TOWN OF HUNTINGTON

DEPARTMENT OF PLANNING AND ENVIRONMENT

Frank P. Petrone, *Supervisor*

Richard Machtay, *Director*

December 10, 2002

Willaim Kollmer Contracting Ltd.
22 North Creek Road
Eatons Neck, NY 11768

Re: *Old Orchard Woods (Subdivision)*
Adoption of SEQRA Findings & Preliminary Approval

Gentlemen:

By resolution dated December 4, 2002 the Huntington Town Planning Board adopted SEQRA findings and granted preliminary approval for the subdivision of Old Orchard Woods. I am forwarding copies of the resolution to you, and, by copy of this letter, to the involved and interested agencies identified on the attached page. Also included is a copy of a memorandum dated November 21, 2002 from the Town of Huntington, Department of Planning and Environment, Engineering Review Division, which was considered in the Planning Board's decision.

If you have any questions on the above, please do not hesitate to contact me directly.

Very truly yours,

Scott Robin
Senior Environmental Analyst
for
Richard Machtay
Director

Encls.

cc: Tracey Edwards, Chairman, and Planning Board members
Robert Sandberg, Planner
John Thomas Rieger, Esq.
Phillip A. Maliciki, CEP, AICP, Nelson, Pope and Voorhis, LLC

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HUNTINGTON TOWN PLANNING BOARD

MEETING OF DECEMBER 4, 2002

The following resolution was offered by W.G. Asher

and seconded by L.A. Santoianni

WHEREAS, WILLIAM KOLLMER and MARY ELLEN CURTIS, 22 North Creek Road, Eaton's Neck, New York, 11768, owners of fee title to land and WILLIAM KOLLMER CONTRACTING LTD., 22 North Creek Road, Eaton's Neck, New York 11768 applicant under contract, have submitted a subdivision application for the OLD ORCHARD WOODS property, prepared by Nelson and Pope, LLP, and located on the northwest side of North Creek Road, 747.78 feet west of Eaton's Neck Road in Eaton's Neck, designated as parcel 0400-001-01-004.1 on the Suffolk County Tax Map, and

WHEREAS, said preliminary application and a Draft Environmental Impact Statement was received on July 27, 2002 for the subdivision of a 24.21 acre property into ten (10) lots, zoned R-80 Residential, and was classified an Unlisted Action, and

WHEREAS, the Huntington Planning Board having been established as Lead Agency per SEQRA section 617.6 has caused a review of the proposed subdivision to be made, pursuant to the New York State Environmental Conservation Law, Article 8, State Environmental Quality Review Act (SEQRA), and Part 617 of the implementation regulations (6 NYCRR 617), and has completed the review, including acceptance of a Final Environmental Impact Statement (FEIS), and

WHEREAS, the Huntington Planning Board as lead agency, has taken a hard look at the environmental aspects of the action, pursuant to SEQRA and have given consideration to the FEIS and finds that the necessary requirements pursuant to 6 NYCRR 617.11 (d) have been met; now, therefore be it

WHEREAS, the proposed map is a resubdivision of the map of Hogan Plat, Lot #2, filed November 29, 1987, map #8859, and

RESOLVED, that the Huntington Planning Board hereby adopts the annexed Findings Statement and imposes the mitigating conditions described therein in compliance with section 617.3 (b) of SEQRA and authorizes its filing in accordance with 617.12 (b) of SEQRA, and be it further

RESOLVED, that the Town of Huntington Planning Board hereby APPROVES/~~DECLINES TO APPROVE~~ the following action, based on the annexed Findings Statement, and be it further

Resolved, that the map of OLD ORCHARD WOODS, a/k/a in the Draft Environmental Impact Statement (DEIS) as Alternate Map #3, depicting six (6) lots adjoining the bluff, dated June 2001 and received in the Planning and Environment Department on April 4, 2002 is hereby granted/~~denied~~ Preliminary Approval, and be it further

RESOLVED, that the conditions set forth in the Findings Statement shall be fulfilled pursuant to statute in a timely fashion, during final subdivision review and subsequent to filing of the final map, and no certificate of occupancy shall be issued on any structure on any of the lots until it is determined that all conditions have been complied with.

VOTE: 5	AYES: 4	NOES: 1	ABSTENTIONS: 0
	W.G. Asher	B.B. Ohlig	
	L.A. Santoianni		
	M. Sommer and A.J. Rosen		

The resolution was thereupon declared to be duly adopted.

14-14-10 (2/87)-9c

SEQR

617.21
Appendix I
State Environmental Quality Review

FINDINGS STATEMENT

Pursuant to Article 8 (State Environmental Quality Review Act - SEQRA) of the Environmental Conservation Law and 6 NYCRR Part 617, the Town of Huntington Planning Board, as lead ~~or involved~~ agency, makes the following findings.

Name of Action: Old Orchard Woods (Subdivision)

Description of Action: The action involves the subdivision of a 24.1-acre wooded, variably sloped, high bluff coastal site, zoned R-80 (minimum 2 acre) residential, in order to construct ten (10) single-family homes, related roadway and drainage facilities. Sanitary wastewater collection and treatment is proposed via disposal to sub-surface septic systems. Public water is to be provided by Suffolk County Water Authority.

Location: (Include street address and the name of the municipality and county.)
The site is bordered by Long Island Sound to the west and by the Village of Asharoken to the northeast. The property is located on the west side of North Creek Road, approximately 750 feet northwest of the North Creek Road/Eaton's neck Road intersection in the hamlet of Eaton's Neck, Town of Huntington, Suffolk County indicated as parcel 0400-001-01-004.1).

Agency Jurisdiction(s): The Huntington Planning Board approves Subdivisions within the Town of Huntington.

Date Final EIS Filed: October 3, 2002

Fact and Conclusions in the EIS Relied Upon to Support the Decision:
(Attach additional sheets, as necessary)

PLEASE REFER TO THE ATTACHED FOURTEEN (14) PAGE FINDINGS STATEMENT ADOPTED BY THE PLANNING BOARD ON DECEMBER 4, 2002.

A Copy of this Notice with attachments to be forwarded to the following:
* Commissioner, Department of Environmental Conservation, 50 Wolf Road, Albany, New York 12233-0001
* Appropriate Regional Office of the Department of Environmental Conservation -- *Region I*
* Office of the Chief Executive Officer of the political subdivision in which the action will be principally located - *Supervisor Frank Petrone*
* Applicant – WILLIAM KOLLMER CONTRACTING. LTD.
* All other involved agencies (if any):
  - ✓ Suffolk County Department of Health Services, Wastewater Management Division
  - ✓ Suffolk County Water Authority
  - ✓ Town of Huntington Department of Engineering Services
  - ✓ Town of Huntington Highway Department

* Interested agencies (if any):
  - ✓ Long Island Regional Planning Board
  - ✓ Suffolk County Planning Commission
  - ✓ Suffolk County Department of Health Services, Office of Ecology,
  - ✓ Incorporated Village of Asharoken Planning Board
  - ✓ Northport-East Northport School District
  - ✓ Eatons Neck Civic Association
  - ✓ Keyspan
  - ✓ Eatons Neck Fire Department
  - ✓ Town of Huntington Town Clerk
  - ✓ Town of Huntington Department of Maritime Services
  - ✓ Town of Huntington Conservation Board
  - ✓ Town of Huntington Bureau of Fire Prevention
  - ✓ Town of Huntington Planning and Environment Department

FINDINGS STATEMENT
OLD ORCHARD WOODS SUBDIVISION

[10 Lot Resubdivision of Lot 1 – Map of Hogan Plat]

PROJECT LOCATION

The project site is located on the west side of North Creek Road, approximately 750 feet northwest of the North Creek Road/Eaton's Neck Road intersection in the hamlet of Eaton's Neck, Town of Huntington, designated as parcel 0400-001-01-004.1 on the Suffolk County Tax Map. Long Island Sound is adjacent to the site to the west and the Village of Asharoken borders the site to the northeast.

PROJECT DESCRIPTION

The action involves the subdivision of a 24.21 acre wooded, variably sloped, high bluff coastal site, zoned R-80 (minimum two-acres), in order to construct ten (10) new detached single-family homes; a standard 34-foot wide access roadway and an approximate 66,072 square foot recharge basin (Preliminary Map of Old Orchard Woods, dated 1/28/02). A proposed access roadway (Apple Drive) is shown entering the site from North Creek Road approximately at the site's mid-point, terminating approximately 600 feet to the west in two cul-de-sacs (Peach Court, North and South). Lots 1-9 would front and have access to this new roadway. Lot 10 would front and access North Creek Road. Each lot is 87,120 SF/2.00 acres in size in conformance with the site's R-80 zoning. Four (4) lots are shown adjoining the Long Island Sound (Lots 3-6) incorporating an existing 3.4-acre Reserve Area created with the previous subdivision (i.e. Hogan Plat) and a 125-foot limited non-disturbance setback line from the top of the bluff. A Homeowners Association would be formed and access to the beach for all residents of the subdivision would be provided via a 14' wide easement along the north boundary on Lot 4.

Proposed improvements include upgrading North Creek Road along the entire length of the subject property and a recharge basin at the northeast corner of the site. The new and upgraded roads and recharge basin are to be dedicated and maintained by the Town of Huntington. No set-aside is shown for neighborhood playground or park area.

Except for a beach access stairway and 2 accessory buildings (proposed for relocation under the auspices of the Huntington Historic Preservation Commission), all existing structures are to be removed (i.e. 4 principal residences, 2 garages, sheds, 2 pump houses, shacks, parking area and bituminous drive).

PROJECT HISTORY

Old Orchard Woods is the re-subdivision of a previously filed map, known as Hogan Plat (Planning Board Final Approval 9/20/89, amended 10/25/89). Hogan Plat involved a two (2) lot subdivision of 34 acres for the initial development of a single residence and garage on a 9.371 acre lot. No physical change was proposed at the time to the remaining 24.21 acres (now known as Old Orchard Woods).

On September 9, 1998, a preliminary application was received by the Town for a twenty-two (22) lot subdivision of the subject 24.21-acre property. The project was issued a Positive Declaration

by the Town Planning Board followed by the preparation and acceptance of Draft and Final Environmental Impact Statements. On July 19, 2000 the Town Planning Board simultaneously issued a Findings Statement and approved the preliminary subdivision of the subject property into twenty-two modified (22) lots.

On October 10, 2000 the Town Board of the Town of Huntington, on their own motion, rezoned the subject 24.21 acres to R-80 in order to 'diminish potential impacts to sensitive natural resources, while maintaining the character of the community'. A Full Environmental Assessment Form prepared in connection with the action dated September 26, 2000 provided the planning and zoning analyses necessary for adopting the zone change.

The subject action for ten (10) lots was received on July 27, 2001 and initially proposed a modified layout. Later the applicant revised the plan to a conventional layout and at their regular meeting of March 13, 2002, the Huntington Town Planning Board issued a Positive Declaration on the action.

YIELD

Yield was established in the Draft and Final Environmental Impact Statements as an alternative, 'development per R-80 Zoning' when the project site was previously proposed for a 22 lot subdivision. Although the Planning Board did not have the authority to rezone property, the alternative was provided as a possible land use (not unlike the 'No Action' alternative) that minimizes or avoids adverse environmental effects to the maximum extent practicable.

There is concern that coastal erosion has reduced the size of the site since the 1989 survey on which the current yield map is based. Although the applicant verified site boundaries with current photogrammetry, it is generally agreed among experts that a one-meter margin of error can occur. As the Planning Board is responsible for determining yield, a new survey for documenting site boundaries would not be unreasonable where dynamic forces are at work.

GEOLOGY, SOILS, TOPOGRAPHY AND INDIRECT IMPACTS

The DEIS estimates the proposed project will impact approximately 7 acres or 29% of the site, requiring the clearing of between 5.34 and 6.60 acres or 26 to 32% of the existing oak-tulip forest and the removal 314 to 388 trees with a diameter of at least 10" in diameter. Although the DEIS characterizes the area of impact as having slight to moderate slopes (Pg. S-13), steep (>15%) and highly erosive soils will be subject to clearing, excavation and grading.

Neither the applicant's Environmental Assessment Form Part I nor the DEIS indicated the amount of material (rock, earth, sand, etc.) that may be removed with the action. The previous proposal for 22 lots calculated that up to **60,000 cubic yards** of sand could be removed from the site. An equivalent amount is anticipated with the current 10-lot subdivision.

Section 2.0 of the FEIS responds to concerns regarding impacts to and near the bluffs as well as recession and the reduction of sand transport to areas south of the site. In anticipating future development of the subject property, the applicant for Hogan Plat had requested a clause in the covenant for the 3.4-acre reserve area that allows construction of bulkheads or similar structures or taking other measures for hardening the bluffs. Since shoreline hardening is likely to eventually be undertaken as a result of the project, SEQRA requires the lead agency to consider the potential impacts. The supplemental analysis and studies in the FEIS regarding bluff erosion

indicated a conservative and overall average recession rate of 1.9 foot/year and 1.09 feet/year respectively. If no shoreline hardening were considered, no structure at least 100 feet from the existing bluff would be in jeopardy for 92 years.

Consideration was also given to potential impacts associated with bluff stabilization should it occur in the future in order to provide a complete analysis of direct and indirect project related impacts. To this end, a technical letter prepared by a qualified professional specializing in coastal geology was provided by the applicant. The letter concluded that the site's bluffs do not appear to provide significant sediment to the beach and as a result the construction of erosion protection structures is not likely to adversely impact the beaches at or down drift of the site. The Town of Huntington disagrees with this analysis (Town of Huntington Department of Maritime Services, Memorandum dated 5/06/02). The FEIS states (page 2-3) that "...it is not anticipated that the construction of a toe stabilization would result in a reduction of sand to beaches downdrift of the site. However, the FEIS acknowledges that the site is a contributor of sand nourishment to the shoreline south of the property. The applicant's studies predict 1.09 to 1.9 feet/year of bluff erosion along approximately 800 feet (L) x 70 feet (H) of coastline. This amounts to a volume of 61,040 to 106,400 ft^3 of material lost each year to the site's beach or sediment system.

It is recognized that the structural stabilization of the bluff at Old Orchard Woods is an accepted means of preventing the loss of land from the parcels located on the waterfront. However, the Town would prefer this impact mitigated by vegetative non-structural methods. Review, approval and conditions regarding any future hardening of the bluff would be conducted at the time of application for such construction by New York State Department of Environmental Conservation, pursuant to State Tidal Wetlands Law, Coastal Erosion Management Regulations and Town Marine Conservation Law. Where there may be a loss or destruction of natural resources the State has the authority to mitigate impacts and impose special conditions on a project.

CONSTRUCTION SCHEDULE

Impacts such as dust and construction traffic would be short term in nature (less than 9 months). Soils that will be covered with impervious surfaces and permanently disturbed, total 2.49 acres (buildings and pavement). All disturbed areas that would not become impervious will be graded, reseeded and landscaped. Erosion and dust control will be undertaken in accordance with Town of Huntington's Subdivision Regulations, Erosion and Sediment Control Handbook and best management practices, to be determined and applied with Final Application.

WATER RESOURCES, FLOODING & SANITARY WASTEWATER CONCERNS

The property falls within the "coastal area" and "watershed" as established by the New York State Coastal Management program; the Coastal Hazard Erosion Area and Coastal Wetland Area. These areas are characterized by bluffs, coastal shoals and littoral zones.

Contamination of water resources can occur due to runoff from lands that carry pathogens and dissolved inorganic matter. Input from septic systems, lawn fertilizers and pesticides and pathogens in soils can also degrade water quality and overall ecosystem health. The creation of a buffer area along the site's coastal frontage and the proper disposal of all stormwater runoff and sanitary effluent can mitigate impacts to water resources by bio-filtering contaminants. Studies of contaminants deposited on and adjacent to roadways, carried by stormwater to recharge basins indicate considerable attenuation of heavy metals before reaching the water table.

The project site is located within Groundwater Management Zone VIII. Based on the requirements of Article 6 of the Suffolk County Sanitary Code, no more than 600 gallons may be discharged per acre within this zone. It is estimated that the ten (10) proposed residences will discharge 3,000 gallons per day (gpd) of sanitary wastewater (300 gpd per dwelling) to subsurface leaching pools. This is 11,526 gallons per day (79%) less than allowed for the site by the SCDHS under its current regulations. From a design flow standpoint, the proposed action conforms to Suffolk County Department of Health Services (SCDHS) allowable density equivalent.

Sub-surface sewage disposal systems for single-family residences in Suffolk County must be constructed and conform with standards for the SCDHS of Section 760-502 of Article 5 and Section 760-710 of Article 7 of the Suffolk County Sanitary Code. Sewage disposal systems cannot be located in areas where groundwater conditions are not conducive to the proper disposal of wastewater. Systems must be at least 65 feet from bluffs and 3 feet above high seasonal groundwater. A typical leaching pool consisting of three leaching sections, chimney and cover extends to a maximum depth of 25 feet below grade. Based on these requirements sanitary systems could be placed anywhere in the site, except within 65 feet from the bluffs.

A total of ten (10) soil borings were installed to characterize the geologic profile across the site. The borings indicate a perched water table resting above an impermeable gray clay lens within a 100' to 120' feet strip along the site's bluff. Seeps observed along the bluff are believed to be the result of the perched water conditions. Soils further east within the site consist of a heterogeneous mix of sands, silts and sandy to silty clays of variable permeability. None of these soils were found to promote perched water conditions at any other locations across the site. Under the proposed plan, the nearest sanitary septic system to the western border of the site would lie approximately 200 feet inland of the bluff crest. As such, effluent from the individual sanitary systems will not be discharged along the clay outcrops but flow vertically through the unsaturated zone to the water table at 32 to 70 feet below surface grade. Crane dug test holes will be observed by representatives of the SCDHS for each individual home site and should lower permeability clay be observed, it will be excavated until good leaching material is encountered. **Conformance with SCDHS standards will assure a safe, sanitary means of disposing household wastewater. Written approval from SCDHS will be required prior to the start of construction of any new sewage disposal system. Approved systems will mitigate the possibility for contamination of ground and surface waters.**

Urban non-point pollution (street runoff, lawn chemicals, etc.) is a significant source of contamination in the Long Island Sound watershed (**The Long Island Coastal Management Program**). To reduce the amount of overland runoff and impact to the Long Island Sound the Draft EIS prepared by the applicant states roadside catchbasins will be installed to direct runoff to the on-site recharge basin and lawn chemicals will be kept from running downslope westward onto and down the bluff by the intervening 125-foot buffer which will retain and slow down and recharge overland flow of runoff.

The proposed subdivision requires a recharge basin in the northeastern portion of the site to meet the design requirements of the Town of Huntington (which includes 150% storage capacity). There is concern from residents regarding the location and need for a recharge basin at the site. Based upon Town standards, the project must provide storage for a minimum of 157,083 cubic

feet (CF) of runoff. The proposed project indicates storage for 180,000 CF with another 3,127 CF to be handled by three (3) leaching pools (one in the beach accessway and two on the south property line of Lot 2). Replacing the proposed 66,072 square foot area recharge basin with subsurface leaching pools was discussed with review of the previously proposed 22-lot subdivision for preserving additional oak-tulip forest. It was noted that subsurface leaching pools can be constructed in right-of-ways, under roadways, sidewalks and grass, reducing the area and clearing required for storm water recharge. The issue was raised again with the current 10-lot subdivision and in response the Planning Board requested the applicant to evaluate and compare the two methods in the Final Environmental Impact Statement (FEIS). However, recent study indicates that test hole data and total contributing drainage area information may not be accurate to conduct a proper evaluation (Town of Huntington Department of Planning and Environment letter dated October 22, 2002). At their October 2, 2002 meeting the Planning Board decided to leave the issue of stormwater recharge open to see if the concerns of the public can be further mitigated.

TERRESTRIAL AND AQUATIC ECOLOGY

The DEIS indicates that approximately between 5.34 and 6.60 acres or 26 to 32% of tulip-oak forest and between 314 and 388 large trees (≥10" diameter) will be removed from the site under the applicant's proposed development plan. This is expected to represent a worst case scenario, as the test plots for the tree survey has a relatively dense inventory. The applicant estimates that approximately 63% of the tulip-oak woodland will remain along the borders and within the site under the proposed plan. This is a substantial reduction in clearing compared to the approximately 55.8 percent or 11.48 acres of native oak-tulip forest and 675 large trees (≥10" diameter) that would have been removed with the previously approved 22-lot subdivision.

The applicant states that a 1.43-acre portion of the 125-foot setback from the top of the bluff lies outside the 3.4-acre Preserve area which will remain undeveloped, except for building removal operations and brush removal (DEIS, Page S-2). The applicant 'anticipates that a relatively dense subcanopy and shrub layer removal (though not tree removal) will be allowed within this area, to allow sight lines toward Huntington Bay and Long Island Sound' (DEIS, Page 2-26). The balance of the 3.4-acre Preserve Area does not restrict normal pruning and clearing of dead brush. As the Preserve Area will be segmented and in private ownership, monitoring and enforcement of the existing 'Hogan' covenant by the Town will be difficult if not impossible.

For mitigating impacts to ecological resources, the applicant is proposing five (5) measures:

- Minimize disturbance to the maximum extent practicable, including delineating tree clearing limits at the site prior to construction in order to avoid inadvertent clearing.
- Planting up to 1.26 acres of native species typical of tulip-oak forest.
- Native and near native plant species which provide food and shelter to wildlife will be utilized in the landscaped area of the recharge basin where possible.
- Nesting boxes will be installed by the applicant and maintained by the HOA along the edge of existing vegetation on land owned by the HOA to encourage use of the site by avian species and help mitigate loss of natural nest sites through clearing
- Retaining walls may be used to minimize the amount of natural vegetation removed for clearing and grading. These may be located in the side and rear yards.

The 1.26 acre area proposed for planting native plant species would include the right-of way, between the roadway and front lawn, and above the high water mark within the recharge basin. Within the recharge basin, planting would be prohibited below the high water mark and planting along the right-of-way, while beneficial, should not be considered a replacement to the natural community. The same limits apply to the installation of nesting boxes in HOA maintained property. As indicated above, the area maintained by the HOA is limited to a narrow easement between building Lots 3 & 4. The best way to minimize impacts to ecological resources is simply to leave the woodland forest in its natural state. No replanting and artificial nesting habitat would be required.

A findings statement for an approvable action balances adverse environmental impacts against the needs and benefits of the action. When all the adverse environmental impacts cannot be mitigated the lead agency must provide a full discussion in its findings (i.e. balancing adverse impacts against applicant and public needs). Although the project is compatible with R-80 area zoning, conformance with area and setback requirements is not sufficient for demonstrating public need. The applicant's reasoning for Project Purpose, Need and Benefits (DEIS, pgs. S-1 & S-2) includes:

- The proposed residential project will provide a permanent use of an underutilized property in conformance with the site's R-80 zoning.
- The development of the property will increase the revenues generated to taxing jurisdictions, though it will result in corresponding increases in demand for services in regard to school enrollments.
- The proposed project will provide high-quality residential housing in a very exclusive and desirable area of the Town of Huntington albeit at lesser density than surrounding properties.
- Temporary construction jobs.

The removal of habitat will cause a direct impact on the abundance and diversity of wildlife on the site. As indicated in the DEIS (Pg. 3-11), the proposed project will favor those species that prefer edge and woodland habitats that are tolerant of human activity. The project would displace forest interior species and those unable to adapt to human influences. Individuals of reptile and/or amphibian populations may be directly 'destroyed' as a result of construction operations. Although, the overall effect on the density and diversity of both local and regional populations should be minimal, as the area represents only a small portion of the forested habitat in the vicinity.

The applicant's proposal provides some mitigation in the way of vegetative preservation. However, the proposed project would allow for brush removal within the existing 3.4-acre Preserve Area and into the 125-foot Limited Non-disturbance Area. The environment includes the influences of other plants and animals present as well as those of the physical features. Every plant and animal has functional interrelations with a variety of other organisms in its environment[1]. It is clear that removal of understory vegetation could have a significant effect of other members of the community. Maximizing preservation of existing vegetation would allow a greater number of wildlife species to survive. Implementation and enforcement of 1) a minimal clearing plan during construction; 2) the recently approved Town Tree Ordinance 3) a conservation area that incorporates the 125-foot setback from the bluff with the 3.4 acre Reserve Area that prohibits any vegetative

[1] Elements of Ecology, George L. Clarke, 1966

removal except where public safety is threatened would minimize the potential for long term impacts to vegetation and habitat to the maximum extent practicable.

OPEN SPACE

Based on the September 1974 Open Space Index for the Town of Huntington, the 24.2 acre subject site is part of a larger 56.4 acre Town designated Open Space Index Parcel (OSI # NE-1) that includes the Morgan Estate and others. These properties are described in the index as woodland, forest and second-growth woodland with bay or beach frontage with steep slopes having erosion potential. The Index defines priorities for insuring that open space is given the same consideration as other factors in granting or denying permits. Of six possible levels that can be assigned, the subject property was defined as "Priority 1", which carries the most immediate need of consideration. Recommendations call for affirmative action to preserve the property or to conserve its open space value and natural features.

The 1974 Open Space Index only mapped two areas on Eatons Neck. While a large portion of the Neck is under the jurisdiction of the Village of Asharoken, the two sites identified had particularly special qualities upheld by their Priority 1 classification. A recent staff study which resulted in a retrospect of what has happened to lands originally mapped on the 1974 OSI found that the subject property was one of very few remaining underdeveloped sites that had received a Priority 1 rating. Most of the Priority 1 sites have benefited from some form of public protection.

Eatons Neck is quite limited in the amount of parkland that is available for public use. Other than beach areas with limited play equipment and boat ramps, there is no publicly-accessible recreational parkland. The subject site appears to be the only large holding remaining in the *unincorporated Town area* (certainly, the Morgan Estate to the northeast is unsurpassed, though it lies in the Village) that might potentially serve such purpose. It was formerly a camp property and could provide future recreational opportunities as such. Even though the limited density of development on Eatons Neck might be viewed as being in some way protective of open space resources, there is a real public need for park space. It would provide a base for further Town nature study programming, which has been exceptionally well received, and for which supply cannot meet demand at this time even with two active program sites (Crab Meadow Beach and Gold Star Battalion Beach/Coindre Hall).

The proposed project will reduce the acreage of Town Open Space Parcel NE-1 by approximately 43%. Public Acquisition would provide the highest and best protection of open space. The Open Space Index states:

> *A property classified as Priority 1 requires affirmative action. The action may be a public acquisition, in whole or part, a protective easement or agreement, a change in zone, or simply enforcement of the laws and ordinances applicable to the situation. Thus the action may conserve a particular feature or part of the property or may preserve the entire property.*

To date, the applicant has not received any formal offer by any government agency to purchase the property. Alternative 1 of the DEIS assumes the No Action alternative. In this alternative the subject property is not developed and would remain in its existing condition. Alternative 1 would represent a condition similar to Public Acquisition, however, the property could possibly be

developed in the future in accordance with the zoning. In the absence of public acquisition, an alternative that minimizes impacts to sensitive habitat and preserves more woodland and open space is the preferred choice.

TRAFFIC AND TRANSPORTATION

Vehicle access will be provided off North Creek Road, a private 50-foot wide access easement at the subject site's eastern property boundary. Improvements to North Creek Road are proposed along the entire frontage of the site. All improved roadways are planned to be built and dedicated to Town of Huntington.

The entire frontage of the subject site is on a private portion of North Creek Road, which the applicant proposes to improve. Said private road provides access to homeowners that live distil to the proposed development. Before improvement or dedication can take place ownership of the road and agreement by all involved must be obtained.

Traffic analysis for the 10 dwellings in the DEIS indicated that the project will generate an increase in traffic volume (8 vehicle trips in the AM peak hour and 10 in the PM peak hour). No change in Level of Service is anticipated from the proposed project. Town engineers have expressed concern that a fully conforming road from Eatons Neck Road to the new entrance (Apple Place) cannot be built unless bonded improvements required for Hogan Plat are completed.[2] The applicant has indicated a willingness to coordinate and cause the Hogan Plat bond improvements to be completed simultaneously with the completion of the improvements to the Old Orchard Woods subdivision to Town standards. However, neighborhood residents and more recently, the applicant have stated (letter from John Thomas Rieger, Esq., Rieger, Walsh & McGinty, LLP, letter dated September 19, 2002) that the extension of North Creek Road leading up to the entrance to the subdivision as well as proposed Apple Place should be built as narrowly as possible.

In accordance with § 280-a of New York State Town Law, 'Before a permit for the erection of any building, a street or highway giving access to such proposed structure must be improved to the satisfaction of the planning board as adequate in respect to the public health, safety and general welfare for the special circumstances of the particular street or highway'.

A significant portion of North Creek Road is a narrow, 18 feet wide, dirt and gravel roadway. The project proposes to improve the road to Town standards. Any less could limit access to drainage facilities and emergency vehicles to the community to the north. New York State Law states a standard road must be 3 rods wide or 49.5 feet. It is customary and common practice of the Town to require a 50 foot wide right-of-way with 34 feet of pavement. However, consistent with the Planning Board's decision of October 2, 2002 regarding the issue of the 'recharge basin vs. leaching pools', the width of the proposed road will be determined at the design stage to investigate if the concerns of the public can be further mitigated.

Another traffic concern is the sight distance to the southwest at the North Creek Road intersection with Eaton's Neck Road is 159 feet which is less than adequate for the current 30

[2] Town of Huntington. Engineering Review Division, Memorandum dated May 3, 2002

MPH speed limit. Although the proposed subdivision will not directly effect sight distance, there were concerns and the DEIS and Final EIS recommended mitigating conditions including undertaking limited vegetative clearing, installation of traffic signs; reducing the speed limit to 25 MPH in this portion of the roadway [subject to Town Board approval] and use of a curved mirror. Inasmuch as road clearing along Eaton's Neck Road is not within the subject subdivision and is quite a distance away from the subdivision, *the applicant may not be able to mitigate the site distance concern.* The applicant has offered (FEIS, pg. 5-2) to clear vegetation within the right-of-way at the corner of Eaton's Neck Road/North Creek Road and the installation of a curved mirror.

LAND USE, ZONING AND PLANS

The proposed project conforms to Town of Huntington Plans and Goals with regard to the Town Zoning and the Town Comprehensive Plan. Reduction of Open Space Index Parcel NE-1 and impacts to environmentally-sensitive areas within the site has the potential to be mitigated with the use of the Preserve Area and the limited 125 foot no-disturbace setback from the bluff. A 1.43-acre portion of the limited 125-foot setback lies outside the 3.4-acre Preserve Area. Brush removal is proposed in the 1.43-acre area to allow for sight lines toward Huntington Bay and Long Island Sound. The applicant states that the allowance for brush removal is applicable within the existing 3.4-acre Preserve Area. Although the restrictive covenants for the existing 3.4-acre Preserve Area specifies trees for protection and not brush, it can be interpreted to include all vegetation that is important to the function of the woodland community. **Incorporating the limited 125-foot setback with the 3.4 acre Reserve Area creating a single uniform conservation area and prohibiting clearing for sight-lines would be consistent with Town plans and goals for minimizing the potential for long term impacts to vegetation and habitat to the maximum extent practicable.**

CONSTRUCTION IMPACTS

There is concern regarding potential impacts to the community (traffic, noise, dust) during the construction phase of the project. Movement of fill from the site will require trucks to travel across North Creek and Eaton's Neck Roads.

The Town of Huntington Code § 141-2 prohibits "any person, firm or corporation to make, continue or cause to be made any loud, unnecessary or unusual noise or any noise which either annoys, disturbs, injuries or endangers the comfort, repose, health, peace or safety of others within the Town of Huntington". This includes the erection (including excavation) of any building other than between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, except in case of emergency, and then only with a permit from the Director of the Department of Engineering, Building and Housing [§ 141-3(J)]. Further §156-8 of Town Code states "No person shall create or cause to be created a hazard and/or nuisance to the health, safety or general welfare of the people of the Town of Huntington by excavating, filling, removing vegetation or *leaving construction works* unattended when the condition is declared to be a hazard and/or nuisance by the Director of Engineering, Building and Housing of the Town of Huntington. **Town inspectors will be monitoring activities for ensuring Town Code and approved plans are implemented. Mitigation for the noise and truck traffic during regular construction hours can not be mitigated.**

COMMUNITY SERVICES

For the subject property, community services include school, police protection, fire protection, water supply, electricity and maintenance of Town roads and drainage facilities. The increase in population from the addition of ten (10) single-family homes is not expected to have an significant impact on the demographic characteristics of the area or any of the service districts. **Adequate provision of services (including school drop-off and pick-up activities) is questionable. Because of the lack of a proposed through street school buses will have a difficult time navigating subdivision roads and it may be impossible for such larger vehicles to turn-around. Emergency vehicle access is also limited by the site's proposed single access road. These restrictions are not unusual conditions in the Town of Huntington and can be dealt with by the various emergency service agencies.**

CULTURAL RESOURCES

Cultural resources typically include historic, archaeological and visual resources. Important prehistoric and historic period resources were noted in and near Eaton's Neck. Due to the indicators of potential historic and prehistoric sensitivity of the property, the Department of Planning and Environment requested the applicant to prepare a Stage I Cultural Resources Assessment and a Stage IB field reconnaissance. However, no culturally significant recoveries were found as a result of the investigations.

AESTHETIC RESOURCES

Clearing of site vegetation and replacement with dwellings, roadway and lawn pose impacts to aesthetic qualities as viewed from the west and adjoining properties. Although, the proposed conservation easement mitigates these impacts, potential clearing for water views remains a concern given the limited restrictions associated with the limited 125 setback from the bluff. Construction is prohibited, but clearing and replacement with lawn and landscaping may occur. **Maximum retention of natural vegetation will maintain views and vistas as well as improve stormwater recharge and reduce fertilizer and pesticide needs.**

SMART GROWTH

That the project is not fully consistent with the Town Board's policies to promote Smart Growth and Liveability is primarily attributable to site zoning and not the proposal. It is not a downtown or neighborhood center location, the more ideal target area for such new development. The existing separation of the site from a mix of uses essential to daily life of the residents (e.g., shops, services, and civic facilities reduces the project's potential to facilitate pedestrian accessibility or diminish automobile dependency.

ALTERNATIVES

The DEIS examined a range of three (3) alternatives development scenarios under the existing zoning requirements and which differ from the proposed action. The following provides a summary of each as well as the proposed action:

Proposed Action

The proposed action fully conforms with the area's R-80 zoning. Each of the ten (10) lots would be 87,120 SF/2.00 acres in size and a minimum of 150 feet in width at the front-yard setback. Four (4) lots are shown adjoining the Long Island Sound (Lots 3-6). Proposed improvements include upgrading North Creek Road along the entire length of the subject property; a new 50' wide

access road (34' foot paved) and a recharge basin at the northeast corner of the site. The new and upgraded roads and recharge basin are to be dedicated and maintained by the Town of Huntington.

Alternative 1 - No Action
The site remains in its existing use and condition. If left undisturbed, the site will generate little traffic, solid waste or wastewater; it would use a minimal amount of potable water and would not generate employees or new residents. The site has been recommended for public purchase by the Town of Huntington EOSPA Committee. The applicant is aware of this recommendation and is open to entertaining offers for such a purchase. However, as of the date of this Findings Statement, neither the Owner nor the Applicant has been contacted by any Town, County or State agency.

Alternative 2 –Previously Approved 22 Lot Subdivision
This alternative assumes that the project site is developed with the same layout as the 22-lot yield proposed in October 1998. As the zoning site is R-80 (minimum 2-acres), this alternative is not a viable solution at this time.

Alternative 3 – Revised R-80 Layout
This alternative is similar to the proposed action, except the layout is modified. Lot sizes range from 67,715 SF to 138,807 SF; a total of 20.10 acres with an average of 87,548 SF per lot. Eight of these lots would be less than 2-acres of which six (6) will back onto the bluff. This would place two additional lots along the bluff compared to the proposed project. The internal roadway for this alternative would be shifted somewhat easterly (compared to the proposed project) increasing the ability for the builder to set back dwellings from the bluff. However, similar to the proposed action, building envelopes are extended to their maximum limit (to the limited 125' bluff setback), and unless setbacks are increased from the bluff , no additional mitigation would be provided.

Although an approximate 3.6-acre conservation easement is added in the eastern portion of Lots 1, 8, 9 & 10, according to the applicant's consultant, the amount of natural vegetation would be reduced from 15.24 acres to 15.12 acres compared to the proposed project. The amount of impervious surfaces and lawn in this alternative, pose slight variation to the proposed project. The size of the recharge basin increases from 1.51 acres to 1.66 acres. As indicated in Town Engineering Review Division comments dated, May 3, 2002, however, both the area and depth of the recharge basin can be reduced to provide additional natural preservation.

CONCLUSIONS

Analysis of the draft and final EIS and comments received during the SEQRA process have shown that the proposed project will result in adverse environmental impacts. Adverse impacts include:

- Loss of open space and visual resources
- Removal of native oak-tulip forest. Approximately 70% of site vegetation will remain following construction. However, given existing and required slope requirements; direct and indirect impacts from construction and past review of the 22-lot subdivision proposal few if any trees are anticipated to be retained in the disturbance area.
- Permanent alteration of the natural topography.
- Displacement and/or loss of wildlife species.

- Erosion and off-site sedimentation.
- Increase in sanitary flows.
- The potential for future shoreline hardening of the bluff and subsequent loss in sand to beaches adjoining and downdrift of the site.
- Positive storm water overflow from the site to private properties in the Village of Asharoken.
- Stormwater flows from landscaped surfaces to Long Island Sound.
- Increase in vehicle trips to local roadways.
- Increase in the number of residents and demand for community services.
- Temporary increase in construction traffic, fugitive dust and noise during construction.
- Possible increase of traffic hazard at the intersection of North Creek and Eaton's Neck Roads.

Pursuant to New York State Town Law "The purpose of a cluster development shall be to enable the flexibility of design and development of land in such a manner as to preserve the natural and scenic qualities of open lands. Review of the Comparison of Alternative Table 6-1 in the DEIS, shows relatively little difference in potential impacts between the Proposed Action and Alternative 3. Among the reasonable alternatives, the Proposed Action and Alternative 3 both have the potential to provide the best and highest mitigation to open space impacts provided a permanent, uniform, and enforceable Conservation Easement is created that severely restricts clearing in both the 3.4-acre Reserve Area and the 125-foot limited bluff setback.

The DEIS examined a range of development scenarios permissible under the existing zoning requirements and which differ from the specific development. Pursuant to 617.11(d) of SEQRA the Planning Board as lead agency has:

- given consideration to the relevant environmental impacts, facts and conclusions disclosed in the EIS;
- weighed and balanced the relevant environmental impacts with social, economic and other considerations;
- provided a rationale for its decision;
- certified that the requirements of this Part have been met; and
- certified that consistent with social, economic and other essential considerations from among the reasonable alternatives available, that the (circled): Proposed Action - Preliminary Map dated January 28, 2002 / Alternative 1 – No Action / Alternative 3 – Modified Layout – Map dated June 2001 avoids or minimizes adverse environmental impacts to the maximum extent practicable, incorporating as conditions to the decision the following EIS identified mitigative measures:

1) The applicant shall cause to be prepared a new survey and yield study of the property.
2) A Covenant and Restriction shall be prepared that incorporates the 3.4-acre Reserve Area created with Hogan Plat with the proposed 125-foot setback from the bluff. This Conservation Area shall conform with Title 3 of New York State Conservation Law, and except for bulkheading and a docking facility that was permitted with Hogan Plat, will be restricted from any disturbance, including but not limited to clearing, grading, excavation, dumping, filling; erecting any structures, placement of any obstructions and any form of pollution, expect where public health is threatened by dead, diseased or dying trees that are in danger of falling as determined by the Town of Huntington Department of Planning & Environment.

3) A Grading and Drainage Plan shall be submitted with Conditional-Final application that locates all trees 16" in diameter and larger within construction limits, by type, size and condition. The plan shall be designed to protect the critical root zones of specimen trees and stands of importance to the maximum extent practicable, detailing the specific measures that will be used both before and after construction.
4) Consideration for relaxing minimum slope requirements to help preserve additional vegetation by decreasing clearing limits.
5) Consideration for retaining walls in side and rear yards to minimize the removal of natural vegetation.
6) North Creek Road along the subject site's frontage and all interior subdivision roads and the site's recharge basin shall be improved to Town standards. Hogan Plat bonded improvements shall be drawn against to insure a fully improved conforming improved roadway. Road and drainage improvements less than Town standards will be considered by the Planning Board only upon pre-approval by the Town Highway Department, Town Department of Engineering Services and Eaton's Neck Fire District.
7) Test hole data and total contributing drainage area shall be confirmed per Town of Huntington Department of Planning letter dated October 22, 2002 (copy attached).
8) Site distance concerns along Eaton's Neck Road shall be addressed to the satisfaction of the Town Highway Department.
9) During construction, the applicant shall provide dust control measures to mitigate air pollutant impacts to the surrounding community.
10) No construction vehicles (cars or trucks) shall be parked or stored on North Creek Road.
11) The developer will be required to install all sediment and erosion control measures and make sure that they are in place and functioning throughout the entire construction process.
12) A flagman shall be stationed at the point of crossing at the intersection of North Creek and Eaton's Neck Roads during removal of fill for safety. Town road surfaces will be cleaned daily to remove tracked soil from truck movements. Any damage caused by construction traffic on local roads will be repaired at the applicant's expense.
13) The owner/applicant shall acknowledge in writing to the Planning Board that the creation of this subdivision in no way commits either the Town of Huntington or the County of Suffolk to any program to protect this property from shoreline or bluff erosion through the construction of engineering or other works. Said acknowledgement shall be placed as a note on the map.

Impacts that will be mitigated with the above conditions include:

- Loss of open space and visual resources as viewed from the west.
- Removal of native oak-tulip forest
- Permanent alteration of the natural topography.
- Displacement and/or loss of wildlife species.
- Erosion and off-site sedimentation
- Traffic (construction and post-construction)

Adverse impacts that cannot be avoided include:

- Increase in sanitary flows
- The potential for future shoreline hardening of the bluff and subsequent loss in sand to beaches adjoining and downdrift of the site.
- Positive storm water overflow from the site to private properties in the Village of Asharoken.

- Storm water flows from landscaped surfaces to Long Island Sound.
- Increase in vehicle trips to local roadways.
- Increase in the number of residents and demand for community services.
- Temporary increase in construction traffic, fugitive dust and noise during construction.

Identification Number N/A

Name of Action OLD ORCHARD WOODS

CERTIFICATION OF FINDINGS TO APPROVE/FUND/UNDERTAKE

Having considered the Draft and Final EIS, and having considered the preceding written facts and conclusions relief upon to meet the requirements of 6 NYCRR 617.11, this Statement of Findings certifies that:

1. The requirements of 6 NYCRR Part 617 have been met.

2. Consistent with the social, economic and other essential considerations from among the reasonable alternatives thereto, the action approved is one which minimizes or avoids adverse environmental effects to the maximum extent practicable; including the effects disclosed in the environmental impact statement, and

3. Consistent with social, economic and other essential considerations, to the maximum extent practicable, adverse environmental effects revealed in the environmental impact statement process will be minimized or avoided by incorporating as conditions to the decision those mitigative measures which were identified as practicable.

4. (and, if applicable) Consistent with the applicable policies of Article 42 of the Executive Law, as implemented by 19 NYCRR 600.5, this action will achieve a balance between the protection of the environment and the need to accommodate social and economic considerations.

Town of Huntington Planning Board
Name of Agency

Signature of Responsible Official

Richard Machtay
Name of Responsible Official

Director of Planning and Environment
Title of Responsible Official

Date

100 Main Street, Huntington, New York 11743
Address of Agency

OR

CERTIFICATION OF FINDINGS TO DENY

Having considered the Daft and Final EIS, and having considered the preceding written facts and conclusions relied upon to meet the requirements of 6 NYCRR 617.11, this Statement of Findings certifies that:

1. The requirements of 6 NYCRR Part 617 have not been met;

2. Consistent with the social, economic and other essential considerations from among the reasonable alternatives thereto, the action denied is one which fails to adequately minimize or avoid adverse environmental effects to the maximum extent practicable; and/or

3. Consistent with social, economic and other essential considerations, to the maximum extent practicable, adverse environmental effects revealed in the environmental impact statement process cannot be adequately minimized or avoided by the mitigation measures identified as practicable.

4. (and, if applicable) Consistent with the applicable policies of Article 42 of the Executive Law, as implemented by 19 NYCRR 600.5, this action will not adequately achieve a balance between the protection of the environment and the need to accommodate social and economic considerations.

Town of Huntington Planning Board
Name of Agency

Signature of Responsible Official

Richard Machtay
Name of Responsible Official

Director of Planning and Environment
Title of Responsible Official

Date

100 Main Street, Huntington, New York 11743
Address of Agency

cc: Other Involved Agencies and the Applicant

TOWN OF HUNTINGTON

DEPARTMENT OF PLANNING AND ENVIRONMENT

Frank P. Petrone, *Supervisor*

Richard Machtay, *Director*

Mr. Victor Bert
Nelson and Pope, Engineers and Surveyors
572 Walt Whitmann Road
Melville, N.Y., 11747-2188

Oct. 22, 2002

Re: Old Orchard Woods

Dear Mr. Victor Bert, P.E.

The engineering drawings and DEIS indicate that Test Hole #1(B-5 as per DEIS) is 45'+/- west of the road edge near LILCO #16. A site visit this date by C. Pohlmann, P.E., Highway Engineer, Van Record, A.C.E., and myself failed to located the test hole. It is our opinion that a test this distance off the road could not be done by boring equipment due to the steep surface slopes. A test hole closer to the road and at a lower surface elevation appears more logical. The surface location and elevation shall be verified with McDonald Geoscience.

The reason for the site visit was to confirm the test hole location and surface elevation. Engineering drawings on file show a 32 contour and existing road elevations of 26+/- in this Area which conflicts (See attached). Therefore, it is essential to confirm the actual surface elevation. From that, the actual groundwater elevation can be calculated to rectify the 6'+/- elevation differential.

The site visit also revealed existing swales along North Creek Road and fencing and a drainage structure that are not yet shown on the topography.

The total contributing area from the east side of North Creek Road to the recharge basin may be reduced depending on the location and outfall of the above mentioned existing roadside swales when they are considered and shown in the final engineering design.

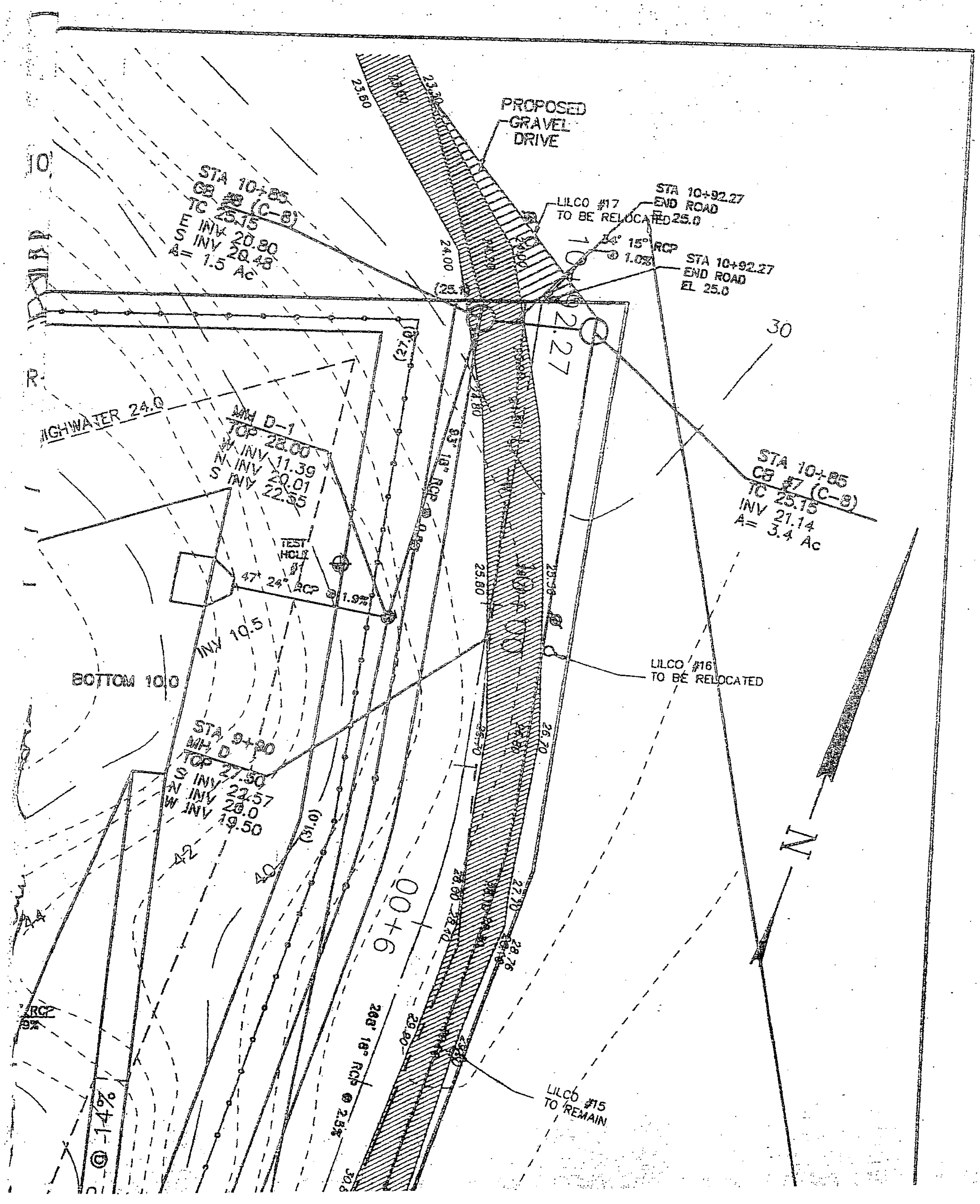
The eastern most swale that appears to be periodically maintained (by Who?) also appears to be within and discharges into the lands of the Village of Asharoken. The existing contributing area to this swale may continue "as is" when all items above are considered in the final design.

Very Truly Yours,

Richard J. Nielsen, A.C.E.
for
Richard Machtay, Director Of Planning and Environment

CC: W. Kollmer, Applicant
T. Mazzola, P.E., Director of Engineering Services
W. Naughton, Superintendent of Highways
C. Pohlmann, P.E., Highway Engineer
S. Robin, Senior Environmental Analyst
McDonald Geoscience

Town Hall • 100 Main Street • Huntington • NY • 11743-6991 • Phone (631) 351-3196
Fax (631) 351-3257 • e-mail: planning@town.huntington.ny.us • website: town.huntington.ny.us


PROPOSED
GRAVEL
DRIVE
STA 10+85
CB #8 (C-8)
TC 25.15
S/E INV 20.80
S INV 20.48
A= 1.5 Ac
LILCO #17
TO BE RELOCATED
STA 10+92.27
END ROAD
EL 25.0
15" RCP
@ 1.0%
STA 10+92.27
END ROAD
EL 25.0
30
HIGHWATER 24.0
MH D-1
TOP 28.00
W INV 11.39
N INV 20.01
S INV 22.55
STA 10+85
CB #7 (C-8)
TC 25.15
INV 21.14
A= 3.4 Ac
TEST
HOLE
#1
47' 24" RCP @ 1.9%
INV 10.5
BOTTOM 10.0
LILCO #16
TO BE RELOCATED
STA 9+80
MH D
TOP 27.50
S INV 23.57
N INV 20.0
W INV 19.50
42
40
(31.0)
(27.0)
9+00
N
268' 18" RCP @ 2.5%
LILCO #15
TO REMAIN
@ 14%
44

TOWN OF HUNTINGTON
DEPARTMENT of PLANNING
& ENVIRONMENT

Intra-Office Memorandum

Date: November 21, 2002

To: Richard Machtay, Director of Planning and Environment

From: Richard J. Nielsen, Assistant Civil Engineer

Re: Old Orchard Woods (R-80) – Excavation

Please be advised that the following excavation quantities are for bonded road excavation only and are based on preliminary plans.

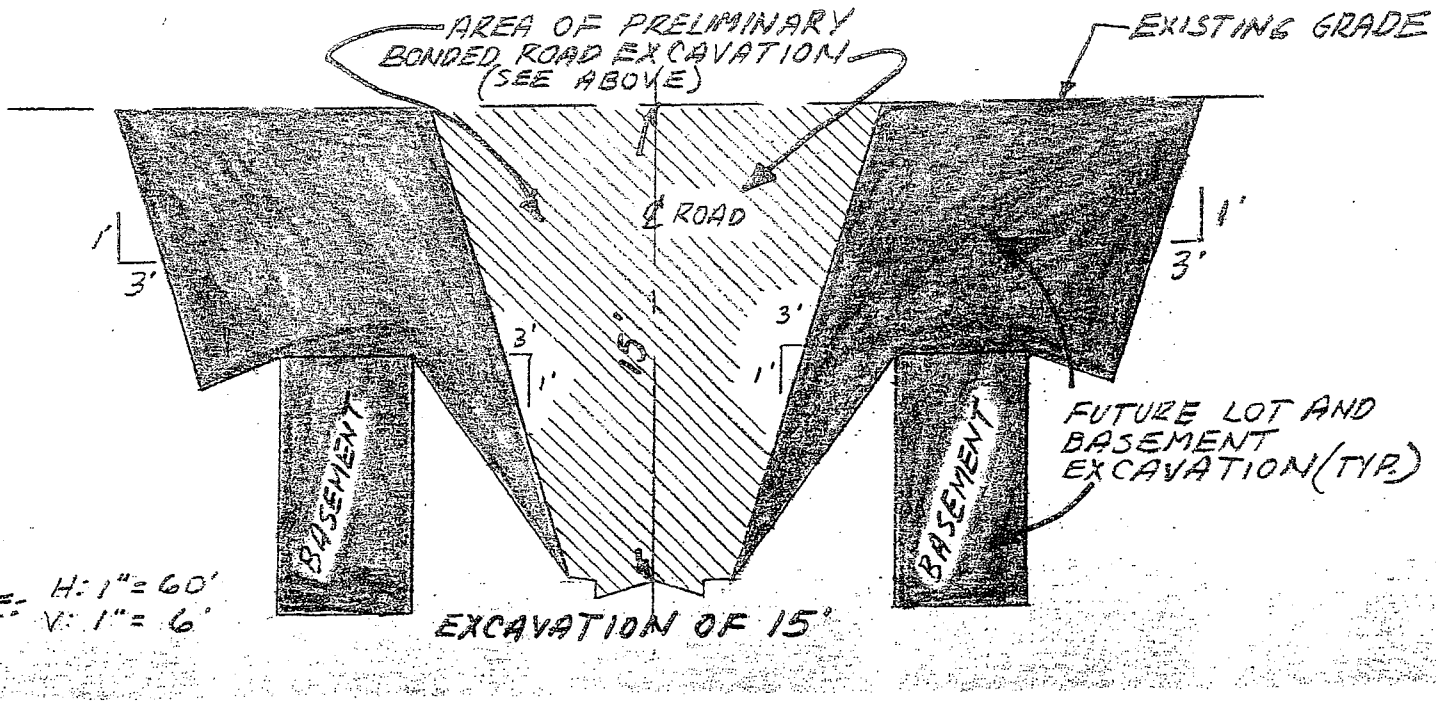
Preliminary Bonded Road Excavation Only	
Alternate 3 (6 lots on the bluff) Dated: June 2001	9,300 cubic yards
Preliminary Application(4 lots on the bluff) Dated: Jan. 28, 2002	61,500 cubic yards

See attached revised memo of Nov. 4, 2002

Recharge basin excavation shall essentially be the same for both plans.

Future excavation of the lots and basements will increase the quantities for both plans (See Below). This excavation quantity cannot be determined until final application.

It appears that 6 lots on the bluff is not out of character with the area.(See attached).



TOWN OF HUNTINGTON
DEPARTMENT of PLANNING
& ENVIRONMENT

Intra-Office Memorandum

Date: November 4, 2002

Rev. 11-21-02
EXCAVATION

To: Planning Board Chairman and Members
Richard Machtay, Director of Planning and Environment

From: Richard J. Nielsen, Assistant Civil Engineer

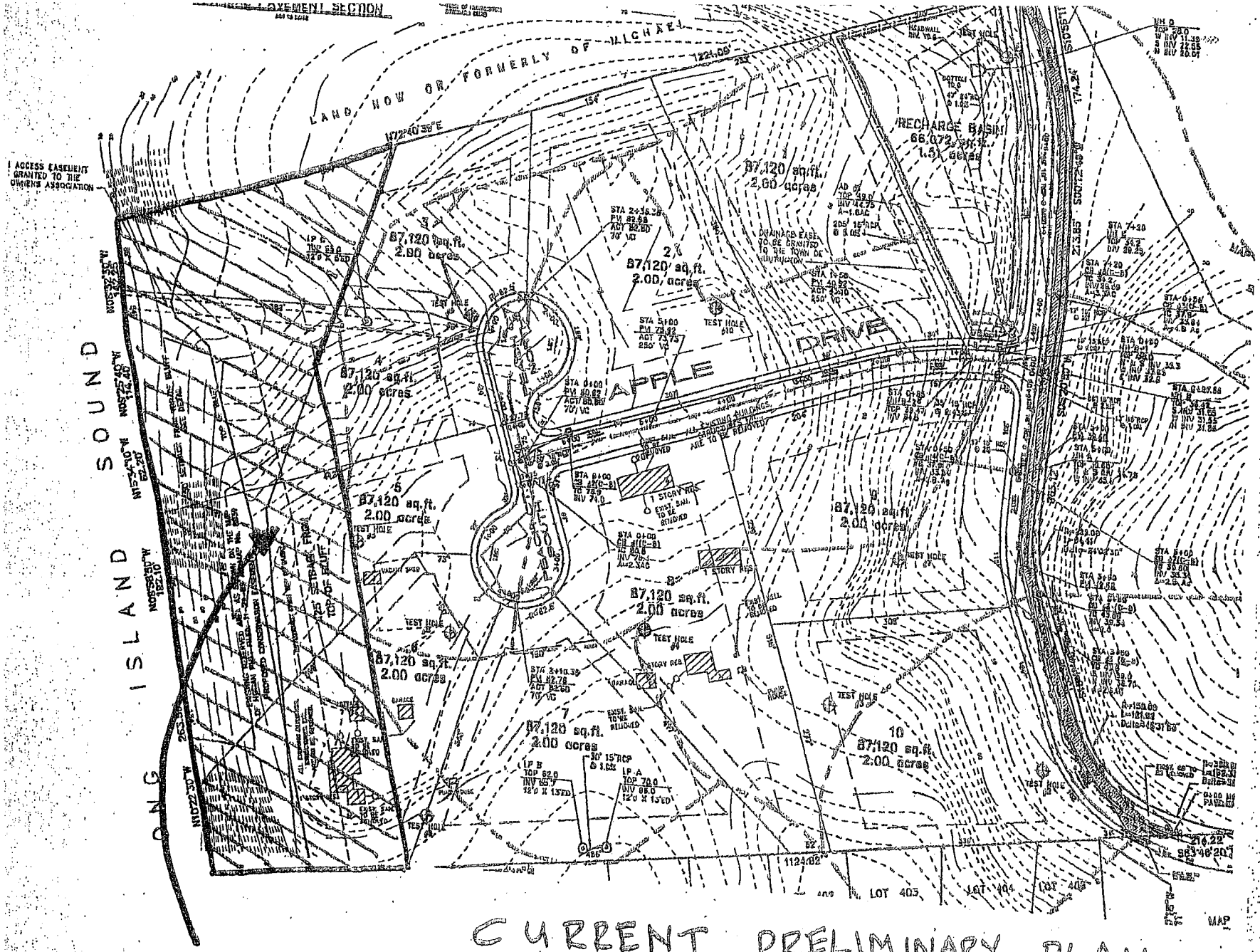
Re: Old Orchard Woods (R-80) – Engineering Comments

This project contains a current preliminary application and an FEIS Alternate 3 layout for 10 lots each.

The current preliminary application (See attached A1,A2 and A3) with the proposed road next to the proposed recharge basin will require road excavation from 20' to 28'.

The FEIS Alternate 3 layout (See attached B1 and B2) with the proposed road located essentially where the current access road is will require average excavation of 3' to 4' and provide additional conservation easements. This layout proposes 6 lots along the bluff.

The current preliminary application (B1 and B2) will require the most clearing, excavation and earth removal without providing additional conservation easements. This layout proposes 4 lots on the bluff.

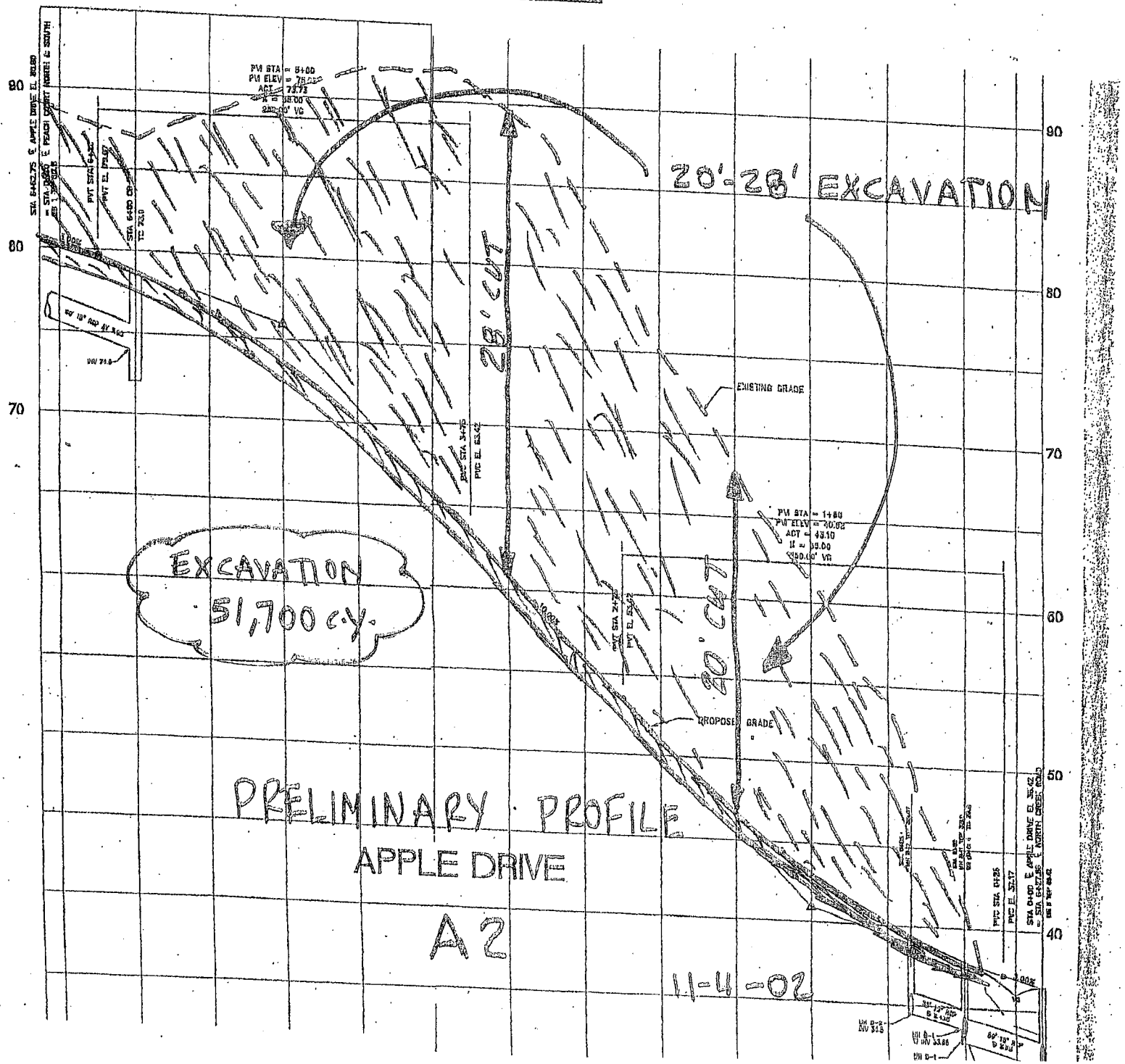


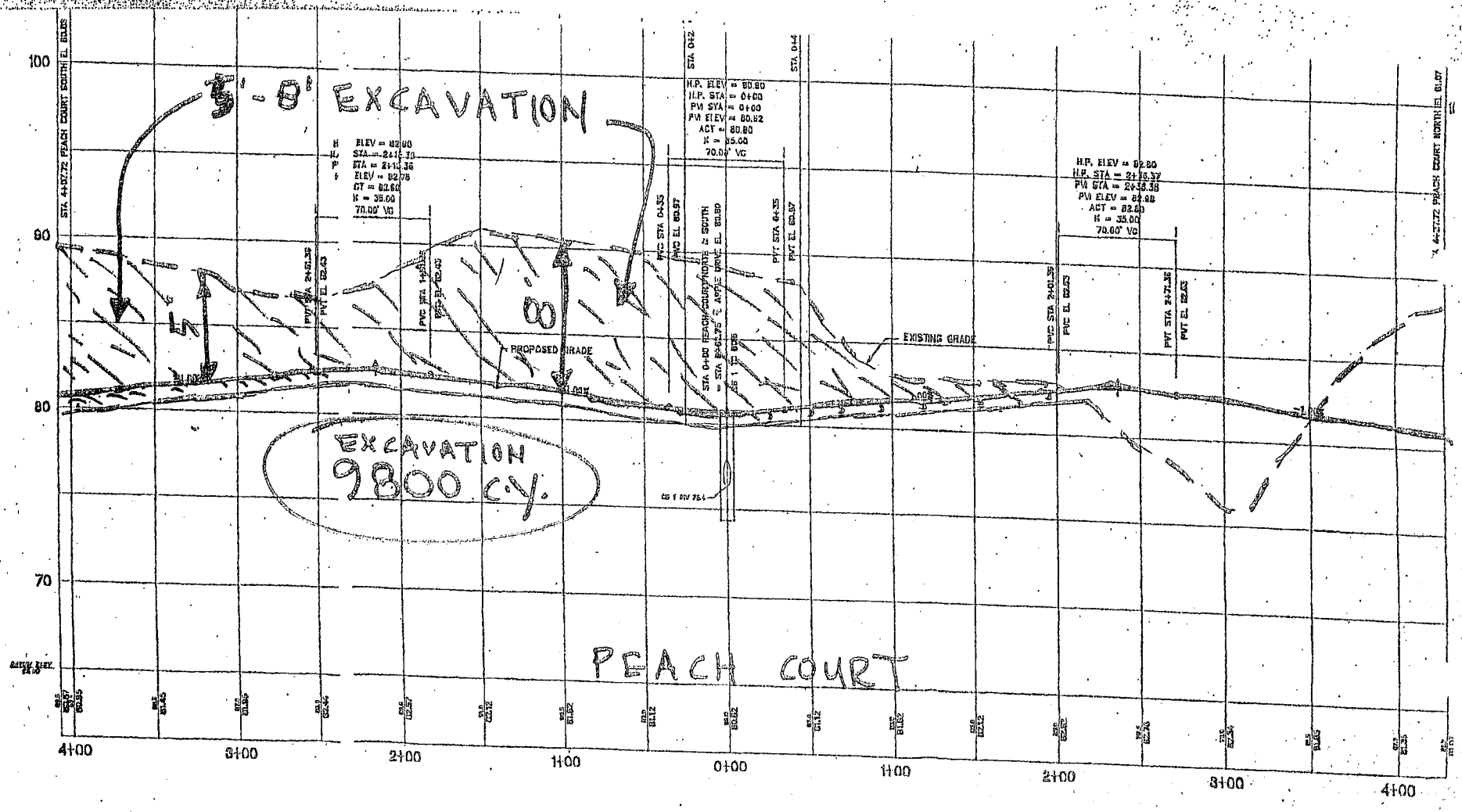
CURRENT PRELIMINARY PLAN

A1

RESERVE AND SETBACK AREA

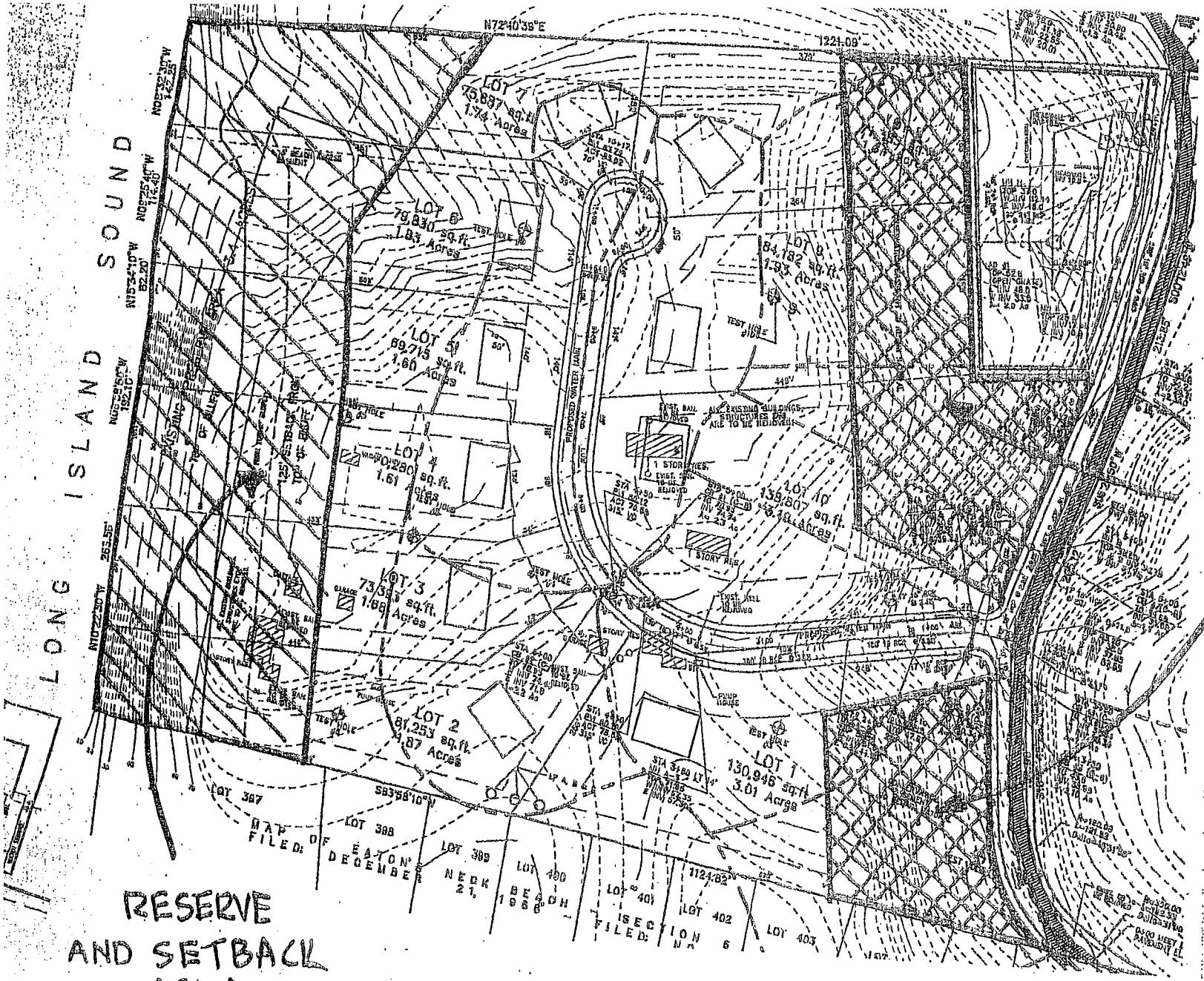
11-4-02


20'-28' EXCAVATION
EXISTING GRADE
PROPOSED GRADE
EXCAVATION
51,700 c.y.
PRELIMINARY PROFILE
APPLE DRIVE
A2
11-4-02



CURRENT PRELIMINARY PROFILE

A 3



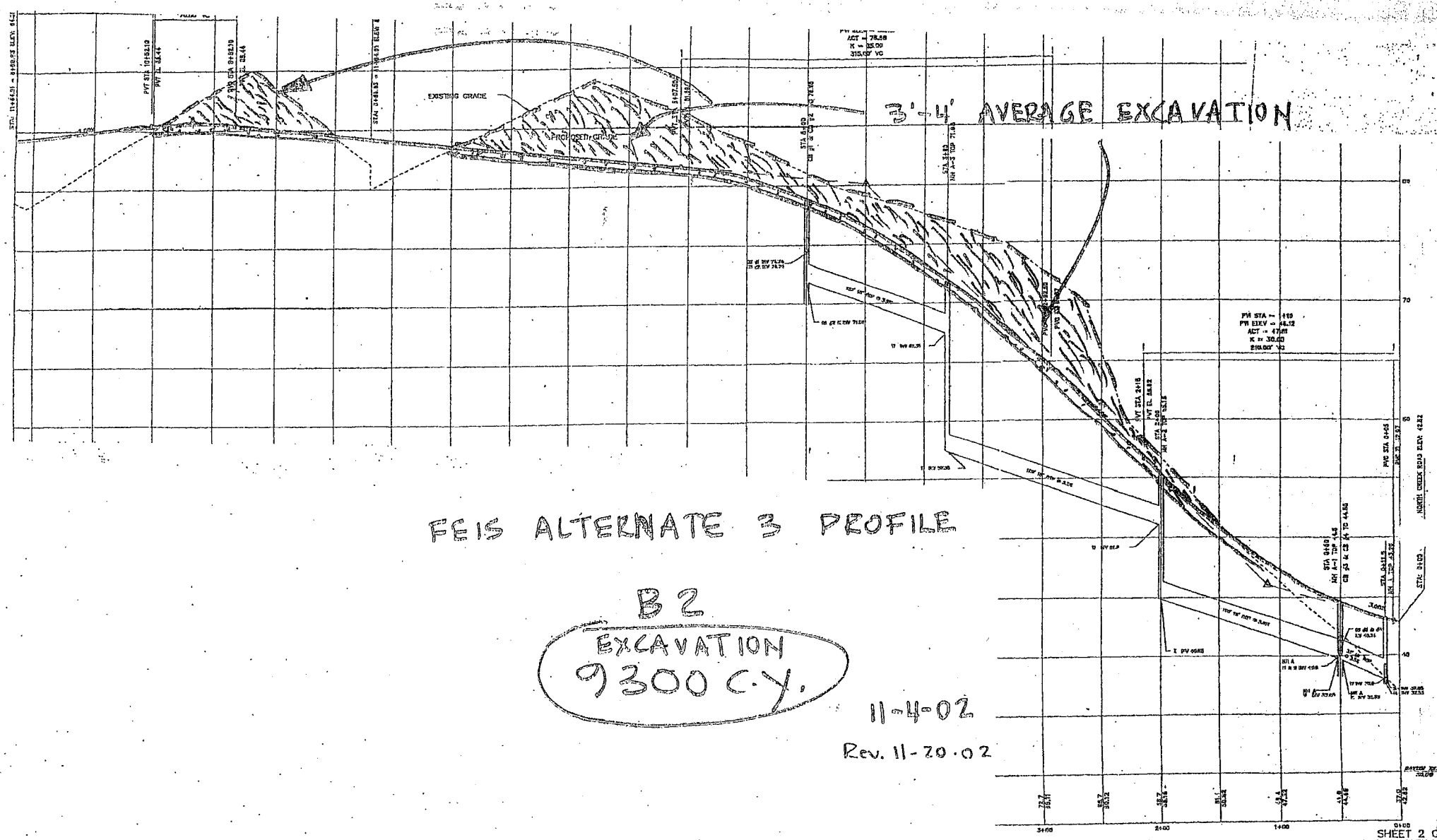
CONSERVATION EASEMENTS

RESERVE AND SETBACK AREA

FEIS ALTERNATE 3 PLAN

B1

11-4-02



FEIS ALTERNATE 3 PROFILE

B2

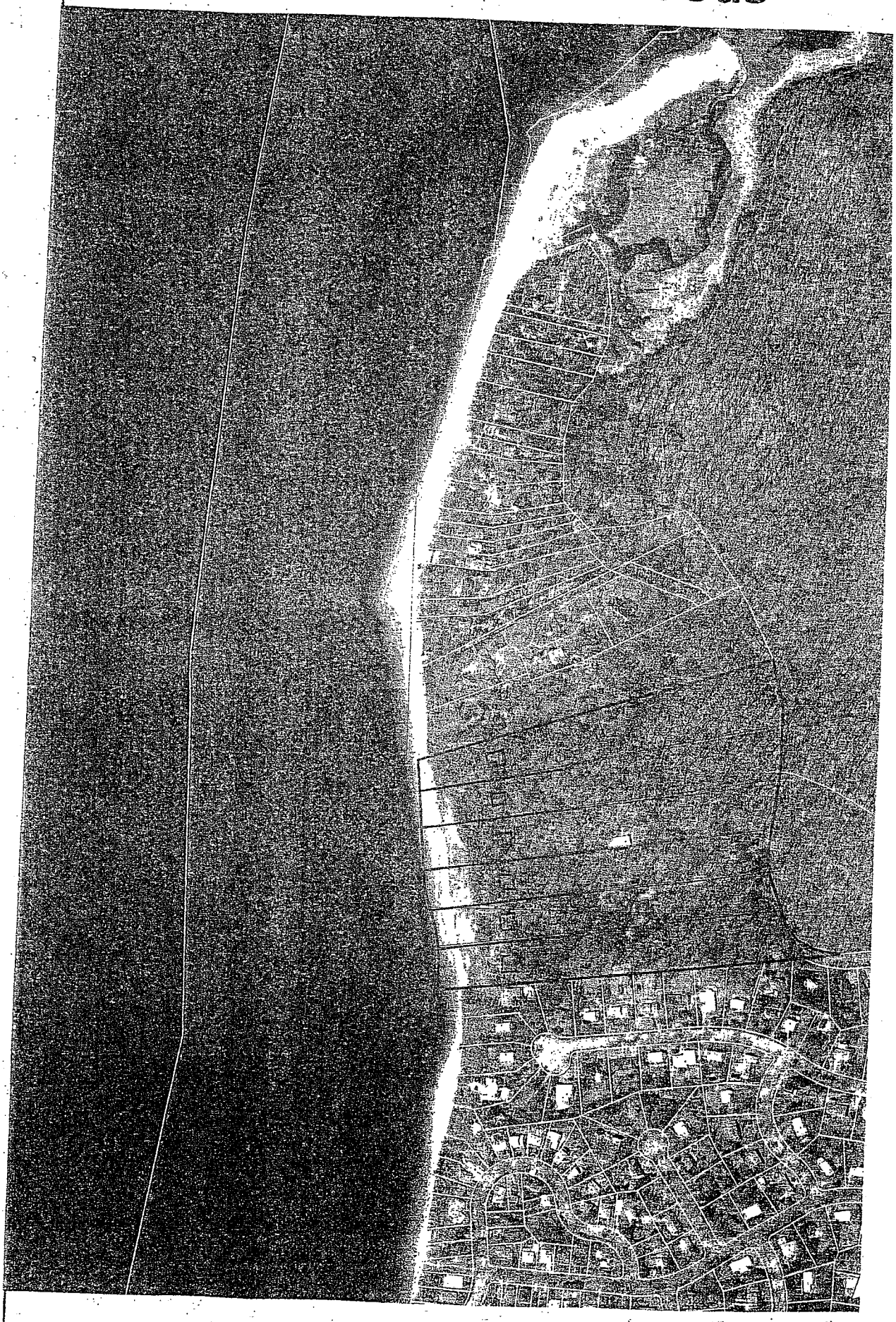
EXCAVATION
9300 C.Y.

11-4-02

Rev. 11-20-02

SHEET 2 O
PRELIMINARY M
OLD ORCHAR
RESUBDIVISION OF LOT I -
FILED: NOVEMBER 29, 1989

Old Orchard Woods



Draft
Environmental Impact Statement

OLD ORCHARD WOODS
Subdivision Application

North Creek Road, Eatons Neck
Town of Huntington
New York

Volume 1 of 2
Main Text and Plans

NP&V Project #85046

March, 2002

NELSON, POPE & VOORHIS, LLC
ENVIRONMENTAL • PLANNING • CONSULTING

572 WALT WHITMAN ROAD, MELVILLE, NY 11747-2188 • (516) 427-5665 • FAX (516) 427-5620

HUNTINGTON TOWN PLANNING BOARD

MEETING OF APRIL 3, 2002

The following resolution was offered by M. Sommer

and seconded by W.G. Asher

WHEREAS, WILLIAM KOLLMER and MARY ELLEN CURTIS, 22 North Creek Road, Eatons Neck, New York, 11768, owners of fee title to land and WILLIAM KOLLMER CONTRACTING, LTD., 22 North Creek Road, Eatons Neck, New York, 11768 applicant under contract, have submitted a subdivision application for the **OLD ORCHARD WOODS** property, prepared by Nelson and Pope, LLP, and located at the easterly terminus of North Creek Road in Eatons Neck, bordered by the Long Island Sound to the west and the Village of Asharoken to the east, designated as parcel 0400-001-01-004.1 on the Suffolk County Tax Map, and

WHEREAS, said preliminary application and a Draft Environmental Impact Statement (DEIS) was received on July 27, 2001, for the subdivision of a 24.21 acre property into ten (10) lots, zoned R-80 Residential, and was classified an **Unlisted Action**, and

WHEREAS, on the applicant's own motion the proposed action was revised as reflected in the preliminary map received on February 5, 2002, and

WHEREAS, the Huntington Town Planning Board determined that significant environmental impacts may result from the implementation of the proposed plan, and issued a Positive Declaration on March 20, 2002, and

WHEREAS, a revised DEIS, dated March 2002 was submitted in response to Planning Board concerns contained in the Positive Declaration, and

WHEREAS, upon review, the revised DEIS was determined to be satisfactory with regard to its scope, content and adequacy for the purpose of commencing the State Environmental Quality Review Act (SEQRA) hearing, now therefore be it

RESOLVED, that the Planning Board of the Town of Huntington finds that the Draft Environmental Impact Statement for Old Orchard Woods, received July 2001 and amended March 2002 is **acceptable for public review**, and directs that a Notice of Completion of the DEIS and Notice of Hearing and copies of the Draft Environmental Impact Statement be filed with the appropriate agencies by the Environmental Review Division of the Department of Planning and Environment in accordance with SEQRA 617.12, and be it further

RESOLVED, that the Planning Board hereby sets the date of the SEQRA hearing on April 24, 2002 which is the same date as the public hearing on the preliminary application.

VOTE: 5	AYES: 5	OES: 0
ABSENT: J. Tane	W.G. Asher, B.B. Ohlig, J. Tane L.A. Santoianni, M. Sommer	

The resolution was thereupon declared to be duly adopted.

The ENB SEQRA Notice Publication Form - *Please check all that apply.*

Deadline: Notices must be received by 6 p.m. Wednesday to appear in the following Wednesday's ENB.

____Negative Declaration - Type I	✓ Draft EIS
_____with Public Hearing	
____Conditioned Negative Declaration	____Generic
_____Supplemental	
____Draft Negative Declaration	
_____Final EIS	
_____Positive Declaration	____Generic
____ with Public Scoping Session	_____Supplemental

Date: April 3, 2002

Project Title: Old Orchard Woods [Subdivision]

Project Location: The project site is located on North Creek Road, approximately 750 feet west of the North Creek Road/Eatons Neck Road intersection in the hamlet of Eatons Neck, Town of Huntington, designated as parcel 0400-01-01-02-4.1 on the Suffolk County Tax Map. The site has approximately 795 feet of frontage on Long Island Sound.

Brief Project Description: The proposed action is a request for the subdivision of a 24.21-acre parcel for the subsequent construction of ten (10) new single-family homes. Access is to be provided by a single roadway, approximately 600-foot in length from North Creek Road, terminating in a pair of cul-de-sacs in a T-intersection arrangement. Storm water will be collected and discharged to a 1.51-acre recharge basin located in the northeastern corner of the site. Sanitary wastewater collection and treatment is proposed via disposal to sub surface septic systems. Public water is to be provided by the Suffolk County Water Authority.

For Draft Negative Declaration/Draft EIS: Public Comment Period: 4/4/02 to 5/6/02
For Public Hearing/Scoping Session: Date: / / Time:____ Location:
Scoping Session:

For Conditioned Negative Declaration: (Please summarize)

DEC Region # 1 County: Suffolk Lead Agency: Town of Huntington Planning Board

Contact Person: Richard Machtay or Scott Robin, Department of Planning and Environment
Address: Huntington Town Hall, 100 Main Street, Huntington NY 11743
Phone: (631) 351-3196 E-Mail: srobin@town.huntington.ny.us

Draft
Environmental Impact Statement

OLD ORCHARD WOODS
Subdivision Application

North Creek Road, Eatons Neck
Town of Huntington, New York

Prepared for:

William Kollmer and Mary Ellen Curtis (owners)
22 North Creek Road
Eaton's Neck, NY 11768
and
William Kollmer Contracting, Ltd (Applicant)
22 North Creek Road
Eaton's Neck, NY 11768

Lead Agency:

Town of Huntington, Planning Board
c/o Department of Planning and Environment
Town Hall, 100 Main Street
Huntington, NY 11747
(631) 351-3196
Contact: Richard Machtay, Director of Planning

Prepared by:

Rieger Walsh & McGinity
199 Main Street
Northport, NY 11768
(631) 261-6400
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First Coastal Corporation
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SUMMARY

Introduction

This document is a Draft Environmental Impact Statement (DEIS) prepared for a subdivision application involving a proposed 10-unit residential project on a 24.21-acre parcel of land in Eatons Neck, Town of Huntington, New York (i.e., Old Orchard Woods Property). The project site is located on the west side of North Creek Road, west of its intersection with Eatons Neck Road. The property is currently occupied by eleven structures (2 cottages, 4 residences, 2 garages, 1 shed and 2 pumphouses), of which only one is presently in use as the caretaker's residence. The applicants are William Kollmer and Mary Ellen Curtis (owner, Eatons Neck, New York) and William Kollmer Contracting, Ltd.

The proposed development of the Old Orchard Woods property began in 1988 with the request for a two-lot land division of a property known as the Hogan Parcel. An environmental review was conducted for the proposed two-lot land division which included the preparation of an Environmental Assessment Form (EAF) Parts I, II and III by the applicant (Part I), and the Town of Huntington (Parts II and III). The EAF recognized the potential for future subdivision of the larger remaining parcel (the 24.21 acre subject site) and advocated for cluster development. A Conditioned Negative Declaration (CND) and, ultimately, a Negative Declaration were issued for the subdivision, thereby concluding the SEQRA process. Covenants and restrictions were placed upon the subdivision (which was granted approval in 1989). One of the conditions was that 3.4 acres (10 percent of the entire parcel which was concentrated entirely within the future Old Orchard Woods [24.21-acre] site) was to be privately-owned and subject to a conservation easement.

The subdivision of the subject 24.21-acre property began in 1998 with the submission of a Part I EAF by the applicant. The SEQRA process continued for over two years and culminated with the issuance of the Findings Statement on July 12, 2000 and the Certification of Findings on July 19, 2000. That Findings Statement determined that the subdivision of the property into 22 lots on 24.21 acres would not result in significant adverse impacts. The 22-lot Old Orchard Woods subdivision was granted preliminary approval by the Town of Huntington Planning Board on July 12, 2000, based upon the SEQRA Findings Statement adopted by the Board.

Shortly thereafter, on October 10, 2000, the Town Board of the Town of Huntington rezoned the subject 24.21 acres to R-80. As a result of the action by the Town Board, the applicant is now submitting a 10-lot subdivision plan that comports with the R-80 zoning district to protect the applicant's ultimate development rights.

Project Purpose, Need and Benefits

The public need for the project is related to the benefits to be derived if the project is implemented. The Applicant has designed the proposed project to achieve the highest and best

use of the site based on the current residential zoning, which the Applicants assert was unjustifiably and improperly imposed by the Town Board. As indicated by the Applicant, it is anticipated that 6 of the units will have 4 bedrooms, and 4 will have 5 bedrooms. The selling price of these approximately 3,500 square foot (SF), 2-story homes is anticipated to be in the range $500,000 to $1.2 million.

The project site lies within a low-density residential area in the Town of Huntington, which has long been and remains an area with a distinctly rural atmosphere. The current Town Comprehensive Plan designates the area and site for low-density residential use which includes one-half-acre, one-acre and two-acre single-family development.

The project area reflects a mature, suburban land use pattern, with a few remaining properties available for development. The proposed residential project will provide a permanent use of an underutilized property in conformance with the R-80 zoning recently enacted by the Town Board.

The project also includes two substantial land dedications to the Town, as follows:

- the 1.51-acre recharge basin
- the 2.70 acres of the North Creek Road ROW within the site

A 1.43-acre portion of the 125-foot setback from the top of the bluff lies outside the 3.4-acre Preserve Area. This area will remain undeveloped, except for building removal operations and brush removal. It is anticipated that brush removal (though not tree removal) will be allowed within this area, to allow for sight lines toward Huntington Bay and Long Island Sound for residents; this is similar to the existing Restrictive Covenants (which are applicable within the existing Conservation Easement). A portion of the 3.4-acre Preserve Area may be used in the future for bulkheading and a docking facility (neither of which are included in the proposed project). In such a case, these would be provided by the individual homeowners and subject to conformance with all applicable rules, regulations and laws.

The development of the property will increase the revenues generated to taxing jurisdictions, though it will result in corresponding increases in demand for services, particularly in regard to school enrollments.

The proposed project will provide high-quality residential housing in a very exclusive and desirable area of the Town of Huntington albeit at lesser density than surrounding properties. Furthermore, the permissible density, based upon the Town Board's recent upzoning of the property to R-80, is out-of-character with historic zoning patterns. In addition, the project will generate a substantial amount ($378,656) of real property tax revenues annually. Finally, an estimated 50 temporary construction jobs would result from project implementation.

Location

The 24.21-acre project site is located on North Creek Road, approximately 750 feet west of the North Creek Road/Eatons Neck Road intersection, in the hamlet of Eatons Neck, Town of Huntington. It should be noted that Long Island Sound is adjacent to the site to the west, and the Village of Asharoken's boundary is located adjacent to the northeast.

The site has approximately 807 feet of frontage along North Creek Road and approximately 795 feet of frontage on Long Island Sound. The project site is identified as Suffolk County Tax Map District 400, Section 01, Block 2, Lot 4.1. The subject property is the site of the former Hogan Estate.

The project site is zoned R-80 (Residence) which requires a minimum lot size of 2 acres. As previously indicated, the zoning of the property was changed, pursuant to an action by the Town Board, on October 10, 2000, merely 12 weeks after the Planning Board granted preliminary approval of a 22-lot subdivision based on the then-prevailing R-20 zoning. Property contiguous to the northwest and along the southern property boundary is zoned R-20. Property to the east is zoned R-80. Beyond these parcels, R-5 (5,000 SF lot size) is the predominant zoning along Long Island Sound, while R-15 (15,000 SF lots) is the predominant zoning landward and to the west side of Eatons Neck Road. The predominant land use in the area is residential.

An estimated 1.67 acres of the subject site are currently developed, containing six residences (of which only one is inhabited) several unused sheds/garages and two unused pumphouses. Approximately 0.17 acres are occupied by buildings, 0.23 acres are covered byimpervious surfaces (road, parking area, patio, etc.), 0.41 acres is the unpaved, stone/packed earth-surfaced North Creek Road, 0.86 acres are occupied by lawn/landscaped areas adjacent to the buildings, 1.96 acres are in the beach/bluff, and 20.58 acres are natural tulip-oak forest.

The site is in the following service and planning districts:

- Eatons Neck Fire District
- Northport-East Northport Union Free School District
- Suffolk County Water Authority
- Suffolk County Police Department, 2nd Precinct
- Town Open Space Index (p/o Parcel #NE-1)
- Local Waterfront Revitalization Program
- R-80 (Residence) District
- NYS Coastal Erosion Hazard Area
- Hydrogeologic Zone VIII

Description of the Proposed Action

General Layout

For calculation purposes, this document assumes a 1,800 SF building coverage for each house; ultimately, a total of 7.01 acres will be developed. The project site is roughly square in shape,

with North Creek Road running north-south along and within the property's eastern border. The site's single access roadway (Apple Drive) will be located at approximately the mid-point of this boundary. Three of the lots are accessed off the northern cul-de-sac (Peach Court North), four off the southern (Peach Court South), two lots will be accessed off Apple Drive, and one lot will be accessible directly off North Creek Road. Similar to the proposed project, lawn/landscaped areas within the lots are assumed to extend from the road frontage to a depth of 100 feet from the rear of the residence, or to the 125-foot bluff setback line (whichever is closer to the unit). In order to maximize the amount of existing tulip-oak forest retained, it is assumed that no more than 15% of each lot will be maintained landscaping. A 66,072 SF/1.51-acre recharge basin is found in the northeastern corner of the site. All lots are 87,120 SF/2.00 acres in size. The proposed 125 foot non-disturbance setback from the top of the bluff is in excess of the 100-foot requirement. This will provide an increased level of protection for the bluffs, by increasing the distance between the bluff face and the units on lots 3-6.

The proposed project is designed and proposed within the parameters established by the Town Zoning Code, based upon the Town Board's upzoning of the property to R-80, and the dimensional requirements contained therein. The installation of Town specification roadways as well as a recharge basin are both required in subdivision regulations and under Town engineering review. Such improvements are part of the ordinary working landscape of the Town where a new subdivision is involved. The proposed recharge basin adjacent to North Creek Road is intended to be dedicated to the Town of Huntington. The Town typically receives dedication of recharge basins and this area is adjacent to the access road and therefore is accessible for maintenance which may be required. Other portions of the Old Orchard Woods subdivision will be held in private ownership. A Homeowners Association (HOA) will be formed and access to the beach for all residents of the subdivision will be provided via the proposed easement and use of the existing valley which accesses the beach.

The applicant will fund the improvements of Apple Drive, Peach Court North and Peach Court South, as well as the improvements to North Creek Road along and within the frontage of the site. The applicant will also fund and construct the proposed recharge basin. This work will be conducted following project approval and subject to bonding by the Town Planning Board to ensure proper completion of these improvements. Once completed, the roads and recharge basin are proposed to be dedicated to the Town of Huntington and thereafter will be maintained by the Town.

Clearing

As with the previously approved 22-lot subdivision, the primary natural features of the site will be preserved and covenanted to remain natural. It is reasonable to expect that homeowners will desire yard areas and possible outdoor amenities. As discussed above, it is anticipated that a maximum of 15% of each lot will be landscaped. It is also reasonable to expect that the natural beauty of the land including forested areas and specimen trees will also be a desirable part of this community. After development, there will be a total of 15.24 acres of tulip-oak forest on-site, which represents 74% of the existing area of this vegetation type (a net clearing of 5.34 acres). As a detailed Demolition/Clearing Plan has not been prepared, it cannot be determined whether and how much of this demolition area will fall within the 7.01 acres to be developed for the proposed project. Therefore, if all of this demolition were to fall within the same area to be

cleared for the proposed project, the minimum of 5.34 acres would be cleared; if none of the demolition would occur in the proposed development area, the maximum of 6.60 acres would be cleared. When the Site Plan is prepared, a detailed Demolition/Clearing Plan may be prepared, indicating the exacting boundaries and amounts, for Town review.

As part of building permit review and site construction, reasonable building envelopes, yards and homesites will be created. Grading will be minimized as much as possible. Specimen trees will be maintained where possible and buffer strips will be left to remain natural in the adjoining side yards and rear yards of homesites. Individual homeowners would have the right to maintain their properties. Trees which are diseased or dead or may pose a threat to on-site improvements would be expected to be removed or maintained. This is contemplated in the proposed design, which retains the primary natural features of the site.

The westerly portion of the subject site lies with a Coastal Erosion Hazard Area, as delineated by the NYS Environmental Conservation Law. There are two types of areas within such a designation: a Natural Protective Feature Area and a Structural Hazard Area. As indicated by the NYS Department of State (the agency overseeing and administering this program), there are no Structural Hazard Areas on Long Island. For this portion of Eatons Neck, the existing bluff is the natural feature to be protected; this is the designated Natural Protective Feature of the site. As given in 6NYCRR Part 505 and the Huntington Town Code (the state and local implementing regulations for this program, respectively), the landward limit of a bluff is 25 feet from the bluff top. This is also the landward limit for non-buildable area.

In addition to this 25-foot limitation, the project site is constrained with a 125-foot building setback from the bluff top. The intended purpose of the 125-foot setback area is to provide a more than adequate setback of the homes from a potential area of erosion. In this 125-foot area, construction of homes will not be permitted. In addition, certain covenants and restrictions affecting the 3.4-acre Preserve Area will be in place. Within the 3.4-acre Preserve Area, the clearing of trees and grading will be prohibited in accordance with the existing covenants and restrictions. Maintenance pruning and removal of dead vegetation will be permitted. The proposed lots have been designed so that each home which is adjacent to the 125-foot setback area will have an adequate building envelope to allow for the siting of the home, yard areas and other amenities. The setback lies entirely beyond this envelope of activity. As a result, there is no adverse impact on the ability of the owners of these lots to utilize these lots for residential purposes.

The rear yard building setback lines for Lots 3-6, sited along the western property line, will terminate at the 125-foot bluff setback limit; no structures will enter this or the Preserve Area. In order to provide a realistic, conservative estimate of tree clearing for both initial construction and later by residents, it is anticipated that clearing will extend to, at most, 100 feet from the rear of the residences, or in the case of Lots 3 and 4, the Preserve Area boundary. In addition, for the areas within the 125-foot setback where two buildings will be removed, these sites will be replanted with natural grass seed, to restore these areas to a vegetation pattern matching their immediate surroundings. Access to the beach will be provided via a 15-foot wide accessway between lots 3 and 4. This area, to be a separate tax lot deeded to the HOA, has been located to

coincide with the existing path, shed and stairway to the beach. Use of the existing location for this beach access, with replacement of these amenities with a better-designed stairway and supplemental plantings, will minimize the potential for long-term erosion of the slope in this area.

Homeowner's Association Responsibilities

The HOA will be formed to own the portion of the project intended to provide access to the beach. Other portions of the property including the beach and bluff will be owned by individual lot owners. The recharge basin and the portion of North Creek Road ROW within the site are proposed to be dedicated to the Town of Huntington. As a result, adequate means of maintenance are provided for various aspects of the subdivision. The maintenance responsibilities and jurisdictions for various aspects of the Old Orchard Woods subdivision are noted as follows:

- The 2.70 acres of North Creek Road ROW within the site are proposed to be dedicated to the Town of Huntington;
- The 1.51-acre recharge basin adjacent to North Creek Road is proposed to be dedicated to the Town of Huntington;
- The 3.4-acre Preserve Area on the west part of the property is proposed to be divided between subdivision lots which extend from the new interior roadway to the shoreline. This Preserve Area would therefore remain in private ownership and would be maintained by individual lot owners, subject to the existing covenants and restrictions. In accordance with these existing covenants and restrictions, it is not anticipated that this will include any activity other than normal pruning and clearing of dead brush. In addition to the 3.4-acre Preserve Area, a 125-foot buffer setback is in place, which will restrict the construction within it of any residential homes. A conservation easement to allow the Town to monitor compliance with the existing covenants and restrictions and the 125-foot no-build zone has been proposed by the Applicant;
- The beach access is proposed as a separate parcel to be owned by the HOA. The land and any improvements or renovation of the existing beach access would be the responsibility of the HOA.

Bluffs and Bulkheading

Bluffs associated with Long Island Sound occupy the western portion of the site; this area is located within the westerly 3.4-acre Preserve Area. The **Preliminary Map** depicts the top and bottom of the bluff within the site, as well as the landward limit of a 125-foot setback from this boundary.

There is no bulkheading proposed as part of the Old Orchard Woods subdivision. Assessment of geologic resources identified a bluff which is subject to some erosion. The lead agency requested that the applicant consider the eventuality that bulkheading may be necessary as a form of shoreline stabilization in order to eliminate erosion and loss of property. The geological and coastal process issues of shoreline stabilization have been considered in this document. It has been documented that a shoreline structure parallel to the shoreline and above mean water is

benign from a coastal process standpoint. As a result, should this become necessary the installation of such a structure would not contribute to flooding or impact to adjacent or nearby properties.

The decision as to whether or not to install a bulkhead will be made by the joint homeowners of the affected waterfront lots and/or the developer in the future. Any installation of a bulkhead at some point in the future would be subject to Article 25 of the Environmental Conservation Law and the Tidal Wetlands Land Use Regulations contained in 6NYCRR Part 661.

The previous DEIS suggested that construction of a seawall may be an appropriate mitigation measure to protect the toe of the bluff from wave attack, thereby stabilizing the bluff face if bluff recession poses a threat to on-site structures. Should the installation of a seawall be considered necessary, observations of seawall structures protecting the bluffs north and south of the subject bluff face support this conclusion. Adjacent properties which are subject to the same environmental processes of wind, waves and precipitation as the subject property, were observed to have stabilized to the point of producing an acceptable environment for the growth of vegetation. This vegetative cover further acts to enhance the bluffs resistance to erosion and further recession. If such a structure was constructed at the subject property it stands to reason that this would also stabilize the bluff and allow for the reintroduction of vegetation which would retard or eliminate further recession. In addition, it should be noted that any mitigation measure would be subject to agency review and permitting procedures which would also include consideration of non-structural measures.

Access, Road System and Parking

Vehicle access will be provided off North Creek Road; a 50-foot wide north-south access easement for this roadway is located within the project site, along its easterly border. This will be offered to the Town for dedication. Presently, North Creek Road is not improved within the site. The project will extend the improved portion of North Creek Road that lies within the site northward a distance of approximately 1,100 feet.

The site's internal roadway will be 34 feet in paved width, in accordance with Town standards. A total of 1.89 acres of paved surfaces lie within the site. All roadways leading to and within the site will be dedicated to the Town. Street trees and curbing will be provided. It is anticipated that garages will be provided in the individual houses, and the 0.20 acres of driveway (60 feet long and 15 feet wide) will be of sufficient size so that the need for on-street parking will be minimized or eliminated.

Recharge System

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 the proposed recharge basin. The recharge basin in the pending subdivision plan is proposed to be sited in the northeastern corner of the site, and will be connected to the planned roadside catch basins. North Creek Road will be improved along its entire site frontage, and will be provided with catch basins for stormwater retention.

The recharge basin will be a total of 66,072 SF in area, and will be sized to handle all stormwater generated on-site. Based upon Town standards, the project must provide storage for a minimum of 157,083 cubic feet (CF) of runoff; the **Preliminary Map** indicates that the proposed recharge basin has been designed to handle 180,000 CF of storage capacity. In addition, 3 leaching pools (one in the beach accessway and two on the south property line of Lot 2) will provide another 3,127 CF of storage.

The recharge basin will require excavation and establishment of sidewall slopes of 1:3 or less. The design is consistent with Town requirements and the proposed location is at a low point of the property in order to promote gravity flow of stormwater to this leaching system. The recharge basin has been designed so that it will not intersect regional groundwater and therefore, will allow stormwater to percolate through the subsoils to the groundwater table. Soil borings and geologic cross sections indicate that there are no impermeable barriers beneath this portion of the subject property. As a result, it is expected that the recharge basin will function properly and will serve the stormwater needs of the subdivision in conformance with Town requirements. The recharge basin is situated such that it will lie adjacent to a road dedicated to the Town improved to Town to allow access for maintenance should it be necessary. Only those areas depicted as graded for the recharge basin will be disturbed; all other areas will remain natural. The natural preserved areas are part of the open space system for the proposed subdivision which allows for preservation of vegetation and slope areas.

The subject property currently generates runoff as a result of overland flow during rain events when the infiltration capacity of the soil is exceeded. The proposed drainage system will include a runoff coefficient for adjacent contributing areas. As a result, the runoff generated on site, which has the potential to leave the site under current conditions, will be reduced under the proposed site conditions. It is therefore concluded that the proposed project will not in any way exacerbate an existing flooding situation adjacent to or in the area of the site.

Sanitary Disposal and Water Supply

Wastewater will be generated as a result of the proposed use of the site as a residential development. All sanitary wastewater effluent will be treated in individual on-site sanitary waste disposal systems. For those lots along the western Preserve Area, the systems will be located in the front yards, in order to maximize the separation between the systems and the bluff. This will minimize the potential for seepage of recharged wastewater from the bluff face. This form of disposal is acceptable provided the projected wastewater design flow does not exceed standards established by the Suffolk County Department of Health Services (SCDHS); the Applicant does not anticipate that this standard will be exceeded. The system design provides protection of groundwater quality from elevated nitrogen concentrations that result from septic wastes. This design promotes the removal of nitrogen gas and the removal of nitrogen through natural denitrification processes. In addition, the subsurface soils underlying the project site will act as a removal mechanism of nitrogen and bacteria associated with wastewater discharges. The concern of nitrogen in subsurface waters is related to the presence of a discontinuous clay layer beneath the project site which could potentially result in discharge of waters along the bluff face impacted by septic wastes. However, seepage along the bluff is not expected due to the discontinuous nature of the clay layer that will ultimately allow for recharge of groundwater at the water table.

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

The project site is located within Groundwater Management Zone VIII as defined by the SCDHS. Based on the requirements of Article 6, no more than 600 gallons may be discharged per acre on a daily basis within this zone. The site acreage used for determining this Population Density Equivalent must not include wetlands, surface waters, or land in flood zones. The subject site is 24.21 acres in size and does not contain surface waters or wetlands. Thus, the Population Density Equivalent (total allowable flow) on the subject site is calculated as:

24.21 acres x 600 gpd/acre = 14,526 gallons per day (gpd)

The project sponsors intend to utilize conventional subsurface sewage disposal systems on site, therefore, the total design flow must not exceed the Population Density Equivalent calculated above.

The current design sewage flow standard for single family residential units applied by the SCDHS is 300 gpd. Therefore, it is estimated that the ten (10) proposed residences will generate approximately 3,000 gpd of sewage flow. This is 11,526 gpd (79%) less than allowed for the site by the SCDHS under its current regulations, therefore, conventional on-site sanitary systems may be used for this development.

A significant amount of study has been devoted to understanding the geology underlying the subject site. A series of soil borings have been installed on the property and three geologic cross-sections have been constructed based on the soil boring logs. There is one limited location on the property where an impermeable clay exists approximately 70 feet below ground surface. Reduced permeability clay has been documented in other portions of the property approximately 40 feet below grade. However, this unit does not result in perched water conditions. The deeper gray clay is restricted to the western part of the property and is the reason why seepage is detected at the face of the bluff. This unit is not continuous below the property and dips toward the south and east. Therefore, it is too deep and discontinuous to impact the proposed on-site discharge of sanitary waste using individual systems. Proposed sanitary systems will be distributed throughout the site. Systems will include a septic tank and leaching pool with the capacity required by SCDHS regulations. Each system will require an individual permit to

construct and a crane dug test hole will be performed on each individual home site for the system. The test holes will be observed by representatives of SCDHS and should lower permeability clay be observed, it will be excavated until good leaching material is encountered. The excavation will be backfilled with good leaching material and sanitary systems will be placed within these holes. Based upon the detailed understanding of the site geology resulting from the test holes, no significant clay units are expected to be encountered in the installation of individual on site sanitary systems. The number of test holes installed far exceeds the number required by the SCDHS for preliminary subdivision design. In addition, the depth of these test holes also far exceeds the requirements of the SCDHS for preliminary subdivision design. As a result, it is concluded that the proposed project will not adversely affect the groundwater or surface water resources as a result of the installation of sanitary systems. All effluent will leach through the underlying soils in an unsaturated zone of sufficient depth to allow for conversion of ammonia to nitrate. Effluent will leach to the water table and become part of the regional groundwater reservoir. Since the total nitrogen load on the property is consistent with SCDHS requirements this will not adversely affect groundwater resources. In addition, a groundwater impact model has been used to simulate the concentration of nitrogen in recharge. The results conclude that the project will not adversely impact the groundwater as a result of nitrogen loading from the proposed subdivision.

The nearest sanitary septic system to the western border of the site lies approximately 350 feet inland of the bluff crest. Since the extent of the impermeable gray clay does not extend beyond 120 feet of the bluff crest, effluent from the individual sanitary systems will not be discharged along the clay outcrops viewed along the face of the bluff, since seeps that have been observed along the bluff face are believed to be the result of perched water conditions which lie within the 100 to 120 feet area along the western portion of the property.

Water will be supplied by the Suffolk County Water Authority (SCWA), which will utilize an existing 8-inch supply main beneath North Creek Road. Assuming that all wastewater generated will originate as public water supply, daily water consumption will total 3,000 gpd.

Construction Schedule

The construction schedule will be based on the Approved Schedule of Operations, as required by the Town of Huntington Subdivision Regulations and Site Plan Specifications, which includes a construction staging area. In addition, construction fencing required by the Town Planning Board will be installed.

The construction process will begin with establishment of flagged clearing limits, followed by installation of staked hay bales and silt fencing in critical areas for erosion control purposes. Then, the demolition and site clearing operations can begin; construction equipment and vehicles will be parked and loaded/unloaded within the site. "Rumble strips" will be placed at the site entrance, to prevent soil on truck tires from being tracked onto North Creek Road. It is anticipated that 10 of the existing 11 structures will be removed; only the small shed (located in the northwestern corner of the property, near the beach) will be retained, for use of site residents when visiting the beach. The conservative clearing assumptions result in a range of 5.34 and 6.60 acres of clearing, or 25.9 to 32.1% of the 20.58 acres of natural vegetation on-site. This includes

areas for the new roadway, buildings, the recharge basin and landscaping. In general, it is anticipated that approximately one-fifth of each lot will be cleared for development.

Grading operations will take place next. In order to minimize the time span that denuded soil is exposed to erosive elements, excavations for the curbs, roads, building foundations, wastewater systems, drainage system/recharge basin and utilities will take place immediately after grading operations have been completed. Construction of the houses can then begin, concurrent with the utility connections and paving of the internal roads. Once heavy construction is complete, finish grading will occur, followed by soil preparation using topsoil and installation of the landscaping, which will be performed while the structures are completed.

North Creek Road will only be used for site access. North Creek Road will not be used for construction equipment and vehicle/material storage or construction worker parking. As a result, no significant or long-term construction impacts to the adjacent residences are anticipated. Construction activities will not occur outside weekday daytime hours (7 AM to 6 PM).

It is anticipated that the construction period (clearing, grading, construction and finishing) will take approximately 7 to 9 months.

Construction period impacts may occur and are identified in this DEIS. Excavation for the recharge basin will occur over a limited period of time, simultaneous with the installation of the site roadway and utilities. Once the subdivision road is established, homesites will be constructed as lots are sold. Homesite areas are predominantly internal on the subject property. Rear yard trees and setbacks will remain providing visual buffering and noise attenuation as a result of the inverse square law and vegetation attenuation. Any construction will occur during normal daytime hours. The subject property is vacant and zoned for residential development therefore it is reasonable to expect that the property will be developed at some point. This is a normal part of the maturing of this community and will occur over a relatively short period of time. Homesites will be constructed in accordance with building permit plot plans. The Town has the ability to inspect construction progress with Town personnel including either building inspectors or, if the Town chooses, a Town arborist. It is the developers intent to comply with all conservation easements and restricted areas which will remain natural. In addition, homesites will maintain buffers where possible and specimen trees within the lots, where appropriate.

Beach Access

The beach will be accessible for site residents via a 15-foot wide accessway, located between lots 3 and 4. This access had been sited to take advantage of low slopes in this area, and to enable the existing shed to be retained and reused. Site residents will be shareholders in a corporation formed for the purpose of owning and maintaining this beach access as a Homeowners Association (HOA). This access has been located to coincide with the existing path and stairway to the beach. It will be a separate tax lot deeded to the HOA, which will be formed to benefit all the lots of the project. Use of the existing location for this beach access, replacement of these amenities and retention of existing vegetation on the steep slopes will minimize the potential for disturbance to the slope in this area.

Significant Environmental Impacts

Geology

Subsurface Geology - The analyses regarding the character and extent of the subsurface clay lenses has been presented, based upon the test borings. These studies indicate that this impervious material is not continuous beneath the site, a characteristic which will allow for proper downward movement of recharge from the proposed sanitary systems and recharge basin. An additional consideration is the distance between the developed portion of the site and the proposed 10 sanitary systems; this separation is sufficient to allow recharge to percolate downward through the gaps between the clay lenses. Finally, the clay tends to slope downward toward the east, indicating that groundwater flowing along the top of this material will flow away from the bluff, not toward it. As a result and similar to the previously-approved subdivision, the sanitary systems and recharge basin are anticipated to operate properly, with no potential for significant adverse environmental impacts.

It is not anticipated that grading operations or excavation for the recharge basin will disturb subsurface soils to a depth which will impact subsurface conditions. The developed area (less the required recharge basin) comprises only 22.7% of the site, which minimizes the area eligible for grading; in addition, the developed area has been delineated based on its existing low relief, which also reduces the amount of grading necessary. The recharge basin will be excavated to an elevation of 10 feet above sea level. As the groundwater table lies at an elevation of approximately 2 feet above sea level in this area, there will remain a sufficient depth of soil between the basin bottom and the water table to allow for proper operation of this feature. As was established for the previously-approved subdivision, there will be no impacts to groundwater quality.

The recharge basin will be constructed through the removal of soil material. If needed and if this material displays acceptable bearing capacity and leaching characteristics, this soil material may be used as backfill in other areas of the site to produce acceptable slopes for construction. Excess acceptable material will be removed by truck (between 7 AM and 6 PM) and sold as backfill. If such characteristics are not determined, this material will be removed by truck to an acceptable landfill. As a result and similar to the previously-approved subdivision, it is not expected that there will be any significant adverse impacts with regard to subsurface geological conditions.

Surface Soils - Of the four soil types represented on-site, two (Beaches and Escarpments) will not be disturbed by the proposed project. The remaining two soils, denoted Carver-Plymouth Sands and Riverhead Sandy Loam, are found in the central and eastern portions of the site and will be disturbed. These two soils present moderate to severe limitations on development, based on slopes and the presence of a sandy surface layer. However, these disturbed areas will be stabilized during construction and will be graded to provide a low slope angle for development. Grades are not anticipated to exceed 1:3. As a result of these design factors and similar to the previously-approved subdivision, it is not anticipated these soil limitations will adversely impact development of the site. Finally, the low number of homes on this 24± acre site, each situated on a lot of 2.00 acres, with no disturbance to the majority of the site, would not be expected to result in any significant disturbance to surface soils.

Dust generated during site construction activities will be controlled through the use of dust suppression techniques and limitations on equipment movement. During this period, the potential for erosion will be minimized by use of techniques specified in the Town of Huntington Erosion Control Handbook, which includes, but is not limited to, the following: 1) minimize the area of denuded soil; 2) minimize the time span that denuded soil is exposed to the elements; 3) use groundcovers: 4) install sediment traps at appropriate points; and 5) use drainage diversions. Additionally and similar to the previously-approved subdivision, the proposed project does not include disturbance to soils in proximity to the northern, western or southern boundaries of the site; this factor minimizes the potential for sediment impact to adjacent properties during the construction period. Construction will occur on the easterly property line. In this area, North Creek Road will be improved to Town standards, to allow for Town access to the recharge basin (for maintenance purposes). However, this improved section of roadway will be provided with a drainage system, thereby minimizing the potential for drainage or sediment impacts to adjacent properties.

As a result of the above-discussed design features and project characteristics, potential impacts to surface soils have been avoided or mitigated.

Topography, Bluff Recession and Beach Erosion - It is anticipated that development of the proposed project will occur on the central and easterly portions of the site, which are characterized by low (0-10%) and medium (11-15%) slopes. The slopes in the developed area, in consideration of the 2-acre lot size proposed, will allow for proper grades to be created, without a significant need for disturbance to existing steep slopes. The grading operation is not anticipated to produce slopes in excess of the 1:3 slopes within the recharge basin. Finally, use of erosion control measures is anticipated to prevent or minimize the potential for erosion of soils during the construction period from occurring or impacting adjacent properties. As a result of these design factors and similar to the previously-approved subdivision, the steeper sloped portions of the site are avoided and, it is not anticipated that slopes will adversely impact development of the site.

The bluff occupying the westerly portion of the site will not be disturbed. In addition, the area adjacent to and within 125 feet of this feature will not be disturbed, in order to provide a buffer from potential disturbance to this feature. Due to the setback of 125 feet and current erosion rates, the increase in load from the erection of structures is not expected to impact the stability of the bluff face. In addition, installation of sanitary systems will function properly and in no way impact the stability of the bluff.

The beach and bluff are the dominant topographic features at the project site. These features are within a 3.4-acre area which will be subject to a Conservation Easement and the existing Restrictive Covenant. These areas are designated as a Natural Protective Feature Area by the NYSDEC Coastal Erosion Management Program. These have received this designation since they function to protect coastal resources from wind and water erosion and storm-induced high water. As such all development, excavating, grading or mining is prohibited on beach and bluffs unless specifically allowed by subdivision 505.8(c) of the Coastal Erosion Management Regulations. A declaration of covenants will be submitted as requested by the Planning Board,

requiring that any bulkheading and erection of docking facilities shall be subject to approval by regulating agencies.

It is estimated that the bluff is receding at a rate of approximately 1.9 feet per year. The primary cause of bluff retreat at the site is wave attack along the toe of the bluff, which is undermining the material on the upper portions on the bluff face. This is evident when observing the bluff faces adjacent to the bluff associated with the project site. These bluffs have been stabilized through the use of seawalls to dissipate energy from wave attack. These bluffs do not exhibit any evidence of further slumping and has resulted in the growth of new vegetation along the bluff face to further secure the bluff. To ensure that development will not impact the bluff, project activities will comply with the Local Waterfront Revitalization Program which requires that construction activities must be set back at least 100 feet landward from the top of the bluff. At the current recession rate, new construction related to the project will not be jeopardized for approximately 50 years unless the bluff face should stabilize resulting in cessation or decrease in the rate of recession. If at some time in the future, bluff recession poses a threat to on-site structures due to natural erosion processes, construction of mitigating measures to protect the toe of the bluff from further wave attack may be considered by the future landowners, and would be subject to agency review and permitting procedures. Such procedures may include review of plans by a qualified professional geologist and consideration of non-structural measures. Construction of these mitigation measures, if desired, will be the responsibility of the future landowners of properties adjacent to the bluff and is currently not included as part of the proposed development activities. Since bulkheading is not being recommended as a mitigation measure under the proposed project there will be no restriction to sand transport to down drift beaches related to shoreline hardening.

Consideration has been given to potential impacts associated with toe stabilization should this occur in the future, in order to provide a complete analysis of present and future potential project-related impacts. It is not anticipated that the construction of a toe stabilization structure would result in a reduction of sand to beaches downdrift of the site. Such structures located parallel to the shoreline and above mean high water are documented to be benign to the environment. Based upon the subject property's beach and bluff width, the site is not the sole or major contributor of sand nourishment to the shoreline south of the subject property. This is determined by the potential contribution of the site to the overall sediment budget of material in transport.

An assessment of the project's impact along the western shoreline of Eaton's Neck has been provided within a technical letter prepared by a qualified professional specializing in coastal geology. The letter presents a review of the local coastal processes as well as the potential impact that the proposed development and potential bluff protection measures may have along the subject shoreline. In addition, the letter also provides an evaluation of the project's compliance with State and Local regulations regarding coastal erosion and management.

The assessment identified three separate littoral cells along the western shoreline of Eaton's Neck which operate independently but are also connected to the regional sand transport system. The location and extent of each cell are provided below:

- Northern Cell - Eaton's Neck point to the Eaton's Neck Boat Basin Inlet.
- Middle Cell - Eaton's Neck Boat Basin to Argyle/Birmingham Drive (the subject site is located here).
- Southern Cell - Argyle/Birmingham Drive to the end of the spit at West Beach.

The northern cell is identified as contributing the largest input of beach-compatible sediment along the subject shoreline in the form of a linear sandbar. This sandbar migrates progressively southward and has resulted in the widening of the beach observed along the middle cell. The report further states that the sand transport process has been so significantly interrupted due to the groin field located between Argyle Drive and West Beach that sandbars migrating from north to south are unlikely to provide substantial sediment to the West Beach peninsula and spit located within the southern cell. The specialist concludes that the bluffs located along the middle cell (which include the bluffs along the subject site) provide little if any sediment to the littoral system. A majority of the bluffs within this area are artificially stabilized, and sediments within these bluffs are not compatible with the beach sands observed in the southern cell. The author concludes that since the site's bluffs do not appear to provide significant sediment to the beach, the construction of erosion protection structures is not likely to adversely impact the beaches at or down drift of the site.

Based upon the project design features including homesite locations and bluff setbacks, and similar to the previously-approved subdivision, no significant impacts are expected with regard to topography or coastal processes.

Water Resources

Groundwater Hydrology and Water Quality - The proposed project will consist of 10 single-family residences and therefore no toxic or hazardous chemicals are anticipated to be present or utilized on the site. Consequently, and similar to the previously-approved subdivision, no impact to groundwater quality is anticipated from this source.

The primary impact associated with residential development is nitrogen in recharge resulting from sanitary waste and lawn fertilization. Each residence will utilize an individual sewerage system for disposal of sanitary wastes. It is anticipated that the concentration of nitrates (as nitrogen) generated on-site will be increased by the proposed project, due primarily to the presence of nitrogen in wastewater. The SONIR computer model was applied to the proposed project, to determine the expected concentration of nitrogen in recharge originating on the site. The results indicate that the nitrogen concentration will be increased to 2.55 mg/l, an increase of 2.26 mg/l nitrogen as compared to the existing level of 0.29 mg/l. Wastewater will account for 56.8% of nitrogen in recharge, with potable water (as flush water in the wastewater stream) representing 30.6%, stormwater accounting for 0.7%, irrigation of 0.4% and fertilization at 11.4%. A detailed analysis of the potential impact of the project on water quality due to nitrogen loading has been completed based on accepted methods. The anticipated concentration is less than the NYSDEC drinking water standard of 10 mg/l, and similar to the previously-approved subdivision (which would have had a nitrate concentration in recharge of 3.90 mg/l), the proposed project is not expected to result in significant adverse effects to groundwater quality with regard to nitrogen loading.

There are no potential impacts to water resources from stormwater generated on-site, based upon analysis of the project's conformance to design requirements of the Town, and to recommendations of the 208 and NURP studies. Specifically, the project will retain and recharge all runoff from developed surfaces within an on-site recharge basin sized to handle this volume. Based upon the NURP Study, the low-density residential nature of the site and vicinity do not result in the presence of substances in runoff which could impact groundwater quality. The proposed project will utilize Best Management Practices (which may include use of low-or no-fertilizer lawn/landscaping species, limited or no use of other landscaping chemicals such as fungicides, herbicides, etc., limited or no use of roadsalts during wintertime). As a result, and similar to the previously-approved subdivision, no significant impact to groundwater quality is anticipated from recharge of stormwater from the project site.

In addition, the expected wastewater flow from individual sewerage systems for the entire project will be approximately 3,000 gallons per day (gpd), or 123.92 gpd per acre. This discharge rate conforms to Article 6 of the Suffolk County Sanitary Code, which allows up to 600 gpd per acre, or a total of 14,526 gpd for the project site. Thus, the proposed project will generate 79% less wastewater than allowed for the site by the SCDHS. This provides further evidence that no significant groundwater impact is expected as a result of this project.

Water Balance - In conformance with the Town of Huntington Engineering and Subdivision requirements, all stormwater runoff generated on developed surfaces will be retained on-site and recharged to groundwater in a proposed recharge basin. This facility will be located in the southeastern corner of the site, and will be connected to the planned roadside catch basins. The recharge basin will be a total of 66,072 SF in area, and will be sized to handle all stormwater runoff generated on-site.

Construction of the proposed project will increase the amount of water available for recharge across the project site resulting from the increase in impermeable surface area and recharge of wastewater from sanitary system effluent. SONIR computer model results for the proposed project indicate that a total of 17.38 million gallons per year (MG/yr) of water will be recharged on the site. This represents a 26.3% increase in recharge as compared with the existing volume of 13.76 MG/yr. Of this anticipated recharge, stormwater will account for 85% of the total recharge, with wastewater contributing 13.8% and irrigation yielding 1.1%%.

Development projects typically increase the quantity of recharge on a site. The rapid permeability of glacial soils allows infiltration of recharge through the unsaturated zone to be assimilated into the water table. In addition, the horizontal hydraulic conductivity of soils is greater than the vertical conductivity such that when recharge reaches the water table, it maintains a constant elevation. The 10 proposed wastewater systems of the project are dispersed throughout the central portion of the site, thereby distributing recharge water over a large area of the water table. The vertical separation between the developed area and the water table (36-88 feet), as well as between the base of the recharge basin and the water table (approximately 8 feet) is anticipated to be sufficient to allow for the dissipation of recharge as it percolates downward toward the water table. That is, recharge originating in smaller areas such as the recharge basin and leaching pools will not form mounds in the water table beneath these sources, but will spread laterally as it moves downward.

The discontinuous clay encountered beneath the site it is not expected to influence groundwater recharge. Recharge flow through the subsurface may result in some horizontal flow and perched groundwater conditions along the surface of the clay. However, flow along this surface may become interrupted due to the clay's discontinuous nature resulting in a preferential vertical flow pattern allowing for groundwater recharge at the water table. In addition, the geologic profiles indicate that the clay lenses are less continuous on the eastern portion of the site, where the recharge basin and the majority of the developed area are located. Therefore, an adverse impact to water table quantity and configuration due to a change in the pattern of recharge generated on-site is not anticipated.

The project site will utilize public water, to be supplied by the SCWA via an existing main beneath North Creek Road. The potable water requirement of the project, 3,000 gpd, is not anticipated to impact the ability of the SCWA to serve the public in the vicinity.

Surface Water and Drainage - The proposed action may result in alteration of drainage flow or surface runoff patterns through the creation of impervious surfaces in areas with steep slopes, ravines, sandy and clayey soils. Runoff from such surfaces may increase the potential for flooding and erosion. To reduce the amount of overland runoff roadside catch basins will be installed to redistribute runoff to the on-site recharge basin. If used, fertilizers, pesticides and other lawn chemicals will be kept from running downslope westward onto and down the bluff, and thereby impacting Long Island Sound, by the intervening 125-foot buffer. The existing restrictions on clearing within and adjacent to the Reserve Area, in conjunction with the existing Restrictive Covenants, will preserve the natural vegetation in this area, which will act to retain and slow down the overland flow of runoff, and recharge it to groundwater.

Similar to the previously-approved subdivision, the proposed action is not expected to have a significant impact on surface waters resulting from subsurface sanitary flows that may discharge to the surface. As previously noted, the soils underlying the project site consist of highly permeable Carver, Plymouth and Riverhead sands with discontinuous clay layers throughout resulting in isolated perched water zones. These clay layers influence the horizontal component of groundwater movement and may result in the discharge of waters as seeps along clay lenses observed on the bluff face. However, preferential horizontal flow along the surface of the clay may be interrupted due to the clays discontinuous nature producing gaps within the clay layer. This will result in the resumption of flow along the preferential vertical pathway due to gravity and the highly permeable nature of the surrounding sands thereby reducing seepage along the bluff face and allowing for groundwater recharge at the water table. In addition, analysis of the data generated from the geologic borings collected on site and observation of site topography indicate that the discontinuous clay layer may slope away from the bluff face. This will result in a horizontal flow component moving in an easterly direction away from the bluff reducing the potential for seepage of sanitary discharges along the bluff face. In the unlikely event that sanitary effluent were to discharge from the surface of the clay layer outcropping along the bluff, impacts related to nitrogen concentrations in the waste water would be negated by the following:

- each sanitary system is designed to conform with SCDHS regulations and design requirements, which were developed to ensure the protection of groundwater quality (in

consideration of the ability and capacity of the subsurface material to handle self-purification);

- the volume of wastewater generated by the proposed project is 79% less than that allowed by the SCDHS;
- nitrogen gas will be removed by each individual septic system;
- bacteria generated by septic waste will be removed by subsurface soils;
- removal of nitrogen through natural denitrification processes; and
- dilution of wastewater with groundwater.

The subject site adjoins the eastern shore of the entrance to Huntington Bay. The site has approximately 900 feet of shore line and is situated between residential development to both the north and the south of the site. The project, as proposed, does not include any alteration of the area adjoining the entrance to Huntington Bay. Consistent with other properties north and south of the subject site, bluff erosion may be curtailed at some time in the future by use of toe stabilizing structure at the base of the bluff. This structure would be placed parallel to the shoreline and above mean high water. This type of shorefront structure has been found to be benign with regard to the waterway. As a result of the design of the proposed subdivision and based on analysis included in this DEIS, the proposed project (similar to the previously-approved subdivision) is not expected to have any adverse impact on the adjacent water body or the coastal resources associated with the areas surrounding the subject site.

There are currently no plans to construct a toe-stabilizing structure on the subject site contained within the proposed subdivision map. Any seawall constructed to stabilize the toe of the bluff by the developer or the individual homeowners in the future will be designed using sound engineering practice and reviewed and built in accordance with all relevant state and local regulations required for the structure. It will be designed according to engineering specifications currently used for seawall construction. Seepage of perched water is observed at an elevation along the bluff face above the top of any possible future bulkhead structure. A toe stabilizing structure would likely not exceed an elevation of 5-6 feet above grade. Any such structure would be lined with filter cloth and backfilled with clean sand. This would enable any seepage of perched water to percolate downward through soils behind the structure. Any structure contemplated would be designed to function properly within the design life of the structure.

Ecological Impacts

The impacts to the ecological resources of a project site are generally a direct result of clearing of natural vegetation, increase in human activity, and the resulting loss and fragmentation of wildlife habitat. The proposed project involves the subdivision of land for single family use, which involves clearing of some of the existing wooded vegetation on the site. Between 5.34 and 6.60 acres of the existing 20.58 acres of tulip-oak forested habitat will be removed from the site to allow for the development, or roughly 26 to 32% of the native woodland that currently exists on site. Thus, the impacts of the proposed project should be assessed in relation to a direct change in habitat and an increase in human activity. The proposed development plan would obviously increase the structures and impervious surfaces found on site, but would also increase the quantity of landscaping by approximately 2.14 acres. The majority of the eastern and western portions will remain as woodland as well as woodland buffers throughout on the rear and sides of the homesites. There will be a shift and increase in the type of habitat found on site

by clearing the natural forested vegetation and increasing the amount of landscaping/turf vegetation, also resulting in an increase in edge habitat. The subject property is bounded to the north and south by residential developments, to the west by Long Island Sound and to the east by the largest tract of woodland in the immediate area. The following sections examine in detail the impact of the proposed site use and development with regard to both vegetation and wildlife.

Vegetation - The project site is 24.21 acres in size; between 5.34 and 6.60 acres of the native woodland on site will be cleared following construction. The existing coverages will be increased to an estimated 2.50 acres of building and pavement area, 3.00 acres of landscaping/turf, and 1.51 acres of recharge basin, with the remaining 17.20 acres left in the natural state (including the 1.96 acres of beach/bluffs will not be disturbed). Although some of the natural vegetation will be replaced by landscaping species, the development of the site will have localized impacts on vegetation. Regional impacts will be negligible, as roughly 71% of the project site will remain undeveloped.

The proposed development will require clearing of between 5.34 and 6.60 acres, although ultimately 15.24 acres of the existing woodland will be present. Most of the remaining woodland habitat would be present along the eastern and western property boundaries, as well as along the northern and southern boundaries. Portions of natural vegetation will remain throughout and between the proposed development lots. This will create a large proportion of edge habitat, which would typically favor growth of understory species which require greater light penetration. The remaining forested area would be further fragmented, but would be contiguous with the large contiguous tract of woodland found adjacent to the eastern property boundary, east of North Creek Road, increasing the value of this area for wildlife. In addition, the creation of a recharge basin will increase the habitat value for particular species of wildlife as well. Due to the presence of steep slopes, the majority of natural vegetation cleared will come from the interior of the site, and between lots.

The loss of woodland habitat on the property will be partially mitigated by the proposed preservation of many of the larger specimen trees on site, as well as preservation of the woodland in the western Reserve Area as well as within the site. Landscaping and turf will be the dominant vegetation surrounding the structures, with native or near native species used. This will supplement the remaining woodland buffers, although the habitat will be further reduced by the proposed development. Planting of native tree species such as oaks, maples, beech, and tulip trees along the street, and in the recharge basin area would help accelerate the process of succession, while minimizing the potential for colonization by introduced species.

The existing woodland habitat in the area is somewhat fragmented due to the surrounding developed areas. Similar wooded forest habitat is found throughout the general area, and a large contiguous tract of woodland lies adjacent to the eastern property boundary of the site. The property is not expected to act as a refuge for rare native flora, and impacts to plant species should be minimal. Christmas fern, cinnamon fern, flowering dogwood and bayberry are the only exploitably vulnerable, protected species expected on the property. Exploitably vulnerable species are protected primarily because they are indiscriminately collected, rather than due to rarity within the State. The presence of these plants would not preclude development of the site, as a property owner is permitted to remove exploitably vulnerable plant species from a site.

However, bayberry is not common on the site as it is restricted to the bluff area and Christmas fern and cinnamon fern is located within the proposed buffer areas and will not be effected by development. Additionally, chestnut husks observed on site were determined to be Chinese chestnuts. No significant impacts are expected to the virtually eliminated American chestnut, as it was not found on site.

A tree survey determined that the oak-tulip forest habitat on site has a density of approximately 27 trees per 20,000 SF with a DBH of at least 10". Based on this, it can be estimated that the 5.34 to 6.60 acres of oak-tulip forest to be removed have between 314 and 388 trees with a DBH of at least 10", and may potentially be cleared. This is expected to represent a worst case scenario, as Plots 1 and 2 had relatively dense tree inventory but many parts of the site are landscaped.

In addition to retaining the larger specimen trees on site, 3.00 acres of the property will be landscaped. Landscaping will be completed by individual homeowners. Evergreens, including white pine and Douglas fir, may be used to provide screening on site, and could be planted as a supplement to the proposed wooded buffers where necessary. Buffer planting (for the recharge basin) and street trees will be installed as part of the subdivision for individual homes. A variety of evergreen and deciduous shrubs could be utilized as foundation plantings, with flowers and mixed turf where needed.

In conclusion, approximately 63% of the site will be a tulip-oak forest buffer along the borders of and within the site under the proposed plan. Additional acreages will be further protected (as Preserve Area and 125-foot setback) through the use of Conservation Easements and the existing Restrictive Covenants. The project will retain large diameter trees where possible within the proposed construction/disturbance areas. Landscaping/turf will increase on site to cover approximately 12.4% of the overall site, which will also retain large diameter specimen trees. Landscaping will be provided, and may incorporate native or near native species. The majority of the vegetation on the property is currently dominated by mature woodland, of which the majority will be retained. As mature woodland is found throughout the area, the regional impacts to this habitat are not expected to be significant.

Wildlife - The vegetation on the project site provides habitat for a wide variety of wildlife, although the surrounding development and adjacent roadways may already exclude some species found in larger tracts of open space. Most of the species expected on the property are at least somewhat tolerant of human activity, but others will be impacted by the proposed clearing operation and resulting increase in human activity. The proposed project will remove some of the existing woodland habitat on the property, although the project will retain natural wooded corridors to the adjacent contiguous tract of woodland to the east. As was discussed in the preceding section, fragmented woodland habitat is found throughout the area, and the site represents only a small portion of these fragmented habitats. As previously stated, there is a large contiguous tract of native woodland similar to that found on the project site. This forested area is located east of the eastern most property boundary. The proposed project will favor those species that prefer edge and woodland habitats and those that are tolerant of human activity, with those more sensitive to development expected to utilized the habitat to the east, if present.

In determining impacts upon the existing wildlife populations, it can be assumed that an equilibrium population size is established for each species as determined by availability of resources in the habitat. Thus, the removal of habitat resulting from the proposed project will cause a direct impact on the abundance and diversity of wildlife using the site. Although the assumption that species are at equilibrium is an oversimplification, and population sizes of many species are controlled below the carrying capacity by other factors, it does provide a worst-case scenario in determining the impact of habitat loss. In addition to this direct impact, the increased intensity of human activity on the site will cause an indirect impact on the abundance of wildlife that will remain on the site and in the area, under post-development conditions.

In the short term, lands adjacent to the subject property will experience an increase in the abundance of some wildlife populations due to displacement of individuals by the construction phase of the proposed project. Ultimately, competition with both conspecifics and other species already utilizing the resources of the surrounding lands should result in a net decrease in population size for most species. The effect on the density and diversity of both local and regional populations should be minimal, as the area represents only a small portion of the forested habitat available in the vicinity.

Rare Species/ Habitat Potential - The piping plover and least tern are the only wildlife species potentially found on site which are listed as endangered species. Threatened species include the osprey, northern harrier, and common tern. These species are associated with are the beach and aquatic habitats found on site, which will remain in the natural state, therefore any direct impacts to these species are not expected. Indirect impacts are mostly concerned with the increase in human activity following development, which would likely impact any of these species nesting on site. Significant impacts are not expected, however, as there is suitable habitat elsewhere in the vicinity.

Several species of special concern exist on the project site. These include the eastern hognose snake, worm snake, spotted salamander, short-eared owl, common nighthawk, and the barn owl. Although there is documented concern about their welfare in New York State, these species receive no additional legal protection under Environmental Conservation Law Section 11-0535. Discussions above indicate the anticipated change in habitat needs and potential impacts to these species.

This DEIS gives a detailed representation of the wildlife species that are either expected to utilize the site or those that were directly observed. The habitat requirements of each species are discussed, in addition to the expected impacts based on individual habitat requirements and species adaptability. It should be noted that several species of birds and wildlife would be expected to benefit as a result of the proposed project, however several species are not tolerant to development, and/or require habitats for breeding that would no longer found on site as a result of development. This document recognizes that development of the proposed project would displace forest interior species and those unable to adapt to human influence. This DEIS further acknowledges that individuals of reptile and/or amphibian populations may be directly "destroyed" as a result of construction operations.

By definition, according to the New York State legal status, the definition of a threatened species is "any native species likely to become endangered species within the foreseeable future in New York" and/or "any species listed as threatened by the U.S Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11, and not listed as endangered in New York." This definition, in addition to the New York State definition of an "endangered" species, is documented in the DEIS to assist in public awareness of the legal categorization placed on these particular species mentioned in the DEIS as "expected to utilize the site given the habitats present". No threatened or endangered species were observed utilizing or nesting on site.

Three threatened species, including the osprey, northern harrier and common tern, are listed in this DEIS as *"expected to be utilize the site given the habitats present"*. These species are associated with the beach/bluff habitat found on site, which will remain in its natural state, along with a 125-foot setback area. Under proposed conditions, retention of the beach/bluff habitat would not impact threatened species. In summary, direct impacts to these species are not expected; although indirectly, the increase in human activity following development would be expected to reduce populations of certain unprotected species.

This DEIS also recognized that the site contains potential habitat for two endangered species, the least tern and the piping plover, associated with the bluff. As these species occur in habitats that are found on and/or in the vicinity of the subject property, these species are acknowledged as *"expected to utilize the site give the habitats present."* The site was inspected on several occasions during the breeding season and no individuals or nests were observed. The appropriate nesting habitat for these species found on site is limited and represents only a small quantity of the available nesting habitat in the area. This area will not be altered by the project.

Transportation

Trip Generation - Based on trip generation rates (as specified in the book "Trip Generation", published by the Institute of Transportation Engineers) for the type of land use proposed for the site, it is anticipated that a total of 8 vehicle trips will be generated by the project in the AM peak hour (vph), and 10 vph in the PM peak hour.

In regard to the concern regarding pedestrian and schoolchild safety, particularly during the construction period, construction vehicles entering and exiting the site would have to respect the legality of a bus stop at the corner of North Creek Road and Eatons Neck Road, as would any professional truck driver and/or licensed motorist. If the request is to improve the visibility of the bus stop location, the Town might authorize an advance warning sign "School Bus Stop Ahead" W6-4. The failure to obey traffic laws is a traffic enforcement issue.

The existing driveway off North Creek Road will provide a storage area for construction vehicles. The first stage of construction will involve clearing of the site; this operation will provide for on-site storage of vehicles and supplies. At no time will the residential access on North Creek Road be impeded or blocked by the construction vehicles.

Roadway Improvements - The roadway within the site will be built to Town standards and dedicated to the Town. North Creek Road will be improved to Town standards from the point where this roadway enters the southerly property line to approximately 400 feet north of that point. The entire 50-foot easement around this roadway will be offered for dedication to the Town subject to the existing ROW.

The developed portion of North Creek Road will be equipped with a drainage system, consisting of subsurface leaching pools and catch basins.

It is anticipated that the "T" intersection at the site entrance will be controlled by a "Stop" sign.

The site design is such that 10 homes access the internal road, which in turn accesses North Creek Road. The overall access to this new development is no different than the nature of the access to this entire community as it now exists.

Sight Distance - The proposed project will improve the existing site access point onto North Creek Road; no other vehicle accesses are planned. It is anticipated that, while grading may be performed at this intersection as part of the roadway improvements, the existing sight distances at this point will not be reduced and may be increased by clearing of vegetation for the widened roadway. As no changes to the North Creek Road/Eatons Neck Road intersection are planned, no changes to the existing sight distances at this point are expected.

In regard to the issue of adequate sight distance at the Eatons Neck Road/North Creek Road intersection, the sight distance to the west along Eatons Neck Road is 159 feet. This is an adequate sight distance for a design speed of up to 25 MPH. As the existing speed limit at this point is 30 MPH, installation of a W2-2 "Intersection Ahead" sign, or a reduced speed limit of 25 MPH in this portion of the roadway could eliminate this condition. An alternative solution would be for the Town to increase the amount of clearing at this corner, if such clearing can be achieved in the available right of way. The sight distances to the east are in excess of what is required to meet minimum standards. The use of a curved mirror is a helpful suggestion that the developer could implement nonetheless.

Land Use, Zoning and Land Use Plans

Land Use - The residential land use type associated with the project is the same as exists adjacent and in the vicinity. Residential use is the dominant land use type in Eatons Neck. However, it should be noted that the proposed development is lower in density than the majority of surrounding lands. Therefore and similar to the previously-approved subdivision, the project will not impact the existing land use pattern in the vicinity.

One of the reasons the Huntington Town Board rezoned the site to R-80 was provide future development consistent with the pattern of land use in the vicinity. However, analysis of the Town Comprehensive Plan and the Findings Statement for Old Orchard Woods (prepared by the Town Planning Board during the SEQRA process) clearly indicate that the 22-lot yield was in character with the pattern of land use, and furthermore, that more intensive development exists within 500 feet of the site.

Zoning - As the proposed project does not require a change in its R-80 zoning classification, Special Use Permit or Special Exception Approval, no impact to the zoning pattern of the site or vicinity is anticipated. Similar to the previously-approved subdivision, the project has been designed in conformance with its current zoning classification, and its yield has been determined in conformance with the Town Steep Slope Ordinance.

The Town Board, in its justification of the rezoning to R-80, determined that R-80 zoning would provide future development consistent with the zoning pattern in the vicinity. However, analysis of the Town Comprehensive Plan, Town Zoning Maps and the Findings Statement for Old Orchard Woods (prepared by the Town Planning Board during the SEQRA process) clearly indicate that the then-extant R-20 zoning was in character with the zoning pattern, and furthermore, that zoning categories representative of more intensive development exist within 500 feet of the site.

Town Comprehensive Plan Update - The proposed project will be in conformance with the Town Comprehensive Plan Update in regard to land use type and the zoning classification associated with that land use type. In fact, both the current 10-lot subdivision and the prior 22-lot project conform to the Update. In particular, the Update did not recommend that the project site be rezoned, and, in fact, the Update discussed strengthening existing regulations (including the Town Steep Slope Ordinance) while retaining the existing zonings of affected sites. The Update also recommended that, in order to protect sensitive environmental features within a parcel, clustering should be considered in order to preserve open space. Finally, the Update specifically states that the prior R-20 zoning of the site is considered to be a "low-density" land use type, which is contrary to the Town Board's implication to the contrary, which was used by that body to justify its rezoning.

As was the case for the prior 22-lot subdivision, the recommendations of the Update will be followed by the project, as follows:

- *Direct more intensive development to less environmentally-sensitive areas and assure that sufficient infrastructure support is provided.*

  While the project site does contain some environmentally-sensitive areas, the project will avoid developing these areas, thereby minimizing the potential for impact. In addition, infrastructure support exists in the area, and will be utilized.

- *Minimize disruptions or alterations to established neighborhoods and development densities. This will help preserve property values in areas accommodating additional development.*

  The project has been designed to minimize impact to the character of the neighborhood, by its conformance to the existing land use type in the area, by its lower density than other development in the area, and by its retention of thick, densely-vegetated natural buffers along all property boundaries.

- *Design new residential developments which respect all environmental limitations.*

The proposed project has been designed to avoid impact to that portion of the site which presents environmental limitations, specifically the bluff area.

Town Open Space Index - The proposed project will reduce the acreage of Town Open Space Index Parcel #NE-1 by approximately 43%. However, development on this parcel since 1974 has reduced the amount of developable acreage on this parcel from its original 56.4 acres. As a result, the removal of land by the proposed project on Parcel #NE-1 may be increased beyond 43%. Nevertheless, the project will reduce, but not remove, the acreage of those features of the site which caused the property to be listed on the Index: the bluff area and associated steep slopes and the natural vegetation. Approximately 7% of the site is developed at present; the project will clear an additional 15 to 20% of the site, while retaining the remainder as natural (the entire bluff area and adjoining 125-foot buffer and vegetated buffers).

However, despite the recommendation in the Town Comprehensive Plan Update that outright purchase be considered, and the existence of a Town Open Space bond program, the Applicants have not received any offer to purchase the site.

Town Environmental Open Space and Park Improvement Advisory (EOSPA) Committee, First Round Recommendations - The proposed project does not "*...threaten the present integrity of the site by new home development...*" as stated by the EOSPA document. Rather, the plan designed by the Applicant, like the previously-approved 22-lot subdivision, specifically preserves (consonant with his right to develop privately-owned property and in conformance with all applicable zoning and land use plan restrictions) those environmental features of the site which the EOSPA document rightly indicates as having the highest value.

Specifically, the entire westerly beach/bluff area will remain undeveloped in its entirety, and will be protected by the existing Restrictive Covenants as well as provide the ability of the Town of Huntington to monitor compliance with these Covenants by virtue of a Conservation Easement given to the Town. The adjacent 125-foot setback area will be retained and protected as well. This will simultaneously preserve and protect the natural vegetation in this area, and preserve the unique and valuable scenic and aesthetic quality of the site in this direction. Additionally, significant open space retentions on the easterly side of the site will preserve the aesthetic quality in this direction. The Applicant has required, in all designs put forth, that development be located as much in the interior of the property as practicable, in consideration of the need to provide a site layout which will provide the high quality residences typical of the area. This requirement will also minimize, though not eliminate, the need to grade a portion of the steep slopes in the interior of the site, now occupied by Tulip-Oak Forest.

Furthermore and as stated above, as of the date of preparation of this DEIS, neither the Owner of the site nor the Applicant have been contacted by any Town, County or State agency in regard to the potential for purchase of the subject site.

National Estuary Program - The NEP did not provide any recommendations specific to the project site; however, the impact of the NEP on the project site is realized through the studies and plans made subsequent to the NEP, as detailed below.

Long Island Sound Study - Of the 6 problems specified in the Long Island Sound Study which merit special attention, 5 apply to the project; following are brief descriptions of how the project will comply:

(2) toxic contamination-the proposed project is residential in nature, and will not store or utilize such materials

(3) pathogen contamination- the project is not associated with the generation of pathogens, other than biological effluents associated with the typical operation of septic systems.

(4) floatable debris-the project will does not include installation of a docking facility at the base of the existing stairway to the beach. Therefore, access to and use of the beach is not anticipated to include opportunities for the residents to pollute their property with floatable debris.

(5) the impact of these water quality problems, and habitat degradation and loss, on the health of living resources-as related above, water quality problems and wildlife habitat impacts are not anticipated from the project, due to the nature and scale of the site design and buffers.

(6) land use and development resulting in habitat loss and water quality problems-the project has been planned to minimize clearing of the natural vegetation in the central portion of the site, leaving the boundaries as thick, undisturbed natural buffers. Furthermore, the project will utilize on-lot septic systems whose design will be subject to the review and approval of the SCDHS. Septic wastewater is not anticipated to reach surface waters, because of the presence of a thick of suitable soil material beneath the site.

NYS Coastal Management Program - Following are discussions indicating whether and how the proposed project will conform to the applicable policies of the Long Island Sound Coastal Management Program:

The Developed Coast
The proposed project will retain the existing vegetated, natural appearance and character of the site, thereby minimizing the potential for further reduction in these factors in comparison to development in the vicinity. As the site has no established or suspected historic resources, no such impact is anticipated.

The Natural Coast
The proposed project will avoid development within 125 feet of the established bluff line, thereby minimizing the potential for slope failure due to increased development in this area. Water quality will be retained by installation of on-site septic and stormwater recharge systems, in conformance with established SCDHS regulations. The project is anticipated to have minimal potential for impact to resources of Long Island Sound and/or Huntington Bay, as only a single walkway to the beach is provided; no docking facility is planned as part of the project (though the Restrictive Covenants will retain the mechanism whereby such an amenity could be provided). Finally, no sources of air emissions are present, and no hazardous or toxic substances would be stored or used on the site, thereby eliminating potential sources of air and/or water pollution.

The Public Coast
The proposed project does not include provision for public use of the site, nor for public access to the beach through the single walkway to the beach through an easement within the site.

The Working Coast
The proposed project is residential in nature, and does not include any provisions or features relating to commercial uses, nor do any features of the project represent restrictions upon such activity.

Coastal Non-Point Source Pollution Program - As there are no state or local Coastal Nonpoint Pollution Control Programs in place, there are no additional recommendations or regulations to which the proposed project must conform. Nevertheless, it is anticipated that the project's adherence to the existing state, county and town regulations will protect coastal waters from any potential nonpoint pollution originating on the project site.

NYS Coastal Erosion Hazard Areas Act - As the Town of Huntington has enacted its Local Law Number 7 to implement the provisions of the NYS Coastal Erosion Hazard Areas Act, discussion of the proposed project's conformance to this Act is presented below.

Town Coastal Erosion Management Regulations - The proposed project will require a permit from the Town Department of Buildings, as a portion of the project site lies within the 100-foot Coastal Erosion Hazard Area limit, located east of the established bluff line along the site's westerly property line. As the proposed project does not include any disturbance (e.g., grading, construction, tree clearing, etc.) within this zone, the proposed project is anticipated to be in conformance with this law.

Suffolk County Planning Commission Subdivision Guidebook

B. *SUBDIVISION ROADS*
The proposed project will construct the two roadways to Town standards, and will dedicate these roads to the Town. In addition, the project includes improvements to North Creek Road to Town standards along the site's easterly frontage. The project is not anticipated to generate a significant number or pattern of vehicle trips. However, due to the configuration of the site and the presence of the eastern Reserve Areas, a second vehicle access cannot be provided, as recommended in the Guidebook.

C. *SUBDIVISIONS THAT HAVE FRONTAGE ON THE SHORELINE OF THE COUNTY*
The proposed project will retain a significant amount of natural vegetation along all property lines, particularly along its western boundary at and along the bluff line. The proposed units will be setback a significant distance from the established bluff line, and in no case shall development occur within the established 125-foot setback limit. Preservation of a significant portion of the existing vegetation minimizes the reduction of habitat area for area wildlife, while simultaneously preserving the natural appearance and character of the site.

D. *STORMWATER*
The proposed project will include an on-site stormwater recharge system, designed and located in accordance with all applicable regulations. In this way, the potential for adverse impacts to groundwater and surface water quality, as well as flooding potential in the vicinity, will be minimized.

G. *OPEN SPACE*
Certain portions of the site to be preserved as natural areas within lots will be owned by the individual owners subject to the terms of the existing Restrictive Covenants and the proposed Conservation Easement and the remaining 3.4 acres of the site will be dedicated directly to the Town of Huntington.

K. *GENERAL*
The layout of the proposed project is the result of careful consideration of the existing natural features of the site (including topography, developed area, natural vegetation patterns and the presence of the bluffs).

NYS Open Space Conservation Plan

- The proposed project will retain surface and groundwater quality by use of an approved septic system, stormwater recharge system, and locating development outside the 125-foot buffer of the bluff line.
- The proposed project will retain the existing access to the beach for the residents of the site.
- The proposed project will retain the existing aesthetic quality of the site, not only for its residents, but for the public at large, by retaining significant buffers of natural vegetation along all property lines, particularly along the sensitive western boundary.
- The project site includes unique or rare habitat: beach/bluff, per the Long Island Sound Coastal Management Program. However, this area will be retained in its entirety. The proposed project does not include any provision for hunting, fishing or the like, as this is a residential project in a residential area. In addition, the project will retain habitat values for wildlife in the vicinity, by retention of natural vegetation.
- The proposed project does not include any provisions for commercial woodland uses, such as farming, wood products, commercial fishing and tourism.
- The proposed project does not include any provisions for educational use of the site.
- The proposed project will retain a significant amount of natural vegetation, and does not include any features which may be a source of air quality impact or emissions.

Community Services

Demography - The proposed project will increase the number of existing households in the Eatons Census Designated Place (CDP) by 10. By applying the average household sizes for 4 and 5-bedroom single-family homes in New York State (Center for Urban Policy Research, 1999), it is estimated that the proposal will increase the Eatons Neck population by 42. Based on the 1997 population estimate of 1,478 for Eatons Neck, it is projected that the proposed project will increase the population of the CDP to 1,520, a 2.8 percent increase. This increase is not expected to have an appreciable impact on the demographic characteristics or the suburban setting of Eatons Neck.

The proposed development is at or below the allowable yield for the property. The development consisting of 10 single family homes will produce 13 school-aged children, distributed over a

wide range of grade levels. In addition, the development will not be constructed all at one time. As a result of the gradual development and occupancy of the site, coupled with the distribution of children throughout a number of grade levels, it is expected that the project will be assimilated into the school district. As noted, the district has been involved in the project review and based on long term planning for school district needs, the district can react in a way that serves the educational needs of the community.

Fiscal Considerations and Tax Revenue - Similar to the previously-approved subdivision, the proposed project is anticipated to significantly increase property tax revenue generated on the site; tax revenues disbursed to the individual taxing districts will be significantly increased as well. This will have the effect of offsetting some of the additional expenses to these services due to the proposed action. The projected increase in taxes is based on a home selling price of $500,000 and $1.2 million.

As can be seen, a selling price of $500,000 is anticipated to increase the total taxes paid on the property by $136,308, with the total taxes paid equivalent to $178,202. A selling price of $1.2 million is projected to increase the total taxes paid on the property by $336,762, with the total anticipated yearly taxes paid equivalent to $378,656.

Tax revenue generated by residential development rarely offsets the cost to educate project generated children. Taxing districts require revenue generating uses such as commercial development and retirement housing in order to provide revenues without the associated demand for educational services. In addition, State aid plays a role in offsetting the cost to educate children in the district.

Educational Facilities - The proposed project is anticipated to generate approximately 6 pre school-aged children and 13 school-aged children. The Northport-East Northport School District prepared an analysis and projection of growth within the District based on the yield of residentially zoned land. However, when that projection was prepared, the site was zoned R-20, whose 23 lots would have generated an estimated 29 school-aged children. Therefore, the 13 school-aged children expected as a result of the proposed project should have been more than accounted for in the District's analysis and projected in its growth rates.

The school taxes paid by the project are anticipated to offset a portion of the expenses required of the district to educate the students generated. However, a portion of which is expected to have already been accounted for within the School District analysis for growth.

Police Protection - The project site is located within SCPD Second Precinct located at 1071 Park Avenue. The proposed project will result in a permanent use of the site which will result in increased occupancy of the site and improved site security. As noted in the SCPD's response letter for the prior 22-lot project, "*The proposed construction would have an impact on the workload of the second precinct. However, the exact impact is difficult to determine because such factors as population, certain demographics, traffic patterns, police hazards, etc. impact and determine the police workload in various ways*". As the current proposal is for 10 lots, it is anticipated that the impacts to police services of this current plan would be less than those of the prior plan.

In general, development of the site will inevitably result in an increase in the potential for emergencies for which the SCPD will respond, because of the level of usage in the site will be increased. However, as the potential need for such responses is roughly proportional to the intensity of development, it is anticipated that the proposed project represents an incremental decrease in the potential workload of the SCPD in comparison to that for the prior, 22-lot yield. The additional taxes generated by the future residences will assist in offsetting demand for additional service that may result from land development. A portion of increase in taxes generated by the proposed project will be earmarked to support the operations of the SCPD.

Fire Protection - For the prior 22-lot project, the Eatons Neck Fire Department was contacted and it was confirmed that the proposed project will receive fire protection from this district. It was expressed that the Fire District has the capacity to provide fire protection services to the proposed project from the headquarters station located at 55 Eatons Neck Road, Northport.

Fire Chief Phil Whiter responded that the fire department is prepared and equipped to respond to any fire or emergency situation and that the proposed project would not have an adverse impact to the fire departments operation, although did have the following comment:

> *One comment for consideration is that the proposed development is situated off a narrow private road. New development in this area and associated increased traffic and population will impede response to this area and would elevate to crisis in an evacuation scenario. It is strongly suggested that major improvement to North Creek Road are made contingent with approval of this development.*

In general, development of the site will inevitably result in an increase in the potential for emergencies for which the Eatons Neck Fire Department will respond, because of the level of usage in the site will be increased. However, as the potential need for such responses is roughly proportional to the intensity of development, it is anticipated that the proposed project represents an incremental decrease in the potential workload of the fire department in comparison to that for the prior, 22-lot yield.

The proposed project will improve North Creek Road to Town standards for the entire portion within the site. These improvements include, but are not limited to, a 34-foot paved width, curbs, a drainage system and signage. It is anticipated that these improvements will satisfy the Fire Department concerns expressed above.

When the proposed project is completed, it will generate additional tax revenue to the Eatons Neck Fire District. This projected revenue is expected to offset any anticipated increase in the fire district's expenditures to cover additional service needs associated with the project.

Solid Waste Disposal - The project site currently generates approximately 2.2 tons of solid waste per year. The proposed subdivision will increase the amount of solid waste generated on site and within the Town. It is anticipated that following development, the proposed project will generate 21.7 tons of solid waste per year. Telephone conversation with Audree Gallo from the Town Department of Solid Waste Management acknowledged that, with respect to the prior 22-lot

plan, the Town has sufficient capacity to handle the additional solid waste generated by the proposed project and that no adverse impacts are expected. As the current application is for a 10-lot subdivision, it is anticipated that the potential impacts to the Town's solid waste services would be less than those of the prior plan.

Utilities and Services - The proposed project is located within the service area of the SCWA for the supply of drinking water. The SCWA maintains a network of water mains in the vicinity of the proposed project and estimates that the installation of the proposed water mains to the proposed project will cost roughly $48,000.00. Further information will be provided to the SCWA when fire and water supply demand is known.

Electrical and natural gas services are provided in the project area by LIPA, through its system engineering and maintenance arm, KeySpan Energy. The regional supervisor, Robert Parkingson, indicated that LIPA would provide service to the site in accordance with their filed tariff and schedules in effect at the time service is required. According to Lewis Cabibi of Gas Sales and Marketing, a gas line may be available to provide service to the site depending upon future expected gas loads which must be determined when exact uses and construction timing are known.

Cultural Resources

Visual Resources - Ten of the existing eleven buildings on the site will be removed; only the shed at the bottom of the beach stairway will be retained. While vegetation will be cleared for the project (an estimated 22 to 27% of the site), this clearing will occur within the interior of the property. Like the previously-approved 22-lot subdivision, naturally-vegetated buffers will be retained along all property lines, particularly along the sensitive western boundary, abutting the bluff. In this area, a minimum 125-foot thick buffer will remain, to provide visual and aesthetic relief, and preserve the natural character of the property.

Retention of these buffers will minimize impacts for outside observers, by reducing the visibility of the project. During the majority of the year, the depth of the buffers, combined with the thickness of the vegetation and the mix of taller trees and understory will result in a minimal opportunity to discern the buildings; it is anticipated that only during the winter (with the absence of leaves on the deciduous trees) will the residences be readily visible through the bare branches and remaining understory.

For that portion of the site along and adjacent to the bluff, the forest vegetation becomes sufficiently thin in places to allow significant views inward from and outward toward the west (and, to a lesser degree, to the northwest and southwest) across Huntington Bay.

In general, the impact of the project on the visual resources of the site will be to slightly increase the visibility of the buildings proposed, though primarily to viewers at a distance toward the west. Viewers closer to the site to the north, east and south will experience lesser degrees of impact, as the thickness and density of vegetation retained within the site in these directions is greater than for the westerly bluff area.

The proposed project involves the improvement of North Creek Road along the site's frontage up to the new site subdivision road. This segment of road and the internal subdivision road will be installed consistent with Town roadway specifications. The section of North Creek Road leading to the site's frontage was intended to be improved to Town specifications under the Hogan plat division of land. Such road improvements are typically required for all new subdivisions so that safe and adequate access to new developments is provided. There will be no parking of cars, boats or other vehicles along North Creek Road. Roads interior to the Old Orchard Woods subdivision are likewise not expected to have on-street parking since adequate lot sizes, driveways and garages will be provided for use by residents of the subdivision. The subdivision of property, in conformance with Town zoning requirements, is the contemplated use for the subject site. Installation of roads to Town specifications are a normal part of the working landscape of the Town of Huntington where a new subdivision is involved. As a result of the project's consistency with these requirements, no significant adverse impact is expected to occur with regard to road installation. Overall site aesthetics are enhanced by the preservation of conservation easements and preserve areas on the property, specifically, the western part of the property adjacent to the bluff and the eastern part of the property adjacent to North Creek Road. Substantial buffers and trees will remain on the interior of the property as well. There are no specific plans for planting of common areas, particularly the proposed 15-foot wide beach access. The project will comply with any required street tree plantings and recharge basin plantings which are necessitated by the subdivision.

Archaeological Resources - A Stage IB CRA was undertaken as a result of the Stage IA recommendation for additional testing, to determine the presence of significant cultural resources (reflective of both prehistoric and historic era uses of the site). The results of that investigation indicate that no such resources are found on the property. Therefore, as no such resources are present on the site, no impact is anticipated.

Correspondence from the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) to NYSDEC as part of their review of the Tidal Wetlands application indicates that the project *"...will have No Impact upon cultural resources on or eligible for inclusion in the State or National Register of Historic Places."*

Mitigation Measures

Geology

- Erosion preventive measures to be taken during the construction period may include: 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 recharge basin will be used as backfill (if it displays acceptable bearing capacity and leaching characteristics) to produce acceptable slopes for construction. Applicable Town of Huntington 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 as backfill. All unacceptable material will be removed and taken to an approved landfill for disposal.

- Dust raised during grading operations may 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.

- Truck movements and construction activities will be undertaken on the site during the hours of approximately 7 AM-6 PM or as specified by the Town Code. Truck routes to and from the site will be limited to North Creek Road and Eatons Neck Road, thereby minimizing noise, dust and potential safety impacts to residential communities adjacent to the site.

- The proposed project will minimize the potential for impact to the beach and bluff, due in part to the Conservation Easement which will preserve and protect this area from development and associated impacts associated with the project. These features are within a 3.4 acre Preserve Area which is also designated as a Natural Protective Feature Area by the NYSDEC Coastal Erosion Management Program (NYSDEC, 1988). All development, excavating, grading or mining is prohibited on beach and bluffs in such an area, unless specifically allowed by subdivision 505.8(c) of the Coastal Erosion Management Regulations. To ensure that development will not impact the bluff, project activities will comply with the Local Waterfront Revitalization Program which requires that construction activities must be set back at least 100 feet landward from the top of the bluff. At the current recession rate of 1.9 feet per year, new construction will not be jeopardized for approximately 50 years unless the bluff face should stabilize. In conformance with the existing Restrictive Covenant, if the recession of the bluff should pose a threat to on-site structures, construction of bulkheading may be installed subject to the prior approval of regulating agencies. Such approval procedures may include review of plans by a qualified professional geologist and consideration of non-structural measures. Construction of these mitigation measures, if desired, will be the responsibility of the individual homeowners and/or the Town of Huntington as permitted in the Conservation Easement. However, such a feature is currently not included as part of the proposed development activities.

Water Resources

- The proposed project will consist of 10 single-family residences and therefore no toxic or hazardous chemicals are anticipated to be present or utilized on the site. Consequently, no impact to groundwater quality is anticipated from this source.

- Each residence will utilize an individual sewerage system for disposal of sanitary wastes. Nitrogen concentrations of 2.55 mg/l will result from sanitary discharges and stormwater runoff. The anticipated concentration is less than the NYSDEC drinking water standard of 10 mg/l and therefore, the proposed project is not expected to result in significant adverse effects to groundwater quality with regard to nitrogen loading.

- The expected wastewater flow from individual sewerage systems for the entire project will be approximately 3,000 gallons per day (gpd) resulting in 123.92 gpd per acre. This conforms to Article 6 of the Suffolk County Sanitary Code, which allows 600 gpd per acre or a total of 14,526 gpd for the entire site. The proposed project will generate 79% less sanitary wastewater than allowed by regulations of the SCDHS.

- SONIR computer model results for the proposed project indicate that a total of 17.38 million gallons per year (MG/yr) of water will be recharged on the site. Of this anticipated recharge volume, stormwater will account for 85% ,with wastewater contributing 13.8% and irrigation yielding 1.1%. 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 recharge basin.

- The project site will utilize public water, to be supplied by the SCWA via an existing main beneath North Creek Road. The potable water requirement of the project, 3,000 gpd, is not anticipated to impact the ability of the SCWA to serve the public in the vicinity.

- The amount of overland runoff will be reduced through the installation of roadside catch basins that will redistribute runoff to the on-site recharge basin.

- The proposed actions at the project site are not expected to have a significant impact on surface waters resulting from subsurface sanitary flows that may discharge to the surface. The soils underlying the project site consist of highly permeable Carver, Plymouth and Riverhead sands with discontinuous clay layers throughout resulting in isolated perched water zones. These clay layers influence the horizontal component of groundwater movement and may result in the discharge of waters as seeps along clay lenses observed on the bluff face. However, preferential horizontal flow along the surface of the clay may be interrupted due to the clay's discontinuous nature producing gaps within the clay layer. This will result in the resumption of flow along the preferential vertical pathway due to gravity and the highly permeable nature of the surrounding sands. This will reduce seepage along the bluff face allowing for groundwater recharge at the water table.

  In addition, analysis of the data generated from the geologic borings collected on-site and observation of site topography indicate that the discontinuous clay layer may slope away from the bluff face. This will result in a horizontal flow component moving in an easterly direction away from the bluff reducing the potential for seepage of sanitary discharges along the bluff face. In the unlikely event that sanitary effluent were to discharge from the surface of the clay layer outcropping along the bluff, impacts related to nitrogen concentrations in the waste water would be negated by the following:

  1) each individual on-site sanitary waste system is designed to conform with the SCDHS regulations and design requirements in order to ensure the protection of groundwater quality;
  2) the project will generate 79% less wastewater than allowed under SCDHS regulations;
  3) nitrogen gas would be removed by each individual septic system;
  4) bacteria generated by septic waste will be removed by subsurface soils;
  5) removal of nitrogen through natural denitrification processes.

Ecological Resources

- Minimize disturbance to the maximum extent practicable, including delineating tree clearing limits at the site prior to construction in order to avoid inadvertent clearing.

- Removal of between 5.34 and 6.60 acres of tulip-oak forest will be mitigated by planting of up to 1.26 acres of native species typical of tulip-oak forest.

- Native and near native plant species which provide food and shelter to wildlife will be utilized in the landscaped areas of the recharge basin where possible. This may encourage ongoing use of the site by avian species which would otherwise abandon the site. Species which will be utilized include the following: serviceberry, hackberry, dogwood, persimmon, American holly, red cedar, crabapple,

mulberry, pin cherry, chokecherry, sassafras, mountain ash, devil's walking-stick, Russian olive, autumn olive, huckleberry, inkberry, juniper, honeysuckle, rye grass, redtop, and fescue.

- Nesting boxes will be installed by the Applicant and maintained by the HOA along the edge of existing vegetation on land owned by the HOA, to encourage use of the site by avian species and help mitigate loss of natural nest sites through clearing. Some of the native species which commonly utilize nest boxes include the eastern bluebird, house wren, tree swallow, and purple martin. The non-native starling and house sparrow also utilize nest boxes, sometimes displacing native birds. The boxes will be monitored to discourage use by these two species. The New York Audubon Society's Nest Box Network provides specifications for constructing and locating boxes, as well as information on follow-up monitoring.

- Retaining walls may be used to minimize the amount of natural vegetation removed for clearing and grading. These may be located in the side and rear yards.

Transportation

- As no impacts to existing sight distances at the site entrance/North Creek Road intersection, no mitigation is required.

- As the proposed project will not generate a number of vehicle trips sufficient to significantly impact the operation of area roadways or intersections, no mitigation is required.

- At the North Creek Road/Eatons Neck Road intersection, the existing conforming sight distance to the northeast and the southwest will not be reduced by the project; hence, no mitigation is required. Toward the southwest however, the existing sight distance (140 feet) is close to the AASHTO standard of 125 feet. While the proposed project will not impact this condition, it is recommended that the appropriate agency undertake limited vegetation clearing in the Eatons Neck Road ROW to provide an improved sight distance for drivers at this point.

- Improvements to North Creek Road between the southeastern corner of the site and Eatons Neck Road will be provided by the Town of Huntington, as these were bonded at the time of the original Hogan Plat Subdivision.

Land Use, Zoning and Plans

- As was the case for the prior 22-lot subdivision, no impact to the existing land use of the site or on the pattern of land use in the vicinity is anticipated; hence, no mitigation is planned.

- As was the case for the prior 22-lot subdivision, no impact to the existing zoning of the site or on the pattern of zoning in the vicinity is anticipated; hence, no mitigation is planned.

- Similar to the prior 22-lot subdivision, the reduction in the acreage of Open Space Index Parcel #NE-1 will be mitigated by preservation and protection of the 1.96-acre western portion of the site, as well as provision of an additional 15.24 acres in the interior, which will include steep slope areas and buffering vegetation in rear yards and between lots. These are the features which give the site its significance which caused it to be listed on the Town's Index.

- As was the case for the prior 22-lot subdivision, the project plan was and will be developed in such a way as to preserve and protect those environmental features which caused the site to be included on

the EOSPA list. Specifically, a Conservation Easement will be granted for the entire beach/bluff area. The 125-foot setback along the bluff easement will increase preserved area

- Similar to the prior 22-lot subdivision, the recommendations of the Town Comprehensive Plan Update with respect to avoidance of environmentally-sensitive areas, minimizing disturbance to established residential areas, and designing projects which respect development restrictions will be followed.

- As was the case for the prior 22-lot subdivision, the proposed project will conform to all applicable recommendations of the following federal, state and town plans, studies and regulations pertaining to Long Island Sound and its associated coastal areas:

  1) National Estuary Program
  2) Long Island Sound Study
  3) NYS Coastal Management Program
  4) Coastal Non-Point Source Pollution Program
  5) NYS Coastal Erosion Hazard Areas Act
  6) Town Coastal Erosion Management Regulations

- As was the case for the prior 22-lot subdivision, the proposed project conforms to all of the applicable regulations of the Suffolk County Planning Commission Subdivision Guidebook; hence, no mitigation is planned.

- As was the case for the prior 22-lot subdivision, the proposed project conforms to all of the applicable goals and guiding principles of the NYS Open Space Conservation Plan; hence, no mitigation is planned.

Community Services

- Security and fire alarm systems and sprinkler systems will be installed in the proposed buildings. Proper lighting of the site will be employed to discourage loitering and other illegal activity.

- The additional taxes generated by the proposed project will assist in offsetting demand for potential increased services which may result from the project. Based on current tax rates, it is estimated that the proposed project will generate an additional $136,308 to $336,762 in annual tax revenue to community services, depending on sale price of the homes.

- Energy efficient design will be utilized where possible, and buildings will be consistent with code requirements.

- There are no proposed impacts in relation to demography, therefore no mitigation is required. However, the slight increase in population due to the proposed project is expected to cause a beneficial impact through expenditures into the community.

Cultural Resources

- As no archaeological resources are present on the site, no impacts to such resources will occur, and no mitigation is required.

- Mitigation of potential visual resource impacts will be achieved by minimizing the need for erosion-protective structures on the base of the bluff, as these would be particularly visible to observers to the

west, and by retention of natural vegetation on the western portion of the site, in conformance with the existing Restrictive Covenants. Implementation of the Conservation Easement will minimize the potential for impact to the bluff, which could otherwise occur via an increase in the erosion rate, and give the Town of Huntington adequate monitoring ability.

- Retention of naturally-vegetated buffers along all four boundaries will serve to mask the developed portion of the site from outside viewers, as well as to eliminate views of the adjacent developments (except toward the west) from residents of the site.

Permits and Approvals Required

This Draft EIS is intended to provide the Town of Huntington Planning Board with the information necessary to render a decision on the Old Orchard Woods Subdivision application. As explained earlier, the Planning Board previously issued a Findings Statement which determined that the subdivision of the subject property into 22 lots would not result in significant adverse impacts. Due to the Town Board's upzoning of the property to R-80, the applicant, in an attempt to protect his development rights, has submitted a 10-lot subdivision plan that conforms to the R-80 zoning district. Given that the density of the currently-proposed 10-lot subdivision application is less than half that of the 22-lot subdivision previously evaluated and approved by the Planning Board, and that the instant application incorporates the mitigation measures agreed to during the SEQRA process for the 22-lot subdivision, the record supports the finding that the 10-lot subdivision application would not result in significant adverse environmental impacts.

This document is intended to comply with SEQRA requirements as administered by the Town of Huntington. Once accepted, the document will be the subject of public review, followed by the preparation of a Final Environmental Impact Statement (FEIS) for any substantive comments on the DEIS. Upon completion of the FEIS, the Planning Board will be responsible for the preparation of a Statement of Findings, which will form the basis for the final decision on the Subdivision application. Following this process, the following additional approvals would have to be obtained prior to commencement of project construction:

- Town Planning Board - Subdivision review
- Town Dept. of Buildings, Engineering and Housing - Building Permits
- Town Dept. of Buildings, Engineering and Housing - Coastal Erosion Management Permit
- Town Highway Dept. - Roadwork Permit
- Suffolk County Dept. of Health Services - Article 6 (Sanitary System design review)
- Suffolk County Dept. of Health Services - Article 4 (Water Supply System design review)
- Suffolk County Water Authority - Water Supply Connection
- NYSDEC- Modification of Tidal Wetlands Permit (#1-4726-01219/00001)
- NYS Department of State - Federal Consistency Assessment Form review (#F-99-446)

A Tidal Wetlands permit application was submitted by the Applicant to the US Army Corps of Engineers in May 1999. The Corps indicated that no such permit is required, as *"... the proposed work does not appear to include dredging or construction activities in or over any navigable waters of the United States, the placement of any dredged or fill material in any*

waters of the United States (including coastal or inland wetlands) or the accomplishment of any work affecting the course, location, condition or capacity of such areas."

A Tidal Wetlands permit application was also submitted by the Applicant to the NYSDEC in May, 1999. Following completion of the SEQRA process, the NYSDEC completed its review of the application, and issued the permit in October, 2000. As this permit was issued based upon the prior 22-unit yield, the current 10-unit project, which has been developed solely to protect the Applicant's development rights, will require a Modification of this existing permit.

SECTION 1.0

DESCRIPTION OF THE PROPOSED ACTION

1.0 DESCRIPTION OF THE PROPOSED ACTION

This document is a Draft Environmental Impact Statement (DEIS) prepared for a subdivision application involving a proposed 10-unit residential project on a 24.21 acre parcel of land in Eatons Neck, Town of Huntington, New York (i.e., Old Orchard Woods Property). The project site is located on the west side of North Creek Road, west of its intersection with Eatons Neck Road. The property is currently occupied by eleven structures (2 cottages, 4 residences, 2 garages, 1 shed and 2 pumphouses), of which only one is presently in use as the caretaker's residence. The applicants are William Kollmer and Mary Ellen Curtis (owner, Eatons Neck, New York) and William Kollmer Contracting, Ltd.

The proposed development of the Old Orchard Woods property began in 1988 with the request for a two-lot land division of a property known as the Hogan Parcel. An environmental review was conducted for the proposed two-lot land division which included the preparation of an Environmental Assessment Form (EAF) Parts I, II and III by the applicant (Part I), and the Town of Huntington (Parts II and III). The EAF recognized the potential for future subdivision of the larger remaining parcel (the 24.21 acre subject site) and advocated for cluster development. A Conditioned Negative Declaration (CND) and, ultimately, a Negative Declaration were issued for the subdivision, thereby concluding the SEQRA process. Covenants and restrictions were placed upon the subdivision (which was granted approval in 1989). One of the conditions was that 3.4 acres (10 percent of the entire parcel which was concentrated entirely within the future Old Orchard Woods [24.21-acre] site) was to be privately-owned and subject to a conservation easement.

The subdivision of the subject 24.21-acre property began in 1998 with the submission of a Part I EAF by the applicant. The SEQRA process continued for over two years and culminated with the issuance of the Findings Statement on July 12, 2000 and the Certification of Findings on July 19, 2000. That Findings Statement determined that the subdivision of the property into 22 lots on 24.21 acres would not result in significant adverse impacts. The 22-lot Old Orchard Woods subdivision was granted preliminary approval by the Town of Huntington Planning Board on July 12, 2000, based upon the SEQRA Findings Statement adopted by the Board.

Shortly thereafter, on October 10, 2000, the Town Board of the Town of Huntington rezoned the subject 24.21 acres to R-80. As a result of the action by the Town Board, the applicant is now submitting a 10-lot subdivision plan that comports with the R-80 zoning district to protect the applicant's ultimate development rights.

1.1 Project Background, Need and Benefits

1.1.1 Background and History

The subject application, named **Old Orchard Woods**, involves the re-subdivision of one lot of a previously approved two-lot subdivision of a property then owned by one of the current

Applicants (the "Hogan Plat"). The Hogan Plat subdivision application was submitted August 18, 1988, and the Town Planning Department (now Town Department of Planning and Environment, DPE) prepared an Environmental Assessment Form (EAF) Part II and III on January 10, 1989 (see **Appendix A-1**). A Conditioned Negative Declaration (CND) was issued by Resolution of the Town Planning Board on January 11, 1989 (see **Appendix A-2**). The CND was issued on that date and amended on January 17, 1989 (see **Appendix A-3**). The CND was amended again by Resolution of the Town Planning Board on February 22, 1989 (**Appendix A-4**), and the subdivision application was given preliminary approval on April 26, 1989 (**Appendix A-5**). The Hogan Plat subdivision application was given final approval by the Huntington Town Planning Board on September 20, 1989, and amended on October 25, 1989 (see **Appendix A-6** and **Map of Hogan Plat**, in folder at rear).

The Hogan Plat subdivided an overall 34± acre site into two lots (9.371 acres/Lot 1 and 24.21 acres/Lot 2). Lot 1 was subsequently developed with a single-family home, and Lot 2 remained undeveloped. In addition, a declaration of covenants (see **Appendix A-7**) stated that the westernmost 3.4 acres of Lot 2, occupied by bluffs overlooking Long Island Sound, would remain as a Preserve Area for open space preservation and bluff protection, subject to certain of the terms and conditions contained therein. The covenants provided, in pertinent part, that that subdivision "*... will satisfy any requirement that land be shown as a park upon this subdivision or any future subdivision of Lot 1 or Lot 2.*" This was an action to ensure that future development of Lot 2 would satisfy the Town requirement for a 10% parkland set aside, based on the acreage of the entire 34± acre property, and not the smaller acreage of Lot 2 only.

During the January 13, 1999 Town Planning Board hearing, it was confirmed that the 3.4-acre Preserve Area was sufficient to satisfy the Town parkland requirement, and that dedication of this Preserve Area to the Town was not required. It is important to note, if accepted by the Planning Board, Alternative 3 set forth herein contemplates an additional 4.45 acres to be offered for dedicated to the Town of Huntington.

The original Old Orchard Woods 22-lot subdivision application was initially submitted to the Town Board on August 27, 1998 (see EAF Part I, **Appendix A-8**), the Suffolk County Planning Commission approved the application on October 7, 1998 (subject to sixteen conditions, see **Appendix A-9**), and the Town prepared the EAF Parts II and III on March 3, 1999 (see **Appendix A-10**). On March 10, 1999, the Town Planning Board passed a Resolution approving a Positive Declaration under the NYS Environmental Quality Review Act (SEQRA), which required that a DEIS be prepared (see **Appendix A-11**). Correspondence received from the Town Department of Planning and Environment on March 12, 1999 indicated that the issues discussed in the EAF Parts II and III were to be considered the Scope for the DEIS (see **Appendix A-12**). **Appendix A-13** contains a Resolution from the Town Planning Board which eliminated consideration of an attached unit Alternative from the DEIS.

The DEIS for the original Old Orchard Woods subdivision was prepared by Nelson, Pope & Voorhis, LLC and formally submitted to the Town Planning Board (as Lead Agency under SEQRA) on behalf of the Applicant in September, 1999. Subsequent to technical review by staff of the Town DPE, the Director of DPE recommended to the Planning Board that it accept the

document as complete for public and agency review, and that it hold a public hearing. On October 7, 1999, the Town Planning Board issued the Notice of Completion of the DEIS. The public hearing was held on November 17, 1999, and an FEIS was accepted for filing by the Lead Agency on April 27, 2000 (see **Appendix A-14**).

The SEQRA process continued for over two years and culminated with the issuance of the Findings Statement on July 12, 2000 (and Certified on July 19, 2000) which determined that the subdivision of the subject site into 22 lots would not result in significant adverse impacts (see **Appendix A-15**). The Old Orchard Woods subdivision application received preliminary subdivision approval by the Planning Board on July 12, 2000, based upon the SEQRA Findings Statement adopted by the Board (see **Appendix A-16**). However, in Resolution 2000-559 (see **Appendix A-17**), the Town Board of the Town of Huntington scheduled a public hearing to consider amending the zoning map and the Huntington Town Code with regard to a change of zone from R-20 to R-80 on the Town Board's own motion for properties located on North Creek Road, Eaton's Neck. The tax parcels involved included:

District	Section	Block	Lot
400	1	2	1.2
400	1	2	4.1
400	1	2	p/o 4.2

Lot 4.1 is the Old Orchard Woods property which comprises 24.21 acres of the 32.5 acres involved in the rezoning. Lot 1.2 is 5.3± acres located directly north of the Old Orchard Woods property. This site has relatively steep topography and is currently zoned R-20. Lot 4.2 is 9.37 acres overall; approximately 2.99 acres of this parcel are proposed to be rezoned from R-20 to R-80. Lot 4.2 is the other portion of the Hogan Parcel that was subdivided in 1989.

On July 25, 2000, nine (9) business days after the SEQRA process for the Old Orchard Woods subdivision was concluded and the project received preliminary subdivision approval from the Planning Board, the Town Board, on its own motion, resolved to consider an upzoning of the parcel from R-20 to R-80. Upzoning of the above-noted parcels was enacted by the Town Board on October 10, 2000 (see **Appendix A-18**). The Old Orchard Woods parcel comprises the approximately 75 percent of the area which was proposed to be rezoned.

As a result of the action by the Town Board, the applicant is now submitting a 10-lot subdivision plan that comports with the R-80 zoning district, which is the subject of this DEIS. As previously indicated, it is the applicant's position that the upzoning was improper. Thus, the applicants do not represent that the currently proposed 10-lot subdivision (i.e., the proposed action considered herein) is acceptable, and this submission is made solely to protect the applicants' ultimate development rights.

As a result of the reduced yield of the site, the applicants have prepared a new **Preliminary Map**, on which this document is based.

1.1.2 Public Need

The public need for the project is related to the benefits to be derived if the project is implemented. The Applicant has designed the proposed project to achieve the highest and best use of the site based on the current residential zoning, which the Applicants assert was unjustifiably and improperly imposed by the Town Board. As indicated by the Applicant, it is anticipated that 6 of the units will have 4 bedrooms, and 4 will have 5 bedrooms. The selling price of these approximately 3,500 square foot (SF), 2-story homes is anticipated to be in the range $500,000 to $1.2 million.

The project site lies within a low-density residential area in the Town of Huntington, which has long been and remains an area with a distinctly rural atmosphere. The current Town Comprehensive Plan designates the area and site for low-density residential use which includes one-half-acre, one-acre and two-acre single-family development.

The project area reflects a mature, suburban land use pattern, with a few remaining properties available for development. The proposed residential project will provide a permanent use of an underutilized property in conformance with the R-80 zoning recently enacted by the Town Board.

The project also includes two substantial land dedications to the Town, as follows:

- the 1.51-acre recharge basin
- the 2.70 acres of the North Creek Road ROW within the site

A 1.43-acre portion of the 125-foot setback from the top of the bluff lies outside the 3.4-acre Preserve Area. This area will remain undeveloped, except for building removal operations and brush removal. It is anticipated that brush removal (though not tree removal) will be allowed within this area, to allow for sight lines toward Huntington Bay and Long Island Sound for residents; this is similar to the existing Restrictive Covenants (which are applicable within the existing Conservation Easement). A portion of the 3.4-acre Preserve Area may be used in the future for bulkheading and a docking facility (neither of which are included in the proposed project). In such a case, these would be provided by the individual homeowners and subject to conformance with all applicable rules, regulations and laws.

The development of the property will increase the revenues generated to taxing jurisdictions, though it will result in corresponding increases in demand for services, particularly in regard to school enrollments.

1.1.3 Objectives of the Project Sponsor

The objective of the project sponsors is to protect his legal rights to develop his property in character with the surrounding area and historical zoning pattern.

1.1.4 Benefits of the Project

The proposed project will provide high-quality residential housing in a very exclusive and desirable area of the Town of Huntington albeit at lesser density than surrounding properties. Furthermore, the permissible density, based upon the Town Board's recent upzoning of the property to R-80, is out-of-character with historic zoning patterns. In addition, the project will generate a substantial amount ($378,656) of real property tax revenues annually. Finally, an estimated 50 temporary construction jobs would result from project implementation.

1.2 Location

1.2.1 Geographic Boundaries of the Project Site

The 24.21-acre project site is located on North Creek Road, approximately 750 feet west of the North Creek Road/Eatons Neck Road intersection, in the hamlet of Eatons Neck, Town of Huntington. **Figure 1-1** is provided as a general location map for the subject site. It should be noted that Long Island Sound is adjacent to the site to the west, and the Village of Asharoken's boundary is located adjacent to the northeast.

The site has approximately 807 feet of frontage along North Creek Road and approximately 795 feet of frontage on Long Island Sound. The project site is identified as Suffolk County Tax Map District 400, Section 01, Block 2, Lot 4.1. The subject property is the site of the former Hogan Estate.

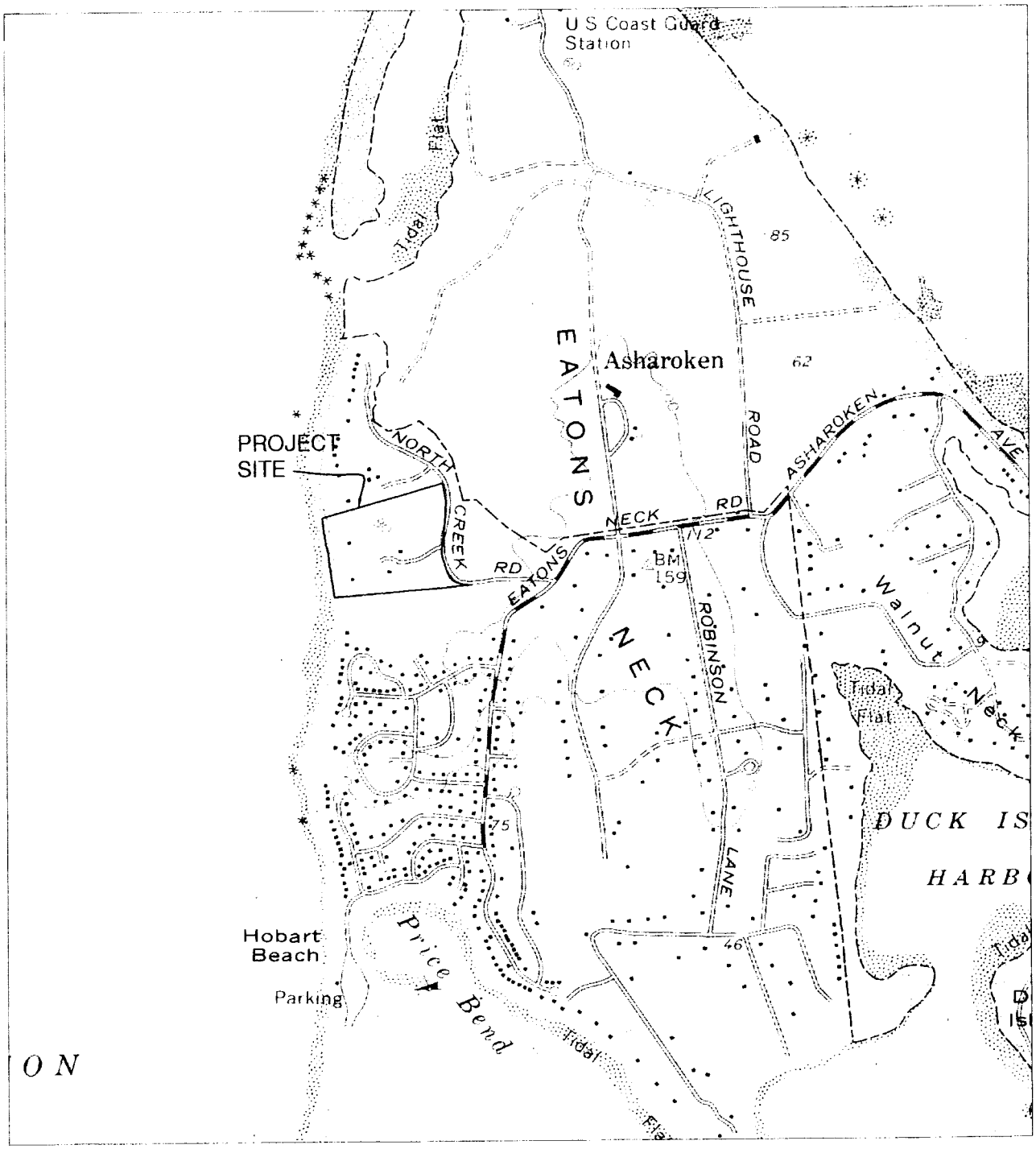
The project site is zoned R-80 (Residence) which requires a minimum lot size of 2 acres. As previously indicated, the zoning of the property was changed, pursuant to an action by the Town Board, on October 10, 2000, merely 12 weeks after the Planning Board granted preliminary approval of a 22-lot subdivision based on the then-prevailing R-20 zoning. Property contiguous to the northwest and along the southern property boundary is zoned R-20. Property to the east is zoned R-80. Beyond these parcels, R-5 (5,000 SF lot size) is the predominant zoning along Long Island Sound, while R-15 (15,000 SF lots) is the predominant zoning landward and to the west side of Eatons Neck Road. The predominant land use in the area is residential.

The majority of Eatons Neck is characterized by residential development. Properties to the north, south, and east of the project site are residentially zoned and developed. Additional information on zoning and land use is provided in **Section 2.5**, and a description of community services is contained in **Section 2.6**.

An estimated 1.67 acres of the subject site are currently developed, containing six residences (of which only one is inhabited) several unused sheds/garages and two unused pumphouses. Approximately 0.17 acres are occupied by buildings, 0.23 acres are covered by

FIGURE 1-1

LOCATION MAP



Source: USGS Topographic Maps, 7.5 minute series
Scale: 1" = 1,500'

NORTH

impervious surfaces (road, parking area, patio, etc.), 0.41 acres is the unpaved, stone/packed earth-surfaced North Creek Road, 0.86 acres are occupied by lawn/landscaped areas adjacent to the buildings, 1.96 acres are in the beach/bluff, and 20.58 acres are natural tulip-oak forest.

The site is in the following service and planning districts:

- Eatons Neck Fire District
- Northport-East Northport Union Free School District
- Suffolk County Water Authority
- Suffolk County Police Department, 2nd Precinct
- Town Open Space Index (p/o Parcel #NE-1)
- Local Waterfront Revitalization Program
- R-80 (Residence) District
- NYS Coastal Erosion Hazard Area
- Hydrogeologic Zone VIII

1.2.2 Site Access

Access to the site is available via North Creek Road. A portion of this road is located within a 50-foot easement which presently occupies the easterly border of the subject site. From Eatons Neck Road, North Creek Road runs westerly and, upon reaching the site's southeastern corner, turns northward. From this point northward, North Creek Road is unpaved, uncurbed and is not served by a drainage system. Upon entering the site, the proposed main access (to occupy a location approximately 150 feet north of the existing access), runs westerly approximately 600 feet, at which point it will terminate in a T-intersection whose branches proceed short distances to the north and south before terminating in cul-de-sacs.

1.2.3 Site Zoning

The subject site is located within the "R-80 Residence District" as depicted on the *Town of Huntington Zoning Map.* As previously indicated, the R-80 zoning was enacted by the Town Board on October 10, 2000. Prior to that date, the subject property was zoned R-20 and that zoning was in effect since at least 1974. Permitted uses in the R-80 Residence District include single family residences with a minimum area per dwelling of 2 acres, farms, nurseries, truck gardens, country estates, churches, schools, libraries, museums, parks and recreation areas, municipal parking fields, fire stations, and municipal water supply reservoirs. Buildings in the District are limited to a maximum height of 35 feet or 2 stories. Dimensional restrictions for building setbacks are as follows: front yard setback, 50 feet; side yard setback, 25 feet (combined yard of 50 feet); and rear yard setback, 50 feet. It should be noted that the site is subject to the Town of Huntington Steep Slope Ordinance, which will be further discussed in **Section 2.1** of this document.

The R-80 Yield Map prepared for the site (on which the proposed project is based), was devised in consideration of the Town's Steep Slope Ordinance, results in a 10-lot yield.

1.3 Project Design and Layout

1.3.1 General Layout

Table 1-1 provides a listing of the subject site's existing and proposed coverages and physical characteristics. For calculation purposes, this document assumes a 1,800 SF building coverage for each house; ultimately, a total of 7.01 acres will be developed. The project site is roughly square in shape, with North Creek Road running north-south along and within the property's eastern border. The site's single access roadway (Apple Drive) will be located at approximately the mid-point of this boundary. Three of the lots are accessed off the northern cul-de-sac (Peach Court North), four off the southern (Peach Court South), two lots will be accessed off Apple Drive, and one lot will be accessible directly off North Creek Road. Similar to the proposed project, lawn/landscaped areas within the lots are assumed to extend from the road frontage to a depth of 100 feet from the rear of the residence, or to the 125-foot bluff setback line (whichever is closer to the unit). In order to maximize the amount of existing tulip-oak forest retained, it is assumed that no more than 15% of each lot will be maintained landscaping. A 66,072 SF/1.51-acre recharge basin is found in the northeastern corner of the site. All lots are 87,120 SF/2.00 acres in size. The proposed 125 foot non-disturbance setback from the top of the bluff is in excess of the 100-foot requirement. This will provide an increased level of protection for the bluffs, by increasing the distance between the bluff face and the units on lots 3-6.

The proposed project is designed and proposed within the parameters established by the Town Zoning Code, based upon the Town Board's upzoning of the property to R-80, and the dimensional requirements contained therein. The installation of Town specification roadways as well as a recharge basin are both required in subdivision regulations and under Town engineering review. Such improvements are part of the ordinary working landscape of the Town where a new subdivision is involved. The proposed recharge basin adjacent to North Creek Road is intended to be dedicated to the Town of Huntington. The Town typically receives dedication of recharge basins and this area is adjacent to the access road and therefore is accessible for maintenance which may be required. Other portions of the Old Orchard Woods subdivision will be held in private ownership. A Homeowners Association (HOA) will be formed and access to the beach for all residents of the subdivision will be provided via the proposed easement and use of the existing valley which accesses the beach.

The applicant will fund the improvements of Apple Drive, Peach Court North and Peach Court South, as well as the improvements to North Creek Road along and within the frontage of the site (see **Section 1.3.5**). The applicant will also fund and construct the proposed recharge basin (see **Section 1.3.6**). This work will be conducted following project approval and subject to bonding by the Town Planning Board to ensure proper completion of these improvements. Once completed, the roads and recharge basin are proposed to be dedicated to the Town of Huntington and thereafter will be maintained by the Town.

TABLE 1-1
SITE AND PROJECT CHARACTERISTICS

Parameter	Existing Conditions	Proposed Conditions
Coverages:	---	---
Building	0.17 acres	0.41 acres
Impervious/Paved	0.23 acres (1)	2.09 acres
Unpaved/Pervious	0.41 acres (2)	0 acres
Landscaped	0.86 acres	3.00 acres (3)
Recharge Basin	0 acres	1.51 acres
Beach/Bluffs	1.96 acres	1.96 acres
Tulip-Oak Forest	20.58 acres	15.24 acres (4)
TOTAL	24.21 acres	24.21 acres
Trip Generation:	---	---
AM Peak Hour	1 vph	8 vph
PM Peak Hour	1 vph	10 vph
Water Resources:	---	---
Water Use/Wastewater Generation	300 gpd	3,000 gpd
Recharge Volume	13.76 MGY	17.38 MGY
Nitrogen Concentration	0.29 mg/l	2.55 mg/l
Miscellaneous:	---	---
Net Tulip-Oak Forest Cleared	N/A	5.34-6.61 acres
Solid Waste Generation	12 lbs/day	119 lbs/day
Recyclable	3.9 lbs/day	38 lbs/day
Residents	5 capita	42 capita
School-age children (5-17 yrs.)	2 capita	13 capita
Pre school-age children (≤5 yrs.)	1 capita	6 capita

(1) Paved internal roadway.
(2) Unpaved North Creek Road.
(3) Irrigated @ 5.50 inches/year and fertilized @ 2.30 lbs/1000 SF/tear.
(4) Includes up to 1.26 acres cleared for demolition of existing buildings, paved surfaces and landscaping.

1.3.2 Clearing

As with the previously approved 22-lot subdivision, the primary natural features of the site will be preserved and covenanted to remain natural. It is reasonable to expect that homeowners will desire yard areas and possible outdoor amenities. As discussed above, it is anticipated that a maximum of 15% of each lot will be landscaped. It is also reasonable to expect that the natural beauty of the land including forested areas and specimen trees will also be a desirable part of this community. **Table 1-1** indicates that, after development, there will be a total of 15.24 acres of tulip-oak forest on-site, which represents 74% of the existing area of this vegetation type (a net clearing of 5.34 acres). As a detailed Demolition/Clearing Plan has not been prepared, it cannot be determined whether and how much of this demolition area will fall within the 7.01 acres to be developed for the proposed project. Therefore, if all of this demolition were to fall within the same area to be cleared for the proposed project, the minimum of 5.34 acres would be cleared; if

none of the demolition would occur in the proposed development area, the maximum of 6.60 acres would be cleared. When the Site plan is prepared, a detailed Demolition/Clearing Plan may be prepared, indicating the exacting boundaries and amounts, for Town review.

As part of building permit review and site construction, reasonable building envelopes, yards and homesites will be created. Grading will be minimized as much as possible. Specimen trees will be maintained where possible and buffer strips will be left to remain natural in the adjoining side yards and rear yards of homesites. Individual homeowners would have the right to maintain their properties. Trees which are diseased or dead or may pose a threat to on-site improvements would be expected to be removed or maintained. This is contemplated in the proposed design, which retains the primary natural features of the site.

The westerly portion of the subject site lies with a Coastal Erosion Hazard Area, as delineated by the NYS Environmental Conservation Law. There are two types of areas within such a designation: a Natural Protective Feature Area and a Structural Hazard Area. As indicated by the NYS Department of State (the agency overseeing and administering this program), there are no Structural Hazard Areas on Long Island. For this portion of Eatons Neck, the existing bluff is the natural feature to be protected; this is the designated Natural Protective Feature of the site. As given in 6NYCRR Part 505 and the Huntington Town Code (the state and local implementing regulations for this program, respectively), the landward limit of a bluff is 25 feet from the bluff top. This is also the landward limit for non-buildable area.

In addition to this 25-foot limitation, the project site is constrained with a 125-foot building setback from the bluff top. The intended purpose of the 125-foot setback area is to provide a more than adequate setback of the homes from a potential area of erosion. In this 125-foot area, construction of homes will not be permitted. In addition, certain covenants and restrictions affecting the 3.4-acre Preserve Area will be in place. Within the 3.4-acre Preserve Area, the clearing of trees and grading will be prohibited in accordance with the existing covenants and restrictions. Maintenance pruning and removal of dead vegetation will be permitted. The proposed lots have been designed so that each home which is adjacent to the 125-foot setback area will have an adequate building envelope to allow for the siting of the home, yard areas and other amenities. The setback lies entirely beyond this envelope of activity. As a result, there is no adverse impact on the ability of the owners of these lots to utilize these lots for residential purposes.

The rear yard building setback lines for Lots 3-6, sited along the western property line, will terminate at the 125-foot bluff setback limit; no structures will enter this or the Preserve Area. In order to provide a realistic, conservative estimate of tree clearing for both initial construction and later by residents, it is anticipated that clearing will extend to, at most, 100 feet from the rear of the residences, or in the case of Lots 3 and 4, the Preserve Area boundary. In addition, for the areas within the 125-foot setback where two buildings will be removed, these sites will be replanted with natural grass seed, to restore these areas to a vegetation pattern matching their immediate surroundings. Access to the beach will be provided via a 15-foot wide accessway between lots 3 and 4. This area, to be a separate tax lot deeded to the HOA, has been located to coincide with the existing path, shed and stairway to the beach. Use of the existing location for

this beach access, with replacement of these amenities with a better-designed stairway and supplemental plantings, will minimize the potential for long-term erosion of the slope in this area.

1.3.3 Homeowner's Association Responsibilities

The HOA will be formed to own the portion of the project intended to provide access to the beach. Other portions of the property including the beach and bluff will be owned by individual lot owners. The recharge basin and the portion of North Creek Road ROW within the site are proposed to be dedicated to the Town of Huntington. As a result, adequate means of maintenance are provided for various aspects of the subdivision. The maintenance responsibilities and jurisdictions for various aspects of the Old Orchard Woods subdivision are noted as follows:

- The 2.70 acres of North Creek Road ROW within the site are proposed to be dedicated to the Town of Huntington;
- The 1.51-acre recharge basin adjacent to North Creek Road is proposed to be dedicated to the Town of Huntington;
- The 3.4-acre Preserve Area on the west part of the property is proposed to be divided between subdivision lots which extend from the new interior roadway to the shoreline. This Preserve Area would therefore remain in private ownership and would be maintained by individual lot owners, subject to the existing covenants and restrictions. In accordance with these existing covenants and restrictions, it is not anticipated that this will include any activity other than normal pruning and clearing of dead brush. In addition to the 3.4-acre Preserve Area, a 125-foot buffer setback is in place, which will restrict the construction within it of any residential homes. A conservation easement to allow the Town to monitor compliance with the existing covenants and restrictions and the 125-foot no-build zone has been proposed by the Applicant;
- The beach access is proposed as a separate parcel to be owned by the HOA. The land and any improvements or renovation of the existing beach access would be the responsibility of the HOA.

1.3.4 Bluffs and Bulkheading

Bluffs associated with Long Island Sound occupy the western portion of the site; this area is located within the westerly 3.4-acre Preserve Area. The **Preliminary Map** depicts the top and bottom of the bluff within the site, as well as the landward limit of a 125-foot setback from this boundary.

There is no bulkheading proposed as part of the Old Orchard Woods subdivision. Assessment of geologic resources identified a bluff which is subject to some erosion. The lead agency requested that the applicant consider the eventuality that bulkheading may be necessary as a form

of shoreline stabilization in order to eliminate erosion and loss of property. The geological and coastal process issues of shoreline stabilization have been considered in this document (see **Appendix B-1**). It has been documented that a shoreline structure parallel to the shoreline and above mean water is benign from a coastal process standpoint. As a result, should this become necessary the installation of such a structure would not contribute to flooding or impact to adjacent or nearby properties.

The decision as to whether or not to install a bulkhead will be made by the joint homeowners of the affected waterfront lots and/or the developer in the future. Any installation of a bulkhead at some point in the future would be subject to Article 25 of the Environmental Conservation Law and the Tidal Wetlands Land Use Regulations contained in 6NYCRR Part 661.

The previous DEIS suggested that construction of a seawall may be an appropriate mitigation measure to protect the toe of the bluff from wave attack, thereby stabilizing the bluff face if bluff recession poses a threat to on-site structures. Should the installation of a seawall be considered necessary, observations of seawall structures protecting the bluffs north and south of the subject bluff face support this conclusion. Adjacent properties which are subject to the same environmental processes of wind, waves and precipitation as the subject property, were observed to have stabilized to the point of producing an acceptable environment for the growth of vegetation. This vegetative cover further acts to enhance the bluffs resistance to erosion and further recession. If such a structure was constructed at the subject property it stands to reason that this would also stabilize the bluff and allow for the reintroduction of vegetation which would retard or eliminate further recession. In addition, it should be noted that any mitigation measure would be subject to agency review and permitting procedures which would also include consideration of non-structural measures.

1.3.5 Access, Road System and Parking

Vehicle access will be provided off North Creek Road; a 50-foot wide north-south access easement for this roadway is located within the project site, along its easterly border. This will be offered to the Town for dedication. Presently, North Creek Road is not improved within the site. The project will extend the improved portion of North Creek Road that lies within the site northward a distance of approximately 1,100 feet.

The site's internal roadway will be 34 feet in paved width, in accordance with Town standards. A total of 1.89 acres of paved surfaces lie within the site. All roadways leading to and within the site will be dedicated to the Town. Street trees and curbing will be provided. It is anticipated that garages will be provided in the individual houses, and the 0.20 acres of driveway (60 feet long and 15 feet wide) will be of sufficient size so that the need for on-street parking will be minimized or eliminated.

1.3.6 Recharge System

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 the proposed recharge basin. The recharge basin in the pending subdivision plan is proposed to be sited in the northeastern corner of the site, and will be connected to the planned roadside catch basins. North Creek Road will be improved along its entire site frontage, and will be provided with catch basins for stormwater retention.

The recharge basin will be a total of 66,072 SF in area, and will be sized to handle all stormwater generated on-site. Based upon Town standards, the project must provide storage for a minimum of 157,083 cubic feet (CF) of runoff; the **Preliminary Map** indicates that the proposed recharge basin has been designed to handle 180,000 CF of storage capacity. In addition, 3 leaching pools (one in the beach accessway and two on the south property line of Lot 2) will provide another 3,127 CF of storage.

The recharge basin will require excavation and establishment of sidewall slopes of 1:3 or less. The design is consistent with Town requirements and the proposed location is at a low point of the property in order to promote gravity flow of stormwater to this leaching system. The recharge basin has been designed so that it will not intersect regional groundwater and therefore, will allow stormwater to percolate through the subsoils to the groundwater table. Soil borings and geologic cross sections indicate that there are no impermeable barriers beneath this portion of the subject property. As a result, it is expected that the recharge basin will function properly and will serve the stormwater needs of the subdivision in conformance with Town requirements. The recharge basin is situated such that it will lie adjacent to a road dedicated to the Town improved to Town to allow access for maintenance should it be necessary. Only those areas depicted as graded for the recharge basin will be disturbed; all other areas will remain natural. The natural preserved areas are part of the open space system for the proposed subdivision which allows for preservation of vegetation and slope areas.

The subject property currently generates runoff as a result of overland flow during rain events when the infiltration capacity of the soil is exceeded. The proposed drainage system will include a runoff coefficient for adjacent contributing areas. As a result, the runoff generated on site, which has the potential to leave the site under current conditions, will be reduced under the proposed site conditions. It is therefore concluded that the proposed project will not in any way exacerbate an existing flooding situation adjacent to or in the area of the site.

1.3.7 Sanitary Disposal and Water Supply

Wastewater will be generated as a result of the proposed use of the site as a residential development. All sanitary wastewater effluent will be treated in individual on-site sanitary waste disposal systems. For those lots along the western Preserve Area, the systems will be located in the front yards, in order to maximize the separation between the systems and the bluff. This will minimize the potential for seepage of recharged wastewater from the bluff face. This form of

disposal is acceptable provided the projected wastewater design flow does not exceed standards established by the Suffolk County Department of Health Services (SCDHS); the Applicant does not anticipate that this standard will be exceeded. The system design provides protection of groundwater quality from elevated nitrogen concentrations that result from septic wastes. This design promotes the removal of nitrogen gas and the removal of nitrogen through natural denitrification processes. In addition, the subsurface soils underlying the project site will act as a removal mechanism of nitrogen and bacteria associated with wastewater discharges. The concern of nitrogen in subsurface waters is related to the presence of a discontinuous clay layer beneath the project site which could potentially result in discharge of waters along the bluff face impacted by septic wastes (refer to **Section 3.2.3**). However, seepage along the bluff is not expected due to the discontinuous nature of the clay layer that will ultimately allow for recharge of groundwater at the water table.

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

The project site is located within Groundwater Management Zone VIII as defined by the SCDHS. Based on the requirements of Article 6, no more than 600 gallons may be discharged per acre on a daily basis within this zone. The site acreage used for determining this Population Density Equivalent must not include wetlands, surface waters, or land in flood zones. The subject site is 24.21 acres in size and does not contain surface waters or wetlands. Thus, the Population Density Equivalent (total allowable flow) on the subject site is calculated as:

24.21 acres x 600 gpd/acre = 14,526 gallons per day (gpd)

The project sponsors intend to utilize conventional subsurface sewage disposal systems on site, therefore, the total design flow must not exceed the Population Density Equivalent calculated above.

The current design sewage flow standard for single family residential units applied by the SCDHS is 300 gpd. Therefore, it is estimated that the ten (10) proposed residences will generate approximately 3,000 gpd of sewage flow. This is 11,526 gpd (79%) less than allowed for the site by the SCDHS under its current regulations, therefore, conventional on-site sanitary systems may be used for this development.

A significant amount of study has been devoted to understanding the geology underlying the subject site. A series of soil borings have been installed on the property and three geologic cross-sections have been constructed based on the soil boring logs. There is one limited location on the property where an impermeable clay exists approximately 70 feet below ground surface. Reduced permeability clay has been documented in other portions of the property approximately 40 feet below grade. However, this unit does not result in perched water conditions. The deeper gray clay is restricted to the western part of the property and is the reason why seepage is detected at the face of the bluff. This unit is not continuous below the property and dips toward the south and east. Therefore, it is too deep and discontinuous to impact the proposed on-site discharge of sanitary waste using individual systems. Proposed sanitary systems will be distributed throughout the site. Systems will include a septic tank and leaching pool with the capacity required by SCDHS regulations. Each system will require an individual permit to construct and a crane dug test hole will be performed on each individual home site for the system. The test holes will be observed by representatives of SCDHS and should lower permeability clay be observed, it will be excavated until good leaching material is encountered. The excavation will be backfilled with good leaching material and sanitary systems will be placed within these holes. Based upon the detailed understanding of the site geology resulting from the test holes, no significant clay units are expected to be encountered in the installation of individual on site sanitary systems. The number of test holes installed far exceeds the number required by the SCDHS for preliminary subdivision design. In addition, the depth of these test holes also far exceeds the requirements of the SCDHS for preliminary subdivision design. As a result, it is concluded that the proposed project will not adversely affect the groundwater or surface water resources as a result of the installation of sanitary systems. All effluent will leach through the underlying soils in an unsaturated zone of sufficient depth to allow for conversion of ammonia to nitrate. Effluent will leach to the water table and become part of the regional groundwater reservoir. Since the total nitrogen load on the property is consistent with SCDHS requirements this will not adversely affect groundwater resources. In addition, a groundwater impact model has been used to simulate the concentration of nitrogen in recharge. The results conclude that the project will not adversely impact the groundwater as a result of nitrogen loading from the proposed subdivision.

The nearest sanitary septic system to the western border of the site lies approximately 350 feet inland of the bluff crest. Since the extent of the impermeable gray clay does not extend beyond 120 feet of the bluff crest, effluent from the individual sanitary systems will not be discharged along the clay outcrops viewed along the face of the bluff, since seeps that have been observed along the bluff face are believed to be the result of perched water conditions which lie within the 100 to 120 feet area along the western portion of the property.

Water will be supplied by the Suffolk County Water Authority (SCWA), which will utilize an existing 8-inch supply main beneath North Creek Road. Assuming that all wastewater generated will originate as public water supply, daily water consumption will total 3,000 gpd.

1.4 Construction Schedule and Beach Access

1.4.1 Construction Schedule

The construction schedule will be based on the Approved Schedule of Operations, as required by the Town of Huntington Subdivision Regulations and Site Plan Specifications, which includes a construction staging area. In addition, construction fencing required by the Town Planning Board will be installed.

The construction process will begin with establishment of flagged clearing limits, followed by installation of staked hay bales and silt fencing in critical areas for erosion control purposes. Then, the demolition and site clearing operations can begin; construction equipment and vehicles will be parked and loaded/unloaded within the site. "Rumble strips" will be placed at the site entrance, to prevent soil on truck tires from being tracked onto North Creek Road. It is anticipated that 10 of the existing 11 structures will be removed; only the small shed (located in the northwestern corner of the property, near the beach) will be retained, for use of site residents when visiting the beach. The conservative clearing assumptions referenced in **Section 1.3.2** result in a range of 5.34 and 6.60 acres of clearing, or 25.9 to 32.1% of the 20.58 acres of natural vegetation on-site. This includes areas for the new roadway, buildings, the recharge basin and landscaping. In general, it is anticipated that approximately one-fifth of each lot will be cleared for development.

Grading operations will take place next. In order to minimize the time span that denuded soil is exposed to erosive elements, excavations for the curbs, roads, building foundations, wastewater systems, drainage system/recharge basin and utilities will take place immediately after grading operations have been completed. Construction of the houses can then begin, concurrent with the utility connections and paving of the internal roads. Once heavy construction is complete, finish grading will occur, followed by soil preparation using topsoil and installation of the landscaping, which will be performed while the structures are completed.

North Creek Road will only be used for site access. North Creek Road will not be used for construction equipment and vehicle/material storage or construction worker parking. As a result, no significant or long-term construction impacts to the adjacent residences are anticipated. Construction activities will not occur outside weekday daytime hours (7 AM to 6 PM).

It is anticipated that the construction period (clearing, grading, construction and finishing) will take approximately 7 to 9 months.

Construction period impacts may occur and are identified in this DEIS. Excavation for the recharge basin will occur over a limited period of time, simultaneous with the installation of the site roadway and utilities. Once the subdivision road is established, homesites will be constructed as lots are sold. Homesite areas are predominantly internal on the subject property. Rear yard trees and setbacks will remain providing visual buffering and noise attenuation as a result of the inverse square law and vegetation attenuation. Any construction will occur during normal daytime hours. The subject property is vacant and zoned for residential development

therefore it is reasonable to expect that the property will be developed at some point. This is a normal part of the maturing of this community and will occur over a relatively short period of time. Homesites will be constructed in accordance with building permit plot plans. The Town has the ability to inspect construction progress with Town personnel including either building inspectors or, if the Town chooses, a Town arborist. It is the developers intent to comply with all conservation easements and restricted areas which will remain natural. In addition, homesites will maintain buffers where possible and specimen trees within the lots, where appropriate.

1.4.2 Beach Access

The beach will be accessible for site residents via a 15-foot wide accessway, located between lots 3 and 4. This access had been sited to take advantage of low slopes in this area, and to enable the existing shed to be retained and reused. Site residents will be shareholders in a corporation formed for the purpose of owning and maintaining this beach access as a Homeowners Association (HOA). This access has been located to coincide with the existing path and stairway to the beach. It will be a separate tax lot deeded to the HOA, which will be formed to benefit all the lots of the project. Use of the existing location for this beach access, replacement of these amenities and retention of existing vegetation on the steep slopes will minimize the potential for disturbance to the slope in this area.

1.5 Permits and Approvals Required

This Draft EIS is intended to provide the Town of Huntington Planning Board with the information necessary to render a decision on the Old Orchard Woods Subdivision application. As explained earlier, the Planning Board previously issued a Findings Statement which determined that the subdivision of the subject property into 22 lots would not result in significant adverse impacts. Due to the Town Board's upzoning of the property to R-80, the applicant, in an attempt to protect his development rights, has submitted a 10-lot subdivision plan that conforms to the R-80 zoning district. Given that the density of the currently-proposed 10-lot subdivision application is less than half that of the 22-lot subdivision previously evaluated and approved by the Planning Board, and that the instant application incorporates the mitigation measures agreed to during the SEQRA process for the 22-lot subdivision, the record supports the finding that the 10-lot subdivision application would not result in significant adverse environmental impacts.

This document is intended to comply with SEQRA requirements as administered by the Town of Huntington. Once accepted, the document will be the subject of public review, followed by the preparation of a Final Environmental Impact Statement (FEIS) for any substantive comments on the DEIS. Upon completion of the FEIS, the Planning Board will be responsible for the preparation of a Statement of Findings, which will form the basis for the final decision on the Subdivision application. Following this process, the following additional approvals would have to be obtained prior to commencement of project construction:

- Town Planning Board - Subdivision review
- Town Dept. of Buildings, Engineering and Housing - Building Permits
- Town Dept. of Buildings, Engineering and Housing - Coastal Erosion Management Permit
- Town Highway Dept. - Roadwork Permit
- Suffolk County Dept. of Health Services - Article 6 (Sanitary System design review)
- Suffolk County Dept. of Health Services - Article 4 (Water Supply System design review)
- Suffolk County Water Authority - Water Supply Connection
- NYSDEC- Modification of Tidal Wetlands Permit (#1-4726-01219/00001)
- NYS Department of State - Federal Consistency Assessment Form review (#F-99-446)

A Tidal Wetlands permit application was submitted by the Applicant to the US Army Corps of Engineers in May 1999. As presented in **Appendix A-19**, the Corps indicated that no such permit is required, as *"... the proposed work does not appear to include dredging or construction activities in or over any navigable waters of the United States, the placement of any dredged or fill material in any waters of the United States (including coastal or inland wetlands) or the accomplishment of any work affecting the course, location, condition or capacity of such areas."*

A Tidal Wetlands permit application was also submitted by the Applicant to the NYSDEC in May, 1999. Following completion of the SEQRA process, the NYSDEC completed its review of the application, and issued the permit in October, 2000 (see **Appendix A-20**). As this permit was issued based upon the prior 22-unit yield, the current 10-unit project, which has been developed solely to protect the Applicant's development rights, will require a Modification of this existing permit.

SECTION 2.0

ENVIRONMENTAL SETTING

2.0 ENVIRONMENTAL SETTING

This section documents the existing environmental conditions of the subject parcel. This baseline of information will be used in **Section 3.0** to evaluate the impacts of the proposed project, by comparing these conditions against those of the site under "Build" conditions.

2.1 Geology

The following section describes the geological, soil and topographic features of the subject parcel and vicinity. Information for this discussion was obtained from on-site observations and borings, the Suffolk County Soil Survey **(Warner et. al., 1975),** topographic maps and referenced studies/reports.

2.1.1 Subsurface Geology

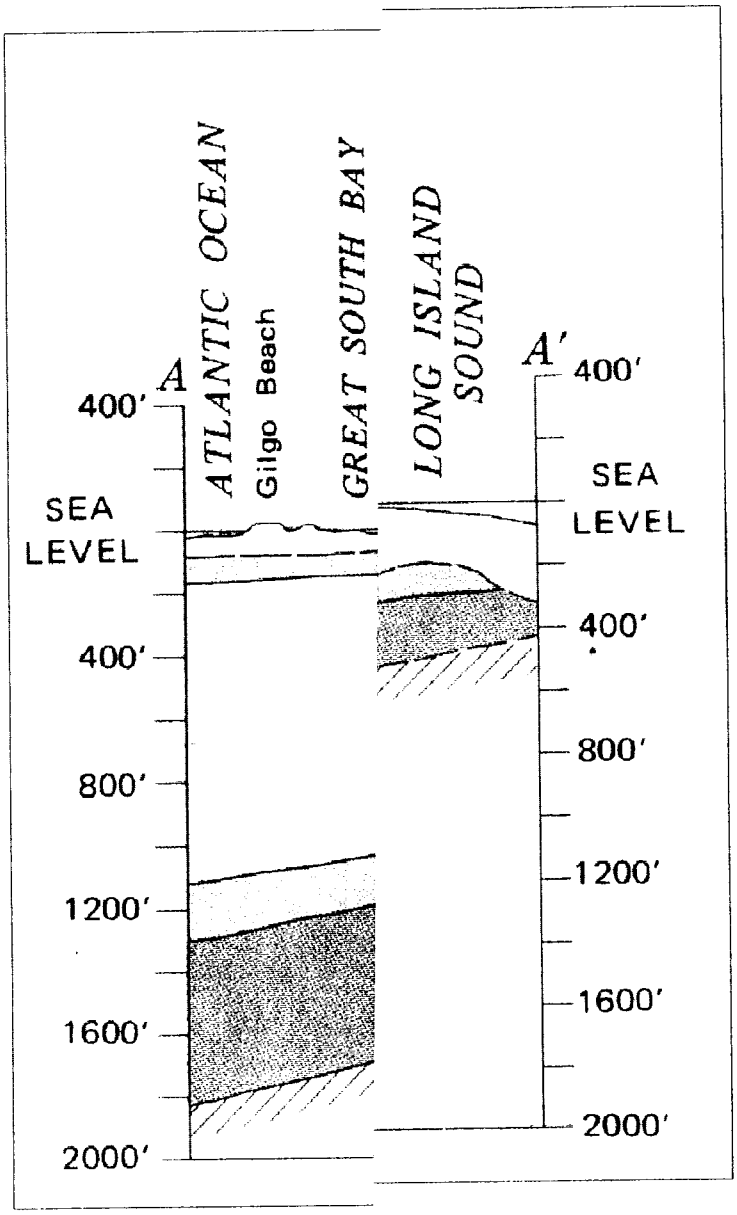
Long Island is located within the Atlantic Coastal Plain, a physiographic province in which substantial sediment deposits overlie the base, or bedrock **(Fuller, 1914).** The surface topography primarily reflects the glacial history of the Island and subsequent human activity. Understanding the geologic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

The bedrock which underlies 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 550 feet below sea level in the area of the site **(Jensen and Soren, 1974).** Bedrock is probably of Precambrian age, and is overlain by unconsolidated sediments of Cretaceous and Quaternary age. In the area, these Cretaceous sediments contain three major groundwater aquifers: the Lloyd, Magothy and Upper Glacial Aquifers. **Figure 2-1** provides a cross section of Long Island for a profile running from Long Island Sound to the Atlantic Ocean in the vicinity of the project site, 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 to 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 **(Suter et al., 1949; Jensen and Soren, 1974).** The upper altitude of the Lloyd sand member is approximately 350 feet below sea level in the vicinity of the site, indicating a thickness of 200 feet, and the top of the Raritan clay is approximately 230 feet below sea level, indicating a thickness of 120 feet. The Magothy Formation and Matawan

FIGURE 2-1

GEOLOGIC CROSS SECTI(



Source: Jensen & Sore

Group, which form the Magothy aquifer, were deposited in the late Cretaceous (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 2 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. However, due to glacial erosion (discussed below), the Magothy formation is not present beneath the project site **(Jensen and Soren, 1974).**

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 a 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 Late 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 processes formed barrier beaches along the south shore as sea level rose.

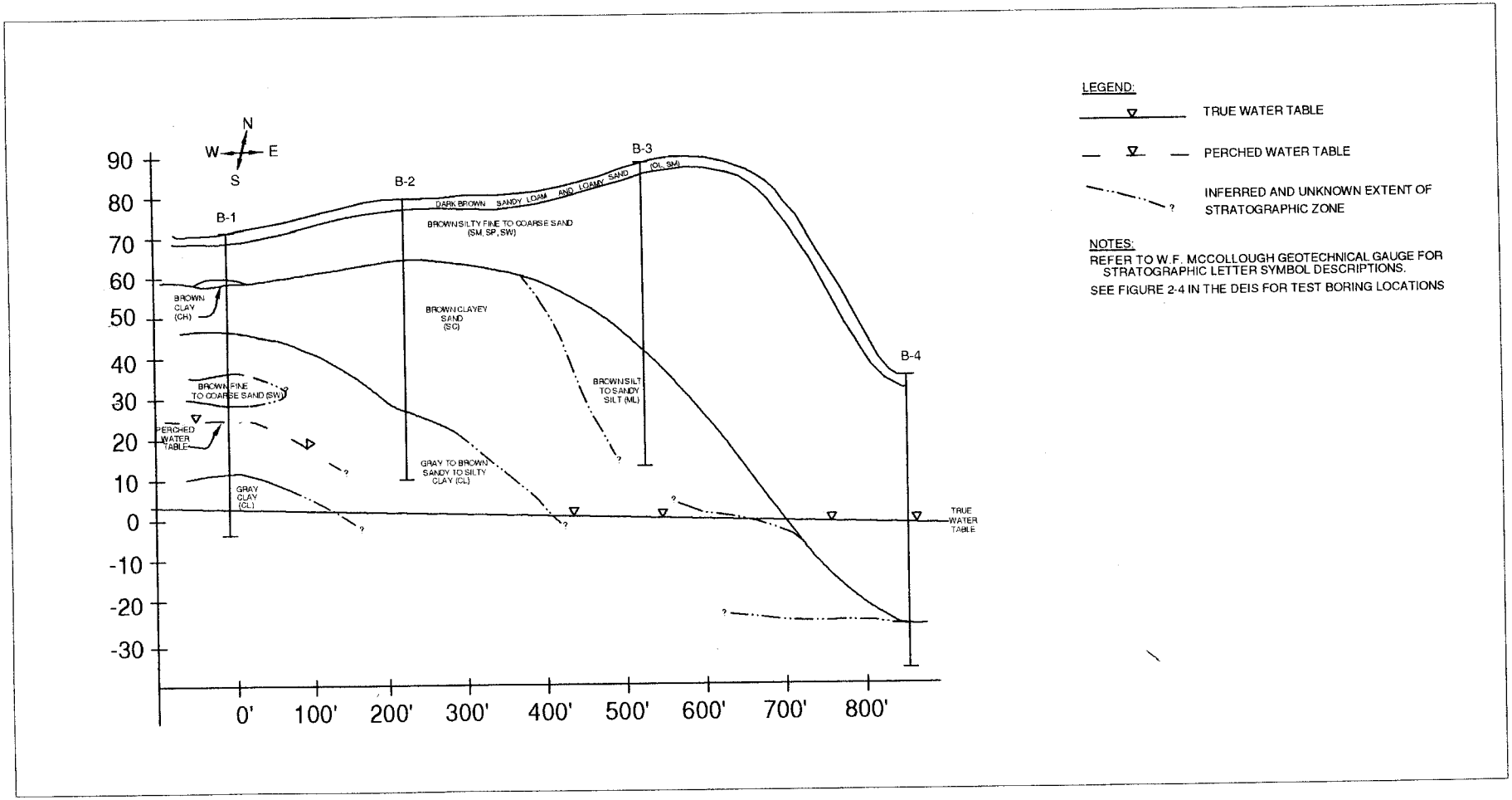
The project site is situated on ground moraine deposits to the north of the Harbor Hills Terminal Moraine **(Jensen and Soren, 1974).** Specifically, the site is located along the entrance to Huntington Bay, where coastal erosion has created an escarpment on the west side of the site over the period since glacial retreat. The sediments of the ground moraines, referred to as "till", typically consist of unsorted and unstratified clay, silt, sand, gravel, and boulders but can also include crudely to well-sorted, stratified glacial drift. In addition, bands of underlying clay have been documented in glacial deposits on Long Island's north shore, including the subject site. In contrast, the glaciofluvial sediments of the outwash plains in parts of central and southern Long Island consist of fine to coarse sand and gravel. The surface elevation of the project site ranges from about 0 (sea level) to 96 feet, and thus the thickness of the Upper Glacial aquifer varies from approximately 230 feet to 326 feet beneath the site. The west side of the site is an exposed bluff that exhibits glacial soils and interbedded clay. **Section 2.1.3** describes topography and coastal resources in greater detail.

An extensive on-site soil boring investigation was conducted to document existing soil conditions. This investigation was conducted specifically to determine the presence and configuration of clay in order to provide a full evaluation of the potential impact of locating sanitary systems and recharge facilities on the site. **Section 3.1** provides a full analysis of these potential impacts.

Data collected from on-site soil borings (completed in April, 1999 and January, 2000; see **Figures 2-2A to 2C** and **Appendix B-2**) indicate that the surface soils across the property generally consist of a dark brown sandy loam underlain by a brown loamy sand and extend to an depth of approximately 3 feet below land surface. The subsurface soils underlying the property

FIGURE 2-2A

GEOLOGIC CROSS SECTION OF SITE (SECTION A-A')

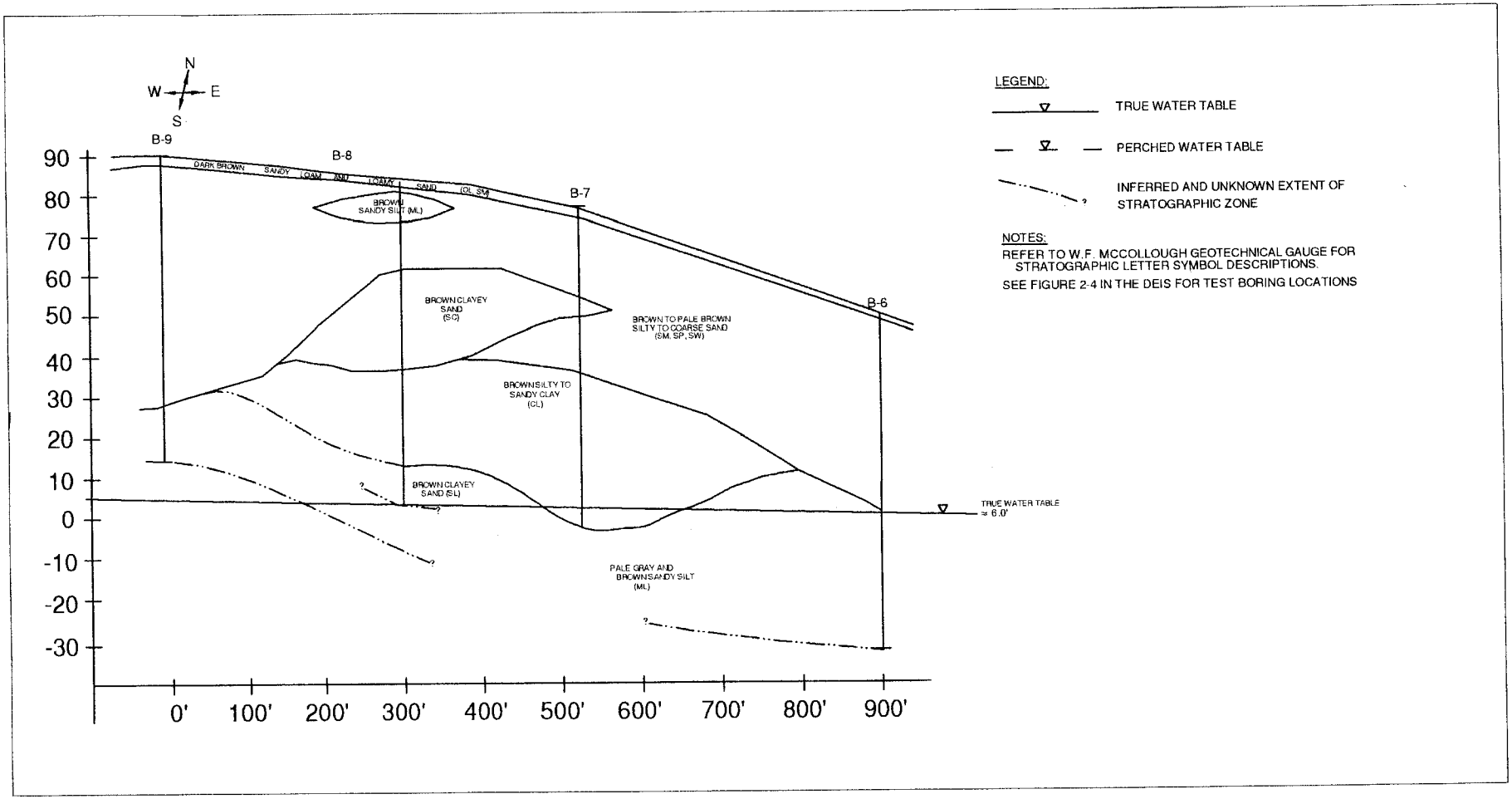


Source: NP&V, LLC

Note: This figure is also included in the Draft EIS (Figure 2-2).

FIGURE 2-2B

GEOLOGIC CROSS SECTION OF SITE (SECTION B-B')

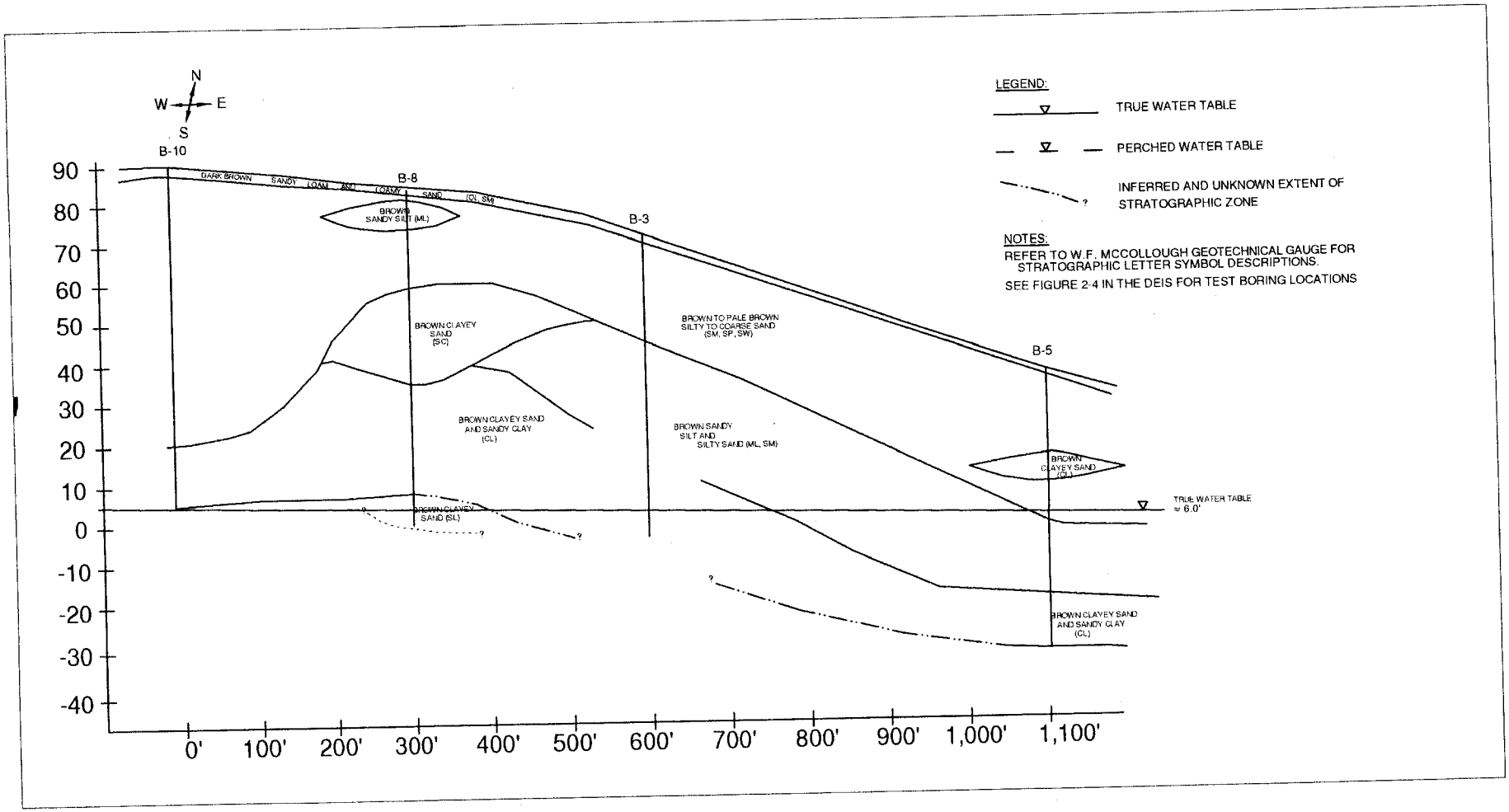


Source: NP&V, LLC

Note: This figure is also included in the Draft EIS (Figure 2-2).

FIGURE 2-2C

GEOLOGIC CROSS SECTION OF SITE (SECTION C-C')



Source: NP&V, LLC

Note: This figure is also included in the Draft EIS (Figure 2-2).

are comprised of unconsolidated glacial deposits generally consisting of silts, sands, clays and gravels. Brown fine to medium sands were observed to extend from approximately 3 feet below surface grade to depths ranging from 8 to 38 feet below surface grade. Underlying these sands soils consist of intermittent brown silt to silty sands and clays which extend to approximately 75 feet below surface grade.

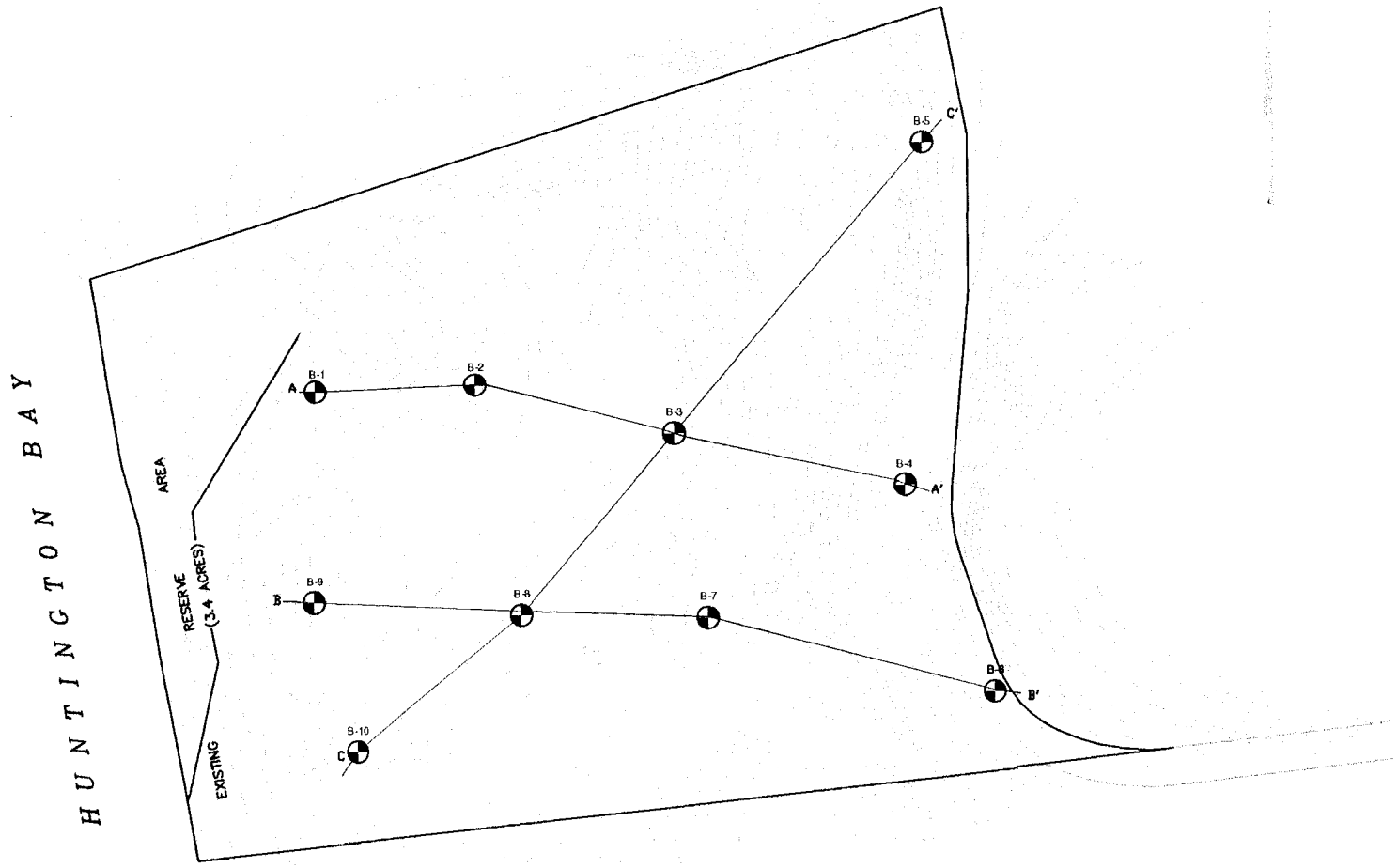
Subsurface water was encountered at depths ranging from 36 to 46 feet below surface grade at elevations of approximately 2 to 26 feet above mean sea level, respectively. The water encountered at 2 feet above mean sea level is considered to be representative of the true water table underlying the property based on its elevation and proximity to surface water. Subsurface water encountered at 26 feet above mean sea level within the western most boring B-1 lies on a low permeability zone consisting of a gray clay. This is considered indicative of a discontinuous perched water zone, since perched water was not encountered in any other boring on-site. It should be noted that portions of this discontinuous clay layer can be observed along the base of the bluff within the western portion of the property. It has also been observed that a small amount of subsurface water discharges along the upper surface of the clay layer. However, based on the small volume of seepage and the discontinuity of the clay as documented in soil borings and geologic profiles, this water is believed to originate from precipitation that falls along the top of the bluff and only slightly inland. That is, only this small volume of infiltration is directed by this portion of the discontinuous clay through the bluff face, otherwise a significantly larger volume of seepage would be expected. Additionally, based on water quality test data on this seepage (see **Appendix B-3**), subsurface waters from farther inland beneath the subject site are not believed to be contributing to discharges along the bluff (see **Section 2.2.2**).

Initially, four (4) borings were installed to characterize the soils underlying the site and generate a geologic profile to establish the soil lithology across the site. Subsequently, an additional six (6) borings were installed to supplement the understanding of the subsurface geological environment and adequately characterize the extent, continuity and orientation of clay lenses which were encountered during the initial geologic investigation. The borings were installed in a grid pattern throughout the accessible portions of the site and include one boring in each of the areas proposed for the on-site recharge basin. This provides a boring density of one boring per every 2.4 acres which is an increase from the previous 1 boring per every 6 acres. In addition the established grid pattern for boring distribution provides additional information regarding the lithology along a two-dimensional plane running from east to west and north to south. **Figure 2-3** provides the location and designations of the soil borings installed at the site. The soil boring data used to compile these profiles is presented in **Appendix B-2**.

Analysis of the soil boring results further confirmed the presence of a perched water table resting above an impermeable gray clay lens in one boring (B-1) along the western portion of the site. None of the succeeding borings detected the presence of either a perched water table or gray clay. This indicates that this impermeable clay is discontinuous or too deep to be of consequence and may be intermittently present along a 100 to 120 foot wide strip along the western edge of the property with visible outcrops along the bluff face. Seeps that have been observed along the bluff face are believed to be the result of perched water conditions which lie within 100 to 120 feet inland of the crest of the bluff. Soils farther east within the site consist of a heterogeneous

FIGURE 2-3

SOIL BORING LOCATION MAP



Source: Nelson & Pope, LLP, Topographic Map
Scale: 1" = 150'

mix of sands, silts and sandy to silty clays of variable permeability. None of these soils were found to promote perched water conditions at any of the other locations across the site. As such, water beyond 100 to 120 feet inland of the crest of the bluff is permitted to flow vertically through the unsaturated zone and recharge the underlying water table which is present at an elevation of 2 to 5 feet above mean sea level with depth to water ranging from 32 to 70 feet below surface grade.

2.1.2 Surface Soils

The 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 soils can vary greatly within an area, particularly soils of glacial origin. The slope identifiers noted in this subsection are generalized based upon regional soil types; the more detailed subsection on topography should be consulted for analysis of slope constraints.

The soil survey identifies the subject site as lying within an area characterized by Carver-Plymouth-Riverhead association soils. These soils are deep, rolling, excessively drained and well-drained, coarse textured and moderately coarse textured soils on moraines.

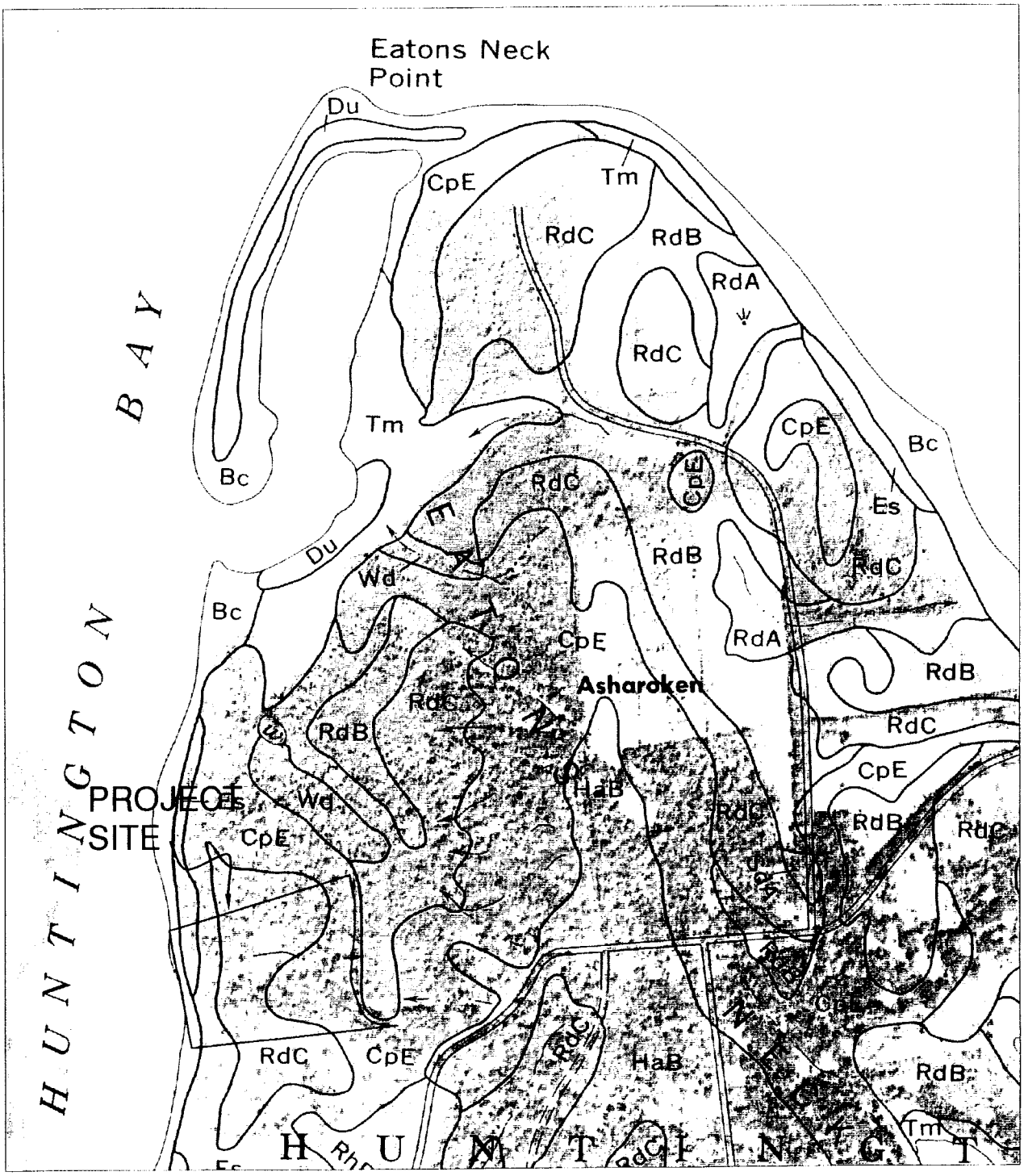
A total of four (4) soils have been identified on site; the locations of these soils are depicted in **Figure 2-4**.

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

> *Carver and Plymouth Sands (CpE)* – These soils are almost 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 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 very low. Moderately steep to steep slopes are a limitation to use. Permeability is rapid throughout.
>
> *Beaches (Bc)* – Beaches are made up of sandy, gravelly or cobbly areas between water at mean sea level and dunes or escarpments. Slope is nearly level in most areas but it is as much as 15 percent in some places on the Atlantic shore. All the beaches along Long Island Sound are very gravelly and cobbly. A few very large boulders rolled down from the adjoining bluffs of the Harbor Hill Moraine are present. The Atlantic Ocean beaches are sandy except for a few small areas near Montauk Point. In most places beaches on the bays are sandy, but varying amounts of gravel are mixed with the sand. Measures should be taken to control erosion to keep the beach wide enough to protect the nearby dunes or uplands.

FIGURE 2-4

SOILS MAP



Source: Soil Survey of Suffolk County, New York
Scale: 1" = 1,000'

NORTH

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Escarpments (Es) – Escarpments are made up of bluffs that have slopes greater than 35 percent. Most areas are along the north shore, but a few are near Peconic Bay and along the Atlantic coastline near Montauk Point. Areas are also along the coastline of offshore islands. The soil horizons have not formed in this actively eroding material. Except for a few scattered areas, this unit is devoid of vegetation. Generally the slopes are uniform with very little dissection except on the more resistant material around Montauk Point and on parts of Gardiners Island. Height of the escarpments ranges from about 20 feet to more than 100 feet. The material in the escarpments is sand along the north shore and sandy loam or loamy sand at Montauk Point. Many escarpments have large boulders embedded in the soil, which to the beach as the escarpment recedes. Escarpments are used by some species of songbirds. Where possible, slopes should be stabilized to reduce erosion.

Riverhead sandy loam (RdC) – This soil is in narrow bands on outwash plains along the side slopes of deep, intermittent drainageways. Slopes are short. On the Harbor Hill moraine and on the Ronkonkoma moraine east of the Shinnecock canal, the areas of this soil are larger than in other places in the county and they generally are rolling. The hazard of erosion is moderately severe on this riverhead soil. Controlling erosion is the main concern of management. This soil is limited by droughtiness and by the difficulty of applying irrigation water. Most areas of this soil are in trees or brush. A few small tracts were formerly cleared and farmed along with adjoining less sloping soils, but many of these areas are now in grass or brush because the use of heavy farm equipment on these areas is impracticable. Many of the larger areas of this soil are used for housing developments where large lots are needed. These rolling areas are in the western part of the county.

The beach exists as a narrow strip of sand located at the western most edge of the property along Huntington Bay. It terminates inland at an escarpment consisting of a bluff which rises from the back of the foreshore to meet the overlying headland. The soils of the Carver-Plymouth Series form a discontinuous arc along the western, northern and eastern potions of the property and coincide with the sloping relief at the outer regions of the site. These soils nearly encircle the Riverhead Series which comprise the central highland region of the property.

The Soil Survey was also consulted for information on the potential limitations on development which the soils may present. Such constraints for the four on-site soils are summarized in **Table 2-1**. As noted in the table, the two soils which occupy the central and eastern portions of the site present "moderate" to "severe" limitations for development, due to their characteristic steep slopes and sandy surface layer. These soil factors have been considered in site layout and design.

2.1.3 Topography, Bluff Recession and Beach Erosion

The western part of the site consists of a beach and bluff adjacent to Huntington Bay that runs along the entire 800 feet length of the western property boundary. The beach is approximately 15 feet wide beginning at the high water mark of 3.2 feet above mean sea level and terminates at the base of the bluff. The bluff rises to an elevation ranging from 30 to 80 feet above mean sea level and exhibits an approximate slope of 65%.

TABLE 2-1
SOIL LIMITATIONS

SOIL FEATURES AFFECTING:	Carver and Plymouth Sands, 15-35% slopes (CpE)	Beaches (Bc)	Escarpments (Es)	Riverhead sandy loam, 8-15% slopes (RdC)
Highway location	Poor trafficability; extensive cuts and fills likely	*	*	Extensive cuts and fills likely
Embankment foundation	Strength generally adequate for high embankments; slight settlement; moderately steep to steep slopes	*	*	Strength generally adequate for high embankments; slight settlement
Foundations for low buildings	Low compressibility; large settlement possible under vibratory load; moderately steep to steep slopes	*	*	Low compressibility; moderate and moderately steep to steep slopes
Irrigation	Very low available moisture capacity; rapid water intake; moderate and moderately steep to steep slopes	*	*	Moderate to rapid water intake; moderate available moisture capacity; moderate and moderately steep to steep slopes
LIMITATIONS FOR:	---	---	---	---
Sewage disposal fields	Severe: slopes	Severe: high water	*	Moderate: slopes
Streets and parking lots				Severe: slopes
Lawns and landscaping	Severe: slopes; sandy surface layer	Severe: high water	*	Moderate: slopes
Paths and trails	Severe: sandy surface layer; slopes	Severe: high water	*	Slight
Picnic/play areas				Moderate: slopes
Athletic fields and intensive play areas				Severe: slopes

* Per Soil Survey, not included because characteristics are too variable to estimate

The entire length of the western property boundary is classified as a Natural Protective Feature Area (per NYSDEC, with respect to the bluffs) and extends inland from the shoreline a distance ranging from 100 to 150 feet.

The property section east of the beach and bluff displays an irregular topography. The land surface contour is dominated by two prominent knolls which are aligned from the southwest to the northeast across the central portion of the property and rise to an elevation of approximately 96 ft above mean sea level. From these high points the topography trends to the east and

northwest at slopes of 13% and 10%, respectively. The slope trending to the northwest terminates at the top of the bluff at an elevation of 30 feet above mean sea level. The downward trending slope to the east terminates at an elevation of 32 feet above mean sea level at the base of a depression along the eastern property boundary parallel to North Creek Road.

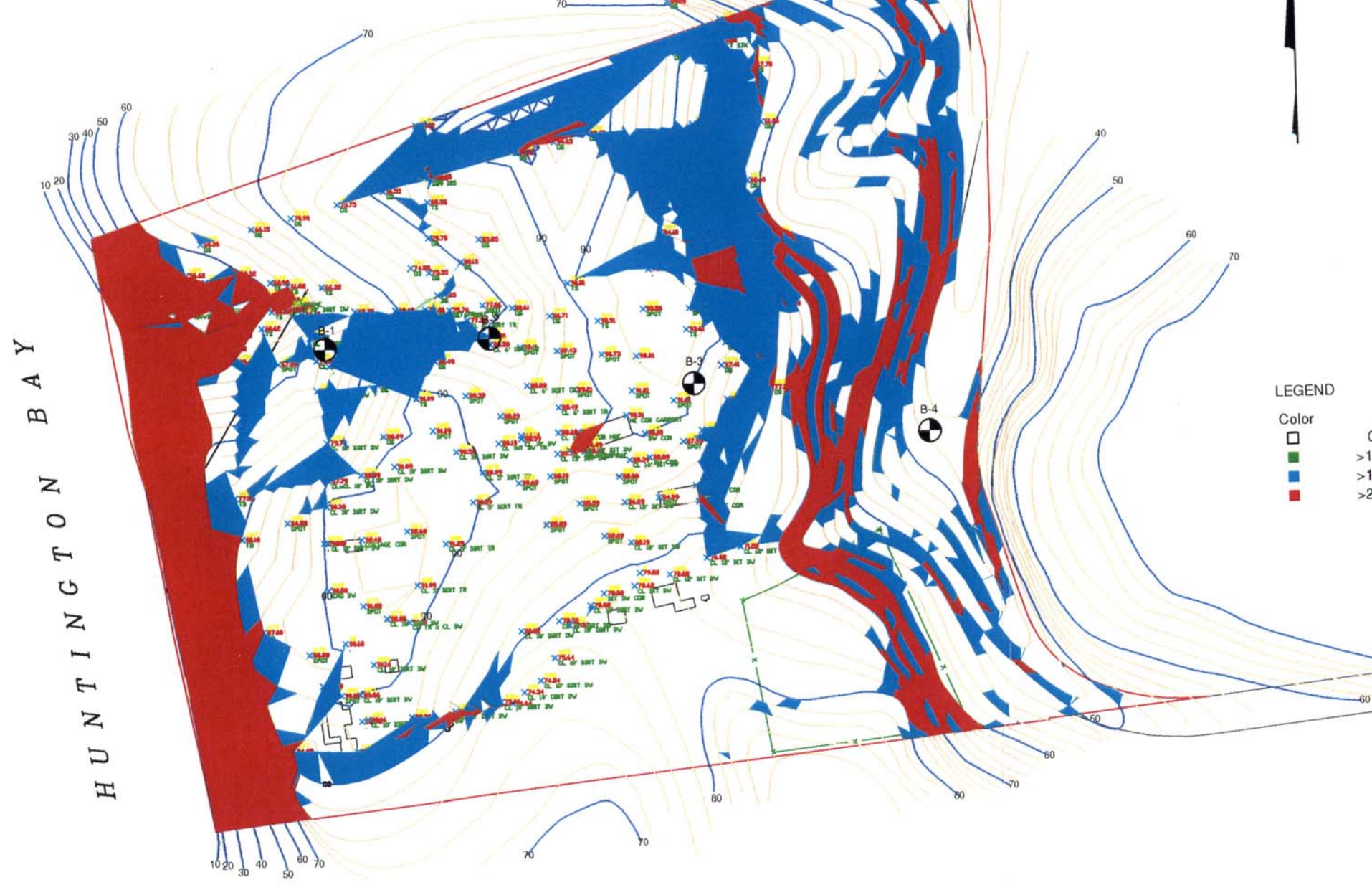
The topography of the site is predominantly of steep slopes, though the central portion of the property is characterized by relatively low slopes. The northwestern corner of the site slopes downward toward the beach, the eastern half of the site slopes downward toward the east; the southern portion of the property slopes downward toward the south, and the western portion slopes downward toward the west. The steepest slopes on the site, associated with the bluffs overlooking Long Island Sound, are located in this western area. Overall, as shown in **Figure 2-5**, approximately 48.6% of the site (11.76 acres) has slopes between 0 and 10%, 17.8% (4.30 acres) are between 11 and 15%, 19.8% (4.78 acres) are between 16 and 25%, and 13.8% (3.34 acres) are 25% or more.

According to the Town Steep Slope Ordinance (Chapter 198, Article X), development on areas having slopes of 10% or more is to be performed in conformance with the Town of Huntington Subdivision Regulations, Erosion and Sediment Control Handbook; this requirement will apply to the project site.

Since the beach bluff is the feature most susceptible to erosion at the site, a historical evaluation of bluff recession was conducted to determine the rate at which the bluff is receding from the shoreline. A description of the methods used to calculate the recession rate is provided in **Appendix B-4**. Historic bluff recession analysis indicates that the bluff is retreating at a rate of approximately 1.9 feet per year along the western property boundary. This is consistent with the results obtained during an erosional study of the north shore of Long Island which recorded a bluff recession rate of 1.6 feet per year along the Eatons Neck coastline (**Davies, et al., 1973**).

The bluff recession rate indicated the total amount of recession for a 20 year period. As such, this recession reflected the total effect of all mechanisms of bluff erosion, one of which is wind action.

While precipitation and wind action along the bluff face will result in the removal of material along the bluff, beach profile development is largely the result of wave attack and seepage along the bluff face. Based on the literature reviewed (**Erosion of the North Shore of Long Island, Davies, D. S., et al, Marine Sciences Research Center, SUNY/Stony Brook, 1973**) the primary mechanism for bluff recession is wave attack generated from local winds or storm surge and is also influenced by other factors which include seepage. Wave attack along the toe of the bluff results in the undermining of material lying higher up on the bluff face. Once wave attack removes enough underlying material the overlying sediments will slump down towards the beach and result in a recession of the bluff and a decrease in its angle of repose.



Source: Nelson & Pope Site Alignment Plan, April 1999
Scale: 1" = 150'

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According to **Davies**, it is impossible to relate erosion of Long Island's north shore to changes in mean sea level provided in the historic record. In addition, this reference states that during the short time period of human development small changes in sea level would produce negligible effects on erosion of the north shore of Long Island.

The method used for calculating the recession rate of the bluff was obtained from **Davies**. The source report was conducted by the Marine Sciences Research Center at the State University of New York at Stony Brook with support provided by the Nassau-Suffolk Regional Planning Board (now Long Island Regional Planning Board) and the NYS Sea Grant Program. The objective of the study was to determine the rates of bluff recession along the north shore of Long Island and the impact that these rates would have on future development. The study utilized data from historical aerial photographs and from several referenced studies to calculate bluff recession rates at several points along Long Island's north shore. One of the bluffs studied was located along the western shoreline of Eaton's Neck at or in close proximity to the bluff face along the Old Orchard Woods property (**Davies, fig 3-9**). At this location, Davies specified a recession rate of 0.8 feet/year for the 80-year period 1885-1965.

Given the apparent absence of any third-party empirical studies involving the subject site after 1965, Nelson Pope & Voorhis, LLC (NP&V) conducted a new bluff recession analysis utilizing the available aerial photographs (which spanned the period 1976-96) for the DEIS. The purpose was to determine if any increase or decrease in the 0.8 foot/year bluff recession rate could be observed during this period, and whether any such change could be correlated with the occurrence of storms during this 20-year period. As was done for the Davies study, this new rate was calculated by measuring the decrease in distance along a common transect between the bluff and a fixed point located in the middle of the property. The 1.9 foot/year recession rate is a conservative estimate applicable to this 20-year period only. If applied to a period outside of this time span, a 1.9 foot/year bluff recession rate would represent a significantly more conservative long-term average bluff recession rate than that contained within the Davies study.

In order to verify the accuracy of this bluff recession rate, NP&V has taken additional measurements along four new transects, and averaged the five results. The results of these additional measurements confirm the original recession rate of 1.9 feet/year. Given that bluff erosion is episodic in nature, this increase from the 0.8 foot/year recession rate for the period of 1885-1965 can be likely explained by the existence of a number of significant storms occurring during this more recent period. Even if one assumes that the bluff recession rate for the intervening period (1966-76) was at the conservative rate of 1.9 feet/year, the overall average annual recession rate over the 110 year period of 1885 to 1996 is estimated to be 1.09 feet/year.

As stated, bluff erosion is episodic in nature. Accordingly, it is impossible to predict with absolute certainty the exact amount of bluff erosion which will occur within any given year. However, if one uses the 1.09 foot/year rate calculated over the 110-year period prior to 1996, it could be concluded that no structure at least 100 feet from the existing bluff would be in jeopardy of collapse for approximately 92 years, which is significantly greater than the 50-year period requested for evaluation. In addition, as discussed in the DEIS, if certain measures are taken by the homeowners or developer to support the bluffs in a manner consistent with those

already taken on the adjacent properties, this period of time may be extended beyond 92 years, which again is well in excess of the 50-year period requested for analysis.

For the purpose of providing the most complete documentation possible, an additional coastal erosion specialist (First Coastal Corporation, of Westhampton Beach) was retained to further document site environmental conditions and regulatory aspects with respect to the bluffs and erosion.

As a point of reference and as mentioned in the report prepared by an additional coastal erosion specialistt (see **Appendix B-1**), this portion of the site has been deemed to lie within a "Coastal Erosion Hazard Area". In such an area, setback regulations defined by Article 34 of the NYS Environmental Conservation Law and implemented by the Town of Huntington prohibit construction within only 25 feet of the bluff, as has occurred on adjacent sites. Assuming the calculated 1.09 foot/year recession rate, such a setback would provide protection from bluff recession for only 23 years. The minimum setback from the bluffs in the present project is 125 feet, as shown on the **Preliminary Map**. This is far in excess of the requirements of Article 34.

The **Preliminary Map** for the proposed project is based on a survey prepared specifically for the current application; in this respect, the map reflects the current configuration and position of the bluffs.

2.2 Water Resources

The following section will provide a complete characterization of the surface water and groundwater resources of the site and vicinity.

2.2.1 Groundwater Hydrology and Water Quality

Groundwater Hydrology

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. This level is referred to as the water table. 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 shores (**Krulikas, 1986**).

Due to the proximity of Long Island Sound and the presence of steep slopes along the site's western boundary, groundwater beneath the site flows toward the west.

The two major water-bearing units beneath the subject site include the Upper Glacial 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 0 to 96 feet above mean sea level (msl). The top of the Lloyd aquifer is 350 feet below msl **(Smolensky, 1989).** Bedrock is present at a depth of about 550 feet below msl. Therefore, the aquifers beneath the subject site have the following approximate thicknesses: the Upper Glacial aquifer, 230 to 326 and the Lloyd aquifer, 200 feet.

The Long Island Regional Planning Board, in conjunction with other agencies, prepared a management plan for Long Island groundwater resources in 1978 under a program funded by Section 208 of the 1972 Federal Water Pollution Control Act Amendments. The purpose of the 208 Study was to investigate waste disposal options and best practice for ground and surface water protection. The study delineated Hydrogeologic Zones for the formulation of management plans based on groundwater flow patterns and quality **(Koppleman, 1978).** The subject site is located in Groundwater Management Zone VIII, a system characterized by shallow horizontal groundwater flow as delineated by the Suffolk County Department of Health Services for the purpose of 208 recommendation implementation **(SCDHS, 1985).** Water recharged in this zone is likely to contribute to the shallow groundwater flow system. This zone discharges to harbors, saltwater bays, and Long Island Sound. Subsurface outflow will affect the quality of the surface water; however, the quality of the north shore bays is most dependant on Long Island Sound due to tidal range which promotes flushing

It is recommended in the 208 Study that development in this zone utilize public sewers if available, particularly in those areas where on-lot sewage systems are subject to failure and cannot be upgraded due to soil conditions, high groundwater, small lot size and other considerations. An alternative would be to provide for wastewater collection/treatment where the wastewater generation rate is 600 gpd/ac or more. Therefore, for this 24.21-acre site, individual septic tank/leaching pool systems could be used to treat wastewater if the volume of wastewater generated on-site is kept to 14,526 gpd or less. In addition, the 208 Study recommends: 1) control stormwater runoff to minimize the transport of sediments, nutrients, metals, organic chemicals, and bacteria to surface and groundwater; and 2) provide for routine maintenance of on-lot systems.

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 released in 1987.

The SCCWRMP **(SCDHS, 1987-2)** provides information on water quality from 0 to 100 feet below the water table based on observation wells as well as public and private water supply and

well monitoring. With respect to nitrate-nitrogen at a depth into the aquifer of between 0 and 100 feet, the Plan shows the subject site as lying within a "good" area in terms of water quality (1 to 6 mg/l of nitrogen) **(SCDHS, 1987-2; Plate 4).** Insufficient nitrate-nitrogen concentration information is available for depths of 100 to 400 feet beneath the site to draw conclusions regarding water quality beneath the site. The Plan also provides information regarding concentrations of Volatile Organic Compounds (VOC's) in groundwater. Groundwater quality in the vicinity of the site is also good (less than 60% of applicable guidelines), although there are detectable levels of some compounds at a depth of 0 to 100 feet **(SCDHS, 1987-2; Plate 6).** Insufficient water quality information is available from the area of the site for water at a depth of 100 to 400 feet. VOC's 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.

Based on information provided by the SCWA, the level of nitrates in potable water averages 5.63 mg/l in the vicinity. For comparison, the NYS Drinking Water Standard for nitrogen is 10 mg/l. Thus, it appears that both organic and inorganic water quality in the vicinity of the site is good to excellent.

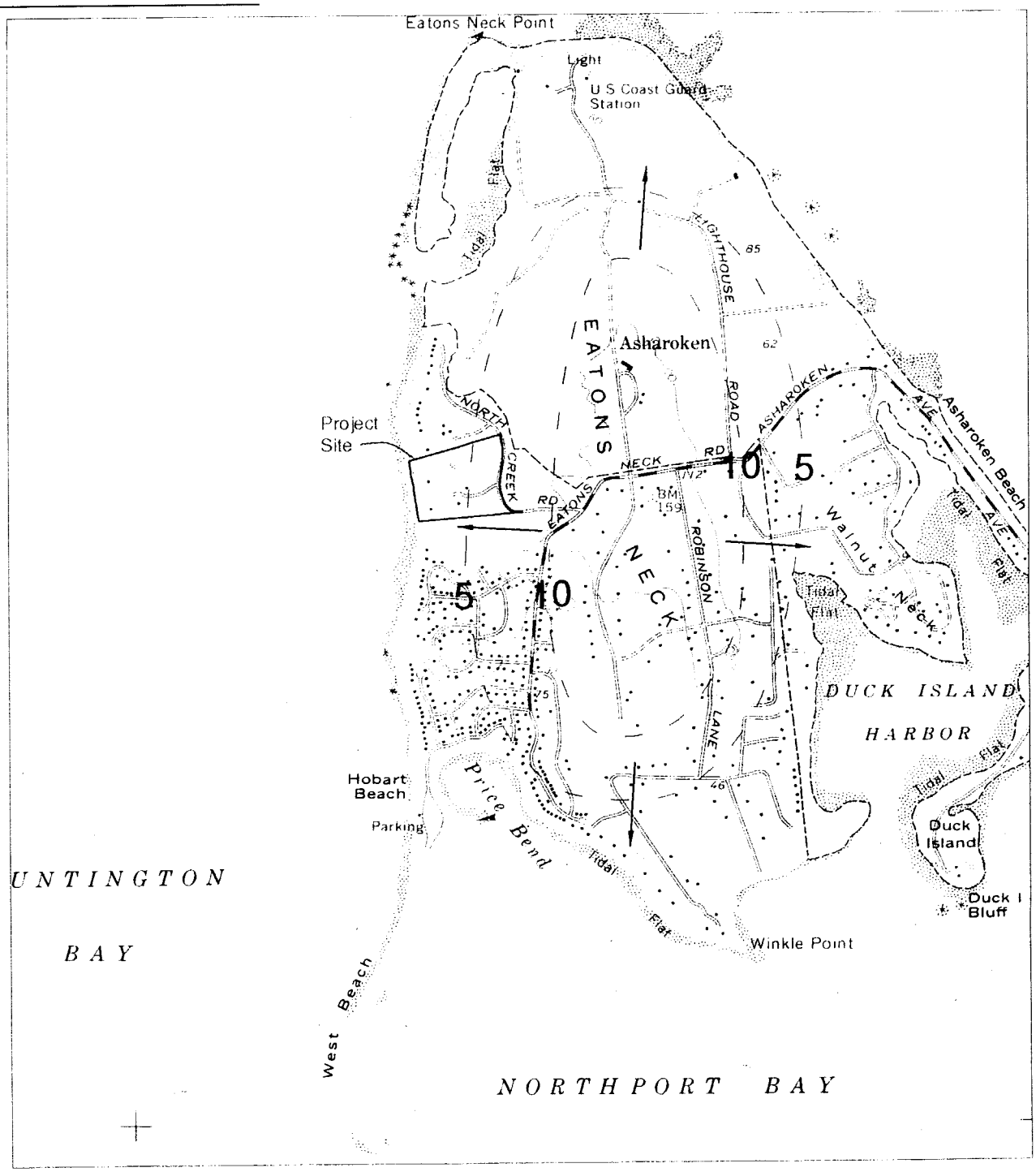
The Suffolk County Department of Health Services (SCDHS) maintains a network of observation wells for the purpose of determining the elevation of groundwater at various locations. The Health Department publishes a Contour Map of the Water Table and Location of Observation Wells in Suffolk County, New York, on an annual basis following synoptic water level measurements taken in the spring. This map is provided by SCDHS at a scale of 1" = 2 miles, and is updated in the spring of each year. The most recent water table map available for Suffolk County is dated March 1997, and according to this map, the elevation of groundwater beneath the site was approximately at mean sea level at that time **(SCDHS, 1997)**. The topography of the site ranges from a high of 96 feet (in the east-central portion of the site), to approximately sea level (0 feet, on the beach along the western property line). Based on soil borings installed at the site the depth to water ranges from 36 to 88 feet bgs in areas to be developed across the site. Perched water was also observed in the western portion of the site in only one of the borings installed indicating the limited occurrence of perched water across the site. A copy of the portion of the water table map including the subject site is included in **Figure 2-6.** It should be noted that the prominent direction of groundwater flow at the water table is to the west towards Huntington Bay. However, some of the groundwater under perched conditions may flow to the east along the gray clay which may exhibit an easterly dipping component.

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

FIGURE 2-6

WATER TABLE CONTOUR MAP



Legend:

— — Inferred groundwater elevation

——→ Direction of groundwater flow

NORTH

Source: Suffolk County Well Data
Scale: 1" = 2,000'

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- 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 Long Island Regional Planning Board (LIRPB) prepared the L.I. Segment of the Nationwide Urban Runoff Program (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 USGS, was to determine:

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

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

Finding: Median values of total recoverable lead in runoff samples ranged from 275 µg/l at the Plainview recharge basin, which drains a major highway, to 19 µg/l at the Laurel Hollow recharge basin, which drains a low density residential area containing only minor roadways. Between these two, in order of decreasing lead concentrations, were Centereach (strip commercial with major roadway), Huntington (parking lot), and Syosset (medium density residential with minor roadways).

Conclusion: Lead concentrations in runoff entering a recharge basin appear to be directly related to the extent and characteristics of the road network and the type and volume of traffic in the drainage area served by the basin.

Finding: The number of coliform and fecal streptococcal indicator bacteria in stormwater range from 10^8 MPN to 10^{10} MPN per acre per inch of precipitation. Except in a few cases, these bacteria were not detected in the groundwater beneath the recharge basins studied. Where they were present, they were found in concentrations at or near the analytical detection limit.

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

In general, stormwater runoff will be generated from impervious surfaces such as roofs and driveways. Runoff may carry such pollutants as heavy metals, petroleum hydrocarbons, bacteria, and nitrogen. Extensive monitoring associated with the NURP Study found that direct discharge of stormwater to surface water caused significant water quality impairment; however, on site stormwater discharge utilizing leaching facilities significantly reduces such impacts. Groundwater monitoring beneath recharge basins found a significant reduction in concentrations of heavy metals, hydrocarbons, and bacteria, indicating that such contaminants are attenuated in soil or volatilized in stormwater transport **(Koppelman, 1982).**

In the NURP Study, a 100 acre drainage area in Laurel Hollow was selected as the site for monitoring of recharge which is characteristic of a low density residential neighborhood. These data are included in this report as an example of stormwater impacts from a low-density residential area. No direct comparisons of the project vicinity to the project area are intended; however, it is speculated that stormwater impacts from the proposed development would be similar to those reported in connection with the Laurel Hollow area.

Groundwater samples collected directly beneath the recharge basin at the Laurel Hollow site were tested for a number of parameters. The results of these analyses are presented in **Table 2-2.** The data in **Table 2-2,** provide information regarding the potential stormwater impact in a low-density residential area. As previously indicated, it is expected that heavy metals associated with automobile usage of roads may be present in stormwater, particularly lead and chromium. In addition, nitrogen and bacteria (coliform) would also be expected due to animal waste in paved areas. The NURP Study and the data presented in **Table 2-2** indicate that most of the constituents commonly present in stormwater are reduced in concentration in groundwater beneath stormwater leaching basins. Elevated heavy metals were detected in groundwater as expected; however, their concentrations were significantly reduced presumably through attenuation. It is noted that the concentration of lead complies with drinking water standards. In addition, the pH level is in excess of the acceptable range; however, pH in groundwater is often on the acidic side due to recharge of acidic precipitation **(SCDHS, 1987-2).**

The data presented herein are for developed areas with public roads. The proposed project will be a low density residential housing site, which will be developed at an intensity similar to the Laurel Hollow area, therefore the impact will be similar to the Laurel Hollow area studied in the NURP report. It is possible that stormwater emanating from the project site will contain slightly elevated levels of heavy metals; however, based upon the documented attenuation associated with recharge of stormwater by use of catch basins, these impacts are not expected to be significant. The section dealing with Land Use Plans should be reviewed as regards the

recommendations of the NURPS for stormwater management. The proposed project will conform with the recommendations of this report for best management in terms of stormwater disposal.

TABLE 2-2
GROUNDWATER IMPACTS OF STORMWATER
Low Density Residential Use

Parameter	Value	Standard
Spec. Cond. (umhos)	61	[n]
PH (standard units)	6.1	6.5-8.5[1]
Turbidity (NTU)	0.4	*
Hardness (mg/1)	15.0	[n]
Calcium (mg/1)	4.5	[n]
Magnesium (mg/1)	0.9	[n]
Sodium (mg/1)	3.7	[n]
Potassium (mg/1)	---	[n]
Sulfate (mg/1)	11.0	250.0
Flouride (mg/1)	0.1	1.5
Chloride (mg/1)	4.3	250.0
Nitrate-Tot (mg/1)	1.0	10.0
Phosphorus (mg/1)	0.01	[n]
Cadmium (mg/1)	0.001	0.01
Chromium (mg/)	0.013	0.05
Lead (mg/1)	0.006	0.025
Arsenic (mg/1)	0	0.025
Coliform (MPN)	3	**
Coliform, fecal	2	[n]

Source: Koppelman, 1982

Notes: Standards from NYS, 1984, Section 703.5 Classes and quality Standards for Groundwaters, except as noted.

1. Standards indicate limit except where exceeded due to natural conditions.

* Standard for Total Dissolved Solids for Class "AA" surface water (Drinking purposes), is 500 mg/1NYS, 1984; Section 701.19)

** Standard for coliform for Class "AA" surface water, indicates the monthly median coliform value for 100 ml of sample shall not exceed 50 from a minimum of five examinations and provided that not more than 20% of the samples shall exceed a coliform value of 240 for 100 ml of sample (NYS, 1984; Section 701.19).

[n] no standards for parameter.

2.2.2 Water Balance

The project site currently utilizes an estimated 300 gpd of water, provided by the SCWA. The site is not connected to any public sewer system, as none are present; sanitary wastewater generated on the site (an anticipated 300 gpd) is retained and recharged in the existing on-site septic system.

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

$$R = P - (E + Q)$$

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

Nelson, Pope & Voorhis, LLC (NP&V) has utilized a microcomputer model developed for its exclusive use in predicting both the water budget of a site and the concentration of nitrogen in recharge. The model, named **SONIR** (Simulation **O**f **N**itrogen **I**n **R**echarge), utilizes a mass-balance concept to determine the nitrogen concentration in recharge. Critical in the determination of nitrogen concentration is a detailed analysis of the various components of the hydrologic water budget, including recharge, precipitation, evapotranspiration and overland runoff. The basis for this method of nitrogen budget analysis is well established, and similar techniques have been used to simulate nitrogen in recharge as published by the New York StateWater Resources Institute, Center for Environmental Research at Cornell University, Ithaca, New York (BURBS - A Simulation of the Nitrogen Impact of Residential Development on Groundwater). The **SONIR** model includes four sheets of computations: 1) Data Input Field; 2) Site Recharge Computations; 3) Site Nitrogen Budget; and 4) Final Computations. There are a number of variables, values and assumptions concerning hydrologic principles, which are discussed in detail in a user manual developed for the SONIR Model and provided in **Appendix C-1.**

The model was run to obtain the existing water budget and nitrogen concentration in recharge. The run was based on current site conditions and land use coverages (see **Table 1-1**). The 24.21-acre site currently has a total site recharge of 13.76 million gallons per year (MGY), with a total nitrogen concentration of 0.29 milligrams per liter (mg/l). The results of this analysis are presented in **Appendix C-2.**

Analysis of the computer model results indicates that 99.2% of the recharge volume generated on-site originates as precipitation; the remaining 0.8% is the result of wastewater recharge. However, the nitrogen in this recharge originates overwhelmingly from wastewater (92.2%, by weight), with the remaining 7.8% originating in precipitation. The reason is that the concentration of nitrate in wastewater is much higher than that of rainfall.

A sample of water discharging from the bluff was collected to confirm that sanitary effluent is not migrating to the bluff face. The sample was analyzed for E. Coli bacteria, fecal coliform, ammonia as nitrogen, nitrite and phosphate, which are compounds indicative of septic wastes. Analytical results detected the presence of E. Coli bacteria, ammonia as nitrogen, nitrite and phosphate at 3,000 colony forming units (cfu) and 2.6 mg/l, <1.0 mg/l and 0.41mg/l, respectively

(see **Appendix B-3**). Fecal coliform was not detected in the sample. The test results are believed to be the result of biological wastes excreted by the water fowl observed along the bluff face in the area where the sample was collected. This conclusion is supported by the fact that fecal coliform, which is normally associated with excreted human wastes, was not present.

2.2.3 Surface Water and Drainage

There are no permanent surface water bodies on the project site. Due to the presence of steep slopes on many parts of the site and due to permeable surface soils, there is no opportunity for surface water bodies to form. There are no flat areas on the site in which runoff can be trapped to form surface water features for more than a temporary period during and immediately following a rainfall. Stormwater runoff generated on the site is directed by topography to lower elevations adjacent to the east, south and west. The nearest permanent surface waters are the marine waters of Long Island Sound (adjacent to the west), and NYSDEC Freshwater Wetland #L-23 (approximately 800 feet to the north).

2.3 Ecological Resources

2.3.1 Vegetation

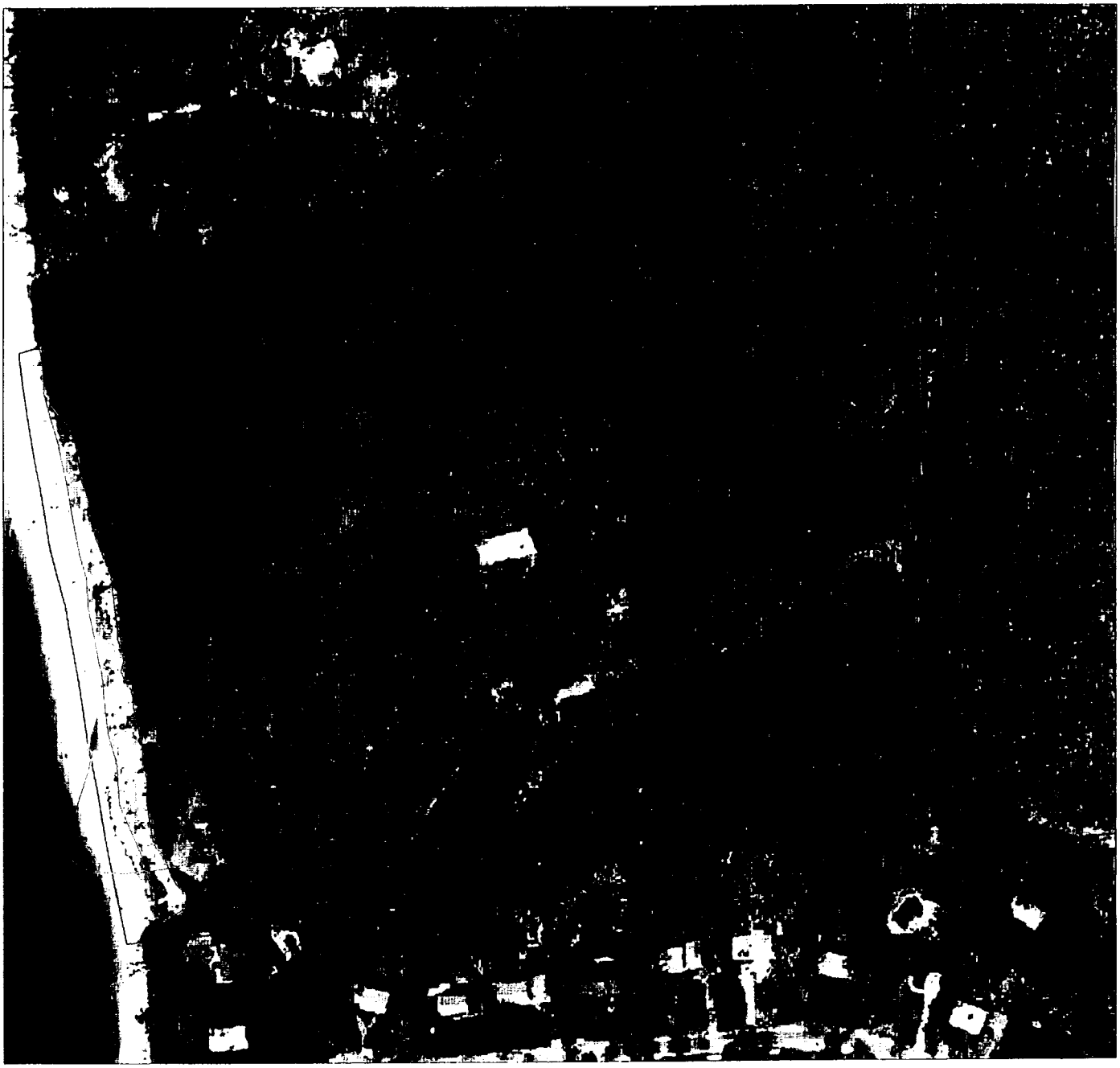
The vegetation of the project site generally includes native oak-tulip forest, an escarpment and beach habitats (within which are landscaped/lawn areas created around existing structures). **Figure 2-7** presents a map of the vegetation community types found at the site. The 24.21 acre subject parcel can best be described as an Oak-Tulip Tree Forest, Maritime Shrubland, and Marine intertidal gravel/sand beach defined by **Reschke (1990).** There are eleven (11) structures on site, each containing a small portion of what is defined as a Mowed Lawn habitat. In addition, there are several trails running throughout the site, which appear to be used and maintained and remain mostly unvegetated. Below is a detailed description of the habitat types found on site along with a list of species present or expected on the site. The existing site habitat quantities as determined by aerial photography and field inspections by NP&V are presented in **Table 2-3.**

Native Deciduous Woodland Habitats

The NYSDEC classification of habitats within New York State (**Reschke, 1990**) recognizes two native oak forest communities within the coastal lowland ecozone, Oak-Tulip Tree Forest and Chestnut-Oak Forest. These two habitats are relatively moist woodlands as compared with the Pine Barrens vegetation which characterizes most of Long Island, and the vegetation is more

FIGURE 2-7

HABITAT MAP



Source: AeroGraphics 4-8-94 aerial photograph and NP&V site inspections during Spring 1999.
Scale: 1" = 200'

NORTH

NP&V
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TABLE 2-3
SITE COVERAGES
Existing Conditions

Coverages:	Existing Conditions	Percent Coverage
Building	0.17 acres	0.7 %
Impervious/Paved	0.23 acres	0.9 %
Unpaved/Pervious	0.41 acres	1.7 %
Landscaped	0.86 acres	3.6 %
Beach/Bluff	1.96 acres	8.1 %
Oak-Tulip Forest	20.58 acres	85.0 %
TOTAL	**24.21 acres**	**100%**

mature due to the minimal disturbance by fire. Deciduous oak forest was the predominant native habitat on the moraines of Long Island's north shore prior to colonization. Much of this vegetation was cleared for cultivation, timber and firewood, but areas of the native oak forest are present as remnants or in areas which have been allowed to undergo succession, reestablishing a new climax community.

> *Oak-Tulip Tree Forest* – The mature oak forest on site is most similar to Oak Tulip Tree as defined by **Reschke (1990). Reschke (1990)** describes the Oak Tulip Tree Forest as *"a mesophytic hardwood forest that occurs on moist, well drained sites in southeastern New York. The dominant trees include a mixture of five or more of the following: red oak, tulip tree, beech,black birch, red maple, scarlet oak, black oak and white oak. There is typically a subcanopy stratum of smaller trees and tall shrubs dominated by flowering dogwood; common associates include witch hazel, sassafras, red maple and black cherry. Common low shrubs include maple-leaved viburnum, northern blackberry, and blueberries. The shrub layer and groundlayer flora may be diverse. Characteristic groundlayer herbs are white wood aster, New York fern, Virginia creeper, Jack-in-the-pulpit, wild geranium, Solomon's seal and false Solomon's seal."*

Several large diameter Tulip, black cherry, sassafras and white oak trees exist throughout the site, with the canopy also dominated by American beech, hickories, black oak, birch and red maple. The eastern most and central portions of the property are mainly dominated by Tulip and white oak, while the western portion, near the bluff, is dominated by a mixture of hickories, beech, sassafras, cherry, tulip and white oak. The soil is relatively well drained throughout the majority of the site, with a fairly well decomposed leaf layer. There are fairly rich organic soils located along North Creek Road in a small depression. The canopy is relatively closed, with several small clearings that have been created by tree falls, structures, and maintained clearings. There are many champion species located throughout the site, some with a DBH (Diameter at Breast Height) of roughly 31 inches. As previously stated, there are several trails running throughout the site, which appear to be used and maintained and remain relatively unvegetated.

The subcanopy and shrub layer found on site are relatively dense. Rose, greenbriar, maple-leaved viburnam currant and grape form thickets beneath the canopy. Seedlings of the canopy species are also common. Other species which are present on site include dogwood, spicebush,

rhododendron, cedar and bayberry. The groundcover layer is relatively sparse throughout most of the site. Bracken and Christmas fern and mosses are prevalent in the moist soils on the slopes above the beach, and a variety of weedy species are found throughout the property. This habitat occupies 20.58 acres, or 85% percent of the site.

Marine/Maritime Habitats

Marine systems consist of open ocean overlying the continental shelf, the associated coastline that is exposed to wind and waves, and shallow coastal bays that are saline because they lack significant freshwater inflow **(Reschke, 1990).** The site contains two systems within this broad classification defined below.

> *Maritime Shrubland* - According to **Reschke (1990),** *Maritime Shrubland occurs on dry seaside bluffs and headlands with exposure to offshore winds and salt spray. The habitat is typically low in species diversity, and dominated by one or more species of shrubs or stunted trees. Characteristic species include beach-plum, sand-rose, wild rose, bayberry, eastern red cedar, shining sumac, poison ivy, black cherry, highbush blueberry, American holly, and shadbush.*

> *Marine intertidal gravel/sand beach* - Marine interdial beach is defined by **Reschke, 1990** as "*a community washed by rough, high energy waves, with sand or gravel substrates that are well-drained at low tide. These areas are subject to high flucuations in salinity and moisture. A relatively low diversity community, it is perhaps best characterized by the benthic invertebrate fauna including polychaetes and amphipods. It provides feeding grounds for migrant shorebirds such as the sanderling and semipalmated plover and breeding shorebirds such as the piping plover.*"

Associated with the intertidal beach on site, is a steep faced bluff, which rises from the beach to an elevation of approximately 60 feet. Although the beach is generally devoid of vegetation, the bluff contains several shrub and tree species as well as facultative wetland indicators. Species include pussy willow, staghorn sumac, maple, scouring rush, hairgrass, common reed, poison ivy, rugosa rose, and olive are present. The bluff contains barren areas of clay material, as well as barren areas of eroded soil. Fresh water was observed seeping from the clay material which is presumably due to the presence of less permeable materials described in the Geology Section. Vegetation existing on the bluff helps to stabilize the erodable soil material. This habitat occupies 1.96 acres or 8.1% of the site.

Barren soil/sand (unpaved road/path) is located throughout the site and mowed lawn is located surrounding the existing structures. These communities are classified as terrestrial/cultural communities. **Reschke, 1990** further relates this broad community type to that which is created and maintained by human activities, or the biological composition of the resident community is substantially different from the character of the community as it existed prior to human influence.

> *Unpaved Road/Path* - Unpaved road/path is defined by **Reschke, 1990**, as "*a sparsely vegetated road or pathway of gravel, bare soil, or bedrock outcrop. These roads or pathways are maintained by regular trampling or scraping of the land surface. The substrate consists of the soil or parent material at the site, which may be modified by the addition of local organic matter,*

sand or gravel." This portion of the site occupies approximately 0.41 acres, or approximately 1.7% of the total parcel and doesn't contain vegetation.

Mowed Law – This community is created and maintained by human activity, whose existence prior to human intervention was substantially different. As defined by **Reschke, (1990)** *"residential, recreational, or commercial land, or unpaved airport runways in which the groundcover is dominated by clipped grasses and there is less than a 30% cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50% cover. The groundcover is maintained by mowing."* This habitat occupies 0.86 acres, or 3.6% of the total parcel.

Table 2-4 is a list of vegetation observed or expected on site given the habitats present; it is based upon field investigations conducted by NP&V during the spring of 1999.

TABLE 2-4
DECIDUOUS FOREST PLANT SPECIES LIST

Trees	
* Norway maple	*Acer platanoides*
* Japanese maple	*Acer sp.*
* red maple	*Acer rubrum*
* silver maple	*Acer saccharinum*
sugar maple	*Acer saccharum*
* black birch	*Betula lenta*
* white birch	*Betula populifolia*
* bitternut hickory	*Carya cordiformis*
mockernut hickory	*Carya tomentosa*
* butternut	*Juglans cinera*
* horse chestnut	*Aesculus hippocastanum*
American chestnut	*Castanea dentata*
* Chinese chestnut	*Castanea mollissima*
northern catalpa	*Catalpa bignonioides*
* American beech	*Fagus grandifolia*
* holly	*Ilex opaca [p]*
* black walnut	*Juglans nigra*
sweetgum	*Liquidambar styraciflua*
* tulip poplar	*Liriodendron tulipifera*
bigtooth aspen	*Populus grandidentata*
* black cherry	*Prunus serotina*
sweet cherry	*Prunus avium*
* red cedar	*Juniperus communis*
* white oak	*Quercus alba*
scarlet oak	*Quercus coccinea*
chestnut oak	*Quercus montana*
* northern red oak	*Quercus rubra*
* black oak	*Quercus velutina*
black locust	*Robinia pseudoacacia*
* sassafras	*Sassafras albidum*

* eastern hemlock	*Tsuga canidensis*
slippery elm	*Ulmus rubrai*
* pussy willow	*Salix discolor*

Shrubs and Vines

American bittersweet	*Celastrus scandens [p]*
sweetfern	*Comptonea peregrina*
trailing arbutus	*Epigaea repens[p]*
burningbush	*Euonymus atropurpureus [p]*
* spicebush	*Lindera benzoin*
wintercreeper	*Euonymus fortunei [p]*
* forsythia	*Forsythia sp.*
* black huckleberry	*Gaylussacia baccata*
* flowering dogwood	*Cornus florida [p]*
inkberry	*Ilex glabra [p]*
mountain laurel	*Kalmia latifolia [p]*
* spicebush	*Lindera benzoin*
* shadbush	*Amelanchier sp.*
honeysuckles	*Lonica spp.*
* northern bayberry	*Myrica pensylvanica [p]*
* Virginia creeper	*Parthenocissus quinquefolia*
* rhododendron	*Rhododendron spp. [p]*
winged sumac	*Rhus copallina*
smooth sumac	*Rhus glabra*
* staghorn sumac	*Rhus typhina*
gooseberry	*Ribes sp.*
* multiflora rose	*Rosa multiflora*
wild rose	*Rosa sp.*
* brambles	*Rubus phoenicolasius*
common dewberry	*Rubus flagellaris*
* cat briar	*Smilax glauca*
elderberry	*Sambucus canadensisi*
common dewberry	*Rubus flagellaris*
* poison-ivy	*Toxicodendron radicans*
low bush blueberry	*Vaccinium angustifolium*
high bush blueberry	*Vaccinium corymbosum*
* grape	*Vitis spp.*
* maple-leaved viburnum	*Viburnum acerifolium*
* currant	*Ribes sp.*

Herbaceous Species

wild onion	*Allium stellatum*
wild leek	*Allium tricoccum*
wood anemone	*Anemone quinquefolia*
wild sarsaparilla	*Aralia nudicaulis*
common mugwort	*Artemisia vulgaris*
jack-in-the-pulpit	*Arisaema triphyllum*
aster	*Aster spp.*
Lady fern	*Athyrium filix-femina [p]*

Pennsylvania sedge	*Carex pensylvanica*
spotted wintergreen	*Chimaphila maculata [p]*
creeping thistle	*Cirsium arvense*
hay-scented fern	*Dennstaedtia punctilobula*
* garlic mustard	*Dentaria sp.*
woodfern	*Dryopteris spinulosa[p]*
beech drops	*Epifagus virginiana*
wintergreen	*Gaultheria procumbens [p]*
wild geranium	*Geranium maculatum*
tree club moss	*Lycopodium obscurum [p]*
club moss	*Lycopodium spp. [p]*
whorled loosestrife	*Lysimachia quadrifolia*
mayflower	*Maianthemum canadense*
Indian cucumber root	*Medeola virginiana*
Indian pipe	*Monontropa uniflora*
* sensitive fern	*Onoclea sensibilis*
* cinnamon fern	*Osmunda cinnamomea [p]*
pachysandra	*Pachysandra terminalis*
pokeweed	*Phytolacca americana*
* Soloman's seal	*Polygonatum biflorum*
Virginia polyploid fern	*Polyploidium virginianum[p]*
* Christmas fern	*Polystichum acrostichoides [p]*
hair cap moss	*Polytrichium sp.*
* bracken fern	*Pteridium aquilinum*
shinleaf	*Pyrola sp.*
nightshade	*Solanum sps.*
false Soloman's seal	*Smilacina racemosa*
goldenrods	*Solidago spp.*
New York fern	*Thelypteris novaboracensis [p]*
Virginia knotweed	*Tovara virginina*
periwinkle	*Vinca minor*
* field horsetail	*Equisetum arvense*
* common glasswort	Salicornia eropaea
* scouring rush	*Equisetum scirpoides*

* - Species identified on site by NPV staff
[p] - NYS exploitably vulnerable species.

Potential for Rare and Endangered Species and Unique Trees

Under ECL-9-1503, the NYSDEC may adopt a list of "rare", "threatened", "endangered" and "exploitably vulnerable" plant species for protection by the state. As per the most updated published list (March 1990), no rare, threatened or endangered plants were identified on site. The New York Natural Heritage Program was contacted to determine whether there is any past or present record of rare plants or habitat types in the vicinity of the site. The Program does not identify rare plants with historical records in the vicinity, although it does identify the location as adjacent to or within a designated Significant Coastal Fish and Wildlife Habitat. This habitat is

part of New York State's Coastal Management Program (CMP) regulated by the Department of State (COS). Two significant habitats within this quadrant are listed as Tern Nesting Areas.

Bayberry, christmas fern, cinnamon fern and flowering dogwood are the only "exploitably vulnerable" species that was 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. Christmas and cinnamon fern is located along the stairway leading to the bluff and in the protected buffer to the east and would be protected following development as both located within a proposed buffer area. Regardless, under ECL 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)**. As per this section of the ECL, the project sponsor (i.e. owner) would not be restricted in utilizing the site for the intended purpose. Therefore, the presence of protected plants would not restrict use of the site under the NYS Environmental Conservation Law, if located beyond the wetland boundary.

Several chestnut husks were observed near the southwestern property boundary near the bluff and along the path and cleared area near the existing gazebo and structures. The American chestnut was nearly obliterated by a fungus bark disease which is believed to be of Asiatic origin, known as *Cryphonectria parasitica or Endothia parasitica*. The fungus is spread by wind, rain, birds and other animals. It enters through cracks or wounds in the bark and multiplies rapidly, making sunken cankers which expend and girdle the stem, killing everything above the canker, usually in one growing season **(The American Chestnut Foundation, 1999).** This "chestnut blight" fungus killed nearly every chestnut in its path, and by 1950, the American chestnut was essentially eliminated as a forest tree **(The American Chestnut Foundation, 1999).**

Scoping for the preparation of the DEIS for Old Orchard Woods identified chestnut trees on-site as a unique vegetation requiring further investigation. American chestnut sprouts may continue from some old stumps, which can often attain a height of 20 feet or more before succumbing to the fungus which continues to live in the portion of the roots **(Harlow, 1957)**. These sprouts often bear nuts, some of which will grow and produce seedlings. The Brooklyn Botanical Garden has been planting nuts collected from these sprouts and found that in most, if not all cases, these trees are no more resistant to "Chestnut blight" than their ancestors **(Harlow, 1957).** Asiatic chestnut were mildly susceptible to chestnut blight, having developed an immunity over many centuries **(Harlow, 1957).** The Chinese chestnut, which is often sold in nurseries, is more resistant than any other chestnut species to the blight fungus, and can be a healthy producer of good nuts **(The American Chestnut Foundation, 1999).**

There are several distinguishing differences between the Chinese and American Chestnut. The leaves of the Chinese chestnut are oval-shaped, contain small teeth along the edge, have a hairy underside on the leaves exposed to the sun, and have a rounded leaf blade at the base. The American chestnut leaf is elongated, contains large, prominent teeth along the edge, and has a leaf blade that tapers sharply at the base. The Chinese chestnut has hairy tan to pea-green stems and hairy leaf veins with rounded buds that hug the stem. The American chestnut has a smooth

and hairless stem, is reddish brown to dark green in color and has buds that angle away from the stem. Additionally, the nuts and burrs of each chestnut species differ. The spines of the Chinese chestnut are 1-2 cm long, while the spines of the American chestnuts are 2-3 cm long. Each species contains 2 to 3 nuts per burr, with the Chinese chestnut containing rounded tipped nuts with hairs generally only around the tip of the nut. On the other hand, the American chestnut has pointed tipped nuts which are hairy down 1/3 to 2/3 of length from the pointed end.

The site was extensively field-surveyed for chestnut tree identification. Based on this extensive field inventory, it is determined that the chestnut trees found on site are the species, *Castanea mollissima*, or the Chinese chestnut. Furthermore, Mrs. Hogan, the original owner of the property, documented and mapped the tree species planted and provided a nursery order receipt dated April 4th, 1951 for the planted tree species. Three of the nine documented tree species planted were Chinese chestnuts, while the remaining six consisted of walnut species. The planted specimens remain today and are the only chestnuts that were found on site. Leaf, stem and burr samples were sent to the American Chestnut Foundation. Paul Sisco, staff geneticist confirmed that the samples were from the Chinese chestnut. Additionally, he stated *"The [Chinese chestnut] trees on the Eaton's Neck property would probably not be worth saving for any intrinsic reason, since Chinese chestnut trees are fairly common in this country."*

The site contains many large diameter specimen trees, with some having a diameter of over 30" DBH (Diameter at Breast Height). An increment borer was used to determine the age of two of the champion species. The increment borer used can extract cores with a length of only approximately sixteen (16) inches, therefore exact age of the larger diameter species cannot be determined. However, it was determined that the large diameter species have survived a minimum of roughly 86 years.

A tree survey was completed to determine average density of large diameter species within the site. An approximately 100' X 100' plot was established with all tree species of at least 10" DBH recorded. Plot 1 was established located adjacent to North Creek Road, approximately 175' north of the existing entrance drive to the property. From site inspections and aerial photographs, this location appears to be the most undisturbed and uniform throughout, and is expected to be most representative of site conditions in order to determine average density. Plot 2 was established roughly 150 feet east of the bluff, in the southwestern portion of the property. This plot appears to represent current conditions throughout the center of the property and is useful as a comparison between areas. **Figure 2-7** shows the locations of Plots 1 and 2. **Table 2-5** presents a listing of the tree species with a DBH of over 10" recorded for each plot.

Within Plot 1, fifteen tree species were recorded with a DBH of over 10", with an average tree diameter across the study area of approximately 21.49" DBH. Within Plot 2, twelve tree specimens were recorded with a DBH of over 10", with an average diameter of approximately 19.63". White Oak and Tulip were the dominant species recorded within Plot 1, and Black Oak and Tulip were dominant within Plot 2. The majority of the tree species within Plot 2 were covered with vines, with one snag, or standing dead tree, present. The shrub and herbaceous layer were relatively dense within Plot 2, as compared to Plot 1. Additionally, Plot 1 contained

slopes of over roughly 25% within the western portion of the surveyed area. Tree health was determined to be similar throughout both plots.

TABLE 2-5
TREE SURVEY DATA SHEET

PLOT #1 Id. Number	Species	Latin Name	Circumference	DBH	Condition
#1	White Oak	*Quercus alba*	95.77"	30.50"	Good
#2	White Oak	*Quercus alba*	81.01"	25.80"	Good
#3	White Oak	*Quercus alba*	71.53"	22.78"	Good
#4	Red Maple	*Acer rubrum*	38.47"	12.25"	Good
#5	Sassafras	*Sassafras albidum*	31.71"	10.10"	Good
#6	White Oak	*Quercus alba*	93.70"	29.84"	Good
#7	Tulip	*Liriodendron tulipifera*	59.31"	18.89"	Good
#8	Tulip	*Liriodendron tulipifera*	43.61"	13.89"	Good
#9	Tulip	*Liriodendron tulipifera*	73.38"	23.37"	Good
#10	Tulip	*Liriodendron tulipifera*	55.86"	17.79"	Good
#11	Tulip	*Liriodendron tulipifera*	68.58"	21.84"	Good
#12	Tulip	*Liriodendron tulipifera*	92.32"	29.40"	Good
#13	B. Birch	*Betula lenta*	37.30"	11.88"	Good
#14	Tulip	*Liriodendron tulipifera*	71.15"	22.66"	Good
#15	White Oak	*Quercus alba*	98.25"	31.29"	Good
AVERAGE	---	---	**67.47"**	**21.49"**	---
PLOT #2 Id. Number	**Species**	**Latin Name**	**Circumference**	**DBH**	**Condition**
#1	Magnolia	*Magnolia sp.*	42.70"	13.60"	Good
#2	Black Oak	*Quercus velutina*	114.04"	36.32"	Good
#3	Tulip	*Liriodendron tulipifera*	56.70"	19.01"	Good
#4	Tulip	*Liriodendron tulipifera*	75.30"	23.98"	Good
#5	Tulip	*Liriodendron tulipifera*	36.42"	11.6"	Good
#6	Black Cherry	*Prunus serotina*	64.56"	20.56"	Good
#7	N/A	---	51.34"	16.35"	Dead
#8	White Oak	*Quercus alba*	60.51"	19.27"	Good
#9	Tulip	*Liriodendron tulipifera*	64.60"	20.57"	Good
#10	Tulip	*Liriodendron tulipifera*	77.72"	24.75"	Good
#11	Black Oak	*Quercus velutina*	43.10"	13.72"	Good
#12	Black Oak	*Quercus velutina*	49.86"	15.88"	Good
AVERAGE	---	---	**61.64"**	**19.63"**	---

2.3.2 Wildlife

The early successional vegetation and the mature woodland found on-site provides habitat for a number of wildlife species. Most wildlife species found in woodland habitats adjust well to human activity, and the surrounding developments 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 potential for forest interior species in remote areas of the site. **Appendix D-2** presents a computer generated list of species expected on site given the habitat available. This list is provided as a supplement to site specific discussions included herein, and also includes information on the biological needs of each species. Nelson, Pope & Voorhis, LLC developed the model, as a tool to supplement site specific inventory and discussions, and is described more fully in the introductory statements contained in **Appendix D-2.**

The following text discusses the avian species that would be expected to breed on site, as well as those species that might be expected during migrations or as winter residents. In addition, data from the 1988 Breeding Bird Survey for the census block which contains the site was obtained from the New York State Department of Environmental Conservation (**Appendix D-3**). This study surveyed the entire state by 25 km^2 census blocks over a five year period to determine the bird species which breed within the State. Most of the species listed by the DEC breeding bird survey are likely to be found on site, with the exception of species restricted to wetlands or other habitats not found on site. Birds that prefer a mix of woodland and urban habitats may be present on the property.

Birds

Seed-eating birds, including grosbeaks, finches, towhees, juncos, and sparrows, are expected to be relatively common on site **(Bent, 1968, 1968).** The most common sparrow that breeds on Long Island is the song sparrow, and the introduced house sparrow is also abundant. Both species are found in forest openings, suburban areas and overgrown field habitats, and are expected on site. The house sparrow is an introduced old world species, which often nests on buildings, and is considered a pest. The house sparrow was observed on site and is likely to be present in the surrounding areas. The fox sparrow and white-throated sparrow are common winter visitors on Long Island, and are expected during the colder months. The chipping sparrow, which is found to be abundant around man made structures, and the white crowned sparrow, who is often found in suburban areas and parks may also be expected. The Savannah sparrow prefers grassland habitats and is likely to utilize areas near the shore. The swamp sparrow may also be found in weedy fields, but prefers fresh water marshes and would likely utilize the wetlands to the north. The house sparrow and song sparrow are the only sparrows listed as confirmed breeders within the breeding bird census block.

The American goldfinch and house finch are the most likely finches to utilize the property. The house finch prefers suburban and edge habitats and was observed on site. The American goldfinch prefers a diet of thistle and dandelions and may utilize portions of the site as well. The northern cardinal, as well as the related rufous-sided towhee and rose-breasted grosbeak prefer woodlands with a dense understory and/or hedgerows, and are expected to be present on site and in the surrounding areas. The indigo bunting prefers open landscapes with dense cover for nesting and tall trees for song perches **(Andrle and Carroll, 1988)** and may also utilize the site. The house finch, northern cardinal and American goldfinch were listed as confirmed breeders, while the indigo bunting is listed as a possible breeder and the rufous-sided towhee is listed as a probable breeder. The northern cardinal was observed on site.

A variety of larger birds are commonly found in a suburban, successional habitats and woodlands, including the thrashers, the orioles and blackbirds **(Bent, 1964, 1965)**. Corvids which are common on Long Island include the American crow and blue jay, with the fish crow present near tidal areas. Both the American crow and the blue jay are listed as confirmed breeders in the breeding bird survey, while the fish crow is listed as probable. The northern mockingbird, brown thrasher, and gray catbird are thrasher species that might be found on site, and are also expected to utilize the site and surrounding areas, as this group generally prefers more open habitats **(Andrle and Carroll, 1988).** The northern mocking bird and gray catbird are listed as confirmed breeders, while the brown thrasher is listed as probable. Two additional confirmed breeders, the American robin and the European starling, both have similar habitat requirement as the thrashers. These species are common in fields and suburban areas feeding on insects and fruits, and are expected on site. American robins, northern mockingbirds, a gray catbird and several European starlings were observed on the site.

Birds from the oriole and blackbird family also feed on a mix of insects, seeds, fruit and aquatic fauna. Both the grackle and brown-headed cowbird were observed and are expected on sit **(Andrle and Carroll, 1988).** These birds generally prefer open woodlands and field habitats, and are probably common throughout the developed areas, as they are relatively tolerant of development. The cowbird is a nest parasite which lays eggs in the nests of other birds. Both are listed as confirmed breeders. The northern oriole is expected to be present, as it generally prefers to nest in taller trees in open areas. The northern oriole is also listed as a confirmed breeder. The red-winged blackbird and eastern meadowlark generally prefer open woodlands and field habitats. The red-winged blackbird feeds primarily on insects, and is typically associated with wetland habitats. It nests on or near the ground in a variety of habitats including marshes, swamps, wet meadows, fields and thickets **(Bent, 1965),** and was observed on site. The eastern meadowlark typically breeds in open areas with bare ground, and the site contains a small portion of suitable habitat. The bobolink prefers breeding in tall grass meadows, hay fields and damp meadows near stream, drier portions of brackish marshes and irrigated fields **(Andrle and Carroll, 1988)** and is generally not expected. The horned lark and eastern meadow lark are listed as confirmed breeders within the census block and the bobolink is listed as a probable breeder.

Two doves are found on Long Island, including the mourning dove and the introduced rock dove, also known as the domestic pigeon. Both are common in suburban areas, parks, cultivated fields and along roadsides. The mourning dove typically nests in overgrown areas and tangled vines, while the rock dove prefers to nest on buildings and other structures **(Andrle and Carroll, 1988).** The mourning dove was observed at the site and in the surrounding areas. The mourning dove is listed as confirmed breeders within the census block.

A few smaller insect feeding birds are found in overgrown areas, including the wrens, titmice, and nuthatches. The house wren is the only wren expected on site, as it is commonly found in suburban areas and edge habitats as well as forest understory, where it feeds on insects. The Carolina wren breeds in woodlands, thickets, brushy hollows, swamps, and along steam beds **(Andrle and Carroll, 1988)**. The house wren and Carolina wren are listed as confirmed breeders within the census block. Titmice and nuthatches which might be found on site include

the black-capped chickadee, tufted titmouse, and white-breasted nuthatch, all of which are year-round residents on Long Island **(Bent, 1964).** The nuthatch and titmouse typically breed in woodlands, and are also expected to forage on site. Both the chickadee and titmouse were observed on site and both are listed as confirmed breeders within the census block. The white-breasted nuthatch is listed as a probable breeder and was observed on site. Similar birds which may also utilize the site outside of the breeding season are the golden-crowned and ruby-crowned kinglets, both of which are winter visitors on Long Island and are found in both forested and open habitats.

Birds from the flycatcher family feed on flying insects in woodlands, edge habitats and open areas. The eastern kingbird, eastern wood-pewee and great-crested flycatcher are the most common flycatchers on Long Island **(Bent, 1963; Andrle and Carroll, 1988).** These species are generally found in deciduous woodlands or edge habitats, although the great-crested flycatcher prefers larger blocks of woodland and is less tolerant of human activity **(Andrle and Carroll, 1988).** The kingbird generally prefers more open areas, and is most likely to utilize the landscaped areas and edge habitat throughout the site and in the surrounding areas. The eastern wood-pewee is an "edge" species found mainly at forest margins and openings and is common to fragmented and open forest tracts **(Bent, 1963; Andrle and Carroll, 1988).** This species is expected to utilize the site. The least flycatcher is a breeding bird of deciduous and mixed forests. It prefers semi-open areas: forest edges, open woodlands, stream and pond borders, and also orchards and parks **(Andrle and Carroll, 1988)** may be present in small numbers. The Acadian flycatcher and blue-grey gnatcatcher are also known to nest and utilize moist oak forests and areas near fresh water. The blue-gray gnatcatcher is generally not expected as this species prefers thick vegetation along waterways although may be present in small numbers. The Acadian flycatcher requires a habitat with mature, dense woodlands with tall trees, closed canopy and open spaces in the understory for feeding **(Andrle and Carroll, 1988).** The eastern kingbird, great-crested flycatcher and eastern wood-pewee are listed as confirmed breeders and the eastern phoebe is listed as a probable breeder within the census block.

Most thrushes and creepers also feed on insects in wooded areas. The wood thrush is expected to utilize the site, as it prefers open woods with a well developed understory of shrubs and small trees **(Andrle and Carroll, 1988).** This thrush is listed as a confirmed breeder and suitable habitat is found over the entire property. The veery may also be present, although it generally prefers larger tracts of forest **(Bent, 1964)** and may be found in the adjacent properties to the east/northeast. The hermit thrush might also be present, as it prefers cool, camp forests, expecially coniferous or mixed, but is also likely to nest in a variety of other locations where undergrowth is thick **(Andrle and Carroll, 1988).** Long Island is at the southern limit of the species breeding range, although it is a relatively common winter visitor in the area. The brown creeper, which prefers moist woods near streams, was observed on site. Nesting has been recorded in dry uplands in both coniferous and deciduous forests and the brown creeper is generally found in areas with 50% or greater forest cover **(Andrle and Carroll, 1988).** This species requires the presence of dead or dying trees with loose shingles of bark, as it builds its nest behind the bark. The brown creeper is listed as a probable breeder within the census block.

The cedar waxwing also occasionally feeds on flying insects, but is more commonly associated with open woodlands, orchards, and suburban areas where its diet consists primarily of fruit. This species might be present on site during summer months **(Bull and Farrand, 1974)**. The scarlet tanager is extremely vulnerable to habitat fragmentation and is usually found in mature wooded areas of over 50 acres **(Andrle and Carroll, 1988)** and thus is not expected on the property but in the adjacent forested habitat. The scarlet tanager is listed as a probable breeder.

The vireos are also somewhat vulnerable to forest fragmentation, with only the red-eyed vireo expected on site. Although it will use suburban habitats and is found in woodlots of varying sizes, the red-eyed vireo appears to be more susceptible to nest parasitism by the cowbird in developed areas where there is more edge habitat (**Andrle and Carroll, 1988**). The warbling vireo favors open woods and isolated trees of open country such as elms and silver maples in villages, city parks, golf courses and farmyards (**Andrle and Carroll, 1988**) and is unlikely to utilize the site. However, there is suitable habitat in the vicinity. The red-eyed vireo is listed as a confirmed breeder and the warbling vireo is listed as a possible breeder.

Common Long Island swallows include the barn and tree swallows, both of which adjust well to human activity. The barn swallow nests on barns and other buildings, but may use natural nest sites as well. The tree swallow and purple martin prefer wetland areas where insects are abundant, and are also likely to be present to the north of the site. Both swallows nest in cavities of trees, but are also common residents in nesting boxes and bird houses. The bank swallow usually nests near water, in the steep banks of streams and creeks where the soil may be sand, clay or gravel but also nests in the banks of lakes, bays or oceans and occasionally some distance from water (**Andrle and Carroll, 1988**). Suitable habitat exists along the bluff on the western portion of the site. There is evidence of swallow nests along the top of the bluff although none were observed. The bank swallow and barn swallow are listed as confirmed breeders within the census block.

The woodland habitat and the open habitat on site and in the vicinity may provide habitat for game birds such as the ring-necked pheasant and the bobwhite. The ring-necked pheasant and bobwhite may be present, although both prefer more open areas than are found on site **(Bent, 1963; Andrle and Carroll, 1988)**. The American woodcock may also be present. It is typically found in habitats with a mix of woodland and overgrown field, and prefers moist areas where earthworms are abundant. These birds are year-round residents on Long Island, and may be present in small numbers. The northern bobwhite and the ring-necked pheasant are listed as confirmed breeders, while the American woodcock is listed as a probable breeder.

The nocturnal whip-poor-will feeds on moths and other insects, and prefers dry woods with adjacent fields. This species is likely to breed on site, and may forage in the area. The chimney swift also feeds on flying insects, and is found in a variety of habitats. Although it originally nested in cliffs and tree cavities, the species now is most commonly found nesting on buildings and other structures (**Andrle and Carroll, 1988**). It may also forage in the vicinity of the site, as well as breed on the property. The chimney swift is listed as a probable breeder within the census block. The common nighthawk on Long Island are known to breed in such places as sandy openings in mixed pine-scrub oak barrens, on bare ground in pastures and fields, on sand

dunes, on gravel beaches, and on flat rocks and logs in the open **(Andrle and Carroll, 1988).** This species is expected to utilize the site and is listed as a possible breeder.

The yellow-billed cuckoo prefers to nest in open wooded areas or along edges, but tends to avoid developed areas. The black-billed cuckoo seems to prefer more wooded areas than the yellow-billed cuckoo and nests in habitats such as brushy pastures, shrubby hedgerows and dry open upland woods **(Andrle and Carroll, 1988)** and may utilize the parcel. The yellow-billed cuckoo is listed as a confirmed breeder within the census block.

Warblers also feed on a variety of insects, and most warbler species are found in woodlands. Warblers that prefer woodland habitats include the black-and-white warbler, black-throated blue warbler, yellow warbler and the yellow-rumped warbler. All of these warblers are expected to utilize the site, and most are relatively intolerant of human development. However, the black-throated blue warbler can adapt to suburbs and the yellow-rumped warbler may be found in yards. The blue-winged warbler primarily utilizes abandoned and overgrown fields, and may be also be expected. The ovenbird prefers an open forest with little underbursh and an abundance of fallen leaves, logs, and rocks **(Andrle and Carroll, 1988)** and may be expected. The yellow warbler is listed as a confirmed breeder and the ovenbird and common yellowthroat were listed as probable breeders. The blue-winged and worm-eating warbler were listed as possible breeders. The American redstart inhibits many forest typed and on Long Island is found in red maple-hardwood swamps and in upland deciduous woods **(Andrle and Carroll, 1988)**. The American redstart is listed as a probable breeder within the census block and may be expected to utilize the site.

The site and surrounding area is suitable for use by raptor and owl species, most of which nest or roost in the forested areas, preying primarily on small mammals in adjacent forested and open habitats. The eastern screech owl and great horned owl are the most common owls on Long Island. The screech owl is expected to nest on site, as it is relatively tolerant of humans **(Andrle and Carroll, 1988)** and is listed as a confirmed breeder. The great horned owl is more vulnerable to development, and it may breed on site as it prefers larger, mature woodlands. The great horned owl is listed as a probable breeder within the census block. The long-eared owl may also be present on site, as it prefers thick coniferous or mixed forests, often near water **(Andrle and Carroll, 1988)**. However, the long-eared owl is not known to be abundant in New York State. In the coastal lowlands, the short-eared owl nests on bare sand with a scattering of beach grass **(Andrle and Carroll, 1988),** and may be present. The barn owl is likely to be present as it is almost exclusively found in the presence of humans, and requires open areas in which to hunt as it almost never hunts in woods **(Andrle and Carroll, 1988)**. This species is also listed as a possible breeder within the census block.

Most raptors nest in high areas away from humans, and thus, while they may roost on the property, most are unlikely to breed on site. Raptors prey primarily on small mammals, which are likely to be abundant in the area. Although none were seen and no signs were observed, the red-tailed hawk, American kestrel, osprey, and the northern harrier may occasionally be found on site. The most common raptors on Long Island are the red-tailed hawk and the American kestrel, as they are relatively tolerant of human activity **(Bent, 1961; Andrle and Carroll, 1988)**. The

red-tailed hawk might be present, as it is found in a variety of habitats. The American kestrel may be found where suitable nest cavities in trees, buildings, or nest boxes exist and sufficient non-forested foraging areas are present **(Andrle and Carroll, 1988).** The northern harrier is a ground-nester, and utilizes various wetland and upland habitats **(Andrle and Carroll, 1988)**. The Northern harrier is more likely to be present in the wetlands areas to the north. The osprey and American kestrel are listed as possible breeders and the red-tailed hawk is listed as a probable breeder.

Woodpecker species, including the common flicker, red-bellied woodpecker, hairy woodpecker and downy woodpecker, are common in the mature wooded portions of Long Island, and are likely to be found on site. The northern flicker, red-bellied and downy woodpeckers were listed as the only confirmed woodpecker species within the census block. The hairy woodpecker is more secretive and avoids human activity, but may be present and is listed as a probable breeder. These species prefer mature woodlands where insects are abundant in both large mature trees and decaying trees. The red-headed woodpecker generally nests in bogs and swamps near fresh water **(CEQ, undated)** and is unlikely to be present. The red-bellied woodpecker prefers northern hardwoods, lowland hardwoods, oak and pine **(Andrle and Carroll, 1988).** The yellow-bellied sapsucker is more numerous at higher elevations, and breeds in either deciduous or mixed deciduous and evergreen forests, **(Andrle and Carroll, 1988)** and is not expected on site. Many suitable trees are present on site for nesting and feeding by woodpecker species. Field inspections located several large diameter holes and trees where woodpeckers have presumably nested and fed. Several northern flickers and a downy woodpecker was observed on site.

Huntington Harbor is considered an important waterfowl wintering area, and several species of waterfowl may use the site and nearby marshes and islands for nesting and/or foraging . Of these waterfowl species, most are present as winter visitors or during migrations, and do not breed on Long Island. These species include the scup, canvasback, goldeneye, and brant. The gadwall, wigeon, northern shoveler and red breasted merganser are typically present as migrants, but occasionally remain through the breeding season. Long Island has year round populations of Canada goose, mallard, black duck and mute swan, although numbers of geese, mallards and black ducks are augmented by migrants during the winter. Mallards, mute swans and black duck might potentially breed on site, although Canada geese prefer more isolated islands **(Andrle and Carroll 1988)**. Several mallards and Canada geese were observed utilizing the shoreline at low tide. The mallard, Canada goose, and Mute Swan are listed as confirmed breeders within the census block.

The double-crested cormorant was also observed in the Harbor and is a year round resident on Long Island, although the species is unlikely to breed on site as it prefers isolated beaches. Another fishing bird, the belted kingfisher, is expected to utilize the site for nesting and feeding. The belted kingfisher is a common summer resident in New York State and breeds in every county of the state (**Andrle and Carroll, 1988**). The kingfisher is usually found near waterways with nearby banks for nesting, although it has also been reported to occasionally nest in trees. They are often found in association with Northern rough-winged and bank swallows using the

same nesting bank. Suitable nesting habitat existing on site for this species. The belted kingfisher is listed as a confirmed breeder within the census block.

The great blue heron, green-backed heron and snowy egret and other related species may also be present on site. Herons and egrets tend to nest in mixed species rookeries near shallow water suitable for fishing, with different species nesting at different heights in the understory and canopy **(Andrle and Carroll, 1988; Hancock and Elliot, 1978).** These species build small nests which may be added on to until they become quite large, and may breed on site. Great blue herons build their nests at heights of 25 to 100 feet, though **Andrle and Carroll (1988)** do not list any breeding sites on Long Island and the species generally breeds further north. The black crowned night heron prefers to nest in red cedar shrublands, though nests are found in a variety of habitats and at varying heights in the vegetation **(Andrle and Carroll, 1988)**. The yellow-crowned night heron also has similar nesting requirements.

Other related species which could potentially use the site are little blue herons, green backed herons, and great egrets. Egrets nest in lower shrubs and thickets at heights of 3-12 feet, and snowy egrets are common in the area. Little blue herons are relatively rare and prefer to breed in trees and shrubs on isolated islands. Breeding populations are only known from the south shore and far east end of Long Island **(Andrle and Carroll 1988)**. Green backed herons nest in low thickets and could potentially use the site for feeding, although it is not expected that they would nest on site. Of these species, the green-backed heron, snowy egret, and black-crowned night-heron are listed as possible breeders within the census block and the yellow-crowned night heron is listed as a probable breeder.

Of the resident wading birds which may forage for infauna on the mudflats and low marsh of the Harbor, the clapper rail breeds in low marsh and is expected to nest near the site and is listed as a probable breeder within the census block. The spotted sandpiper and greater yellowlegs are summer residents and breed in the high marsh vegetation **(Andrle and Carroll 1988)**. The American oystercatcher and Virginia rail are both year-round breeders on Long Island, but the oystercatcher tends to be restricted to the south shore and east end of Long Island **(Andrle and Carroll 1988)**, and the Virginia rail tends to avoid humans. If present, the Virginia rail prefers salt shrub for nest sites. Lesser yellowlegs may be common during migrations. Although these species are generally not expected to nest on site, it is likely that they would utilize the site for feeding. The piping plover is an endangered shorebird who is listed as a confirmed breeder within the breeding bird census block. On Long Island, the piping plover nests primarily along beaches, although it is also found nesting on dredge spoil in either sandy or pebble substrates **(Andrle and Carroll 1988)**. It nests singly and generally locates its nest on the beach above the high-tide line **(Andrle and Carroll 1988)**. No nest was observed on the subject site

Many gulls and terns are also expected to utilize the harbor for feeding, although none are typically expected to breed on site as most prefer to nest exclusively on islands. They may, however, forage in the area below the high marsh, and are common in the area. The herring gull, laughing gull, black-backed gull, common tern and least terns are all expected in the area of the site. The common tern is a threatened species and the least tern is an endangered species. Both are listed as confirmed breeders within the census block. The common tern nests in colonies on

offshore islands, barrier beach dunes, dredge spoils areas and on salt marshes **(Andrle and Carroll 1988)**. The least tern nests in small colonies on beaches, dredge spoil areas, and other open shoreline sites with nests consisting of no more than scrapes in the sand which are sometimes lined with shells **(Andrle and Carroll 1988)**. Human disturbance, coastal development, predation and flooding can greatly affect productivity **(Andrle and Carroll 1988)**. These species are expected to breed on the bird preserve located on Sand City, south of the site.

Table 2-6 is a list of the bird species observed or expected on site given the habitats present; it is based upon field investigations conducted by NP&V during the spring of 1999. Relatively few avian species were sighted, although remains of songbird nests were observed within several shrubs on the site. Additional information regarding these species and others can be found within **Appendix D-2.**

TABLE 2-6
BIRD SPECIES LIST

* gray catbird	*Dumetella carolinensis*
* red-winged blackbird	*Agelaius phoeniceus*
* black-capped chickadee	*Parus atricapillus*
* Northern Cardinal	*Cardinalis 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*
* house finch	*Carpodacus mexicanus*
*common flicker	*Colaptus auratus*
Acadian flycatcher	*Empidonax virescens*
Eastern kingbird	*tyrannus tyrannus*
Eastern phoebe	*Sayornis phoebe*
Blue-grey gnatcatcher	*Polioptila caerulea*
great-crested flycatcher	*Myiarchus crinitus*
* common grackle	*Quiscalus quiscula*
ring-necked pheasant	*Phasianus colchicus*
rose-breasted grosbeak	*Pheucticus ludovicianus*
northern harrier	*Circus cyaneus [threatened]*
osprey	*Pandion haliaetus [threatened]*
red-tailed hawk	*Buteo jamaicensis*
American kestrel	*Falco sparverius*
* blue jay	*Cyanocitta cristatta*
* Northern (dark-eyed) junco	*Junco hyemalis*
golden-crowned kinglet	*Regulus satrapa*
ruby-crowned kinglet	*Regulus calendula*
* Northern mockingbird	*Mimus polyglottos*
* white-breasted nuthatch	*Sitta carolinensis*
northern oriole	*Icterus galbula*
ovenbird	*Seiurus aurocapillus*

	common nighthawk	*Chordeiles minor [s]*
	barn owl	*Tyto alba [s]*
	common screech owl	*Otus asio*
	great-horned owl	*Bubo virginianus*
	long-eared owl	*Asio otus*
	short-eared owl	*Asio flammeus [s]*
*	American robin	*Turdus migratorius*
	chipping sparrow	*Spizella passerina*
	Savanah sparrow	*Passerculus sandwichensis*
	white-crowned sparrow	*Zonotrichia leucophrys*
	fox sparrow	*Passerella iliaca*
*	house sparrow	*Passer domesticus*
	song sparrow	*Melospiza melodia*
	white-throated sparrow	*Zonotrichia albicollis*
*	European starling	*Sturnus vulgaris*
	American goldfinch	*Carduelis tristis*
	indigo bunting	*Passerina cyanea*
	barn swallow	*Hirundo rustica*
	bank swallow	*Riparia riparia*
	tree swallow	*Tachycineat bicolor*
	purple martin	*Progne subis*
	chimney swift	*Chaetura pelagica*
	scarlet tanager	*Piranga olivacea*
	brown thrasher	*Toxostoma rufum*
	rufous-sided towhee	*Pipilo erythrophathalmus*
	hermit thrush	*Catharus guttatus*
	wood thrush	*Hylocichla mustelina*
*	tufted titmouse	*Parus bicolor*
	veery	*Catharus fuscescens*
	red-eyed vireo	*Vireo olivaceus*
	warbling vireo	*Vireo gilvus*
	blue-winged warbler	*Vermivora pinus*
	black-and-white warbler	*Mniotilta varia*
	black-throated blue warbler	*Dendroica caerulescens*
	yellow-rumped warbler	*Dendroica coronata*
	yellow warbler	*Dendrocica petchia*
	worm-eating warbler	*Helmitheros vermivorus*
	horned lark	*Eremophila alpestris*
	killdeer	*Charadrius vociferus*
	eastern meadowlark	*Sturnella magna*
	bobolink	*Dolichonyx oryzivorus*
	cedar waxwing	*Bombycilla cedrorum*
	whip-poor-will	*Caprimulgus vociferous*
	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*

	common yellowthroat	*Geothlypis trichas*
	fish crow	*Corvus ossifragus*
	belted kingfisher	*Megaceryle alcyon*
	gadwall	*Anas strepera*
	Bonaparte's gull	*Larus philadelphia*
	great-black-backed gull	*Larus marinus*
*	herring gull	*Larus argentatus*
	ring-billed gull	*Larus delawarensis*
	little-blue heron	*Egretta caerulea*
	yellow-crowned night-heron	*Nycticorax violaceus*
	black-crowned night heron	*Nyctucirax nycticorax*
	green heron	*Butorides striatus*
	great blue heron	*Ardea herodias*
	red-breasted merganser	*Mergus serrator*
	American oystercatcher	*Haematopus palliatus*
	piping plover	*Charadrius melodus [endangered]*
	semipalmated plover	*Charadrius semipalmatus*
	semipalmated sandpiper	*Calidris pusilla*
	spotted sandpiper	*Actitus macularia*
	black skimmer	*Rynchops niger*
	seaside sparrow	*Ammodramus maritimus*
	common tern	*Sterna hirundo [threatened]*
	least tern	*Sterna antillarum [endagered]*
	brant	*Brant bernicla*
	American coot	*Fulica americana*
	double-crested cormorant	*Phalacrocorax auritus*
	American black duck	*Anas rubripes*
*	mallard	*Anas platyrhynchos*
*	Canada goose	*Branta candensis*
	great egret	*Casmerodius albus*
	snowy egret	*Egretta thula*
	clapper rail	*Rallus longirostris*
	Virginia rail	*Rallus limicola*
	least sandpiper	*Calidris minutilla*
	greater scaup	*Aythya marila*
	lesser scaup	*Aythya affinis*
	Northern shoveler	*Anas clypeata*
	canvasback	*Aythya valisineria*
	goldeneye	*Bucephala islandia*
	common snipe	*Gallinago gallinago*
	mute swan	*Cygnus olor*
	greater yellowlegs	*Tringa melanoleuca*
	lesser yellowlegs	*Triniga flavipes*

[s] special concern species
*species observed by NP&V staff, spring of 1999

Mammals

The habitats found on the project site are expected to support a number of mammal species. Small rodents and insectivores such as mice, shrews and voles are expected to be the most abundant mammals, but the property and surrounding area should also support larger mammals. Several tunnel entrances under the accumulated leaf litter were found, although no ground dwelling species were observed.

The masked shrew may be the most common mammal on Long Island. Although it is rarely seen, this small insectivore has been captured and identified in almost every type of habitat on Long Island **(Connor, 1971).** It will utilize any site with sufficient ground cover, including woods, fields, bogs, and both marine and freshwater marshes. The short-tailed shrew also uses a variety of habitats, but on Long Island appears to be most common in deciduous woodlands **(Connor, 1971; Godin, 1977).** Both shrews feed on insects and other small invertebrates, and are expected to be abundant on site.

A larger insectivore, the eastern mole, is also found on Long Island, and is expected on site. The eastern mole is common in woodlands, fields and suburban lawns throughout the island, where they dig tunnels which are also used by mice and shrews. The species is probably most common in the rich soils of deciduous woodlands along the north shore of Long Island, and should be present on the property. Its habitats also include landscaped areas, pine barrens, dunes and salt marsh borders, but the species seems to avoid fresh water swamps and marshes **(Connor, 1971).**

The meadow vole and pine vole may be expected to utilize the subject parcel. The meadow vole prefers open woodlands while the pine vole prefers sandy soils in woodlands or in fields. Both species utilize underground tunnels.

Other rodents expected on site include mice and rats, and some of the larger rodents. Most mice and rats are omnivorous, feeding on grasses, herbs, roots, tubers and occasionally small invertebrates. The white-footed mouse is likely to be the most abundant mouse on site. It is found in a wide variety of habitats on Long Island, including wetlands, dry fields, woods and occasionally buildings **(Connor, 1971),** and is expected on site. This mouse is one of the most common mammals on the Island, but local populations appear to fluctuate greatly from year to year **(Connor, 1971).** The house mouse and Norway rat are introduced European species that prefer to be near human structures and are considered pests. These two species are likely to be present due to the surrounding residential developments.

Of the larger rodents, the eastern gray squirrel was observed, with the eastern chipmunk also likely to be present. Gray squirrels are quite tolerant of humans and will use both woodland and open habitats as long as large, nut bearing trees are present for foraging and nesting. On Long Island, they are most common in the oak woodlands of the north shore, but are also present in pine barrens, where they feed on pine seeds. The species may become a pest, and individuals are often found in the attics of older buildings. **Connor (1971)** indicates that the southern flying squirrel is also present in heavily wooded areas away from developed areas, although its distribution does not appear to be extend east of Riverhead. The chipmunk prefers forest and

edge habitats with thick understory vegetation, where it feeds on a variety of plant materials, and it will utilize suburban areas with sufficient cover **(Connor, 1971; Godin, 1977).**

Bats typically prefer areas near water where there are abundant insects for feeding, and thus should be found on or near the site. The caretaker has observed several bats, varying in size, within the open areas on the project site during the warmer months. Due to the absence of caves on Long Island, these species generally roost in colonies in the attics of buildings, although some species will occasionally roost in trees **(Connor, 1971).** The big brown bat is present throughout the year, and is the most common bat in many areas of Long Island **(Connor, 1971).** The most common summer bats are the little brown myotis and Keen's bat, and the red bat and eastern pipistrelle are also present in small numbers **(Connor, 1971).** The silver-haired bat and hoary bat are found on the Island only during seasonal migrations. All of these species are tolerant of humans. Although none were observed, bats are expected to utilize the site and surrounding areas, and may occasionally roost in the older structures found on site.

The eastern cottontail is the most common rabbit on Long Island, although the similar New England cottontail is also present in some areas **(Connor, 1971).** The cottontails occupy a variety of habitats, including dry and swampy woods, fields, bogs, dunes and shrublands **(Connor, 1971).** They are also tolerant of humans and utilize suburban lawns and gardens extensively if food is available. The eastern cottontail is expected on and in the areas surrounding the site. The opossum is the only marsupial on Long Island, and makes use of a variety of habitats ranging from brushy woods to towns and urban areas with cover. It appears to be quite abundant, and is often killed on roadways. This species is likely to be present on site. The white-tailed deer is the largest mammal found on Long Island. Although deer are present in the general area, they do not appear to be abundant but are expected to utilize the site.

Long Island carnivores include the red fox, raccoon, long tailed weasel, and striped skunk. Of these species, the raccoon, fox and long tailed weasel are expected to be found on site. The raccoon is common throughout Long Island and prefers brushy wooded habitats near water. The raccoon is tolerant of humans, and may become a pest, foraging in garbage cans, gardens and agricultural fields. They will occasionally cause damage by denning in attics and other structures. A raccoon was observed on site.

The red fox is found throughout Suffolk County in a variety of habitats with limited human development, and often hunts in freshwater and marine wetlands. Fox typically prefer diverse habitats consisting of "intermixed cropland, rolling farmland, brush, pastures, mixed hardwood stands and edges of open areas that provide suitable hunting grounds" **(Chapman and Feldhamer, 1982).** Much of this habitat has been either urbanized or allowed to revert to dense forest throughout the northeast U.S. **Chapman and Feldhamer (1982)** report ranges from 140 to 400 acres depending on the habitat, though regardless of size, home ranges are generally twice as long as they are wide. Home range size is determined by "abundance of food, degree of intraspecific and interspecific competition, type and diversity of habitat and the presence of natural physical barriers such as rivers or lakes" **(Wade et al., 1990).** It appears that although fox will utilize suburban areas, their range increases with diminished amounts of open land. The

site is suitable for use by the red fox and has been observed by the caretaker on several occasions. Fox scat was observed on the site.

Table 2-7 is a list of the mammal species that are expected to occur in the study area and more specifically on site because of the existing site and area conditions. Additional information regarding these species and others can be found within **Appendix D-2.**

Amphibians and Reptiles

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, breeds in temporary pools **(Behler and King, 1979).** The Fowler's toad prefers sandy areas near marshes, irrigation ditches and temporary pools. These two species are the most likely anuran species to be present in upland habitats on Long Island. If present on site, numbers are expected to be small. However, they are likely to be found in the immediate vicinity.

TABLE 2-7
MAMMAL SPECIES LIST

big-brown bat	*Eptesicus fuscus*
hoary bat	*Lasiurus borealis*
Keen's bat	*Myotis keenii*
little-brown bat	*Myotis lucifugus*
red bat	*Lasiurus borealis*
Eastern pipistrelle	*Pipistrellus subflavus*
silver-haired bat	*Lasionycteris noctivagans*
Eastern chipmunk	*Tamis striatus*
Eastern cottontail	*Sylvilagus floridanus*
white-tailed deer	*Odocoileus virginianus*
red fox	*Vulpes vulpes*
Eastern mole	*Scalopus aquaticus*
house mouse	*Mus musculus*
white-footed mouse	*Peromyscus leucopus*
Virginia opossum	*Didelphis virginiana*
*raccoon	*Procyon lotor*
Norway rat	*Rattus norvegicus*
masked shrew	*Sorex cinereus*
short-tailed shrew	*Blarina breuicauda*
*Eastern gray squirrel	*Sciurus carolinensis*
southern-flying squirrel	*Glaucimys volans*
meadow vole	*Microtus pennsylvanicus*
pine vole	*Microtus pinetorum*

*species observed by NP&V staff, during the spring of 1999

Most frog species remain in or near permanent water throughout their life cycle, with the exception of the wood frog, southern leopard frog and spring peeper. These two species may move considerable distances from the breeding site after hatching, and are expected in woodland

habitats near pond habitats. These species may be present in small numbers, although would be expected to breed in the wetland to the north. Fully aquatic frog species which are found in small ponds on Long Island include the bullfrog, cricket frog, and green frog. These species prefer wooded ponds, but may be found in other permanent pond habitats **(Wright, 1949; Mattison, 1987; Dickerson, 1943)** and are not expected on site.

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)**. The site contains suitable habitat for this species.

Mole salamanders, which typically spend most of their adult life underground and are present on Long Island, include the spotted salamander and marbled salamander. The spotted salamander breeds in mid-spring and is found primarily in rich soils of the moraine deposits **(Cryan, 1984)**. The blue-spotted salamander also breeds in the spring, and is restricted to deep woodlands on the moraines of the Montauk peninsula **(Cryan, 1984)** and thus is not expected. The marbled salamander lays its eggs during the fall within dried vernal pools or marsh edges, which are then inundated by winter rains. The species is most common in deciduous oak woodlands with rich soils, although individuals are occasionally found in pine-oak habitat **(Cryan, 1984)**.

Several species of reptiles are found on Long Island in a variety of upland habitats, including the eastern garter snake, eastern hognose snake, brown snake, worm snake, black racer, and eastern milk snake **(Wright, 1957).** The smooth green snake and ring-neck snake are also present in some habitats. The garter snake, brown snake, and worm snake prefer moist soils and are most common near wetlands and in mesic woodlands **(Behler and King, 1979),** but will utilize a variety of habitats. The garter snake and brown snake are both tolerant of humans and may be common in suburban areas **(Conant and Collins, 1991)**. The black racer and hognose snake prefer dryer soils, while the milk snake is found in soils of varying moisture content. The ring-neck snake is more restricted to woodland habitats, and prefers areas with logs, rocks or other hiding places. The green snake is most common in upland habitats within the eastern U.S. **(Conant and Collins, 1991)**. Of these species, the garter snake, worm snake, milk snake, ring-necked snake, brown snake and hognose snake are expected to utilize the site and surrounding areas. No snake species were observed, although the caretaker yearly observes an eastern milk snake near the dwellings located on the eastern portion of the site.

These snakes are all colubrid snakes, which feed on whole animals such as worms, insects or small amphibians **(Behler and King, 1979)**. The larger milk snake, black racer and hognose snakes will also take small rodents and birds, while the small worm snake feeds predominantly on worms and the smooth green snake feeds on spiders and insects **(Conant and Collins, 1991)**.

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 and may be found on site. The species feeds on primarily on slugs, earthworms, wild strawberries and mushrooms **(Behler and King, 1979)**. The similar wood

turtle utilizes both aquatic and terrestrial habitats, but is restricted to eastern Long Island (**Conant and Collins, 1991**) and is thus not expected.

No amphibian or reptile species were observed on site. **Table 2-8** is a list of amphibian and reptile species that might occur on site given the existing habitat.

Rare Species/Habitat Potential

Several species discussed above are listed as Endangered, Threatened, or Species of Special Concern. Endangered species are those who are native species of New York State that are in danger of becoming extinct or any of those species who are listed as federally endangered by the United States Department of the Interior. The endangered species that may be expected to be found on or in the vicinity of the project site include the piping plover and least tern.

TABLE 2-8
AMPHIBIAN AND REPTILE SPECIES LIST

Amphibians	
spotted salamander	*Ambystoma maculatum[s]*
marbled salamander	*Ambystoma laterale*
Fowler's Toad	*Bufo woodhousei fowleri*
spring peeper	*Hyla crucifer*
red-backed salamander	*Plethodon cinereus cinereus*
wood frog	*Rana sylvatica*
southern leopard frog	*Rana utricularia*
eastern spadefoot toad	*Scaphiopus holbrooki*
Reptiles	
worm snake	*Carphophis amoenus [s]*
northern ringneck	*Diadophis punctatus edwardsii*
eastern hognose snake	*Heterodon platyrhinos [s]*
eastern milk snake	*Lampropeltis triangulum*
brown snake	*Storeria dekayi victa*
eastern box turtle	*Terrapene carolina*
eastern garter snake	*Thamnophis sirtalis*

[s] NYSDEC special concern species
[t] NYSDEC threatened species
[e] NYSDEC endangered species

Threatened species are those species listed as threatened by the Untied States Department of Interior and not listed as endangered in New York and any native New York species that is likely to become an endangered species in the future. The northern harrier, opsrey, and common tern are those listed as Threatened species.

Of the wildlife species listed as being likely on the site, the eastern hognose snake, worm snake, spotted salamander, short-eared owl, common nighthawk, and barn owl are identified as special concern species. 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.

2.4 Transportation

2.4.1 Trip Generation

As only the caretaker and his family presently occupy the site, little vehicle traffic is generated on the property.

2.4.2 Roadway Conditions

Along the eastern boundary of the site and northward to its terminus at North Creek, North Creek Road is privately-owned and has an approximately 18 foot wide unpaved surface; south of the site this roadway is owned by the Town and is approximately 34 feet in width and is bituminous-paved. Within the project site, North Creek Road lies within an access easement granted to the Town.

There is no drainage system serving the portion of North Creek Road along the site, though leaching catch basins are found at the point where this roadway enters the site, at the southeastern property line. This roadway is not lighted, and it is posted for a speed limit of 15 miles per hour (mph).

Eatons Neck Road is the major roadway serving the vicinity. This Town-owned roadway provides one travel lane in each direction, and generally has a posted speed limit of 30 mph, though it is posted at 20 mph in the vicinity of North Creek Road (because of the limited sight line). It forms a "T" intersection with North Creek Road, the latter roadway being controlled by a Stop sign.

2.4.3 Sight Distance

Analysis of the sight distance was performed at the existing site entrance and at the North Creek Road/Eatons Neck Road intersection. Sight distance is that length of roadway visible to a driver. The minimum sight distance available on a roadway should be sufficiently long to enable a vehicle traveling at or near the design speed to stop before reaching a stationary object in its path.

A 20-mph design speed (for Eatons Neck Road) yields a stopping sight distance (horizontal control) of 125 feet. The document referenced for this analysis, Table IX-10 in the document "A Policy on the Geometric Design of Highways and Streets (American Association of State

Highway and Transportation Officials, AASHTO, 1994), recommends a sight distance of 75 feet for a design speed of 15 mph.

Based upon analysis of aerial photographs, a driver in a vehicle at the site entrance can see approximately 260 feet to the north and 150 feet to the east along North Creek Road. Therefore, the minimum 75-foot sight distance is more than satisfied at this entrance for vehicles exiting the site onto North Creek Road and for vehicles on North Creek Road approaching the site entrance from both the north and east.

For vehicles on North Creek Road at Eatons Neck Road, sight distance to the northeast is approximately 470 feet, and 140 feet to the southwest, based upon analysis of aerial photographs. Therefore, the 125-foot minimum stopping sight distance is satisfied at this point for vehicles accessing Eatons Neck Road in the southwesterly direction as well as for vehicles accessing this roadway to the northeast.

For those vehicles on Eatons Neck Road approaching North Creek Road from the southwest, as well as for vehicles on North Creek Road attempting to turn right onto Eatons Neck Road (to travel in a southwesterly direction), the 140-foot sight distance at this point, though satisfied, is not optimum. This is an existing condition, and is not attributable to the project site. In general, sight distance is a result of a combination of factors, including horizontal and vertical curvatures, and the presence of roadside obstructions (signs, billboards, etc.) and vegetation. Sight distance can be increased by the removal of visual obstructions by the owners (if privately-owned) or the public agency having jurisdiction (if publicly-owned). A more involved response could include regrading, installation of convex mirrors and/or realigning the roadway.

2.5 Land Use, Zoning and Land Use Plans

2.5.1 Land Use

The project site is presently classified as a residential use, which generally is the dominant land use throughout Eatons Neck, including the Village of Asharoken. In the Village, which abuts the project site to the east, developable land is found within the 440-acre Morgan Estate, which lies to the north and east of the project site; this Estate has been planned by the Village for minimum 2-acre lots.

Residential land is adjacent to the north and south of the site, while vacant land abuts it to the east, across North Creek Road. More distantly, land has been developed residentially along the bluffs overlooking Long Island Sound to the north and south of the site, while lands away from the bluffs are less developed; in general, vacant land in the vicinity is found in the interior of Eatons Neck, away from the shorelines. As related on **page 1-9**, the 17 residential lots north of the site and along the bluff, and the five waterfront lots to the south are comparable in size (roughly 1 to 1.5 acres) to the waterfront lots of the prior application. Of the remaining 38 residential waterfront lots along the Huntington Bay bluff south of the subject parcel, two lots are 1 and 1.2 acres and the other 36 are considerably smaller than the proposed waterfront lots on

Old Orchard Woods (as the remaining 36 lots are all zoned R-5). The remaining residential lots existing west of Eatons Neck Road from Eatons Neck Point to Northport Harbor (in excess of 250 lots) have been developed consistent with the R-15, R-10 and R-5 zoning classifications that exist in this area.

Long Island Sound has been designated an "Estuary of National Significance" in the National Estuary Program, which was established by the US Congress to address the complex problems associated with estuary management. In addition, numerous studies, programs and regulations have been developed for protection of this resource: these are described and discussed in **Section 2.5.3.**

2.5.2 Zoning

As discussed in detail in **Section 1.1.1**, the project site was recently rezoned on the Town Board's own motion to R-80 (Residence). As part of that action, lands contiguous to the east and north of the site were also rezoned to R-80. The prior zoning of the subject site and these now-R-80 zoned lands was R-20.

As shown in **Figure 2-8**, properties more distant to the north are zoned generally R-20 between the bluffs and the west side of North Creek Road to its northerly terminus; land along the easterly side of that road is zoned R-80 easterly to the Village of Asharoken boundary. Property to the east, beyond the recently-rezoned property, is zoned R-80 and extends easterly to the Village boundary and southerly to Northport Harbor. Abutting the subject site to the south is R-20 land, with two somewhat higher-density residential zones (R-5 along the bluffs and R-15 land inland) beyond.

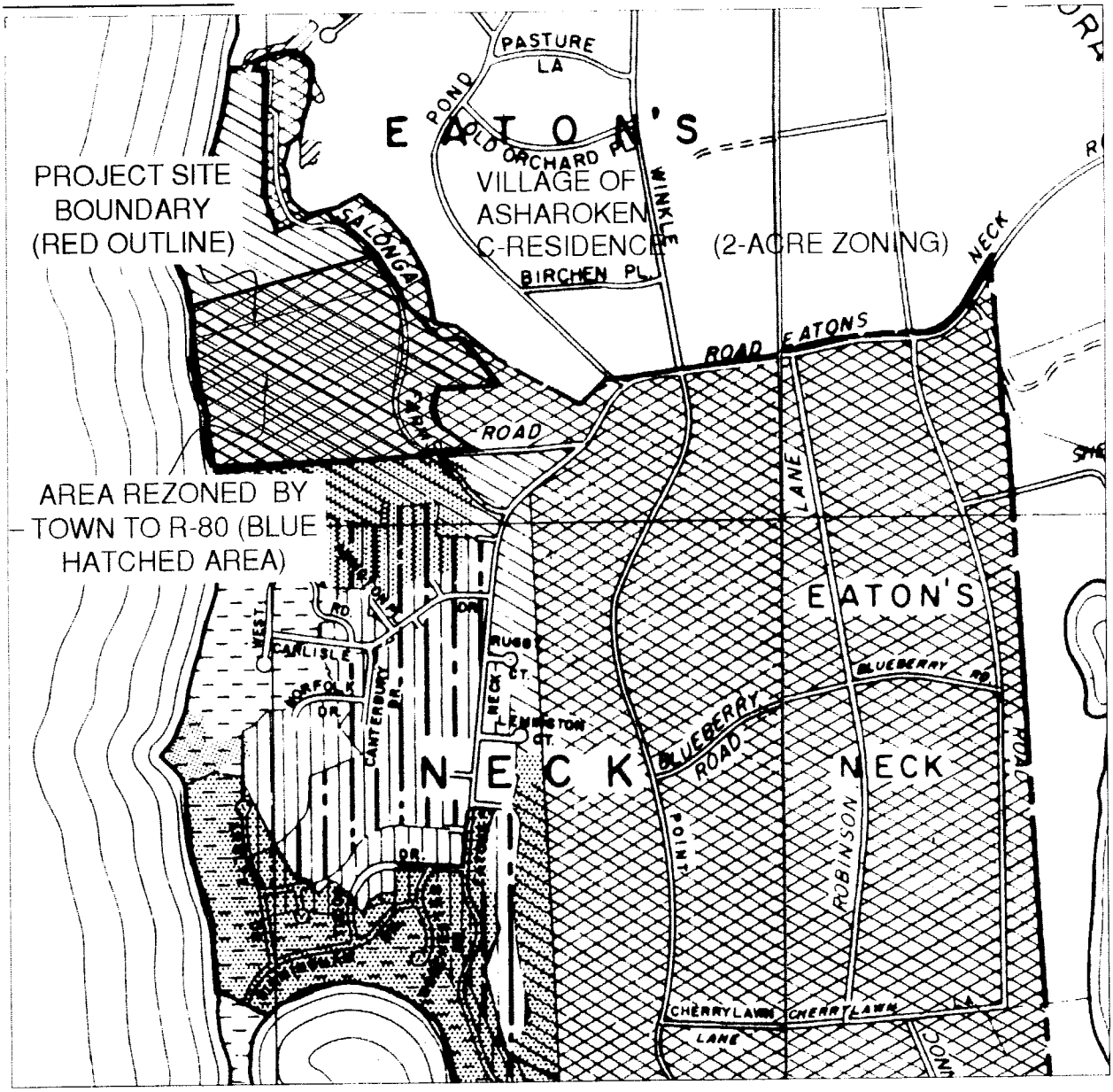
R-80 zone in the Town of Huntington requires lots a minimum of 2 acres in size, while R-20 zoning requires 20,000 SF minimum lots. The R-5 and R-15 zones require lots to be a minimum of 5,000 SF and 15,000 SF, respectively.

The boundary of the Village of Asharoken is located nearby, to the northeast and the east of the project site. The current zoning of this portion of the Village is C (Residence), which requires lots of at least 2 acres in size.

According to the Town Steep Slope Ordinance (Chapter 198, Article X), development on areas having slopes of 10% or more is to be performed in conformance with the Town of Huntington Subdivision Regulations, Erosion and Sediment Control Handbook. The Applicant prepared a lot yield analysis (dated 5/17/01), based upon the Town Steep Slope Ordinance. The results confirm a yield of 10 lots, 1.4 acres in size or larger.

FIGURE 2-8

ZONING MAP



LEGEND

- R - 80 RESIDENCE
- R - 20 RESIDENCE
- R - 15 RESIDENCE
- R - 10 RESIDENCE
- R - 5 RESIDENCE

Source: Town of Huntington Zoning Map
Scale: 1" = 1,000'

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2.5.3 Land Use Plans

When preparing a development application, it is important to consider the conformance of the project to those land use plans, studies and regulations which may apply either to the project site or the application. Following are brief descriptions of the several land use plans/studies applicable to the project site, which were prepared by Federal State and local government agencies:

- Town Comprehensive Plan Update
- Town Open Space Index
- Town Environmental Open Space and Park Improvement Advisory Committee, First Round Recommendations
- National Estuary Program
- Long Island Sound Study
- Long Island Sound Coastal Management Program
- Coastal Non-Point Source Pollution Program
- NYS Coastal Erosion Hazard Areas Act
- Town Coastal Erosion Management Regulations
- Suffolk County Planning Commission Subdivision Guidebook
- NYS Open Space Conservation Plan

Town Comprehensive Plan Update

The Town of Huntington Comprehensive Plan (the "Plan") was updated in 1993 for the Town Planning Board; it is intended *"... to reflect the issues the Town must confront associated with further growth and development based on its remaining resources."* Similar to the zoning pattern, the Plan recommendations for the area (see **Figure 2-9**) can be described as dominated by low-density residential use for the site and land to the north and the east. The Plan indicates medium-density residential land south of the site.

Recommendations of the Plan pertinent to the proposed project include:

Environmental Conditions

- Direct more intensive development to less environmentally-sensitive areas and assure that sufficient infrastructure support is provided.

Housing

- Minimize disruptions or alterations to established neighborhoods and development densities. This will help preserve property values in areas accommodating additional development.

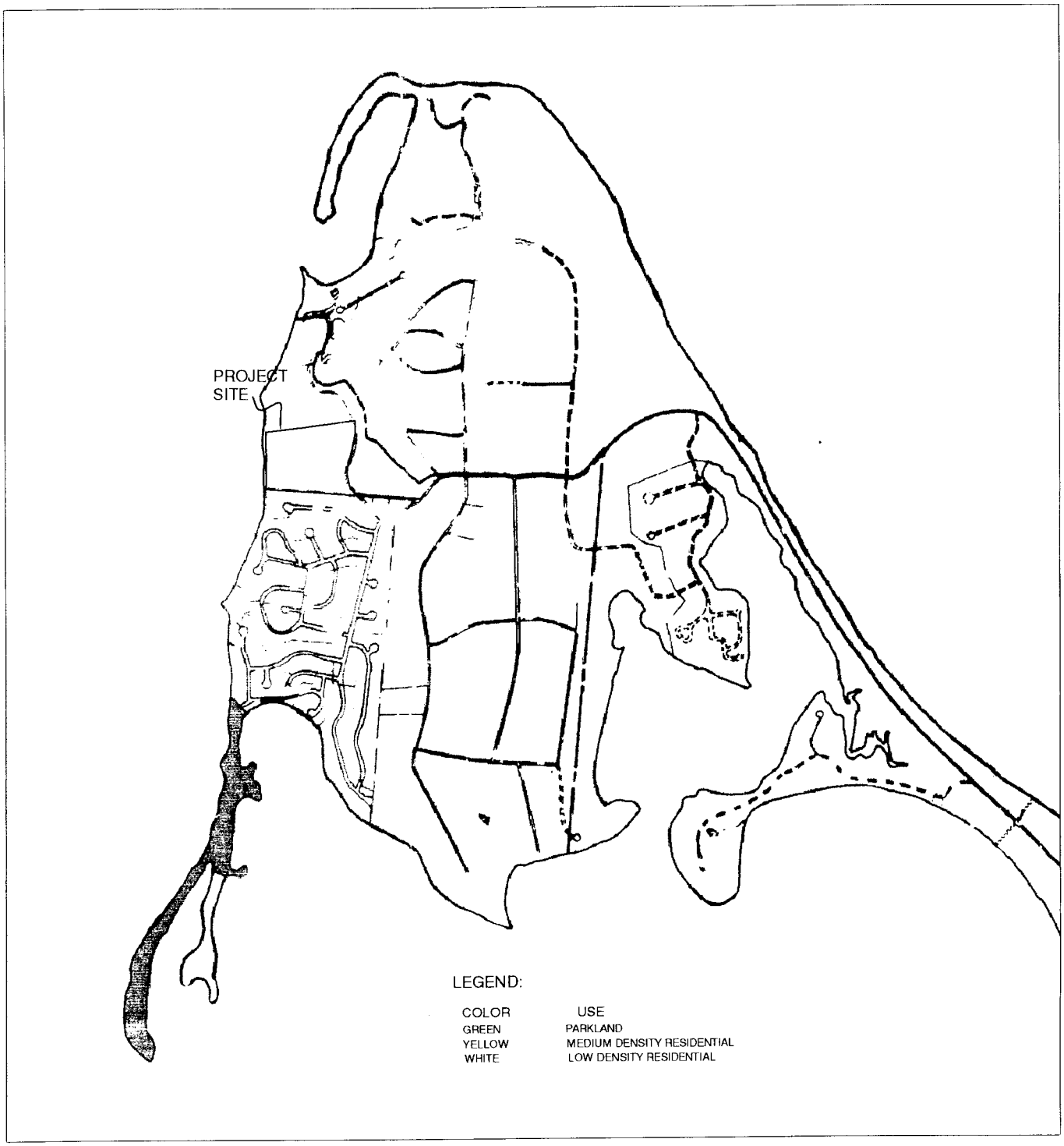
- Design new residential developments which respect all environmental limitations.

Town Open Space Index

The Town of Huntington Open Space Index, prepared in 1974 (the "Index") is intended to aid in the preservation and conservation of open lands in the Town that promote a sense of natural or rural spaciousness. The subject site is located within the easterly portion of Index Parcel #NE-1,

FIGURE 2-9

TOWN COMPREHENSIVE PLAN UPDATE MAP



Source: Town of Huntington Comprehensive Plan Update
Scale: 1" = 2000'

NORTH

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which occupies a total of approximately 56.4 acres of the Hogan and Morgan estates, and other unspecified lands. Descriptors listed for this parcel justifying its designation include: 1) woodland, forest or second-growth woodland, 2) steep slopes with erosion potential, and 3) beach or bay frontage; waterfront property. The parcels listed in the Index are given a "priority" designation, based upon the perceived need to preserve the parcel. The Index indicates a priority of "1" for Parcel #NE-1. For Priority 1, the Index states:

> A property classified as Priority 1 requires affirmative action. The action may be a public acquisition, in whole or in part, a protective easement or agreement, a change in zone, or simply enforcement of the laws and ordinances applicable to the situation. Thus the action may conserve a particular feature or part of the property or may preserve the entire property.
>
> The threat which requires the action may be natural forces which erode or otherwise damage the natural features, public activity (including vandalism) which is encouraged by the location or some other aspect of the property, development applications (subdivision plat being submitted, zoning change being considered, building permit being issued), Town decisions (park acquisition, location of a new public facility), a prospective change in ownership of the property or its availability as open space.
>
> Generally, properties classified in this priority possess exceptional natural characteristics. However, a property otherwise bearing a lower priority would be a Priority 1 if new information indicated an immediate threat.

Town Environmental Open Space and Park Improvement Advisory (EOSPA) Committee, First Round Recommendations

The above-referenced committee was set up by the Huntington Town Board to recommend lands for public acquisition for new parks, and to provide recommendations for public park improvements. As stated in the Recommendations:

> The recommendations supported by the EOSPA Committee meet goals contained in the Parks, Open Space and Historic Resources and the Environmental Conditions Sections of the Huntington Comprehensive Plan adopted by the Planning Board, April 1993. Several of the recommended acquisitions also achieve specific objectives of the Suffolk County and New York State Open Space Plans, Long Island Comprehensive Special Groundwater Protection Area Plan, and local park master plan (e.g., Crab Meadow Beach and Jerome Ambro Memorial Wetlands Preserve). Each of the sites forwarded to the Town Board for consideration/action is identified by a natural resource description and planning rationale to support the Committee's recommendation.

In addition, the committee provided the Town Board with a list of general open space acquisition policy recommendations, which include the following:

1. There was consensus that the Town's open space program should support the procurement of environmentally sensitive lands, as well as potential active recreation areas, and that Census Designated Places identified as underserved in the [Town] Comprehensive Plan should warrant special scrutiny.

2. Primary emphasis should be placed on protecting vulnerable sites with high natural quality as characterized, for example, by protected native plants and strong biotic diversity.
3. Existing protected open space holdings should be extended or expanded whenever possible and linkages within common systems, e.g., watersheds, should be secured.
4. All matching grant programs should be pursued whenever appropriate to extend the value of the public bond referendum.
5. To further the efforts of the EOSPA Committee, consistent with the OASIS Study, it is imperative that "all available tools should be employed by the Town's agencies and boards to maximize protection of open space."

The project site was included (as site #10-NE-99) on the first round list of recommendations submitted by the committee on July 1, 1999. Following is the text of that recommendation:

EOSPA Recommendation (unanimous vote, 6/22/99): Recommend Town Board support joint Town and County acquisition under SC Greenways/Open Space and/or Active Recreation Program for environmental education/nature camp use; requires Town Board pledge to develop and maintain new recreational facilities using capital budget program or possibly EOSPA park improvement funds.

Natural Resources: The Hogan property is high land on the western bluffs of Eatons Neck. It has exceptional views to the west and northwest across Huntington Bay and the Sound. The property is heavily-wooded with some open space areas and several well-maintained trails, one of which leads to the beach. Some of the trees (oaks, tulips) are huge and the understory is dense and varied. The habitat is extremely complex and exhibits a great variety of birds, plants, trees, wildflowers, and quadrupeds. There is a colony of bank swallows in the bluffs. Typical of Eatons Neck, the bluffs are unstable and eroding continually. There are clay outcroppings at the base of the bluffs. Previous attempts at stabilization are not preventing erosion. This is an exciting place to visit and has many features that demand preservation. It was formerly a camp and retains several small buildings, two of which are used as dwellings. The others are vacant and in need of rehabilitation.

Planning Rationale: The subject property is one of only two Eatons Neck areas mapped on the Town Open Space Index adopted in December 1974. The site was classified "Priority 1", which carries the most immediate need of consideration and action to preserve the property or to conserve its open space value and natural features. The OASIS Study found that the Hogan site was one of very few remaining Priority 1 rated sites, most have benefited from some form of public protection already.

The Planning Board's SEQRA review for the pending Old Orchard Woods subdivision, which threatens the present integrity of the site by new home development, specifies: "Eatons Neck is quite limited in the amount of parkland that is available for public use. Other than beach areas with limited play equipment and boat ramps, there is no publicly accessible recreational parkland. The subject site appears to be the only large holding remaining in the *unincorporated Town area*...that might potentially serve such purpose. It was formerly a camp property and could provide future recreational [and outdoor education] opportunities as such...The subject property contains a specific form of habitat that is not presently represented in the town's parkland inventory-high bluff."

The Hogan site possesses both "significant environmental qualities, particularly those needed for the protection and maintenance of groundwater recharge areas, wetlands, sensitive coastal areas, and wildlife habitats" and "unique aesthetic, image and/or scenic qualities," identified in the Comprehensive Plan as needing planned protection.

Policy Consideration: This site has been nominated by the Town Board (4/7/99) for County funding program and Long Island Regional Planning Board consideration. As property mapped on the Town Open Space index adopted by the Town Board in December 1974, the property is already considered designated open space.

National Estuary Program

The National Estuary Program was established by Congress to establish and protect estuaries of national significance; the program is administered by the Environmental Protection Agency (EPA), which provides seed money to local communities to develop and implement comprehensive management plans for their estuaries. The following is taken from the document, "Preserving Our Heritage, Securing Our Future: A Report to the Citizens of the Nation", prepared by the Association of National Estuary Programs and the US Environmental Protection Agency (EPA):

> In 1987, Congress established the National Estuary Program (NEP) to restore and preserve these unique bodies of water. The NEP's creation was both an acknowledgement of the vital role estuaries play in our nation's prosperity, and a challenge to environmental managers to look beyond institutional boundaries by addressing the needs of entire ecosystems.
>
> In the 11 years since its establishment, the Program has expanded to embrace 28 estuaries from throughout the United States. More than 42 percent of the continental U.S. shoreline is now included in the NEP, and 15 percent of all Americans live within NEP-designated watersheds. New residents arrive by the thousands everyday, their sheer numbers threatening to overwhelm these delicately balanced systems.
>
> Many of the estuaries participating in the Program are in good health, but need additional protection if they are to remain so. Others are suffering the consequences of rapid growth and development, and require a helping hand to repair damage to habitats, fisheries or water quality.
>
> All are cornerstones of their community's economic and environmental well-being as well as its cultural identity.

Long Island Sound was established in the NEP by 1994, when the EPA and the states of New York and Connecticut approved a plan (the Long Island Sound Study, LISS) to restore the ecosystem and improve the water-quality dependent uses of the Sound which are important to the regional economy. The goals of the LISS are to: 1) reduce the load of nitrogen by 58.5% within 15 years, and 2) restore 2,000 acres of coastal habitat and 100 miles used by migratory fish over the next 10 years. The LISS is discussed below.

Long Island Sound Study

The LISS is intended to provide a management plan to achieve the goals specified in the NEP. The following is taken from the document "Summary of the Comprehensive Conservation and Management Plan", prepared by the NYSDEC, Bureau of Publications:

> In 1985, Congress directed the U.S. Environmental Protection Agency (EPA), in cooperation with the states of Connecticut and New York, to sponsor the Long Island Sound Study. A Management Conference, involving federal, state, interstate, and local agencies, universities, environmental groups, industry, and the public was established. With the Clean Water Act Amendments in 1987, Section 320 if the Act officially established a National Estuary Program. At the request of the states of Connecticut and New York, Long Island Sound was officially designated an Estuary of National Significance under this new program, and a Management Conference of the Long Island Sound Study was convened in March of 1988. The Management Conference identified and investigated the Sound's most significant problems and produced a draft management plan in January 1993. Public meetings were held to solicit comments on the draft, many of which were incorporated into the final version of the plan.
>
> The plan described ongoing programs and lists commitments and recommendations for actions that specifically address the Sound's priority problems. Its implementation will have a range of benefits. Degradation of the Sound will be halted. Many of the Sound's uses, impaired and impeded over time, will be recovered. Beach closings will be reduced, shellfish harvest acreage will expand, and there will be more life-sustaining oxygen and fewer fish kills. Habitats will be reclaimed and restored. Diverse and health plant and animal life, including endangered species, will be supported. The various water quality-dependent uses, so important to the regional economy, will achieve some level of long-term security as an improved Long Island Sound invites visitors to return often.
>
> To achieve this vision, the plan calls for a sustained and cooperative effort among the states of Connecticut and New York, the EPA and other federal agencies, local governments, and the private sector. But the fate of the Sound depends on more than just the commitments of government agencies and regulated entities; it depends on the will and desire of the people of the region.
>
> The Management Conference has identified six problems that merit special attention: (1) low dissolved oxygen (hypoxia), (2) toxic contamination (3) pathogen contamination, (4) floatable debris, (5) the impact of these water quality problems, and habitat degradation and loss, on the health of living resources, and (6) land use and development resulting in habitat loss and degradation of water quality. The Management Conference has focused its efforts and resources on the most pressing problem among these, low dissolved oxygen, which affects a substantial portion of Long Island Sound in late summer, but has addressed all priority problems.

The LISS does not provide recommendations specifically for the project site; however, its Land Use and Development section recommended several measures government agencies should consider to protect the Sound which apply to the project site. These are:

- The impacts from new development are also significant and must be minimized to prevent further degradation of water quality. Progressive planning and management should ensure

the application of best management practices, protect wetlands, minimize land disturbances, improve access, and maintain appropriate water-dependent uses.

- Conservation of natural resources and open space is vital to the long-term protection of Long Island Sound. Open space conservation and conservation practices must be aggressively pursued. This might be accomplished through a watershed-based planning approach that integrates protection of surface waters with programs and plans that guide growth and development.

In addition, the LISS recommended that the Long Island Sound Coastal Management Plan, prepared by the NYS Department of State in 1999, be adopted. That plan is discussed below

Long Island Sound Coastal Management Program

In 1982, the NYS Department of State, in the NYS Coastal Management Program, formulated a list of 44 Policies regarding development and waterfront revitalization in the coastal area. These policies were to be examined by the state when reviewing development applications for sites within or affecting the designated coastal zone, unless the local governmental entity had enacted its own legislation conforming to this list of policies. In such a case, a consistency review would be conducted, as part of this Local Waterfront Revitalization Program (LWRP).

The Town of Huntington prepared a LWRP in 1989; however, as of June, 1999, this program has not been approved by the NYS Department of State, which is the administering agency. The policies of the Town program are generally identical to those of the state.

In 1999, the state adopted the Long Island Sound Coastal Management Program, which replaces the NYS Coastal Management Program, except in those cases where the local government has prepared an approved LWRP.

The following describes and discusses the Long Island Sound Coastal Management Program:

> The Waterfront Revitalization of Coastal Areas and Inland Waterways Act, Article 42 of the Executive Law, is the foundation for the New York State Coastal Management Program. The legislative findings declare that:
>
> > The social and economic well-being and the general welfare of the people of the state are critically dependent upon the preservation, enhancement, protection, development and use of the natural and man-made resources of the state's coastal area and inland waterways.
> >
> > The legislature further finds that it is in the interest of the people of the state that coordinated and comprehensive policy and planning for preservation, enhancement, protection, development and use of the state's coastal and inland waterway resources take place to insure the proper balance between natural resources and the need to accommodate the needs of population growth and economic development.

The Long Island Sound Coastal Management Program builds on the long-standing partnership of state and local government in the management of coastal resources.

The program refines the existing New York State Coastal Management Program and incorporates the existing array of programs and laws governing activities in the coastal area. The Long Island Sound Coastal Management Program is based on public consensus and close consultation with the state agencies whose programs and activities affect the coast. Finally, it integrates capabilities of state and local government into an enforceable program for the Sound.

The Long Island Sound Coastal Management Program replaces the state Coastal Management Program for the Sound shorelines of Westchester County, New York City to the Throgs Neck Bridge, Nassau County and Suffolk County. Its specially tailored standards are used for consistency decisions made by the Department of State and other state agencies except where there is an approved Local Waterfront Revitalization Program. The program defines what constitutes a balance between appropriate and needed economic development and protection and restoration of the natural and living resources of the Sound. It complements the Long Island Sound Study Comprehensive Conservation and Management Plan, which focuses on water quality in the deep waters of the Sound, by addressing the upland watershed and harbor and nearshore waters.

Local government priorities for the coast, expressed in local plans and in Local Waterfront Revitalization Programs, are supported by the Long Island Sound Coastal Management Program in two important ways. First, it establishes priorities and targets state capital and program efforts to better reflect approved Local Waterfront Revitalization Programs. Second, it provides resource protection and development information for use in periodic updates of approved Local Waterfront Revitalization Programs and in the development of new Local Waterfront Revitalization Programs within the region.

To better understand the significance of and opportunities presented by the land and water resources of the Sound, the region is viewed from four perspectives-the developed coast, the natural coast, the public coast, and the working coast. Each coast must be considered for both its own intrinsic value, and its interrelationship with the other coasts. These four coasts are the organizational foundation of the Long Island Sound Coastal Management Program.

Following are the policies of the Long Island Sound Coastal Management Program, organized by the type of coast to which the policies refer:

The Developed Coast

1. Foster a pattern of development pattern in the Long Island Sound coastal area that enhances community character, preserves open space, makes efficient use of infrastructure, makes beneficial use of a coastal location, and minimizes adverse effects of development.
2. Preserve historic resources of the Long Island Sound coastal area.
3. Enhance visual quality and protect scenic resources throughout Long Island Sound.

The Natural Coast

4. Minimize loss of life, structures, and natural resources from flooding and erosion.
5. Protect and improve water quality and supply in the Long Island Sound coastal area.
6. Protect and restore the quality and function of the Long Island Sound ecosystem.
7. Protect and improve air quality in the Long Island Sound coastal area.

8. Minimize environmental degradation in the Long Island Sound coastal area from solid waste and hazardous substances and wastes.

The Public Coast

9. Provide for public access to, and recreational use of, coastal waters, public lands, and public resources of the Long Island Sound coastal area.

The Working Coast

10. Protect Long Island Sound's water-dependent uses and promote siting of new water-dependent uses in suitable locations.
11. Promote sustainable use of living marine resources in Long Island Sound.
12. Protect agricultural lands in the eastern Suffolk County portion of Long Island Sound's coastal areas.
13. Promote appropriate use and development of energy and mineral resources.

The Program does not provide any policies specific to the project site; however, several of these general policies are applicable to the project. These will be discussed in **Section 3.6**.

Coastal Non-Point Source Pollution Program

Nonpoint pollution is a source of impact to the nation's surface water quality which has been recognized by the EPA since at least 1987, when it established the NEP. Simultaneous with that program, the EPA prepared, through authorization under the Water Quality Act of 1987 and the Coastal Zone Act Reauthorization Amendments (1990), a series of measures to provide, through the states, protection of the nation's surface waters. The following is taken from the document, "Guidance Specifying Management Measures For Nonpoint Pollution In Coastal Waters", prepared by the EPA:

> Nonpoint source pollution generally results from land runoff, precipitation, atmospheric deposition, drainage, seepage, or hydrologic modification. Technically, the term "nonpoint source" is defined to mean any source of water pollution that does not meet the legal definition of "point source" in section 502(14) of the Clean Water Act.
>
> Nonpoint pollution is the pollution of our nation's waters caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural pollutants and pollutants resulting from human activity, finally depositing them into lakes, rivers, wetlands, coastal waters, and ground waters. In addition, hydrologic modification is a form of nonpoint source pollution that often adversely affects the biological and physical integrity of surface waters.
>
> *Nonpoint Source Program*
> In 1987, in view of the progress achieved in controlling point sources and the growing national awareness of the increasingly dominant influence of nonpoint source pollution on water quality, Congress amended the Clean Water Act to focus greater national efforts on nonpoint sources. In the Water Quality Act of 1987, Congress amended section 101, "Declaration of Goals and Policy", to add the following fundamental principle:
>
> > It is the national policy that programs for the control of nonpoint sources of pollution be developed and implemented in an expeditious manner so as to enable the goals of this Act to be met through the control of both point and nonpoint sources of pollution.

More importantly, Congress enacted section 319 of the Clean Water Act, which established a national program to control nonpoint sources of water pollution. Under Section 319, States address nonpoint pollution by assessing nonpoint source pollution problems and causes within the State, adopting management programs to control the nonpoint source pollution, and implementing the management programs. Section 319 authorizes EPA to issue grants to States to assist them in implementing those management programs of management programs which have been approved by EPA.

National Estuary Program
EPA also administers the National Estuary Program under section 320 of the Clean Water Act. This program focuses on point and nonpoint pollution in geographically targeted, high-priority estuarine waters. In this program, EPA assists State, regional, and local governments in developing comprehensive conservation and management plans that recommend priority corrective actions to restore estuarine water quality, fish populations, and other designated uses of the waters.

The Coastal Zone Management Act of 1972 (CZMA) established a program for States and Territories to voluntarily develop comprehensive programs to protect and manage coastal resources (including the Great Lakes). To receive Federal approval and implementation funding, States and Territories had to demonstrate that they had programs, including enforceable policies, that were sufficiently comprehensive and specific both to regulate land uses, water uses, and coastal development and to resolve conflicts between competing uses. In addition, they had to have the authorities to implement the enforceable policies.

There are 29 federally approved State and Territorial programs. Despite institutional differences, each program must protect and manage important coastal resources, including wetlands, estuaries, beaches, dunes, barrier islands, coral reefs, and fish and wildlife and their habitats. Resource management and protection are accomplished in a number of ways through State Laws, regulations, permits, and local plans and zoning ordinances.

While water quality protection is integral to the management of many of these coastal resources, it was not specifically cited as a purpose or policy of the original statue. The Coastal Zone Act Reauthorization Amendments of 1990 specifically charged State coastal programs, as well as State nonpoint source programs, with addressing nonpoint sources pollution affecting coastal water quality.

State Coastal Nonpoint Pollution Control Programs
To address more specifically the impacts of nonpoint source pollution on coastal water quality, Congress enacted section 6217, "Protecting Coastal Waters", which was codified as 16 U.S.C. §1455b. This section provides that each State with an approved coastal zone management program must develop and submit to EPA and the National Oceanic and Atmospheric Administration (NOAA) for approval a Coastal Nonpoint Pollution Control Program. The purpose of the program "shall be to develop and implement management measures for nonpoint source pollution to restore and protect coastal waters, working in close conjunction with other State and local authorities."

Coastal Nonpoint Pollution Control Programs are not intended to supplant existing coastal zone management programs and nonpoint source management programs. Rather, they are to serve as

an update and expansion of existing nonpoint source management programs and are to be coordinated closely with the existing coastal zone management programs. The legislative history indicates that the central purpose of section 6217 is to strengthen the links between Federal and State coastal zone management and water quality programs and to enhance State and Local efforts to manage land use activities that degrade coastal waters and coastal habitats. The legislative history further indicates that State coastal zone and water agencies are to have coequal roles, analogous to the sharing of responsibility between NOAA and EPA at the Federal level.

Section 6217(b) states that each State program must "provide for the implementation, at a minimum, of management measures in conformity with the guidance under subsection (g) to protect coastal waters generally", and also to:

1. Identify land uses which, individually or cumulatively, may cause or contribute significantly to a degradation of (a) coastal waters where there is a failure to attain or maintain applicable water quality standards or protect designated uses, or (b) coastal waters that are threatened by reasonably foreseeable increases in pollution loadings from new or expanding sources;
2. Identify critical coastal areas adjacent to coastal waters identified under the preceding paragraph;
3. Implement additional management measures applicable to land uses and areas identified under paragraphs (1) and (2) above that are necessary to achieve and maintain applicable water quality standards and protect designated uses;
4. Provide technical assistance to local governments and the public to implement the additional management measures;
5. Provide opportunities for public participation in all aspects of the program;
6. Establish mechanisms to improve coordination among State and Local agencies and officials responsible for land use programs and permitting, water quality permitting and enforcement, habitat protection, and public health and safety; and
7. Propose to modify State coastal zone boundaries as necessary to implement NOAA's recommendations under section 6217(e), which are based on NOAA's findings that inland boundaries must be modified to more effectively manage land and water uses to protect coastal waters.

Congress required that, within 30 months of EPA's publication of final guidance, States must develop and obtain EPA and NOAA approval of their Coastal Nonpoint Pollution Control Programs. Failure to submit an approvable program (i.e. one that meets the requirements of section 6217(b)) will result in a reduction of Federal grant dollars under the nonpoint source and coastal zone management programs.

As indicated by the NYS Department of State (DOS), New York State at present does not have a federally-approved Coastal Nonpoint Pollution Control Program. The Plan prepared by the state and submitted to the EPA and NOAA for review in 1995 was returned for minor revisions and clarifications. As of June 1999, the state has not resubmitted the Plan. However, the DOS indicates that the level of protection sought by the federal government (through its recommended protection mechanisms and regulations), are already in place through existing state-level programs and regulations.

NYS Coastal Erosion Hazard Areas Act

In 1981, the NYS legislature enacted Article 34 of the NYS Environmental Conservation Law (ECL), known as the Coastal Erosion Hazard Areas Act. This law was prepared to implement the following public policy:

1. Those areas of the state's coastline most prone to erosion hazards should be identified.
2. Any activities, development or other actions in such erosion hazard areas should be undertaken in such manner as to minimize damage to property, and to prevent the exacerbation of erosion hazards. Such actions may be restricted or prohibited if necessary to protect natural protective features or to prevent or reduce erosion impacts.
3. Local governments should be encouraged to use all authorities that can be applied within the identified erosion hazard areas to achieve these objectives.
4. Public actions, such as the provision of additional municipal services, which are likely to encourage new permanent activities or development within coastal erosion hazard areas should not occur unless such hazard areas have been protected by erosion protection structures or non-structural measures which are most likely to prevent damage from effects of erosion during the anticipated life of the proposed activities or development.
5. Publicly-financed structures to minimize erosion damage should be utilized only where necessary to protect human life, existing investment in development or new development which requires a location within the erosion hazard area or adjacent coastal waters to be able to function. Both publicly and privately financed erosion protective structures should be designed to minimize damage to other man-made property or to natural protective features or to other natural resources; long term costs of such structures should be carefully weighed against public benefits before construction is undertaken.

Part 505 of 6NYCRR implements the provisions of Article 34. As part of that implementation, detailed mapping of those areas of the coastline subject to regulation was completed. That portion of the project site within 100 feet of the top of the bluff is within the designated Coastal Erosion Hazard Area.

Known as the Coastal Erosion Management Regulations, Part 505 lists the requirements and procedures required by the state to implement the goals of Article 34. Among the requirements is the allowance for local governments to administer the implementation of Part 505, following adoption of a local law written in conformance with Part 505. As discussed below, Local Law No.7 was adopted by the Town of Huntington in 1989 to administer the implementation of Part 505 in the Town.

Town Coastal Erosion Management Regulations

Local Law Number 7 of the Town of Huntington was adopted in November, 1989 to administer a local version of the 6NYCRR Part 505. These Town Coastal Erosion Management Regulations require a permit (issued by the Town Department of Buildings) for regulated activities within the state-mapped Coastal Erosion Hazard Area. Regulated activities are defined as follows:

The construction, modification, restoration or placement of a structure, or major addition to a structure, or any action or use of land which materially alters the condition of land, including grading, excavation, dumping, mining, dredging, filling, or other disturbance of soil.

Suffolk County Planning Commission Subdivision Guidebook

The Suffolk County Planning Commission has jurisdiction in the review of subdivision for which has established procedures and guidelines. Following are the General Statements of Policy for those Commission Guidelines applicable to the project site:

B. *SUBDIVISION ROADS*

The objective of residential subdivision design is to provide for maximum residential amenity with a minimum of traffic. In the case of a commercial or an industrial subdivision the objective is to create a functional and viable economic asset for the community. These goals can not be achieved without safe and efficient access and circulation.

h. An alternate means of access must be provided for all subdivisions to insure access by emergency and service vehicles. Where a second street for an alternate means of access can not be provided a special right-of-way must be created for this purpose. While the chance of a sole means of access becoming blocked is extremely remote it is nevertheless possible, especially during hurricane season.

C. *SUBDIVISIONS THAT HAVE FRONTAGE ON THE SHORELINE OF THE COUNTY*

The shoreline of Suffolk County is one of its prime economic, aesthetic, and environmental assets. It is the objective of the Commission to encourage the preservation of this resource through the prevention of the degradation of any body of water, the use of adequate setbacks to offset the affect of erosion, the discouragement of those activities that will hasten erosion and disturb the ecological balance of the area, and the preservation of the aesthetic attributes of the shoreline.

D. *STORMWATER*

Proper collection, retention, and disposal of stormwater runoff created by the development and improvement of all or a part of a tract of land that has been subdivided is essential for our environmental and economical well-being, as well as for our safety. The time for establishing control of stormwater runoff is when the tract is being designed for subdivision and not later when serious problems of erosion and flooding occur. Proper control must be exercised over the site when the site is being developed.

Allowing runoff from a subdivision to flow out into a county or state road may result in the overloading of the road's stormwater drainage system and as a consequence can contribute to flooding. This condition is not only hazardous but also limits the road's ability to carry traffic efficiently. Runoff may deposit soil and other material on the surface of the road resulting in a hazardous road condition, in addition to being a maintenance problem. Soil erosion not only wastes an important natural resource, but the sedimentation resulting from erosion can clog streams and ponds and kill fish and other aquatic life. Stormwater runoff carries deleterious materials, in addition to eroded soils,

in solid form and in solution. These materials can alter wildlife environments and prevent use of recreational facilities.

It is the objective of the Commission to encourage the proper design and installation of stormwater disposal facilities at the time of development of the subdivision. Remedial measures taken to alleviate stormwater problems after the development of a subdivision has been completed and the residents have moved in are expensive in terms of disruption of residential amenities and economic cost. The Commission also encourages the use of innovative stormwater disposal techniques utilizing natural features of the site and free form design.

G. *OPEN SPACE*
Land that is set aside as open space as part of the subdivision design process under Section 278 of the Town Law and Section 7-738 of Village Law must remain as such. Measures must be taken to insure that this land is not used for purposes other than that intended and that the land does not end up in county Ownership because of non-payment of taxes.

K. *GENERAL*
Once a parcel of land is subdivided the pattern of its layout will remain on the surface of the earth almost indefinitely. One only has to look to Manhattan to see the pattern of streets, and subsequent lotting, established in 1803. In many of the European cities that were established by the Roman Legions the pattern of the "castrum" is still evident. European cities leveled during World War II were often rebuilt with only minor changes in the street pattern due to the existing infrastructure and property ownership pattern. Therefore, serious consideration should be given to the impact that the subdivision will have, not only during the present time but in the future. The layout of a subdivision should take into consideration the preservation of the natural and historical features of the site and the creation of an environment that will enhance residential amenities of those who will reside in the subdivision. It is the desire of the Commission that in promulgating the following guidelines that these goals and objectives will be achieved and that in the future the pattern of the layout on the landscape will still be suitable for the use of future generations.

NYS Open Space Conservation Plan

The NYS Open Space Conservation Plan was adopted in 1990 by the NYSDEC and OPRHP to identify and preserve open space and historic resources of the state. The following is taken from the document, "Conserving Open Space in New York State, 1998" prepared by these two agencies:

> New York State's first Open Space Conservation Plan (Plan) was authorized by a 1990 Act of the State Legislature. It was prepared through a joint effort by the Department of Environmental Conservation (DEC) and the Office of Parks, Recreation and Historic Preservation (OPRHP), working with nine Regional Advisory Committees (RACs) appointed jointly by the State and local governments. The initial Plan received final executive approval on November 18, 1992.

The 1990 legislation required an update of the Plan every three years. In 1993 the Environmental Protection Act required that the Plan be reviewed by the Regional Advisory Committees (RACs) every two years. DEC and OPRHP updated and revised the 1992 Plan with input from the RACs to produce the 1995 plan.

The 1998 Plan builds on the 1995 Plan. Similar to past versions, the Plan proposed what open space and historic sites should be saved for New York State's future and describes how we can conserve and manage these resources in a sensible and affordable way. The Plan does not confine itself to public land acquisition, but recognized that encouraging private land stewardship is also important. The Plan recognized that open space conservation efforts must be fiscally prudent and they must go on in good times and bad; because, once developed, forests and fields, lakeshores and seashores will seldom, if ever, be open land again. Similarly, once destroyed, historic and archaeological sites cannot be replaced.

Following are the seven Guiding Principles of the Open Space Conservative Plan, along with the seven goals:

Guiding Principles

- The State should work in partnership with others including local governments, not-for-profit conservation organizations and private landowners to establish and achieve land conservation goals.

- State acquisition of land and easements on land are only two of a number of strategies for conserving open space, recreational, historical and cultural resources with public values. The key to the success of this Plan is fitting the appropriate strategy to the resource.

- Given limited public dollars and overall economic concerns, it is essential to establish careful and understandable priorities for State action to conserve specific open space parcels and cultural resources.

- Such priorities ought to be established through the combination of objective measurements of land conservation needs and broad based citizen opinion.

- In pursuing open space conservation goals, the State must deal fairly and openly with property owners, local governments, and citizens in general.

- In setting out proposals, the plan should try to define costs of implementation and propose methods for meeting those costs.

- When conveying land for public purposes, the cost of adequate management must be taken into account.

Goals

- To protect water quality in New York State including the quality of surface and underground drinking water supplies and the quality of lakes, streams and coastal waters needed to sustain aquatic ecosystems and water based recreation;

- To provide high quality outdoor recreation, on both land and water, accessible to New Yorkers regardless of where they live, how much money they have, or their physical abilities;

- To protect and enhance those scenic, historic and cultural resources, which are readily identifiable as valued parts of the common heritage of New York's citizens;
- To protect habitat for the diversity of plant and animal species both to assure the protection of unique and irreplaceable ecosystems and to sustain the traditional pastimes of hunting, fishing, trapping and viewing fish and wildlife;
- To maintain the critical natural resource based industries of farming, wood products, commercial fishing and tourism;
- To provide places for education and research on ecological, environmental and appropriate cultural resources to provide a better understanding of the systems from which they derive.
- To preserve open space, particularly forest lands, for the protection and enhancement of air quality.

The Plan provided no recommendations specific to the project site; those goals and/or guiding principles which apply to the site or project will be discussed in **Section 3.5**.

2.6 Community Services

2.6.1 Demography

The Long Island Lighting Company (LILCO, now the Long Island Power Authority, LIPA) historically prepared a population survey for Nassau and Suffolk Counties on a yearly basis utilizing residential electric meter records, U.S. Census Bureau data and adjustment figures devised by the Long Island Regional Planning Board. The proposed project is located in the census designated place (CDP) of Eatons Neck in the Town of Huntington.

Table 2-9 compares the population statistics of the villages and designated hamlets within the Town in the vicinity of the subject parcel. The population within the Eatons Neck experienced a slight change between 1990 and 1997, declining from 1,499 persons to a total of 1,478 in 1997 (**LILCO, 1997**). This represents a decrease of 21 persons, or 1.4 percent. Over this same period, the overall population within the Town of Huntington increased from an estimated 189,825 persons in 1996 to an estimated 191,032 persons in 1997.

Based on the 1997 population statistics and a total area of 1 square mile, the Eatons Neck CDP has a density of 1,478 persons per square mile (**LIBN, 1998**). The overall density of the Town of Huntington is slightly higher, at approximately 2,032 persons per square mile.

TABLE 2-9
POPULATION STATISTICS

Area	1990 Census	1997 Estimate	% Change	Median Income
Eatons Neck	1,499	1,478	1.4%	$99,955
Asharoken	807	785	2.7%	$126,513
Northport	7,572	7,510	0.8%	$90,036
East Northport	20,411	20,453	2.1%	$74,195
Fort Salonga, part	5,602	5,649	0.8%	$95,464
Suffolk County	1,322,535	1,350,747	2.1%	$69,642

Source: Long Island Business News, 1998 and LILCO, 1997.

In addition to population change, **Table 2-9** also compares the median family income in the Eatons Neck CDP to the other CDPs and villages in the vicinity. The Eatons Neck community was estimated to have a median family income of $99,955 annually in 1997, which is just above the Townwide median family income of $86,086 **(LIBN, 1997)**.

2.6.2 Fiscal Considerations and Tax Revenue

According to the 1998-99 Statement of Taxes for the project site **(Table 2-10)**, the property has an assessed value of $29,000, of which $24,200 is the land assessment and $4,800 is the assessed value of the improvements. The total tax rate is $143.1810 per $100 of total assessed value. For the 1998-99 tax year, the project site will generate a total of approximately $41,894 in property tax revenue, of which $22,890.86 is allocated to the School District (55%).

TABLE 2-10
TAXES
Existing Conditions

Jurisdiction	Tax Rate ($/$100 assessed)	Taxes Paid
School Dist-Northport	78.9340	$22,890.86
Library Dist-Northport	6.5910	$1,911.39
County Tax/Tax Refunds	5/9350	$1,726.37
County Police Distrct	21.3710	$6,197.59
Town/Park Town/Open Space	9.7040	$2,814.16
Highway Tax	7.3760	$2,139.04
Refuse District	---	$371.08
Lighting Dist.-Town Wide	0.8690	$252.01
Fire Dist.-Eatons Neck	12.3830	$3,591.07
TOTAL	143.1810	$41,893.57

*Assuming total assessed value of $29,000, as: $24,200 land plus $4,800 improvements

2.6.3 Educational Facilities

The project site is located within the Northport-East Northport Union Free School District, and is served by either the Norwood Avenue or Ocean Avenue Elementary (K-5) Schools, the Northport Middle (6-8) School and the Northport High (9-12) School. It is anticipated that the two school-age children of the caretaker attend public schools.

According to the Superintendent of Schools, the district is presently experiencing an "enrollment crunch". **Appendix E** contains a recent memorandum provided by the Superintendent in regard to current and projected enrollments and classroom space. Following is the Summary of that document:

> At this point, it appears that we will be able to accommodate the projected elementary enrollment growth with existing facilities, or perhaps with a portable classroom or two. At the middle school, it appears we will need to build additional space onto Northport Middle School. At the high school, it appears we will need to relocate the central offices to Laurel Avenue, and also build additional space, at least for the science program, and possibly for other programs.
>
> The "caution" is that enrollment can be very difficult to project. We saw in the early 1990's serious projection errors in all school districts. The errors were caused by the fact that the projections are based on the assumption that current conditions will remain relatively stable. What had occurred in the late 1980's and the early 1990's is that there was a slowdown in the economy and a slowdown in the housing market, resulting in almost constant enrollment from year to year. However, when the economy turned around, so did the housing market, and more families with children moved into the school district. The projections were proven wrong; unanticipated growth occurred.
>
> The conclusions in this report are based on the enrollment projections prepared by BOCES, which has been extraordinarily accurate in developing projections for our district in the past. However, a few years ago, BOCES was projecting growth, followed by somewhat of a decline, followed by stability. Now, BOCES is projecting growth, followed by a very slight decline, followed by stability. These projections are subtly different. It is conceivable that the "curve is shifting," which could mean additional changes in the future. This needs to be monitored very closely, each year, to see if changes occur.

2.6.4 Police Protection

The project site is served by the Suffolk County Police department (SCPD) 2nd Precinct. According to the SCPD Management Services Section (see **Appendix E**), the site is within patrol sector 216. The 2nd precinct stationhouse is located at 1071 Park Avenue, just north of Jericho Turnpike, in Huntington, which is approximately 14 road-miles from the site.

2.6.5 Fire Protection

Appendix E contains a letter received from the Chief of the Eatons Neck Fire Department, which indicates that the Department is staffed by 54 active members. The firehouse is located at 55 Eatons Neck Road, which is less than 1 mile from the site. It operates 3 class A Engines, 1 Rescue Truck and 1 4,500 gallon Tanker. The Department has an Advanced Life Support Ambulance, staffed by certified AEMT and EMT-D volunteers. The Department is funded through property taxes.

2.6.6 Solid Waste Disposal

According to information provided by the Town Department of Solid Waste Management, the average single-family home in the Town generates approximately 12 pounds of solid waste daily (based on an annual generation of 2.2 tons). Of this volume, approximately 32% (3.9 lbs/day) is recyclable (glass, metal, plastic and paper). As this waste is residential in nature, no toxic or hazardous wastes are anticipated. This waste is collected by private carter, and is taken to the Town Resource Recovery Facility (RRF) in East Northport, which handles municipal solid waste, commercial waste, and special waste.

In 1998, this facility handled a total of 171,526.94 tons of solid waste, of which 57,650.29 tons (33.6%) were recyclable, 112,063.82 tons (65.3%) were incinerated, and 1,812.83 tons (1.1%) were landfilled. No construction and demolition debris or medical waste is accepted at the RRF.

2.6.7 Utilities and Services

The project site is presently served with potable water by the Suffolk County Water Authority (SCWA); it is anticipated that approximately 300 gpd are consumed, all of which is consumed within the caretaker's residence. However, when the site was fully occupied and the camp was open, daily water consumption would have been substantially greater.

In the vicinity of the project site, SCWA maintains an 8-inch water supply main beneath the west side of North Creek Road. The Waterside Road wellfield is the nearest public water supply wellfield; it is located approximately 4.2 miles southeast of the site.

The project site is presently served by LIPA for electricity and natural gas.

2.7 Cultural Resources

2.7.1 Visual Resources

The site is a former residential/camp property, now dominated by forest. The site contains eleven buildings distributed throughout the property; only one of the existing eleven buildings is occupied. The majority of the property is covered by forest, with thick wooded buffers present along all four borders of the site. Except for those areas adjacent to the buildings and along the trails within the property, the visual character of the parcel is dominated by the forest vegetation which is present throughout this portion of Eatons Neck.

For that portion of the site along and adjacent to the bluff, the forest vegetation becomes sufficiently thin to allow significant views westerly (and, to a lesser degree, to the northwest and southwest) across Huntington Bay. However, for viewers within the property, vegetation and topography combine to limit the potential for significant views outward to the north, south or west, though the existing residences adjacent to the north and south can be discerned through the trees and understory.

Views into the site from adjacent and nearby sites are similarly restricted by: 1) the presence of thick vegetation contiguous to that on the project site (for viewers to the north, south and east), 2) vegetation along the top of the bluff on the site (for viewers to the west), and 3) elevation differences between the viewer and the site. The existing structures are generally not visible to outside viewers for most of the year, though it is possible that the structures nearest the bluff would be visible during the winter months, when the deciduous trees in this area are bare.

The visual character of the site is that of an attractive, wooded parcel of land, similar in appearance to the developed parcels contiguous to the north and south. It should be noted that the base of the bluff has been bulkheaded on these latter two properties, while that of the project site has not.

2.7.2 Archaeological Resources

Appendix F contains the Phase IA Cultural Resources Assessment (CRA) prepared for the project site. A Phase IA study is a documentary search and field study of the site of a proposed development project; it does not include on-site test excavations. The Phase IA CRA states the following in regard to the history of this site:

> **Chronology of Events Relating to the Subject Property**
> In prehistoric times this general area served as part of the resource exploitation area of the local native Americans who probably were settled on the southeastern part of the Neck. Known prehistoric finds and sites are common in the general region. The early natives may have been settled on the low lying coastal areas such as Walnut Neck and areas around Duck Harbor as well as at Winkle Point.

It was at Walnut Neck where a late contact period settlement known as Ketanomoke was located. Here the Matinicock Sagamore, Resoroken, met with Theophilus Eaton in 1646 to sell the peninsula that would become Eaton's Neck. Eaton, a wealthy London merchant, had arrived only seven years earlier in New Haven at the English colony on the Connecticut shore. In the short period of seven years Eaton had been appointed the governor of the colony and had acquired Eaton's Neck for his own. Eaton's rapid rise to a powerful position was evidence of his perception, skill and sagacity. His political position may have permitted him access to information or to influence events regarding the soon to be signed Treaty of Hartford (1650) which divided up desirable Long Island vacant lands into an English and Dutch spheres of influence. The boundary placed at Oyster Bay confined the Dutch to the west of the line and the English to the east. The Treaty place Eaton's Neck in the English area. Eaton with his earliest of all Indian Deeds to Long Island lands had already established his ownership of a prized piece of Long Island territory prior to this date. The property of Eaton, soon fell to others however, and by the second half of the 17th century the ownership of Eaton's Neck was in the hands of George Baldwin (1663) and was briefly known as Baldwin's Neck. Later another powerful local family, the Gardiners, owned all or major parts of it in the late 18th century and early 19th century. It was this family that sold a portion of their property at the north end of the Neck for the erection of the Eaton Light in 1798. By the third decade of the 19th century other less affuent and powerful families were to settle on the Neck. Sometime about mid 19th century a C.W. Jones purchased from the Gardiners a large plot of land on the southwest coast north of Winkle Point. Near the southwest coast north of Winkle Point, Jones built his home and farm. The Jones family was to occupy this isolated section of the Neck well into the third decade of the 20th century. However, by 1922 the senior male members of the Jones family were deceased, and with no male members to work the land the family fell into arrears on their taxes. The property continued to be owned by Mary Jones as late as 1929. However, to pay back taxes the northern parts of the property were taken by creditors according to Mrs. M. Hogan (1998). In 1922 Mrs. Hogan states that her father-in-law Mr. John V. L. Hogan of Forrest Hills purchased a plot of land formerly owned by Jones family on the western shore of Eaton's Neck. Hogan was ultimately to purchase two more parcels in the are to put together a large estate. There were no structures on the parcel and the Hogan family, who resided in Forrest Hills, used the place for recreation by camping in a tent in the woods and swimming and sailing on the Bay. Several years later, in 1924 the parcel to the north was purchased by the Fields and developed as a children's camp known as Camp Marshall Field, where needy children from the city were exposed to fresh air and nature. On the Hogan's property a pleasant summer bungalow overlooking the Bay was built in about 1926 and was known later as "the old house" (Structure 1). By 1938 Camp Field was no longer functional and was sold. The Hogans purchased the wooded site and the cottages to the north of them to enlarge their holdings and insure privacy. At this time they may have moved or disassembled the rebuilt one or more of the small cottages from the camp tot he site of Structure 1 to expand their recreational home. Additional property in the vicinity became available in the early 1940's and this third parcel became the final purchase. In 1970 the new house, larger and of a one story ranch style, was built in the eastern portion of the site. Since that time, the property has remained relatively unaltered from its original state.

Conclusions

The parcel was part of agricultural and wooded land from the early settlement of the site to the present day. Aside from the early clearing of the land for pasture in the 18th century, the cutting of roads and foot paths and the construction of a number of simple frame cottages and other low impact structures, and the construction of a modern residence late in the 20th century, the parcel has remained relatively unaltered.

Sensitivity Assessment
This parcel has a better than average potential to produce cultural evidence related to the prehistoric past. There appears to be little potential for evidences of early historic sites given the known history of the site. Evidences of early 20th century structures such as cottages, outbuildings or similar features, may be located near the existing building. The remainder of the parcel may have preserved evidences of the prehistoric past on the tops of knolls, and in small hollows or other relatively level areas.

The Phase IA study recommended the following:

Recommendations
A Stage IB field reconnaissance survey is recommended. Subsurface testing should address the questions regarding presence or absence of culturally significant subsurface or ground level prehistoric or historic evidences.

The recommended Phase IB study was prepared immediately after the conclusion of the Phase IA CRA (see **Appendix G**). The Phase IB study states the following in regard to the areas of concern expressed in the Phase IA study:

Summary of Subsurface Testing
No culturally significant recoveries were found as a result of the subsurface testing at the Old Orchard Woods property. Of the 159 subsurface tests dug in the approximately nine-acre subsurface test area, most were culturally barren. Twenty-six tests out of 159 revealed cultural evidences such as coal, metal, brick, plastic, etc. Thus 26 out of 159 or 26/159 or 16% of the tests were culturally positive with historic or contemporary materials. Tests were more likely to be positive in the vicinity of presently or formerly occupied structures. The remaining tests were culturally barren (designated as "CN" on the data forms). The character of cultural materials recovered are commonly associated with soils in the vicinity of occupied residences, or are found in former gardens or agricultural fields which were fertilized by manure and domestic wastes. Their recovery can be ascribed to periods of human activity, past waste disposal or soil fertilization practices. No culturally significant recoveries were made from the subsurface at the Old Orchard Woods Site.

A systematic surface survey and methodological subsurface study, and a protocol which included digging and analysis of one hundred fifty nine subsurface grid sited tests within the study area revealed no significant cultural evidences on the surface or within the subsurface. No further study is proposed or warranted.

SECTION 3.0

SIGNIFICANT ENVIRONMENTAL IMPACTS

3.0 SIGNIFICANT ENVIRONMENTAL IMPACTS

3.1 Geology

3.1.1 Subsurface Geology

The analyses regarding the character and extent of the subsurface clay lenses has been presented in **Section 2.1.1**, based upon the test borings contained in **Appendix B-2**. These studies indicate that this impervious material is not continuous beneath the site, a characteristic which will allow for proper downward movement of recharge from the proposed sanitary systems and recharge basin. An additional consideration is the distance between the developed portion of the site and the proposed 10 sanitary systems; this separation is sufficient to allow recharge to percolate downward through the gaps between the clay lenses. Finally, the clay tends to slope downward toward the east, indicating that groundwater flowing along the top of this material will flow away from the bluff, not toward it. As a result and similar to the previously-approved subdivision, the sanitary systems and recharge basin are anticipated to operate properly, with no potential for significant adverse environmental impacts.

It is not anticipated that grading operations or excavation for the recharge basin will disturb subsurface soils to a depth which will impact subsurface conditions. The developed area (less the required recharge basin) comprises only 22.7% of the site, which minimizes the area eligible for grading; in addition, the developed area has been delineated based on its existing low relief, which also reduces the amount of grading necessary. The recharge basin will be excavated to an elevation of 10 feet above sea level. As the groundwater table lies at an elevation of approximately 2 feet above sea level in this area, there will remain a sufficient depth of soil between the basin bottom and the water table to allow for proper operation of this feature. As was established for the previously-approved subdivision, there will be no impacts to groundwater quality.

The recharge basin will be constructed through the removal of soil material. If needed and if this material displays acceptable bearing capacity and leaching characteristics, this soil material may be used as backfill in other areas of the site to produce acceptable slopes for construction. Excess acceptable material will be removed by truck (between 7 AM and 6 PM) and sold as backfill. If such characteristics are not determined, this material will be removed by truck to an acceptable landfill. As a result and similar to the previously-approved subdivision, it is not expected that there will be any significant adverse impacts with regard to subsurface geological conditions.

3.1.2 Surface Soils

The surface soils of the site were described and discussed in **Section 2.1.2**; **Table 2-1** listed those characteristics which could constrain or limit development. Of the four soil types represented on-site, two (Beaches and Escarpments) will not be disturbed by the proposed project. The remaining two soils, denoted Carver-Plymouth Sands and Riverhead Sandy Loam, are found in

the central and eastern portions of the site and will be disturbed. These two soils present moderate to severe limitations on development, based on slopes and the presence of a sandy surface layer. However, these disturbed areas will be stabilized during construction and will be graded to provide a low slope angle for development. Grades are not anticipated to exceed 1:3. As a result of these design factors and similar to the previously-approved subdivision, it is not anticipated these soil limitations will adversely impact development of the site. Finally, the low number of homes on this 24± acre site, each situated on a lot of 2.00 acres, with no disturbance to the majority of the site, would not be expected to result in any significant disturbance to surface soils.

Dust generated during site construction activities will be controlled through the use of dust suppression techniques and limitations on equipment movement. During this period, the potential for erosion will be minimized by use of techniques specified in the Town of Huntington Erosion Control Handbook, which includes, but is not limited to, the following: 1) minimize the area of denuded soil; 2) minimize the time span that denuded soil is exposed to the elements; 3) use groundcovers: 4) install sediment traps at appropriate points; and 5) use drainage diversions. Additionally and similar to the previously-approved subdivision, the proposed project does not include disturbance to soils in proximity to the northern, western or southern boundaries of the site; this factor minimizes the potential for sediment impact to adjacent properties during the construction period. Construction will occur on the easterly property line. In this area, North Creek Road will be improved to Town standards, to allow for Town access to the recharge basin (for maintenance purposes). However, this improved section of roadway will be provided with a drainage system, thereby minimizing the potential for drainage or sediment impacts to adjacent properties.

As a result of the above-discussed design features and project characteristics, potential impacts to surface soils have been avoided or mitigated.

3.1.3 Topography, Bluff Recession and Beach Erosion

The Slope Map presented in **Figure 2-5** indicates the locations and extent of the steep slope areas of the site. It is anticipated that development of the proposed project will occur on the central and easterly portions of the site, which are characterized by low (0-10%) and medium (11-15%) slopes. The slopes in the developed area, in consideration of the 2-acre lot size proposed (see **Section 3.1.2**), will allow for proper grades to be created, without a significant need for disturbance to existing steep slopes. As further discussed in **Section 3.1.2**, the grading operation is not anticipated to produce slopes in excess of the 1:3 slopes within the recharge basin. Finally, use of the erosion control measures discussed in **Section 3.1.2** is anticipated to prevent or minimize the potential for erosion of soils during the construction period from occurring or impacting adjacent properties. As a result of these design factors and similar to the previously-approved subdivision, the steeper sloped portions of the site are avoided and, it is not anticipated that slopes will adversely impact development of the site.

As noted in **Section 3.1.2** above, the bluff occupying the westerly portion of the site will not be disturbed. In addition, the area adjacent to and within 125 feet of this feature will not be

disturbed, in order to provide a buffer from potential disturbance to this feature. Due to the setback of 125 feet and current erosion rates, the increase in load from the erection of structures (as discussed in **Section 3.1.1**) is not expected to impact the stability of the bluff face. In addition, installation of sanitary systems will function properly and in no way impact the stability of the bluff.

The beach and bluff are the dominant topographic features at the project site. These features are within a 3.4 acre area which will be subject to a Conservation Easement and the existing Restrictive Covenant. These areas are designated as a Natural Protective Feature Area by the NYSDEC Coastal Erosion Management Program. These have received this designation since they function to protect coastal resources from wind and water erosion and storm-induced high water. As such all development, excavating, grading or mining is prohibited on beach and bluffs unless specifically allowed by subdivision 505.8(c) of the Coastal Erosion Management Regulations. A declaration of covenants will be submitted as requested by the Planning Board, requiring that any bulkheading and erection of docking facilities shall be subject to approval by regulating agencies.

As discussed in **Section 2.1.3**, it is estimated that the bluff is receding at a rate of approximately 1.9 feet per year. The primary cause of bluff retreat at the site is wave attack along the toe of the bluff, which is undermining the material on the upper portions on the bluff face. This is evident when observing the bluff faces adjacent to the bluff associated with the project site. These bluffs have been stabilized through the use of seawalls to dissipate energy from wave attack. These bluffs do not exhibit any evidence of further slumping and has resulted in the growth of new vegetation along the bluff face to further secure the bluff. To ensure that development will not impact the bluff, project activities will comply with the Local Waterfront Revitalization Program which requires that construction activities must be set back at least 100 feet landward from the top of the bluff. At the current recession rate, new construction related to the project will not be jeopardized for approximately 50 years unless the bluff face should stabilize resulting in cessation or decrease in the rate of recession. If at some time in the future, bluff recession poses a threat to on-site structures due to natural erosion processes, construction of mitigating measures to protect the toe of the bluff from further wave attack may be considered by the future landowners, and would be subject to agency review and permitting procedures. Such procedures may include review of plans by a qualified professional geologist and consideration of non-structural measures. Construction of these mitigation measures, if desired, will be the responsibility of the future landowners of properties adjacent to the bluff and is currently not included as part of the proposed development activities. Since bulkheading is not being recommended as a mitigation measure under the proposed project there will be no restriction to sand transport to down drift beaches related to shoreline hardening.

Consideration has been given to potential impacts associated with toe stabilization should this occur in the future, in order to provide a complete analysis of present and future potential project-related impacts. It is not anticipated that the construction of a toe stabilization structure would result in a reduction of sand to beaches downdrift of the site. Such structures located parallel to the shoreline and above mean high water are documented to be benign to the environment. Based upon the subject property's beach and bluff width, the site is not the sole or

major contributor of sand nourishment to the shoreline south of the subject property. This is determined by the potential contribution of the site to the overall sediment budget of material in transport.

An assessment of the project's impact along the western shoreline of Eaton's Neck has been provided within a technical letter prepared by a qualified professional specializing in coastal geology. The letter, report and supporting documentation has been included as **Appendix B-1**. The letter presents a review of the local coastal processes as well as the potential impact that the proposed development and potential bluff protection measures may have along the subject shoreline. In addition, the letter also provides an evaluation of the project's compliance with State and Local regulations regarding coastal erosion and management.

The assessment identified three separate littoral cells along the western shoreline of Eaton's Neck which operate independently but are also connected to the regional sand transport system. The location and extent of each cell are provided below:

- Northern Cell - Eaton's Neck point to the Eaton's Neck Boat Basin Inlet.
- Middle Cell - Eaton's Neck Boat Basin to Argyle/Birmingham Drive (the subject site is located here).
- Southern Cell - Argyle/Birmingham Drive to the end of the spit at West Beach.

The northern cell is identified as contributing the largest input of beach-compatible sediment along the subject shoreline in the form of a linear sandbar. This sandbar migrates progressively southward and has resulted in the widening of the beach observed along the middle cell. The report further states that the sand transport process has been so significantly interrupted due to the groin field located between Argyle Drive and West Beach that sandbars migrating from north to south are unlikely to provide substantial sediment to the West Beach peninsula and spit located within the southern cell. The specialist concludes that the bluffs located along the middle cell (which include the bluffs along the subject site) provide little if any sediment to the littoral system. A majority of the bluffs within this area are artificially stabilized, and sediments within these bluffs are not compatible with the beach sands observed in the southern cell. The author concludes that since the site's bluffs do not appear to provide significant sediment to the beach, the construction of erosion protection structures is not likely to adversely impact the beaches at or down drift of the site.

Based upon the project design features including homesite locations and bluff setbacks, and similar to the previously-approved subdivision, no significant impacts are expected with regard to topography or coastal processes.

3.2 Water Resources

3.2.1 Groundwater Hydrology and Water Quality

The proposed project will consist of 10 single-family residences and therefore no toxic or hazardous chemicals are anticipated to be present or utilized on the site. Consequently, and

similar to the previously-approved subdivision, no impact to groundwater quality is anticipated from this source.

The primary impact associated with residential development is nitrogen in recharge resulting from sanitary waste and lawn fertilization. Each residence will utilize an individual sewerage system for disposal of sanitary wastes. It is anticipated that the concentration of nitrates (as nitrogen) generated on-site will be increased by the proposed project, due primarily to the presence of nitrogen in wastewater. The SONIR computer model (presented in **Section 2.2.2)** was applied to the proposed project, to determine the expected concentration of nitrogen in recharge originating on the site. The results (see **Appendix B-3**) indicate that the nitrogen concentration will be increased to 2.55 mg/l, an increase of 2.26 mg/l nitrogen as compared to the existing level of 0.29 mg/l. Wastewater will account for 56.8% of nitrogen in recharge, with potable water (as flush water in the wastewater stream) representing 30.6%, stormwater accounting for 0.7%, irrigation of 0.4% and fertilization at 11.4%. A detailed analysis of the potential impact of the project on water quality due to nitrogen loading has been completed based on accepted methods. The anticipated concentration is less than the NYSDEC drinking water standard of 10 mg/l, and similar to the previously-approved subdivision (which would have had a nitrate concentration in recharge of 3.90 mg/l), the proposed project is not expected to result in significant adverse effects to groundwater quality with regard to nitrogen loading.

There are no potential impacts to water resources from stormwater generated on-site, based upon analysis of the project's conformance to design requirements of the Town, and to recommendations of the 208 and NURP studies (see **Section 2.2.1**). Specifically, the project will retain and recharge all runoff from developed surfaces within an on-site recharge basin sized to handle this volume. Based upon the NURP Study, the low-density residential nature of the site and vicinity do not result in the presence of substances in runoff which could impact groundwater quality. The proposed project will utilize Best Management Practices (which may include use of low-or no-fertilizer lawn/landscaping species, limited or no use of other landscaping chemicals such as fungicides, herbicides, etc., limited or no use of roadsalts during wintertime). As a result, and similar to the previously-approved subdivision, no significant impact to groundwater quality is anticipated from recharge of stormwater from the project site.

In addition, the expected wastewater flow from individual sewerage systems for the entire project will be approximately 3,000 gallons per day (gpd), or 123.92 gpd per acre. This discharge rate conforms to Article 6 of the Suffolk County Sanitary Code, which allows up to 600 gpd per acre, or a total of 14,526 gpd for the project site. Thus, the proposed project will generate 79% less wastewater than allowed for the site by the SCDHS. This provides further evidence that no significant groundwater impact is expected as a result of this project.

3.2.2 Water Balance

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

corner of the site, and will be connected to the planned roadside catch basins. The recharge basin will be a total of 66,072 SF in area, and will be sized to handle all stormwater runoff generated on-site.

Construction of the proposed project will increase the amount of water available for recharge across the project site resulting from the increase in impermeable surface area and recharge of wastewater from sanitary system effluent. SONIR computer model results for the proposed project (**Appendix C-3**) indicate that a total of 17.38 million gallons per year (MG/yr) of water will be recharged on the site. This represents a 26.3% increase in recharge as compared with the existing volume of 13.76 MG/yr. Of this anticipated recharge, stormwater will account for 85% of the total recharge, with wastewater contributing 13.8% and irrigation yielding 1.1%%.

Development projects typically increase the quantity of recharge on a site. The rapid permeability of glacial soils allows infiltration of recharge through the unsaturated zone to be assimilated into the water table. In addition, the horizontal hydraulic conductivity of soils is greater than the vertical conductivity such that when recharge reaches the water table, it maintains a constant elevation. The 10 proposed wastewater systems of the project are dispersed throughout the central portion of the site, thereby distributing recharge water over a large area of the water table. The vertical separation between the developed area and the water table (36-88 feet), as well as between the base of the recharge basin and the water table (approximately 8 feet) is anticipated to be sufficient to allow for the dissipation of recharge as it percolates downward toward the water table. That is, recharge originating in smaller areas such as the recharge basin and leaching pools will not form mounds in the water table beneath these sources, but will spread laterally as it moves downward.

The discontinuous clay encountered beneath the site it is not expected to influence groundwater recharge. Recharge flow through the subsurface may result in some horizontal flow and perched groundwater conditions along the surface of the clay. However, flow along this surface may become interrupted due to the clay's discontinuous nature resulting in a preferential vertical flow pattern allowing for groundwater recharge at the water table. In addition, the geologic profiles presented in **Section 2.1.1** indicate that the clay lenses are less continuous on the eastern portion of the site, where the recharge basin and the majority of the developed area are located. Therefore, an adverse impact to water table quantity and configuration due to a change in the pattern of recharge generated on-site is not anticipated.

The project site will utilize public water, to be supplied by the SCWA via an existing main beneath North Creek Road. The potable water requirement of the project, 3,000 gpd, is not anticipated to impact the ability of the SCWA to serve the public in the vicinity.

3.2.3 Surface Water and Drainage

The proposed action may result in alteration of drainage flow or surface runoff patterns through the creation of impervious surfaces in areas with steep slopes, ravines, sandy and clayey soils. Runoff from such surfaces may increase the potential for flooding and erosion. To reduce the

amount of overland runoff roadside catch basins will be installed to redistribute runoff to the on-site recharge basin. If used, fertilizers, pesticides and other lawn chemicals will be kept from running downslope westward onto and down the bluff, and thereby impacting Long Island Sound, by the intervening 125-foot buffer. The existing restrictions on clearing within and adjacent to the Reserve Area, in conjunction with the existing Restrictive Covenants, will preserve the natural vegetation in this area, which will act to retain and slow down the overland flow of runoff, and recharge it to groundwater.

Similar to the previously-approved subdivision, the proposed action is not expected to have a significant impact on surface waters resulting from subsurface sanitary flows that may discharge to the surface. As previously noted, the soils underlying the project site consist of highly permeable Carver, Plymouth and Riverhead sands with discontinuous clay layers throughout resulting in isolated perched water zones. These clay layers influence the horizontal component of groundwater movement and may result in the discharge of waters as seeps along clay lenses observed on the bluff face. However, preferential horizontal flow along the surface of the clay may be interrupted due to the clays discontinuous nature producing gaps within the clay layer. This will result in the resumption of flow along the preferential vertical pathway due to gravity and the highly permeable nature of the surrounding sands thereby reducing seepage along the bluff face and allowing for groundwater recharge at the water table. In addition, analysis of the data generated from the geologic borings collected on site and observation of site topography indicate that the discontinuous clay layer may slope away from the bluff face. This will result in a horizontal flow component moving in an easterly direction away from the bluff reducing the potential for seepage of sanitary discharges along the bluff face. In the unlikely event that sanitary effluent were to discharge from the surface of the clay layer outcropping along the bluff, impacts related to nitrogen concentrations in the waste water would be negated by the following:

- each sanitary system is designed to conform with SCDHS regulations and design requirements, which were developed to ensure the protection of groundwater quality (in consideration of the ability and capacity of the subsurface material to handle self-purification);
- the volume of wastewater generated by the proposed project is 79% less than that allowed by the SCDHS;
- nitrogen gas will be removed by each individual septic system;
- bacteria generated by septic waste will be removed by subsurface soils;
- removal of nitrogen through natural denitrification processes; and
- dilution of wastewater with groundwater.

The subject site adjoins the eastern shore of the entrance to Huntington Bay. The site has approximately 900 feet of shore line and is situated between residential development to both the north and the south of the site. The project, as proposed, does not include any alteration of the area adjoining the entrance to Huntington Bay. Consistent with other properties north and south of the subject site, bluff erosion may be curtailed at some time in the future by use of toe stabilizing structure at the base of the bluff. This structure would be placed parallel to the shoreline and above mean high water. This type of shorefront structure has been found to be benign with regard to the waterway. As a result of the design of the proposed subdivision and based on analysis included in this DEIS, the proposed project (similar to the previously-approved

subdivision) is not expected to have any adverse impact on the adjacent water body or the coastal resources associated with the areas surrounding the subject site.

There are currently no plans to construct a toe-stabilizing structure on the subject site contained within the proposed subdivision map. Any seawall constructed to stabilize the toe of the bluff by the developer or the individual homeowners in the future will be designed using sound engineering practice and reviewed and built in accordance with all relevant state and local regulations required for the structure. It will be designed according to engineering specifications currently used for seawall construction. Seepage of perched water is observed at an elevation along the bluff face above the top of any possible future bulkhead structure. A toe stabilizing structure would likely not exceed an elevation of 5-6 feet above grade. Any such structure would be lined with filter cloth and backfilled with clean sand. This would enable any seepage of perched water to percolate downward through soils behind the structure. Any structure contemplated would be designed to function properly within the design life of the structure.

3.3 Ecological Resources

The impacts to the ecological resources of a project site are generally a direct result of clearing of natural vegetation, increase in human activity, and the resulting loss and fragmentation of wildlife habitat. The proposed project involves the subdivision of land for single family use, which involves clearing of some of the existing wooded vegetation on the site. Between 5.34 and 6.60 acres of the existing 20.58 acres of tulip-oak forested habitat will be removed from the site to allow for the development, or roughly 26 to 32% of the native woodland that currently exists on site. Thus, the impacts of the proposed project should be assessed in relation to a direct change in habitat and an increase in human activity. The proposed development plan would obviously increase the structures and impervious surfaces found on site, but would also increase the quantity of landscaping by approximately 2.14 acres. The majority of the eastern and western portions will remain as woodland as well as woodland buffers throughout on the rear and sides of the homesites. There will be a shift and increase in the type of habitat found on site by clearing the natural forested vegetation and increasing the amount of landscaping/turf vegetation, also resulting in an increase in edge habitat. The subject property is bounded to the north and south by residential developments, to the west by Long Island Sound and to the east by the largest tract of woodland in the immediate area. The following sections examine in detail the impact of the proposed site use and development with regard to both vegetation and wildlife.

3.3.1 Vegetation

The project site is 24.21 acres in size; between 5.34 and 6.60 acres of the native woodland on site will be cleared following construction. The existing coverages will be increased to an estimated 2.50 acres of building and pavement area, 3.00 acres of landscaping/turf, and 1.51 acres of recharge basin, with the remaining 17.20 acres left in the natural state (including the 1.96 acres of beach/bluffs will not be disturbed). Although some of the natural vegetation will be replaced

by landscaping species, the development of the site will have localized impacts on vegetation. Regional impacts will be negligible, as roughly 71% of the project site will remain undeveloped.

In order to assess the impacts of the project, the proposed site quantities are summarized in **Table 3-1**. The proposed development will require clearing of between 5.34 and 6.60 acres, although ultimately 15.24 acres of the existing woodland will be present. Most of the remaining woodland habitat would be present along the eastern and western property boundaries, as well as along the northern and southern boundaries. Portions of natural vegetation will remain throughout and between the proposed development lots. This will create a large proportion of edge habitat, which would typically favor growth of understory species which require greater light penetration. The remaining forested area would be further fragmented, but would be contiguous with the large contiguous tract of woodland found adjacent to the eastern property boundary, east of North Creek Road, increasing the value of this area for wildlife. In addition, the creation of a recharge basin will increase the habitat value for particular species of wildlife as well. Due to the presence of steep slopes, the majority of natural vegetation cleared will come from the interior of the site, and between lots.

TABLE 3-1
SITE COVERAGES
Proposed Conditions

Parameter	Existing Conditions	% Coverage	Proposed Conditions	% Coverage	Change (acres)
Building	0.17 acres	0.7%	0.41 acres	1.7%	+0.24
Impervious/Paved	0.23 acres	0.9%	2.09 acres	8.6%	+1.86
Unpaved/Pervious	0.41 acres	1.7%	0 acres	---	-0.41
Landscaped	0.86 acres	3.6%	3.00 acres	12.4%	+2.14
Beach/Bluff	1.96 acres	8.1%	1.96 acres	8.1%	0
Tulip-Oak Forest	20.58 acres	85%	15.24 acres	62.9%	-5.34
Recharge Basin	0	---	1.51 acres	6.2%	+1.51
TOTAL	**24.21 acres**	**100%**	**24.21 acres**	**100%**	**---**

The loss of woodland habitat on the property will be partially mitigated by the proposed preservation of many of the larger specimen trees on site, as well as preservation of the woodland in the western Reserve Area as well as within the site. Landscaping and turf will be the dominant vegetation surrounding the structures, with native or near native species used. This will supplement the remaining woodland buffers, although the habitat will be further reduced by the proposed development. Planting of native tree species such as oaks, maples, beech, and tulip trees along the street, and in the recharge basin area would help accelerate the process of succession, while minimizing the potential for colonization by introduced species.

The existing woodland habitat in the area is somewhat fragmented due to the surrounding developed areas. Similar wooded forest habitat is found throughout the general area, and a large contiguous tract of woodland lies adjacent to the eastern property boundary of the site. The property is not expected to act as a refuge for rare native flora, and impacts to plant species

should be minimal. Christmas fern, cinnamon fern, flowering dogwood and bayberry are the only exploitably vulnerable, protected species expected on the property. Exploitably vulnerable species are protected primarily because they are indiscriminately collected, rather than due to rarity within the State. The presence of these plants would not preclude development of the site, as a property owner is permitted to remove exploitably vulnerable plant species from a site. However, bayberry is not common on the site as it is restricted to the bluff area and Christmas fern and cinnamon fern is located within the proposed buffer areas and will not be effected by development. Additionally, chestnut husks observed on site were determined to be Chinese chestnuts. No significant impacts are expected to the virtually eliminated American chestnut, as it was not found on site.

As noted in the previous section, a tree survey determined that the oak-tulip forest habitat on site has a density of approximately 27 trees per 20,000 SF with a DBH of at least 10". Based on this, it can be estimated that the 5.34 to 6.60 acres of oak-tulip forest to be removed have between 314 and 388 trees with a DBH of at least 10", and may potentially be cleared. This is expected to represent a worst case scenario, as Plots 1 and 2 had relatively dense tree inventory but many parts of the site are landscaped.

In addition to retaining the larger specimen trees on site, 3.00 acres of the property will be landscaped. Landscaping will be completed by individual homeowners. Evergreens, including white pine and Douglas fir, may be used to provide screening on site, and could be planted as a supplement to the proposed wooded buffers where necessary. Buffer planting (for the recharge basin) and street trees will be installed as part of the subdivision for individual homes. A variety of evergreen and deciduous shrubs could be utilized as foundation plantings, with flowers and mixed turf where needed.

In conclusion, approximately 63% of the site will be a tulip-oak forest buffer along the borders of and within the site under the proposed plan. Additional acreages will be further protected (as Preserve Area and 125-foot setback) through the use of Conservation Easements and the existing Restrictive Covenants. The project will retain large diameter trees where possible within the proposed construction/disturbance areas. Landscaping/turf will increase on site to cover approximately 12.4% of the overall site, which will also retain large diameter specimen trees. Landscaping will be provided, and may incorporate native or near native species. The majority of the vegetation on the property is currently dominated by mature woodland, of which the majority will be retained. As mature woodland is found throughout the area, the regional impacts to this habitat are not expected to be significant.

3.3.2 Wildlife

The vegetation on the project site provides habitat for a wide variety of wildlife, although the surrounding development and adjacent roadways may already exclude some species found in

larger tracts of open space. Most of the species expected on the property are at least somewhat tolerant of human activity, but others will be impacted by the proposed clearing operation and resulting increase in human activity. The proposed project will remove some of the existing woodland habitat on the property, although the project will retain natural wooded corridors to the adjacent contiguous tract of woodland to the east. As was discussed in the preceding section, fragmented woodland habitat is found throughout the area, and the site represents only a small portion of these fragmented habitats. As previously stated, there is a large contiguous tract of native woodland similar to that found on the project site. This forested area is located east of the eastern most property boundary. The proposed project will favor those species that prefer edge and woodland habitats and those that are tolerant of human activity, with those more sensitive to development expected to utilized the habitat to the east, if present.

In determining impacts upon the existing wildlife populations, it can be assumed that an equilibrium population size is established for each species as determined by availability of resources in the habitat. Thus, the removal of habitat resulting from the proposed project will cause a direct impact on the abundance and diversity of wildlife using the site. Although the assumption that species are at equilibrium is an oversimplification, and population sizes of many species are controlled below the carrying capacity by other factors, it does provide a worst-case scenario in determining the impact of habitat loss. In addition to this direct impact, the increased intensity of human activity on the site will cause an indirect impact on the abundance of wildlife that will remain on the site and in the area, under post-development conditions.

In the short term, lands adjacent to the subject property will experience an increase in the abundance of some wildlife populations due to displacement of individuals by the construction phase of the proposed project. Ultimately, competition with both conspecifics and other species already utilizing the resources of the surrounding lands should result in a net decrease in population size for most species. The effect on the density and diversity of both local and regional populations should be minimal, as the area represents only a small portion of the forested habitat available in the vicinity.

Section 2.3.2 provides a discussion of the wildlife populations associated with the subject site. In addition, **Appendix D-4** includes the results of a microcomputer model developed for use by NP&V. The model is used to establish baseline information of species associated with various habitats, as well as relevant information concerning abundance, habits, and seasonal fluctuations.

Appendix D-4 contains a computer-generated table labeled "Species Adaptability". This list is another component of the program developed for NP&V used for the preparation of the Wildlife Habitat computer model; however, in this application the "Adaptability" of the observed and expected species is shown. The "Adaptability" as indicated in the table, refers to whether an individual species may potentially benefit from (+) a habitat change from natural to a developed setting; or be adversely impacted (-), or remain constant (=), as a result of this change. This appendix is included to provide the reader with the benefit of the literature which was consulted in connection with the Wildlife-Habitat model in terms of generalized species dynamics resulting from land use. These values are general indicators of the response of each species to alteration of its natural habitat by a mixture of residential, commercial and industrial development. The

following text considers the site-specific aspects of the proposed development in regard to individual species, and supplements the predictions of the more general model. In some cases the predicted response of a species at the site may differ from the general prediction of the model because of site-specific information.

Birds

Literature suggests that many avian species are able to utilize both urban and suburban environments. Birds such as crows, doves, blue jays, American robin, northern mockingbird, brown thrasher, gray catbird, cedar waxwing, grackle, northern oriole, and the brown-headed cowbird may be temporarily affected by development of the property. However, these birds usually adjust well to human activity, and are expected to remain on-site **(Andrle and Carroll, 1988; Bent, 1963, 1964, 1968)**. Populations of those species which are more abundant in open and edge habitats should remain stable following the construction phase of the project, including the starling, robin, rock dove, cedar waxwing, catbird, brown headed cowbird, and mockingbird. In addition, the rock dove may be expected to increase in numbers on site, as it typically nests on buildings and other structures.

Some smaller birds that also typically adjust well to development include the finches, towhees, juncos and sparrows. These seed-eating species are generally found in wooded edge habitats and buffer zones, and thus populations are likely to be moderate under existing site conditions and throughout the general area. Species from these groups expected on site include the house sparrow, song sparrow, house finch, northern cardinal, American goldfinch, and rose-breasted grosbeak. The northern junco was observed on site and the fox sparrow, white-throated sparrow and white-crowned sparrow may be present as winter visitors. Populations of the majority of these species are likely to remain stable or increase following construction, although those which are found primarily in forested habitats may decrease. Species which should not be impacted include the introduced house finch, a pest which prefers to nest on buildings **(Bent, 1968),** as well as the chipping sparrow, goldfinch, and northern cardinal, which prefer open edge habitats. The northern junco, fox and white-throated sparrow prefer woodland habitats, and thus winter populations of these species may decrease slightly. No significant regional impacts are expected to these species due to the presence of suitable habitat elsewhere in the vicinity.

Other smaller, insect feeding birds such as the black-capped chickadee, tufted titmouse, and white-breasted nuthatch are also fairly tolerant of development as long as large trees with plenty of food sources remain **(Andrle and Carroll, 1988; Bent, 1964).** Numbers of these species are expected to decline slightly, but individuals are expected to remain on site and overall impacts are expected to be minimal. The ruby-crowed kinglet and golden-crowned kinglet, which are winter visitors, are less tolerant of human activity and are more likely to be impacted by the proposed development. However, adequate buffers will remain throughout the site and no adverse impacts are expected. The house wren is very tolerant of development, and no significant impacts to this species are expected. In addition, the chimney swift nests in chimneys and is likely to increase in numbers following development.

Some birds cannot adjust well to development, including forest interior species such as most varieties of warblers. These species are expected to suffer declines on site, with local stress due

to increased human activity. Many of these birds are fairly secretive and prefer woodlands with dense understory vegetation **(Andrle and Carroll, 1988; Bent, 1964, 1968).** The existing development near the site may already limit the number of these species which are present on site, however the site is expected to contain suitable habitat for these species in the existing condition. Adequate buffers will remain on site and there is similar woodland in the vicinity for the use by warbler species. The black and white warbler, blue-winged warbler and the yellow-rumped warbler may be present in small numbers. The yellow warbler may also be present on site during winter, with the common yellowthroat also likely to be present. The worm-eating warbler is also expected to utilize the site, and would be expected to no longer utilize the site for nesting as this species nests on the ground. These species, as well as the ovenbird and purple finch, are likely to decline in numbers on site following construction, but may continue to utilize the remaining woodland habitat and buffer areas. The black-throated blue warbler is more tolerant of human disturbance and is not expected to leave the area, if present. Local impacts to these species are expected, but regional impacts should not be significant given the small area to be cleared.

The common nighthawk, a special concern species, is typically a ground nester, although it will nest on roofs, and will likely continue utilizing the parcel if present. The northern oriole and rufous-sided towhee are expected to be present and are expected to utilize the area following development. The indigo bunting prefers areas with thick cover and may likely abandon the site if present.

Common Long Island swallows include the barn and tree swallows, both of which adjust well to human activity. The barn swallow is expected to increase in numbers following development, as suitable nesting habitat for the species would increase. The tree swallow and purple martin prefer wetland areas where insects are abundant, and are not expected to abandon the site following development. These species are also known to utilize man-made nest boxes which may increase the suitability of the habitat for nesting. Suitable habitat exists for bank swallows along the bluff on the western portion of the site. There is evidence of swallow nests along the top of the bluff although none were observed. The bank swallow and barn swallow are listed as confirmed breeders within the census block. The kingfisher, somewhat associated with swallows due to the use of the same nesting bank, is not expected to abandon the site following development as the preferred habitat will remain in its existing condition.

The vireos are also relatively sensitive to development, and may suffer local impacts from the proposed project. The red-eyed vireo should remain in small numbers, as it can be found in parks and suburban areas. The warbling vireo would be expected to increase following development, as it is unlikely to be present under existing conditions but is likely to be present in the vicinity. The scarlet tanager, if present, would be expected to decline following development. Of the woodland thrushes and creepers, the wood thrush, hermit thrush, and the veery were listed as probably present on site. The wood thrush, hermit thrush and brown creeper are relatively tolerant of human activity, and should be minimally impacted as long as some wooded habitat remains. If present, the veery would not be expected to continue to use the site following development, but it is expected to be rare under existing conditions as it typically avoids human activity. Large contiguous forested habitat remains in the vicinity and is expected

to be utilized by this species. The whip-poor-will is nocturnal and prefers open woods with adjacent fields, thus if present, numbers are likely to decline.

Of the flycatchers, the kingbird prefers open edge habitats, and may increase on site following the proposed project. The eastern wood pewee is more vulnerable to development, but is occasionally found in suburban habitats. Numbers of this species may decline on site, although regional populations should not be significantly impacted. The great-crested flycatcher might also be present, although they prefer larger areas of open space and are generally expected in adjacent parcels and may increase following development. The eastern phoebe and the Acadian flycatcher would be expected to continually utilize the site and surrounding forested parcels following development. The blue-grey gnatcatcher would be expected to utilize the bluff habitat, if present. Regional impacts to these species should be minimal given the relatively small area to be cleared and habitat available in the local area.

Although woodpeckers can adjust well to some types of development as long as wooded buffers remain, it is critical that both large, mature trees and smaller trees are present for feeding and nesting **(Andrle and Carroll, 1988; Bent, 1964).** Populations of these species may decline slightly on site following clearing and the increase of human interference. The site and surrounding woodlands contain suitable habitat for many woodpecker species. Included in this group are common flickers, downy woodpeckers, hairy woodpeckers, red-bellied woodpeckers, red headed woodpecker and the yellow-bellied sapsucker, all of which are residents on Long Island. If present, the hairy woodpecker may abandon the site, as it prefers more isolated areas than the other woodpeckers. No significant regional impacts to these species are expected, as there is adequate habitat elsewhere in the vicinity.

Several species of birds associated with old field habitats are also likely to decline following development. The common bobwhite and eastern meadowlark are generally intolerant of human development and activity and are unlikely to utilize the site following development. The American woodcock is also less tolerant of development and would likely abandon the area if present. The red-winged blackbird prefers areas near water and is generally not expected to utilize the interior of the site but is expected to utilize the bluff habitat. Development is not expected to impact this species as they are relatively tolerant of human disturbance and activity. The bobolink is not generally expected to utilize the site therefore no impacts are expected. If present, the ring-necked pheasant would be expected to abandon the developed portions of the site as they prefer dense cover and generally avoid humans. The killdeer and horned lark would be expected to utilize the beach portion of the site, although would likely abandon the area as nesting habitat due to an increase in human activity. Similar habitat is available in the immediate vicinity. Despite these local impacts, regional impacts are cumulative, although minimal due to the marginal suitability of the existing habitats on site and the availability of habitat elsewhere in the vicinity.

Several species of sparrows would also be expected to abandon the site following development, as they are less tolerant of human development and interaction. These include the grasshopper sparrow, a special concern species, Savannah sparrow, and field sparrow. The chipping sparrow is expected to utilize the site and surrounding areas and would not generally be expected to be

impacted following development as they are commonly found in suburban yards, gardens and parks. Local impacts on these species may be significant although no regional impacts are expected.

Both the yellow-billed cuckoo and black-billed cuckoo are also vulnerable to development, and, if present, would be expected to abandon the site following construction. The black-billed cuckoo tends to avoid human activity, and the yellow-billed prefers edges, but also tends to avoid heavily urbanized areas.

Other species of birds which prefer a mix of woodland and field habitat include owls and raptors. These species generally roost or nest in forested areas, hunting for rodents and other prey in adjacent open areas. The red-tailed hawk and American kestrel are the most likely species to be present. Both are fairly tolerant of human activity and would likely continue to utilize the site. The northern harrier, a threatened species, avoids humans and would likely abandon the site, if present. The osprey, also a threatened species, may continue to utilize the habitat along the bluff and is not generally expected within the areas of disturbance. The broad winged hawk, sharp-shinned hawk and Cooper's hawk (a special concern species) are listed as not likely to utilize the area, therefore no significant impacts are expected. However, any raptors nesting on site would be expected to be displaced, with the exception of the American kestrel, but most of these species are not expected to nest on site under current conditions. As long as suitable nest sites remain in nearby areas, impacts to these species should not be significant.

The eastern screech owl, great-horned owl, short-eared owl and the barn owl are listed as likely being present. The eastern screech owl and barn owl are relatively tolerant of development and human activity, and both would be expected to continue to nest on site, if present. The great horned owl would be expected to be displaced following development although is expected to nest in adjacent wooded parcels. The short eared owl is expected to utilize the beach habitat on site, although would be expected to abandon the site for nesting habitat due to the increase in human activity along the beach.

The site is adjacent to Huntington ~~Harbor~~, which is considered an important waterfowl wintering area as well as providing breeding habitat for several species of waterfowl, shorebirds, gulls and terns. The majority of these species are directly correlated with the aquatic and beach habitats found on and in the vicinity of the subject site. The proposed subdivision of land will not cause habitat changes to the beach and/or bluff areas found on site and significant impacts are generally not expected.

Several mallards and Canada geese were observed on site, with several additional waterfowl species expected. Waterfowl is generally expected to only utilize the beach and aquatic habitats on and in the vicinity of the subject site, and are generally not expected to breed on site as there is suitable habitat elsewhere in the vicinity. This habitat will remain in its existing condition and no significant impacts are expected.

Shorebirds and wading birds, such as egrets, herons, rails, sandpipers, yellowlegs, sandpiper, piping plovers, etc. likely feed on the benethic invertebrates and aquatic species found on the

beach on the site and in the vicinity. No nests were observed on site, and the site represents only a small quantity of the beach and aquatic habitats in the area. If present, species nesting along the beach would be expected to abandon the area, although there is suitable habitat in the vicinity.

Gulls and terns also utilize the Harbor for feeding, although none are generally expected to breed on site. Most prefer to nest exclusively on islands and many in large breeding colonies. As these species many occasionally utilize the beach and bluff areas on site, the are not expected to be affected by development.

Mammals

The mammalian fauna found on the site will also be somewhat impacted by the proposed clearing and resulting habitat loss. As with the avian species, intolerant species are expected to relocate to other areas, and local populations are expected to reach a slightly lower equilibrium population density.

The short-tailed shrew is commonly found in open woodlands and field habitats, but can live in a variety of habitats and will use several different food sources. Although limited numbers will probably utilize the landscaped areas, the number of individuals are likely to decrease at the site **(Godin, 1983).** The masked shrew spends most of its time underground in tunnels and runways **(Godin, 1983).** It also likes to burrow beneath leaf litter, fallen branches, logs and stumps. It is present in most habitats, but prefers mixed deciduous woods and red maple swamps **(Connor, 1971).** It is likely that local populations of these two shrews will be minimally impacted, but regional population change should not be significant.

The eastern mole is commonly found in woodlands and field habitats with sandy or light loamy soils. They are also common in lawns and landscaped areas when their preferred habitat is destroyed or not available **(Godin, 1983).** The species would most likely utilize the landscaped, revegetated and buffer areas, however local impacts are expected. The meadow vole and pine vole both tunnel underground and populations are likely to remain stable following development.

The white-footed mouse prefers forest edge habitat and does not adjust well to development. Unlike other small mammals, it does not usually move into nearby residential areas when pushed out of its preferred habitat **(Godin, 1983).** The population within the proposed development area will be directly impacted, but suitable habitat will remain in the buffer areas and the adjacent vacant forested land. Thus, local declines are expected, but regional populations should remain stable. The house mouse and Norway rat are introduced pests found in or near humans in field habitats, with the Norway rat also found in urban settings near moist areas. They will eat almost anything and usually cause problems for homeowners **(Godin, 1983).** Populations may increase slightly subsequent to development.

The eastern gray squirrel prefers hardwood forests with large, nut-producing trees. Squirrels usually adjust quite easily to urban areas where larger trees remain for feeding and nesting, and are expected to use the landscaped areas and remaining buffers. Relocated squirrels have been known to cause extensive damage to houses by gnawing holes in roofs and eaves to gain access

to shelter. Maintaining the buffer areas will help to reduce the impacts to this species, and local populations will not be significantly impacted. The southern flying squirrel is less tolerant of human development although would be expected to utilize the remaining buffer areas and adjacent forested habitat. The eastern chipmunk prefers forest edge habitat with thick understory vegetation. They have a small home range of about 1/3 acre. Chipmunks feed on nuts, seeds, fruits, vegetables, and some small insects and animals. Edge habitat exists on and near the site presently, and as long as small sections of habitat are left for these mammals, chipmunks can adjust fairly well to fragmentation of the natural areas **(Connor, 1971)**, and populations are likely to remain stable.

Several bats were listed as potentially present, including the big brown bat, little brown myotis, Keen's bat, red bat and eastern pipistrelle, which breed on Long Island and the silver-haired bat and hoary bat, which are present during migrations. Due to the absence of caves on Long Island, these species generally roost in colonies in the attics of buildings, although some species will occasionally roost in trees **(Connor, 1971).** Development of the site may have a significant impact these species, although similar habitat is available in the area.

The eastern cottontail seems to do well in both suburban and natural habitat **(Connor, 1971)**, which may be due in part to its variable home range, which varies from 1/2 acre up to 40 acres depending on conditions. It also has a large number of food sources that are available in almost any setting **(Godin, 1983).** If present, it is likely that cottontails will remain on site along the buffer and shrub areas, but local populations may decrease slightly.

Development of the existing forest habitat will also have slight impacts on raccoon and opossum populations. Both species prefer wooded areas with brush and hollow logs to den in. The opossum has a home range of about 1/2 mile **(Godin, 1983).** The raccoon has a variable home range of about one to two miles **(Burt and Grossenheider, 1976).** These species are some of the most common nuisance animals to homeowners. If all of the natural habitat is removed, these species may invade under buildings, attics and chimneys in search of places to den. Suitable habitat will remain on site and in the surrounding areas. Raccoon and opossum also forage for food in neighborhood garbage cans. Neither is social, and the two species are often involved in fights with family pets **(NYS DEC Wildlife Hotline, 1988).** Clearing of portions of the site may push some individuals into the surrounding natural area, but no significant regional impact is expected given their tolerance of humans and the remaining open space.

As is suggested by the discussion contained in the ecological setting section, the red fox may inhabit suburban areas, "particularly parks, golf courses, cemeteries and large gardens" **(Chapman and Feldhamer, 1982).** According to Ben Tullar, a biologist with the New York State Department of Environmental Conservation (NYSDEC) in Delmar, all of the requirements of red foxes can be met in suburban areas. He indicates that development does not impact red fox populations, provided that large open areas with edge habitat for hunting remain. Development of the site will reduce the available habitat slightly, however, if present, foxes will continue to use the surrounding area.

Amphibians and Reptiles

The incidence of reptile and amphibians on the site is expected to be low in both density and diversity. However, species are likely to be abundant in the wetland to the north. Although most of the herptile species which are found in dry woodlands adjust well to suburban areas, they are often less mobile than avian and mammal species, and may suffer direct elimination during construction. Any individuals that are destroyed are likely to be replaced from populations in natural areas remaining in the vicinity of the site. Species found primarily in wetland habitats are not likely to be impacted by the proposed project, as they are not expected on site.

Terrestrial amphibians which are expected be present include only the toads. The eastern spadefoot toad and the Fowler's toad are also found in dry forested areas with sandy or loose soils **(Wright, 1949).** These species would be expected to utilize the landscaped areas after development, however, as the area to be cleared represents only a small portion of the available habitat in the vicinity, this impact should not be significant. These species are aquatic breeders, but travel long distances from the breeding site during the year.

Frogs and salamanders are not likely to be abundant due to the absence of standing water, although may occasionally utilize the site. Suitable habitat will remain in the buffer areas for frog species such as the wood frog, southern leopard frog, and spring peeper. In addition, the red-backed salamander, marbled and spotted salamander are generally expected to utilize the wetland habitat to the north, although may occasionally utilize the site and surrounding areas.

Several species of reptiles were identified as potentially present on site. The eastern garter snake, eastern hognose snake, eastern milk snake, worm snake, brown and the northern ringneck may be present **(Wright, 1957).** Of these species, the eastern garter snake and brown snake are the most tolerant of urbanization, and would be expected in the landscaped and revegetated areas; however, even these species would be expected to suffer temporary impacts due to direct loss during construction. Populations will partially recover after completion of the project, but local impacts to snake species would be expected.

The only terrestrial turtle species possibly on site is the eastern box turtle. It is essentially a terrestrial species and requires very little water to ensure its survival **(Obst, undated).** Like the snakes, this species is likely to suffer some direct losses during construction, and local impacts are expected. Regional impacts should be minimal, as habitat will remain in the surrounding area.

Rare Species/ Habitat Potential

The piping plover and least tern are the only wildlife species potentially found on site which are listed as endangered species. Threatened species include the osprey, northern harrier, and common tern. These species are associated with are the beach and aquatic habitats found on site, which will remain in the natural state, therefore any direct impacts to these species are not expected. Indirect impacts are mostly concerned with the increase in human activity following development, which would likely impact any of these species nesting on site. Significant impacts are not expected, however, as there is suitable habitat elsewhere in the vicinity.

Several species of special concern exist on the project site. These include the eastern hognose snake, worm snake, spotted salamander, short-eared owl, common nighthawk, and the barn owl. Although there is documented concern about their welfare in New York State, these species receive no additional legal protection under Environmental Conservation Law Section 11-0535. Discussions above indicate the anticipated change in habitat needs and potential impacts to these species.

This DEIS gives a detailed representation of the wildlife species that are either expected to utilize the site or those that were directly observed. The habitat requirements of each species are discussed, in addition to the expected impacts based on individual habitat requirements and species adaptability. It should be noted that several species of birds and wildlife would be expected to benefit as a result of the proposed project, however several species are not tolerant to development, and/or require habitats for breeding that would no longer found on site as a result of development. This document recognizes that development of the proposed project would displace forest interior species and those unable to adapt to human influence. This DEIS further acknowledges that individuals of reptile and/or amphibian populations may be directly "destroyed" as a result of construction operations.

By definition, according to the New York State legal status, the definition of a threatened species is "any native species likely to become endangered species within the foreseeable future in New York" and/or "any species listed as threatened by the U.S Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11, and not listed as endangered in New York." This definition, in addition to the New York State definition of an "endangered" species, is documented in the DEIS to assist in public awareness of the legal categorization placed on these particular species mentioned in the DEIS as "expected to utilize the site given the habitats present". No threatened or endangered species were observed utilizing or nesting on site.

Three threatened species, including the osprey, northern harrier and common tern, are listed in this DEIS as *"expected to be utilize the site given the habitats present"*. These species are associated with the beach/bluff habitat found on site, which will remain in its natural state, along with a 125-foot setback area. Under proposed conditions, retention of the beach/bluff habitat would not impact threatened species. In summary, direct impacts to these species are not expected; although indirectly, the increase in human activity following development would be expected to reduce populations of certain unprotected species.

This DEIS also recognized that the site contains potential habitat for two endangered species, the least tern and the piping plover, associated with the bluff. As these species occur in habitats that are found on and/or in the vicinity of the subject property, these species are acknowledged as *"expected to utilize the site give the habitats present."* The site was inspected on several occasions during the breeding season and no individuals or nests were observed. The appropriate nesting habitat for these species found on site is limited and represents only a small quantity of the available nesting habitat in the area. This area will not be altered by the project.

3.4 Transportation

3.4.1 Trip Generation

Based on trip generation rates (as specified in the book "Trip Generation", published by the Institute of Transportation Engineers) for the type of land use proposed for the site, it is anticipated that a total of 8 vehicle trips will be generated by the project in the AM peak hour (vph), and 10 vph in the PM peak hour.

In regard to the concern regarding pedestrian and schoolchild safety, particularly during the construction period, construction vehicles entering and exiting the site would have to respect the legality of a bus stop at the corner of North Creek Road and Eatons Neck Road, as would any professional truck driver and/or licensed motorist. If the request is to improve the visibility of the bus stop location, the Town might authorize an advance warning sign "School Bus Stop Ahead" W6-4. The failure to obey traffic laws is a traffic enforcement issue.

The existing driveway off North Creek Road will provide a storage area for construction vehicles. The first stage of construction will involve clearing of the site; this operation will provide for on-site storage of vehicles and supplies. At no time will the residential access on North Creek Road be impeded or blocked by the construction vehicles.

3.4.2 Roadway Improvements

The roadway within the site will be built to Town standards and dedicated to the Town. North Creek Road will be improved to Town standards from the point where this roadway enters the southerly property line to approximately 400 feet north of that point. The entire 50-foot easement around this roadway will be offered for dedication to the Town subject to the existing ROW.

The developed portion of North Creek Road will be equipped with a drainage system, consisting of subsurface leaching pools and catch basins.

It is anticipated that the "T" intersection at the site entrance will be controlled by a "Stop" sign.

The site design is such that 10 homes access the internal road, which in turn accesses North Creek Road. The overall access to this new development is no different than the nature of the access to this entire community as it now exists.

3.4.3 Sight Distance

The proposed project will improve the existing site access point onto North Creek Road; no other vehicle accesses are planned. It is anticipated that, while grading may be performed at this intersection as part of the roadway improvements, the existing sight distances at this point will

not be reduced and may be increased by clearing of vegetation for the widened roadway. As no changes to the North Creek Road/Eatons Neck Road intersection are planned, no changes to the existing sight distances at this point are expected.

In regard to the issue of adequate sight distance at the Eatons Neck Road/North Creek Road intersection, the sight distance to the west along Eatons Neck Road is 159 feet. This is an adequate sight distance for a design speed of up to 25 MPH. As the existing speed limit at this point is 30 MPH, installation of a W2-2 "Intersection Ahead" sign, or a reduced speed limit of 25 MPH in this portion of the roadway could eliminate this condition. An alternative solution would be for the Town to increase the amount of clearing at this corner, if such clearing can be achieved in the available right of way. The sight distances to the east are in excess of what is required to meet minimum standards. The use of a curved mirror is a helpful suggestion that the developer could implement nonetheless.

3.5 Land Use, Zoning and Land Use Plans

3.5.1 Land Use

The residential land use type associated with the project is the same as exists adjacent and in the vicinity. As discussed in **Section 2.5.1**, residential use is the dominant land use type in Eatons Neck. However, it should be noted that the proposed development is lower in density than the majority of surrounding lands. Therefore and similar to the previously-approved subdivision, the project will not impact the existing land use pattern in the vicinity.

As discussed in **Section 1.1.2,** one of the reasons the Huntington Town Board rezoned the site to R-80 was provide future development consistent with the pattern of land use in the vicinity. However, analysis of the Town Comprehensive Plan and the Findings Statement for Old Orchard Woods (prepared by the Town Planning Board during the SEQRA process) clearly indicate that the 22 lot yield was in character with the pattern of land use, and furthermore, that more intensive development exists within 500 feet of the site.

3.5.2 Zoning

As the proposed project does not require a change in its R-80 zoning classification, Special Use Permit or Special Exception Approval, no impact to the zoning pattern of the site or vicinity is anticipated. Similar to the previously-approved subdivision, the project has been designed in conformance with its current zoning classification, and its yield has been determined in conformance with the Town Steep Slope Ordinance.

The discussion in **Section 1.1.2** indicates that the Town Board, in its justification of the rezoning to R-80, determined that R-80 zoning would provide future development consistent with the zoning pattern in the vicinity. However, analysis of the Town Comprehensive Plan, Town Zoning Maps and the Findings Statement for Old Orchard Woods (prepared by the Town

Planning Board during the SEQRA process) clearly indicate that the then-extant R-20 zoning was in character with the zoning pattern, and furthermore, that zoning categories representative of more intensive development exist within 500 feet of the site.

3.5.3 Land Use Plans

Town Comprehensive Plan Update

The proposed project will be in conformance with the Town Comprehensive Plan Update in regard to land use type and the zoning classification associated with that land use type. In fact, both the current 10-lot subdivision and the prior 22-lot project conform to the Update, as discussed in **Section 1.1.2**. In particular, the Update did not recommend that the project site be rezoned, and, in fact, the Update discussed strengthening existing regulations (including the Town Steep Slope Ordinance) while retaining the existing zonings of affected sites. The Update also recommended that, in order to protect sensitive environmental features within a parcel, clustering should be considered in order to preserve open space. Finally, the Update specifically states that the prior R-20 zoning of the site is considered to be a "low-density" land use type, which is contrary to the Town Board's implication to the contrary, which was used by that body to justify its rezoning.

As was the case for the prior 22-lot subdivision, the recommendations of the Update will be followed by the project, as follows:

- *Direct more intensive development to less environmentally-sensitive areas and assure that sufficient infrastructure support is provided.*

  While the project site does contain some environmentally-sensitive areas, the project will avoid developing these areas, thereby minimizing the potential for impact. In addition, infrastructure support exists in the area, and will be utilized.

- *Minimize disruptions or alterations to established neighborhoods and development densities. This will help preserve property values in areas accommodating additional development.*
  The project has been designed to minimize impact to the character of the neighborhood, by its conformance to the existing land use type in the area, by its lower density than other development in the area, and by its retention of thick, densely-vegetated natural buffers along all property boundaries.

- *Design new residential developments which respect all environmental limitations.*

  The proposed project has been designed to avoid impact to that portion of the site which presents environmental limitations, specifically the bluff area.

Town Open Space Index

The proposed project will reduce the acreage of Town Open Space Index Parcel #NE-1 by approximately 43%. However, development on this parcel since 1974 has reduced the amount of developable acreage on this parcel from its original 56.4 acres. As a result, the removal of land

by the proposed project on Parcel #NE-1 may be increased beyond 43%. Nevertheless, the project will reduce, but not remove, the acreage of those features of the site which caused the property to be listed on the Index: the bluff area and associated steep slopes and the natural vegetation. Approximately 7% of the site is developed at present; the project will clear an additional 15 to 20% of the site, while retaining the remainder as natural (the entire bluff area and adjoining 125-foot buffer and vegetated buffers).

However, despite the recommendation in the Town Comprehensive Plan Update that outright purchase be considered, and the existence of a Town Open Space bond program, the Applicants have not received any offer to purchase the site.

Town Environmental Open Space and Park Improvement Advisory (EOSPA) Committee, First Round Recommendations

The proposed project does not "*...threaten the present integrity of the site by new home development...*" as stated by the EOSPA document. Rather, the plan designed by the Applicant, like the previously-approved 22-lot subdivision, specifically preserves (consonant with his right to develop privately-owned property and in conformance with all applicable zoning and land use plan restrictions) those environmental features of the site which the EOSPA document rightly indicates as having the highest value.

Specifically, the entire westerly beach/bluff area will remain undeveloped in its entirety, and will be protected by the existing Restrictive Covenants as well as provide the ability of the Town of Huntington to monitor compliance with these Covenants by virtue of a Conservation Easement given to the Town. The adjacent 125-foot setback area will be retained and protected as well. This will simultaneously preserve and protect the natural vegetation in this area, and preserve the unique and valuable scenic and aesthetic quality of the site in this direction. Additionally, significant open space retentions on the easterly side of the site will preserve the aesthetic quality in this direction. The Applicant has required, in all designs put forth, that development be located as much in the interior of the property as practicable, in consideration of the need to provide a site layout which will provide the high quality residences typical of the area. This requirement will also minimize, though not eliminate, the need to grade a portion of the steep slopes in the interior of the site, now occupied by Tulip-Oak Forest.

Furthermore and as stated above, as of the date of preparation of this DEIS, neither the Owner of the site nor the Applicant have been contacted by any Town, County or State agency in regard to the potential for purchase of the subject site.

National Estuary Program

The NEP did not provide any recommendations specific to the project site; however, the impact of the NEP on the project site is realized through the studies and plans made subsequent to the NEP, as detailed below.

Long Island Sound Study

Of the 6 problems specified in the Long Island Sound Study which merit special attention, 5 apply to the project; following are brief descriptions of how the project will comply:

(2) toxic contamination-the proposed project is residential in nature, and will not store or utilize such materials

(3) pathogen contamination- the project is not associated with the generation of pathogens, other than biological effluents associated with the typical operation of septic systems.

(4) floatable debris-the project will does not include installation of a docking facility at the base of the existing stairway to the beach. Therefore, access to and use of the beach is not anticipated to include opportunities for the residents to pollute their property with floatable debris.

(5) the impact of these water quality problems, and habitat degradation and loss, on the health of living resources-as related above, water quality problems and wildlife habitat impacts are not anticipated from the project, due to the nature and scale of the site design and buffers.

(6) land use and development resulting in habitat loss and water quality problems-the project has been planned to minimize clearing of the natural vegetation in the central portion of the site, leaving the boundaries as thick, undisturbed natural buffers. Furthermore, the project will utilize on-lot septic systems whose design will be subject to the review and approval of the SCDHS. Septic wastewater is not anticipated to reach surface waters, because of the presence of a thick of suitable soil material beneath the site.

NYS Coastal Management Program

Following are discussions indicating whether and how the proposed project will conform to the applicable policies of the Long Island Sound Coastal Management Program:

The Developed Coast

The proposed project will retain the existing vegetated, natural appearance and character of the site, thereby minimizing the potential for further reduction in these factors in comparison to development in the vicinity. As the site has no established or suspected historic resources, no such impact is anticipated.

The Natural Coast

The proposed project will avoid development within 125 feet of the established bluff line, thereby minimizing the potential for slope failure due to increased development in this area. Water quality will be retained by installation of on-site septic and stormwater recharge systems, in conformance with established SCDHS regulations. The project is anticipated to have minimal potential for impact to resources of Long Island Sound and/or Huntington Bay, as only a single walkway to the beach is provided; no docking facility is planned as part of the project (though the Restrictive Covenants will retain the mechanism whereby such an amenity could be provided). Finally, no sources of air emissions are present, and no hazardous or toxic substances would be stored or used on the site, thereby eliminating potential sources of air and/or water pollution.

The Public Coast

The proposed project does not include provision for public use of the site, nor for public access to the beach through the single walkway to the beach through an easement within the site.

The Working Coast

The proposed project is residential in nature, and does not include any provisions or features relating to commercial uses, nor do any features of the project represent restrictions upon such activity.

Coastal Non-Point Source Pollution Program

As there are no state or local Coastal Nonpoint Pollution Control Programs in place, there are no additional recommendations or regulations to which the proposed project must conform. Nevertheless, it is anticipated that the project's adherence to the existing state, county and town regulations discussed throughout **Section 2.6** will protect coastal waters from any potential nonpoint pollution originating on the project site.

NYS Coastal Erosion Hazard Areas Act

As the Town of Huntington has enacted its Local Law Number 7 to implement the provisions of the NYS Coastal Erosion Hazard Areas Act, discussion of the proposed project's conformance to this Act is presented below.

Town Coastal Erosion Management Regulations

The proposed project will require a permit from the Town Department of Buildings, as a portion of the project site lies within the 100-foot Coastal Erosion Hazard Area limit, located east of the established bluff line along the site's westerly property line. As the proposed project does not include any disturbance (e.g., grading, construction, tree clearing, etc.) within this zone, the proposed project is anticipated to be in conformance with this law.

Suffolk County Planning Commission Subdivision Guidebook

B. *SUBDIVISION ROADS*

The proposed project will construct the two roadways to Town standards, and will dedicate these roads to the Town. In addition, the project includes improvements to North Creek Road to Town standards along the site's easterly frontage. The project is not anticipated to generate a significant number or pattern of vehicle trips. However, due to the configuration of the site and the presence of the eastern Reserve Areas, a second vehicle access cannot be provided, as recommended in the Guidebook.

C. *SUBDIVISIONS THAT HAVE FRONTAGE ON THE SHORELINE OF THE COUNTY*

The proposed project will retain a significant amount of natural vegetation along all property lines, particularly along its western boundary at and along the bluff line. The proposed units will be setback a significant distance from the established bluff line, and in no case shall development occur within the established 125-foot setback limit. Preservation of a significant portion of the existing vegetation minimizes the reduction of habitat area for area wildlife, while simultaneously preserving the natural appearance and character of the site.

D. *STORMWATER*

The proposed project will include an on-site stormwater recharge system, designed and located in accordance with all applicable regulations. In this way, the potential for adverse impacts to groundwater and surface water quality, as well as flooding potential in the vicinity, will be minimized.

G. *OPEN SPACE*
Certain portions of the site to be preserved as natural areas within lots will be owned by the individual owners subject to the terms of the existing Restrictive Covenants and the proposed Conservation Easement and the remaining 3.4 acres of the site will be dedicated directly to the Town of Huntington.

K. *GENERAL*
The layout of the proposed project is the result of careful consideration of the existing natural features of the site (including topography, developed area, natural vegetation patterns and the presence of the bluffs).

NYS Open Space Conservation Plan

- The proposed project will retain surface and groundwater quality by use of an approved septic system, stormwater recharge system, and locating development outside the 125-foot buffer of the bluff line.
- The proposed project will retain the existing access to the beach for the residents of the site.
- The proposed project will retain the existing aesthetic quality of the site, not only for its residents, but for the public at large, by retaining significant buffers of natural vegetation along all property lines, particularly along the sensitive western boundary.
- The project site includes unique or rare habitat: beach/bluff, per the Long Island Sound Coastal Management Program. However, this area will be retained in its entirety. The proposed project does not include any provision for hunting, fishing or the like, as this is a residential project in a residential area. In addition, the project will retain habitat values for wildlife in the vicinity, by retention of natural vegetation.
- The proposed project does not include any provisions for commercial woodland uses, such as farming, wood products, commercial fishing and tourism.
- The proposed project does not include any provisions for educational use of the site.
- The proposed project will retain a significant amount of natural vegetation, and does not include any features which may be a source of air quality impact or emissions.

3.6 Community Services

3.6.1 Demography

The proposed project will increase the number of existing households in the Eatons Census Designated Place (CDP) by 10. By applying the average household sizes for 4 and 5-bedroom single-family homes in New York State (Center for Urban Policy Research, 1999), it is estimated that the proposal will increase the Eatons Neck population by 42. Based on the 1997 population

estimate of 1,478 for Eatons Neck, it is projected that the proposed project will increase the population of the CDP to 1,520, a 2.8 percent increase. This increase is not expected to have an appreciable impact on the demographic characteristics or the suburban setting of Eatons Neck.

The proposed development is at or below the allowable yield for the property. The development consisting of 10 single family homes will produce 13 school-aged children, distributed over a wide range of grade levels. In addition, the development will not be constructed all at one time. As a result of the gradual development and occupancy of the site, coupled with the distribution of children throughout a number of grade levels, it is expected that the project will be assimilated into the school district. As noted, the district has been involved in the project review and based on long term planning for school district needs, the district can react in a way that serves the educational needs of the community.

3.6.2 Fiscal Considerations and Tax Revenue

Similar to the previously-approved subdivision, the proposed project is anticipated to significantly increase property tax revenue generated on the site; tax revenues disbursed to the individual taxing districts will be significantly increased as well. This will have the effect of offsetting some of the additional expenses to these services due to the proposed action. **Table 3-2** reflects the projected increase in taxes based on a home selling price of $500,000 and $1.2 million.

As can be seen, a selling price of $500,000 is anticipated to increase the total taxes paid on the property by $136,308, with the total taxes paid equivalent to $178,202. A selling price of $1.2 million is projected to increase the total taxes paid on the property by $336,762, with the total anticipated yearly taxes paid equivalent to $378,656.

Tax revenue generated by residential development rarely offsets the cost to educate project generated children. Taxing districts require revenue generating uses such as commercial development and retirement housing in order to provide revenues without the associated demand for educational services. In addition, State aid plays a role in offsetting the cost to educate children in the district.

3.6.3 Educational Facilities

The proposed project is anticipated to generate approximately 6 pre school-aged children and 13 school-aged children. The Northport-East Northport School District prepared an analysis and projection of growth within the District based on the yield of residentially zoned land **(Appendix E)**. However, when that projection was prepared, the site was zoned R-20, whose 23 lots would have generated an estimated 29 school-aged children. Therefore, the 13 school-aged children expected as a result of the proposed project should have been more than accounted for in the District's analysis and projected in its growth rates.

TABLE 3-2
TAXES
Existing vs. Proposed

Jurisdiction	Tax Rate ($/$100 assessed)	Existing Taxes ($)*	Projected Taxes ($)**	Difference ($)	Projected Taxes ($)***	Difference ($)
School Dist.-Northport	78.9340	22,890.86	98,036	75,145	208,544	185,653
Library Dist.-Northport	6.5910	1,911.39	8,186	6,275	17,413	15,502
County Tax/Tax Refunds	5.9530	1,726.37	7,394	5,668	15,728	14,002
County Police District	21.3710	6,197.59	26,543	20,345	56,462	50,264
Town Park /Open Space	9.7040	2,814.16	12,052	9,238	25,638	22,824
Highway Tax	7.3760	2,139.04	9,161	7,022	19,488	17,349
Refuse District	---	371.08	371	0	371	0
Lighting Dist.-Townwide	0.8690	252.01	1,079	827	2,296	2,044
Fire Dist.-Eatons Neck	12.3830	3,591.07	15,380	11,789	32,716	29,125
TOTAL	**143.1810**	**41,893.57**	**178,202**	**136,308**	**378,656**	**336,762**

*Assuming total assessed value of $29,000, as: $24,200 land plus $4,800 improvements
**Assuming total assessed value of $124,200, as: $24,200 land plus $100,000 improvements
***Assuming total assessed value of $264,200, as: $24,200 land plus $240,000 improvements

The school taxes paid by the project are anticipated to offset a portion of the expenses required of the district to educate the students generated. However, a portion of which is expected to have already been accounted for within the School District analysis for growth.

3.6.4 Police Protection

As indicated in **Section 2.6.4**, the project site is located within SCPD Second Precinct located at 1071 Park Avenue. The proposed project will result in a permanent use of the site which will result in increased occupancy of the site and improved site security. As noted in the SCPD's response letter for the prior 22-lot project, "*The proposed construction would have an impact on the workload of the second precinct. However, the exact impact is difficult to determine because such factors as population, certain demographics, traffic patterns, police hazards, etc. impact and determine the police workload in various ways*" **(Appendix E)**. As the current proposal is for 10 lots, it is anticipated that the impacts to police services of this current plan would be less than those of the prior plan.

In general, development of the site will inevitably result in an increase in the potential for emergencies for which the SCPD will respond, because of the level of usage in the site will be increased. However, as the potential need for such responses is roughly proportional to the intensity of development, it is anticipated that the proposed project represents an incremental decrease in the potential workload of the SCPD in comparison to that for the prior, 22-lot yield. The additional taxes generated by the future residences will assist in offsetting demand for

additional service that may result from land development. A portion of increase in taxes generated by the proposed project will be earmarked to support the operations of the SCPD.

3.6.5 Fire Protection

For the prior 22-lot project, the Eatons Neck Fire Department was contacted and it was confirmed that the proposed project will receive fire protection from this district. It was expressed that the Fire District has the capacity to provide fire protection services to the proposed project from the headquarters station located at 55 Eatons Neck Road, Northport.

Fire Chief Phil Whiter responded that the fire department is prepared and equipped to respond to any fire or emergency situation and that the proposed project would not have an adverse impact to the fire departments operation, although did have the following comment **(Appendix E):**

> *One comment for consideration is that the proposed development is situated off a narrow private road. New development in this area and associated increased traffic and population will impede response to this area and would elevate to crisis in an evacuation scenario. It is strongly suggested that major improvement to North Creek Road are made contingent with approval of this development.*

In general, development of the site will inevitably result in an increase in the potential for emergencies for which the Eatons Neck Fire Department will respond, because of the level of usage in the site will be increased. However, as the potential need for such responses is roughly proportional to the intensity of development, it is anticipated that the proposed project represents an incremental decrease in the potential workload of the fire department in comparison to that for the prior, 22-lot yield.

The proposed project will improve North Creek Road to Town standards for the entire portion within the site. These improvements include, but are not limited to, a 34-foot paved width, curbs, a drainage system and signage. It is anticipated that these improvements will satisfy the Fire Department concerns expressed above.

When the proposed project is completed, it will generate additional tax revenue to the Eatons Neck Fire District. This projected revenue is expected to offset any anticipated increase in the fire district's expenditures to cover additional service needs associated with the project.

3.6.6 Solid Waste Disposal

The project site currently generates approximately 2.2 tons of solid waste per year. The proposed subdivision will increase the amount of solid waste generated on site and within the Town. It is anticipated that following development, the proposed project will generate 21.7 tons of solid waste per year. Telephone conversation with Audree Gallo from the Town Department of Solid Waste Management acknowledged that, with respect to the prior 22-lot plan, the Town has sufficient capacity to handle the additional solid waste generated by the proposed project and

that no adverse impacts are expected. As the current application is for a 10-lot subdivision, it is anticipated that the potential impacts to the Town's solid waste services would be less than those of the prior plan.

3.6.7 Utilities and Services

The proposed project is located within the service area of the SCWA for the supply of drinking water. The SCWA maintains a network of water mains in the vicinity of the proposed project and estimates that the installation of the proposed water mains to the proposed project will cost roughly $48,000.00 **(Appendix E).** Further information will be provided to the SCWA when fire and water supply demand is known.

Electrical and natural gas services are provided in the project area by LIPA, through its system engineering and maintenance arm, KeySpan Energy. The regional supervisor, Robert Parkingson, indicated that LIPA would provide service to the site in accordance with their filed tariff and schedules in effect at the time service is required. According to Lewis Cabibi of Gas Sales and Marketing, a gas line may be available to provide service to the site depending upon future expected gas loads which must be determined when exact uses and construction timing are known.

3.7 Cultural Resources

3.7.1 Visual Resources

Ten of the existing eleven buildings on the site will be removed; only the shed at the bottom of the beach stairway will be retained. While vegetation will be cleared for the project (an estimated 22 to 27% of the site), this clearing will occur within the interior of the property. Like the previously-approved 22-lot subdivision, naturally-vegetated buffers will be retained along all property lines, particularly along the sensitive western boundary, abutting the bluff. In this area, a minimum 125-foot thick buffer will remain, to provide visual and aesthetic relief, and preserve the natural character of the property.

Retention of these buffers will minimize impacts for outside observers, by reducing the visibility of the project. During the majority of the year, the depth of the buffers, combined with the thickness of the vegetation and the mix of taller trees and understory will result in a minimal opportunity to discern the buildings; it is anticipated that only during the winter (with the absence of leaves on the deciduous trees) will the residences be readily visible through the bare branches and remaining understory.

For that portion of the site along and adjacent to the bluff, the forest vegetation becomes sufficiently thin in places to allow significant views inward from and outward toward the west (and, to a lesser degree, to the northwest and southwest) across Huntington Bay.

In general, the impact of the project on the visual resources of the site will be to slightly increase the visibility of the buildings proposed, though primarily to viewers at a distance toward the west. Viewers closer to the site to the north, east and south will experience lesser degrees of impact, as the thickness and density of vegetation retained within the site in these directions is greater than for the westerly bluff area.

The proposed project involves the improvement of North Creek Road along the site's frontage up to the new site subdivision road. This segment of road and the internal subdivision road will be installed consistent with Town roadway specifications. The section of North Creek Road leading to the site's frontage was intended to be improved to Town specifications under the Hogan plat division of land. Such road improvements are typically required for all new subdivisions so that safe and adequate access to new developments is provided. There will be no parking of cars, boats or other vehicles along North Creek Road. Roads interior to the Old Orchard Woods subdivision are likewise not expected to have on-street parking since adequate lot sizes, driveways and garages will be provided for use by residents of the subdivision. The subdivision of property, in conformance with Town zoning requirements, is the contemplated use for the subject site. Installation of roads to Town specifications are a normal part of the working landscape of the Town of Huntington where a new subdivision is involved. As a result of the project's consistency with these requirements, no significant adverse impact is expected to occur with regard to road installation. Overall site aesthetics are enhanced by the preservation of conservation easements and preserve areas on the property, specifically, the western part of the property adjacent to the bluff and the eastern part of the property adjacent to North Creek Road. Substantial buffers and trees will remain on the interior of the property as well. There are no specific plans for planting of common areas, particularly the proposed 15-foot wide beach access. The project will comply with any required street tree plantings and recharge basin plantings which are necessitated by the subdivision.

3.7.2 Archaeological Resources

As presented in **Section 2.7.2**, a Stage IB CRA was undertaken as a result of the Stage IA recommendation for additional testing, to determine the presence of significant cultural resources (reflective of both prehistoric and historic era uses of the site). The results of that investigation, also presented in **Section 2.7.2**, indicate that no such resources are found on the property. Therefore, as no such resources are present on the site, no impact is anticipated.

Correspondence from the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) to NYSDEC as part of their review of the Tidal Wetlands application indicates that the project *"...will have No Impact upon cultural resources on or eligible for inclusion in the State or National Register of Historic Places."*

SECTION 4.0

MITIGATION MEASURES

4.0 MITIGATION MEASURES

4.1 Geology

- Erosion preventive measures to be taken during the construction period may include: 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 recharge basin will be used as backfill (if it displays acceptable bearing capacity and leaching characteristics) to produce acceptable slopes for construction. Applicable Town of Huntington 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 as backfill. All unacceptable material will be removed and taken to an approved landfill for disposal.

- Dust raised during grading operations may 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.

- Truck movements and construction activities will be undertaken on the site during the hours of approximately 7 AM-6 PM or as specified by the Town Code. Truck routes to and from the site will be limited to North Creek Road and Eatons Neck Road, thereby minimizing noise, dust and potential safety impacts to residential communities adjacent to the site.

- The proposed project will minimize the potential for impact to the beach and bluff, due in part to the Conservation Easement which will preserve and protect this area from development and associated impacts associated with the project. These features are within a 3.4 acre Preserve Area which is also designated as a Natural Protective Feature Area by the NYSDEC Coastal Erosion Management Program (NYSDEC, 1988). All development, excavating, grading or mining is prohibited on beach and bluffs in such an area, unless specifically allowed by subdivision 505.8(c) of the Coastal Erosion Management Regulations. To ensure that development will not impact the bluff, project activities will comply with the Local Waterfront Revitalization Program which requires that construction activities must be set back at least 100 feet landward from the top of the bluff. At the current recession rate of 1.9 feet per year, new construction will not be jeopardized for approximately 50 years unless the bluff face should stabilize. In conformance with the existing Restrictive Covenant, if the recession of the bluff should pose a threat to on-site structures, construction of bulkheading may be installed subject to the prior approval of regulating agencies. Such approval procedures may include review of plans by a qualified professional geologist and consideration of non-structural measures. Construction of these mitigation measures, if desired, will be the responsibility of the individual homeowners and/or the Town of Huntington as permitted in the Conservation Easement. However, such a feature is currently not included as part of the proposed development activities.

4.2 Water Resources

- The proposed project will consist of 10 single-family residences and therefore no toxic or hazardous chemicals are anticipated to be present or utilized on the site. Consequently, no impact to groundwater quality is anticipated from this source.

- Each residence will utilize an individual sewerage system for disposal of sanitary wastes. Nitrogen concentrations of 2.55 mg/l will result from sanitary discharges and stormwater runoff. The anticipated concentration is less than the NYSDEC drinking water standard of 10 mg/l and therefore, the proposed project is not expected to result in significant adverse effects to groundwater quality with regard to nitrogen loading.

- The expected wastewater flow from individual sewerage systems for the entire project will be approximately 3,000 gallons per day (gpd) resulting in 123.92 gpd per acre. This conforms to Article 6 of the Suffolk County Sanitary Code, which allows 600 gpd per acre or a total of 14,526 gpd for the entire site. The proposed project will generate 79% less sanitary wastewater than allowed by regulations of the SCDHS.

- SONIR computer model results for the proposed project (**Appendix C-3**) indicate that a total of 17.38 million gallons per year (MG/yr) of water will be recharged on the site. Of this anticipated recharge volume, stormwater will account for 85% ,with wastewater contributing 13.8% and irrigation yielding 1.1%. 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 recharge basin.

- The project site will utilize public water, to be supplied by the SCWA via an existing main beneath North Creek Road. The potable water requirement of the project, 3,000 gpd, is not anticipated to impact the ability of the SCWA to serve the public in the vicinity.

- The amount of overland runoff will be reduced through the installation of roadside catch basins that will redistribute runoff to the on-site recharge basin.

- The proposed actions at the project site are not expected to have a significant impact on surface waters resulting from subsurface sanitary flows that may discharge to the surface. The soils underlying the project site consist of highly permeable Carver, Plymouth and Riverhead sands with discontinuous clay layers throughout resulting in isolated perched water zones. These clay layers influence the horizontal component of groundwater movement and may result in the discharge of waters as seeps along clay lenses observed on the bluff face. However, preferential horizontal flow along the surface of the clay may be interrupted due to the clay's discontinuous nature producing gaps within the clay layer. This will result in the resumption of flow along the preferential vertical pathway due to gravity and the highly permeable nature of the surrounding sands. This will reduce seepage along the bluff face allowing for groundwater recharge at the water table.

  In addition, analysis of the data generated from the geologic borings collected on-site and observation of site topography indicate that the discontinuous clay layer may slope away from the bluff face. This will result in a horizontal flow component moving in an easterly direction away from the bluff reducing the potential for seepage of sanitary discharges along the bluff face. In the unlikely event that sanitary effluent were to discharge from the surface of the clay layer outcropping along the bluff, impacts related to nitrogen concentrations in the waste water would be negated by the following:

  1) each individual on-site sanitary waste system is designed to conform with the SCDHS regulations and design requirements in order to ensure the protection of groundwater quality;
  2) the project will generate 79% less wastewater than allowed under SCDHS regulations;

3) nitrogen gas would be removed by each individual septic system;
4) bacteria generated by septic waste will be removed by subsurface soils;
5) removal of nitrogen through natural denitrification processes.

4.3 Ecological Resources

- Minimize disturbance to the maximum extent practicable, including delineating tree clearing limits at the site prior to construction in order to avoid inadvertent clearing.

- Removal of between 5.34 and 6.60 acres of tulip-oak forest will be mitigated by planting of up to 1.26 acres of native species typical of tulip-oak forest.

- Native and near native plant species which provide food and shelter to wildlife will be utilized in the landscaped areas of the recharge basin where possible. This may encourage ongoing use of the site by avian species which would otherwise abandon the site. Species which will be utilized include the following: serviceberry, hackberry, dogwood, persimmon, American holly, red cedar, crabapple, mulberry, pin cherry, chokecherry, sassafras, mountain ash, devil's walking-stick, Russian olive, autumn olive, huckleberry, inkberry, juniper, honeysuckle, rye grass, redtop, and fescue.

- Nesting boxes will be installed by the Applicant and maintained by the HOA along the edge of existing vegetation on land owned by the HOA, to encourage use of the site by avian species and help mitigate loss of natural nest sites through clearing. Some of the native species which commonly utilize nest boxes include the eastern bluebird, house wren, tree swallow, and purple martin. The non-native starling and house sparrow also utilize nest boxes, sometimes displacing native birds. The boxes will be monitored to discourage use by these two species. The New York Audubon Society's Nest Box Network provides specifications for constructing and locating boxes, as well as information on follow-up monitoring.

- Retaining walls may be used to minimize the amount of natural vegetation removed for clearing and grading. These may be located in the side and rear yards.

4.4 Transportation

- As no impacts to existing sight distances at the site entrance/North Creek Road intersection, no mitigation is required.

- As the proposed project will not generate a number of vehicle trips sufficient to significantly impact the operation of area roadways or intersections, no mitigation is required.

- At the North Creek Road/Eatons Neck Road intersection, the existing conforming sight distance to the northeast and the southwest will not be reduced by the project; hence, no mitigation is required. Toward the southwest however, the existing sight distance (140 feet) is close to the AASHTO standard of 125 feet. While the proposed project will not impact this condition, it is recommended that the appropriate agency undertake limited vegetation clearing in the Eatons Neck Road ROW to provide an improved sight distance for drivers at this point.

- Improvements to North Creek Road between the southeastern corner of the site and Eatons Neck Road will be provided by the Town of Huntington, as these were bonded at the time of the original Hogan Plat Subdivision.

4.5 Land Use, Zoning and Plans

- As was the case for the prior 22-lot subdivision, no impact to the existing land use of the site or on the pattern of land use in the vicinity is anticipated; hence, no mitigation is planned.

- As was the case for the prior 22-lot subdivision, no impact to the existing zoning of the site or on the pattern of zoning in the vicinity is anticipated; hence, no mitigation is planned.

- Similar to the prior 22-lot subdivision, the reduction in the acreage of Open Space Index Parcel #NE-1 will be mitigated by preservation and protection of the 1.96-acre western portion of the site, as well as provision of an additional 15.24 acres in the interior, which will include steep slope areas and buffering vegetation in rear yards and between lots. These are the features which give the site its significance which caused it to be listed on the Town's Index.

- As was the case for the prior 22-lot subdivision, the project plan was and will be developed in such a way as to preserve and protect those environmental features which caused the site to be included on the EOSPA list. Specifically, a Conservation Easement will be granted for the entire beach/bluff area. The 125-foot setback along the bluff easement will increase preserved area

- Similar to the prior 22-lot subdivision, the recommendations of the Town Comprehensive Plan Update with respect to avoidance of environmentally-sensitive areas, minimizing disturbance to established residential areas, and designing projects which respect development restrictions will be followed.

- As was the case for the prior 22-lot subdivision, the proposed project will conform to all applicable recommendations of the following federal, state and town plans, studies and regulations pertaining to Long Island Sound and its associated coastal areas:

    1) National Estuary Program
    2) Long Island Sound Study
    3) NYS Coastal Management Program
    4) Coastal Non-Point Source Pollution Program
    5) NYS Coastal Erosion Hazard Areas Act
    6) Town Coastal Erosion Management Regulations

- As was the case for the prior 22-lot subdivision, the proposed project conforms to all of the applicable regulations of the Suffolk County Planning Commission Subdivision Guidebook; hence, no mitigation is planned.

- As was the case for the prior 22-lot subdivision, the proposed project conforms to all of the applicable goals and guiding principles of the NYS Open Space Conservation Plan; hence, no mitigation is planned.

4.6 Community Services

- Security and fire alarm systems and sprinkler systems will be installed in the proposed buildings. Proper lighting of the site will be employed to discourage loitering and other illegal activity.

- The additional taxes generated by the proposed project will assist in offsetting demand for potential increased services which may result from the project. Based on current tax rates, it is estimated that the proposed project will generate an additional $136,308 to $336,762 in annual tax revenue to community services, depending on sale price of the homes.

- Energy efficient design will be utilized where possible, and buildings will be consistent with code requirements.

- There are no proposed impacts in relation to demography, therefore no mitigation is required. However, the slight increase in population due to the proposed project is expected to cause a beneficial impact through expenditures into the community.

4.7 Cultural Resources

- As no archaeological resources are present on the site, no impacts to such resources will occur, and no mitigation is required.

- Mitigation of potential visual resource impacts will be achieved by minimizing the need for erosion-protective structures on the base of the bluff, as these would be particularly visible to observers to the west, and by retention of natural vegetation on the western portion of the site, in conformance with the existing Restrictive Covenants. Implementation of the Conservation Easement will minimize the potential for impact to the bluff, which could otherwise occur via an increase in the erosion rate, and give the Town of Huntington adequate monitoring ability.

- Retention of naturally-vegetated buffers along all four boundaries will serve to mask the developed portion of the site from outside viewers, as well as to eliminate views of the adjacent developments (except toward the west) from residents of the site.

SECTION 5.0

ADVERSE IMPACTS THAT CANNOT BE AVOIDED

5.0 ADVERSE IMPACTS THAT CANNOT BE AVOIDED

The site has been characterized, and the potential impacts to the existing site have been assessed. Some impacts may still exist for which no mitigation is available. The impacts themselves have been quantitatively and qualitatively discussed in previous sections of this document. The impacts of the proposed project will be minimized where possible, but this section acknowledges those impacts which may still occur:

- Temporary increases in the potential for fugitive dust and construction traffic and noise during the construction period.
- Grading and filling operations will occur on the central portion of the site, which will permanently alter the natural topography in this area.
- Increase in the concentration of nitrogen in recharge as compared to the current site nitrogen load, from 0.29 mg/l to 2.55 mg/l.
- Removal of approximately one-fifth of the vegetation within each proposed lot. Although the existing vegetation will remain around the periphery and as buffers between individual lots, it is expected that several of the large-diameter trees will be removed as a result of the proposed project.
- Displacement and/or loss of forest interior species and those species unable to adapt to human influences.
- Increase in vehicle trips generated on the site and on area roadways, although impacts are expected to be minimal.
- Increase in the number of school-aged children generated on the site.

SECTION 6.0

ALTERNATIVES

6.0 ALTERNATIVES

The State Environmental Quality Review Act requires the investigation of alternatives to a proposed project in order to determine the merits of the project as compared to other possible uses, site locations and technologies. The discussion and analysis of each alternative should be conducted at a level of detail sufficient to allow for the comparison of various impact categories by the decision-making agencies. For this document, the alternatives include the following:

1. The site remains in its existing use and condition.
2. The site is developed as proposed in the original DEIS, with 22 detached lots in a modified cluster. This plan is included as a basis of comparison ***only and for no other purpose***. It is offered as a baseline comparison given that this plan had been previously accepted by the Planning Board within the SEQRA process.
3. The site is developed with 10 detached lots in a modified cluster, in a layout revised from that of the proposed project.

Plans for Alternatives 2 and 3 are attached to this document. **Table 6-1** presents a qualitative listing of relevant site and development characteristics for each of the above alternatives, along with those of the proposed project, to enable comparisons.

6.1 Alternative 1: No Action

The subject site is currently in private ownership and is zoned for residential use. The property owner pays taxes on the property as a privately owned real estate holding. The proposed project is consistent with zoning and allows the property owner to realize an economic return on the property. In addition, the EIS process provides a forum for consideration of project impacts, mitigation and alternatives with a final decision based upon the weighing of environmental, social and economic factors.

This alternative would preserve, by use of a Conservation Easement, the following:

- the 3.4-acre western Reserve Area

If the site is not developed and remains in its existing condition and use, no residences would be built. The existing Conservation Easement to preserve and protect the beach/bluff will be implemented, but no additional dedications would be made. The site would remain underutilized, and could possibly be redeveloped in the future in accordance with zoning. As the site has been zoned by the Town for residential development, it is assumed that the Town anticipates that the site could and would be developed in this manner at some time, particularly in consideration of the attractiveness of this site for such a use.

If left undisturbed, the site will generate little traffic, solid waste or wastewater; it would use a minimal amount of potable water, and would not generate employees or new residents. There

would continue to be little enrollment impact to the Northport-East Northport School District, as no new schoolchildren would be generated. A total of 13.76 MG of recharge would be generated on the site annually, at a nitrogen concentration of 0.29 mg/l.

TABLE 6-1
COMPARISON OF ALTERLATIVES

Parameter	Proposed Action	Alt. 1	Alt. 2	Alt. 3
Coverages:	---	---	---	---
Building (ac)	0.41	0.17	0.91	0.41
Impervious/Paved (ac)	2.09	0.23	1.76	2.05
Unpaved/Pervious (ac)	0	0.41	0.21	0
Landscaped (ac)	3.00	0.86	7.78	3.01
Recharge Basin (ac)	1.51	0	1.66	1.66
Beach/Bluffs (ac)	1.96	1.96	1.96	1.96
Tulip-Oak Forest (ac)	15.24	20.58	9.93	15.12
Water Resources:	---	---	---	---
Water/Wastewater (gpd)	3,000	300	6,600	3,000
Recharge Volume (MG/yr)	17.38	13.76	18.33	17.35
Nitrogen Conc (mg/l)	2.55	0.29	4.57	2.55
Trip Generation:	---	---	---	---
AM Peak Hour (tph)	8	1	17	8
PM Peak Hour (tph)	10	1	22	10
Miscellaneous:	---	---	---	---
Preserved /Dedicated Areas (ac)	5.34	3.4	7.64	9.87
Net Natural Vgtn. Removed (ac)	5.34-6.61	N/A	10.65-11.91	5.46-6.72
Solid Waste (lbs/day)	119	12	266	119
Residents (capita)	42	5	94	42
School-age Children (5-17 yrs)	13	2	27	13
Pre School-age Children (<5 yrs)	6	1	11	6

If the project site were to remain undisturbed and in its present condition and use, the goals of the Applicant and Owner would not be realized. Finally, roadway improvements to a portion of North Creek Road would not be completed.

In comparison to the proposed project, this alternative would not satisfy the goals of the Town, in that permanent preservation of natural open space would not result.

6.2 Alternative 2: Previously-Approved 22-Lot Subdivision

This alternative assumes that the project site is developed with the same layout and 22-lot yield as was proposed in October, 1998; this development scenario was the basis upon which the prior

DEIS (accepted by the Lead Agency on October 7, 1999) was written. Furthermore, after detailed review, public hearings and preparation of a Statement of Findings, it was determined that the action *would not* have a significant adverse impact on the environment, and Preliminary Subdivision approval was granted by the Town Planning Board on July 12, 2000 (see **Appendices A-15 and A-16**). The **Preliminary Map** (in folder at rear) depicts this alternative. This alternative is being presented for comparison purposes only.

If implemented, this alternative would have preserved, by use of a Conservation Easement, the 3.4-acre western Reserve Area, as well as the following:

- the 0.95-acre eastern Reserve Area adjacent to the Recharge Basin
- the 0.92-acre eastern Reserve Area
- the 1.66-acre recharge basin
- the 0.71-acre section of North Creek Road ROW north of Apple Place

As result of these actions, approximately 5.9 acres of open space within the site would have been permanently preserved and protected, with monitoring rights remaining with the Town. The development of the property in this configuration would have increased the revenues generated to taxing jurisdictions, though it will result in corresponding increases in demand for services, particularly in regard to school enrollments.

Two Reserve Areas totaling 1.87 acres were placed along the westerly side of North Creek Road, along the eastern property line and on either side of the access road. A 72,411 SF/1.66 acre recharge basin, (identical to alternative 3), would have been found on the south side of the access road immediately adjacent to the southerly Reserve Area; a total of 22 lots are arrayed along either side of the two roadways. Access to the beach will be provided via a 15-foot wide accessway between lots 8 and 9.

It is estimated that the twenty-two proposed residences would have generated approximately 6,600 gpd of sewage flow. This is 7,926 gpd less than allowed by the SCDHS under its current regulations, therefore, conventional on-site sanitary systems may be used for this development.

It is anticipated that the construction period (clearing, grading, construction and finishing) would have taken approximately 14 to 18 months.

As can be seen in **Table 6-1**, the values for Building, Impervious/Paved and Landscaped areas would have been greater than those for the proposed project. This is due primarily to the greater number of residences in this alternative, which results in greater values for these coverages. Coverages on waterfront lots in this alternative are generally similar to coverages of other waterfront lots in the vicinity, while (as related in **Section 1.1.2**), coverages on non-waterfront lots in this alternative are less than those of other non-waterfront lots. This difference is due to the smaller lot sizes of properties located away from the bluff in the vicinity.

Similar increases in the values for water consumption, population, trip generation, and solid waste generation are anticipated. A total of 18.33 MG of recharge would be generated on the

site annually, at a nitrogen concentration of 4.57 mg/l. The corresponding values for the proposed project are 17.38 MGY and 2.55 mg/l. The increased nitrate concentration is due to the greater amount of landscaped area, which causes greater use of fertilizers. Increases in the potential for use of police and fire services are expected, though less extensive improvements to North Creek Road are assumed. The houses on the westerly lots would be located substantially closer to the bluff (with and increased visibility for observers to the west, south and north).

This alternative had undergone the complete SEQRA review process (when the property was zoned R-20), and was granted Preliminary Subdivision approval by the Town Planning Board (indicating that this 22-lot yield was considered appropriate by that body). This approval was granted after extensive, detailed review of plans depicting bluff, beach and open space preservation/protection measures to be provided by the Applicant. Thus, this alternative reflected a use, a yield and a design which had been at the time established by the Town Planning Board as appropriate and acceptable for the site.

6.3 Alternative 3: Revised R-80 Layout

This alternative assumes that the property is developed in conformance with the same 10-lot yield as the proposed project, but with a layout revised to provide for a range of lot sizes. Specifically, lots will range from 69,715 SF to 138,807 SF; a total of 20.10 acres will be allocated into lots, with an average lot size of 87,548 SF. However, eight of these lots are less than 2 acres in size, and are located in the westerly part of the site, nearest the bluff; the smallest six of these lots will back onto the bluff. Therefore, because of the smaller sizes for these lots, and due to the shifting of the internal roadway somewhat easterly (compared to the proposed project), there will be a greater setback from the bluff in this alternative than for the proposed project. Similar to the proposed project, the recharge basin (1.66 acres) is located in the northeastern corner of the site, which is the lowest area of the site; the remainder of the property is allotted to the required 3.4-acre Reserve Area, 125-foot bluff setback, and internal roadway.

This alternative would preserve, by use of a Conservation Easement and/or dedication to the Town, the 3.4-acre western Reserve Area, as well as the following:

- an approximately 2.5-acre Conservation Easement in the rear of Lots 8-10
- an approximately 1.1-acre Conservation Easement in the eastern portion of Lot 1
- the 1.66-acre recharge basin
- the 0.71 acres of North Creek Road ROW north of Apple Place

The internal roadway in this alternative is located slightly southward and eastward in comparison to the location shown in the proposed project. Upon entering the site, this roadway runs westerly approximately 400 feet, at which point it curves northward before terminating in a cul de sac. Similar to the proposed project, lawn/landscaped areas within the lots are assumed to extend from the road frontage to a depth of 100 feet from the rear of the residence, or to the 125-foot bluff setback line (whichever is closer to the unit). Access to the beach will be provided via a 15-foot wide accessway on Lot 6. This area, to be a separate tax lot deeded to the HOA, will be, to

the extent practicable, located to coincide with the existing path, shed and stairway to the beach. Use of the existing location for this beach access, with replacement of these amenities with a better-designed stairway and supplemental plantings, will minimize the potential for long-term erosion of the slope in this area.

In general, the amount of impervious surfaces is slightly less than the proposed project, due to the somewhat shorter length of internal roadway. The amount of lawn is nearly identical in this alternative, due to the similar average lot size, though the amount of retained natural vegetation is slightly reduced in this alternative. The recharge basin in this alternative is somewhat larger than that of the proposed project because the smaller lot sizes in this area allow for a larger allocation for the basin, so that a reduced slope angle within the basin becomes possible, which would mitigate potential erosion here.

The amount of the site available for habitat use would be nearly the same as that of the proposed project (15.12 acres vs. 15.24 acres, respectively), though the potential for adverse impact to visual character (for outside observers) would be significantly reduced in this alternative, due to the increased setback (with associated deeper vegetated buffering) along the bluff top.

The same values for water consumption, population, trip generation, and solid waste generation are anticipated as that for the proposed action. For this alternative, values similar to those of the proposed project for total recharge generated and nitrogen concentration are expected. The same increase in the potential for use of police and fire services is expected. With respect to the North Creek Road improvements, the improvements to North Creek Road would be less, in that the entrance to Apple Place would be south of the proposed project, thus making them closer to the existing improvements. Moreover, the placement of Apple Place in this Alternative would be beneficial in that the internal roadway would be located over the existing driveway and on a less severe slope than that of the proposed action.

The above analysis indicates that impacts associated with clearing, water consumption, recharge quality and quantity, population, school enrollment, trip generation, community services, and solid waste generation would be the same as or similar to those of the proposed project. However, the analysis also indicates that this alternative would result in a significantly greater preservation of natural vegetation (over 50% more) than the proposed project, with a higher level of visual/aesthetic protection. These factors may be sufficient to justify implementing this alternative in preference to the proposed project.

SECTION 7.0

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7.0 REFERENCES

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Old Orchard Wood

I HEREBY CERTIFY THAT THE WATER SUPPLY(S) AND/OR SEWAGE DISPOSAL SYSTEM(S) FOR THIS PROJECT WERE DESIGNED BY ME OR UNDER MY DIRECTION. BASED UPON A CAREFUL AND THOROUGH STUDY OF THE SOIL, SITE AND GROUNDWATER CONDITIONS, ALL LOTS, AS PROPOSED, CONFORM TO THE SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES CONSTRUCTION STANDARDS IN EFFECT AS OF THIS DATE.

_____
VICTOR BERT, P.E. No. 49006

ALL LOTS IN THIS DEVELOPMENT COMPLY FULLY WITH THE ZONING REQUIREMENTS OF R-80 DIST. IN RESPECT TO AREA AND WIDTH EXCEPT AS MODIFIED BELOW.

WE HEREBY CERTIFY THAT THIS PLAT IS MADE FROM AN ACTUAL SURVEY COMPLETED BY US 10/10/88 AND CONCRETE MONUMENTS WILL BE SET AS SHOWN.

_____
PAUL M. RACZ P.L.S. 50164

THIS IS TO CERTIFY THAT THIS SUBDIVISION HAS BEEN APPROVED BY THE TOWN OF HUNTINGTON PLANNING BOARD AND IF NO CONCRETE MONUMENTS HAVE BEEN SET, THE SIGNING OF THIS MAP BY A DULY AUTHORIZED PERSON AS DESIGNATED BY THE TOWN OF HUNTINGTON PLANNING BOARD HEREBY CERTIFIES THAT A PERFORMANCE BOND HAS BEEN POSTED TO SECURE INSTALLATION OF SAID MONUMENTS.

_____ _____ _____
DATE OF CONDITIONAL FINAL APPROVAL | DATE OF FINAL APPROVAL | DIRECTOR OF PLANNING

NO PLOT MAY BE SUBDIVIDED OR CHANGED IN ANY MANNER AT ANY FUTURE DATE UNLESS BY SPECIAL ACTION OF THE HUNTINGTON TOWN PLANNING BOARD.

LANDS SHOWN ON THIS MAP AS ROADS, STREETS, OR HIGHWAYS OR FOR THE WIDENING THEREOF AND ALSO EASEMENTS FOR THE INSTALLATION OF SEWERS, DRAINS OR WATER MAINS, CONDUITS AND ALSO LANDS INDICATED AS TO BE DEDICATED FOR OTHER PUBLIC USE ARE HEREBY IRREVOCABLY OFFERED FOR DEDICATION TO THE MUNICIPALITY HAVING JURISDICTION THEREOF.

OWNER_____

DATE _____ TITLE _____

GRADING OF LOTS, INCLUDING SLOPES ON THIS MAP SHALL BE LIMITED TO THE EXTENT OF CLEARING AND GRADING AS SHOWN ON THE APPROVED SITE PLANS. TREES WITH A DIAMETER OF (8) EIGHT INCHES OR LARGER WHICH ARE FURTHER THAN 25 FEET FROM A BUILDING OR FURTHER THAN 15 FEET FROM A DRIVEWAY MUST BE LEFT STANDING AND PROTECTED FROM GRADE CHANGES. EACH INDIVIDUAL LOT MUST BE TEMPORARILY AND/OR PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING THE BACKFILLING OF THE FOUNDATION AND SHALL BE IN COMPLIANCE WITH THE TOWN OF HUNTINGTON EROSION AND SEDIMENT CONTROL HANDBOOK AND SECTION H-100 THRU H-100.6 OF THE TOWN OF HUNTINGTON SUBDIVISION REGULATIONS AND SITE IMPROVEMENT SPECIFICATIONS.

RELEASE OF BUILDING PERMITS FOR LOTS ON THIS MAP SHALL BE SUBJECT TO A SCHEDULE OF OPERATIONS APPROVED BY THE DIRECTOR OF ENGINEERING, BUILDING AND HOUSING, AND IN CONFORMANCE WITH THE TOWN OF HUNTINGTON SUBDIVISION REGULATIONS AND SITE IMPROVEMENT SPECIFICATIONS.

THIS PLAT IS SUBJECT TO DECLARATION OF COVENANTS OF AND RESTRICTIONS DATED ---------- AND RECORDED IN THE SUFFOLK COUNTY CLERK'S OFFICE ON ---------- IN DEED LIBER---------- PAGE----------.

COVENANTS AND RESTRICTIONS:

1 THE EXISTING 3.4-ACRE NATURAL BUFFER AREA ON LOT #'S 3-6 SHALL BE SHOWN ON THE FINAL MAP. IN THIS BUFFER AREA NO BUILDING OR STRUCTURE SHALL BE ERECTED, TREES REMOVED OR GRADING OR EXCAVATION PERFORMED. THIS SHALL NOT PRECLUDE DECLARANT FROM MAKING ORDINARY REPAIRS TO OR MAINTAINING THE EXISTING STAIRWAY OR ANY PART THEREOF LOCATED WITHIN THE AFORESAID 3.4-ACRE AREA OR ERECTING AND MAINTAINING ANY DOCKING FACILITY WHICH WOULD NOT EXTEND ABOVE THE 10-FOOT ELEVATION, NOR SHALL IT PRECLUDE DECLARANT FROM ERECTING BULKHEADS OR SIMILAR STRUCTURES OR TAKING OTHER MEASURES SPECIFICALLY DESIGNED TO PROTECT THE BLUFFS FROM EROSION, PROVIDE THE SAME COMPLY WITH ALL LAWS AND REGULATIONS OF THE STATE OF NEW YORK AND ITS DEPARTMENTS, REGULATIONS OF THE U.S. ARMY CORPS OF ENGINEERS, AND THE MARINE CONSERVATION LAW AND OTHER APPLICABLE ORDINANCES OF THE TOWN OF HUNTINGTON AND PROVIDED DECLARANT PROCURES ALL REQUIRED PERMITS.

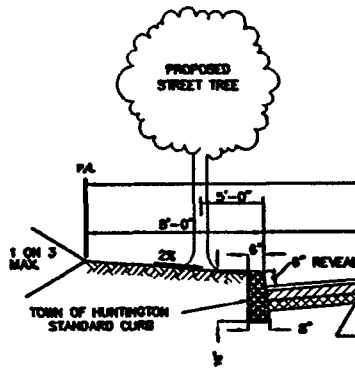
2 NO PROPOSED MAJOR NONRESIDENTIAL STRUSTURES, SUCH AS, SWIMMING POOLS, DECKS, GARAGES, PATIOS, ETC., BUT NOT INCLUDING STRUCTURES PROVIDING ACCESS TO THE BEACH IN FRONT OF THE BLUFF, SHALL BE CONSTRUCTED OR LOCATED WITHIN 50 FEET OF THE TOP OF THE BLUFF.

3 GRADING WITHIN 50 FEET OF THE TOP EDGE OF A BLUFF SHALL NOT BE PERMITTED. GRADING THAT MAY BE NECESSARY TO CONTROL OR REMEDY EROSION OR TO DIVERT STORMWATER FROM FLOWING OVER THE EDGE OF THE BLUFF MAY BE ALLOWED.

4 CLEARING AND CUTTING OF VEGETATION WITHIN 50 FEET OF THE TOP EDGE OF THE BLUFF SHALL BE LIMITED IN THE FUTURE , TO THAT NECESSARY FOR MAINTENANCE AND REMOVAL OF DISEASED, DECAYED AND DEAD MATERIAL.

5 NO SANITARY DISPOSAL FACILITY OF ANY NATURE SHALL BE CONSTRUCTED OR LOCATED WITHIN 125 FEET OF THE TOP EDGE OF ANY BLUFF.

6 NO STORMWATER RUNOFF RESULTING FROM THE DEVELOPMENT AND IMPROVEMENT OF



THE DESIGN OF WATER SUPPLY AND SEWAGE DISPOSAL FACILITIES FOR ALL LOTS IN THIS DEVELOPMENT WILL COMPLY WITH THE STANDARDS AND REQUIREMENTS OF THE SUFFOLK COUNTY DEPARTMENT OF HEALTH.

ALL LOTS IN THIS DEVELOPMENT COMPLY FULLY WITH THE ZONING REQUIREMENTS OF R-20 DIST. IN RESPECT TO AREA AND WIDTH EXCEPT AS MODIFIED BELOW

WE HEREBY CERTIFY THAT THIS PLAT IS MADE FROM AN ACTUAL SURVEY COMPLETED BY US 10/10/88 AND CONCRETE MONUMENTS WILL BE SET AS SHOWN.

PAUL M. RACZ, P.L.S.

TABLE OF MODIFICATIONS

LOT NO.	LOT AREA	LOT WIDTH AT REQUIRED SETBACK	FRONT YARD SETBACK	ESTABLISHED FRONT YARD SETBACK	SIDE YARD SETBACK	CORNER LOT SIDE YARD SETBACK (ST. SIDE)
1			40'			
2			40'			
3			40'			
4			40'			
5		66.62		101.46		
6		93.26				
7			40'			
8			40'			
9			40'			
10			40'			
11			40'			
12			40'			
13			40'			
14			40'			
15			40'			
16			40'			
17			40'			
18			40'			40'
19			40'			
20			40'			
21			40'			
22			40'			

THIS IS TO CERTIFY THAT THIS SUBDIVISION HAS BEEN APPROVED BY THE HUNTINGTON TOWN PLANNING BOARD.

DATE OF CONDITIONAL FINAL APPROVAL

DATE OF FINAL APPROVAL

DIRECTOR OF PLANNING

NO PLOT MAY BE SUBDIVIDED OR CHANGED IN ANY MANNER AT ANY FUTURE DATE UNLESS BY SPECIAL ACTION OF THE HUNTINGTON TOWN PLANNING BOARD.

LANDS SHOWN ON THIS MAP AS ROADS, STREETS, OR HIGHWAYS OR FOR THE WIDENING THEREOF AND ALSO EASEMENTS FOR THE INSTALLATION OF SEWERS, DRAINS OR WATER MAINS, CONDUITS AND ALSO LANDS INDICATED AS TO BE DEDICATED FOR OTHER PUBLIC USE ARE HEREBY IRREVOCABLY OFFERED FOR DEDICATION TO THE MUNICIPALITY HAVING JURISDICTION THEREOF.

OWNER_____

DATE _____ TITLE _____

GRADING OF LOTS, INCLUDING SLOPES ON THIS MAP SHALL BE LIMITED TO THE EXTENT OF CLEARING AND GRADING AS SHOWN ON THE APPROVED SITE PLANS. TREES WITH A DIAMETER OF (8) EIGHT INCHES OR LARGER WHICH ARE FURTHER THAN 25 FEET FROM A BUILDING OR FURTHER THAN 15 FEET FROM A DRIVEWAY MUST BE LEFT STANDING AND PROTECTED FROM GRADE CHANGES. EACH INDIVIDUAL LOT MUST BE TEMPORARILY AND/OR PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING THE BACKFILLING OF THE FOUNDATION AND SHALL BE IN COMPLIANCE WITH THE TOWN OF HUNTINGTON EROSION AND SEDIMENT CONTROL HANDBOOK AND

THE DESIGN OF WATER SUPPLY AND SEWAGE DISPOSAL FACILITIES FOR ALL LOTS IN THIS DEVELOPMENT WILL COMPLY WITH THE STANDARDS AND REQUIREMENTS OF THE SUFFOLK COUNTY DEPARTMENT OF HEALTH.

ALL LOTS IN THIS DEVELOPMENT COMPLY FULLY WITH THE ZONING REQUIREMENTS OF R-80 DIST. IN RESPECT TO AREA AND WIDTH EXCEPT AS MODIFIED BELOW

WE HEREBY CERTIFY THAT THIS PLAT IS MADE FROM AN ACTUAL SURVEY COMPLETED BY US 10/10/88 AND CONCRETE MONUMENTS WILL BE SET AS SHOWN.

PAUL M. RACZ, P.L.S.

TABLE OF MODIFICATIONS

LOT NO.	LOT AREA	LOT WIDTH AT REQUIRED SETBACK	FRONT YARD SETBACK	ESTABLISHED FRONT YARD SETBACK	SIDE YARD SETBACK	CORNER LOT SIDE YARD SETBACK
1	———	———	———	———	———	———
2	81,253	91'	———	———	———	———
3	73,393	91'	———	———	———	———
4	70,280	134'	———	———	———	———
5	69,715	140'	———	———	———	———
6	79,830	———	———	———	———	———
7	75,687	143'	———	———	———	———
8	71,383	———	———	———	———	———
9	84,182	———	———	———	———	———
10	———	———	———	———	———	———

THIS IS TO CERTIFY THAT THIS SUBDIVISION HAS BEEN APPROVED BY THE HUNTINGTON TOWN PLANNING BOARD.

DATE OF CONDITIONAL FINAL APPROVAL

DATE OF FINAL APPROVAL

DIRECTOR OF PLANNING

NO PLOT MAY BE SUBDIVIDED OR CHANGED IN ANY MANNER AT ANY FUTURE DATE UNLESS BY SPECIAL ACTION OF THE HUNTINGTON TOWN PLANNING BOARD.

LANDS SHOWN ON THIS MAP AS ROADS, STREETS, OR HIGHWAYS OR FOR THE WIDENING THEREOF AND ALSO EASEMENTS FOR THE INSTALLATION OF SEWERS, DRAINS OR WATER MAINS, CONDUITS AND ALSO LANDS INDICATED AS TO BE DEDICATED FOR OTHER PUBLIC USE ARE HEREBY IRREVOCABLY OFFERED FOR DEDICATION TO THE MUNICIPALITY HAVING JURISDICTION THEREOF.

OWNER_____

DATE _____ TITLE _____

GRADING OF LOTS, INCLUDING SLOPES ON THIS MAP SHALL BE LIMITED TO THE EXTENT OF CLEARING AND GRADING AS SHOWN ON THE APPROVED SITE PLANS. TREES WITH A DIAMETER OF (8) EIGHT INCHES OR LARGER WHICH ARE FURTHER THAN 25 FEET FROM A BUILDING OR FURTHER THAN 15 FEET FROM A DRIVEWAY MUST BE LEFT STANDING AND PROTECTED FROM GRADE CHANGES. EACH INDIVIDUAL LOT MUST BE TEMPORARILY AND/OR PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING THE BACKFILLING OF THE FOUNDATION AND SHALL BE IN COMPLIANCE WITH THE TOWN OF HUNTINGTON EROSION AND SEDIMENT CONTROL HANDBOOK AND SECTION H-100 THRU H-100.6 OF THE TOWN OF HUNTINGTON SUBDIVISION REGULATIONS AND SITE IMPROVEMENT SPECIFICATIONS.

RELEASE OF BUILDING PERMITS FOR LOTS ON THIS MAP SHALL BE SUBJECT TO A SCHEDULE OF OPERATIONS APPROVED BY THE DIRECTOR OF ENGINEERING, BUILDING AND HOUSING, AND IN CONFORMANCE WITH THE TOWN OF HUNTINGTON SUBDIVISION REGULATIONS AND SITE IMPROVEMENT SPECIFICATIONS.

LOT DIMENSIONS AND AREAS ARE APPROXIMATE.

PROPOSED RECHARGE BASIN SHALL CONFORM TO TOWN OF HUNTINGTON SUBDIVISION REGULATIONS AND SITE IMPROVEMENT SPECIFICATIONS.

N08°32'30"W

SOUND

THE DESIGN OF WATER SUPPLY AND SEWAGE DISPOSAL FACILITIES FOR ALL LOTS IN THIS DEVELOPMENT WILL COMPLY WITH THE STANDARDS AND REQUIREMENTS OF THE SUFFOLK COUNTY DEPARTMENT OF HEALTH.

ALL LOTS IN THIS DEVELOPMENT COMPLY FULLY WITH THE ZONING REQUIREMENTS OF R-20 & R-80 DIST. IN RESPECT TO AREA AND WIDTH EXCEPT AS MODIFIED.

WE HEREBY CERTIFY THAT THIS PLAT IS MADE FROM AN ACTUAL SURVEY COMPLETED BY US 10/10/88 AND CONCRETE MONUMENTS HAVE BEEN SET AS SHOW

Robert G. Nelson

ROBERT G. NELSON P.E. & L.S. # 29168

THIS IS TO CERTIFY THAT THIS SUBDIVISION HAS BEEN APPROVED BY THE HUNTINGTON TOWN PLANNING BOARD.

SEPT 20, 1989	11/22/89	
DATE OF CONDITIONAL FINAL APPROVAL	DATE OF FINAL APPROVAL	DIRECTOR OF PLANNING

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DATE 11-22-89 OWNER John V. Horgan

TITLE Sam A Rattazzi

GRADING OF LOTS, INCLUDING SLOPES ON THIS MAP SHALL BE LIMITED TO THE EXTENT OF CLEARING AND GRADING AS SHOWN ON THE APPROVED SITE PLANS. TREES WITH A DIAMETER OF (8) EIGHT INCHES OR LARGER WHICH ARE FURTHER THAN 25 FEET FROM A BUILDING OR FURTHER THAN 15 FEET FROM A DRIVEWAY MUST BE LEFT STANDING AND PROTECTED FROM GRADE CHANGES. EACH INDIVIDUAL LOT MUST BE TEMPORARILY AND/OR PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING THE BACKFILLING OF THE FOUNDATION AND SHALL BE IN COMPLIANCE WITH THE TOWN OF HUNTINGTON EROSION AND SEDIMENT CONTROL HANDBOOK AND SECTION H-100 THRU H-100.6 OF THE TOWN OF HUNTINGTON SUB-DIVISION REGULATIONS AND SITE IMPROVEMENT SPECIFICATIONS.

RELEASE OF BUILDING PERMITS FOR LOTS ON THIS MAP SHALL BE SUBJECT TO A SCHEDULE OF OPERATIONS APPROVED BY THE DIRECTOR OF ENGINEERING, BUILDING AND HOUSING, AND IN CONFORMANCE WITH THE TOWN OF HUNTINGTON SUBDIVISION REGULATIONS AND SITE IMPROVEMENT SPECIFICATIONS.