habitat for hibernation is not present on the site as no structures exist on the site. As a result, there is potential for this species to utilize the site for maternity roosting and foraging activities.

As can be seen in Table 10, no other endangered or threatened species were identified as potentially present on-site. The NHP was contacted to determine if there is any record of rare plants or wildlife in the vicinity. The NHP did not identify any records of known occurrences of rare or state-listed animals, significant natural communities, or other significant habitats on or in the immediate vicinity of the site. Appendix D includes a copy of the correspondence received from the NHP.

Of the wildlife species listed as being likely on the site, the eastern hognose snake, eastern spadefoot toad, eastern box turtle, common nighthawk, whip-poor-will, and the horned lark are identified as special concern species by New York State. Special concern species are native species which are not recognized as endangered or threatened, but for which there is documented concern about their welfare in New York State as a whole. Unlike threatened or endangered species, species of special concern receive no additional legal protection under Environmental Conservation

Law Section 11-0535. This category is intended to enhance public awareness of those species which deserve additional attention.

3.6.2 Anticipated Impacts

Vegetation

Habitat

The subject property is approximately 56.01 acres in size, of which approximately 88 percent (49.28 acres) will be developed with a mixed-use development. In total, as illustrated in Table 11 the developed portion of the overall site will consist of 23.94 acres of impervious surfaces (buildings and pavement) and 17.88 acres of landscaping/turf. The remaining 14.19 acres will consist of existing habitats to be retained, as 12.16 acres of Coastal Oak-Laurel Forest, the majority of the area of Brushy Cleared Land (1.43 acres), 0.47 acres of Unvegetated surfaces, and a small area of Successional Old Field (0.13 acres).

Table 11 – Habitat Areas (Existing Conditions vs. Proposed Action)

Habitat Type/Use	Existing Conditions		Proposed Action		Change (acres)
	Acres	Percent	Acres	Percent	
Successional Habitats					
Successional Shrubland	2.98	5.32%	0	0.00%	-2.98
Successional Old Field	2.75	4.91%	0.13	0.24%	-2.62
Brushy Cleared Land	1.67	2.98%	1.43	2.56%	-0.23
Successional Southern Hardwood Forest	0.80	1.43%	0	0.00%	-0.80
Forest Habitat					
Coastal Oak-Laurel Forest	33.96	60.63%	12.16	21.70%	-21.80
Other Areas					
Landscaped	7.91	14.12%	17.88	31.92%	+9.97
Unvegetated	5.39	9.62%	0.47	0.84%	-4.92
Impervious	0.55	0.98%	23.94	42.74%	+23.39
Total	56.01	100.00%	56.01	100.00%	---

While the proposed action will impact the existing natural vegetation and the associated wildlife habitat it currently provides, regional impacts are expected to be small due to the larger amount of other available habitat in the area. Similar forested habitat is found to the north and in the general area. The majority of the southern portion of the property has been disturbed and is dominated by bare soil and successional vegetation. Although limited successional habitat is found throughout the general area, the regional impacts to this habitat type are not expected to be significant.

The development of the site will reduce the successional habitats on-site by a total of 6.40 acres and will reduce the coastal oak forest found on-site by 21.80 acres. Following the construction of the proposed development, landscaping and turf will be found in the areas surrounding the proposed buildings and within the parking lot islands and native or non-invasive ornamental species will be utilized. Although landscaped areas will provide some habitat, there will be a direct change and loss of the habitat presently found on-site. Additionally, as is common when the clearing of wooded areas occurs, there would be the potential for edge effects (e.g., changes in species composition [including increased diversity]), to occur along the periphery of the natural areas to remain. Planting of native species in landscaped areas such as pines, oaks, maples, blueberry, bayberry and mountain laurel will help accelerate the process of succession, while minimizing the potential for colonization by introduced species (or other edge effects), thereby providing some mitigation for the loss of habitat.

Rare and Endangered Species

The subject property is not expected to act as a refuge for rare native flora, so direct impacts to these species will be expected to be minimal. Several exploitably vulnerable, protected species (mountain laurel and bayberry) were identified on the property. Mountain Laurel is relatively abundant, particularly in the northern and northwestern portion of the site, with the remaining species listed above found only in isolated patches. Exploitably vulnerable species are protected primarily because they are indiscriminately collected, rather than due to rarity within the State. The presence of these plants will not preclude development of the site, as a property owner is permitted to remove exploitably vulnerable plant species from a site.

Wildlife

Habitat

The successional habitats and mature woodland found on-site provide habitat for a variety of wildlife species. The surrounding development, adjacent roadways and disturbance within the site partially fragment the site under existing conditions. Given these conditions, the site is generally not expected to provide habitat for some species found in larger tracts of contiguous forests and open space, although its location with respect to the adjoining undeveloped habitats increases the likelihood that some of these species may be found in the general area, particularly in the northeast area of the site. Most of the species expected on the property are at least somewhat tolerant of human activity, and most are expected to be impacted to some degree by the proposed development, resulting in the loss and further fragmentation of the existing habitat, with an increase in human activity. It is also expected that certain species of wildlife (particularly avian species) will migrate to undeveloped portions of the site and surrounding area; however, it is noted that less available habitat has the potential to decrease the population of individual species.

A total of 12.16 acres of coastal oak forest is proposed to remain, thereby continuing to provide habitat on-site. A total of 0.13-acre of successional habitats will be retained on-site, which will also provide some habitat, albeit habitat of lesser quality than that of the coastal oak forest, as the successional habitats are impacted by the presence of invasive plant species. Retention of both the coastal oak forest and successional vegetation is expected to allow for wildlife corridors and habitat for those species that are tolerant and/or dependent on human activity.

Rare and Endangered Species

Potential exists for the northern long eared bat to utilize the site. Guidance from the USF&WS (USF&WS, 2015) and communication with the NYSDEC were utilized to determine potential impacts from the proposed project on the species. Generally, the guidance indicates the following:

- If known hibernacula are present, do not clear cut trees within ¼ mile of the hibernacula.
- If roost trees are identified, do not cut the roost tree during the bat maternity season, between June 1 and July 31.
- If roost trees are identified, do not clear cut within ¼ mile of the roost tree during the maternity season, between June 1 and July 31.

As no hibernacula are present on site, this condition does not apply. Site specific surveys for roost trees and to determine the presence/absence of the species have not been conducted. If roost trees and/or presence/absence surveys are not conducted prior to construction, cutting of trees will not be permitted during the maternity season (June 1 to July 31) to ensure that pups are not impacted by construction activities. If a survey is conducted that results in a determination that the species is not utilizing the site, seasonal clearing restrictions will not apply. Additionally, approximately 12 acres of existing natural woodland will be retained and will continue to provide suitable habitat for the species. As a result, impacts to this species as a result of the proposed development are mitigated through the use of the above described measures.

As noted above, no threatened or endangered species were observed on-site. Of the species listed as being likely on the site, the common nighthawk, horned lark, whip-poor-will, eastern spadefoot toad, eastern box turtle and eastern hognose snake are listed as special concern species. Although there is documented concern about their welfare in New York State, these special concern species receive no additional legal protection under ECL Section 11-0535. This category is presented primarily to enhance public awareness of these species, which bear additional attention (NYSDEC, 2007).

3.6.3 Proposed Mitigation

The following mitigation measures are proposed to minimize any impacts on ecological resources, to the extent practicable:

- Disturbance will be minimized to the maximum extent practicable, including delineating tree-clearing limits, prior to construction in order to avoid inadvertent clearing

- Native plant species that provide food and shelter to wildlife will be utilized in some of the landscaped areas

- No known invasive plant species will be utilized, including those species listed in Resolution 614-2007 enacted by the Suffolk County Legislature. A copy of Resolution 614-2007 is included in Appendix D

3.7 Transportation

3.7.1 Introduction

VHB completed a comprehensive evaluation of the potential traffic impacts associated with the proposed action. The purpose of the Traffic Impact Study (TIS) Report was to determine whether any significant traffic impacts will result from the proposed development and to propose and evaluate mitigation measures, if required. This section presents the findings of that evaluation and summarizes the data collection process, traffic analysis procedures, and study conclusions. The TIS is included in its entirety in Appendix I.

3.7.2 Study Methodology

The following describes the methodology used in the TIS:

- The Conceptual Site Layout Plan and related documents were reviewed to obtain an understanding of the project scope and layout.
- A review was made of the adjacent roadway system and the key intersections that might be significantly impacted by the proposed action were identified to be included in this study.
- 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 was obtained, tabulated and summarized.
- Turning movement counts to supplement available count data were collected using Miovision cameras at the key intersections during the weekday AM, weekday PM and Saturday midday peak periods. The existing traffic volumes at the key intersections were expanded to the future No-Build year (assumed to be 2017).
- Traffic likely to be generated by other planned developments in the area and passing through the study intersections was accounted for.
- The traffic generated by the proposed development was projected based on recognized traffic engineering standards.

- The site-generated volumes were distributed along the adjacent roadway network and were added to the No-Build volumes to produce the proposed Build volumes.

- Capacity analyses were performed at the key intersections for the Existing, No-Build, and future Build conditions.

- The results of the analyses for the Existing, No-Build, and Build were compared to assess any significant traffic impacts due to the proposed action.

- The need for traffic mitigation measures was evaluated and proposed

- The site access points and on-site circulation were evaluated.

- The proposed on-site parking was reviewed.

3.7.3 Roadway Intersections and Conditions

Roadways

Jericho Turnpike (NYS Route 25)

Jericho Turnpike, designated as NYS Route 25, is a major east-west arterial under the jurisdiction of New York State Department of Transportation (NYSDOT), that extends from Queens to Orient Point. Jericho Turnpike runs along the south side of the subject property and provides two travel lanes in each direction, with additional turn lanes at key intersections. Three of the proposed four site access points are located along Jericho Turnpike. According to 2011 NYSDOT hourly traffic counts, the Average Annual Daily Traffic (AADT) on this section of Jericho Turnpike is approximately 24,200 vehicles per day. The posted speed limit on this section is 45 miles per hour (mph).

Deer Park Road (CR 35)

Deer Park Road, designated as CR 35, is a major arterial under the jurisdiction of the Suffolk County Department of Public Works (SCDPW) that extends northwest from CR 66 to NYS Route 25. North of Jericho Turnpike it is designated Park Avenue and continues to NYS Route 110. Deer Park Road provides two travel lanes in each direction, with additional turn lanes at key intersections in the vicinity of the subject property. According to 2011 NYSDOT hourly traffic counts, the AADT on this section of Deer Park Road is approximately 30,600 vehicles per day. The posted

speed limit on CR 35 is 40 mph, north of Jericho Turnpike the posted speed limit is 35 mph.

East Deer Park Road (CR 66)

East Deer Park Road, designated as CR 66, is a major north-south arterial under the jurisdiction of SCDPW, that extends northeast from CR 35 to NYS Route 25. East Deer Park Road provides two travel lanes in each direction, with additional turn lanes at key intersections. According to 2011 NYSDOT hourly traffic counts, the AADT on East Deer Park Road is approximately 30,700 vehicles per day. The posted speed limit is 40 mph.

Old Country Road

Old Country Road is a north-south collector roadway in the vicinity of the subject property under the jurisdiction of Town of Huntington. It extends south from Jericho Turnpike to Round Swamp Road, west of which, it turns into a major arterial and continues to Rockaway Avenue in Garden City. Within the study area it provides one travel lane in each direction, with additional turn lanes at Jericho Turnpike and CR 35. One of the site access points is proposed to be aligned with the northern terminus of Old Country Road. The posted speed limit on Old Country Road is 35 mph.

Manor Road

Manor Road is a north-south collector roadway under the jurisdiction of the Town of Huntington that extends north from Jericho Turnpike to Cuba Hill Road, north of which it is designated Manor Road N. It runs along the west side of the subject property and provides one travel lane in each direction, with additional turn lanes at Jericho Turnpike. According to 2011 NYSDOT hourly traffic counts, the AADT on this section of Manor Road is approximately 4,700 vehicles per day. The posted speed limit on Manor Road is 30 mph.

Warner Road

Warner Road is a north-south collector roadway under the jurisdiction of Town of Huntington that extends north from Jericho Turnpike and then east to Elwood Road. It provides one travel lane in each direction. According to 2011 NYSDOT hourly traffic counts, the AADT on Warner Road is approximately 3,350 vehicles per day. The posted speed limit on Warner Road is 30 mph.

Deforest Road North

Deforest Road North is a local roadway under jurisdiction of the Town of Huntington. Deforest Road North, in addition to providing access to adjacent

residences and businesses, serves as a connection from a westbound Northern State Parkway exit to Deer Park Road and Deer Park Road East. Deforest Road North provides one travel lane in each direction. The posted speed limit on Deforest Road North is 30 mph.

Stowe Avenue

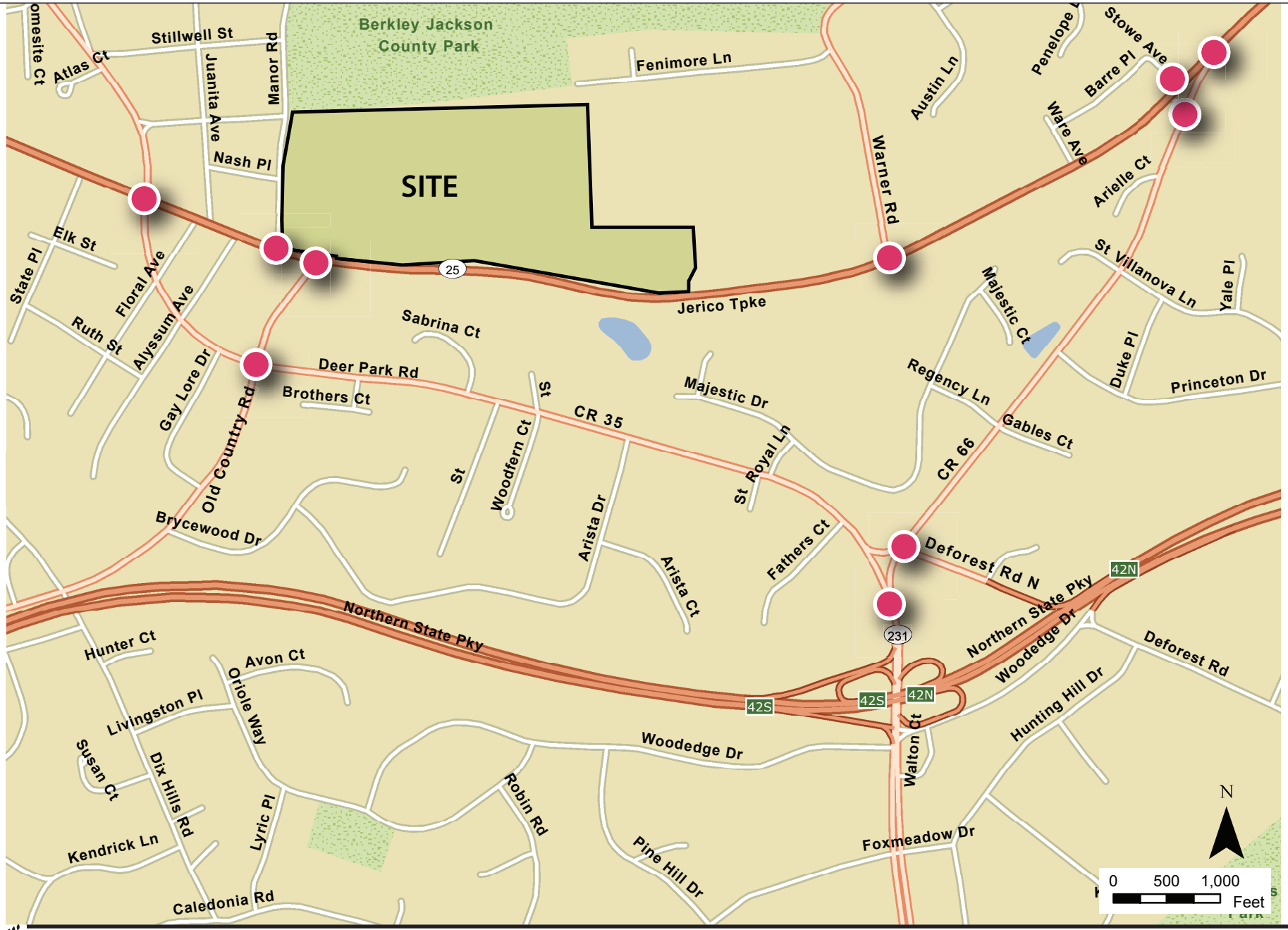
Stowe Avenue is a short north-south minor roadway under the jurisdiction of Town of Huntington that extends north from Jericho Turnpike. Stowe Avenue intersects Jericho Turnpike just west of East Deer Park Road. There is no posted speed limit on Stowe Avenue.

Study Area Intersections

To determine the potential traffic impacts of the proposed action, the following ten signalized intersections were analyzed under Existing, No-Build, and Build Conditions:

- Jericho Turnpike (NYS Route 25) & Deer Park Road / Park Avenue (CR 35)
- Jericho Turnpike (NYS Route 25) & Manor Road
- Jericho Turnpike (NYS Route 25) & Old Country Road
- Deer Park Road (CR 35) & Old Country Road
- Jericho Turnpike (NYS Route 25) & Warner Road
- Jericho Turnpike (NYS Route 25) & Stowe Avenue
- Jericho Turnpike (NYS Route 25) & East Deer Park Road (CR 66)
- East Deer Park Road (CR 66) & Town of Huntington Yard/Shopping Center Access
- East Deer Park Road (CR 66) & Deforest Road North
- Deer Park Road (CR 35) & East Deer Park Road (CR 66)

The locations of these intersections are shown in Figure 13 and described and shown in detail in the TIS.



VILLADOM-ELWOOD ORCHARD
Huntington, New York

Traffic Study Intersections

Figure
13

Existing Traffic Volume Data

Intersection turning movement counts to supplement available traffic counts at the key intersections previously described were collected using Miovision cameras on a typical weekday during the AM and PM peak hours on Thursday, November 21, 2013. Saturday midday peak period counts were collected on November 23, 2013. These time periods typically reflect the heaviest traffic flows coinciding with commuter and shopping activities. Summaries of the turning movement counts are provided in Appendix A of the TIS. The existing peak hour traffic volumes for the weekday AM, midday, and PM peak hours are shown in Figures 3, 4, and 5, respectively, of the TIS.

Accident History

Accident data from NYSDOT Accident Location Information System (ALIS) records for the most recent available three-year period was requested. Accident Verbal Description Reports (VDRs) for the period March 1, 2010 through February 28, 2013 were obtained for the following roadway segments within the specified limits including data at the end intersections and all intersections in between:

- Segment of Jericho Turnpike From Deer Park Road/Park Avenue to East Deer Park Road
- Segment of Deer Park Road From East Deer Park Road to Jericho Turnpike
- Segment of East Deer Park Road From Deer Park Road to Jericho Turnpike
- Segment of Manor Road From Jericho Turnpike to Ontario Street

Table 12 provides a summary of the accident data. The intersections with no recorded accidents are not noted in the table. The VDRs are included in Appendix B of the TIS.

Table 12 – Accident Data Summary

Intersection/Segment	Accident Severity				Total	Accident Type											
	Fatality	Injury	Property Damage Only	Non-Reportable		Rear End	Overtaking	Right Angle	Left Turn	Right Turn	Fixed Object	Head On	Side-Swipe	Pedestrian	Parked Vehicle	Backing	Other/ Unknown
Jericho Turnpike & Deer Park Road /Park Avenue	2	30	39	4	75	34	9	8	9	3	-	2	-	1	1	2	6
Jericho Turnpike & Manor Road	-	10	7	-	17	5	-	1	4	1	-		1	1	-	2	2
Jericho Turnpike & Old Country Road	-	5	6	-	11	3	-	3	2	1	-	-	-	-	2	-	-
Jericho Turnpike & Warner Road	1	11	5	1	18	10	-	-	0	-	7	-	-	-	-	-	1
Jericho Turnpike & Stowe Avenue	-	2	2	-	4	2	-	-	1	-	-	1	-	-	-	-	-
Jericho Turnpike & East Deer Park Road	-	4	4	2	10	5	1	1	1	-	-	1	1	-	-	-	-
Deer Park Road & Old Country Road	-	14	11	-	25	11	-	8	-	2	-	1	-	-	1	-	2
Deer Park Road & East Deer Park Road	-	6	15	-	21	12	3	-	2	-	1	1	1	-	-	-	1
East Deer Park Road & Deforest Road N	-	5	11	2	18	11	5	1	1	-	-	-	-	-	-	-	-
East Deer Park Road & TOH Driveway	-	1	1	-	2	1	-	-	1	-	-	-	-	-	-	-	-
Segment of Jericho Turnpike between CR 35 & CR 66 (other than at Key Intersections)	-	23	23	16	62	23	9	6	6	3	7	2	-	1	3	2	-
Segment of CR 35 between NY 25 & CR 66 (other than at Key Intersections)	-	21	25	-	46	15	7	5	8	1	4	1	1	-	1	-	3
Segment of CR 66 between NY 25 & CR 35 (other than at Key Intersections)	1	7	11	-	19	10	2	-	3	1	2	-	-	-	-	-	1

The access to the proposed action has been well-designed to accommodate the traffic levels expected to be generated at the site. Furthermore, all traffic to and from Jericho Turnpike, with the exception of right turns into and out of the site at the easterly access, will occur at an existing or proposed traffic signal. It is not expected that the development of the proposed action would unduly influence the rate of accident occurrence in the study area.

3.7.4 Future Conditions

The analysis of future conditions, with and without the proposed action ("Build" and "No-Build" conditions respectively), was performed to evaluate the effect of the proposed action on future traffic in the area. Background traffic volumes in the study area were projected to the year 2017, reflecting the year when the project is expected to be completed and operational. The No-Build condition represents the future traffic conditions that can be expected to occur, were the proposed action not constructed. The No-Build condition serves to provide a comparison to the Build condition, which represents expected future traffic conditions resulting from both project and non-project generated traffic.

No-Build Condition

The 2017 No-Build traffic volumes include existing traffic, additional traffic volume due to background traffic growth, and other planned developments in the area as explained below.

Background Traffic Growth

To account for increases in general population and background growth not related to the proposed action, an annual growth factor was applied to existing traffic volumes. Based on the LITP 2000 model, the growth rate anticipated for the Town of Huntington in Suffolk County is 1.0% per year. Therefore, a growth rate of 1% per year was applied for three years to 2017 for a total of 3%.

Other Planned Developments

The Town of Huntington Planning Department was contacted and the following other planned development in the vicinity of the subject property was identified:

The Seasons, located on Elwood Road north of Cuba Hill Road. This approved 256-unit[4] senior residential community was estimated to generate 88 trips (Entering 31 & Exiting 58) during the weekday a.m. peak hour, 108 trips (Entering 66 & Exiting 42)

[4] The original Seasons proposal was for 400-units. The Traffic Impact Study utilized trip generation projected for the original 400-unit proposal.

during the weekday p.m. peak hour and 92 trips (Entering 44 & Exiting 48) during the Saturday midday peak hour.

To obtain the 2017 No-Build traffic volumes at the study intersections, the trips anticipated to be generated by this other planned development were added to the existing traffic volumes plus background traffic growth.

The No-Build volumes for the weekday AM, PM, and Saturday midday peak hours are shown in Figures 6, 7, and 8, respectively of the TIS.

Build Condition

To estimate the traffic impacts of the proposed action, it is necessary to determine the traffic volumes expected to be generated by the proposed action.

Project-Generated Traffic Volumes

To estimate the project-generated traffic for the proposed development, a review was undertaken of available trip generation data sources, including the reference published by the Institute of Transportation Engineers (ITE), Trip Generation, 9th Edition. This widely utilized reference source contains trip generation rates for various land uses, including those proposed at proposed development. The TIS details the methodology and approach utilized to evaluate the proposed action using ITE's Trip Generation rates. In addition, ITE was referenced to determine the pass-by trips that will be associated with the proposed action. ITE defines pass-by trips as *trips made as intermediate stops on the way from an origin to a primary trip destination without diversion.* Pass-by trips are attracted from the adjacent street, in this case from Jericho Turnpike, Old Country Road and Manor Road. Pass-by trip rates depend on the type and size of the proposed development.

The result is that the proposed action will generate 593 trips (410 entering and 183 exiting) during the weekday AM peak hour, 1,446 trips (658 entering and 788 exiting) during the weekday PM peak hour and 1,649 trips (842 entering and 807 exiting) during the Saturday midday peak hour.

Trip Distribution and Assignment

The net trips generated by the proposed multi-use development were distributed to the adjacent roadways based on the location of the access points, area demographics and the characteristics of the roadway system in the vicinity of the site. Two different distribution patterns were developed: one for the retail/fitness/library and one for office land uses. These were treated separately to account for the difference in trip making activity between employment based travel and the other components. Essentially, employees are willing to travel farther to their places of employment

than do patrons of the other uses. This is reflected in the differing directional distributions used for the project. The directional distribution for the office use was developed based on journey to work data specific to where persons who work in the Elwood area reside. The shopping center/gym/library directional distribution was developed based on the distribution of households within the drawing area of the development.

It is noted that there is currently approximately 7,500 square feet of retail and restaurant space located on the site near the corner of Jericho Turnpike and Manor Road. With the development of the site as proposed, this existing space will be eliminated. However, to present a high-side conservative estimate of potential traffic impacts, no credit was taken for the elimination of existing trips from this space.

The trip distribution percentages, shown on Figure 9 of the TIS (and detailed in Appendix C of the TIS), were then applied to retail primary trips and trips anticipated to be generated by fitness club and community facility land uses and then assigned to the local roadway network. The resulting site generated traffic volumes for the weekday AM, PM, and Saturday midday peak hours are shown in Figures 10, 11, and 12, respectively, of the TIS. The trip distribution percentages shown on Figure 13 of the TIS were then applied to trips anticipated to be generated by the office land use and then assigned to the local roadway network. Figures 14, 15 and 16 of the TIS show site generated traffic from office land use for AM, PM and Saturday midday peak hours, respectively.

Finally, to determine the 2017 Build traffic volumes, the net trips generated by the site were added to the No-Build traffic volumes at the key intersections. The resulting 2017 Build traffic volumes for the weekday AM, PM, and Saturday midday peak hours are shown in Figures 17, 18, and 19, respectively of the TIS.

3.7.5 Traffic Operations Analysis

Level of Service and Delay Criteria

The evaluation criteria used to analyze area intersections in this traffic study 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. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions.

In addition to LOS, vehicle delay time (expressed in seconds per vehicle) is typically used to quantify the traffic operations at intersections. For example, a delay of 15 seconds for a particular vehicular movement or approach indicates that vehicles on the movement or approach will experience an average additional travel time of 15 seconds. It should be noted that delay time has a range of values for a given LOS letter designation. Therefore, when evaluating intersection capacity results, in addition to the LOS, vehicle delay time should also be considered.

The levels of service designations, which are based on delay, are reported differently for signalized and unsignalized intersections. For signalized intersections, the analysis considers the operation of all traffic entering the intersection and the LOS designation is for overall conditions at the intersection. For unsignalized intersections, however, the analysis assumes that traffic on the mainline is not affected by traffic on the side streets. Thus the LOS designation is for the critical movement exiting the side street, which is generally the left turn out of the side street or side driveway.

Software

The capacity analyses were performed using the traffic analysis software Synchro, *Version 8,* a computer program developed by Trafficware Ltd. Synchro is a complete software package for modeling and optimizing traffic signal timing. Synchro adheres to and implements the guidelines and methods set forth in the 2000 and 2010 HCM. This analysis methodology was used to evaluate the ability of an intersection or roadway to efficiently handle the number of vehicles using the facility. Synchro was used to model and analyze the Existing, No-Build, and Build conditions at the key intersections.

Level of Service Analysis Results

LOS analyses were conducted for the Existing, 2017 No-Build and 2017 Build conditions for each of the key intersections. The results of the capacity analyses for each of the signalized study intersections for the weekday AM, PM, and Saturday midday peak periods are summarized below in Tables 13, 14, and 15, respectively. The detailed capacity analysis worksheets are contained in Appendix E of the TIS.

Table 13 – Intersection LOS – AM Peak Hour

Intersection	Movement	Lane Group	Existing 2013		No-Build 2017		Build 2017	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Deer Park Road	EB	L	55.0	E	62.8	E	62.8	E
		TR	22.7	C	24.0	C	28.4	C
		Approach	23.8	C	25.3	C	29.4	C
	WB	L	15.1	B	15.7	B	35.0	D
		TR	29.0	C	33.3	C	44.7	D
		Approach	28.5	C	32.8	C	44.4	D
	NB	L	142.6	F	162.5	F	162.5	F
		TR	35.2	D	35.9	D	35.9	D
		Approach	65.6	E	71.8	E	71.9	E
	SB	L	37.1	D	42.5	D	80.4	F
		TR	55.9	E	59.5	E	59.5	E
		Approach	53.3	D	57.1	E	63.1	E
	Overall		44.7	D	48.8	D	53.6	D
Jericho Turnpike & Manor Road	EB	L	8.2	A	8.7	A	6.2	A
		TR	17.2	B	18.7	B	8.6	A
		Approach	17.0	B	18.4	B	8.5	A
	WB	L	2.5	A	2.5	A	2.1	A
		TR	4.2	A	4.4	A	6.8	A
		Approach	4.2	A	4.3	A	6.7	A
	NB	L	37.0	D	37.1	D	40.1	D
		TR	24.5	C	26.1	C	27.8	C
		Approach	29.1	C	30.3	C	32.5	C
	SB	LT / L	71.0	E	72.1	E	69.0	E
		R / TR	7.1	A	7.1	A	37.8	D
		Approach	48.6	D	49.3	D	51.3	D
	Overall		16.7	B	17.2	B	15.7	B
Jericho Turnpike & Old Country Road / Site Access	EB	L					9.5	A
		TR	16.6	B	17.5	B	25.3	C
		Approach	16.6	B	17.5	B	24.3	C
	WB	L	24.2	C	30.2	C	32.4	C
		T / TR	15.7	B	16.6	B	30.3	C
		R					0.0	A
		Approach	17.9	B	20.0	C	30.6	C
	NB	L	35.7	D	35.4	D	38.2	D
		TR / T					51.1	D
		R	7.5	A	7.4	A		
		Approach	16.6	B	16.4	B	48.7	D
	SB	L					32.5	C
		T					42.4	D
		R					0.6	A
		Approach					21.0	C
	Overall		17.4	B	18.9	B	30.6	C

Table 13 – Intersection LOS – AM Peak Hour – continued…2 of 3

Intersection	Movement	Lane Group	Existing 2013		No-Build 2017		Build 2017	
			Delay	LOS	Delay	LOS	Delay	LOS
Deer Park Road & Old Country Road	EB	L	11.0	B	10.5	B	11.0	B
		TR	21.0	C	22.6	C	21.6	C
		Approach	21.0	C	22.6	C	21.6	C
	WB	L	52.9	D	85.3	F	73.1	E
		TR	23.0	C	25.3	C	26.9	C
		Approach	24.7	C	28.5	C	29.3	C
	NB	L	32.4	C	34.1	C	36.7	D
		TR	29.7	C	30.0	C	32.7	C
		Approach	29.9	C	30.4	C	33.0	C
	SB	L	32.2	C	32.9	C	37.6	D
		T	46.6	D	47.0	D	52.5	D
		R	0.0	A	0.0	A	0.0	A
		Approach	43.4	D	43.9	D	48.7	D
	Overall		26.7	C	29.0	C	30.1	C
Jericho Turnpike & Warner Road	EB	L	72.8	E	75.4	E	84.1	F
		T	9.2	A	9.6	A	10.4	B
		Approach	13.6	B	14.2	B	16.1	B
	WB	TR	16.5	B	17.6	B	20.0	C
		Approach	16.5	B	17.6	B	20.0	C
	SB	LR	62.6	E	63.2	E	64.2	E
		Approach	62.6	E	63.2	E	64.2	E
	Overall		22.1	C	22.9	C	25.0	C
Jericho Turnpike & Stowe Avenue	EB	L	76.6	E	78.8	E	81.7	F
		T	0.4	A	0.4	A	0.3	A
		Approach	3.3	A	3.4	A	3.2	A
	WB	TR	5.3	A	5.5	A	5.8	A
		Approach	5.3	A	5.5	A	5.8	A
	SB	L	53.0	D	53.3	D	53.3	D
		R	26.3	C	26.3	C	26.3	C
		Approach	42.1	D	43.0	D	43.0	D
	Overall		5.3	A	5.4	A	5.6	A
Jericho Turnpike & CR 66	EB	T	18.7	B	18.8	B	18.8	B
		Approach	18.7	B	18.8	B	18.8	B
	WB	L	22.2	C	22.8	C	22.8	C
		T	0.2	A	0.3	A	0.3	A
		Approach	10.6	B	10.9	B	10.5	B
	NB	R	6.0	A	6.1	A	6.1	A
		Approach	6.0	A	6.1	A	6.1	A
	Overall		10.9	B	11.2	B	11.0	B

Table 13 – Intersection LOS – AM Peak Hour – continued…3 of 3

Intersection	Movement	Lane Group	Existing 2013		No-Build 2017		Build 2017	
			Delay	LOS	Delay	LOS	Delay	LOS
CR 66 & TOH Yard Driveway	WB	L	22.7	C	22.8	C	22.8	C
		R	9.1	A	8.9	A	8.9	A
		Approach	15.9	B	15.8	B	15.8	B
	NB	TR	18.6	B	18.8	B	18.8	B
		Approach	18.6	B	18.8	B	18.8	B
	SB	L	3.6	A	3.5	A	3.5	A
		T	0.2	A	0.2	A	0.2	A
		Approach	0.2	A	0.2	A	0.2	A
	Overall		7.5	A	7.6	A	7.6	A
East Deer Park Road & Deforest Road	EB	LT	11.4	B	11.4	B	11.5	B
		Approach	11.4	B	11.4	B	11.5	B
	WB	LTR	41.0	D	43.9	D	46.1	D
		Approach	41.0	D	43.9	D	46.1	D
	NB	TR	15.9	B	16.5	B	16.6	B
		Approach	15.9	B	16.5	B	16.6	B
	SB	LTR	34.9	C	55.2	E	58.5	E
		Approach	34.9	C	55.2	E	58.5	E
	Overall		31.8	C	42.3	D	44.4	D
Deer Park Road & East Deer Park Road	WB	L	13.9	B	14.9	B	13.0	B
		Approach	13.9	B	14.9	B	13.5	B
	NB	T	58.2	E	69.0	E	110.6	F
		R	0.2	A	0.3	A	0.3	A
		Approach	30.6	C	36.1	D	60.8	E
	SB	T	39.0	D	47.8	D	53.0	D
		Approach	39.0	D	47.8	D	53.0	D
	Overall		28.4	C	33.7	C	44.0	D
Jericho Turnpike & Central Signalized Site Access	EB	L					13.0	B
		T					11.3	B
		Approach					11.5	B
	WB	T					18.5	B
		R					3.7	A
		Approach					18.0	B
	SB	L					43.5	D
		R					14.3	B
		Approach					28.7	C
	Overall						16.1	B

Table 14 – Intersection LOS – PM Peak Hour

Intersection	Movement	Lane Group	Existing 2013		No Build 2017		Build 2017	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Deer Park Road	EB	L	30.8	C	32.6	C	65.0	E
		TR	73.4	E	98.7	F	153.3	F
		Approach	72.2	E	96.8	F	151.1	F
	WB	L	29.4	C	31.9	C	39.2	D
		TR	18.2	B	19.7	B	29.7	C
		Approach	18.4	B	20.0	C	29.9	C
	NB	L	96.6	F	108.7	F	78.9	E
		TR	31.8	C	31.8	C	29.4	C
		Approach	50.4	D	53.8	D	43.6	D
	SB	L	28.0	C	30.8	C	89.8	F
		TR	46.4	D	47.1	D	47.1	D
		Approach	43.5	D	44.5	D	56.6	E
	Overall		50.2	D	59.4	E	77.4	E
Jericho Turnpike & Manor Road	EB	L	3.7	A	3.6	A	5.0	A
		TR	5.9	A	5.8	A	3.3	A
		Approach	5.7	A	5.7	A	3.4	A
	WB	L	5.0	A	5.2	A	2.6	A
		TR	9.7	A	10.1	B	5.3	A
		Approach	9.6	A	10.0	B	5.3	A
	NB	L	45.5	D	44.8	D	70.9	E
		TR	39.2	D	38.9	D	52.7	D
		Approach	41.6	D	41.2	D	59.8	E
	SB	LT / L	51.3	D	50.0	D	69.9	E
		R / TR	0.6	A	0.6	A	29.9	C
		Approach	39.9	D	39.0	D	43.8	D
	Overall		11.8	B	11.8	B	9.9	A
Jericho Turnpike & Old Country Road / Site Access	EB	L					10.9	B
		TR	3.6	A	3.6	A	28.9	C
		Approach	3.6	A	3.6	A	27.2	C
	WB	L	8.7	A	10.0	B	86.3	F
		T / TR	11.7	B	12.4	B	5.7	A
		R					0.1	A
		Approach	11.2	B	12.0	B	23.7	C
	NB	L	57.6	E	56.4	E	31.5	C
		TR / T					36.9	D
		R	16.1	B	18.5	B		
		Approach	34.4	C	35.3	D	35.2	D
	SB	L					50.1	D
		T					47.3	D
		R					8.7	A
		Approach					29.4	C
	Overall		12.1	B	12.5	B	27.8	C

Table 14– Intersection LOS – PM Peak Hour – continued…2 of 3

Intersection	Movement	Lane Group	Existing 2013		No Build 2017		Build 2017	
			Delay	LOS	Delay	LOS	Delay	LOS
Deer Park Road & Old Country Road	EB	L	15.4	B	20.7	C	17.1	B
		TR	20.7	C	28.6	C	26.9	C
		Approach	20.6	C	28.5	C	26.9	C
	WB	L	27.6	C	74.9	E	85.5	F
		TR	20.7	C	28.8	C	47.6	D
		Approach	20.9	C	30.0	C	48.5	D
	NB	L	28.1	C	26.3	C	21.1	C
		TR	40.0	D	33.4	C	30.2	C
		Approach	38.4	D	32.4	C	29.1	C
	SB	L	43.5	D	34.0	C	93.2	F
		T	29.5	C	26.4	C	28.0	C
		R	2.6	A	2.6	A	8.7	A
		Approach	33.5	C	28.2	C	60.2	E
	Overall		23.8	C	29.6	C	39.6	D
Jericho Turnpike & Warner Road	EB	L	64.8	E	65.5	E	69.5	E
		T	4.9	A	5.2	A	6.2	A
		Approach	13.6	B	13.9	B	15.7	B
	WB	TR	29.0	C	29.8	C	34.5	C
		Approach	29.0	C	29.8	C	34.5	C
	SB	LR	64.9	E	65.4	E	71.8	E
		Approach	64.9	E	65.4	E	71.8	E
	Overall		22.1	C	22.5	C	25.9	C
Jericho Turnpike & Stowe Avenue	EB	L	83.9	F	84.4	F	83.1	F
		T	2.2	A	2.3	A	2.4	A
		Approach	5.3	A	5.3	A	5.0	A
	WB	TR	6.7	A	6.8	A	7.3	A
		Approach	6.7	A	6.8	A	7.3	A
	SB	L	59.2	E	59.5	E	59.5	E
		R	17.8	B	17.7	B	17.7	B
		Approach	42.2	D	42.2	D	42.2	D
	Overall		7.7	A	7.8	A	7.6	A
Jericho Turnpike & CR 66	EB	T	23.4	C	23.7	C	25.1	C
		Approach	23.4	C	23.7	C	25.1	C
	WB	L	20.2	C	20.5	C	20.5	C
		T	0.1	A	0.1	A	0.2	A
		Approach	9.7	A	9.9	A	9.1	A
	NB	R	13.3	B	16.3	B	16.3	B
		Approach	13.3	B	16.3	B	16.3	B
	Overall		14.7	B	15.8	B	16.1	B

Table 14 – Intersection LOS – PM Peak Hour – continued…3 of 3

Intersection		Movement	Lane Group	Existing 2013		No Build 2017		Build 2017	
				Delay	LOS	Delay	LOS	Delay	LOS
CR 66 & TOH Yard Driveway		WB	L	21.1	C	21.1	C	21.1	C
			R	16.0	B	16.0	B	16.0	B
			Approach	20.7	C	20.7	C	20.7	C
		NB	TR	26.7	C	27.8	C	27.8	C
			Approach	26.7	C	27.8	C	27.8	C
		SB	L	6.0	A	6.9	A	6.9	A
			T	0.1	A	0.1	A	0.1	A
			Approach	0.2	A	0.2	A	0.2	A
		Overall		17.0	B	17.6	B	17.6	B
East Deer Park Road & Deforest Road		EB	LT	10.4	B	10.4	B	11.0	B
			Approach	10.4	B	10.4	B	11.0	B
		WB	LTR	37.6	D	41.3	D	41.6	D
			Approach	37.6	D	41.3	D	41.6	D
		NB	TR	39.0	D	56.4	E	56.7	E
			Approach	39.0	D	56.4	E	56.7	E
		SB	LTR	23.8	C	30.3	C	32.0	C
			Approach	23.8	C	30.3	C	32.0	C
		Overall		33.9	C	44.3	D	44.7	D
Deer Park Road & East Deer Park Road		WB	L	11.6	B	12.8	B	13.0	B
			Approach	11.6	B	12.8	B	13.0	B
		NB	T	24.6	C	26.6	C	35.9	D
			R	0.7	A	0.8	A	0.8	A
			Approach	8.7	A	9.4	A	13.3	B
		SB	T	28.5	C	33.6	C	53.6	D
			Approach	28.5	C	33.6	C	53.6	D
		Overall		15.9	B	18.2	B	27.2	C
Jericho Turnpike & Central Signalized Site Access		EB	L					47.5	D
			T					33.0	C
			Approach					35.3	D
		WB	T					36.3	D
			R					4.6	A
			Approach					32.7	C
		SB	L					26.9	C
			R					5.2	A
			Approach					16.1	B
		Overall						31.9	C

Table 15 – Intersection LOS – Saturday Midday Peak Hour

Intersection	Movement	Lane Group	Existing 2013		No Build 2017		Build 2017	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Deer Park Road	EB	L	39.4	D	50.0	D	270.4	F
		TR	32.1	C	35.6	D	60.1	E
		Approach	32.6	C	36.5	D	70.8	E
	WB	L	30.9	C	47.1	D	58.2	E
		TR / T	16.6	B	17.5	B	36.4	D
		Approach	17.0	B	18.4	B	36.9	D
	NB	L	82.9	F	94.9	F	86.8	F
		TR	44.0	D	43.8	D	46.7	D
		Approach	56.0	E	59.6	E	59.1	E
	SB	L	35.9	D	38.3	D	114.9	F
		TR	46.3	D	45.8	D	44.4	D
		Approach	43.9	D	44.1	D	66.9	E
	Overall		37.0	D	39.4	D	58.4	E
Jericho Turnpike & Manor Road	EB	L	5.3	A	5.7	A	16.7	B
		TR	9.2	A	9.8	A	9.6	A
		Approach	8.9	A	9.5	A	10.2	B
	WB	L	3.0	A	3.2	A	3.7	A
		TR / T	4.7	A	4.8	A	6.2	A
		Approach	4.6	A	4.8	A	6.1	A
	NB	L	69.1	E	69.5	E	145.3	F
		TR	33.1	C	33.2	C	34.1	C
		Approach	52.6	D	52.8	D	94.2	F
	SB	LT / L	64.7	E	63.8	E	50.0	D
		R / TR	8.9	A	8.5	A	49.1	D
		Approach	47.5	D	46.9	D	49.4	D
	Overall		14.9	B	15.1	B	17.6	B
Jericho Turnpike & Old Country Road / Site Access	EB	L					24.3	C
		TR	7.1	A	7.7	A	29.9	C
		Approach	7.1	A	7.7	A	29.3	C
	WB	L	12.1	B	14.9	B	68.2	E
		T / TR	13.8	B	14.8	B	13.9	B
		R					0.0	A
		Approach	13.5	B	14.8	B	24.0	C
	NB	L	41.2	D	40.3	D	32.6	C
		TR / T					62.8	E
		R	7.9	A	7.6	A		
		Approach	18.4	B	17.8	B	58.1	E
	SB	L					63.2	E
		T					41.5	D
		R					7.6	A
		Approach					27.8	C
	Overall		11.2	B	12.0	B	30.9	C

Table 15 – Intersection LOS – Saturday Midday Peak Hour – continued…2 of 3

Intersection		Movement	Lane Group	Existing 2013		No Build 2017		Build 2017	
				Delay	LOS	Delay	LOS	Delay	LOS
Deer Park Road & Old Country Road		EB	L	7.6	A	8.4	A	17.9	B
			TR	8.7	A	9.4	A	22.2	C
			Approach	8.7	A	9.4	A	22.1	C
		WB	L	7.8	A	8.5	A	15.9	B
			TR	9.0	A	9.8	A	24.8	C
			Approach	9.0	A	9.7	A	24.7	C
		NB	L	44.8	D	44.0	D	28.3	C
			TR	48.4	D	47.5	D	30.2	C
			Approach	47.6	D	46.8	D	29.9	C
		SB	L	76.7	E	78.4	E	49.3	D
			T / TR	46.7	D	45.7	D	29.5	C
			R	7.2	A	7.8	A	6.9	A
			Approach	55.1	E	55.2	E	37.4	D
		Overall		18.2	B	18.7	B	26.5	C
Jericho Turnpike & Warner Road		EB	L	143.6	F	158.8	F	289.2	F
			T	4.8	A	5.0	A	5.6	A
			Approach	20.3	C	21.9	C	40.2	D
		WB	TR	5.5	A	5.6	A	6.2	A
			Approach	5.5	A	5.6	A	6.2	A
		SB	LR	85.3	F	89.0	F	130.1	F
			Approach	85.3	F	89.0	F	130.1	F
		Overall		18.3	B	19.4	B	32.2	C
Jericho Turnpike & Stowe Avenue		EB	L	68.1	E	69.4	E	68.3	E
			T	6.0	A	6.2	A	6.9	A
			Approach	8.3	A	8.6	A	8.8	A
		WB	TR	7.4	A	7.6	A	8.4	A
			Approach	7.4	A	7.6	A	8.4	A
		SB	L	61.1	E	61.6	E	61.6	E
			R	18.9	B	18.7	B	18.7	B
			Approach	49.0	D	49.4	D	49.4	D
		Overall		9.8	A	10.0	B	10.2	B
Jericho Turnpike & CR 66		EB	T	15.5	B	15.6	B	17.4	B
			Approach	15.5	B	15.6	B	17.4	B
		WB	L	33.0	C	34.0	C	34.0	C
			T	0.2	A	0.2	A	0.3	A
			Approach	15.0	B	15.4	B	14.2	B
		NB	R	12.7	B	15.0	B	15.0	B
			Approach	12.7	B	15.0	B	15.0	B
		Overall		14.4	B	15.2	B	15.1	B

Table 15 – Intersection LOS – Saturday Midday Peak Hour – continued…3 of 3

Intersection	Movement	Lane Group	Existing 2013		No Build 2017		Build 2017	
			Delay	LOS	Delay	LOS	Delay	LOS
CR 66 & Highway Office Driveway	WB	L	14.6	B	14.7	B	14.7	B
		R	9.3	A	9.3	A	9.3	A
		Approach	14.0	B	14.0	B	14.0	B
	NB	TR	35.1	D	36.4	D	36.4	D
		Approach	35.1	D	36.4	D	36.4	D
	SB	L	6.7	A	7.3	A	7.3	A
		T	0.1	A	0.1	A	0.1	A
		Approach	0.2	A	0.2	A	0.2	A
	Overall		18.4	B	19.1	B	19.1	B
East Deer Park Road & Deforest Road	EB	LT	15.3	B	15.3	B	17.1	B
		Approach	15.3	B	15.3	B	17.1	B
	WB	LTR	38.8	D	41.7	D	42.2	D
		Approach	38.8	D	41.7	D	42.2	D
	NB	TR	11.6	B	12.1	B	12.1	B
		Approach	11.6	B	12.1	B	12.1	B
	SB	LTR	12.6	B	13.2	B	13.4	B
		Approach	12.6	B	13.2	B	13.4	B
	Overall		17.2	B	18.1	B	18.3	B
Deer Park Road & East Deer Park Road	WB	L	5.1	A	5.3	A	5.5	A
		Approach	5.1	A	5.3	A	5.5	A
	NB	T	67.9	E	79.3	E	140.3	F
		R	0.4	A	0.4	A	0.4	A
		Approach	25.4	C	29.5	C	56.9	E
	SB	T	36.2	D	41.7	D	61.9	E
		Approach	36.2	D	41.7	D	61.9	E
	Overall		22.7	C	26.1	C	44.6	D
Jericho Turnpike & Central Signalized Site Access	EB	L					40.3	D
		T					15.3	B
		Approach					20.3	C
	WB	T					24.6	C
		R					2.9	A
		Approach					22.2	C
	SB	L					49.0	D
		R					11.4	B
		Approach					30.1	C
	Overall						22.3	C

Review of Tables 13, 14, and 15 reveals that, within the peak hours analyzed, a number of intersections experience changes in levels of service or poor levels of service as a result of background growth and/or the traffic projected for proposed action.

It can be seen in Tables 13, 14, and 15 that the intersection levels of service for Jericho Turnpike at Old Country Road/Westerly site access changes from LOS B to LOS C from No-Build to Build in all three time periods. This is due to the addition of a fourth leg to an existing three-legged intersection and the additional signal phase required to service the new approach. Level of Service C is considered a good LOS on a major arterial such as Jericho Turnpike.

It is also noted that, as shown in Table 14, during the weekday PM peak hour the intersection of Jericho Turnpike at Manor Road is shown to improve from LOS B to LOS A from the No-Build to Build conditions. The improvement in traffic service with the addition of site traffic is unusual and worthy of explanation. As noted in this study, this intersection is controlled by the same controller as the intersection of Jericho Turnpike and Old Country Road. When the proposed action is developed, a forth leg of that intersection will be constructed on the north side of Jericho Turnpike. This new configuration precludes the use of a single controller and results in two intersections, controlled by distinct controllers, but coordinated. This change, and the flexibility in signal phasing that it provides is what results in an improvement in traffic service over the no-build condition.

Proposed Mitigation

The following study intersections were re-analyzed with capacity and signal timing mitigation to improve their operation:

- Jericho Turnpike & Deer Park Road/Park Avenue
- Jericho Turnpike & Manor Road
- Jericho Turnpike & Old Country Road/Site Access
- Deer Park Road & Old Country Road
- Jericho Turnpike & Warner Road
- Jericho Turnpike & Stowe Avenue
- East Deer Park Road (CR 66) & Deforest Road North
- Deer Park Road (CR 35) & East Deer Park Road (CR 66)

The mitigation measures utilized at each location are described in Table 16. In addition, the proposed layout of the site access intersections is included in Table 16.

Table 16 – Table of Mitigation

Location	Capacity		Signal Timing Changes	
	Existing Conditions	Proposed	Existing Conditions	Proposed
Jericho Turnpike & Deer Park Road/Park Avenue	Westbound – One exclusive left-turn lane, one through lanes and a shared through and right-turn lane	Add an exclusive westbound right-turn lane with storage of 250'. New configuration – One exclusive left-turn lane, two through and an exclusive right-turn lane.	AM/PM/Saturday Signal operates at a cycle length of 120 seconds. EB/WB lefts turns are during permitted phase only.	No change in cycle length. Change EB left turn to a leading protected-permitted phase. Optimize phase splits to correlate to future volumes. Optimize offsets to the next signal in the EB and SB directions.
Jericho Turnpike & Manor Road	Southbound – One shared left-turn / through lane and one right-turn lane	Change SB lane configuration to exclusive left turn lane and a shared through / right turn lane.	AM/PM/Saturday Signal operates at a cycle length of 120 seconds. NB/SB lefts turns are during permitted phase only. Common signal controller with Old Country Road	Install exclusive signal controller for this intersection. No change in cycle length. Change NB/SB left turns to a leading protected-permitted phase. Optimize phase splits to correlate to future volumes. Optimize offsets to the next signal on the EB and WB directions.
	Westbound – One exclusive left-turn lane, one through lane and a shared through / right turn lane.	Add a right turn lane. New configuration - One exclusive left-turn lane, two through lanes and an exclusive right turn lane.		
Jericho Turnpike & Old Country Road/Future Westerly Site Access	Southbound – None	Add southbound approach to/from the future site access with lane configuration – one exclusive left turn lane, a through and an exclusive right turn lane.	AM/PM/Saturday Signal operates at a cycle length of 120 seconds. WB left turn is a leading protected-permitted phase. Common signal controller with Manor Road.	Install exclusive signal controller for this intersection. No change in cycle length. Add EB left turn leading protected-permitted phase. Make NB/SB left turns as a leading protected-permitted phase. Overlap NB/SB right turns with EB/WB left turn phases. Optimize phase splits to correlate to future volumes. Optimize offsets to the next signal on the EB and WB directions.
	Westbound – One exclusive left-turn lane, two through lanes.	Add a right turn lane. New configuration – One exclusive left-turn lane, two through lanes and an exclusive right turn lane with storage of 300'.		
	Northbound – One exclusive left turn lane and an exclusive right-turn lane	Add a right turn lane. New configuration – One exclusive left-turn lane, one through lane and an exclusive right-turn lane.		

Table 16 – Table of Mitigation…continued 2 of 3

	Capacity		Signal Timing Changes	
	Existing Conditions	Proposed	Existing Conditions	Proposed
Deer Park Road & Old Country Road	Southbound – One left turn lane, one through and an exclusive right turn lane.	Change to new configuration – Two left turn lanes and a shared through / right turn lane	Signal operates at a cycle length of 117 seconds. All left turns are during permitted phase.	Increase cycle length to 120 seconds. Add a leading fully protected phase for SB left turns. Add a leading NB left turn protected-permitted phase. Add a leading WB left turn protected-permitted phase. Optimize phase splits to correlate to future volumes. Optimize offsets to the next signal in the WB and NB directions.
Jericho Turnpike & Warner Road			AM/PM/Saturday Signal operates at a cycle length of 120 seconds.	Optimize phase splits to correlate to future volumes.
Jericho Turnpike & Stowe Avenue			AM/PM/Saturday Signal operates at a cycle length of 120 seconds.	Optimize phase splits to correlate to future volumes.
East Deer Park Road at Deforest Road North & Deer Park Road			AM & PM Peak operates at a cycle length of 65 seconds Saturday Midday Peak operates at a cycle length of 60 seconds	Increase the PM peak cycle to 70 seconds. Increase the Saturday Midday peak cycle to 65 seconds. Optimize phase splits to correlate to future volumes.

Table 16 – Table of Mitigation…continued 3 of 3

Location	Capacity		Signal Timing Changes	
	Existing Conditions	Proposed	Existing Conditions	Proposed
Jericho Turnpike & Proposed Central Signalized Site Access		Eastbound – One left turn lane from center turning lane, two through lanes. Westbound – Two through lanes, an exclusive right turn lane that extends to the unsignalized site access to the east. Southbound – Two left-turn lanes and one right turn lane.		Match cycle length to NYS 25 intersections to the west (120 seconds). Add a leading EB left turn protected-permitted phase Optimize phase splits to correlate to future volumes. Optimize offsets to the next signal in the WB direction.
Jericho Turnpike & Proposed Easterly Unsignalized Site Access East		Rights in-rights out site access. Eastbound – Two through lanes. Westbound – Two through lanes and an exclusive right turn lane with storage 300'. Southbound – One right turn lane with acceleration lane on Jericho Turnpike.		
Manor Road & Site Access		Northbound – One through and one right-turn lane. Southbound – One left-turn and one through lane. Westbound – Stop controlled one left-turn and one right-turn lane.		

The results of the analyses with the above mitigation for the weekday AM, PM and Saturday midday peak hours for the signalized study intersections are summarized in Tables 17, 18, and 19, respectively.

Table 17 – Mitigation Analysis – AM Peak Hour

Intersection	Movement	Lane Group	No Build 2017		Build 2017		Build 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Deer Park Road	EB	L	62.8	E	62.8	E	31.7	C
		TR	24.0	C	28.4	C	33.2	C
		Approach	25.3	C	29.4	C	33.2	C
	WB	L	15.7	B	35.0	D	39.1	D
		TR / T	33.3	C	44.7	D	54.4	D
		R					6.4	A
		Approach	32.8	C	44.4	D	45.9	D
	NB	L	162.5	F	162.5	F	76.2	E
		TR	35.9	D	35.9	D	43.3	D
		Approach	71.8	E	71.9	E	52.6	D
	SB	L	42.5	D	80.4	F	37.2	D
		TR	59.5	E	59.5	E	73.7	E
		Approach	57.1	E	63.1	E	67.3	E
	Overall		48.8	D	53.6	D	50.5	D
Jericho Turnpike & Manor Road	EB	L	8.7	A	6.2	A	8.6	A
		TR	18.7	B	8.6	A	9.4	A
		Approach	18.4	B	8.5	A	9.4	A
	WB	L	2.5	A	2.1	A	4.1	A
		TR / T	4.4	A	6.8	A	8.4	A
		R					0.5	A
		Approach	4.3	A	6.7	A	7.8	A
	NB	L	37.1	D	40.1	D	31.3	C
		TR	26.1	C	27.8	C	37.9	D
		Approach	30.3	C	32.5	C	35.4	D
	SB	LT / L	72.1	E	69.0	E	47.2	D
		R / TR	7.1	A	37.8	D	43.4	D
		Approach	49.3	D	51.3	D	45.1	D
	Overall		17.2	B	15.7	B	15.5	B
Deer Park Road & Old Country Road	EB	L	10.5	B	11.0	B	35.5	D
		TR	22.6	C	21.6	C	40.7	D
		Approach	22.6	C	21.6	C	40.7	D
	WB	L	85.3	F	73.1	E	31.3	C
		TR	25.3	C	26.9	C	30.4	C
		Approach	28.5	C	29.3	C	30.4	C
	NB	L	34.1	C	36.7	D	26.7	C
		TR	30.0	C	32.7	C	49.2	D
		Approach	30.4	C	33.0	C	47.4	D
	SB	L	32.9	C	37.6	D	56.5	E
		T / TR	47.0	D	52.5	D	52.8	D
		R	0.0	A	0.0	A		
		Approach	43.9	D	48.7	D	53.7	D
	Overall		29.0	C	30.1	C	38.9	D

Table 17 – Mitigation Analysis – AM Peak Hour ….2 of 2

Intersection	Movement	Lane Group	No Build 2017		Build 2017		Build 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Warner Road	EB	L	75.4	E	84.1	F	63.9	E
		T	9.6	A	10.4	B	10.0	A
		Approach	14.2	B	16.1	B	14.2	B
	WB	TR	17.6	B	20.0	C	22.9	C
		Approach	17.6	B	20.0	C	22.9	C
	SB	LR	63.2	E	64.2	E	67.4	E
		Approach	63.2	E	64.2	E	67.4	E
	Overall		22.9	C	25.0	C	26.4	C
Jericho Turnpike & Stowe Avenue	EB	L	78.8	E	81.7	F	53.5	D
		T	0.4	A	0.3	A	3.0	A
		Approach	3.4	A	3.2	A	4.8	A
	WB	TR	5.5	A	5.8	A	5.8	A
		Approach	5.5	A	5.8	A	5.8	A
	SB	L	53.3	D	53.3	D	53.3	D
		R	26.3	C	26.3	C	26.3	C
		Approach	43.0	D	43.0	D	43.0	D
	Overall		5.4	A	5.6	A	6.0	A
East Deer Park Road & Deforest Road	EB	LT	11.4	B	11.5	B	13.3	B
		Approach	11.4	B	11.5	B	13.3	B
	WB	LTR	43.9	D	46.1	D	49.6	D
		Approach	43.9	D	46.1	D	49.6	D
	NB	TR	16.5	B	16.6	B	17.1	B
		Approach	16.5	B	16.6	B	17.1	B
	SB	LTR	55.2	E	58.5	E	45.8	D
		Approach	55.2	E	58.5	E	45.8	D
	Overall		42.3	D	44.4	D	39.5	D
Deer Park Road & East Deer Park Road	WB	L	14.9	B	13.5	B	29.5	C
		Approach	14.9	B	13.5	B	29.5	C
	NB	T	69.0	E	110.6	F	53.0	D
		R	0.3	A	0.3	A	0.3	A
		Approach	36.1	D	60.8	E	29.2	C
	SB	T	47.8	D	53.0	D	26.3	E
		Approach	47.8	D	53.0	D	26.3	E
	Overall		33.7	C	44.0	D	28.3	C

Table 18 – Mitigation Analysis – PM Peak Hour

Intersection	Movement	Lane Group	No Build 2017		Build 2017		Build 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Deer Park Road	EB	L	32.6	C	65.0	E	21.1	C
		TR	98.7	F	153.3	F	76.8	E
		Approach	96.8	F	151.1	F	75.4	E
	WB	L	31.9	C	39.2	D	36.7	D
		TR / T	19.7	B	29.7	C	23.4	C
		R					4.1	A
		Approach	20.0	C	29.9	C	19.0	B
	NB	L	108.7	F	78.9	E	100.6	F
		TR	31.8	C	29.4	C	51.9	D
		Approach	53.8	D	43.6	D	65.8	E
	SB	L	30.8	C	89.8	F	62.0	E
		TR	47.1	D	47.1	D	86.7	F
		Approach	44.5	D	56.6	E	81.2	F
	Overall		59.4	E	77.4	E	63.0	E
Jericho Turnpike & Manor Road	EB	L	3.6	A	5.0	A	4.4	A
		TR	5.8	A	3.3	A	6.3	A
		Approach	5.7	A	3.4	A	6.2	A
	WB	L	5.2	A	2.6	A	4.4	A
		TR / T	10.1	B	5.3	A	10.3	B
		R					1.6	A
		Approach	10.0	B	5.3	A	8.5	A
	NB	L	44.8	D	70.9	E	44.1	D
		TR	38.9	D	52.7	D	54.9	D
		Approach	41.2	D	59.8	E	50.7	D
	SB	LT / L	50.0	D	69.9	E	46.4	D
		R / TR	0.6	A	29.9	C	32.1	C
		Approach	39.0	D	43.8	D	37.1	D
	Overall		11.8	B	9.9	A	11.5	B
Deer Park Road & Old Country Road	EB	L	20.7	C	17.1	B	19.1	B
		TR	28.6	C	26.9	C	33.3	C
		Approach	28.5	C	26.9	C	33.2	C
	WB	L	74.9	E	85.5	F	26.2	C
		TR	28.8	C	47.6	D	39.0	D
		Approach	30.0	C	48.5	D	38.7	D
	NB	L	26.3	C	21.1	C	23.2	C
		TR	33.4	C	30.2	C	77.2	E
		Approach	32.4	C	29.1	C	70.8	E
	SB	L	34.0	C	93.2	F	70.6	E
		T	26.4	C	28.0	C	45.8	D
		R	2.6	A	8.7	A		
		Approach	28.2	C	60.2	E	58.2	E
	Overall		29.6	C	39.6	D	43.1	D

Table 18 – Mitigation Analysis – PM Peak Hour – continued…2 of 2

Intersection	Movement	Lane Group	No Build 2017		Build 2017		Build 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Warner Road	EB	L	65.5	E	69.5	E	69.3	E
		T	5.2	A	6.2	A	6.5	A
		Approach	13.9	B	15.7	B	16.0	B
	WB	TR	29.8	C	34.5	C	18.3	B
		Approach	29.8	C	34.5	C	18.3	B
	SB	LR	65.4	E	71.8	E	67.3	E
		Approach	65.4	E	71.8	E	67.3	E
	Overall		22.5	C	25.9	C	20.0	C
Jericho Turnpike & Stowe Avenue	EB	L	84.4	F	83.1	F	60.7	E
		T	2.3	A	2.4	A	3.9	A
		Approach	5.3	A	5.0	A	5.7	A
	WB	TR	6.8	A	7.3	A	7.9	A
		Approach	6.8	A	7.3	A	7.9	A
	SB	L	59.5	E	59.5	E	59.5	E
		R	17.7	B	17.7	B	17.7	B
		Approach	42.2	D	42.2	D	42.2	D
	Overall		7.8	A	7.6	A	8.2	A
East Deer Park Road & Deforest Road	EB	LT	10.4	B	11.0	B	12.7	B
		Approach	10.4	B	11.0	B	12.7	B
	WB	LTR	41.3	D	41.6	D	50.9	D
		Approach	41.3	D	41.6	D	50.9	D
	NB	TR	56.4	E	56.7	E	42.4	D
		Approach	56.4	E	56.7	E	42.4	D
	SB	LTR	30.3	C	32.0	C	23.7	C
		Approach	30.3	C	32.0	C	23.7	C
	Overall		44.3	D	44.7	D	38.6	D
Deer Park Road & East Deer Park Road	WB	L	12.8	B	13.0	B	13.0	B
		Approach	12.8	B	13.0	B	13.0	B
	NB	T	26.6	C	35.9	D	26.7	C
		R	0.8	A	0.8	A	0.8	A
		Approach	9.4	A	13.3	B	10.1	B
	SB	T	33.6	C	53.6	D	32.0	C
		Approach	33.6	C	53.6	D	32.0	C
	Overall		18.2	B	27.2	C	18.2	B

Table 19 – Mitigation Analysis – Saturday Midday Peak Hour

Intersection	Movement	Lane Group	No Build 2017		Build 2017		Build 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Deer Park Road	EB	L	50.0	D	270.4	F	50.1	D
		TR	35.6	D	60.1	E	71.9	E
		Approach	36.5	D	70.8	E	70.8	E
	WB	L	47.1	D	58.2	E	54.8	D
		TR / T	17.5	B	36.4	D	36.5	D
		R					6.5	A
		Approach	18.4	B	36.9	D	29.7	C
	NB	L	94.9	F	86.8	F	65.3	E
		TR	43.8	D	46.7	D	39.0	D
		Approach	59.6	E	59.1	E	47.1	D
	SB	L	38.3	D	114.9	F	71.0	E
		TR	45.8	D	44.4	D	40.3	D
		Approach	44.1	D	66.9	E	50.1	D
	Overall		39.4	D	58.4	E	50.5	D
Jericho Turnpike & Manor Road	EB	L	5.7	A	16.7	B	24.8	C
		TR	9.8	A	9.6	A	18.1	B
		Approach	9.5	A	10.2	B	18.6	B
	WB	L	3.2	A	3.7	A	7.9	A
		TR / T	4.8	A	6.2	A	14.5	B
		R					0.9	A
		Approach	4.8	A	6.1	A	13.2	B
	NB	L	69.5	E	145.3	F	43.6	D
		TR	33.2	C	34.1	C	35.8	D
		Approach	52.8	D	94.2	F	40.0	D
	SB	LT / L	63.8	E	50.0	D	35.4	D
		R / TR	8.5	A	49.1	D	53.9	D
		Approach	46.9	D	49.4	D	48.6	D
	Overall		15.1	B	17.6	B	20.8	C
Deer Park Road & Old Country Road	EB	L	8.4	A	17.9	B	28.1	C
		TR	9.4	A	22.2	C	27.6	C
		Approach	9.4	A	22.1	C	27.6	C
	WB	L	8.5	A	15.9	B	18.6	B
		TR	9.8	A	24.8	C	26.7	C
		Approach	9.7	A	24.7	C	26.5	C
	NB	L	44.0	D	28.3	C	23.3	C
		TR	47.5	D	30.2	C	56.3	E
		Approach	46.8	D	29.9	C	50.8	D
	SB	L	78.4	E	49.3	D	72.8	E
		T / TR	45.7	D	29.5	C	23.6	C
		R	7.8	A	6.9	A		
		Approach	55.2	E	37.4	D	45.1	D
	Overall		18.7	B	26.5	C	32.7	C

Table 19 – Mitigation Analysis – Saturday Midday Peak Hour – continued…2 of 2

Intersection	Movement	Lane Group	No Build 2017		Build 2017		Build 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Warner Road	EB	L	158.8	F	289.2	F	64.8	E
		T	5.0	A	5.6	A	7.3	A
		Approach	21.9	C	40.2	D	14.3	B
	WB	TR	5.6	A	6.2	A	15.3	B
		Approach	5.6	A	6.2	A	15.3	B
	SB	LR	89.0	F	130.1	F	77.4	E
		Approach	89.0	F	130.1	F	77.4	E
	Overall		19.4	B	32.2	C	19.2	B
Jericho Turnpike & Stowe Avenue	EB	L	69.4	E	68.3	E	57.8	E
		T	6.2	A	6.9	A	8.4	A
		Approach	8.6	A	8.8	A	10.0	B
	WB	TR	7.6	A	8.4	A	9.3	A
		Approach	7.6	A	8.4	A	9.3	A
	SB	L	61.6	E	61.6	E	60.8	E
		R	18.7	B	18.7	B	18.4	B
		Approach	49.4	D	49.4	D	48.8	D
	Overall		10.0	B	10.2	B	11.2	B
East Deer Park Road & Deforest Road	EB	LT	15.3	B	17.1	B	15.6	B
		Approach	15.3	B	17.1	B	15.6	B
	WB	LTR	41.7	D	42.2	D	32.7	C
		Approach	41.7	D	42.2	D	32.7	C
	NB	TR	12.1	B	12.1	B	14.0	B
		Approach	12.1	B	12.1	B	14.0	B
	SB	LTR	13.2	B	13.4	B	15.5	B
		Approach	13.2	B	13.4	B	15.5	B
	Overall		18.1	B	18.3	B	18.1	B
Deer Park Road & East Deer Park Road	WB	L	5.3	A	5.5	A	8.7	A
		Approach	5.3	A	5.5	A	8.7	A
	NB	T	79.3	E	140.3	F	39.2	D
		R	0.4	A	0.4	A	0.4	A
		Approach	29.5	C	56.9	E	16.1	B
	SB	T	41.7	D	61.9	E	21.8	C
		Approach	41.7	D	61.9	E	21.8	C
	Overall		26.1	C	44.6	D	15.7	B

Review of Tables 17, 18, and 19 reveals that, with the exception of the intersection (discussed below), the mitigation measures identified result in an improvement in operating LOS at the study intersections where mitigation was deemed necessary. The intersection operation in the No-Build condition is restored in most cases and in a few cases, improved.

At the intersection of Deer Park Road and Old Country Road the analysis results indicate that, with the proposed mitigation, the intersection operation drops one LOS designation in all three time periods studied. The intersection however, continues to operate at an acceptable LOS (considered to be LOS D or better). The operation of this intersection is unique in that it is affected by its proximity to the intersection of Old Country Road with Jericho Turnpike as well as Deer Park Road with Jericho Turnpike. These roadways are mitigated to operate in a coordinated manner and changes in operations, such as signal timing for example, have an effect on the other signals in the area. The analysis performed indicated a potential vehicle queuing problem on the southbound approach as well as difficulty performing westbound left turns during the weekday PM peak hour at the intersection. The mitigation proposed here addresses and improves both of these issues with redesignation of lanes and installation of a left turn arrow. However, while the installation of the left turn arrow greatly improves the operation of that particular movement it does take time away from competing movements at the intersection. The change in phasing and lane allocation at the intersection, which is necessary for one time period will be present during the others as well and may cause an effect on operations in those other time periods. The proximity of the other intersections noted precludes additional changes to timing that could improve the overall LOS as the other intersections would be adversely affected. It is important to note again, however, that the intersection would still operate under acceptable conditions.

3.7.6 Site Access

The proposed action will be served by four access driveways: three on Jericho Turnpike and one on Manor Road. The proposed westerly access on Jericho Turnpike would be lined up opposite Old Country Road to form the southbound and fourth leg of the intersection. The central access is proposed approximately 800 feet east of Old Country Road, would be signalized, and form a three-legged intersection. The easterly access is proposed approximately 600 feet farther east. This access would provide right in and right out access points only. The site access on Manor Road would be an unsignalized three-legged intersection with the westbound approach being stop controlled. Tables 20, 21 and 22 summarize the analysis results of the two signalized site access points for the AM, PM, and Saturday midday peak hours, respectively. Table 23 summarizes the analysis results for the two unsignalized site accesses for the three time periods in the build scenario.

Table 20 – Signalized Site Accesses – AM peak

Intersection	Movement	Lane Group	No Build 2017		Build 2017		Build 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Old Country Road / Site Access	EB	L			9.5	A	8.6	A
		TR	17.5	B	25.3	C	21.9	C
		Approach	17.5	B	24.3	C	21.1	C
	WB	L	30.2	C	32.4	C	38.1	D
		T / TR	16.6	B	30.3	C	5.5	A
		R			0.0	A	0.0	A
		Approach	20.0	C	30.6	C	13.8	B
	NB	L	35.4	D	38.2	D	45.1	D
		TR / T			51.1	D	51.1	D
		R	7.4	A			6.0	A
		Approach	16.4	B	48.7	D	23.8	C
	SB	L			32.5	C	40.7	D
		T			42.4	D	54.2	D
		R			0.6	A	0.8	A
		Approach			21.0	C	26.8	C
	Overall		18.9	B	30.6	C	17.6	B
Jericho Turnpike & Central Signalized Site Access	EB	L			13.0	B	26.9	C
		T			11.3	B	3.1	A
		Approach			11.5	B	6.7	A
	WB	T			18.5	B	17.2	B
		R			3.7	A	3.5	A
		Approach			18.0	B	16.8	B
	SB	L			43.5	D	44.4	D
		R			14.3	B	14.6	B
		Approach			28.7	C	29.3	C
	Overall				16.1	B	13.7	B

Table 21 – Signalized Site Accesses – PM peak

Intersection	Movement	Lane Group	No Build 2017		Build 2017		Build 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Old Country Road / Site Access	EB	L			10.9	B	5.6	A
		TR	3.6	A	28.9	C	35.7	D
		Approach	3.6	A	27.2	C	33.0	C
	WB	L	10.0	B	86.3	F	54.3	D
		T / TR	12.4	B	5.7	A	5.9	A
		R			0.1	A	0.0	A
		Approach	12.0	B	23.7	C	16.7	B
	NB	L	56.4	E	31.5	C	54.0	D
		TR / T			36.9	D	55.7	E
		R	18.5	B			12.5	B
		Approach	35.3	D	35.2	D	33.0	C
	SB	L			50.1	D	37.6	D
		T			47.3	D	62.1	E
		R			8.7	A	14.6	B
		Approach			29.4	C	36.0	D
	Overall		12.5	B	27.8	C	28.2	C
Jericho Turnpike & Central Signalized Site Access	EB	L			47.5	D	22.7	C
		T			33.0	C	14.0	B
		Approach			35.3	D	15.4	B
	WB	T			36.3	D	20.4	C
		R			4.6	A	3.3	A
		Approach			32.7	C	18.5	B
	SB	L			26.9	C	38.5	D
		R			5.2	A	7.4	A
		Approach			16.1	B	22.9	C
	Overall				31.9	C	17.4	B

Table 22 – Signalized Site Accesses – Saturday Midday peak

Intersection	Movement	Lane Group	No Build 2017		Build 2017		Build 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Old Country Road / Site Access	EB	L			24.3	C	14.5	B
		TR	7.7	A	29.9	C	16.6	B
		Approach	7.7	A	29.3	C	16.4	B
	WB	L	14.9	B	68.2	E	57.0	E
		T / TR	14.8	B	13.9	B	10.4	B
		R			0.0	A	0.0	A
		Approach	14.8	B	24.0	C	19.1	B
	NB	L	40.3	D	32.6	C	37.7	D
		TR / T			62.8	E	57.0	E
		R	7.6	A			34.0	C
		Approach	17.8	B	58.1	E	41.2	D
	SB	L			63.2	E	39.3	D
		T			41.5	D	60.1	E
		R			7.6	A	15.4	B
		Approach			27.8	C	34.2	C
	Overall		12.0	B	30.9	C	22.5	C
Jericho Turnpike & Central Signalized Site Access	EB	L			40.3	D	55.4	E
		T			15.3	B	7.7	A
		Approach			20.3	C	17.4	B
	WB	T			24.6	C	31.4	C
		R			2.9	A	4.3	A
		Approach			22.2	C	28.5	C
	SB	L			49.0	D	41.7	D
		R			11.4	B	8.6	A
		Approach			30.1	C	25.1	C
	Overall				22.3	C	22.8	C

Table 23 – Unsignalized Site Accesses

Intersection	Approach/ Movement	AM Peak		PM Peak		Saturday Midday Peak	
		Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Easterly Site Access	SB	16.1	C	12.7	B	15.3	C
Manor Road & Site Access	WB	10.7	B	13.6	B	13.5	B
	SB L	7.5	A	8.4	A	8.0	A

Tables 20, 21, 22, and 23 show that the four site accesses operate well after the measures of mitigation are applied to the other network study intersections. The intersection of Jericho Turnpike and Old Country Road operates at a good LOS C or better and at a slightly increased overall delay. This is a result of, not only the

additional site traffic associated with the proposed development, but is associated with the additional traffic signal phasing complications necessary to accommodate the new fourth leg of the intersection. Additional traffic signal phases and clearance times reduce the green times that were previously allocated to vehicle movement.

Tables 20, 21 and 22 present a somewhat unexpected result in regard to the westbound approach at the intersection of Jericho Turnpike at Old Country Road and the Westerly Site Access that should be provided further explanation. Examination of the tables reveals that, in the final condition, the westbound through movement at this location operates with less delay (sometimes significantly less) than during the no-build condition. This, on its face, is counter intuitive. The reason for this occurrence is related to the creation of the new signalized intersection at the site driveway to the east and the proposed installation of a separate dedicated traffic signal controller at this location which is currently controlled by the same controller as the Manor Road intersection. The combination of these two factors allow for much improved traffic responsive timing here as well as incorporation into a coordinated traffic signal system which provides for much more efficient movement of vehicles in platoons rather than a more random arrival pattern. This results in a significant improvement in handling westbound through vehicles and the resulting reductions in delay.

The access plan for the project includes the construction of a fourth leg at the intersection of Jericho Turnpike at Old Country Road to allow for site ingress and egress at this existing signalized intersection. As full traffic movements would be allowed at this location, and given the relatively short distance between this intersection and the Jericho Turnpike at Manor Road intersection, both the eastbound left-turn movement into the site and the existing westbound left-turn movement into the shopping center opposite Manor Road will take place in a relatively short distance (200 feet). To evaluate the ability to queue left turn vehicles for both of these movements within the available distance, the Synchro Queueing and Blocking Report for these locations was evaluated for all peak time periods. Given the peak period traffic volumes, the key critical time periods for this evaluation were found to be the weekday p.m. peak hour and the Saturday midday peak hour. Weekday a.m. peak hour traffic volumes for both movements are significantly lower. Review of these reports reveals that, in large part due to the very light westbound left turn volume into the existing shopping center (opposite Manor Road), that the available 200 feet of left turn lane between these intersections will be more than sufficient to accommodate both queues, even during peak periods.

3.7.7 Traffic Signal Warrant Investigation

In order to justify the installation of a traffic signal at a particular location, an engineering study is required to determine if conditions meet one or more of nine traffic signal warrants set forth in the National Manual of Uniform Traffic Control Devices (MUTCD). As noted previously, it is intended that the central access driveway on Jericho Turnpike which would serve the proposed development would be signalized. Review of the warrants in the MUTCD indicates that the following three warrants apply:

Warrant 1 - Eight Hour Vehicular Volume
Warrant 2 - Four-Hour Vehicular Volume

As part of this study, evaluation of the two signal warrants above in respect to the development of Elwood Orchard was performed. Additional details of this evaluation are contained in Appendix F of this report.

Based on this evaluation it has been determined that the proposed central site access on Jericho Turnpike meets Warrant 1 and Warrant 2. Given the nature of traffic conditions on Jericho Turnpike and the proposed development, it is recommended that a traffic signal be installed at this location as described in this study.

3.7.8 Parking

As shown in the conceptual site plan prepared by N&P, the total off-street parking requirement for the uses incorporated in the plan, according to Town of Huntington Code, is 2,180 spaces. The site plan shows that a total of 2,249 spaces have been provided which include 545 land-banked stalls.

The level of proposed land-banked stalls equates to 24 percent of the total code requirement. However, code requirements, which typically result in an oversupply of parking stalls, also do not account for the operation of a mixed-use site. The site contains a significant office component as well as retail, library and restaurants which were calculated independently and summed for the purpose of code requirements. However, the actual parking demands for an office use, for example, are greatly reduced when the parking demands for retail and restaurant parking are at their peaks, in the evening and on weekends.

Therefore, while the Conceptual Plan indicates that parking can be provided to code, it is recommended that the proposed landbanked parking be set aside as such. Should an unanticipated parking shortage ever materialize, these parking stalls could be constructed at that time.

Review of the concept plan reveals that the site layout and circulation are adequate to serve the needs of the site.

3.7.9 Public Transportation

The project area is served by Suffolk County Transit Bus Routes. Route S54 travels weekdays and weekends between the Patchogue railroad station and Walt Whitman Mall in South Huntington, stopping near the intersection of Jericho Turnpike and Deer Park Road/Park Avenue. Route S29 operates between Babylon and Walt Whitman Mall daily and Saturday, also stopping at the same intersection.

In addition to Suffolk County Transit, Huntington's HART H40 bus travels between Northport and Walt Whitman Mall daily and Saturday and will stop to board and discharge passengers at any intersection along the route where it is safe to do so. This route passes the subject property on Jericho Turnpike.

The potential provision of bus shelters on either Jericho Turnpike or Manor Road along the sites frontages will be reviewed with the two bus providers in the course of site plan development. In addition, should the bus providers wish to modify a route such that an internal stop is provided, the developer will work to provide such accommodation.

While no credit was taken for the use of public transportation in the TIS, it is anticipated that some employees and patrons of the proposed development will take advantage of the presence of this option.

3.7.10 Conclusions

Based on the results of the analyses conducted for the purpose of this report, the TIS concludes the following:

- The proposed development is estimated to generate approximately 593 new vehicle trips (410 entering trips and 183 exiting trips) during the weekday AM peak hour, 1,446 new trips (658 entering trips and 788 exiting trips) during weekday PM peak hour, and 1,649 new trips (842 entering trips and 807 exiting trips) during the Saturday midday peak hour.

- A total of 10 existing intersections and three new access points were evaluated for operation and potential impacts.

- Eight signalized intersections were identified as to the need for mitigation under the Build Condition which includes both capacity and signal timing changes.

- It was found that four of the impacted intersections can be mitigated with changes in signal timing parameters, such as cycle, phase-splits and signal progression. Three others would require physical changes such as widening, additional lanes and changes to lane designations. Recommendations to this effect have been included in the report.

- The proposed site access plan contains four points of access which will allow traffic to and from the site to enter and exit the site at various locations, reducing the additional traffic at any one point. The access plan proposed is more than adequate to serve the site and will provide good traffic service.

- The proposed central access on Jericho Turnpike meets warrants for signalization and should be signalized.

- The traffic generated by the development is not expected to unduly affect the accident rates on the adjacent roadways.

- The proposed number of parking spaces is adequate to meet Town code requirements, as well as the projected needs of the development.

- Based on the results of the analysis herein, it can be concluded that the roadways and intersections in the study area can accommodate the additional traffic due to the proposed Elwood Orchard, given the implementation of the proposed mitigation described in this DEIS.

3.8 Socioeconomics

3.8.1 Existing Conditions

Fiscal Analysis

Existing economic conditions were evaluated in the *Fiscal and Economic Impact Analysis and Assessment of Needs and Benefits* prepared by NPV (see Appendix E). The subject property is currently assessed at approximately $59,035. This generates real property tax revenues to several jurisdictions, including Suffolk County, the Town of Huntington, special districts, and the Elwood UFSD. Table 24 shows the tax rates, assessed values, and tax revenues for the site.

Table 24 – Existing Tax Rates, Assessed Values, and Tax Revenues

Taxing Jurisdiction	Tax Rate ($ per $100 of Assessed Value)	Assessed Value	Current Taxes
Suffolk County	2.78	$59,035	$1,641
Suffolk County Police District	34.898	$59,035	$20,602
Out of County Tuition	0.731	$59,035	$432
Town Taxes	10.748	$59,035	$6,345
Highway Tax	10.381	$59,035	$6,128
Lighting District – Town Wide	1.206	$59,035	$712
Elwood UFSD	237.986	$59,035	$140,495
Elwood Library District	8.346	$59,035	$4,927
NYS Real Property Tax Law	5.365	$59,035	$3,167
NYS MTA Tax	0.152	$59,035	$90
Open Space Bonds II & III	1.367	$59,035	$807
Greenlawn Fire District	11.192	$59,035	$6,607
GWD	4.939	$59,035	$2,916
Refuse District*	378.786*	$200*	$758*
TOTAL	330.091	$59,035	$195,627

Source: *Fiscal and Economic Impact Analysis and Assessment of Needs and Benefits*, prepared by NPV (see Appendix F).
Note: *An additional fee of $378.786 is generated by the Refuse District for the residential portion of the subject property only.

As can be seen from Table 24, the subject property generates more than $195,000 in tax revenues for all taxing jurisdictions. Table 24 also indicates that the subject property generates more than $140,000 in tax revenues for the Elwood UFSD, which represents over 72 percent of overall tax revenues.

Employment

It is estimated that, with all four storefronts occupied, there are 16 full-time and 13 part-time employees associated with the subject property.

Environmental Justice

On March 19, 2003, the NYSDEC published *"CP-29: Environmental Justice and Permitting."* The policy sets forth guidance for incorporating environmental justice (EJ) concerns into the NYSDEC environmental permit review process. As indicated on Figure 14, the subject property is not located within a "Potential EJ Area," as depicted by NYSDEC. The closest EJ populations are farther up on Manor Road, between approximately Stillwell Street and Delamere Street.

This computer representation has been compiled from supplied data or information that has not been verified by EPA or NYSDEC. The data is offered here as a general representation only and is not to be used for commercial purposes without verification by an independent professional qualified to verify such data or information.

Neither EPA nor NYSDEC guarantee the accuracy, completeness, or timeliness of the information shown and shall not be liable for any loss or injury resulting from reliance.

Legend

- Potential EJ Area
- County Boundary
- Waterbodies

0 0.2 0.4 0.6 0.8 1 Miles

SCALE: 1:40,000

Data Source for Potential Environmnetal Justice Areas:US Census Bureau, 2000 U.S. Census

vhb

VILLADOM-ELWOOD ORCHARD
Huntington, New York

environmental Justice

Figure
14

3.8.2 Anticipated Impacts

Fiscal Impact Analysis

Tax revenues were estimated for the proposed action, based upon the analysis put forth in the *Fiscal and Economic Impact Analysis and Assessment of Needs and Benefits* prepared by NPV (see Appendix F). Table 25 provides the estimated tax revenues to all taxing jurisdictions.

Table 25 – Estimated Tax Rates, Assessed Values, and Tax Revenues

Taxing Jurisdiction	Current Taxes	Projected Taxes	Increase in Taxes	Percent of Total Taxes
Elwood UFSD	$140,495	$2,933,201	$2,792,706	72.1%
Elwood Library District	$4,927	$102,865	$97,938	2.5%
Suffolk County	$1,641	$34,264	$32,623	0.8%
Suffolk County Police District	$20,602	$430,121	$409,519	10.6%
Out of County Tuition	$432	$9,010	$8,578	0.2%
Town Taxes	$6,345	$132,470	$126,125	3.3%
Highway Tax	$6,128	$127,947	$121,818	3.1%
Lighting District – Town Wide	$712	$14,864	$14,152	0.4%
NYS Real Property Tax Law	$3,167	$66,124	$62,957	1.6%
NYS MTA Tax	$90	$1,873	$1,784	<0.1%
Open Space Bonds II & III	$807	$16,848	$16,041	0.4%
Greenlawn Fire District	$6,607	$137,943	$131,335	3.4%
GWD	$2,916	$60,874	$57,958	1.5%
Refuse District	$758	$758	$0	0.0%
TOTAL	$195,627	$4,069,162	$3,873,535	100%

Source: *Fiscal and Economic Impact Analysis and Assessment of Needs and Benefits*, prepared by NPV (see Appendix F).
Note: *An additional fee of $378.786 is generated by the Refuse District for the residential portion of the subject property only.

As can be seen from Table 25, the proposed action is estimated to generate $4,069,162 in tax revenues for all taxing jurisdictions, which represents a $3,873,535 (1,980 percent) increase over existing tax revenues. Table 25 also indicates that the proposed action is estimated to generate $2,933,201 in tax revenues for the School District, a $2,792,706 (1,988 percent) increase over existing tax revenues. As a non-residential development, the proposed development will not generate additional students and will not require the services of the school system.

As will be discussed in Section 3.9, there may be a need for some increased police, fire, and emergency services related to the proposed action. However, this mixed-use development is situated within a fully-developed commercial corridor that is already covered by these services (including the existing use on the subject property). Any

increased costs that may be associated with emergency services' protection of the additional developed area will likely be offset by additional tax revenue generated by the proposed action. Note that the proposed action will include safety and security measures such as smoke, fire and security alarms, and lighting systems, and may extend to on-site security personnel and/or security camera systems in both building interiors and exterior public areas, which will also supplement emergency services.

Employment

The proposed action will generate both short-term and long-term employment opportunities, as follows:

- **Short-term**—Approximately 750 FTE construction related jobs will be created throughout the site development process. This need for construction workers is viewed as a beneficial impact to the construction industry. In addition, during the construction phase, many of the building materials will be purchased locally in Suffolk County, and many of the construction workers will be area residents. The purchase of construction materials will not only aid area merchants, but will also represent an important source of sales tax revenue to the County.

- **Long-term**—Approximately 950 FTE permanent employees are expected as a result of the proposed action. This represents a significant increase over the existing 29 employees currently on the subject property. These additional jobs are not considered to be sufficient to generate new residential construction in the area or have any other significant impact on the local and regional housing market.

Environmental Justice

As the subject property is not located within a "Potential EJ Area," as depicted by NYSDEC, the proposed action will not adversely impact designated environmental justice areas.

3.8.3 Proposed Mitigation

No significant adverse impacts are anticipated to occur from the proposed action with respect to socioeconomics. In fact, the proposed action will provide a large socioeconomic benefit through the generation of property taxes and employment opportunities. As a result, no mitigation is required. Notwithstanding this, the proposed mixed-use development will provide safety and security measures such as smoke, fire and security alarms, and lighting systems, and may extend to on-site security personnel and/or security camera systems in both building interiors and exterior public areas to minimize potential impacts to emergency service providers.

3.9 Community Facilities and Services

The various community facilities and services relevant to the proposed action and subject property include schools, police, fire, and emergency services, and solid waste.

Each of these service providers was contacted and, if a response was received, it is reflected in the discussion here. Otherwise, the existing conditions and impact evaluation are based upon other sources. Appendix F contains the correspondence with each of the service providers (e.g., the Greenlawn Fire District, Suffolk County Police Department, Commack Volunteer Ambulance Corps, Elwood UFSD). Other infrastructural services, such as water supply and energy services are discussed elsewhere in this DEIS (see Section 3.5). Note that the subject property is not located in a public sewer district and public wastewater treatment and disposal facilities are not available to the subject property or utilized by the existing uses on the subject property.

3.9.1 Existing Conditions

Schools

The subject property is located in the Elwood UFSD. The following Elwood UFSD schools serve students living within the areas surrounding the subject property:

- Elwood/John Glenn High School, 478 Elwood Road (Grades 9-12)
- Elwood Middle School, 478 Elwood Road (Grades 6-8)
- James H. Boyd Intermediate School, 286 Cuba Hill Road (Grades 3-5)
- Harley Avenue Primary School, 30 Harley Avenue (Grades K-2)

As noted in Section 3.8, the subject property presently generates $140,000 in tax revenues for the Elwood UFSD.

Police, Fire, and Emergency Services

Police Protection

The subject property is served by the Suffolk County Police Department (SCPD) 2nd Precinct. Based on the SCPD's response letter, dated February 3, 2014, the site is within Patrol Sector 210. The 2nd Precinct stationhouse is located at 1071 Park Avenue in Huntington, which is located approximately 1,500 feet to the west of the subject property. The SCPD currently receives an annual tax allocation of $20,602 from the subject property. Sector 210 received 3,575 calls for service in 2013.

Fire Protection and Emergency Services

The subject property is within the Greenlawn Fire District (GFD) and is served by the Greenlawn Fire Department. Based on the GFD's response letter, dated February 5, 2014, there are two stations: the headquarters is located at 23 Boulevard Avenue and Station 1 is located at 210 Little Plains Road, west of Manor Road. GFD currently has 56 volunteers at the Headquarters and 65 volunteers at Station 1. There are one Class "A" Pumper, one Brush Truck, one Quint Truck (Ladder and Heavy Rescue), and two Ambulances assigned to the Headquarters facility, and one Class "A" Pumper, one 100-foot Ladder Truck, one Heavy Rescue Truck, and one Ambulance at Station 1. GFD also employs paid paramedics, on weekdays, from 6 AM to 6 PM and has three advance life support (ALS) equipped ambulances. The Greenlawn Fire Department currently receives an annual tax allocation of $6,607 from the subject property. The Greenlawn Fire District receives approximately 2,100 calls a year.

Solid Waste

Based upon a response email from the Town of Huntington Department of Environmental Waste Management, dated June 4, 2013:

> *The yearly tonnage of solid waste disposed of at the Town of Huntington Resource Recovery Facility (RRF) for 2012 was 110,259 tons. The 2012 disposal percentages were: 25.2% recycled (various private facilities), 74.2% incinerated (RRF), 0.6% landfilled (Town of Smithtown landfill). The Town typically accepts waste from shopping centers as described in your letter; however, the Town makes no guarantee as to the availability of disposal capacity at the RRF. For further information on the Town of Huntington refuse and disposal regulations, you may consult the code of the Town of Huntington at http://www.huntingtonny.gov.*

The Town does not provide any direct waste management services to commercial facilities; the owner, operator, and/or manager of such facilities must make arrangements to manage the wastes generated at such a property. The most common arrangement is to contract for waste removal with a local carting company. Each carting company makes its own arrangements for disposal, including the facility to which the waste is taken.

Libraries

Residents of the Elwood area are served by one public library – the Elwood Public Library, which is located at 1929 Jericho Turnpike, approximately 1.5 miles from the subject property. The library was established in 2002 and moved into its current location in 2009. The approximately 9,000 sf facility includes a large collection of materials, study rooms, a community room, tables, a magazine reading area, and public computer facilities. The library employs a qualified director who is

responsible for the day-to-day operation of the library. The library employs professional librarians and support staff to assist with providing services.

3.9.2 Anticipated Impacts

Schools

Since the proposed action does not contain a residential component, no school-aged children will be generated on-site, and, therefore, there will be no enrollment impact to the Elwood UFSD. Further, the proposed action will provide a significant increase in the tax revenues to the Elwood UFSD (from $140,495 to $2,933,201), with no associated additional expenditures for additional students. Thus, the proposed action represents a significant beneficial fiscal impact to the Elwood UFSD.[5]

Police, Fire, and Emergency Services

Police Protection

It is expected that the nature of the patrol responsibilities for the SCPD 2nd precinct will be changed and expanded by the proposed action. The developed and occupied nature of the subject property following construction will increase the potential need for services associated with an occupied property that may include site security and safety, medical emergency assistance, automobile accident investigation and the like. On the other hand, the proposed action will minimize the potential need for the SCPD current patrol duties with respect to trespassing and unauthorized debris dumping. Tax revenues generated by the proposed action will contribute to the funding of any staffing and equipment that could be needed as a result of the proposed development and will further contribute to local police services, off-setting any additional increase in service costs. Note that the proposed action will include safety and security measures such as smoke, fire and security alarms, and lighting systems, and may extend to on-site security personnel and/or security camera systems in both building interiors and exterior public areas. Such measures will be provided and maintained at the owner's expense.

Fire Protection and Emergency Services

Considering the nature of the proposed action, it is not expected that it will present a new type or magnitude of concern for the Greenlawn Fire Department, particularly in consideration of the types and range of safety measures to be incorporated and the fact that it is within a developed commercial corridor and there is existing

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[5] Note that should a Suffolk County Industrial Development Agency (IDA) tax abatement be applied to the Proposed action (see Appendix F, Section 5.3), the first year (representing the highest abatement period) property taxes levied for the Elwood UFSD would total nearly $1.40 million. This would still represent an increase of nearly $1.26 million over existing conditions.

development on the subject property. Specifically, the buildings will be constructed using up-to-date building materials and safety systems per the New York State Building Code (e.g., fire and smoke alarms, carbon monoxide alarms, fire-resistant materials, etc.). It is expected that the buildings will be sprinklered. The proposed action is designed with suitable access for emergency vehicles and will include installation of fire hydrants as directed through the site plan review process.
In addition, tax revenues generated by the proposed action will contribute to the funding of any additional staffing and equipment that may be necessary for the GFD and Greenlawn Fire Department, and will further contribute to local fire protection services, off-setting any additional increase in service costs. Similar to police protection, the inclusion of on-site security measures and potentially personnel at the owner's expense has the potential to help reduce fire protection service requests.

Solid Waste

The proposed action is anticipated to generate approximately 5,308 pounds-per-day of solid waste, which will be stored in closed containers in exterior areas at the rear of the proposed structures. This solid waste generation represents a 0.87 percent increase in the amount of solid waste handled at the Town RRF, which is not considered a significant adverse impact on the usage or capacity of this facility. Further, it should be noted that a commercial carter operating under contract with the property owner will be utilized to remove its waste on a regular basis, which will in turn pay a fee for disposal at the Town RRF. The property owner also anticipates that an on-site recycling program will be employed. Thus, it is anticipated that the proposed action will not impact the Town's solid waste services.

Libraries

The Elwood Public Library provides services to the residents of the Elwood community. As there is no residential component to the proposed project, there would not be a demand for services. Moreover, one of the services offered by the Elwood Public Library is a community room, which local organizations can utilize for meeting space. The proposed development includes a space for the Library that is approximately 67 percent larger than its current space, allowing for increased materials, resources and public meeting areas. Therefore the proposed action will not result in any significant adverse impacts to libraries; rather, it will provide a significant benefit by providing expanded library space for the provision of resources, materials and additional community meeting space.

3.9.3 Proposed Mitigation

The following mitigation measures are proposed to minimize any impacts on community facilities and services, to the extent practicable:

- Provision of safety/security alarms will increase the level of security on the property, thereby reduction the potential need for services of the SCPD and/or Greenlawn Fire Department.

- Use of fire/smoke alarms and fire resistant building materials, as well as adherence to the New York State Fire Code, will increase the level of safety from fires and minimize the potential for use of ambulance services.

- The proposed action will reduce the burden on community service providers through the proposal to maintain the internal road and parking areas, sanitary systems and recharge facilities privately, thereby reducing the need for Town highway maintenance, snow plowing, and sanitary treatment and drainage system maintenance and related efforts.

3.10 Cultural Resources

A series of cultural studies were performed by Tracker Archaeology Services, Inc. in 2002 for the previous Orchard Park application. These studies covered both historic and archeological resources and involved coordination with the New York State Office of Parks, Recreation and Historic Preservation (OPRHP), which acts as the State Historic Preservation Office (SHPO). The purpose of all of these studies was to ascertain whether potentially significant cultural resources are present on the subject property. The referenced cultural resource reports are included in Appendix G, as well as the correspondence with SHPO regarding the proposed action. Coordination with OPRHP will continue to occur to review the cultural resource reports prepared for the proposed action. Their suggestions and comments will be integrated into project plans, as appropriate.

3.10.1 Existing Conditions

Phase IA Archaeological Documentary Study

A Phase IA Study is a documentary review to determine the potential of the property to contain recoverable prehistoric (archaeological) and/or historic-era cultural resources. The January 2002 Phase IA Study prepared for the proposed action (Appendix G) found that the site is located within an area with high potential for recovery of prehistoric remains and moderate potential for recovery of historic remains. The Phase IA Study recommended conducting a Phase IB archaeological survey focused on the relatively level areas of the property (and not the areas containing the sand mounds or steep slopes).

Phase IB Archaeological Survey

A Phase IB Study involves physically investigating the site to determine the presence, distribution, and other pertinent characteristics of prehistoric or historic-era resources. A Phase IB Study involves a field walkover and series of shovel test pits and soil screenings. The Phase IB investigation for the property was conducted in March 2002. Two-hundred and thirty-five shovel test pits were excavated on the property, and no historic or prehistoric artifacts or features were found. The Phase IB Archaeological Survey concluded: *"No prehistoric artifacts or features were encountered. No historic artifacts or features were encountered. No further archaeological work is recommended."*

3.10.2 Anticipated Impacts

As recommended in the Phase IA Study, the Applicant prepared a Phase IB Study for those portions of the site that had not previously been disturbed (and will not be disturbed by the proposed action). The Phase IB Study did not determine the presence of cultural resources, and did not recommend further investigation, indicating that there were no cultural resources on the portion of the site to be disturbed by the proposed action. Therefore, no impacts to such resources will occur.

3.10.3 Proposed Mitigation

As no significant or adverse impacts to cultural resources are expected, no mitigation measures are necessary or proposed.

3.11 Construction Impacts

3.11.1 Description of Construction Process

Prior to the onset of site construction activities, the existing building, developed area, and utilities on the site will be removed. A demolition plan will be prepared as part of the site plan application, for Town review and approval, and a demolition permit will be obtained prior to the onset of demolition activities. In general, demolition of the existing structures will include cessation of activities and disconnection of utilities, followed by inspection for potentially hazardous or toxic building materials (e.g., asbestos, chemicals, etc.). Any necessary or appropriate removal or remediation activities required by applicable regulations will follow.

In general, the construction process will begin with establishment of flagged clearing limits, followed by installation of staked hay bales and silt fencing as necessary along the property periphery and adjacent to roadways. As construction begins, construction equipment, materials storage, and worker vehicles will be staged, parked and loaded/unloaded within the site. The only site access for construction vehicles, including the trucks involved in the site grading operation will be Jericho Turnpike. It is anticipated that these vehicles will be present in the vicinity outside of the hours when school buses will be operating. Manor Road will not be used for construction equipment loading/unloading, vehicle/material storage or construction worker parking. As a result, no significant or long-term construction or safety impacts to these roadways or the residents in the area are anticipated.

"Rumble strips" will be placed at the site entrance to prevent soil on truck tires from being tracked onto Jericho Turnpike, and a water truck will be available to wet excessive dry soils.

In order to minimize the time span that denuded soil in the developed area is exposed to the elements, excavations will take place immediately after clearing/grading operations. These excavations are for building foundations, retaining walls, roadways and parking, the sanitary and drainage systems and utility connections. The excavation phase will be followed by pouring of concrete for the building foundations, curbing, etc. Building construction can then begin; concurrent activities may include installation of the utility connections and, later, final grading and preparation of the base for the internal roadway, parking spaces and sidewalk, and installation of the site lighting system may be performed while the buildings are being completed. Laying of the asphalt road surfaces, installation of landscaping and utility system commissioning will complete the construction process.

3.11.2 Potential Impacts Related to Construction

Impacts associated with construction are not anticipated to be significantly adverse; rather, the impacts will be temporary and unavoidable. A summary follows:

- Localized noise impacts resulting from construction activity will be from heavy equipment such as backhoes, bulldozers, dump trucks, cranes, and boom trucks. Noise typically comes from the diesel engines that power equipment. Construction activity would be limited to non-sensitive time periods in accordance with the relevant restrictions of the Code of the Town of Huntington.

- Construction-related traffic will include delivery and export of construction-related materials and debris and the related construction equipment entering and leaving the site. The number of vehicles coming and leaving will depend on the phase of construction.

- During construction, air quality may be affected by dust during dry periods and construction vehicle emissions.

- Localized clearing and grading will result in disturbance to presently stable soils and removal of vegetation, which could result in water quality impacts due to raised sedimentation levels. Additionally, contamination of surface waters by petroleum products (e.g., fuels, grease, oils) could occur from construction equipment used during construction activities.

- Minor temporary impacts to flora and fauna will occur due to the removal of vegetation and disturbance of certain habitat areas. This loss of habitat will result in temporary wildlife displacement.

- Routine project construction activity will yield quantities of waste that must be disposed of separately from daily operational waste.

3.11.3 Proposed Mitigation, Including Erosion and Sedimentation Control Measures

The following discussion presents erosion and sedimentation control guidelines to be observed during construction in order to minimize impacts. In general, sediment will not be transported off-site by stormwater runoff and, as a result of proper grading procedures, drainage system design, erosion and sedimentation control measures and permit compliance that will be implemented during construction (both discussed below), no impact on local water quality is expected. A request for coverage under the NYSDEC General Permit will be filed in accordance with NYSDEC requirements, prior to the initiation of construction activities at the subject property.

Conformance to the Town Code and to the requirements of NYSDEC SPDES review of stormwater control measures is necessary to be consistent with Phase II stormwater permitting requirements for construction sites in excess of one-acre (the SPDES GP-0-15-002 permit). Under this program, a site-specific SWPPP must be prepared and submitted to the Town for review and approval prior to final site plan approval.[6] Once the SWPPP has been prepared and approved by the Town, the Applicant will need to file a NOI with the NYSDEC to obtain coverage under GP-0-15-002. Additionally, the GP-0-15-002 permit requires that inspections of the construction site be performed under the supervision of a qualified professional to ensure that erosion controls are properly maintained during the construction period.

The construction manager, in combination with the various specialized contractors, will be responsible for all construction activities, site grading, and installation and maintenance of the erosion and sediment controls. The construction manager will also be responsible for ensuring proper storage and stockpiling of construction materials and that building supplies will be stored in designated areas, and that measures are implemented to prevent/reduce wind-blown dust. The construction manager will be responsible for securing an approved carter to empty the site dumpster and haul waste from the site to an approved location for disposal.

As discussed above, efforts will be made to prevent sediment from being transported off-site by stormwater runoff and, as a result of the erosion and sedimentation control measures and permit compliance that will be implemented during construction, no impact on local water quality is expected. However, should any sediment escape from the site, it will be swept back onto the site by manual or mechanical means (depending upon the amount of fugitive sediments), under the direction of the construction manager. It is expected that the erosion control plan will incorporate recommended measures of the NYSDEC Technical Guidance Manual, such as:

- Silt fence, storm drain inlet protection, hay bales, and good housekeeping procedures will be used

- Construction equipment and vehicles will be parked and loaded/unloaded within the site

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[6] The SWPPP must include: a description of the existing site conditions including topography, soils, potential receiving water bodies and stormwater runoff characteristics, a description of the proposed construction project, construction schedule, the erosion and sediment controls planned during construction activities and the details of the post construction stormwater management system design and consistency of said systems with *NYS Stormwater Design Manual*, appropriate maintenance procedures for the erosion and sediment controls and each component of the post construction drainage system, pollution prevention measures during construction activities a post-construction hydrologic and hydraulic analysis for all structural components of the post construction stormwater management system for a 1, 10 and 100 year storm event, and comparison of existing and post construction peak stormwater discharges. The SWPPP must demonstrate that the proposed stormwater management system is sized adequately to ensure that there is not net increase in peak stormwater discharges from a property once developed.

- "Rumble strips" at the site entrance will prevent soil on truck tires from being tracked onto the public road system

- The construction process will begin with establishment of flagged clearing limits, followed by installation of the erosion control measures

- The drainage system will provide permanent stormwater controls once construction is completed

Appropriate measures will be adopted to ensure that post-construction stormwater management controls are provided, in accordance with the SWPPP. Maintenance of all permanent stormwater management controls and drainage structures will be the responsibility of the site owner upon the completion of construction activities. Routine maintenance responsibilities for permanent stormwater structures and practices include:

5. Monitoring of the drainage inlets should be completed routinely, particularly following rainfall events with significant rainfall (defined as 0.5-inches of rainfall over a 24-hour period, or greater is recommended as a minimum).

6. Drainage grates should be kept free from obstruction of leaves, trash, and other debris.

7. Drainage structures are to be initially inspected annually to determine if sediment removal is necessary to ensure drainage structures are property functioning and permitting adequate conveyance throughout the system and establish the frequency of future maintenance.

8. All seeded and landscape areas are to be maintained, reseeded, and mulched as necessary to maintain a dense vegetative cover.

Other mitigation measures include, but are not limited to:

- Properly maintaining all construction equipment and vehicles to control noise impacts and vehicle emissions

- Requiring dust control on-site during construction

- Limiting construction to designated daytime hours

4.0

Growth-Inducing and Cumulative Impacts

4.1 Introduction

As discussed in this DEIS, implementation of the proposed action in and of itself is not expected to significantly induce growth in the Elwood community, Town of Huntington, or surrounding communities. The Project involves the construction of a 486,000-sf mixed-use development and will not increase residential population or have any growth inducing impacts on the Elwood UFSD. As such, it is not expected that the proposed action will induce additional development nearby.

However, communities are often concerned, not only with the impacts of individual projects and their growth-inducing nature, but the overall impact of all development projects taken together.

In the case of the subject property, only one additional project is currently under consideration in its vicinity:

- ***The Seasons***—An approved 256-unit senior housing residential community located on a 37.05-acre site on the west side of Elwood Road, approximately 1,250 feet north of Cuba Hill Road.[7]

At this time, there currently is no active application for potential development of the adjacent Mediavilla family property. Since it is private property and there is no active application, it is not considered in this analysis.

[7] Note that the Seasons project was evaluated in this DEIS at a density of 400 units, which has since been reduced. However, given that it was evaluated at a higher density, the analyses herein represent a more conservative evaluation of conditions and potential impacts.

The proposed action includes the rezoning of the subject property, only, as described throughout this DEIS. Additionally, the amendment to the Town's Comprehensive Plan contemplated as part of the proposed action concerns only the subject property. The future rezoning of any other parcel in the Town, including, but not limited to, the additional properties to the east or south of the subject property that are currently zoned R-40, would be at the discretion of the Town Board, and, therefore, not as a result of any precedent set by the proposed action. Moreover, any such rezoning would be subject to a separate application and environmental review process, likely similar to that of the proposed action. Any resultant development or environmental impacts thereof would be purely speculative, and, accordingly, no cumulative impact analysis of such development is included in this DEIS.

4.2 Discussion of Potential Impacts

The following provides a qualitative analysis of the cumulative impacts that may result from the combination of the proposed action and the Seasons:

Land Use and Zoning

The patterns of land use in the vicinity of each of the proposals conform to or complement the projects. As a result, construction of these two proposals will not adversely impact their respective local land use patterns; the subject property lies along the Jericho Turnpike commercial corridor and is mixed-use in nature. For the Seasons project, neighboring uses include residential, open space, and institutional lands. Therefore, its senior residential character complements these nearby uses. As a result, no cumulative impacts with respect to land use are anticipated from these two projects. Both the Seasons and the proposed action involve zoning changes, and generally will conform to the setback and bulk standards of their respective proposed zonings. Thus, no cumulative zoning impacts are anticipated from these two projects.

Visual Resources and Community Character

As each of the projects will change the use and appearance of their sites, there will be a cumulative change to the visual resources and character of the two communities involved. However, this visual change will be beneficial. Jericho Turnpike is a predominantly commercial corridor, with many areas of antiquated strip mall style development. It is anticipated that site and building design and landscaping associated with the proposed action will enhance the appearance of Jericho Turnpike. For the Seasons project, it will be located in an established residential neighborhood and would include substantial building setbacks (to preserve the open character of the site). This, along with extensive landscaping plantings to complement the proposed building architecture, will result in an attractive and appropriate visual character.

Topography and Soils

It is anticipated that both projects will require clearing and grading of significant acreages of their sites. However, the proposed action will also require significant volumes of excavation, as steep slope areas are present on both of these properties and portions of these slopes will have to be excavated in order to provide surfaces having low slopes in order to locate the proposed buildings and required parking areas. It is expected that, in order to comply with Town and NYSDEC SWPPP requirements, the minimum necessary disturbances to steep slopes will be made for these projects. Such conformance will also minimize the potential for impacts to steep slope resources and simultaneously minimize the potential for impacts for erosion of steep slopes both during construction and afterwards.

Infrastructure

The volumes of wastewater anticipated for the proposed action are within the applicable SCDHS design requirements (as determined by SCSC Article 6). In contrast, the Seasons proposal will generate more sanitary wastewater than allowed for a septic system. Therefore, it is assumed that only the proposed action will utilize on-site septic systems for wastewater generated; the Seasons proposal requires and proposes a new, on-site sewage treatment plant. Both the Seasons' sewage treatment plant and the proposed action's septic system will be subject to the review and approval of SCDHS. Finally, groundwater recharge nitrogen calculations for each project are well within the New York State drinking water standard of 10 mg/l.

Ecology

It is acknowledged that there will be impacts to natural vegetation (and impacts to wildlife from the losses in habitat area) on the two project properties, due to clearing for buildings, paved surfaces, and landscaping. However, these impacts will be minimized by limiting clearing areas, installation of landscaping, and similar measures. It is noted that no significant types of vegetated/habitat area are present on these sites, and that clearing has been minimized as much as practicable.

Transportation

Individually and cumulatively, these two proposals will increase the amounts of vehicle trips generated on each site, as well as increasing usage of local roadways and local intersections. For each of the projects a number of mitigation measures are proposed, including new turning lanes, new lane configurations, and signal timing changes, among others. The Town will have the ability to review each of the projects' traffic impact studies to determine individual and cumulative impacts to traffic conditions in the area.

Community Facilities and Services/Socioeconomics

The development of these projects will combine to increase the demand upon some of the local community services (e.g., fire and police protection, solid waste), but will not adversely impact the school districts concerned, as no enrollment increases will occur (the proposed action does not contain any residential uses and the Seasons project is senior residential in nature). However, each of these projects will provide significant increases in funding to school and municipal service districts to adequately compensate for any potential increased costs.

In conclusion, while each of these projects will result in changes to the natural and human environment, it is not anticipated that they will combine to cumulatively result in any significant adverse impacts.

5.0

Unavoidable Adverse Impacts

All potential significant adverse impacts of the proposed action will be mitigated to the maximum extent practicable, consistent with the requirements of SEQRA. Regardless, any development of land results in certain unavoidable impacts for which no mitigation is available. Some of these will be short-term impacts associated with construction, while others will be long-term impacts associated with the physical alteration of the subject property.

5.1 Short-Term Construction Impacts

Approximately 34.06 acres of the subject property will be disturbed during construction. However, such impacts will be temporary in nature. Short-term impacts related to the Proposed Action will be primarily construction-related and will include:

- **Traffic**—Traffic will be generated related to construction activities and equipment, routing of construction vehicles and equipment/trucking, construction staging and storage, and site security. Most of the traffic will utilize Jericho Turnpike to reach the subject property.

- **Noise**—Heavy equipment will elevate noise levels near the construction activities.

- **Air Quality**—Heavy equipment will elevate vehicle exhaust emissions near the construction activities.

- **Water Quality**—Localized clearing and grading will result in disturbance to presently stable soils and removal of vegetation, which could result in water quality impacts due to raised sedimentation levels. Additionally, contamination of surface waters by petroleum products (e.g., fuels, grease, oils) could occur from construction equipment used during construction activities.

- **Flora and Fauna**—Minor temporary impacts to flora and fauna will occur due to the removal of vegetation and disturbance of certain habitat areas. This loss of habitat will result in temporary wildlife displacement.

- **Construction Waste**—Routine project construction activity, as well as excavation and demolition of existing paved areas, will yield quantities of waste that must be disposed of separately from daily operational waste.

During the construction period there will be an increase in the potential for fugitive dust, construction traffic, and noise. This condition, however, will be temporary in duration and geographically limited to the site and immediate area, oriented to the south along Jericho Turnpike.

Construction will be performed in a logical progression, which will be initiated by the installation of sediment and erosion control measures. Mitigation will also include limiting construction to designated daytime hours and maintaining mechanical construction equipment in good working order to help limit noise levels. It is important to note that upon completion of construction, all short-term impacts will subside or will be eliminated.

A beneficial short-term impact of the proposed development will be the generation of temporary construction jobs (approximately 750 FTE jobs). The construction period schedule for the proposed development is anticipated to be 18 months.

5.2 Long-Term Impacts

In addition to the short-term, construction-related impacts described above, the proposed action will also result in longer-term, more permanent impacts that cannot be avoided. The long-term impacts listed below are unavoidable, but not necessarily significant.

- Clearing and grading operations will occur on the site, which will alter the existing topography, including those areas that have previously been mined and those areas that are natural. The proposed action, however, will provide a stable and landscaped surface that will improve the visual character of this portion of the Jericho Turnpike commercial corridor.

- The proposed action will result in an increase in the concentration of nitrogen in recharge as compared to the current, primarily vacant, site conditions. The current concentration of nitrogen in recharge is 3.13 mg/l, and the computed concentration of nitrogen in recharge for the proposed action is 5.43 mg/l. Note that the expected nitrogen concentration remains well within the New York State drinking water standard of 10 mg/l.

- While the development of the site as proposed will impact the existing natural vegetation and the associated wildlife habitat it currently provides, regional impacts are expected to be negligible due to the larger amount of other available habitat in the area. Similar forested habitat is found to the north and in the general area and native landscaping will be utilized for site restoration.

- Displacement and/or loss of non-endangered forest interior species and those non-endangered species unable to adapt to human influences. As noted above, undeveloped habitat in the general area will be expected to absorb a portion of the site species, and areas restored with native landscaping will also provide a limited amount of habitat suitable for species tolerant of human activity and edge and suburban habitats.

- Typical of development alternatives, an increase in vehicle trips generated on the site and on area roadways is expected. However, analysis indicates that the impacts are expected to be properly mitigated by the proposed action's traffic and roadway improvements.

6.0

Irreversible and Irretrievable Commitment of Resources

Construction of the proposed development will result in a permanent commitment of both natural and human resources. Those resources that will be consumed, converted, or made available for further uses are described below. Note that this commitment of natural and human resources associated with the implementation of the proposed action will be offset and balanced by the substantial local and regional economic benefits, including net positive tax revenues and permanent jobs.

6.1 Natural Resources

The construction of the proposed development will commit land resources that are currently undeveloped for the development of the mixed-use development. Construction of the proposed development will result in a disturbance of approximately 34.06 acres of the 56.01-acre subject property, including disturbances to slopes. The proposed development will result in an increase in impervious surfaces (e.g., buildings, roads, and parking), which will alter on-site drainage patterns.

The construction of the Project will involve the commitment of a variety of natural and manmade resources. These include, but are not necessarily limited to: concrete, asphalt, fiberglass, aluminum, brick, steel, timber, paint, water, and topsoil.

The operation of construction equipment will involve the consumption of fossil fuels, while the completed buildings will require electricity, natural gas, and water.

6.2 Human Resources

Human resources, in terms of person hours, will be irreversibly committed upon the commencement of construction activities for implementation of the proposed action. The construction phase of the proposed action will require a commitment of labor. The hours needed for construction will be limited and short-term in nature, as construction is anticipated to endure for 18 months. This need for construction workers, however, can be viewed as a beneficial impact to the construction industry, as approximately 750 jobs are expected to be created during construction. Upon completion of construction, it is anticipated that 950 permanent full-time jobs will be created on-site. Other labor commitments, such as the services of police and fire department personnel, are not expected to significantly increase as a result of the proposed development.

7.0

Use and Conservation of Energy

An increase in the consumption of energy resources will occur due to development of the subject property from the small retail strip to the proposed mixed-use development. Construction of the proposed action will result in the consumption of gasoline, oil, and electricity used in the operation and maintenance of construction equipment. Upon completion of construction, operation of the development will result in use of fuel (electricity, natural gas, and other fuels) for heating, lighting, air conditioning, and other operational utilizations. The proposed action will connect to the power grid, as opposed to generating power on-site.

A primary goal of the proposed action is to create a mixed-use development that is energy efficient and environmentally sustainable. The proposed action will utilize energy efficient design standards to minimize energy consumption at the site. The proposed development will meet the current standards outlined in the Town Code and the Energy Conservation Construction Code of the State of New York (which requires the use of energy efficient products in all new and renovated construction) and will be consistent with New York State Energy Research and Development Authority (NYSERDA) programs. Details will be provided as part of the site plan approval process when specific buildings and uses are defined.

8.0 Alternatives

8.1 Introduction

Although this DEIS focuses its analysis on the impacts and mitigation measures for the proposed action, a range of alternatives, including the No Action Alternative, have also been analyzed. Table 40 at the end of this section presents in matrix form a comparison of each of the alternatives as they relate to a number of impact issues.

8.2 No Action Alternative

The No Action Alternative, which assumes no development under existing zoning, is commonly utilized in SEQRA as a baseline of comparison for an action. Under the No Action Alternative, the 56.01-acre subject property would remain in its current state, with 0.35-acre dedicated to a retail strip, one residential dwelling, and the remaining acres undeveloped. With this alternative, there would be no physical changes in the site: no grading or alteration of topography; no loss of existing vegetation; and no construction activities. In addition, no square footage of retail space, or related uses would result. The site would generate no additional traffic, additional population, or additional school-aged children; there would be no visual impact; there would be no effects on community facilities or services; etc. However, while this alternative would eliminate any potential adverse impacts of the proposed action, it would not yield any beneficial effects expected to result from the construction of the development, such as increased tax ratables for the Town and Elwood UFSD; increased retail and commercial opportunities for the Town; increased employment opportunities in the Town, both short- and long-term; improvements to the visual character of this portion of Jericho Turnpike; and removal of the piles of sand on the subject property and the attractiveness of the subject property as a location for ATV, paintball, and other unauthorized activities.

The No Action Alternative, however, is unrealistic because the subject property is currently privately owned and unlikely to remain undeveloped in the future.

Therefore, the potential would remain for the subject property to be developed under current C-6 and R-40 District Zoning.

8.3 Development Under Existing Zoning

Description of Alternative

The subject property is currently zoned C-6 and R-40. As noted in Section 3.1, the C-6 District permits a number of commercial uses, but does not permit residential; the R-40 District permits single-family dwellings on minimum 40,000 sf lots. Given that, the Development under the Existing Zoning Alternative would consist of 45 residential units (given the steep slopes on the subject property, such units would be clustered to allow for a similar limit of disturbance as the proposed action), as well as 7,535 sf of commercial space (for the purposes of this analysis assumed to be retail).

The residential yield for this alternative was determined by isolating the 55.66 acres that is zoned R-40. Given the minimum lot size of 40,000 sf and the assumption that 25 percent of a development site is set aside for roadway right-of-way and parking, the maximum residential yield resulted in 45 single-family dwellings. With regard to the C-6 portion of the subject property, the existing 7,535 sf of retail would remain.

Considering the presence of steep slopes on the site, as well as the requirements of Article X, Chapter 198 of the Town Code, it is assumed that the 45 new residences would be developed in the form of an attached-unit condominium development. In this way, the steep slopes that occupy the northern and western portions of the site would be preserved. For this scenario, it is assumed that the same or similar amounts of the site would be cleared/graded and developed, as with the proposed action. Retaining walls would be necessary, to roughly the same degree as the proposed action.

Similar to the proposed action, it is anticipated that extensive site grading would be required to the R-40 portion of the site, necessitating clearing some of the site's natural vegetation. The existing vacant land area would be replaced with buildings, roadways, and landscaping. Landscaped areas would be distributed around and between the condominium structures, as well as the perimeter of this area. Only a minimal amount of landscaping is currently found in the C-6 portion of the property; it is expected that this area would be upgraded. In order to minimize potential groundwater impacts from fertilizers and similar to the proposed action, it is expected that 8.4 acres would be maintained landscaping (i.e., fertilized and irrigated).

It is expected that two new vehicle access points would be provided for the new residential area, of which one would be located on Jericho Turnpike and the other on Manor Road. As Manor Road experiences a relatively low level of usage, this access

would be controlled by a simple STOP sign for exiting movements. The T-intersection of Old Country Road and Jericho Turnpike is presently signalized; it is expected that the new residential portion of this scenario would install its Jericho Turnpike access at this location, to create a four-leg intersection. The existing traffic signal would be re-configured to provide full movements at this location. The commercial area would retain its two existing vehicle access points, along Jericho Turnpike and Manor Road.

Land Use, Zoning, and Public Policy

Development under this alternative would be consistent with existing zoning and, therefore, in accordance with the provisions of the existing residential (R-40) and commercial (C-6) regulations. No amendments to the existing zoning regulations would be necessary. The retail use would continue the commercial land use pattern of Jericho Turnpike. However, the 45 single-family residential units fronting on Jericho Turnpike would not continue the commercial land use pattern that characterizes the rest of the corridor to the west and east.

Visual Resources and Community Character

The topographic characteristics of the site relative to the surrounding areas would remain the same. Therefore, views of this development would remain minimal from the north and northwest, but would be visible from the south, west, and east along Jericho Turnpike. Based upon the parking constraints, the retail use at the northeast corner of Jericho Turnpike and Manor Road would be limited to one-story, which would be lower than both the existing building and many of the planned buildings as part of the proposed action. The residential units would be two-story single-family homes, spread throughout most of the property. As such, they would be taller than some of the buildings proposed as part of the proposed action. Views of the single-family homes would be limited from surrounding areas, as they would be blocked by the retail use in the west, topography to the north, and typical landscaping and vegetation associated with residential development. As with the proposed action, retaining walls would be necessary at the rear of the development, but would be obscured by the proposed uses.

Natural Resources

It is expected that this alternative would result in similar disturbances and impacts to natural resources (including soils, topography, and steep slopes; flora and fauna; and, waterbodies and wetlands), as compared to the proposed action since similar portions of the subject property would need to be disturbed. However, given that much of the development of this alternative would be residential, which would have greater amounts of grassed and planted areas, this alternative would have greater potential to accommodate wildlife habitats to host flora and fauna species.

Stormwater Management

The Development under Existing Zoning Alternative would have less impervious surfaces than the proposed action.

Water Supply

Based on SCDHS design criteria of 300 gpd/residence, the 45 residences would consume 13,500 gpd of water, to be recharged to groundwater through each unit's septic system. Combined with the existing wastewater systems on the retail area (13,238 gpd consumption) and the annualized average irrigation demand of 9,998 gpd[8], total water use in this scenario would be 26,738 gpd. This represents a lower water demand and projected sanitary flow than the proposed action.

Other Utilities

As with the proposed action, it would be expected that PESG Long Island and National Grid would be able to extend electrical/gas and communication services, respectively, to accommodate this alternative.

Socioeconomics

It is estimated that this alternative would result in a population increase of approximately 139 persons,[9] representing an approximate 0.08 percent increase to the Town's overall population (estimated at 203,264 in 2010)[10]. This alternative would also retain its current 29 employees, but would not provide any additional temporary or permanent employment opportunities.

This alternative is estimated to generate $719,384 in tax revenues, about 70 percent of which ($508,181) would be generated for the Elwood UFSD. This is significantly less than the approximately $4.07 million in taxes than the proposed action will generate, including $3.04 million in taxes for the Elwood UFSD.

Community Facilities and Services

Approximately 28 school-age children would be expected to result from the Existing Zoning Alternative,[11] representing an approximate 1.1 percent increase in the Elwood UFSD overall enrollment (estimated at 2,479 in 2012-2013).[12] These additional school-age children would result in additional costs to the Elwood UFSD.

▼

[8] Assumes 8.40 acres irrigated at 16 inches annually and fertilized at 2.30 pounds/1,000 sf/year.
[9] Based upon the "Single-Family Attached, 3 BR, All Values" multiplier rate of 3.08 in *Residential Demographic Multipliers – Estimates of the Occupants of New Housing*, Rutgers University, Center for Urban Policy Research, June 2006.
[10] http://www.huntingtonny.gov/content/13747/13817/16503/default.aspx; accessed February 20, 2014.
[11] Based upon the "Single-Family Attached, 3 BR, All Values" multiplier rate of 0.62 in *Residential Demographic Multipliers – Estimates of the Occupants of New Housing*, Rutgers University, Center for Urban Policy Research, June 2006.
[12] *Elwood Union Free School District Budget Workshop #1, Draft Budgets For 2013-2014*, December 13, 2012.

The 45 units and the estimated population generation of 139 persons from the Development under Existing Zoning Alternative would increase the demand for police, fire, and emergency services.

It is estimated that the Development under Existing Zoning Alternative would generate approximately 524 pounds of solid waste per day,[13] which is less than the 5,308 pounds per day anticipated with the proposed action.

Traffic and Transportation

The Existing Zoning Alternative would add less traffic to the surrounding roadways than the proposed action due to its size and the introduction of residential use. Therefore, it would be anticipated that the Existing Zoning Alternative would result in fewer impacts than the proposed action and would require fewer mitigation improvements.

8.4 Reduced Density Alternative

Description of Alternative

The reduced density alternative would still require the change of zone and site plan approval for the mixed-use commercial development of the subject property. The overall square footage would be reduced to 392,975 sf (from 486,000 sf), and the number and location of site access points from Jericho Turnpike have changed.

Specifically, the reduced density alternative would include the following (see Appendix K):

181,250 sf of retail space within one main building
8,000 sf restaurant (two-standalone 4,000 sf buildings)
120,000 sf fitness center in the main building
15,000 sf library in the main building
14,000 sf of retail standalone (existing commercial lot redeveloped)
54,725 sf of office space in the main building
Associated parking areas providing 1,984spaces
Landscape areas

Consistent with the proposed action, this reduced alternative would concentrate development toward the center portion of the property, away from the steep slopes. In this way, the steep slopes that occupy the northern and western portions of the site would be preserved. For this scenario, it is assumed that the same or similar amounts of the site would be cleared/graded and developed, as with the proposed action. Retaining walls would be necessary, to roughly the same degree as the proposed action.

▼

[13] Based on 5 pounds/1,000 sf/day (retail) and 3.5 pounds/capita/day (residential).

This alternative, although a reduced density with less gross square footage and fewer standalone buildings than the proposed action, would also require extensive site grading, necessitating clearing some of the site's natural vegetation. Potential groundwater impacts from fertilizers would be minimized similar to the proposed action, with a similar amount (i.e., approximately 8.4 acres) of maintained landscaping (i.e., fertilized and irrigated).

The proposed site access points, east to west, would include: 1) a new signalized driveway would be located proximate to the eastern border of the redeveloped property, providing one lane in and one lane out; 2) a right turn in/right turn out access point would be located to the west; 3) the "main" entrance would be signalized and would provide one lane in and three lanes out (two right turn lanes and one left turn lane) of the subject property; 4) the westernmost site access would be a right turn in only, with no exit onto Jericho Turnpike. As with the proposed action, there will also be an access point (one lane in and one lane out) on Manor Road.

Land Use, Zoning, and Public Policy

Development under this alternative would be consistent with the proposed action, which would include the rezoning of the same portions of the subject property from R-40 and C-6 to C-5, and amending the Town's Comprehensive Plan. As discussed in Section 3.1.2 of this DEIS, the proposed mix of uses, including retail, fitness and restaurant, would be consistent with existing development patterns throughout most of the Jericho Turnpike corridor. The reduced density of this alternative would still provide a mix of uses set back from Jericho Turnpike, but would reduce the overall gross square footage from 486,380 sf to 392,975 sf, and instead of three, free-standing retail stores (7,400 sf, 6,100 sf and 5,200 sf), a combined office/retail building (28,000 sf) and a restaurant (17,700 sf) use along the frontage of Jericho Turnpike, the combined office retail would be one-story, retail (14,000 sf), and there would be only two smaller restaurants (i.e., 4,000 sf, each) proposed at the frontage. The northern portion of the property would continue to serve as a buffer to the open space and residential uses north of the subject property. Thus, this alternative would be consistent with local land use patterns, and would have less of an impact on the surrounding area, with regard to land uses, than the proposed action, as the overall gross square footage of the development would be less than that of the proposed action (i.e., from 486,380 sf to 392,975 sf), and would reduce the gross square footage and number of buildings proximate to Jericho Turnpike (i.e., from 36,400 sf to 8,000 sf).

With regard to zoning, the proposed change of zone would still be required for this alternative. The provisions set forth in § 198-70.B. and 198-10.G. of the Code of the Town of Huntington indicate that no more than one main building can be developed on one lot. However, as discussed in Section 3.1.2.2.2 of this DEIS, it is within the

purview of the Planning Board to provide relief from this provision if, among other things, improved site design may be achieved by locating more than one building. The reduced density alternative would reduce the number of buildings from six to four, with two small restaurant uses proposed on the southern portion of the property, and would provide for an improved design for the redeveloped (retail) southwestern corner of Jericho Turnpike and Manor Road, as compared with the proposed action.

Visual Resources and Community Character

The site would be cleared and developed to a similar extent to the proposed action under this reduced density alternative, such that views of the site would be altered. With regard to the proposed buildings, the retail use at the northeast corner of Jericho Turnpike and Manor Road would be limited to one-story, unlike the proposed action, and there would be two small restaurant uses along Jericho Turnpike, as opposed to a total of five buildings, under the proposed action. Similar to the proposed action, retaining walls would be necessary at the rear of the development, but would be obscured by the proposed uses.

Natural Resources

It is expected that this alternative would result in similar disturbances and impacts to natural resources (including soils, topography, and steep slopes; flora and fauna; and, waterbodies and wetlands), as compared to the proposed action since similar portions of the subject property would need to be disturbed.

Stormwater Management

As with the proposed action, all stormwater runoff generated under the reduced density alternative will be retained and recharged in an on-site drainage system, designed to accommodate a minimum of three inches of stormwater. The drainage system would utilize subsurface leaching pools distributed throughout the areas to be developed in order to take advantage of the site's natural topography, as well as any necessary grading. The drainage system would have a capacity in excess of the minimum volume required by the Town, and would be designed to comply with relevant State Pollutant Discharge Elimination System (SPDES) requirements under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002) for post-development stormwater quality and quantity control.

Groundwater Resources

This alternative, similar to the proposed action, will include a mix of retail, restaurant, office, and other commercial or service uses. As a result, the only impacts to groundwater resources underlying the site will result from sanitary discharge, naturally-fertilized, landscaped areas and recharge from impervious surface areas. Article 6 of the Suffolk County Sanitary Code allows up to 600 gpd/acre for sanitary flow in Groundwater Management Zone I, without sewage treatment. It is anticipated that sanitary flow would be similar or less than that proposed, under this alternative. On-site septic systems to treat and recharge all wastewater generated, and such systems would comply with Article 6 of the SCSC.

Water Balance and Nitrogen

For this reduced-density alternative, the water balance and concentration of nitrogen in recharge was calculated for the proposed action by NPV utilizing its SONIR computer model. The results indicate that a total of 58.88 MGY of water will be recharged on the site. This represents a 4.8 percent increase from the proposed action, and a 55 percent increase from the existing recharge volume of 37.93 MGY. Of this anticipated recharge volume, stormwater will account for 76.6 percent, wastewater recharge for 20.9 percent and irrigation for 2.6 percent. This anticipated recharge volume represents 38.71 inches of water distributed annually over the 56.01-acre site.

As with the proposed action, the concentration of nitrates (as nitrogen) in this recharge is anticipated to be increased by the proposed commercial center, due primarily to the presence of nitrogen in wastewater. In addition, the predicted overall nitrogen concentration will be increased to 5.17 mg/l. This is less than the 10 mg/l nitrogen standard for drinking water, and less than that predicted for the proposed action (i.e., 5.43 mg/l), and therefor is not expected to cause an adverse impact upon groundwater. Wastewater will account for 95.0 percent of nitrogen in the recharge on-site. The percentage contribution of other recharge sources which contribute to nitrogen concentrations, i.e., stormwater, irrigation and fertilization, would be the same as the proposed action, i.e., 0.1, 0.3 and 4.6 percent, respectively.

Development of the site, under this alternative, would also result in an increase in impermeable surface area and all wastewater would be recharged on-site.

Other Utilities

As with the proposed action, it would be expected that PESG Long Island and National Grid would be able to extend electrical/gas and communication services, respectively, to accommodate this alternative.

Socioeconomics

The reduced density alternative represents an approximate 19 percent reduction in gross square footage proposed to be developed. This alternative would be expected to generate a similar increase in property tax revenues (proportionally reduced) as compared with the proposed action, which was expected to generate approximately $2.9 million in revenues to the Elwood UFSD of $4.07 million in total property tax revenue (see detailed discussion in Section 3.8.2). As with the proposed action, no school children would be generated by the proposed development, such that the entire increase in school tax revenues represents a pure benefit. Although the density would be reduced, this alternative would still provide substantial economic benefits to the Town and various taxing districts located therein.

Community Facilities and Services

Schools

As with the proposed action, this alternative does not contain a residential component, and as such, no school-aged children will be generated by the proposed development, and there would be no enrollment impact to the Elwood UFSD. Tax revenues would still increase significantly over the current condition, and there would be no associated additional expenditures for additional students. Thus, this alternative represents a significant beneficial fiscal impact to the Elwood UFSD.

Police, Fire, and Emergency Services

The potential need for patrol responsibilities for the SCPD 2nd precinct would be expected to change, from the existing condition, for this alternative proposal, to a similar extent as expected under the proposed action. Any development of the subject property, which is currently largely vacant, would be expected to increase the potential need for services, such as site security, medical emergency assistance, etc. This alternative, as with the proposed action, would include on-site safety and security measures such as smoke, fire and security alarms, and lighting systems, and may also extend to on-site security personnel and/or security camera systems. Additional tax revenues would help offset any additional costs associated with the additional services provided. Moreover, any on-site security systems would be maintained at the owner's expense.

The reduced density alternative would be constructed using up-to-date building materials and safety systems per the New York State Building Code (e.g., fire and smoke alarms, carbon monoxide alarms, fire-resistant materials, etc.). It is expected that the buildings will be sprinklered. The development is designed with suitable access for emergency vehicles, including an additional site access point from the proposed action, and will include installation of fire hydrants, as directed through the site plan process.

In addition, although this is a reduced density alternative, there would still be a proportional increase in tax revenue that would contribute to the funding of any additional staffing and/or equipment that may be necessary for the GFD and Greenlawn Fire Department.

As such, the reduced density alternative would not have significant adverse impacts on police, fire and emergency services, and would provide additional revenue to such service providers.

Traffic and Transportation

In order to estimate the volume of traffic that might be generated under this scenario, the traffic associated with the above conceptual program mix has been estimated using the same resources, as previously done in the earlier section. Also as done previously, the community facility space was considered office for the purpose of trip generation. In addition to a modified development program mix, site access points vary from the proposed action.

Table 26 below, summarizes the unadjusted trip generation for the reduced density alternative.

Table 26- Trip Generation (Unadjusted)

Project Component	Component Size	AM Peak Hour		PM Peak Hour		Saturday Midday	
RETAIL SPACE ITE # 820 Shopping Center	203,250 SF	Rate =	0.96	Ln(T)=0.67 Ln(X)+3.31		Ln(T)=0.65 Ln(X)+3.78	
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		62%	38%	48%	52%	52%	48%
		121	74	463	501	721	665
		Total =	195	Total =	964	Total =	1386
HEALTH/FITNESS CLUB ITE # 492	120,000 SF	Rate =	1.41	Rate =	3.53	Rate =	2.78
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		50%	50%	57%	43%	45%	55%
		85	85	242	182	150	184
		Total =	170	Total =	424	Total =	334
OFFICE/COMMERCIAL ITE # 710 General Office Building	54,725 SF	Rate =	1.56	Rate =	1.49	Rate =	0.43
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		88%	12%	17%	83%	54%	46%
		75	10	14	68	13	11
		Total =	85	Total =	82	Total =	24
LIBRARY ITE # 590	15,000 SF	Rate =	1.04	Rate =	7.30	Rate =	6.75
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		71%	29%	48%	52%	53%	47%
		11	5	53	57	54	47
		Total =	16	Total =	110	Total =	101
TOTALS		AM Peak Hour Trips		PM Peak Hour Trips		Saturday Midday Trips	
		Entering	Exiting	Entering	Exiting	Entering	Exiting
		292	174	772	808	938	907
		466		1,580		1,845	

Table 26 shows that the project would generate (unadjusted) 466 trips (292 entering and 174 exiting) during the weekday a.m. peak hour, 1,580 trips (772 entering and 808 exiting) during the weekday p.m. peak hour and 1,845 trips (938 entering and 907 exiting) during the Saturday midday peak hour.

It is noted that there is currently approximately 7,500 square feet of retail and restaurant space located on the site near the corner of Jericho Turnpike and Manor Road. With the development of the site as proposed, this existing space will be eliminated. However, to present a high-side conservative estimate of potential traffic impacts, no credit was taken for the elimination of existing trips from this space.

Pass-by Trips

ITE presents the following pass-by rates of the land uses proposed with the study development:

- Retail – 34% for p.m. peak and 26% for the Saturday midday peak.

- Restaurant – 43% for p.m. peak

As previously done, to provide a more high-side conservative analysis, the following percentages for pass-by were used for all three land uses:

- Weekday a.m. peak – 0%
- Weekday p.m. peak – 25%
- Saturday midday peak – 20%

These percentages were applied to the total number of trips generated by the site to determine the volume of primary trips to the site. The pass-by trips were included in the volumes expected at the site access points during subsequent analysis.

Table 27 summarizes the primary trip calculation.

Table 27 - Pass-by Trips & Estimated Primary Trips

Component	AM Peak Hour		PM Peak Hour		Saturday Midday	
	Entering	Exiting	Entering	Exiting	Entering	Exiting
Estimated Gross Retail Site Generated Trips l	121	74	463	501	721	665
Pass-by Percentage applied	0%		25%		20%	
Pass-by Trips	0	0	116	125	144	133
Estimated Primary Retail Trips	121	74	347	376	577	532

Table 27 shows that the primary trips generated by the retail component of the project site would be 195 trips (121 entering and 74 exiting) during the weekday a.m. peak hour, 723 trips (347 entering and 376 exiting) during the weekday p.m. peak hour and 1,109 trips (577 entering and 532 exiting) during the Saturday midday peak hour.

The primary trips generated by the retail component of the project site were then combined with the trips generated by the office, fitness club and library portions to develop the total net site generated trips for the project site, summarized in Table 28.

Table 28 - Net Trip Generation

Trips	AM Peak Hour Trips		PM Peak Hour Trips		Saturday Midday	
	Entering	Exiting	Entering	Exiting	Entering	Exiting
Primary Retail	121	74	347	376	577	532
Fitness Club	85	85	242	182	150	184
Office Space	75	10	14	68	13	11
Library	11	5	53	57	54	47
Totals	292	174	656	683	794	774
	466		1,339		1,568	

Table 28 shows the projected total trip generation for the project site under the alternative, after adjustments for pass-by trips. It is estimated that the primary trips generated by the site would be approximately 466 trips (entering trips 292 and exiting trips 174) during the AM peak hour, 1,339 trips (entering trips 656 and exiting trips 684) during the PM peak hour, and 1,568 trips (entering trips 794 and exiting trips 774) during the Saturday midday peak hour. It is noted that the alternative development scenario is expected to result in 127 fewer weekday a.m. peak hour trips, 107 fewer weekday p.m. peak hour trips and 81 fewer Saturday midday peak hour trips than the proposed action.

The development would be served by five access points (four on Jericho Turnpike and one on Manor Road). The site generated traffic will be distributed to and from these driveways in all directions. The directional distribution developed for the alternative is discussed and presented below. It should be noted that given the fact that the site traffic is distributed in all directions, through numerous driveways, that the traffic increases at any point on Jericho Turnpike will be much less than the trip generation figures presented in Table 28. The assignment of site generated traffic to the various intersections and roadway segments, in the study area, is also discussed and presented below.

Alternative Development Scenario Access

In the Alternative plan Elwood Orchard would be served by five access driveways: four on Jericho Turnpike and one on Manor Road. On Jericho Turnpike, just east of Old Country Road is the first of the four accesses, an unsignalized free westbound right-turn in only into the site. Approximately 630 feet east of Old Country Road is the second and signalized westerly access. This access provides two eastbound left-turn lanes and a westbound right-turn lane for entering traffic and two southbound left-turn lanes and a right turn lane for exiting traffic. Approximately 540 feet farther east is proposed a third and unsignalized Center Site Access which would be a rights in / rights out only access. This access provides a westbound right-turn lane for entering traffic and a southbound right-turn lane for exiting traffic. The fourth and

the East Site Access on Jericho Turnpike is located 460 feet east of the unsignalized site access. The East Site Access is proposed to be signalized and would provide one eastbound left-turn lane and a westbound right-turn lane for entering traffic and one southbound left-turn lane and a right-turn lane for exiting traffic. The site access on Manor Road would be an unsignalized three-legged intersection with the westbound approach stop controlled, and it is located approximately 280 feet north of Jericho Turnpike. This access would provide a northbound shared through/right-turn lane and a southbound left-turn lane for entering traffic and one left-turn lane and a right-turn lane for exiting traffic.

Trip Distribution and Assignment

The net trips generated by the alternative multi-use development were distributed to the adjacent roadways based on the location of the access points, area demographics and the characteristics of the roadway system in the vicinity of the site. Two different distribution patterns were developed earlier for the original development plan: one for the retail/fitness/library and one for office land uses. These were treated separately to account for the difference in trip making activity between employment based travel and the other components. Essentially, employees are willing to travel farther to their places of employment than are patrons of the other uses. This is reflected in the differing directional distributions used for the project. The directional distribution for the office use was developed based on journey to work data specific to where persons who work in the Elwood area reside. The shopping center/gym directional distribution was developed based on the distribution of households within the drawing area of the development. The original directional distributions developed for the proposed development and presented previously in this study were revised for the Reduced Density Alternative to account for the differences in site access between the two plans. Details of these distributions can be found in Appendix C of the Traffic Impact Study located in Appendix I of this DEIS.

Level of Service Analysis

The 2017 Build conditions analysis for this Alternative, and the results therefrom are presented in this section.

Analysis Results – Signalized Intersections

The 2017 Build Alternative results for the weekday a.m., weekday p.m. and Saturday midday peak hours for the signalized study intersections are summarized in Tables 29, 30 and 31, respectively. No-Build results previously presented are also shown in the table for easy comparison. Detailed capacity analysis worksheets are contained in Appendix H of the TIS (see Appendix I of this DEIS).

Table 29 - Build Alternative Intersection LOS - AM Peak Hour

Intersection	Movement	Lane Group	No Build 2017		Build Alt 2017	
			Delay	LOS	Delay	LOS
Jericho Turnpike & Deer Park Road	EB	L	62.8	E	62.8	E
		TR	24.0	C	27.2	C
		Approach	25.3	C	28.3	C
	WB	L	15.7	B	33.4	C
		TR	33.3	C	49.6	D
		Approach	32.8	C	49.1	D
	NB	L	162.5	F	162.5	F
		TR	35.9	D	35.9	D
		Approach	71.8	E	71.9	E
	SB	L	42.5	D	73.5	E
		TR	59.5	E	59.5	E
		Approach	57.1	E	61.9	E
	Overall		48.8	D	54.5	D
Jericho Turnpike & Manor Road	EB	L	8.7	A	6.3	A
		TR	18.7	B	8.8	A
		Approach	18.4	B	8.7	A
	WB	L	2.5	A	5.7	A
		TR	4.4	A	18.8	B
		Approach	4.3	A	18.6	B
	NB	L	37.1	D	39.7	D
		TR	26.1	C	27.6	C
		Approach	30.3	C	32.3	C
	SB	LT / L	72.1	E	69.6	E
		R / TR	7.1	A	37.3	D
		Approach	49.3	D	51.5	D
	Overall		17.2	B	22.0	C
Jericho Turnpike & Old Country Road		TR	17.5	B	17.2	B
		Approach	17.5	B	17.2	B
	WB	L	30.2	C	22.1	C
		TR	16.6	B	7.0	A
		Approach	20.0	C	10.8	B
	NB	L	35.4	D	61.3	E
		R	7.4	A	16.0	B
		Approach	16.4	B	25.6	C
	Overall		18.9	B	14.3	B

Table 29– Build Alternative Intersection LOS – AM Peak Hour.... 2 of 3

Intersection	Movement	Lane Group	No Build 2017		Build 2017	
			Delay	LOS	Delay	LOS
Deer Park Road & Old Country Road	EB	L	10.5	B	10.5	B
		TR	22.6	C	22.1	C
		Approach	22.6	C	22.0	C
	WB	L	85.3	F	79.4	E
		TR	25.3	C	26.1	C
		Approach	28.5	C	28.9	C
	NB	L	34.1	C	36.0	D
		TR	30.0	C	31.9	C
		Approach	30.4	C	32.2	C
	SB	L	32.9	C	35.9	D
		T	47.0	D	50.8	D
		R	0.0	A	0.0	A
		Approach	43.9	D	47.2	D
	Overall		29.0	C	29.8	C
Jericho Turnpike & Warner Road	EB	L	75.4	E	81.6	F
		T	9.6	A	10.2	B
		Approach	14.2	B	15.7	B
	WB	TR	17.6	B	19.3	B
		Approach	17.6	B	19.3	B
	SB	LR	63.2	E	63.8	E
		Approach	63.2	E	63.8	E
	Overall		22.9	C	24.4	C
Jericho Turnpike & Stowe Avenue	EB	L	78.8	E	81.1	F
		T	0.4	A	0.3	A
		Approach	3.4	A	3.2	A
	WB	TR	5.5	A	5.7	A
		Approach	5.5	A	5.7	A
	SB	L	53.3	D	53.3	D
		R	26.3	C	26.3	C
		Approach	43.0	D	43.0	D
	Overall		5.4	A	5.5	A
Jericho Turnpike & CR 66	EB	T	18.8	B	18.8	B
		Approach	18.8	B	18.8	B
	WB	L	22.8	C	22.8	C
		T	0.3	A	0.3	A
		Approach	10.9	B	10.6	B
	NB	R	6.1	A	6.1	A
		Approach	6.1	A	6.1	A
	Overall		11.2	B	11.1	B

Table 29 – Build Alternative Intersection LOS – AM Peak Hour....3 of 3

Intersection	Movement	Lane Group	No Build 2017		Build 2017	
			Delay	LOS	Delay	LOS
CR 66 & TOH Yard Driveway	WB	L	22.8	C	22.8	C
		R	8.9	A	8.9	A
		Approach	15.8	B	15.8	B
	NB	TR	18.8	B	18.8	B
		Approach	18.8	B	18.8	B
	SB	L	3.5	A	3.5	A
		T	0.2	A	0.2	A
		Approach	0.2	A	0.2	A
	Overall		7.6	A	7.6	A
East Deer Park Road & Deforest Road	EB	LT	11.4	B	11.5	B
		Approach	11.4	B	11.5	B
	WB	LTR	43.9	D	44.6	D
		Approach	43.9	D	44.6	D
	NB	TR	16.5	B	16.6	B
		Approach	16.5	B	16.6	B
	SB	LTR	55.2	E	58.5	E
		Approach	55.2	E	58.5	E
	Overall		42.3	D	43.9	D
Deer Park Road & East Deer Park Road	WB	L	14.9	B	13.5	B
		Approach	14.9	B	13.5	B
	NB	T	69.0	E	90.9	F
		R	0.3	A	0.3	A
		Approach	36.1	D	48.9	D
	SB	T	47.8	D	51.8	D
		Approach	47.8	D	51.8	D
	Overall		33.7	C	39.2	D
Jericho Turnpike & West Site Access	EB	L			47.1	D
		T			4.4	A
		Approach			10.1	B
	WB	T			7.2	A
		R			2.9	A
		Approach			7.2	A
	SB	L			57.5	E
		R			44.0	D
		Approach			47.2	D
	Overall				9.4	A
Jericho Turnpike & East Site Access	EB	L			7.6	A
		T			8.4	A
		Approach			8.3	A
	WB	T			7.4	A
		R			1.8	A
		Approach			7.3	A
	SB	L			58.7	E
		R			21.5	C
		Approach			38.1	D
	Overall				8.5	A

Table 30 - Build Alternative Intersection LOS - PM Peak Hour

Intersection	Movement	Lane Group	No Build 2017		Build Alt 2017	
			Delay	LOS	Delay	LOS
Jericho Turnpike & Deer Park Road	EB	L	32.6	C	57.4	E
		TR	98.7	F	153.3	F
		Approach	96.8	F	150.9	F
	WB	L	31.9	C	36.2	D
		TR	19.7	B	27.5	C
		Approach	20.0	C	27.6	C
	NB	L	108.7	F	85.6	F
		TR	31.8	C	34.2	C
		Approach	53.8	D	48.9	D
	SB	L	30.8	C	90.9	F
		TR	47.1	D	47.1	D
		Approach	44.5	D	56.8	E
	Overall		59.4	E	78.5	E
Jericho Turnpike & Manor Road	EB	L	3.6	A	4.7	A
		TR	5.8	A	2.7	A
		Approach	5.7	A	2.8	A
	WB	L	5.2	A	4.4	A
		TR	10.1	B	13.1	B
		Approach	10.0	B	13.0	B
	NB	L	44.8	D	61.4	E
		TR	38.9	D	49.5	D
		Approach	41.2	D	54.1	D
	SB	LT / L	50.0	D	71.5	E
		R / TR	0.6	A	27.9	C
		Approach	39.0	D	45.5	D
	Overall		11.8	B	12.5	B
Jericho Turnpike & Old Country Road		TR	3.6	A	17.6	B
		Approach	3.6	A	17.6	B
	WB	L	10.0	B	51.7	D
		TR	12.4	B	3.8	A
		Approach	12.0	B	14.7	B
	NB	L	56.4	E	79.4	E
		R	18.5	B	21.2	C
		Approach	35.3	D	40.2	D
	Overall		12.5	B	20.7	C

Table 30– Build Alternative Intersection LOS – PM Peak Hour ....2 of 3

Intersection	Movement	Lane Group	No Build 2017		Build 2017	
			Delay	LOS	Delay	LOS
Deer Park Road & Old Country Road	EB	L	20.7	C	17.7	B
		TR	28.6	C	21.8	C
		Approach	28.5	C	21.8	C
	WB	L	74.9	E	82.3	F
		TR	28.8	C	33.9	C
		Approach	30.0	C	35.2	D
	NB	L	26.3	C	22.8	C
		TR	33.4	C	35.6	D
		Approach	32.4	C	34.1	C
	SB	L	34.0	C	142.2	F
		T	26.4	C	41.2	D
		R	2.6	A	11.9	A
		Approach	28.2	C	87.5	F
	Overall		29.6	C	35.7	D
Jericho Turnpike & Warner Road	EB	L	65.5	E	68.8	E
		T	5.2	A	6.1	A
		Approach	13.9	B	15.5	B
	WB	TR	29.8	C	34.3	C
		Approach	29.8	C	34.3	C
	SB	LR	65.4	E	71.8	E
		Approach	65.4	E	71.8	E
	Overall		22.5	C	25.8	C
Jericho Turnpike & Stowe Avenue	EB	L	84.4	F	83.2	F
		T	2.3	A	2.4	A
		Approach	5.3	A	5.0	A
	WB	TR	6.8	A	7.3	A
		Approach	6.8	A	7.3	A
	SB	L	59.5	E	59.5	E
		R	17.7	B	17.1	B
		Approach	42.2	D	42.2	D
	Overall		7.8	A	7.6	A
Jericho Turnpike & CR 66	EB	T	23.7	C	24.9	C
		Approach	23.7	C	24.9	C
	WB	L	20.5	C	20.5	C
		T	0.1	A	0.2	A
		Approach	9.9	A	9.1	A
	NB	R	16.3	B	16.3	B
		Approach	16.3	B	16.3	B
	Overall		15.8	B	15.9	B

Table 30 – Build Alternative Intersection LOS – PM Peak Hour ....3 of 3

Intersection	Movement	Lane Group	No Build 2017		Build 2017	
			Delay	LOS	Delay	LOS
CR 66 & TOH Yard Driveway	WB	L	21.1	C	21.1	C
		R	16.0	B	16.0	B
		Approach	20.7	C	20.7	C
	NB	TR	27.8	C	27.8	C
		Approach	27.8	C	27.8	C
	SB	L	6.9	A	6.9	A
		T	0.1	A	0.1	A
		Approach	0.2	A	0.2	A
	Overall		17.6	B	17.6	B
East Deer Park Road & Deforest Road	EB	LT	10.4	B	11.0	B
		Approach	10.4	B	11.0	B
	WB	LTR	41.3	D	41.5	D
		Approach	41.3	D	41.5	D
	NB	TR	56.4	E	56.4	E
		Approach	56.4	E	56.4	E
	SB	LTR	30.3	C	32.0	C
		Approach	30.3	C	32.0	C
	Overall		44.3	D	44.6	D
Deer Park Road & East Deer Park Road	WB	L	12.8	B	13.0	B
		Approach	12.8	B	13.0	B
	NB	T	26.6	C	35.0	D
		R	0.8	A	0.8	A
		Approach	9.4	A	13.0	B
	SB	T	33.6	C	46.2	D
		Approach	33.6	C	46.2	D
	Overall		18.2	B	24.3	C
Jericho Turnpike & West Site Access	EB	L			45.6	D
		T			11.6	B
		Approach			16.6	B
	WB	T			12.4	B
		R			2.0	A
		Approach			11.9	B
	SB	L			49.7	D
		R			58.1	E
		Approach			56.0	E
	Overall				19.3	B
Jericho Turnpike & East Site Access	EB	L			6.7	A
		T			5.3	A
		Approach			5.4	A
	WB	T			11.3	B
		R			2.6	A
		Approach			10.8	B
	SB	L			63.3	E
		R			12.0	B
		Approach			35.5	D
	Overall				10.3	B

Table 31 – Build Alternative Intersection LOS – Saturday Midday Peak

Intersection	Movement	Lane Group	No Build 2017		Build Alt 2017	
			Delay	LOS	Delay	LOS
Jericho Turnpike & Deer Park Road	EB	L	50.0	D	270.4	F
		TR	35.6	D	57.8	E
		Approach	36.5	D	68.8	E
	WB	L	47.1	D	53.5	D
		TR	17.5	B	31.7	C
		Approach	18.4	B	32.2	C
	NB	L	94.9	F	86.8	F
		TR	43.8	D	46.7	D
		Approach	59.6	E	59.1	E
	SB	L	38.3	D	108.4	F
		TR	45.8	D	44.4	D
		Approach	44.1	D	64.6	E
	Overall		39.4	D	56.0	E
Jericho Turnpike & Manor Road	EB	L	5.7	A	15.0	B
		TR	9.8	A	38.7	D
		Approach	9.5	A	36.8	D
	WB	L	3.2	A	7.5	A
		TR	4.8	A	18.9	B
		Approach	4.8	A	18.7	B
	NB	L	69.5	E	143.6	F
		TR	33.2	C	34.7	C
		Approach	52.8	D	93.5	F
	SB	LT / L	63.8	E	57.1	E
		R / TR	8.5	A	49.2	D
		Approach	46.9	D	51.7	D
	Overall		15.1	B	34.8	C
Jericho Turnpike & Old Country Road		TR	7.7	A	83.6	F
		Approach	7.7	A	83.6	F
	WB	L	14.9	B	46.9	D
		T / TR	14.8	B	7.1	A
		Approach	14.8	B	15.0	B
	NB	L	40.3	D	59.5	E
		R	7.6	A	17.6	B
		Approach	17.8	B	26.7	C
	Overall		12.0	B	44.2	D

Table 31 – Build Alternative Intersection LOS – Saturday Midday Peak ....2 of 3

Intersection	Movement	Lane Group	No Build 2017		Build 2017	
			Delay	LOS	Delay	LOS
Deer Park Road & Old Country Road	EB	L	8.4	A	18.2	B
		TR	9.4	A	22.5	C
		Approach	9.4	A	22.5	C
	WB	L	8.5	A	16.2	B
		TR	9.8	A	25.1	C
		Approach	9.7	A	24.9	C
	NB	L	44.0	D	28.0	C
		TR	47.5	D	29.6	C
		Approach	46.8	D	29.4	C
	SB	L	78.4	E	45.1	D
		T / TR	45.7	D	29.0	C
		R	7.8	A	6.8	A
		Approach	55.2	E	35.2	D
	Overall		18.7	B	26.3	C
Jericho Turnpike & Warner Road	EB	L	158.8	F	286.1	F
		T	5.0	A	5.6	A
		Approach	21.9	C	39.8	D
	WB	TR	5.6	A	5.9	A
		Approach	5.6	A	5.9	A
	SB	LR	89.0	F	127.6	F
		Approach	89.0	F	127.6	F
	Overall		19.4	B	21.7	C
Jericho Turnpike & Stowe Avenue	EB	L	69.4	E	68.4	E
		T	6.2	A	6.8	A
		Approach	8.6	A	8.8	A
	WB	TR	7.6	A	8.6	A
		Approach	7.6	A	8.6	A
	SB	L	61.6	E	61.6	E
		R	18.7	B	18.7	B
		Approach	49.4	D	49.4	D
	Overall		10.0	B	10.3	B
Jericho Turnpike & CR 66	EB	T	15.6	B	17.4	B
		Approach	15.6	B	17.4	B
	WB	L	34.0	C	34.0	C
		T	0.2	A	0.3	A
		Approach	15.4	B	14.3	B
	NB	R	15.0	B	15.0	B
		Approach	15.0	B	15.0	B
	Overall		15.2	B	15.1	B

Table 31 – Build Alternative Intersection LOS – Saturday Midday Peak ....3 of 3

Intersection	Movement	Lane Group	No Build 2017		Build 2017	
			Delay	LOS	Delay	LOS
CR 66 & Highway Office Driveway	WB	L	14.7	B	14.7	B
		R	9.3	A	9.3	A
		Approach	14.0	B	14.0	B
	NB	TR	36.4	D	36.4	D
		Approach	36.4	D	36.4	D
	SB	L	7.3	A	7.3	A
		T	0.1	A	0.1	A
		Approach	0.2	A	0.2	A
	Overall		19.1	B	19.1	B
East Deer Park Road & Deforest Road	EB	LT	15.3	B	17.1	B
		Approach	15.3	B	17.1	B
	WB	LTR	41.7	D	42.2	D
		Approach	41.7	D	42.2	D
	NB	TR	12.1	B	12.1	B
		Approach	12.1	B	12.1	B
	SB	LTR	13.2	B	13.4	B
		Approach	13.2	B	13.4	B
	Overall		18.1	B	18.3	B
Deer Park Road & East Deer Park Road	WB	L	5.3	A	5.5	A
		Approach	5.3	A	5.5	A
	NB	T	79.3	E	133.8	F
		R	0.4	A	0.4	A
		Approach	29.5	C	53.8	D
	SB	T	41.7	D	59.6	E
		Approach	41.7	D	59.6	E
	Overall		26.1	C	42.5	D
Jericho Turnpike & West Site Access	EB	L			74.4	E
		T			1.8	A
		Approach			14.8	B
	WB	T			11.6	B
		R			0.5	A
		Approach			11.1	B
	SB	L			51.1	D
		R			62.1	E
		Approach			59.4	E
	Overall				18.0	B
Jericho Turnpike & East Site Access	EB	L			26.6	C
		T			7.1	A
		Approach			10.3	B
	WB	T			19.9	B
		R			3.9	A
		Approach			19.1	B
	SB	L			62.8	E
		R			11.0	B
		Approach			34.1	C
	Overall				16.5	B

Review of Tables 29 through 31 reveals that, within the peak hours analyzed, a number of intersections experience changes in levels of service or poor levels of service, as a result of background growth and/or the traffic projected for Elwood Orchard.

The changes at Jericho Turnpike and Manor Road and Jericho Turnpike and Old Country Road from No-Build to Build condition are due not only to the site generated traffic, but also because of the fact that the two intersections are currently controlled by one signal controller, and have been revised in Build Condition, for this alternative, to each having individual controllers.

Mitigation

As part of this alternative analysis, methods of improving poor operating conditions and mitigating impacts were evaluated for the following intersections:

- Jericho Turnpike & Deer Park Road/Park Avenue
- Jericho Turnpike & Manor Road
- Jericho Turnpike & Old Country Road/Site Access
- Deer Park Road & Old Country Road
- Jericho Turnpike & Warner Road
- Jericho Turnpike & Stowe Avenue
- East Deer Park Road (CR 66) & Deforest Road North
- Deer Park Road (CR 35) & East Deer Park Road (CR 66)

These study intersections were re-analyzed with capacity and signal timing mitigation to improve their operation. The mitigation measures utilized at each location, as well as the proposed layout of the site access intersections, are included in Table 32.

Table 32 - Table of Mitigation - Build Alternative

Location	Capacity		Signal Timing Changes	
	Existing Conditions	Proposed	Existing Conditions	Proposed
Jericho Turnpike & Deer Park Road/Park Avenue	Westbound – One exclusive left-turn lane, one through lanes and a shared through and right-turn lane.	Add an exclusive westbound right-turn lane with storage of 250'. New configuration - One exclusive left-turn lane, two through and an exclusive right-turn lane.	AM/PM/SAT Signal operates at a cycle length of 120 seconds. EB/WB lefts turns are during permitted phase only.	No change in cycle length. Change EB left-turn to a leading protected-permitted phase. Optimize phase splits to correlate to future volumes. Optimize offsets to the next signal in the EB and SB directions.
Jericho Turnpike & Manor Road	Southbound – One shared left-turn / through lane and one right-turn lane.	Change SB lane configuration to exclusive left-turn lane and a shared through / right-turn lane.	Common signal controller with Old Country Road. AM/PM/SAT Signal operates at a cycle length of 120 seconds. NB/SB lefts turns are during permitted phase only.	Install exclusive signal controller for this intersection. No change in cycle length. Change NB/SB left-turns to a leading protected-permitted phase. Optimize phase splits to correlate to future volumes. Optimize offsets to the next signal on the EB and WB directions.
	Westbound – One exclusive left-turn lane, one through lane and a shared through / right-turn lane.	Add a right-turn lane. New configuration – One exclusive left-turn lane, two through lanes and an exclusive right-turn lane.		
Jericho Turnpike & Old Country Road	Westbound – One exclusive left-turn lane, two through lanes.	Add a second left-turn lane. New configuration – Two exclusive left-turn lanes, two through lanes. Add a free right-turn in the site just east of intersection.	Common signal controller with Manor Road. AM/PM/SAT Signal operates at a cycle length of 120 seconds. WB left-turn is a leading protected-permitted phase.	Install exclusive signal controller for this intersection. No change in cycle length. Add EB left-turn leading protected-permitted phase. Make NB/SB left-turns as a leading protected-permitted phase. Overlap NB/SB right-turns with EB/WB left-turn phases. Optimize phase splits to correlate to future volumes. Optimize offsets to the next signal on the EB, WB and SB directions.
	Northbound – One exclusive left-turn lane and an exclusive right-turn lane.	No Change Proposed		

Table 32 – Table of Mitigation - Build Alternative ... 2 of 3

Location	Capacity Enhancements		Signal Timing Changes	
	Existing Conditions	Proposed	Existing Conditions	Proposed
Deer Park Road & Old Country Road	Southbound – One left-turn lane, one through and an exclusive right-turn lane.	Change to new configuration – Two left-turn lanes and a shared through / right-turn lane	Signal operates at a cycle length of 117 seconds. All left-turns are during permitted phase.	Increase cycle length to 120 seconds. Add a leading fully protected phase for SB left-turns Add a leading NB left-turn protected-permitted phase Add a leading WB left-turn protected-permitted phase Optimize phase splits to correlate to future volumes. Optimize offsets to the next signal in the WB and NB directions.
Jericho Turnpike & Warner Road			AM/PM/SAT Signal operates at a cycle length of 120 seconds.	Optimize phase splits to correlate to future volumes. Optimize offsets to the next signal on the EB.
Jericho Turnpike & Stowe Avenue			AM/PM/SAT Signal operates at a cycle length of 120 seconds.	Optimize phase splits to correlate to future volumes. Optimize offsets to the next signal on the EB and WB directions.
East Deer Park Road at Deforest Road North & Deer Park Road			AM& PM Peak operates at a cycle length of 65 seconds. Saturday Midday Peak operates at a cycle length of 60 seconds.	Increase the Cycle length during all peak times to 75 seconds Optimize phase splits to correlate to future volumes.

Table 32 – Table of Mitigation - Build Alternative ... 3 of 3

Location	Capacity Enhancements		Signal Timing Changes	
	Existing Conditions	Proposed	Existing Conditions	Proposed
Jericho Turnpike & Proposed West Signalized Site Access		Eastbound – Two left-turn lanes, two through lanes Westbound – Two through lanes, an exclusive right-turn lane that extends to the unsignalized Central site access to the east Southbound – Two left-turn lanes and one right-turn lane		Match cycle length to NYS 25 intersections to the west (120 seconds). Add a leading EB left-turn protected phase Optimize phase splits to correlate to future volumes. Optimize offsets to the next signal in the EB and WB direction.
Jericho Turnpike & Proposed Center Unsignalized Site Access East		Rights in-rights out site access Eastbound – Two through lanes Westbound – Two through lanes and an exclusive right-turn lane. Southbound – One right-turn lane with acceleration lane on Jericho Turnpike.		
Jericho Turnpike & Proposed East Signalized Site Access		Eastbound – One left-turn lanes, two through lanes Westbound – Two through lanes, an exclusive right-turn lane. Southbound – One left-turn lane and one right-turn lanes		Match cycle length to NYS 25 intersections to the west (120 seconds). Add a leading EB left-turn protected-permitted phase Optimize phase splits to correlate to future volumes. Optimize offsets to the next signal in the EB and WB direction.
Manor Road & Site Access		Northbound – One through and one right-turn lane. Southbound – One left-turn and one through lane Westbound – Stop controlled one left-turn and one right-turn lane.		

The results of the analyses, with the mitigation measures identified above, for the weekday a.m., p.m. and Saturday midday peak hours, for the signalized study intersections, are summarized in Tables 33, 34 and 35 respectively. The table shows the No-Build, Build and Build with mitigation results, for this alternative, for easy comparison. The results of the analysis for the Site Access intersections on Jericho Turnpike are presented in the Site Access section.

Table 33 - Build Alternative Mitigation Analysis - AM Peak Hour

Intersection	Movement	Lane Group	No Build 2017		Build Alt 2017		Build Alt 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Deer Park Road	EB	L	62.8	E	62.8	E	31.7	C
		TR	24.0	C	27.2	C	31.7	C
		Approach	25.3	C	28.3	C	31.7	C
	WB	L	15.7	B	33.4	C	30.8	C
		TR / T	33.3	C	49.6	D	52.6	D
		R					4.2	A
		Approach	32.8	C	49.1	D	43.9	D
	NB	L	162.5	F	162.5	F	76.2	E
		TR	35.9	D	35.9	D	49.1	D
		Approach	71.8	E	71.9	E	56.8	E
	SB	L	42.5	D	73.5	E	35.2	D
		TR	59.5	E	59.5	E	71.8	E
		Approach	57.1	E	61.9	E	65.6	E
	Overall		48.8	D	54.5	D	50.4	D
Jericho Turnpike & Manor Road	EB	L	8.7	A	6.3	A	8.8	A
		TR	18.7	B	8.8	A	10.2	B
		Approach	18.4	B	8.7	A	10.1	B
	WB	L	2.5	A	5.7	A	3.0	A
		TR / T	4.4	A	18.8	B	9.9	A
		R					0.7	A
		Approach	4.3	A	18.6	B	9.2	A
	NB	L	37.1	D	39.7	D	31.2	C
		TR	26.1	C	27.6	C	37.9	D
		Approach	30.3	C	32.3	C	35.3	D
	SB	LT / L	72.1	E	69.6	E	47.8	D
		R / TR	7.1	A	37.3	D	43.3	D
		Approach	49.3	D	51.5	D	45.3	D
	Overall		17.2	B	22.0	C	16.6	B
Jericho Turnpike & Old Country Road		TR	17.5	B	17.2	B	12.7	B
		Approach	17.5	B	17.2	B	12.7	B
	WB	L	30.2	C	22.1	C	47.2	D
		TR	16.6	B	7.0	A	2.6	A
		Approach	20.0	C	10.8	B	14.2	B
	NB	L	35.4	D	61.3	E	53.1	D
		R	7.4	A	16.0	B	7.4	A
		Approach	16.4	B	25.6	C	17.7	B
	Overall		18.9	B	14.3	B	14.1	B

Table 33 – Build Alternative Mitigation Analysis – AM Peak Hour ....2 of 3

Intersection	Movement	Lane Group	No Build 2017		Build 2017		Build 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
Deer Park Road & Old Country Road	EB	L	10.5	B	10.5	B	26.5	C
		TR	22.6	C	22.1	C	31.2	C
		Approach	22.6	C	22.0	C	31.2	C
	WB	L	85.3	F	79.4	E	31.7	C
		TR	25.3	C	26.1	C	29.2	C
		Approach	28.5	C	28.9	C	29.4	C
	NB	L	34.1	C	36.0	D	26.2	C
		TR	30.0	C	31.9	C	46.6	D
		Approach	30.4	C	32.2	C	44.8	D
	SB	L	32.9	C	35.9	D	41.4	D
		T	47.0	D	50.8	D	57.9	E
		R	0.0	A	0.0	A		
		Approach	43.9	D	47.2	D	54.2	D
	Overall		29.0	C	29.8	C	35.1	D
Jericho Turnpike & Warner Road	EB	L	75.4	E	81.6	F	70.6	E
		T	9.6	A	10.2	B	10.0	B
		Approach	14.2	B	15.7	B	14.7	B
	WB	TR	17.6	B	19.3	B	20.8	C
		Approach	17.6	B	19.3	B	20.8	C
	SB	LR	63.2	E	63.8	E	65.1	E
		Approach	63.2	E	63.8	E	65.1	E
	Overall		22.9	C	24.4	C	25.0	C
Jericho Turnpike & Stowe Avenue	EB	L	78.8	E	81.1	F	79.2	E
		T	0.4	A	0.3	A	0.3	A
		Approach	3.4	A	3.2	A	3.1	A
	WB	TR	5.5	A	5.7	A	5.7	A
		Approach	5.5	A	5.7	A	5.7	A
	SB	L	53.3	D	53.3	D	53.3	D
		R	26.3	C	26.3	C	26.3	C
		Approach	43.0	D	43.0	D	43.0	D
	Overall		5.4	A	5.5	A	5.5	A

Table 33 – Build Alternative Mitigation Analysis – AM Peak Hour ....3 of 3

Intersection	Movement	Lane Group	No Build 2017		Build 2017		Build 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
East Deer Park Road & Deforest Road	EB	LT	11.4	B	11.5	B	13.3	B
		Approach	11.4	B	11.5	B	13.3	B
	WB	LTR	43.9	D	44.6	D	48.4	D
		Approach	43.9	D	44.6	D	48.4	D
	NB	TR	16.5	B	16.6	B	17.0	B
		Approach	16.5	B	16.6	B	17.0	B
	SB	LTR	55.2	E	58.5	E	45.2	D
		Approach	55.2	E	58.5	E	45.2	D
	Overall		42.3	D	43.9	D	38.9	D
Deer Park Road & East Deer Park Road	WB	L	14.9	B	13.5	B	29.6	C
		Approach	14.9	B	13.5	B	29.6	C
	NB	T	69.0	E	90.9	F	43.2	D
		R	0.3	A	0.3	A	0.3	A
		Approach	36.1	D	48.9	D	23.3	C
	SB	T	47.8	D	51.8	D	26.0	C
		Approach	47.8	D	51.8	D	26.0	C
	Overall		33.7	C	39.2	D	26.1	C

Table 34 – Build Alternative Mitigation Analysis – PM Peak Hour

Intersection	Movement	Lane Group	No Build 2017		Build Alt 2017		Build Alt 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Deer Park Road	EB	L	32.6	C	57.4	E	20.9	C
		TR	98.7	F	153.3	F	76.8	E
		Approach	96.8	F	150.9	F	75.4	E
	WB	L	31.9	C	36.2	D	27.7	C
		TR / T	19.7	B	27.5	C	17.8	B
		R					1.6	A
		Approach	20.0	C	27.6	C	14.1	B
	NB	L	108.7	F	85.6	F	100.2	F
		TR	31.8	C	34.2	C	56.1	E
		Approach	53.8	D	48.9	D	68.7	E
	SB	L	30.8	C	90.9	F	62.3	E
		TR	47.1	D	47.1	D	86.7	F
		Approach	44.5	D	56.8	E	81.3	F
	Overall		59.4	E	78.5	E	62.9	E
Jericho Turnpike & Manor Road	EB	L	3.6	A	4.7	A	5.1	A
		TR	5.8	A	2.7	A	6.5	A
		Approach	5.7	A	2.8	A	6.4	A
	WB	L	5.2	A	4.4	A	6.4	A
		TR / T	10.1	B	13.1	B	14.1	B
		R					2.7	A
		Approach	10.0	B	13.0	B	11.6	B
	NB	L	44.8	D	61.4	E	39.5	D
		TR	38.9	D	49.5	D	55.8	E
		Approach	41.2	D	54.1	D	49.4	D
	SB	LT / L	50.0	D	71.5	E	41.7	D
		R / TR	0.6	A	27.9	C	33.0	C
		Approach	39.0	D	45.5	D	36.5	D
	Overall		11.8	B	12.5	B	12.8	B
Jericho Turnpike & Old Country Road		TR	3.6	A	17.6	B	11.8	B
		Approach	3.6	A	17.6	B	11.8	B
	WB	L	10.0	B	51.7	D	68.4	E
		TR	12.4	B	3.8	A	5.9	A
		Approach	12.0	B	14.7	B	20.1	C
	NB	L	56.4	E	79.4	E	73.3	E
		R	18.5	B	21.2	C	30.0	C
		Approach	35.3	D	40.2	D	43.2	D
	Overall		12.5	B	20.7	C	21.0	C

Table 34 – Build Alternative Mitigation Analysis – PM Peak Hour .... 2 of 3

Intersection	Movement	Lane Group	No Build 2017		Build 2017		Build 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
Deer Park Road & Old Country Road	EB	L	20.7	C	17.7	B	18.1	B
		TR	28.6	C	21.8	C	31.0	C
		Approach	28.5	C	21.8	C	31.0	C
	WB	L	74.9	E	82.3	F	25.4	C
		TR	28.8	C	33.9	C	37.4	D
		Approach	30.0	C	35.2	D	37.1	D
	NB	L	26.3	C	22.8	C	23.1	C
		TR	33.4	C	35.6	D	73.6	E
		Approach	32.4	C	34.1	C	67.6	E
	SB	L	34.0	C	142.2	F	70.5	E
		T	26.4	C	41.2	D	61.4	E
		R	2.6	A	11.9	A		
		Approach	28.2	C	87.5	F	65.7	E
	Overall		29.6	C	35.7	D	41.9	D
Jericho Turnpike & Warner Road	EB	L	65.5	E	68.8	E	64.0	E
		T	5.2	A	6.1	A	6.9	A
		Approach	13.9	B	15.5	B	15.5	B
	WB	TR	29.8	C	34.3	C	23.8	C
		Approach	29.8	C	34.3	C	23.8	C
	SB	LR	65.4	E	71.8	E	63.3	E
		Approach	65.4	E	71.8	E	63.3	E
	Overall		22.5	C	25.8	C	21.5	C
Jericho Turnpike & Stowe Avenue	EB	L	84.4	F	83.2	F	61.0	E
		T	2.3	A	2.4	A	3.7	A
		Approach	5.3	A	5.0	A	5.6	A
	WB	TR	6.8	A	7.3	A	8.0	A
		Approach	6.8	A	7.3	A	8.0	A
	SB	L	59.5	E	59.5	E	59.2	E
		R	17.7	B	17.1	B	17.6	B
		Approach	42.2	D	42.2	D	42.0	D
	Overall		7.8	A	7.6	A	8.2	A

Table 34 – Build Alternative Mitigation Analysis – PM Peak Hour ….3 of 3

Intersection	Movement	Lane Group	No Build 2017		Build 2017		Build 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
East Deer Park Road & Deforest Road	EB	LT	10.4	B	11.0	B	13.6	B
		Approach	10.4	B	11.0	B	13.6	B
	WB	LTR	41.3	D	41.5	D	53.1	D
		Approach	41.3	D	41.5	D	53.1	D
	NB	TR	56.4	E	56.4	E	38.2	D
		Approach	56.4	E	56.4	E	38.2	D
	SB	LTR	30.3	C	32.0	C	22.7	C
		Approach	30.3	C	32.0	C	22.7	C
	Overall		44.3	D	44.6	D	37.1	D
Deer Park Road & East Deer Park Road	WB	L	12.8	B	13.0	B	13.3	B
		Approach	12.8	B	13.0	B	13.3	B
	NB	T	26.6	C	35.0	D	23.8	C
		R	0.8	A	0.8	A	0.8	A
		Approach	9.4	A	13.0	B	9.0	A
	SB	T	33.6	C	46.2	D	24.9	C
		Approach	33.6	C	46.2	D	24.9	C
	Overall		18.2	B	24.3	C	15.3	B

Table 35 – Build Alternative Mitigation Analysis – Saturday Midday Peak

Intersection	Movement	Lane Group	No Build 2017		Build Alt 2017		Build Alt 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Deer Park Road	EB	L	50.0	D	270.4	F	41.0	D
		TR	35.6	D	57.8	E	54.8	D
		Approach	36.5	D	68.8	E	54.1	D
	WB	L	47.1	D	53.5	D	47.0	D
		TR / T	17.5	B	31.7	C	23.7	C
		R					2.9	A
		Approach	18.4	B	32.2	C	19.3	B
	NB	L	94.9	F	86.8	F	63.6	E
		TR	43.8	D	46.7	D	58.6	E
		Approach	59.6	E	59.1	E	60.2	E
	SB	L	38.3	D	108.4	F	62.4	E
		TR	45.8	D	44.4	D	50.0	D
		Approach	44.1	D	64.6	E	54.0	D
	Overall		39.4	D	56.0	E	46.0	D
Jericho Turnpike & Manor Road	EB	L	5.7	A	15.0	B	19.9	B
		TR	9.8	A	38.7	D	18.4	B
		Approach	9.5	A	36.8	D	18.6	B
	WB	L	3.2	A	7.5	A	9.3	A
		TR / T	4.8	A	18.9	B	18.9	B
		R					4.5	A
		Approach	4.8	A	18.7	B	17.3	B
	NB	L	69.5	E	143.6	F	43.4	D
		TR	33.2	C	34.7	C	35.8	D
		Approach	52.8	D	93.5	F	39.9	D
	SB	LT / L	63.8	E	57.1	E	37.0	D
		R / TR	8.5	A	49.2	D	54.0	D
		Approach	46.9	D	51.7	D	48.6	D
	Overall		15.1	B	34.8	C	22.6	C
Jericho Turnpike & Old Country Road		TR	7.7	A	83.6	F	5.9	A
		Approach	7.7	A	83.6	F	5.9	A
	WB	L	14.9	B	46.9	D	64.0	E
		T / TR	14.8	B	7.1	A	3.8	A
		Approach	14.8	B	15.0	B	16.2	B
	NB	L	40.3	D	59.5	E	55.8	E
		R	7.6	A	17.6	B	56.6	E
		Approach	17.8	B	26.7	C	56.4	E
	Overall		12.0	B	44.2	D	17.2	B

Table 35 – Build Alternative Mitigation Analysis – Saturday Midday Peak ....2 of 3

Intersection	Movement	Lane Group	No Build 2017		Build 2017		Build 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
Deer Park Road & Old Country Road	EB	L	8.4	A	18.2	B	24.7	C
		TR	9.4	A	22.5	C	24.2	C
		Approach	9.4	A	22.5	C	24.2	C
	WB	L	8.5	A	16.2	B	18.1	B
		TR	9.8	A	25.1	C	25.9	C
		Approach	9.7	A	24.9	C	25.8	C
	NB	L	44.0	D	28.0	C	23.8	C
		TR	47.5	D	29.6	C	56.9	E
		Approach	46.8	D	29.4	C	51.3	D
	SB	L	78.4	E	45.1	D	79.6	E
		T / TR	45.7	D	29.0	C	16.0	B
		R	7.8	A	6.8	A		
		Approach	55.2	E	35.2	D	43.4	D
	Overall		18.7	B	26.3	C	31.0	C
Jericho Turnpike & Warner Road	EB	L	158.8	F	286.1	F	64.7	E
		T	5.0	A	5.6	A	8.3	A
		Approach	21.9	C	39.8	D	15.2	B
	WB	TR	5.6	A	5.9	A	19.9	B
		Approach	5.6	A	5.9	A	19.9	B
	SB	LR	89.0	F	127.6	F	66.0	E
		Approach	89.0	F	127.6	F	66.0	E
	Overall		19.4	B	21.7	C	20.8	C
Jericho Turnpike & Stowe Avenue	EB	L	69.4	E	68.4	E	56.9	E
		T	6.2	A	6.8	A	4.1	A
		Approach	8.6	A	8.8	A	5.8	A
	WB	TR	7.6	A	8.6	A	9.6	A
		Approach	7.6	A	8.6	A	9.6	A
	SB	L	61.6	E	61.6	E	60.8	E
		R	18.7	B	18.7	B	18.4	B
		Approach	49.4	D	49.4	D	48.8	D
	Overall		10.0	B	10.3	B	9.3	A

Table 35 – Build Alternative Mitigation Analysis – Saturday Midday Peak ....3 of 3

Intersection	Movement	Lane Group	No Build 2017		Build 2017		Build 2017 Mitigated	
			Delay	LOS	Delay	LOS	Delay	LOS
East Deer Park Road & Deforest Road	EB	LT	15.3	B	17.1	B	18.4	B
		Approach	15.3	B	17.1	B	18.4	B
	WB	LTR	41.7	D	42.2	D	37.7	D
		Approach	41.7	D	42.2	D	37.7	D
	NB	TR	12.1	B	12.1	B	14.0	B
		Approach	12.1	B	12.1	B	14.0	B
	SB	LTR	13.2	B	13.4	B	15.2	B
		Approach	13.2	B	13.4	B	15.2	B
	Overall		18.1	B	18.3	B	18.9	B
Deer Park Road & East Deer Park Road	WB	L	5.3	A	5.5	A	10.2	B
		Approach	5.3	A	5.5	A	10.2	B
	NB	T	79.3	E	133.8	F	28.5	C
		R	0.4	A	0.4	A	0.4	A
		Approach	29.5	C	53.8	D	11.7	B
	SB	T	41.7	D	59.6	E	19.8	B
		Approach	41.7	D	59.6	E	19.8	B
	Overall		26.1	C	42.5	D	13.6	B

Review of Tables 33, 34 and 35 reveals that, with the exception discussed below, the mitigation measures identified result in an improvement in operating LOS at the study intersections where mitigation was deemed necessary. The intersection operation in the No-Build condition is restored in many cases and in a few cases, improved.

At the intersection of Deer Park Road and Old Country Road the analysis results indicate that, with the proposed mitigation, the intersection operates with a slightly higher overall delay, but with the same LOS designation during p.m. and Saturday midday time periods and drops from LOS C to D during the a.m. time period. The intersection however, continues to operate at an acceptable LOS (considered to be LOS D or better). The operation of this intersection is unique in that it is affected by its proximity to the intersection of Old Country Road with Jericho Turnpike, as well as Deer Park Road with Jericho Turnpike. These roadways are mitigated operate in a coordinated manner and changes in operations, such as signal timing/progression, for example, have an effect on the other signals in the area. The analysis performed indicated a potential vehicle queuing problem on the southbound approach, as well as difficulty performing westbound left-turns during the weekday p.m. peak hour, at the intersection. The mitigation proposed here addresses and improves both of these issues with re-designation of lanes and installation of a left-turn arrow. However, while the installation of the left-turn arrow greatly improves the operation of that particular movement, it does take time away from competing movements at the intersection. The change in phasing and lane allocation at the intersection, which is

necessary for one time period, will be present during the others as well, and may cause an effect on operations in those other time periods. The proximity of the other intersections noted precludes additional changes to timing that could improve the overall LOS as the other intersections would be adversely affected. It is important to note again, however, that the intersection would still operate within acceptable conditions.

Table 36 - Signalized Site Accesses - AM Peak

Intersection	Movement	Lane Group	Build Alt 2017		Build Alt 2017 Mitigated	
			Delay	LOS	Delay	LOS
Jericho Turnpike & West Signalized Site Access	EB	L	47.1	D	49.0	D
		T	4.4	A	1.4	A
		Approach	10.1	B	7.9	A
	WB	T	7.2	A	7.8	A
		R	2.9	A	1.8	A
		Approach	7.2	A	7.7	A
	SB	L	57.5	E	57.5	E
		R	44.0	D	44.0	D
		Approach	47.2	D	47.2	D
	Overall		9.4	A	8.9	A
Jericho Turnpike & East Signalized Site Access	EB	L	7.6	A	3.9	A
		T	8.4	A	3.4	A
		Approach	8.3	A	3.5	A
	WB	T	7.4	A	7.4	A
		R	1.8	A	1.8	A
		Approach	7.3	A	7.3	A
	SB	L	58.7	E	58.7	E
		R	21.5	C	21.5	C
		Approach	38.1	D	38.1	D
	Overall		8.5	A	6.9	A

Table 37 – Signalized Site Accesses - PM Peak

Intersection	Movement	Lane Group	Build Alt 2017		Build Alt 2017 Mitigated	
			Delay	LOS	Delay	LOS
Jericho Turnpike & West Signalized Site Access	EB	L	45.6	D	5.1	A
		T	11.6	B	9.9	A
		Approach	16.6	B	9.2	A
	WB	T	12.4	B	7.3	A
		R	2.0	A	1.5	A
		Approach	11.9	B	7.1	A
	SB	L	49.7	D	62.6	E
		R	58.1	E	43.6	D
		Approach	56.0	E	48.3	D
	Overall		19.3	B	12.8	B
Jericho Turnpike & East Signalized Site Access	EB	L	6.7	A	5.2	A
		T	5.3	A	3.9	A
		Approach	5.4	A	4.0	A
	WB	T	11.3	B	11.3	B
		R	2.6	A	2.7	A
		Approach	10.8	B	10.8	B
	SB	L	63.3	E	63.1	E
		R	12.0	B	17.6	B
		Approach	35.5	D	38.4	D
	Overall		10.3	B	9.9	A

Table 38 – Signalized Site Accesses - Saturday Midday Peak

Intersection	Movement	Lane Group	Build Alt 2017		Build Alt 2017 Mitigated	
			Delay	LOS	Delay	LOS
Jericho Turnpike & West Signalized Site Access	EB	L	74.4	E	10.8	B
		T	1.8	A	3.2	A
		Approach	14.8	B	4.6	A
	WB	T	11.6	B	27.5	C
		R	0.5	A	9.8	A
		Approach	11.1	B	26.8	C
	SB	L	51.1	D	62.9	E
		R	62.1	E	40.0	D
		Approach	59.4	E	45.7	D
	Overall		18.0	B	18.1	B
Jericho Turnpike & East Signalized Site Access	EB	L	26.6	C	16.8	B
		T	7.1	A	10.0	B
		Approach	10.3	B	11.1	B
	WB	T	19.9	B	19.2	B
		R	3.9	A	3.8	A
		Approach	19.1	B	18.4	B
	SB	L	62.8	E	62.9	E
		R	11.0	B	11.0	B
		Approach	34.1	C	34.2	C
	Overall		16.5	B	16.6	B

Table 39 – Unsignalized Site Accesses

Intersection	Approach/ Movement	AM Peak		PM Peak		Saturday Midday Peak	
		Delay	LOS	Delay	LOS	Delay	LOS
Jericho Turnpike & Center Site Access	SB	16.4	C	13.6	B	16.8	C
Manor Road & Site Access	WB	11.1	B	13.9	B	14.1	B
	SB L	7.5	A	8.4	A	8.0	A

Tables 36, 37, 38 and 39 show that the four site access points evaluated operate well, after the mitigation measures are applied to the other network study intersections. It should be noted that the westernmost access proposed on Jericho Turnpike was not evaluated here as a free-right turn should experience no delay.

Traffic Signal Warrant Investigation

In order to justify the installation of a traffic signal at a particular location, an engineering study is required to determine if conditions meet one or more of nine traffic signal warrants set forth in the National Manual of Uniform Traffic Control Devices (MUTCD). As noted previously, the alternative plan proposes that two of the four access points on Jericho Turnpike be signalized. These are the Westerly Signalized Site Access and Easterly Signalized Site Access. Review of the warrants in the MUTCD indicates that the following two warrants apply:

- Warrant 1 – Eight Hour Vehicular Volume
- Warrant 2 – Four-Hour Vehicular Volume

As part of this study, evaluation of the two signal warrants above in respect to the development of Elwood Orchard under this alternative was performed. Additional details of this evaluation are contained in Appendix I of this report.

Based on this evaluation it has been determined that the proposed westerly signalized site access and the easterly signalized site access on Jericho Turnpike meet Warrant 1 and Warrant 2. Given the nature of traffic conditions on Jericho Turnpike and the proposed development, it is recommended that a traffic signal be installed at these locations as described in this study.

Parking and Circulation

As shown in the Alternative conceptual site plan prepared by VHB, the total off-street parking requirement for the uses incorporated in the plan, according to Town of Huntington Code, is 1,769 spaces. This plan shows that a total of 1,984 spaces have been provided, exceeding Code requirements. As such, more than sufficient parking would be provided to serve the uses proposed on the site. Review of the concept plan reveals that the site layout and circulation, as designed, are adequate to serve the needs of the site

Conclusions

- The proposed development of Elwood Orchard under the Reduced Density Plan is estimated to generate approximately 466 new vehicle trips (292 entering trips and 174 exiting trips) during the weekday a.m. peak hour, 1,339 new trips (656 entering trips and 683 exiting trips) during the p.m. peak hour, and 1,568 new trips (794 entering trips and 774 exiting trips) during the Saturday midday peak hour.

- Eight signalized intersections were identified as to the need for mitigation under the Build Condition which includes both capacity and signal timing changes.

- It was found that four of the impacted intersections can be mitigated with changes in signal timing parameters, such as cycle, phase-splits and signal progression. Three others would require physical changes such as widening, additional lanes and changes to lane designations. Recommendations to this effect have been included in the report.

- The alternative site plan contains five points of access which will allow traffic to and from the site to enter and exit the site at various locations, reducing the additional traffic at any one point. The access plan proposed is more than adequate to serve the site and will provide good traffic service.

- The proposed two major access points on Jericho Turnpike meet warrants for signalization and should be signalized.

- The traffic generated by the development is not expected to unduly affect the accident rates on the adjacent roadways.

- The proposed number of parking spaces is adequate to meet Town code requirements, as well as the projected needs of the development.

- Based on the results for the Reduced Density Alternative, which is anticipated to generate lower levels of peak hour traffic, when compared to the proposed action, it can be concluded that the roadways and intersections in the study area can accommodate the additional traffic due to the proposed Elwood Orchard, given the implementation of the proposed mitigation described in this DEIS.

Cultural Resources

The Phase IB Study did not determine the presence of cultural resources, and did not recommend further investigation, indicating that there were no cultural resources on the portion of the site to be disturbed by the proposed action. The same would be true of this alternative. As such, no impacts to such resources would occur.

Construction

Potential construction related impacts would be the same for this alternative, as with the proposed action. Such impacts, not anticipated to be significantly adverse, and are temporary and unavoidable, include but are not limited to: localized noise from construction activity, construction-related traffic, localized clearing and grading will disturb soils and remove vegetation, and construction waste generation that must be disposed of separately from daily operational waste.

8.5 Comparison of Alternatives

A comparison of the alternatives (Table 40) indicates that the reduced density alternative, as presented in this DEIS, is the more desirable alternative by providing a high quality, mixed-use development, with economic benefits to the Town, Elwood UFSD, and others, while reducing the gross square footage and number of buildings contemplated in the proposed action.

Table 40 – Comparative Table of Project Alternatives

Alternative	Proposed Action	No Action Alternative	Development Under Existing Zoning	Reduced Density Alternative
Zoning	C-5, R-40	C-6, R-40	C-6, R-40	C-5, R-40
Retail Use	240,880 sf[1]	7,535 sf	7,535 sf	203,250 sf[1]
Office Use	129,800 sf	--	--	54,725
Residential Use	1 unit	1 unit	45 units	1 unit
Other Use	60,700 sf[2]	--	--	135,000sf[2]
Gross Floor Area	486,380 sf	7,535 sf	7,535 sf	392,975 sf
Density[4]	0.23 FAR 1.0 per 6.73 acres		0.49 FAR 0.81 unit/acre	0.18 FAR 1.0 unit per 6.73 acres
Residents Generated	5	5	139	5
School-Age Children	2	2	28	2
Impervious Surfaces	28.7 acres	0.3 acres	9± acres	28.7 acres
Water Usage	33,606 gpd	13,538 gpd	26,738 gpd	33,606 gpd
Solid Waste	5,308 lbs/day	225 lbs/day	524 lbs/day	7,755 lbs/day

Notes:
[1] Includes retail space, supermarket, and restaurant.
[2] Includes fitness center, library, and management office.
[3] Should a Suffolk County Industrial Development Agency (IDA) tax abatement be applied to the Proposed Action (see Appendix F, Section 5.3), the first year (representing the highest abatement period) property taxes levied for the Elwood UFSD would total nearly $1.40 million. This would still represent an increase of nearly $1.26 million over existing conditions.
[4] Density for commercial portions of the subject property is expressed in FAR, and units per acre for the residential portion.

9.0

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