

**DRAFT
ENVIRONMENTAL IMPACT
STATEMENT**

Jill Estates

@

Dix Hills

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

Prepared by
J.A. Hartman
Consulting Engineers
East Northport, New York

December
1996

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DEC 23 1996

HUNTINGTON TOWN
PLANNING DEPT.

JEFFREY A. HARTMAN
CONSULTING ENGINEERS

JILL ESTATES
DRAFT ENVIRONMENTAL IMPACT STATEMENT

DIX HILLS
TOWN OF HUNTINGTON
SUFFOLK COUNTY
NEW YORK

DECEMBER, 1996

COVER SHEET

TYPE: DRAFT ENVIRONMENTAL IMPACT STATEMENT

PROJECT: JILL ESTATES

LOCATION: S/S VANDERBILT MOTOR PKWY.
DIX HILLS, HUNTINGTON

LEAD AGENCY: TOWN OF HUNTINGTON
PLANNING BOARD

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COMMENT DEADLINE:

ACCEPTANCE DATE:

TABLE OF CONTENTS

I.	Cover Sheet	
II.	Table of Contents	
	List of Figures	
	List of Tables	
	List of Appendices	
III.	Description of Proposed Action	9
	A. Project Purpose and Need	9
	B. Location	10
	C. Design and Layout	12
	D. Construction Operation	16
	E. Approvals	20
IV.	Environmental Setting (Natural Resources)	23
	A. Geology	23
	1. Topography	
	B. Air Resources	24
	1. Climate	24
	2. Air Quality	25
	C. Terrestrial Ecology	28
V.	ENVIRONMENTAL SETTING (HUMAN RESOURCES)	29
	A. Land Use and Zoning	29
	B. Community Services	39
	1. Education Facilities	39
	2. Police Protection	39

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January 15, 1997

Dept. of Planning
Town of Huntington
100 Main Street
Huntington, New York

Attention: Scott Robin, Environmental Analyst

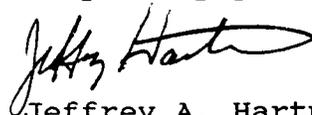
Re: Jill Estates Environmental Impact Statement

Dear Mr. Robin:

As per our discussion, I have enclosed revised pages for insertion into the above referenced E.I.S. in order to clarify the alternative description.

Thank you.

Very truly yours,



Jeffrey A. Hartman, P.E.

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JAN 15 1997

HUNTINGTON TOWN
PLANNING DEPT.

3.	Fire Protection	39
4.	Utilities	40
5.	Public Service	40
6.	Shopping	40
7.	Health Care	41
8.	Recreation	41
C.	Demography	42
D.	Cultural Resources	43
1.	Visual Resources	43
2.	Noise	43
VI.	MITIGATION MEASURES	45
A.	Geological Resources	45
B.	Water Resources	45
C.	Air Resources	45
D.	Terrestrial and Aquatic Ecology	45
E.	Transportation	46
F.	Land Use and Zoning	46
G.	Community Resources	46
H.	Demography	46
I.	Cultural Resources	46
VII.	IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES	47
VIII.	ADVERSE ENVIRONMENTAL EFFECTS IF PROJECT IMPLEMENTED	48
IX.	IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES	49
X.	GROWTH INDUCING ASPECTS	50

XI. ALTERNATIVES	51
A. Full Yield Alternative	51
B. No Action Alternatives	53
C. Preferred Modified Yield Alternatives	53
D. Cluster Alternatives (Preferred Alternative)	55
E. Attached Single Family Cluster Alternative	56
F. Other Possible Property Uses	58
XII. TRAFFIC	58
A. Study Area	58

LIST OF FIGURES

Figure 1	Location Plan
Figure 2	SEQR Flow Chart
Figure 3	SEQR Time Frame
Figure 4	Slope Configuration
Figure 5	Pollution Standard Index Chart
Figure 6	Air Quality Criteria
Figure 7	Attached Single Family Cluster
Figure 8	Cluster Alternatives
Figure 9	Traffic Studies

LIST OF TABLES

Table 1	Site Characteristics
Table 2	Air Quality
Table 3	Environmental Impacts

LIST OF APPENDICES

Appendix A	Environmental Assessment Form
Appendix B	Positive Declaration
Appendix C	Jill Estates Scoping Checklist
Appendix D	Charles Voorhis & Assoc. "Terrestrial Ecology for Jill Estates"

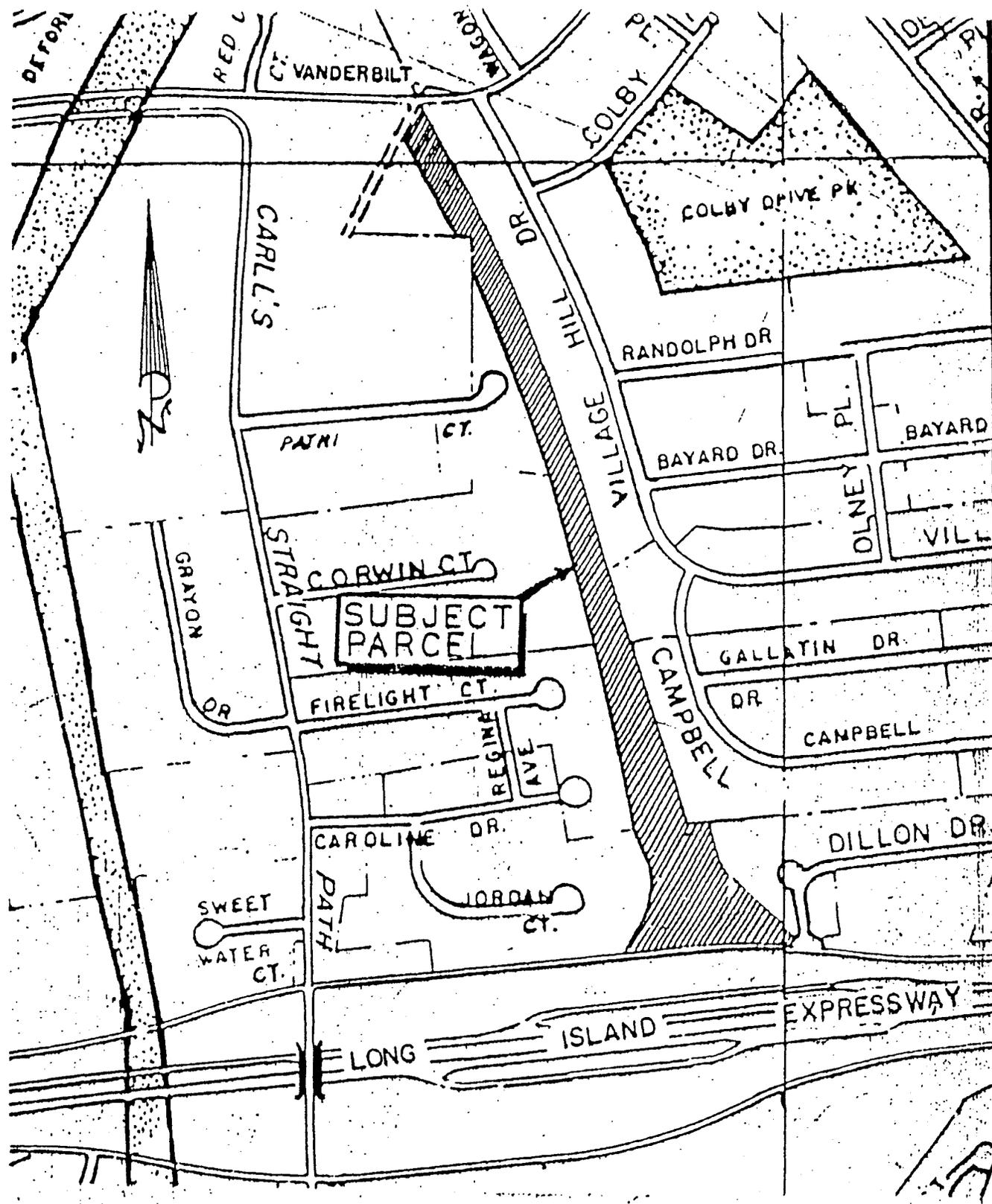
SECTION III

DESCRIPTION OF PROPOSED ACTION

A. PROJECT PURPOSE AND NEED - The purpose of this project is to provide housing in conformance with the character and diversity of the existing surrounding community. The intent of the project is to attract families of upper middle income to high income levels to single family units in this area.

The purpose is to accommodate a need for increased housing as depicted in the demographic section of this project.

B. LOCATION - Figure 1 shows the proposed site location. The parcel is located north of the Long Island Expressway and the westbound Long Island Expressway Service Road between the Commack Road underpass and the Carll's Straight Path overpass to the Long Island Expressway. The northern boundary of the parcel is located on Vanderbilt Parkway (Suffolk County Road 67) approximately 180 feet west of Village Hill Drive. The lot then runs south-southeast from Vanderbilt Parkway to the North Service Road. Village Drive parallels the parcel running south-southeasterly on the parcel's easterly side for approximately 2200 feet then turning eastward. The parcel is then paralleled by Campbell Drive for approximately 700 feet and then Dillon Drive for about 350 feet at the southern end. The paralleling roadways (Campbell and Village Drives) are a minimum of 180 feet from the parcel. Residential units abut the site zoned both R-20 (20,000 square feet of property) and R-40 (43,560 square feet of property). The western periphery contains residential units of the same zoning as discussed above. Cul-de-sacs specified as Patri Court, Corwin Court, Firelight Court, Caroline Drive and Jordan Court are located on the western periphery of the proposed subdivision. None of these cul-de-sacs are accessible to the property.



LOCATION PLAN
SCALE: 1" = 600'

JILL ESTATES

FIGURE 1

The subject parcel is actually two parcels designated by Suffolk County Tax Map Numbers as Division 400 Section 249 Block 04 Lot 19 and Division 400 Section 263 Block 02 and Lot 72. All of Lot 19 is zoned R-40. Lot 72 is zoned R-40 south from Lot 19 to a line running from the southeast corner of point of Parcel District 400 Section 263 Block 02 Lot 9 to the northwest corner of Parcel District 400 Section 263 Block 02 Lot 04. Approximately 10.8 acres are zoned R-20 and 9.8 acres are zoned R-40.

C - DESIGN AND LAYOUT

Drawings No. 1, 2 & 3 entitled "Cluster Map, Jill Estates Subdivision," show the proposed preferred preliminary subdivision. Table 1 gives the characteristics of the subdivision and the inputs imposed on the Site.

The roadway was designed to avoid large cuts and fills. Grades were kept below 14% and sight distances were maintained to provide adequate sight distance for safety purposes. The 36' road was designed to run approximately in the center of the property for the first 400 feet south to north after the road entrance at the North Service Road to the Long Island Expressway. The road then turns northeast and runs adjacent to the east property line until the terminus at the north end of a cul de sac, 875 feet from the south entrance. The north terminus consists of a cul de sac of adequate turning radius to allow emergency fire apparatus to easily navigate the circle. The easterly position of the road was aligned to avoid deeper cut and fill areas located on the westerly side of the road. The preliminary estimate of cut and fill for the roadway is about 700 cu. yd. of fill and 800 cu. yd. of cut. If suitable, the cut will be used to replace much of the fill.

Drainage is to be provided using a recharge basin as shown on Drawing No. 3 (Cluster Map of Jill Estates Subdivision). As

SITE CHARACTERISTICS

TABLE 1

Unit

Size	3000 sq. ft.(1500 sq.ft./floor)
Garage	500 sq. ft.
Total No. of Units	17
Total Occupants	60
K - 12 Student Age	22
School Impact(%)	+.24

Area

Total Site	20.6 Acres
Road Length (ending in cul de sac)	875 ft
Impervious Roof Area	.78 acres
Impervious Paved Area	1.25 acres
Pervious Areas: Undisturbed	15.17 acres
Pervious Areas: Landscaped	3.40 acres

Water Impact

Precipitation (44"/Year)	24.51 MG/YR
Irrigation (at 10"/Year)	.91 MG/YR
Consumption (SCDHS Criteria)	1.91 MG/YR
Total Usage	2.82 MG/YR
Recharge Volume	13.8 MG/YR
Water Balance	10.98 MG/YR
Supply Nitrate/Nitrogen Con. (USGS)	
Solid Waste Generation (@ 6 lbs/capita/day)	360 lbs./day
Chloride Loading (@ 5 tons/lane - mile/yr.)	1.7 tons/yr.
Electric Usage (@ 4.5 KWH/SF/Yr.)	153 MHW/yr.
Fuel Oil Usage (@ .5 gal/SF/yr.)	17,000 gal/yr.
Nitrate - N Recharge (Mg/l)	4.7 mg/l

shown on the Cluster Map at the conclusion of this document, a 32,400 square foot parcel has been allocated for recharge. This will accommodate stormwater flows from the roadway and the 8.8 acres of proposed development (includes area of recharge basin) including impermeable roofs, and driveways runoff as well as ground cover runoff.

The units are anticipated to be approximately 3000 square feet. The current design could make the units two stories with an addition of 500 square feet of garage. A driveway with a minimum of 50 foot length and 15 foot width would discharge onto a curb cut on Jill Court. It is anticipated that rear wood deck would also be installed of approximately 400 square feet or an equivalent concrete patio. The impervious conditions created by these units have been incorporated in Table 1.

Each unit will be individually serviced with a Suffolk County Department of Health Services approved septic system more than likely consisting of a 1200 gallon septic tank and 2 - 5 foot deep by 8 foot diameter leaching pools with a dome. The groundwater discharge levels would not exceed Suffolk County Department of Health Service criteria for 20,000 square feet of parcel i.e. 300 gallons/day of domestic septage through an individual septic system.

Refuse removal per household will go to Huntington's Resource Recovery Facility. This is a 750 tons/day facility. The impact of the development would be a .27% increase to the refuse flow. At present, the resource recovery facility is below its capacity and actively seeking refuse generators who are in need of this service. Ash is being disposed of by private contractors. There have been no reports of a lack of disposal facilities for the resource recovery ash.

The Dix Hills Water District has been notified by the Town of the project. Lilco has been notified by the applicant.

A 10.9 acres dedication of property will be offered to the Town of Huntington for parkland north of the proposed development running to its north terminus at Vanderbilt Parkway. See Drawings 1 and 2 of the "Cluster Maps of Jill Estates."

D. CONSTRUCTION OPERATION

The following processes will be followed:

- Clearing and Grubbing - The roadway for the units will be cleared of vegetation i.e. trees and brush, followed by clearing and grubbing of the excavation areas for basements and footings. All effort will be made to maintain rear yard trees if drainage grading permits as well as front yard large trees.

- Grading - All grading will be done in accordance with the site Grading Plan for drainage roadway and driveway construction purposes. This plan is to be submitted to the Town Planning Department with the Final Site Plan.

- Building Construction - After the clearing, grubbing and grading, the construction will proceed as follows:

- Excavation - A group of excavators with a power shovel and/or a payloader and a dump truck will excavate a foundation footing and possibly a basement area depending on the architectural design. Excavation and installation of a septic system will take place at this time as well as drainage basins.

- Foundation Footings and Walls - A group of concrete specialists will set the footings using forms and pour the footings letting them set for a minimum of three days. Then, the forms for concrete foundation walls will be placed. Some hammering will be needed to secure the forms. A concrete truck will be called to pour the wall. Usually less, no more than one day will be required to pour and set the concrete with shovels. The concrete will be allowed to set a minimum of three days and the forms will be stripped by a group of concrete specialists. Again, some hammering will be necessary to strip the forms.

- Framing - Following the foundation construction, carpenters will be called to frame the house starting with the house sill and first floor joists, subflooring and partition walls, exterior walls, second floor joists, subflooring, more partition walls, roof joists, rafters and ridge beam.

- Sheathing and Roofing - The framers (carpenters) will be hammering at the framing joints and will be calling for lumber supply deliveries and possibly hardware deliveries during the day.

- Roughing - Electricians, plumbers and insulation will begin filling the frame wall with needed materials. In addition, windows are now installed. Some hammering may be necessary.

- Dry wall installation will follow roughing followed by taping and spackeling.

- Backfilling - Somewhere after framing the foundation wall exterior will be backfilled using a payloader or other earth moving machine.

- After drywall installation, painting, carpets, utilities, flooring and other amenities will be installed.

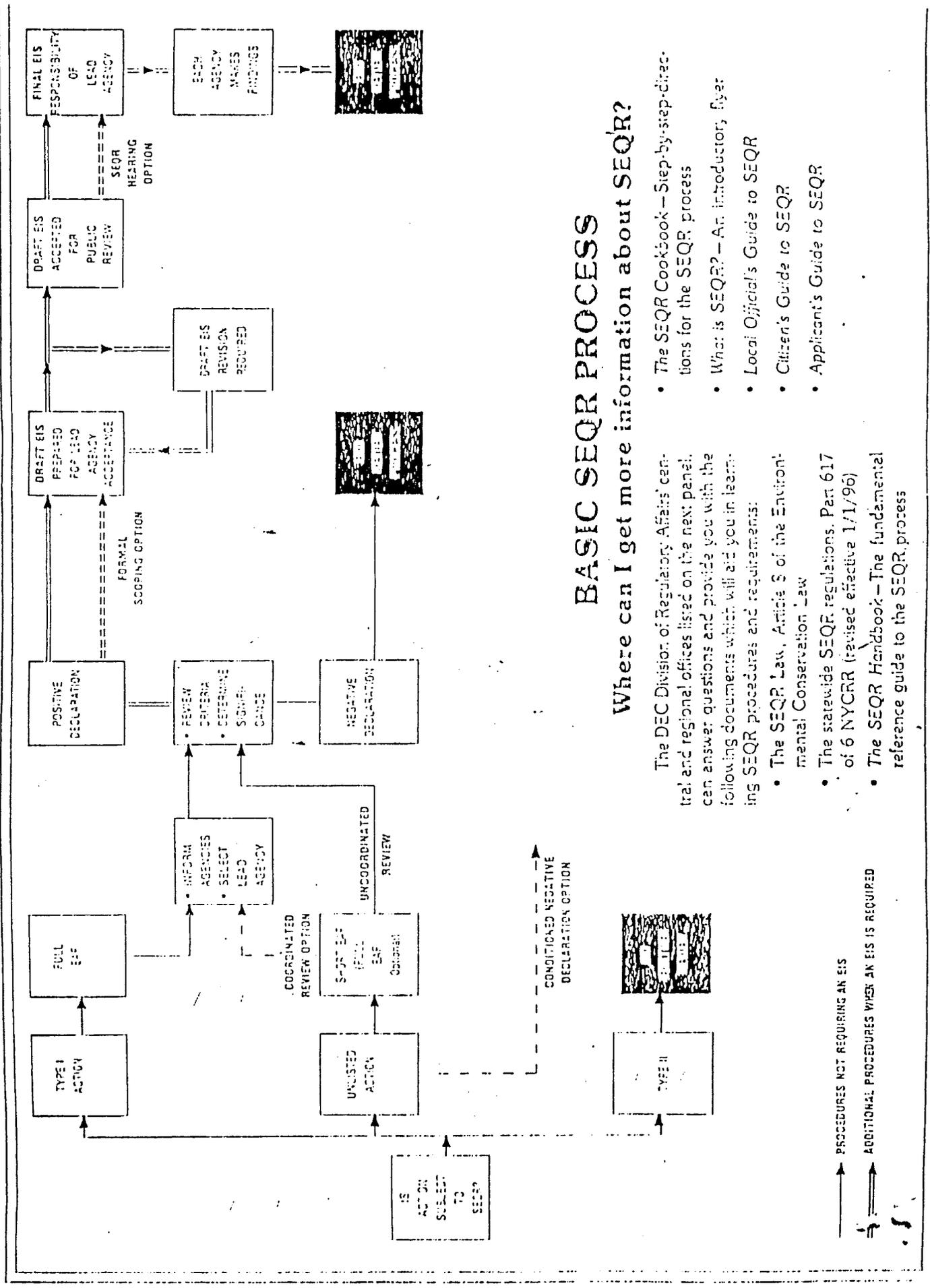
- All earth stripping and moving operations will be in strict compliance with the New York Soil Conservation Service. Appropriate screening and catchments will be provided to block soil washouts during earth movement and stockpiling. All reasonable methods will be used to prevent washouts. If, however, washouts occur they will be quickly removed and all clogged or silted areas cleaned to pre-washout conditions.

During all phases, vehicles will enter the site for deliveries of materials and equipment in addition to the tradesmen and supervisory and regulatory personnel vehicles.

All work will be done in accordance with OSHA and New York State Building Code requirements under the regulatory field monitoring of the State Building Construction representative i.e. the Town of Huntington Building Department.

The construction phase for a unit should take approximately six to eight months depending upon the weather.

Units will be built on contractual commitment. No set time frame for completion can be committed although based on other developments of this nature, a three to five year program may be expected.



BASIC SEQR PROCESS

Where can I get more information about SEQR?

- The DEC Division of Regulatory Affairs' central and regional offices listed on the next panel, can answer questions and provide you with the following documents which will aid you in learning SEQR procedures and requirements:
- The SEQR Cookbook — Step-by-step directions for the SEQR process
 - Who is SEQR? — An introductory flyer
 - Local Official's Guide to SEQR
 - Citizen's Guide to SEQR
 - Applicant's Guide to SEQR
- The DEC Division of Regulatory Affairs' central and regional offices listed on the next panel, can answer questions and provide you with the following documents which will aid you in learning SEQR procedures and requirements:
 - The SEQR Law, Article 9 of the Environmental Conservation Law
 - The statewide SEQR regulations, Part 617 of 6 NYCRR (revised effective 1/1/96)
 - The SEQR Handbook — The fundamental reference guide to the SEQR process

→ PROCEDURES NOT REQUIRING AN EIS
 ⇄ ADDITIONAL PROCEDURES WHEN AN EIS IS REQUIRED

FIGURE NO. 2

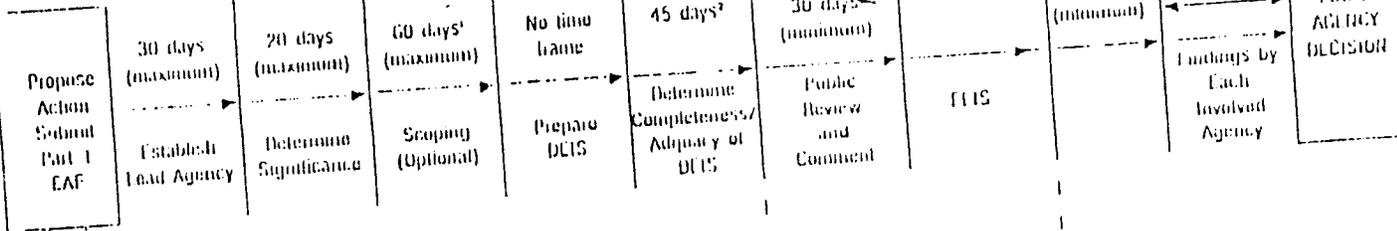
SEQR TIME FRAMES

FILE NOTICE of all Positive Declarations and all Conditioned and Type I Negative Declarations

FILE NOTICE of Completion of Draft EIS and SEQR Hearing

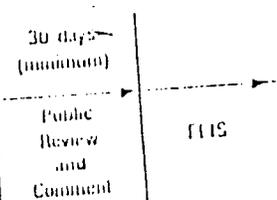
FILE NOTICE of Completion of Final EIS

BEGIN SEQR PROCESS

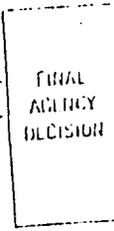


WITHOUT SEQR HEARING

60 days (Unless extended or hearing involved)



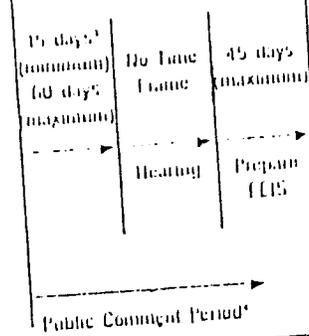
END SEQR PROCESS



FOOTNOTES:

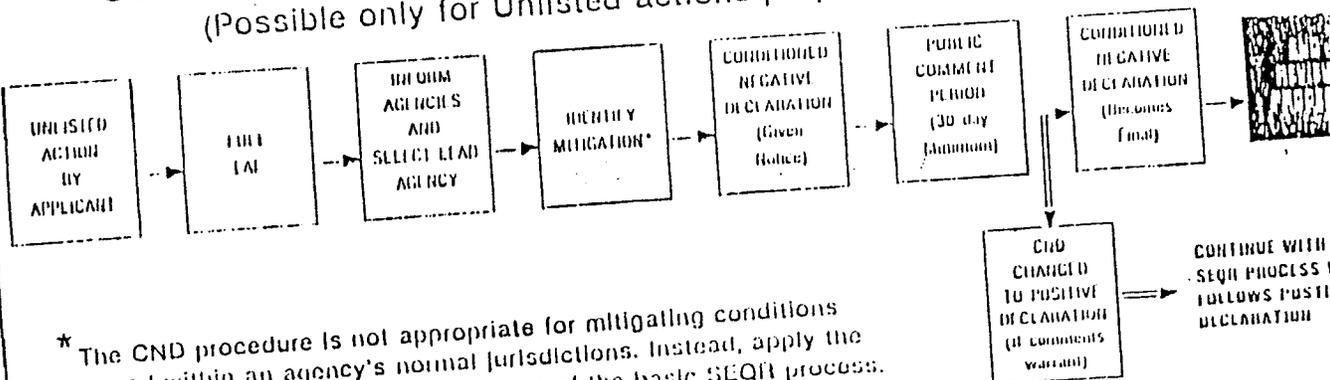
- * Time clock starts with submission of draft scope by applicant.
- * 30 days for resubmitted DEIS
- * Publish hearing notice in newspaper of general circulation at least 14 days before a public hearing. The hearing may commence on 15th day.
- * Public comment period must remain open until 10 days after the close of hearing.
- * When applicant is involved, lead agency findings and decision must be made within 30 days of filing the F/EIS, otherwise, findings not required until an agency must make a decision on final action.

IF SEQR HEARING IS HELD:



CONDITIONED NEGATIVE DECLARATION (CND) PROCESS

(Possible only for Unlisted actions proposed by an applicant)



* The CND procedure is not appropriate for mitigating conditions imposed within an agency's normal jurisdictions. Instead, apply the determination of significance procedures of the basic SEQR process.

E. APPROVALS

Compliance with New York State Environmental Quality Review Act (SEQRA) regulations relative to this application, precedes the issuance of any other regulatory approvals. The lead agency (The Town of Huntington Planning Board) and the applicant are responsible for the preparation and review of an Environmental Assessment which describes general project components and characteristics and potential impacts. The lead agency reviews the Environmental Assessment form prepared by the applicant and determines the type of action to be taken relative to the submission. A Negative Declaration or a conditional Negative Declaration may be issued indicating that the project has an insignificant impact on the environment. A public comment period is available on this action as described in the SEQRA Flow Chart enclosed (Figure 2). A Positive Declaration signifies that the lead agency believes that the project has a significant Environmental Impact and requires a Draft Environmental Impact Statement to review various alternatives and mitigating measures which can be taken to reduce the impact. The process is described in Figure 2. The time schedule is described in Figure 3 "SEQR Time Frames."

The project E.A.F. was submitted to the Planning Board and is enclosed as Appendix A. The Planning Board issued a Positive Declaration as shown in Appendix B.

This was followed by a Scoping Session on August 25, 1995, at which time the Planning Department issued a checklist of information to be included in the Draft Environmental Impact Statement DEIS which is included herein as Appendix C.

This document is prepared pursuant to the SEQRA process as shown on Figure 2 and 3. Upon submission of this report, to the Town of Huntington Planning Board, this Board as lead agency shall review the document. Upon its determination that a draft EIS prepared by the project's sponsor is adequate for public review, the lead agency must prepare, file and publish a notice of completion of the draft EIS and file copies of the draft EIS in accordance with the requirements set forth in Section 617.12 of SEQRA. The minimum public comment period on the Draft EIS is 30 days beginning with the first filing and circulation of the "Notice of Completion."

The following approvals are required:

- Subdivision and Section 278 of New York State Town Law - Town of Huntington Planning Board.
- Subdivision - Suffolk County Health Services. (for wastewater disposal.)
- New York State Dept. of Transportation - Road Opening.
- Curb Cut - Suffolk County Public Works Dept.
- Dix Hills Water District - Water Availability and Hookups.

- Suffolk County Planning - Subdivision
- New York Telephone-Movement of Existing Telephone

Easement

The town will solicit comments from the following agencies: Town of Huntington Engineering Services, Highway, Planning. New York State Department of Environmental Conservation, New York State Department of Transportation, Suffolk County Department of Public Works, Suffolk County Department of Health Services, Dix Hills Water District & Suffolk County Planning Commission, New York Telephone, Half Hollow Hills School District and Lilco.

When the Planning Board as lead agency has determined that a draft EIS prepared by a project sponsor is adequate for public review, the lead agency will determine whether or not to conduct a public hearing review concerning the action. In determining whether or not to hold a SEQRA hearing, the lead agency will consider: the degree of interest in the action shown by the public or involved agencies, whether substantive or significant adverse environmental impacts have been identified; the adequacy of the mitigation measures and alternatives proposed; and the extent to which a public hearing can aid the agency decision-making processes by providing a forum for, or an efficient mechanism for the collection of, public comment.

SECTION IV

ENVIRONMENTAL SETTING - NATURAL RESOURCES

A. GEOLOGY

1. Topography - The site slope general configuration is shown on Figure 4 which gives approximate areas within the site with slopes between 0 - 8% and 8 - 15%. The grade of the property increases from Elevations 227 at the northern end (Vanderbilt Parkway) to a knoll at elevation 245,720 feet south southwest in the approximate center of the property. The property then maintains a downward slope for approximately 550 feet to elevation 204 and then mildly slopes upward to a knoll at elevation 217, an additional distance of 380 feet. Continuing south southeast towards the Long Island Expressway from the southern knoll, the property grades to elevation 188 in approximately 300 feet and then mildly slopes downward from elevation 188 to 164 at the north of the southern terminus at the north service road to the Long Island Expressway, a distance of 1800 feet +/-.

A map depicting the site in two foot contours is provided in the rear of the report (Cluster Map of Jill Estates Drawings 1, 2 and 3.)

NORTH SERVICE RD. (L.I. EXP'WAY.)

DILLEN DR.

RECHARGE BASIN

SLOPE LEGEND

0-8%

8-15%



FIGURE 4

15

PARK

VILLAGE HILL DR.

PATRI CT.

10

VANDERBILT PK'WAY.



Scale: 1" = 400'

B. AIR RESOURCES

1. Climate - Long Island's coastal type climate is governed primarily by the Atlantic Ocean, which acts to moderate the extremes of summer tropical and winter continental air masses. July is the warmest month, with an average temperature of 71.1 degrees fahrenheit. January averages 30.9 degrees fahrenheit. The spring and fall months offer transitions between the two extremes; thunderstorms occur in late spring/early summer, as warm, moist tropical air masses collide with Canadian cold fronts.

Temperature plays an important role in many aspects of land suitability on Long Island. There is a long growing season of 200 to 210 frost free days. This aspect, together with adequate precipitation and good soils, allowed for the development of a large agricultural industry.

Average annual precipitation (rain and snow) for Long Island is about 44 inches. This figure includes the water equivalent of the 29.7 inches of yearly snowfall. Wind velocity averages 9 mph, with winter wind direction generally from the northwest, and from the southwest in summer. Annually, an average 106 days are

clear, 133 are partly cloudy, and 136 are cloudy.

2. Air Quality - There are two NYSDEC continuous air quality monitoring sites in the bi-county area, at Eisenhower Park in Nassau County and in Babylon (the East Farmingdale Water District) in Suffolk County. Generally, air quality is satisfactory, though ozone and carbon monoxide can rise to levels exceeding the NYS/Federal standards. The concentrations of primary air contaminants appear to be declining over the last ten years. These declines, according to the New York State Department of Environmental Conservation (NYSDEC) seem to be attributed in part to implementation of pollution control devices on vehicles, as well as the use of unleaded fuels and implementation of controls on stationary sources.

There are no site-specific air quality studies available.

Air quality measurements taken at the nearest observing facility for each pollutant and presented in Table 2. Generally, results are within the New York State and Federal Ambient Air Quality Standards (AAQS, Figure 5), except for carbon monoxide and ozone. Thirteen exceedances of these standards occurred during the 1986 observation year, the most recent for which data is available.

The Pollution Standards Index (PSI), Figure 5, is an overall indicator of air quality, and is based upon levels of four air pollutants (SO₂, TSP, O₃, and CO) presented in Table 2.

In general, the four pollutants sampled are rated relative to their respective AAQS standards. Then, the number of times each of these pollutants exceeds the AAQS is compared to the total number of all exceedances for the four pollutants. This provides a relative measure of the magnitude of each pollutant as a Critical Pollutant. From the individual pollutant results, a total simultaneous air pollution value is obtained numerically and a PSI description is obtained.

For the Babylon station, (the nearest PSI observation point to the project site), two of the four pollutants were sampled (sulfur dioxide and ozone). Here, SO₂ was considered within the "Good" category 95% of its 588 readings, with the remaining 5% as "Moderate". For ozone, 85% of its 005 measurements were "good" with 17% as "moderate" while 1% (3 readings) were considered "unhealthful". As a result, for 74% of all readings, the Critical Pollutant was ozone, while SO₂ was critical for only 26% of all readings. Overall, PSI quality at the Babylon station was classified "good" for 77% of all 605 readings in 1986 while 22% of the measurements were "moderate" and 1% were "unhealthful". This suggests that ozone is more of an air quality problem at the Babylon station than sulfur dioxide. It must be remembered,

TABLE 2

AIR QUALITY

PARAMETER	AQS STANDARD	NO. OF OBSERVATIONS	HIGHEST VALUE	NO. OF EXCEEDANCES
Sulfur Dioxide*	(3-hr) not to exceed 0.50 ppm more than once per year	8628	0.098 ppm	0
	(24-hr) not to exceed 0.14 ppm more than once per year	360	0.052 ppm	0
	(annual) not to exceed 0.03 ppm	1	0.011 ppm	0
Total Suspended Particulates*	(24-hr) not to exceed 250 ug/m ³ more than once per year	58	129 ug/m ³	0
Carbon Monoxide**	(1-hr) not to exceed 35 ppm more than once per year	8641	19.7 ppm	0
	(8-hr) not to exceed 9 ppm more than once per year	8651	10.4 ppm	4
Ozone*	(1-hr) not to exceed 0.12 ppm	8515	0.160 ppm	9
Nitrogen Dioxide**	(12-month) average not to exceed 0.05 ppm	1	0.034 ppm	0
Lead**	(quarterly) average not to exceed 1.5 ug/m ³ per year	4	0.14 ug/m ³	0
Pollution Standards* Index (PSI)	Descriptor			
	Good	466 (77%)		
	Moderate	136 (22%)		
	Unhealthful	3 (1%)		

*Taken at Babylon, 7 miles SW of site

**Taken at Eisenhower Park, 26 miles W of site

SOURCE; NYS Department of Environmental Conservation, Air Quality Report, Ambient Air Monitoring System, 1986, DAR-87-1

however, that the project site is located in an area very different in usage than the Babylon monitoring station; the site is located in a low density residential neighborhood, while the monitoring station is near Route 110, opposite the SUNY/Farmingdale campus. The former has little auto traffic and no other air emissions, while the latter has heavy vehicle traffic in an industrial area. Thus, it can be expected that the subject site's air will be much higher in quality than that of the Babylon monitoring station.

Contaminant ^①	Averaging Period	New York State Standards				CORRESPONDING Federal Standards					
		Level	Conc.	Units	Statistic ^②	PRIMARY			SECONDARY		
						Conc.	Units ^③	Stat.	Conc.	Units	Stat.
SULFUR DIOXIDE SO ₂	12 Consecutive Months	ALL	0.03	PPM	A.M. (Arith. Mean of 24 hr. avg. conc'n.)	80	µg/m ³	A.M.			
	24-HR.	ALL	0.14 ^④	"	MAX. ^⑤	365	µg/m ³	MAX. ^⑦			
	3-HR.	ALL	0.50 ^⑥	"	MAX.				1300	µg/m ³	MAX.
CARBON MONOXIDE CO	8-HR.	ALL	9	"	MAX.	10	mg/m ³	MAX.	10	mg/m ³	MAX.
	1-HR.	ALL	35	"	MAX.	40	mg/m ³	MAX.	40	mg/m ³	MAX.
OZONE (PHOTOCHEMICAL OXIDANTS)	1-HR.	ALL ^⑧	0.12	"	MAX.	235	µg/m ³	MAX.	235	µg/m ³	MAX.
HYDROCARBONS (NON-METHANE)	3-HR. (6-9 A.M.)	ALL	0.24	"	MAX.	160	µg/m ³	MAX.	160	µg/m ³	MAX.
NITROGEN DIOXIDE	12 Consecutive Months	ALL	0.05	"	A.M.	100	µg/m ³	A.M.	100	µg/m ³	A.M.
PARTICULATES (SUSPENDED) TSP	2 Consecutive Mos.	IX	75	µg/m ³	G.M.	75	µg/m ³	G.M.	60 ^⑨	µg/m ³	G.M.
		III	65	"	(Geometric mean of 24 hr. average concentrations)						
	24 HR 30 DAYS ^①	H	55	"	MAXIMUM	260	µg/m	MAX.	150	µg/m	MAX.
		I	45	"							
		ALL	250	"							
		IX	135	"							
		H	115	"							
		H	100	"							
		H	80	"							
		H	115	"							
60 DAYS ^②	H	80	"	A.M.							
	H	95	"	"							
	H	85	"	"							
	H	70	"	"							
	H	105	"	A.M.							
	H	90	"	"							
90 DAYS ^③	H	80	"	"							
	H	80	"	"							
	H	80	"	"							
	I	65	"	"							
LEAD	3 Consecutive Mos.	④				1.5	µg/m ³	MAX.			

- (1) N.Y.S. also has standards for Beryllium, Fluorides, Hydrogen Sulfide and Settling Particulates (Dustfall).
- (2) All maximum values are values not to be exceeded more than once a year (Ozone std. not to be exceeded during more than one day per year).
- (3) Also during any 12 consecutive months, 99% of the values shall not exceed 0.10 ppm (not necessary to address this standard when predicting future concentrations).
- (4) Also during any 12 consecutive months 99% of the values shall not exceed 0.25 ppm (see above).
- (5) Gaseous concentrations are corrected to a reference temperature of 25°C and to a reference pressure of 760 millimeters of Mercury.

- (6) As a guide to be used in assessing implementation plans to achieve 24-hour standard.
- (7) For enforcement only, monitoring to be done only when required by N.Y.S., (not necessary to address this standard when predicting future concentrations).
- (8) Existing N.Y.S. standard for Photochemical Oxidants (Ozone) of 0.08 ppm not yet officially revised via regulatory process to coincide with new Federal standard of 0.12 ppm which is currently being applied to determine compliance status.
- (9) New Federal standard for Lead not yet officially adopted by NYS but is currently being applied to determine compliance status.

FIGURE 5 POLLUTION STANDARD INDEX CHART

COMPARISON OF PSI VALUES WITH POLLUTANT CONCENTRATIONS, DESCRIPTOR WORDS
GENERALIZED HEALTH EFFECTS, AND CAUTIONARY STATEMENTS

INDEX VALUE	AIR QUALITY LEVEL	POLLUTANT LEVELS					HEALTH EFFECT DESCRIPTOR	GENERAL HEALTH EFFECTS	CAUTIONARY STATEMENTS
		TSP (24 hour), µg/m ³ [ppm]	SO ₂ (24 hour), µg/m ³ [ppm]	CO (8 hour), mg/m ³ [ppm]	O ₃ (11 hour), µg/m ³ [ppm]	NO ₂ (11 hour), µg/m ³ [ppm]			
500	SIGNIFICANT HARM	1000	2670	57.8	1700	3150		Promotes death of ill and elderly. Healthy people will experience and worse symptoms that affect their normal activity.	All persons should remain indoors, keeping windows and doors closed. All persons should minimize physical exertion and avoid sthale.
400	EMERGENCY	875	2100	45.8	1000	3000	HAZARDOUS	Promotes onset of certain diseases in addition to significant exposure. Some of symptoms are decreased tolerance on healthy persons.	Elderly and persons with existing disease should stay indoors and avoid physical exertion. General population should avoid outdoor activity.
300	WARNING	875	1800	34.8	800	2700		Significant exposure of symptoms and discomforts to sensitive persons with heart or lung disease, with moderate symptoms in the healthy population.	Elderly and persons with existing heart or lung disease should stay indoors and reduce physical activity.
200	ALERT	375	800	17.8	600 ^a	1100	VERY UNHEALTHFUL	Mild exposure of symptoms in susceptible persons with existing symptoms in the healthy population.	Persons with existing heart or respiratory ailments should reduce physical exertion and outdoor activity.
100	MAJOR	200	305	10.8	235	8	MODERATE		
50	NOT OF MAJOR CONCERN	75	80 ^b	5.8	118	0	GOOD		
0		0	0	0	0	0			

^a This index value is based on concentrations of all five pollutants, but for those specified by "Alert Level" or higher.
^b Annual primary MAAD.

1000 µg/m³ is the annual maximum of the O₃ Alert level of 200 µg/m³.

* Concentrations in: Micrograms per cubic meter - µg/m³
[Parts per million - ppm]

FIGURE 6 AIR QUALITY CRITERIA

C. TERRESTRIAL ECOLOGY

Consult Appendix D for the descriptions and discussions of site vegetation and wildlife characteristics, as written by Charles Voorhis & Associates, Inc. Appendix D contains a bioscientific review of the potential impacts of development upon the site's existing ecology. A copy of this affidavit was supplied to Cramer, Voorhis & Associates prior to their field investigation of the subject parcel and its concerns are addressed in their.

SECTION V

ENVIRONMENTAL SETTING (HUMAN RESOURCES)

A. Land Use and Zoning -

1. Existing Land Use and Zoning - The subject site is presently wooded and "vacant"; usages nearby are generally residential in nature, except for the transportation uses along the site's northern and southern borders. A utility usage (the LILCO powerline) crosses the site overhead. More distantly, recreational and institutional uses also exist.

The property and its surroundings are zoned R-40 and R-20, which allows for residential lot sizes of one acre and 20,000 square feet.

2. Land Use Plans - The 1965 Huntington Comprehensive Town Plan had described the project site as part of the ROW for the proposed Northport-Babylon Highway. At the time, the route was established by the New York State Department of Transportation (D.O.T.). This highway was never built.

The Long Island Areawide Waste Treatment Management Plan (the "208 Study"), prepared pursuant to Section 208, of the Federal Water Pollution Control Act Amendment of 1972 was completed by the Nassau-Suffolk Regional Planning Board in July 1978. The Plan identified eight hydrogeologic zones comprising

both deep recharge and shallow discharge zones in Nassau and Suffolk counties. Knowledgeable management of these areas is deemed essential in maintaining groundwater quality and quantity. The Plan identified non-point sources of pollution as a major cause of both groundwater and surface water contamination.

The project site is designated within Hydrogeologic Zone I, a deep aquifer recharge area, and a primary source of public drinking water. Recommendations made for this zone and applicable to the Proposed Action are:

1. At densities less than nine persons (three dwelling units) per gross acre, institute a monitoring program to determine the quality of the water table aquifer and the efficacy of the non-point source controls. Where area-average nitrate/nitrogen levels are six milligrams per liter or greater or other contaminants are in excess of groundwater standards, and where the pollution may reasonably be expected to result from on-lot systems, provide collection and treatment.

2. Control stormwater runoff to minimize the transport of sediments, nutrients, metals, organic chemicals and bacteria to surface and groundwaters.

3. Minimize population density by encouraging large lot development (one dwelling unit/one or more acres), where

possible, to protect the groundwater from future pollutant loadings.

4. As currently vacant land is developed, provide collection and treatment at a density of approximately two dwelling units per acre (20,000 square foot lot size).

5. Provide for the routine maintenance of on-site disposal system.

6. Reduce the use of fertilizers on turf. Promote the use of low maintenance lawns.

7. Prohibit the use of certain chemical cleaners in on-lot systems.

The plan did not make any recommendations specifically for the project site.

The Long Island 208 Study and other 208 Studies identified urban stormwater runoff as the single most important source of surface water pollution. In response, Congress in 1977 established the Nationwide Urban Runoff Program (NURP), in which Long Island was one of 30 participants. An important question examined in the Long Island program was whether stormwater recharge basins contribute to the contamination of Long Island's

groundwater supply. The NURP Study was designed to determine the sources, types, quantities, and fates of stormwater pollutants as they percolate through recharge basins. Five recharge basins, representing various types of land use, were monitored before and after storm events. The United States Geological Survey collected the stormwater and groundwater samples, and performed the chemical analyses.

Conclusions relevant to ground and surface waters were:

- Most of the runoff into recharge basins is derived from rain that falls directly on impervious surfaces, except during storms of high intensity, high volume and/or long duration.

- Infiltration through the soil is generally an effective mechanism for reducing lead and probably chromium from runoff on Long Island. Although the NURP findings concerning chromium are not conclusive, data from an industrial spill at Farmingdale indicate attenuation. Chloride is not attenuated. The effect of infiltration on nitrogen is undetermined.

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

- 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.

- In addition to land use, the length of time that a recharge basin has been in use, appears to affect the concentration of some pollutants in the basin soil. The limit of the ability of the soil to adsorb or otherwise retain these constituents is unknown.

- Removal of basin vegetation is not necessary, and may indeed decrease the infiltration rate.

- Any control of chemical constituents in runoff requires awareness of their year-round presence. The use of highway deicing salts in winter explains the high chloride concentrations found in runoff during that season.

- Ratios of fecal coliform bacteria to fecal streptococci (FC/FS) were less than 1.0 in the overwhelming majority of samples analyzed. FC/FS values greater than 4.0 are generally considered to be of human origin and values less than 0.7 of animal origin. The evidence accumulated in this study strongly support the belief that fecal coliform loads are derived from a non-human source.

The follow-on study to the Plan, the LIRPB's 1984 report, "Non-Point Source Management Handbook," which has been prepared

as part of the USEPA 208 Plan Implementation Program, focuses on existing problems and needed controls for non-point sources of contamination. Various non-point source impacts on ground and surface waters and relevant legislation are discussed. A series of state, municipal, and non-government actions are recommended for the control or mitigation of undesirable impacts. The Handbook described and discussed present Long Island groundwater quality, the processes of development which affect this water, and recommends various regulation measures for its protection.

The purpose of the Handbook is to identify cause-effect relationships and to provide the best available guidance for use by public officials, developers and Long Island residents concerned with the protection of ground and surface waters. The major objectives, which underlie the recommendations, are maximization of the recharge of high quality groundwater to the aquifers, minimization of pollutant loadings from all land uses and reduction of the amount of consumptive use of groundwater, particularly in shoreline areas or other areas where quantities are limited.

In particular, the handbook chapters describe, discuss and provide recommendations on:

1. Land Use - Discusses existing land uses on Long Island, their relationship to the Hydrogeologic Zones, and existing

controls. Makes recommendations for necessary controls relative to the location and siting of various land uses in particular areas and zones.

2. Stormwater - Discusses stormwater processes and constituents drainage system design and operation, impacts on ground and surface waters and existing management and legislation. Makes recommendations for appropriate stormwater controls and development guidelines.

3. On-Site - Discusses current siting practices, system functions and maintenance and existing regulations. Makes recommendations for needed legislation, administration, siting, guidelines and proper maintenance.

4. Highway Deicing - Discusses existing highway deicing and salt storage practices and existing management. Makes recommendations for the control of salt application and salt storage.

5. Fertilizer - Discusses current fertilizer practices (residential, agricultural) and the effects on groundwater. Makes zoning and site development recommendations for decreasing fertilizer use and the utilization of alternative groundcovers.

6. Animal Wastes - Discusses existing animal waste

(domestic animals and wildfowl) disposal practices and current legislation. Makes recommendations for proper animal waste disposal.

7. Site Plan Review - Discusses the existing site plan review process and its relationship to controlling some of the non-point sources discussed in the other chapters. Makes recommendations for streamlining the process while ensuring that the appropriate non-point source controls are implemented.

8. Ordinances - The last chapter includes a compilation of existing and proposed ordinances. These ordinances are used to illustrate alternative ways of meeting the water resource protection needs of a particular municipality. The existing ordinances are currently being used on Long Island or in various other states. These ordinances, in the judgment of the LIRPB constitute the best available models for the control of the impact of a particular non-point source. Some of these ordinances may be used in their present form, while others may need to be tailored to the specific needs of the municipality.

During 1983, the New York State Department of Environmental Conservation (NYSDEC) completed its Long Island Groundwater Management Program, which was an outgrowth of the Nassau Suffolk 208 Plan. The NYSDEC's study documented the various groundwater pollution problems facing Suffolk County, and evaluated the

capabilities of existing programs to cope with these problems. Recommendations included in the Program pertinent to the Proposed action are:

- Existing regulatory programs need to be expanded and redirected to more effectively address priority problem areas, specifically deep flow recharge zones, industrial/commercial areas, special groundwater protection districts, and quantity-stressed areas.

- Undeveloped watershed areas (e.g. The Pine Barrens) should be designated as environmentally sensitive areas under the State Environmental Quality Review Act (SEQRA) which will require the preparation of an environmental review for any proposed action.

- New York State should institute a groundwater quantity management program, utilizing existing well permit and water supply permit systems.

The Suffolk County Department of Health Services administers a number of approval and permit programs that are designed to protect groundwater resources. Sewage treatment requirements for residential subdivisions and developments (minor subdivisions of less than five lots) are reviewed under Article 6 of the Suffolk County Sanitary Code; these requirements are based on building density and hydrogeologic considerations. Plans for individual well and sewage disposal systems are reviewed pursuant to Part 75 of the State Sanitary Code and Article 5.B of the Suffolk

Sanitary Code; considerations include the separation between existing and proposed wells and disposal systems, and the demonstration of an adequate supply of potable groundwater.

B. COMMUNITY SERVICES

1. Educational Facilities - The project site lies within the jurisdiction of the Half Hollow Hills Central School District, which would provide three nearby schools for instruction of the site's students. These schools are: Forest Park Elementary School on DeForest Road immediately west of the site, with a staff of 53 and 514 students. Candlewood Junior High School on Carll's Straight Path, 1 1/2 miles south with a staff of 79 and 723 students, and High School West on Wolf Hill Road, 3 miles to the west, with a staff of 124 and 1181 students. Total district enrollment in the 1986-87 school year was 8816 students.

2. Police Protection - Police services are provided by the Suffolk County Police Department's 2nd Precinct, which is located at Park Avenue and Jericho Turnpike. This station is currently staffed by approximately 220 officers. The site itself is patrolled on a 24-hour, 7 day a week cycle by sector care unit 207. The three adjacent units are available for added coverage. Specialized units such as Investigative, Aviation, Emergency, etc. are also available throughout the County.

3. Fire Protection - Replies to letters to the Huntington

and Dix Hills Fire Departments requesting information on services, staffing and equipment have not yet been received.

4. Utilities - LILCO has indicated that it can and will provide electric service to the site. The Dix Hills Water District will provide water service. Daily usage in the District varies over time, averaging 2 MGD in winter and 15 MGD in the summer; overall, in 1987, an average of 4.95 MG were pumped daily. The well which serves the site pumps the Magothy aquifer; its nitrate/nitrogen level is 0.9 mg/l.

Solid waste generation on the site is currently zero. Removal services after the construction phase will be provided by a private carting company. Waste will be taken to the Town Resource Recovery Facility in East Northport. Presently, about 900 tons of solid waste are handled at this Resource Recovery Facility daily.

5. Public Service - Public services presently available are highway/road maintenance services. These include plowing, roadsalting, paving, grasscutting/landscaping, road drainage and striping and traffic signs.

6. Shopping - There are several shopping areas in the vicinity in the form of malls, open shopping centers, and central business districts.

Retail shopping in the vicinity is available at the Walt Whitman Mall to the west in Huntington Station, (68 acres, 107 stores), the Caldor Center Mall in Melville (20 acres, 23 stores), Huntington Square Mall in East Northport (18 acres, 25 stores) and the Big H Shopping Center in Huntington (21 acres, 35 stores). In addition, numerous small shopping plazas and individual stores exist throughout the area and along Jericho Tpke. to both the east and west. Huntington's "downtown" business district boasts 334 stores with another 185 in Huntington Station, both Northport and East Northport have 94 each.

7. Health Care - Huntington Hospital is located about seven miles to the northwest along Park Avenue. It features 424 beds and a staff of 1400. St. John's Smithtown Hospital is approximately 6 miles to the northeast, with 300 beds and a staff of 1100.

8. Recreation - The Berkeley Jackson County Park, a Nature Preserve area which supports no organized recreational activities is about two miles to the northwest. Several other town and local parks are within 1/2 mile of the site; the Colby Drive and Rolling Hills Park to the east, the Dix Hills Park complex and DeForest Nature Park to the west.

C. DEMOGRAPHY

The census tract is the basic unit of measurement used by the Census Bureau to allow the comparison of data each time a new census is undertaken. The tract is an easily identifiable area that has a population of approximately 5000 persons and has limits defined by municipal boundaries, roads, railroads, waterways or other readily identified natural or man-made features. The 1980 U.S. Census had designated the subject property as within census tract 1121.02. Figure 14 presents a map illustrating the boundaries of this tract, as well as those comprising Dix Hills, which encompasses the site. Table 5 is a listing of various demographic parameters for each tract, with totals for Dix Hills. The data used is taken from the U.S. Census Bureau; projections are based upon these values, and were derived by CACI Inc. - Federal, a Washington, D.C. based demographic and market analysis company.

Of the five census tracts which comprise Dix Hills, the subject tract has the greatest percentage of college graduates (47.6%) and the highest average number of years of schooling (15.6 years).

D. CULTURAL RESOURCES

1. Visual Resources - The visual appearance of the site is that of a densely wooded, rolling, vacant lot located between low density residential developments in a wooded area with higher ground to the west and east. Because of the nature of the site, scenic vistas from the site are difficult to attain, even though the elevation of the site's northern end is above that of the southern.

2. Noise - The loudness of sound is measured in decibels (dB). The decibel scale is logarithmic, with the threshold of hearing set at zero dB and pain experienced at 140 dB. Given two sounds of equal loudness but different frequency (pitch) the high-frequency sound will seem louder to the human ear than will the low frequency sound. To account for this, sound is usually measured in a weighted form, known as A-weighted decibels (dBA). Figure 15 gives a rough graphical interpretation of this scale. As there are presently no sound sources on the site, there is no sound originating there, except for incidental wind generated noise. External noise audible on the site originates primarily from auto traffic, on the Long Island Expressway and Vanderbilt Motor Parkway. These should be in the interval 30-80 dB (A) nearest the northern and southern site borders, and decrease

steadily toward the center of the site.

SECTION VI

MITIGATION MEASURES (PREFERRED ALTERNATIVE)

A. Geological Resources - Soil erosion while the land is unvegetated i.e. construction can be mitigated by the following techniques, minimizing exposed soil area and the time span this area is exposed to erosive elements and use of drainage diversions and soil traps. The Town of Huntington Erosion Control Handbook will be followed as well as the State Soil Conservation regulations. Slopes will be kept 1:4.

B. Water Resources - The NYSDEC Approved Water Conserving Fixtures List will be used to reduce potable water usage. To reduce the irrigation demand and nitrate/nitrogen level at the same time, a low fertilizer lawn plant species could be used. Mandatory sprinkler restrictions could be imposed by Dix Hills Water District for potable water reduction.

C. Air Resources - The increase in site-generated air pollution will not be sufficiently large or of a nature to warrant special mitigative measures. Dust palliatives can be used to reduce dust during construction; generally 70% of the dust raised by such activity will settle within 50 feet.

D. Terrestrial and Aquatic Ecology - The entire northern portion of the property will remain undisturbed; if so, agreed by

the Town Planning Board.

E. Transportation - As traffic volume increases will be minimal, there need be no mitigative measures taken. Road safety items, such as lights signs, etc, will be provided if deemed necessary by the regulatory agencies.

F. Land Use and Zoning - While the Proposed Action intends a clustered lot layout, which is dissimilar to the regular subdivision layout prevalent in the area, the nature of the site dictates such an arrangement, an environmentally acceptable conventional subdivision layout is not practicable.

G. Community Resources - Smoke alarms, security alarms and exterior lighting systems, flame retardant building materials, etc. Use of water and energy saving materials, fixtures and appliances would reduce these demands, while use of a no-salt material (such as sand) in wintertime would eliminate chloride loading to groundwater.

H. Demography - As the impacts to area demography are minimal, there need be no mitigative measures taken.

I. Cultural Resources - As the impacts to area cultural resources are minimal, there need be no mitigative measures taken.

SECTION VII

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

PREFERRED ALTERNATIVE

Site and area resources which will be irreversibly and irretrievably consumed by the project are both physical and non-physical/aesthetic.

Physical resources committed include: 6.2 acres of natural vegetation removed by development, the changes in site groundwater and air pollutant concentrations, present area auto traffic volumes, the energy and construction material resources committed by construction, and present levels of usage for utilities and public services.

Among non-physical/aesthetic resources to be committed are: the present visual quality of the site and desirability to the community of present site land usage.

SECTION VIII

ADVERSE ENVIRONMENTAL EFFECTS IF PROJECT IS IMPLEMENTED

PREFERRED ALTERNATIVE

1. 30% of vegetation will be removed from the site for development of which 16% will be landscaped. Net loss of vegetation will be 14% of the property.

2. Water utilization will increase from a 0 to 2.82 million gallons per year.

3. Chloride loading to the site will increase from 0 to 1.70 tons/year.

4. There will be an increased demand on energy from 0 currently to 153.0 MHW/Yr. and 17,000 gallons of heating oil.

5. Solid waste will be generated from current 0 to 360 #/day, 50% of which should be recycled.

SECTION IX

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The area resources which will be consumed by the project consist of both physical and non-physical. Physical resources are those which can be seen, felt, heard, smelled, or tasted i.e., tangibly sensed and directly quantified. Non-physical resources can only be indirectly quantified i.e. perception, aesthetics, Features such as historic, archaeological and architectural value, demand upon public services, are aesthetic resources. Physical resources committed by the proposed action include removal of natural vegetation by the developer, changes in site groundwater and pollutant concentrations, auto traffic volume, energy and construction material resources, committed during construction and usage of utilities and public services after construction.

Non physical aesthetic resources to be committed by the project are the visual quality of the site and the desirability of the community for the present land usage to remain undisturbed.

SECTION X
GROWTH INDUCING ASPECTS
(PREFERRED ALTERNATIVE)

A residential project will generate higher tax revenues, an increase in student population and an increase in consumer goods sales. In addition, the development of the parcel will increase utility services and public services which, in turn, will increase spending for operating and maintenance of these systems i.e., road maintenance, electricity, solid waste disposal and water utilization. For the proposed action, the consumer base would increase by approximately 84 people which increases the residential population of Dix Hills by .3%. This constitutes a customer base for local businesses, restaurants, etc. of the same magnitude. The local tax base would also be increased by property and sales tax revenues.

SECTION XI
ALTERNATIVES

This section describes five alternative action plans including the "Modified Cluster Yield Alternative" which is the preferred action and the "Full Yield Alternative" which was the action that triggered the environmental review. Table 3 presents an impact review which may be used to compare the alternatives to the proposed action.

A. Full Yield Alternative

This action is shown on enclosed drawings entitled "Full Yield Map" Jill Estates Drawings No. F1 through F3. This alternative was originally submitted to the Planning Department of the Town of Huntington for consideration to use the entire parcel based on its current zoning. Twenty four parcels within both the R40 and R20 zones were proposed. The length of the roadway proposed 3560 feet ends in a cul de sac at the northern end of the property and is longer than normally acceptable single access roads. The environmental impacts are given on Figure 3.

The same mitigation measures for geological resources, water resources, transportation, air resources, community resources, demographic and cultural resources would apply to this alternative as the preferred alternative (See Section VI.)

Terrestrial and aquatic ecology mitigations would consist

TABLE 3 ENVIRONMENTAL IMPACTS

ITEM	FULL YIELD ALTERNATIVE	NO ACTION ALTERNATIVE	MODIFIED YIELD ALTERNATIVE	CLUSTER ALTERNATIVE (PREFERRED)	ATTACHED SINGLE FAMILY CLUSTER
TOTAL SITE AREA (ACRE)	20.6	20.6	20.6	20.6	20.6
TOTAL NO. OF UNITS	24	0	17	17	17
TOTAL FLOOR AREA	84000	0	59500	59500	34000
IMPERVIOUS AREA					
ROOF (ACRES)	1.10	0	.78	.78	.39
PAVED (ACRES)	4.95	0	1.40	1.25	.81
PERVIOUS AREA					
UNDISTURBED (ACRES)	6.30	20.6	10.56	15.17	16.24
LANDSCAPED (ACRES)	9.30	0	7.86	3.40	3.00
TOTAL OCCUPANTS	84	0	60	60	43
TOTAL K-12 STUDENTS	32	0	22	22	7
SCHOOL DISTRICT IMPACT (%)	.35	0	.24	.24	.07
IRRIGATION (MG/YR.)	2.53	0	2.85	.91	.82
PRECIPITATION (MG/YR.)	24.51	24.51	24.51	24.51	24.51
CONSUMPTION (MG/YR.)	2.67	0	1.91	1.91	1.37
TOTAL USAGE (MG/YR.)	5.28	0	4.76	2.82	2.20
RECHARGE VOLUME (MG/YR.) *	18.8	10.79	16.5	13.8	14.80
WATER BALANCE *	13.5	10.79	11.74	10.98	12.60
NITRATE N RECHARGE mg/l *	6.8	.1	4.2	4.7	3.8
TOTAL SOLID WASTE GENERATED (#/DAY)	501	0	360	360	258
CHLORIDES (TONS/YR.)	3.21	0	2.75	1.70	.78
POWER USAGE					
ELECTRICAL (MHW/YR.)	324.0	0	153.0	153.0	153.0
FUEL OIL USAGE (GAL/YR.)	36000	0	17000	17000	12000
COST PER UNIT TO CONSTRUCT (APPROX.)	225,000	0	225,000	225,000	85000

* SEE EXHIBIT 2 ** APPROXIMATELY 1500 SQ. FT FOR BUILDING FOOTPRINT-2 STORY UNIT WOULD BE APPROXIMATELY 3000 SQ.FT. WITH A 2 CAR 500 SQ FT GARAGE

of trying to maintain as many existing large berth trees and the individual properties. In addition, a ten foot natural buffer would be installed between the western property line and any landscaping of proposed properties to be maintained in a pristine state by new property owners. Land use and zoning would be maximized and no mitigation would be proposed in the alternative for the item.

Site and area resources which will be irreversibly and irretrievably consumed by this alternative would be both physical and non physical aesthetics.

Physical resources committed would include as much as 16.2 acres of natural vegetation removed by development, the change in insitu groundwater and air pollutant concentrations, present area automobile traffic volumes, energy/construction material resources committed during construction, and present levels of usage for utilities and public resources.

Among non-physical/aesthetic resources to be committed are: the present visual quality of the site and desirability of community for present site land usage.

Seventy five percent of vegetation will be removed from the site for development of which 45% will be landscaped. Net loss of vegetation will be 30% of the property. Water utilization will increase from 0 to 5.28 million gallons per year. Chloride leading to the site will increase from 0 to 3.21 tons/year. There will be an increased demand on energy from 0 currently to 324.0 MHW/year and 36,000 gallons of heating oil. Solid waste

will be generated from current 0 to 501 pounds/day, 50% of which should be recycled. The lots would create 18 front type lots (through lots) on those lots fronting Campbell and Village Hill Drive.

B. No Action Alternative

This alternative considers no change in the current condition of the property. As shown on Table 3 11.27 million gallons of water would continue to discharge into the ground. The condition of this property and maintenance of the property to prevent dumping or incursions is subject to the ownership and property rights enforcement.

C. Modified Yield Alternatives

Drawings M1, M2 and M3 entitled "Yield Map" shows the seventeen lot modified subdivision. The lots are designed to comply with the R20 (20,000 square feet) requirements within the 1/2 acre. A dedication of 10.7 acres of parkland is proposed as part of this alternative with access from Vanderbilt Parkway. A sump was designed at the southeast corner of the parcel to accommodate drainage requirements for the 10.78 R20 portion (development) of the subdivision. The building unit sizes and accessory structures are planned to be the same size as those in the "Full Yield Alternative" Table 4 provides comparisons for this alternative.

This alternative creates six two front thru lots along the subdivision road and Campbell Drive thereby mitigating this

subdivision concern for the "Full Yield Alternative" and provides for "Positive Drainage Disposal" through the use of a sump instead of a drywell.

The road is 1340 feet long which provides more accessible fire service to the units from the major road (North Service Road) than the "Full Yield Alternative" and does not exceed 2% in grade. Table 3 gives pertinent parameter comparisons for this alternative vs. the other alternatives.

The same mitigation measures for geological resources, water resources, transportation air resources, community resources, demographics and cultural resources would apply to this alternative as the preferred alternative (See Section VI).

Mitigation for terrestrial and aquatic ecology damage would be similar to that indicated in Section VI.

Site and area resources which will be irreversibly and irretrievably consumed by this alternative would be both physical and non-physical aesthetic.

Physical resources committed would include 10.8 acres of natural vegetation removed by development, the change in insitu groundwater and air pollutant concentration, present acre automobile traffic volumes, energy/construction material resources committed during construction and present levels of usage for utilities and public services.

Among non-physical/aesthetic resources to be committed are: the present visual quality of the site and desirability of the community for present site land usage.

Forty nine percent of vegetation will be removed from the site for development of which 38% will be landscaped. Net loss of vegetation will be 9% of the property. Water utilization will increase from 0 to 4.76 million gallons per year. Chloride leading to the site will increase from 0 to 2.75 ton/year. There will be an increased demand on energy from 0 currently to 153.0 MHW/year and 17,000 gallons of heating oil. Solid waste will be generated from current 0 to 360 pounds/day, 50% of which should be recycled. The lots would create two front type lots (through lots) on those lots fronting Campbell and Village Hill Drive.

D. Cluster Alternative (Preferred Project)

Drawings 1, 2 and 3 are a "Cluster Development" alternative consolidated from the modified yield configuration previously discussed. This alternative modified thirteen lots to sizes below 20,000 square feet to approximately 1/3 of an acre. The housing unit sizes and accessory structures are to remain the same size as those proposed for the "Full Yield Alternative". Again, a recharge basin is to be provided at the southeast corner of the parcel. A road 875 feet long will provide frontage for all units. The road grade would not exceed 2%. A park dedication located north within the entire one acre zone and 1.1 acres of the northerly extension of the R20 zone will be dedicated in the Town for parkland and will be accessed from Vanderbilt Parkway. Table 3 compares the impact of this alternative with the other four alternatives.

E. Attached Single Family Cluster Alternative

This alternative depicted on Figure 7 shows a 17 unit townhouse configuration. The units contemplated are 2000 square feet each both simplex and duplex each having a single car garage. The road length is approximately 700 feet long with excess parking provided in the cul de sac. The subdivision recharge basin would be located at the southeast corner of the property. All property north of the subject multi unit cluster would be subject to dedication as parkland. The road would not exceed 2%.

The same mitigation measures for geological resources, water resources, transportation, air resources, community resources, terrestrial and aquatic ecology, demographic and cultural resources would apply to this alternative as the preferred alternative (See Section VI).

Site and air resources which will be irreversibly and irretrievably consumed by this alternative would be both physical and non-physical/aesthetic.

Physical resources committed would include 5 acres of natural vegetation removed by development, the change in insitu groundwater, and air pollutant concentrations, present area automobile traffic volumes, energy/construction material resources committed during construction, and present levels of usage for utilities and public services.

Among non-physical/aesthetic resources to be committed are:

the present visual quality of the site and desirability of the community for present site land usage.

Twenty percent of vegetation will be removed from the site for development of which 3.5% landscaped. Net loss of vegetation will be 16.5% of the property. Water utilization will increase from a 0 to 2.20 million gallons per year. Chloride leading to the site will increase from 0 to .78 tons/year. There will be an increased demand on energy from 0 currently to 153 MHW/year and 36,000 gallons of heating oil. Solid waste will be generated from current 0 to 258 pounds/day, 50% of which should be recycled.

F. Other Possible Property Uses

The property as currently zoned could be consolidated into the surrounding property. Each adjoining owner would be requested to purchase the additional property and extend between 100 or 200 feet into the subject parcel in the one acre zone. The property in the 1/2 acre zone could as well be sold to the adjoining property owner for larger consolidated parcels.

The property could be used for a road between Vanderbilt Parkway and the North Service Road to the Long Island Expressway. Since it was original designated by New York State for this propose, a transition to an arterial would be conducive to the configuration of the property.

VANDERBILT PK'WY

VILLAGE HILL DR.

PATRI CT.

0
100
200

R-40
R-20

SECTION XII

TRAFFIC

A. Study Area - The major roadway to be affected by the proposed action is the North Service Road of the Long Island Expressway. The area of impact would be the road section between Commack Road to the east and Carll's Straight Path to the west. The N.Y.S. D.O.T. recently completed this section of roadway following the Environmental Impact Statement proposed in 1988. The level of service at the three influenced intersections i.e. Commack Road, Carll's Straight Path and Deer Park Road were predicted to have the following levels of service.

	<u>AM Peak</u>		<u>PM Peak</u>	
	1990	2010	1990	2010
Deer Park Ave. with Service Lane north	D	E	B	C
Carll's Straight Path with Service Lane north	C	C	C	C
Commack Road with Service Lane north	A	B	B	C

Traffic counts in the north service road in November, 1992 indicate 489 vehicles driving the peak hour. Since this is a two lane road, the volume is in Zone A or B. A maximum total of 51

vehicle trips would be projected for the proposed subdivision. In addition, projecting vehicle counts by 5%/year to 1996 projects 589 vehicles. This still provides adequate gaps in a two lane one way service road. The gaps between vehicles even during this period are adequate to allow for relatively little weaving during peak hours or any other time of the day. (See Figure 11).

NEW YORK STATE
 DEPT OF TRANSPORTATION
 AVERAGE WEEKDAY
 HOURLY REPORT

L.I.E NORTH SERV.ROAD
 COMMACK ROAD TO
 CARLLS STRAIGHT PATH
 NOVEMBER 1982

AM	WESTBOUND	FILE NAME
12-1	15	RT906B 078441192
1-2	7	
2-3	4	
3-4	2	
4-5	5	
5-5	22	
6-7	279	
7-8	489 **	DAILY TOTAL
8-9	337	2,839
9-10	108	
10-11	109	EST. AADT
11-12	106	2,028
PM		
12-1	120	
1-2	116	
2-3	147	
3-4	172	
4-5	216	
5-6	178	
6-7	115	
7-8	98	
8-9	63	
9-10	72	** DENOTES
10-11	46	PEAK HOUR
11-12	25	
TOTALS	0	2,839

FIGURE 9

NEW YORK STATE
 DEPT OF TRANSPORTATION
 AVERAGE WEEKDAY
 HOURLY REPORT

L.I.E NORTH SERV. ROAD
 CARLLS STRAIGHT PATH TO
 ROUTE 281
 NOVEMBER 1992

	WESTBOUND
AM	
12-1	12
1-2	10
2-3	5
3-4	6
4-5	11
5-6	67
6-7	422
7-8	745 **
8-9	500
9-10	260
10-11	186
11-12	103
PM	
12-1	154
1-2	153
2-3	188
3-4	219
4-5	222
5-6	178
6-7	116
7-8	110
8-9	79
9-10	72
10-11	48
11-12	27
TOTALS	0 4,053

FILE NAME
 RT906E 078431192

DAILY TOTAL
 4,053

EST. AADT
 3,753

** DENOTES
 PEAK HOUR

FIGURE 9
 (CONT'D.)

EXHIBITS

COUNTY OF SUFFOLK



EXHIBIT 1

ROBERT J. GAFFNEY
SUFFOLK COUNTY EXECUTIVE

DEPARTMENT OF PUBLIC WORKS

April 23, 1996

STEPHEN G. HAYDUK, P.E.
COMMISSIONER

Jeffrey A. Hartman, P.E.
8 Elwin Place
East Northport, New York 11731

Attention: Jeffrey A. Hartman

Re: CR 67, Motor Parkway, "Jill Estates." SCTM #0400-429-04-019 & 0400-263-02-072

Gentlemen,

Be advised that we have reviewed your letter of March 26, 1996 regarding the above referenced proposed subdivision. The "yield map" that you have submitted shows only one (1) lot (#16) fronting the Right-of-way of motor parkway. This lot appears to be segregated from the remainder of this subdivision that lies to the south, by a two(2) acre "park land."

If the subdivision is developed with only one lot fronting Motor Parkway, we would have no objection to issuing a Highway Work Permit for a single access to this lot. All other access to the remaining portion of this subdivision should be by way of the NYSDoT maintained LIE North Service Road.

Should you have any questions please call this office at (516) 852-4100.

Very truly yours,

Richard J. LaValle, P.E.
Chief Engineer

By:

M. Paul Campagnola
Permits Engineer

cc: Peter Rabano, Town of Huntington Planning
Robert E. Riekert, Suffolk County Planning Dept.
William S. Shannon, Suffolk County DPW

CR67JLL.wpd

SUFFOLK COUNTY IS AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

EXHIBIT 2

WATER BALANCE INFORMATION

1. Area of Site	20.60 acres
2. Precipitation Rate	44.00 in/yr
3. Water Recharge from Turf	19.80 in/yr
4. Water Recharged From Natural Land	19.80 in/yr
5. Evaporation Fraction from Impervious Turf	.10
6. Nitrogen Conc. in Water Used	.90 mg/l
7. Nitrogen Conc. in Precipitation	1.00 mg/l
8. Turf Fertilizer Rate	2.30 lbs/1000 sq.ft./yr
9. Fraction of Nitrogen Leached from Turf	.57
10. Nitrogen per person in Wastewater	10.88 lbs/yr
11. Nitrogen Removal Rate of Natural Land	.95
12. Irrigation Recharged from Turf	4.50 in/yr

EXHIBIT 2 (cont'd)

FULL YIELD ALTERNATIVE
WATER RECHARGED

	<u>Water Recharged</u>		<u>Nitrogen Leached</u>	
	<u>in/yr</u>	<u>Mg/yr</u>	<u>lb/acre/yr</u>	<u>mg/l</u>
Turf	10.97	6.4	25.7	14.0
Natural Land	6.05	3.3	9.1	.1
Impervious Runoff	11.63	6.5	2.6	.3
Wastewater	4.61	2.6	24.2	23.1
Total		18.8	52.6	6.8

NO ACTION ALTERNATIVE

	<u>Water Recharged</u>		<u>Nitrogen Leached</u>	
	<u>in/yr</u>	<u>Mg/yr</u>	<u>lb/acre/yr</u>	<u>mg/l</u>
Turf	0	0	0	0
Natural Land	19.80	10.79	.5	.1
Impervious Runoff	0	0	0	0
Wastewater	0	0	0	0
Total		10.79	.5	.1

MODIFIED YIELD ALTERNATIVE

	<u>Water Recharged</u>		<u>Nitrogen Leached</u>	
	<u>in/yr</u>	<u>Mg/yr</u>	<u>lb/acre/yr</u>	<u>mg/l</u>
Turf	13.50	4.4	19.06	14.5
Natural Land	11.75	6.4	.83	.1
Impervious Runoff	3.77	2.1	.84	.1
Wastewater	3.06	1.7	16.21	23.1
Total		14.6	37.0	6.26

EXHIBIT 2 (cont'd)

CLUSTER ALTERNATIVE

	<u>Water Recharged</u>		<u>Nitrogen Leached</u>	
	<u>in/yr</u>	<u>Mg/yr</u>	<u>lb/acre/yr</u>	<u>mg/l</u>
Turf	8.43	2.8	11.90	14.5
Natural Land	14.60	7.9	.1	.1
Impervious Runoff	3.04	1.69	.68	.1
Wastewater	3.06	1.7	16.21	23.1
Total		14.1	28.9	5.1

MULTIPLE FAMILY UNIT ALTERNATIVE

	<u>Water Recharged</u>		<u>Nitrogen Leached</u>	
	<u>in/yr</u>	<u>Mg/yr</u>	<u>lb/acre/yr</u>	<u>mg/l</u>
Turf	6.3	2.9	2.02	14.5
Natural Land	15.6	8.50	.1	.1
Impervious Land	2.6	1.4	.5	.1
Wastewater	4.61	2.6	24.2	23.1
Total		15.4	26.8	4.30

APPENDICES

APPENDIX A

ENVIRONMENTAL ASSESSMENT FORM

PART I - PROJECT INFORMATION

Responsibility of project sponsor to complete

NOTICE: This document is designed to assist in determining whether the proposed action may have a significant effect on the environment. Complete the entire form, Parts A thru E. Answers to the questions herein will be considered as part of the application for approval and may be subject to further verification and public review. Provide any additional information you believe will be needed to complete Parts II and III of the Full EAF. It is expected that completion of the Full EAF will be dependent on information currently available and will not usually involve new studies, research or investigation. If the project sponsor determines that information not currently available and requiring additional work is needed and should be supplied, then he/she does so at his/her own discretion. Please answer N/A. to any question below that does not apply.

Name of Action: SUBDIVISION OF PROPERTY

Suffolk County Tax Map Number: DIY 0109 SECT 249 BLK 04 LOT 20 & SECT 263 LOT 02 LOT 72

Location: VILLAGE HILL DR RUNNING S.W. TO VANDERBILT PKWY. III HILLS

Applicant/Sponsors Information:

Name: DAVID MAROM (BRITT REALTY) Phone: (516) 979-6069

Street Address: 521 ROUTE 111

City/State/Zip: HAUPPAUGE, N.Y. 11788

Owner Information (if different than Applicant/Sponsor):

Name: SAME AS ABOVE Phone: ()

Street Address: _____

City/State/Zip: _____

Use the last page or the back of this form to answer questions for which there is insufficient space on the form to include all pertinent information.

Description of Action:

SUBDIVIDE 20.6 ACRES OF RESIDENTIAL PROPERTY INTO 23 SINGLE FAMILY RESIDENTIAL PARCELS

A. Site Description:

Physical setting of overall project, both developed and undeveloped areas.

1. Present land use: CHECK ALL THAT APPLY ✓

Urban	Industrial	Commercial	Residential
Rural (non-farming) X	Forest	Other (explain)	Agriculture

2. Total Acreage of Project Area: _____ acres.

APPROXIMATE ACRES	PRESENT	COMPLETED PROJECT
Meadow or Brushland	20.6 acres	5.0 acres
Forest	_____ acres	_____ acres
Agriculture	_____ acres	_____ acres
Wetland	_____ acres	_____ acres
Water Surface Area	_____ acres	_____ acres
Unvegetated	_____ acres	_____ acres
Roads, Buildings etc.	_____ acres	6.3 acres
Other (indicate) LANDSCAPED	_____ acres	9.3 acres

3. What is the predominant soil type(s) on the project site? SANDY LOAM
 Soil Drainage:

Well Drained %	Moderately Drained % 100	Poorly Drained %
-------------------	-----------------------------	---------------------

4. Approximate percentage of proposed project site with slopes:

0 to 10%- 95 %	10 to 15%- 5 %	15% or greater- %
----------------	----------------	-------------------

5. Is project site contiguous to or substantially contiguous to (i.e., across the street etc.), or contain a building, site or district on the State or National Registers of Historic Places or on the Register of Natural Landmarks?

Yes No

6. Is project site contiguous or substantially contiguous to or is it occupied by an historic building or landmark as designated pursuant to Article VI of the Town Code?

Yes No

7. Is the project site within a one mile radius of an archeologically significant site or multiple site zone, as has been identified by the New York State Office of Parks, Recreation and Historic Preservation using the "circles and squares" method of evaluation?

Yes No

8. What is the depth of the Water Table? 150-160 FT(+/-) feet;
 and to Groundwater? 150-160 FT(+/-) feet

9. Is project site located over a primary, principle or sole source aquifer?

Yes No

10. Do hunting, fishing or shell fishing opportunities presently exist on the project site?

Yes No

If yes will they continue after completion of project?

Yes No N.A.

11. Does project site contain any species of plant or animal life that is identified as protected, threatened or endangered?

Yes No

If yes then indicate authority _____ and identify each species: N.A.

12. Are there any unique or unusual land forms on the project site? (e.g., Cliffs, dunes, etc.)

Yes No

Indicate which: N.A.

13. Is the project site presently used by the community or neighborhood as an open space or recreation area?

Yes No If yes explain on the back of this form.

If yes will the use continue at the completion of the project?

Yes No

14. Does the site presently include views known to be important to the community?

Yes No

If yes will the views be retained with the completion of the proposed project?

Yes No

15. Name(s) of streams and or rivers within or contiguous to project area: _____
 NONE

A. Name of water body to which the stream/river is tributary: _____
 NONE

16. Names and sizes (acres) of Lakes, ponds and other wetland areas within or contiguous to project area: NONE

17. Is the project site served by existing public utilities or are such utilities readily available to the site?

Yes No

a) If yes is there sufficient capacity to allow the proposed project to connect?

Yes No

b) If yes will improvements be necessary to allow connection?

Yes No

18. Is project site located in or substantially contiguous to (e.g., across the street, etc.) a Critical Environmental Area (CEA) designated pursuant to Article 8 of the ECL and 6 NYCRR 617 (SEQRA)?

Yes No

19. Has the project site ever been used for disposal of solid or hazardous waste?

Yes No NOT TO THE BEST OF MY KNOWLEDGE BEST ON A SURFICIAL REVIEW OF THE SITE

B. Project Description:

1. Physical dimensions and scale of project (fill in dimensions as appropriate)

a) Total contiguous and/or substantially contiguous (e.g., across the street) acreage owned or controlled by the project sponsor is 0 acres.

b) Project acreage to be developed initially is 15.6 acres and ultimately is 15.6 acres.

c) Acreage to remain undeveloped upon completion of project is 5 acres.

d) Length of project in miles is ONE HALF (+/-) miles. (If appropriate)

e) If project will result in enlargement of a facility indicate the percent expansion here: N.A. %

f) For commercial/industrial indicate, if any, the number of off-street parking spaces existing: N.A. proposed: N.A. and required by Code:

g) Estimate the maximum vehicular trips that will be generated per hour upon completion of project: 60 trips/hour.

h) If the proposed project is residential indicate below the number and type of housing units below:

	One Family	Two Family	Multi-Family	Attached Clusters
Initially	23			
Ultimately	23			

i) Dimensions, in feet, the largest proposed structure: 35 FT height, 60 FT width, 70 FT length.

J) If non-residential indicate the gross floor area of proposed building: NA sq.ft.

k) If commercial/industrial indicate the "Floor Area Ratio": NA FAR. (Proposed building area in square feet divided by lot area in square feet)

l) Linear feet of frontage on any road in the Town is 40 feet

2. How much natural material (e.g., rock, earth, sand, etc.) will be removed from the project site? MINIMAL tons, MINIMAL cubic yards.

3. Will disturbed areas be reclaimed?

Yes No N/A

a) If yes indicate here the intended purpose for reclamation: LANDSCAPING AND BUFFERS

b) Will top soil and/or upper subsoil be stock piled for reclamation?

Yes No

4. Indicate here how many acres of vegetation (trees, shrubs, ground cover) will be removed from the project site during construction: 15.6 acres.
5. Will mature forest (over 100 years old) or other locally important vegetation and/or NYS protected native plants be removed by the proposed project?
 Yes No
6. If the proposed project is multi phased then: NA
 a) Total number of phases are _____
 b) Anticipated starting date phase one is: Month _____ Year _____
 c) Approximate completion date of final phase is: Month _____ Year _____
 d) Is the first phase functionally dependent on the following Phase(s).
 Yes No
7. Estimate the number of jobs generated: during construction 20; if industrial/office or retail indicate number of jobs generated when complete _____
8. If any indicate the number of jobs that will be eliminated by the proposed project if it is implemented: NA
9. Will the proposed project require relocation of any other projects or facilities?
 Yes No
 If yes, explain here: _____
10. Does the proposed project involve a liquid waste discharge to a body of water?
 Yes No
 a) If yes, indicate volume per day (_____ gallons), & type (sewage, industrial) _____
 b) If yes, indicate into what body of water the discharge will take place: _____
11. Is subsurface liquid waste disposal involved?
 Yes No
 If yes, indicate volume per day (6900 gallons), type (storm water, sewage, industrial): _____
12. Will the surface area of an existing body of water increase, decrease or will the bottom become deeper as a result of the proposed project?
 Yes No If yes, explain on back of this form.
13. Is any portion of the proposed project within either a 50 year or 100 year flood plain?
 Yes No If yes which: _____ Year flood plain.
14. If implemented will the project generate solid waste?
 Yes No
 a) If yes, estimated amount per month will be 5.8 tons.
 b) If yes, will an existing solid waste facility be used?
 Yes No If yes, provide name and location here: _____
HUNTINGTON RESOURCE RECOVERY FAC.
EAST NORTHPORT
15. Will any wastes not go into a sewage disposal system, a sanitary landfill, resource recovery facility or be recycled?
 Yes No UNLESS SOMEONE BREAKS THE LAW
 If yes, explain _____
16. Indicate the volume of solid waste that will be recycled by the completed project each month: OPTIMISTICALLY 50% 2.9 tons.

To be answered only if the project is one that will operate a facility that disposes of solid waste

17. Will the project involve the handling and disposal of solid waste?
 Yes No
 a) if yes, what is the anticipated rate of disposal? _____ tons/month.
 b) If yes, and landfilling is proposed, what is the site life? _____ years.

18. Is the project expected to use herbicides or insecticides on a regular basis for other than normal landscape maintenance?
 Yes No

19. If implemented will project routinely produce odors?
 Yes No

20. Is project expected to produce operating noise which exceeds local ambient noise levels?
 Yes No DURING CONSTRUCTION

21. Will project result in increased energy usage for other than ordinary lighting and heating requirements?
 Yes No CONSTRUCTION EQUIPMENT DURING CONSTRUCTION
 If yes, indicate Type(s): _____

22. If water supply is from wells indicate pumping capacity, NA _____ gallons/minute.

23. Total anticipated water usage will be 9200 gallons per day.

24. Does the project involve local, state or federal funding?
 Yes No
 If yes, Explain _____

25. Approvals required:

Agency			Type of Approval	Submittal Date
Town Board	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
Planning Board	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	SUBDIVISION APPROVAL	
Town ZBA	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
Health Department	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	SUBDIVISION APPROVAL	
Other Local Agencies	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
State Agencies	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
Federal Agencies	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		
Other	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		

C. Zoning and Planning Information

1. Does the proposed action involve a planning or zoning decision?
 Yes No

Indicate which of the following: Check All that Apply

Zoning Amendment	Zoning Variance	Special Use Permit	Subdivision X
Site Plan	New or Updated Master Plan	Resource Management Plan	Other

If other, explain: _____

2. What is the existing zoning classification(s) of the subject site? R40 & R20

3. In your opinion, what is the estimated maximum potential development of the subject site at the existing zoning?
 AS SHOWN

Source: NYSEQR Form 14-16-2 (2/87)-7c, revised 6/87 and 12/91 (Huntington Town Planning Dept.)

4. If a zone change is proposed what zoning classification is requested and, in your opinion, what is the estimated maximum development potential of the subject site?

Explain: NA

5. Is the proposed action consistent with the recommended uses in adopted local land use plan(s)?

Yes No

6. What are the predominant land uses and zoning classifications within a 1/4 mile radius of the proposed action? List R20 & R40

7. In your opinion, is the proposed project compatible with adjoining/surrounding land uses within 1/4 mile of the subject site?

Yes No

8. If the proposed action is a subdivision of land how many lots are proposed and what is the minimum lot size proposed? Explain: 23 LOTS ARE PROPOSED. THE MINIMUM LOT SIZE IS 20000 SQUARE FT.

9. Will the proposed action require the extension of an existing sewer district or authorization for formation of a new sewer or water district?

Yes No

10. Will the proposed action create a demand on any community provided services (recreation, education, police, fire protection etc.)?

Yes No

If yes, is the existing capacity of the utility or service sufficient to handle the project demand?

Yes No

11. Will the proposed action result in generation of vehicular traffic significantly above present levels?

Yes No

a) If yes, is the existing infrastructure (roads, signals, signage, etc.) adequate to handle the additional traffic?

Yes No On what authority is this opinion offered?

b) Will improvements be necessary?

Yes No If yes to either a) and/or b) provide the basis for such opinion and agency name and documentation that supports the conclusion: _____

D. Additional Information and Details

Attach an addendum with any additional information needed to clarify your project. If there may be adverse impacts associated with the proposal, discuss those impacts and the measures which you will undertake to mitigate or avoid them.

E. Verification

I hereby certify that I have filled out the above form for the action known as:

SUBDIVISION OF PROPERTY
and to the best of my knowledge all of the answers are true.

Name: JEFFREY A. HARTMAN Date: 1/23/95
(Print or type name)

Signed: _____ Title: _____
(Preparer)

If the Applicant/Sponsor did not fill out this form then the following verification must be signed.

I am the applicant/sponsor of the proposed project described above and I hereby certify that I have given the above signed individual/company permission to fill out this form on my behalf. I further certify that the above signed consultant has made me aware of the questions on this form and explained the answers that have been provided, and I understand the proposed project and the answers provided on this form.

Name: _____ Date: _____
(Print or type name)

Signed: _____ Title: _____
(Applicant/Sponsor)

APPENDIX B

POSITIVE DECLARATION

617.21
Appendix E
State Environmental Quality Review
POSITIVE DECLARATION
Notice of Intent to Prepare a Draft EIS
Determination of Significance

Project Number: _____

Date: August 17, 1995

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law.

The Huntington Town Planning Board, as lead agency, has determined that the proposed action described below may have a significant effect on the environment and that a Draft Environmental Impact Statement will be prepared.

Name of Action: JILL ESTATES

SEQR Status: / Type I
 — Unlisted

Description of Action:

The action is for the subdivision of a 20.59 acre site, zoned R-40 and R-20 Residence District, for subsequent construction of twenty-four (24) new single-family homes and a cul-de-sac 3400' feet in length. The application does not propose any parkland or area for a recharge basin.

Location: (Include street address and the name of the municipality/county. A location map of appropriate scale is also recommended.)

Located between Vanderbilt Motor Parkway and the Long Island Expressway (NYS 495) North Service Road, 34.94 feet west of Dillon Drive in Dix Hills; indicated as parcel 0400-263-02-72 and 0400-249-04-19 on the Suffolk County Tax Map.

Reasons Supporting This Determination:

Refer to the attached Environmental Assessment Form (EAF) Part III and the Town of Huntington Planning Board adopted SEQR resolution dated August 16, 1995.

For further information:

Contact Person: Richard Machtay, Director of Planning, or
Scott L. Robin, Environmental Review Division

Address: 100 Main Street, Huntington, NY 11743

Telephone Number: (516) 351-3196

A Copy of this Notice Sent to:

- / 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 -- Frank Petrone, Supervisor, Town of Huntington
- / Applicant -- D & S Realty Development, L. P., 521 Route 111, Hauppauge, New York 11788

Other involved agencies (if any):

- / New York State Dept. of Transportation, New York State Office Building, Veterans Memorial Highway, Hauppauge, NY 11787, Attn: T. C. Hoffman, Regional Traffic Engineer
- / Suffolk County Department of Public Works; Attn. Paul Campagnola, Permits Engineer
- / Suffolk County Department of Health Services, Wastewater Management Division, County Center, Riverhead, New York 11901, Attn: Stephen A. Costa, P.E., Chief
- / Dix Hills Water District, Caledonia Road, Dix Hills, NY 11746

Interested Agencies:

- / Long Island Regional Planning Board
- / Suffolk County Planning Commission, Veterans Highway, Hauppauge, New York 11788
- / Huntington Town Conservation Board
- / Long Island Lighting Company, 175 East Old Country Road, Hicksville, NY 11801, Attn. William S. Davidson, Director of Government Relations
- / Half Hollow Hills School District
525 Half Hollow Road
Dix Hills, New York 11746, Attn: Mr. Kevin McGuire, Superintendent

cc: Planning Board

HUNTINGTON TOWN PLANNING BOARD

MEETING OF AUGUST 16, 1995

The following resolution was offered by S. Celano
and seconded by W. Penza

WHEREAS, D & S Realty Development, L.P., 521 Route 111, Hauppauge, New York 11788, owner of fee title to land, has submitted a subdivision application for the JILL ESTATES property located between Vanderbilt Motor Parkway (CR 67) and the Long Island Expressway (NYS 495), 34.94 feet west of Dillon Drive in Dix Hills, indicated as parcels 0400-263-02-72 & 0400-249-04-19 on the Suffolk County Tax Map, prepared by Jeffrey A. Hartman, P.E., Consulting Engineers, and

WHEREAS, said preliminary application was received on April 18, 1995 for the subdivision of a 20.59 acre parcel into twenty-four (24) lots, seven (7) zoned R-40 Residential and seventeen (17) zoned R-20 Residential, and

WHEREAS, said application is classified a Type I Action pursuant to 6 NYCRR PART 617 of the State Environmental Quality Review sections 617.12(b)(5)(ii) and 617.12(b)(9 & 10), and

WHEREAS, the Planning Board has been established as the lead agency pursuant to SEQRA § 617.6 for the action, and

WHEREAS, the Planning Board has caused a review of the preliminary map 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 Part 617), and

WHEREAS, the staff of the Huntington Town Planning Department, Environmental Review Division, at the direction of the Planning Board, has reviewed the information provided with Part I of the Full Environmental Assessment Form and has prepared a Full Environmental Assessment Form Parts II and III on behalf of the Planning Board, and

WHEREAS, the Huntington Town Planning Board has conducted a complete review of all aspects of the Environmental Assessment Form Parts I, II and III and the facts presented thereby and the most recent plans; now, therefore be it

RESOLVED, that the Huntington Town Planning Board hereby adopts the Full EAF (Parts I, II, and III) prepared for Jill Estates subdivision and finds from the facts therein that there may be significant environmental impacts resulting from the implementation of the proposed plan and hereby issues a Positive Declaration, pursuant to the SEQRA regulations, and be it further

RESOLVED, that the Planning Board of the Town of Huntington hereby directs the Director of the Planning Department to file Notice of Determination of Significance, and be it further

RESOLVED, that the Planning Board of the Town of Huntington hereby directs the applicant to prepare a Draft Environmental Impact Statement (DEIS), and be it further

RESOLVED, that pursuant to § 617.17 (a) and (b) of the SEQRA regulations, the lead agency may charge a fee to the applicant, not to exceed two percent of the total project cost [total project cost shall be calculated on the cost of the land plus the cost of all required site improvements, not including the cost of buildings and structures] (supplying utilities, site preparation, labor and materials as determined by a cost estimate publication such as "MEANS") in order to recover the actual cost of preparing or reviewing a DEIS (including scoping), and be it further

RESOLVED, that the applicant shall be made aware of the estimate of said fee within fifteen (15) working days of the submission of the DEIS and no formal review of the document shall take place until the estimated fee is deposited into an escrow account with the Town Comptroller's Office, and be it further

RESOLVED, that said escrow account will be charged for services and materials rendered by the Town for review of the DEIS, and should the funds be depleted before the review is complete than it will be incumbent on the applicant to replenish such funds, and any monies left at the end of said review will be returned to the applicant, and be it further

RESOLVED, that Parts I, II and III of the Full Environmental Assessment Form are attached hereto and made a part hereof.

VOTE: 4 AYES: 4 NOES: 0
Absent: T. Cole

The resolution was thereupon declared to be duly adopted.

ENVIRONMENTAL ASSESSMENT FORM
PART III

Jill Estates

SEQRA CLASSIFICATION

The subject property is substantially contiguous to a Town designated open space index parcel indicated as SE-16 and is proposed to have twenty-four (24) new residential homes without connection to a public or community sewage system. Pursuant to 6 NYCRR Part 617 (SEQRA) sections 617.12 (b) (5) (ii), and 617.12 (b) (10), the proposed action is classified Type I.

PROJECT DESCRIPTION

The action is for the subdivision of a 20.59 acre site for subsequent construction of twenty-four (24) new single-family homes as exhibited in the applicant's Preliminary Map, dated January 18, 1995. The site is bisected by a zone boundary line with 9.81 acres zoned R-40 Residence District and 10.78 acres zoned R-20 Residence District, north and south respectively. The Preliminary Map depicts seven (7) R-40 lots and seventeen (17) R-20 lots. The application does not propose any parkland, road widening or recharge basin dedication.

The subject property is located between Vanderbilt Motor Parkway to the north and the Long Island Expressway (LIE) Service Road to the south, 34.94 feet west of Dillon Drive in Dix Hills (SCTM # 400-249-04-19 & 400-263-02-72). The property, shaped similar to a clarinet stood on end, is long and narrow (approximately 4,600' X 200'), flaring in width to 531' where it meets the LIE. Access to the site will be provided by a 3400' foot long cul-de-sac from the LIE Service Road. The cul-de-sac will enter the property approximately at the frontage midpoint with lots to either side within the flared portion. Approximately 350' feet north into the site, the road sweeps to the eastern boundary line as the property narrows to a median width of 200 feet. Placement of the road along the boundary line will create "through lots" of the existing properties adjoining to the east (i.e. frontage on two streets).

SEQRA HISTORY

Pursuant to the SEQRA Handbook, the lead agency is recommended to review the files on previous determinations of significance involving similar projects or geographic locations. A similar project, immediately north of the subject site between Vanderbilt Motor Parkway and Northern State Parkway, underwent SEQRA review for subdivision in the mid-1980s. Known as Vanderbilt Homes, it was a 21 acre R-40 parcel, measuring 4,736 feet in length and 200 feet in width. In January 1985 an application was submitted to subdivide the property into 14 one-acre lots with access to be provided by a 4,300 foot long cul-de-sac. The Town Planning Board issued a Positive Declaration for the project in August 1985 based on the following findings:

1. Development of the site as proposed will involve construction on relatively steep slopes;
2. the climax forest community on the site would be substantially destroyed, and habitat of fauna destroyed;
3. construction of impervious surfaces will replace forest floor, necessitating submission and review of a drainage and grading plan;
4. the site is fenced along the Vanderbilt Parkway frontage, preventing access by an inspector, and thereby precluding a survey of indigenous species of biota.

A scoping meeting was conducted in March of 1986 with the resulting DEIS completed in early 1987. The DEIS was accepted by the Planning Board in January of that year. However, in March the application was denied by the Planning Board for the following reasons:

1. The lot was never intended to be developed for anything other than the proposed Babylon-Northport Expressway. During subdivision of the adjoining properties the then owner agreed to set aside this parcel for the future roadway.
2. A right-of-way zoned R-40 Residence District 200 feet in width, 4,736 feet in length is not suitable for residential development.
3. A proposed cul-de-sac street, 4,300 linear feet in length violates the normal maximum length used as planning design criteria in this zoning district.
4. Due to the narrow width of the property, and a street system required to develop lots, 78% of the 16 acre site requires clearing for development.
5. A new street constructed on the property lines will have an adverse impact on adjacent properties.

The application was resubmitted in June of 1987 as a 14 unit clustered lot subdivision and included an approximately 4300' long cul-de-sac (later reduced to 2,300'). A positive declaration was issued by the Planning Board for this design on January 27, 1988. A Draft Environmental Impact Statement was prepared by the applicant and accepted after revision on January 11, 1989. It was circulated for review and comment in accordance with SEQRA notice and filing requirements. A public hearing was held on March 29, 1989. A Final Environmental Impact Statement (FEIS) was accepted as complete on July 19, 1989, filed on July 20, 1989, and circulated for a 30 day period. On September 13, 1989 the Planning Board denied the application. Subsequent to the issuance of findings and project denial, the denial was rescinded and the application reinstated to enable further investigation of a previously unaddressed 3-lot alternative. An FEIS Supplement was accepted on December 4, 1990; a public hearing on such and on the preliminary map was held on March 9, 1991, and a Final FEIS Supplement/Complete FEIS was accepted on April 17, 1991 and filed on April 18, 1991. Comments received from involved agencies, interested agencies, and the general public on the DEIS, Supplement, FEIS and public hearings used in evaluating the EIS resulted in finding the following significant environmental impacts that could be posed by the 14 lot subdivision:

1. Project yield and design configuration posing impacts to existing community character.
2. Loss of an open space greenbelt corridor and subsequent impact on individual NYS-protected plant species, natural woodland, and wildlife resources.
3. Impact on local traffic conditions.
4. Impact to existing drainage patterns, non-regulated wetland area, and potential for off-site sedimentation and stormwater loading.
5. Impact to visual resources.

On December 3, 1991 a conditional-final application was submitted that included three (3) modified lots and a 15.53 acre Park Preserve. Following a January 8, 1992 public hearing, the Planning Board approved the application (with minor conditions) on March 11, 1992.

SURROUNDING USES

Zoning for the area is R-40 Residence District and R-20 Residence District since 1934 and 1947 respectively. Uses to the west appear to be in conformance with such zoning with many parcels yet to be fully developed. To the east is the large subdivision -- Village on the Hill, 1962, that resulted in modified lots (ranging between one-half and one acre) and park/school land dedications.

Adjoining to the east and west are existing single-family dwellings. Their rear yards back onto the subject property. Also to the east are two Town recharge basins. Three utility easements are shown intersecting the property, two existing (telephone and power) and one proposed (Dix Hills Water District). Noise barriers are conspicuous to the west, on the LIE Service Road and south on the LIE proper.

NATURAL RESOURCE DESCRIPTION

The property is densely vegetated and rolling, generally rising in elevation from south to north. According to the applicant's EAF Part I, 95% of the site has slopes ranging between 1 to 15%, and 5% has slopes ranging between 10 to 15%. Elevations for the site range from a low of 145 feet above mean sea level (MSL) in the south to 240 feet above MSL in the north with some valleys and hills in between. Steep slopes appear within three areas of the site, which include the berm along the LIE Service Road; at the boundary of lots 22 & 23, and in the area of lot 19.

The Suffolk County Soil Survey classifies soils on the site as primarily Riverhead and Haven soils, graded, 0 to 8 percent slopes (RhB) with small areas of Haven loam, 2 to 6 percent (HaB) and Riverhead sandy loam, 8 to 15 percent slopes (RdC).

According to the Suffolk County Soil Survey, RhB soils are soils that have been altered by grading operations for housing developments, shopping centers, industrial parks and similar non-farm uses. Although, little evidence exists to indicate such extensive development ever took place, the site has been significantly disturbed, particularly at its southern boundary (possibly related to LIE Service Road construction) where clearing, grading and dumping have occurred. Debris was also noted along the

site's east and west boundaries (landscape waste, stripped pool liners, empty pool chemical containers, etc.), apparently deposited by adjoining property owners. As depicted on the Preliminary Map driveway and curbing encroaches the site in the area of lot 23.

The site is characterized by successional growth (olive, cherry, maple saplings, sumac, grasses and vines) in the south and mature woodland in the north (oak, beech and pine). A thick understory of brambles and poison ivy made it difficult to access the central portion of the site. Comprehensive fauna and flora inventories compiled for the similarly vegetated Vanderbilt Homes site may be indicative of other vegetation (including New York State Protected Species), that could be found on the subject site (attachment 1).

PART 3 EVALUATIONS MUST BE PREPARED IF ONE OR MORE IMPACT(S) IS CONSIDERED TO BE POTENTIALLY LARGE, EVEN IF THE IMPACT(S) MAY BE MITIGATED

IMPACT ON LAND

The action will result in a moderate to substantial physical change to the project site as a consequence of clearing of woodland and subsequent grading in order to accommodate twenty-four (24) new homes and a 3400' feet long cul-de-sac. Removal of woodland, site grading and increased impervious surfaces will pose drainage, erosion, and sedimentation impacts as well as impacts to the sites existing wildlife habitat.

Issues of concern are:

1. Lot yield and issues that might effect yield:
 - a) Park Dedication (2.06 acres)
 - b) Recharge Basin
 - c) Road Configuration
2. Telephone easement through lot #9
3. Effect on neighboring properties: creates through lots on properties on easterly side
4. Length and grade of cul-de-sac
5. Clustering (recommended by the Suffolk County Planning Commission
6. Emergency access
7. Loss of open space
9. Lots in R-40 portion of property wider than deep-results in atypical 1 acre lot-smaller than usual backyard.
10. Drainage and Grading because of the undulating topography

IMPACT ON SURFACE WATER

Due to proposed clearing/grading and construction/development activities, the proposed action has the potential to affect existing patterns of surface water run-off and cause erosion and off-site sedimentation.

The applicant is proposing the use of leaching catch basins within the right-of-way to collect and recharge stormwater. Adequate drainage facilities in the form of a recharge basin may be required pursuant to Town of Huntington Subdivision Regulations and Site Improvement Specifications. As indicated above, grading and

drainage are issues of concern as are erosion/sedimentation during and after construction.

IMPACT ON GROUNDWATER

Development of the subject property is not close to, nor expected to connect to an existing municipal or private sewer system. As proposed, the twenty-four (24) residential dwellings will discharge a total of 7,200 gallons per day (gpd) of sanitary wastewater (300 gpd per dwelling) to subsurface leaching pools.

To ensure mitigation of potential adverse groundwater impacts prior to any site development, the subject application will undergo review by the Suffolk County Department of Health Services to determine if proposed sewage disposal facilities are in compliance with sanitary health codes.

IMPACT ON PLANTS AND ANIMALS

The action will result in the clearing of woodland vegetation which may include NYS protected species resulting in impacts to community aesthetics, existing drainage patterns and wildlife displacement. Based on the applicant's EAF Part I, the existing 20.6 acre vegetated parcel will contain approximately 5.0 acres of vegetation, 6.3 acres of impervious roads, driveways and buildings and 9.3 acres of landscaped pervious area upon completion of the proposed project. This translates into the elimination of more than 75% of the natural vegetation on the site. Area calculations may be somewhat altered to meet Town grading, drainage and woodland preservation requirements as noted in the Town Subdivision Regulations and Site Improvement Specifications.

Due to difficulty in accessing the center of the site and the potential existence of NYS protected species, additional ecological information is warranted. With the discovery of any NYS protected species, measures should be provided for minimizing their impact.

IMPACT ON HISTORIC OR ARCHAEOLOGICAL RESOURCES

The subject parcel is not contained within a circle or square or multiple sites area designated on the New York State Office of Parks, Recreation and Historic Preservation Archeological Sites Map. The site is also not listed on the National or State Register of Historic Places, designated by the Town of Huntington under Chapter 198, Article VI of the Huntington Town Code as a landmark or a historically significant site. In addition, the site is not listed in the Town of Huntington Historic Sites Survey (1979) as a site recommended for designation. The site is not near or part of any known site of paleontological importance. As a result, the Jill Estates parcel is unlikely to contain any artifacts which may contribute to the community's further understanding of Long Island Native American pre-history, and further cultural resources investigation is not warranted.

IMPACT ON TRANSPORTATION

The subdivision development proposal of twenty-four (24) homes will pose a slight increase in vehicular volume along local roads. Access to the site will be from the New York State LIE service road and therefore require NYS Department of Transportation review and approval. It is expected that the service road will be able to accept project generated traffic flows. The length and single ingress/egress point of the proposed cul-de-sac (4300'), however, is considered a potential hazard, limiting emergency vehicle access only from the west bound North Service Road of the LIE and the ability to maneuver within the site.

Access and internal circulation issues to be considered include:

1. Site access and maneuverability for emergency equipment, school buses, delivery trucks
2. Exit and entrance alternatives
3. Impact to aesthetics

IMPACT ON OPEN SPACE AND AESTHETIC RESOURCES / PUBLIC CONTROVERSY

Although not officially designated as such, the subject property itself currently acts as open space by providing a passive wildlife habitat/buffer area for the surrounding developed neighborhood. When the subject property was first advertised for auction, the Dix Hills Woodlands Civic Association alerted surrounding residents of the value of this property as open space and urged them to write to New York State to transfer the property to a local governmental agency for management as a passive park and greenbelt trail corridor (attachment 2). In 1992 the Town requested the State to consider similar options in the use of the property (attachment 3).

By way of this subdivision, the action will result in a loss of open space and reduce the aesthetic qualities of that resource currently available to adjoining homeowners. The placement of the cul-de-sac along the site's boundary line will eliminate a vegetative buffer as seen from the rear yards of homes to the east and add visual, noise and air impacts from related vehicular traffic. The proposed seven (7) R-40 lots, although fully conforming to area and setback requirements, are more than twice as wide and at least half as deep as typical one acre lots and will lack the large backyards that results in privacy and open space as well as separation between homes that usually exists in one acre subdivisions.

Positive attributes associated with open space, including physical and psychological relief from the built environment, diversity of visual experience, protection of natural resources and natural groundwater recharge will be impacted. The loss of open space and natural recharge area will be somewhat mitigated by proposed landscaping and required drainage structures. However, additional mitigative measures should be explored.

Issues related to aesthetic resources and open space that need to be considered:

1. Impacts from construction activities (noise, dust, etc.)

NOISE IMPACTS

Construction of the proposed subdivision development may generate some short-term noise impacts. If not designed properly, the action may also remove natural vegetative barriers that currently mitigates noise between the LIE and existing neighboring residential homeowners.

Although wood wall noise barriers were noted in the area of the subject property, additional mitigation measures should be investigated as a component of the proposed project.

COMPARATIVE ANALYSIS

Pursuant to the SEQRA Handbook, there are four components in determining significance: a) Classification of the action b) Review of prior SEQRA determinations involving similar projects or geographic locations c) Focus on significant criteria d) Preparation on an environmental assessment. Towards addressing item b, the following matrix is provided which compares the potential significant impacts of Jill Estates and Vanderbilt Homes:

Impacts	Jill Estates	Vanderbilt Homes
Traffic Safety	No	Yes
Emergency Vehicle Access	Yes	Yes
Design Configuration	Yes	Yes
Steep Slopes	No	Yes
Drainage/non-regulated wetlands/off-site sedimentation	No	Yes
Aesthetics	Yes	Yes
Plants & Animals	Yes	Yes
Open Space	Yes	Yes

Note: Significant impacts for Vanderbilt Homes were extracted from the January 27, 1988 positive declaration and the May 15, 1991 Findings Statement.

RECOMMENDATION FOR SEQRA DETERMINATION

Due to the potential for environmental impacts, discussed above and evaluated pursuant to SEQRA section 617.11 (Criteria for Determining Significance), and the similarity between the proposed action and the Vanderbilt Homes project, it is recommended that a positive declaration be issued and an Environmental Impact Statement be prepared for the proposed action.

APPENDIX C

JILL ESTATES

SCOPING CHECKLIST

JILL ESTATES

Scoping Checklist

Formal Scoping Meeting 8/25/

Jeff Hartman

David Marcus

Heris Rubin

Scott Polish

Ann Dwyer-Orth

Charles Mangini

Introduction

The following checklist of topics is intended as a starting point for developing a detailed scope for a project-specific Draft Environmental Impact Statement. Typically, no one project will require a discussion of all the topic areas contained in this document. Through the scoping process, this list of topics should be refined to reflect issues unique to the proposed project. Topic areas may be deleted, added, or elaborated upon, to arrive at the final scoping document.

The purpose of the checklist format is to identify the basic topic areas for the Draft EIS. This is accomplished by reviewing the list and placing a check in the box located to the left of those topics which should be discussed. The model scoping checklist can also be used as a worksheet, including comments, suggestions and identification of the particular example(s) that are relevant to a detailed discussion of the topic or issue that has been checked. Conversely, those topics which are not checked, are issues not associated with the project, and may be eliminated from discussion in the Draft EIS. Minimum requirements for any Draft EIS are already checked for convenience.

The next step is to expand the list to include or elaborate on those topics unique to the proposed project. A blank sheet is included at the end of the checklist for such additional information.

The scoping process involves several steps in addition to compiling a list of topics. Scoping also includes discussions on the quantity and quality of information required and the methods for obtaining that data.

NOTE: This checklist was designed to be used in conjunction with the section on scoping contained in the SEQR Guideline-Draft and Final EIS's. It is also important to emphasize that this checklist should serve only as a model to assist in the scoping of a Draft EIS. It should not be used as a substitute for actively scoping a Draft EIS for a specific project.

I. Cover Sheet

All EIS's (Draft or Final) shall begin with a cover sheet that indicates:

- A. Whether it is a draft or final statement
- B. Name or other descriptive title of the project
- C. Location (county and town, village or city) of the project
- D. Name and address of the lead agency which required preparation of the statement and the name and telephone number of a person at the agency to be contacted for further information
- E. Name and address of the preparers of any portion of the statement and a contact name and telephone number
- F. Date of acceptance of the Draft EIS
- G. In the case of a Draft EIS, the deadline date by which comments are due should be indicated

II. Table of Contents and Summary

A table of contents and a brief summary are required for Draft and Final EIS's exceeding 10 pages in length. However, one should include these features in any size EIS to provide the review agency with easy reference to EIS topics.

The summary should include:

- A. Brief description of the action
- B. Significant, beneficial and adverse impacts. (issues of controversy must be specified)
- C. Mitigation measures proposed
- D. Alternatives considered
- E. Matters to be decided (permits, approvals, funding)

III. Description of the Proposed Action

Place a check in the box to the left of those topics to be included in the draft EIS.

- A. PROJECT PURPOSE AND NEED
1. Background and history
 2. Public need for the project, and municipality objectives based on adopted community development plans
 3. Objectives of the project sponsor

B. LOCATION

1. Establish geographic boundaries of the project (use of regional and local scale maps is recommended)
2. Description of access to site
3. Description of existing zoning of proposed site
4. Other:

C. DESIGN AND LAYOUT

1. Total site area
 - a.) proposed impervious surface area (roofs, parking lots, roads)
 - b.) amount of land to be cleared
 - c.) open space
2. Structures
 - a.) gross leaseable area (GLA), if applicable
 - b.) layout of buildings (attached, enclosed, separate)
 - c.) site plans and profile views
3. Parking
 - a.) pavement area
 - b.) number of spaces and layout
4. Other:

D. CONSTRUCTION AND OPERATION

1. Construction
 - a.) total construction period anticipated
 - b.) schedule of construction
 - c.) future potential development, on site or on adjoining properties
 - d.) other:
2. Operation
 - a.) type of operation
 - b.) schedule of operation
 - c.) other:

E. CLOSURE AND POST CLOSURE PLANS
(for projects of planned limited life such as landfills)

F. APPROVALS

1. Required changes or variances to the zoning regulations
2. Other permit approval or funding requirements

IV. Environmental Setting

Place a check in the box to the left of those topics to be included in the Draft EIS.

Natural Resources

A. GEOLOGY

1. Subsurface
 - a.) composition and thickness of subsurface material
examples:
 - depth to, and nature of, bedrock formations and impermeable layers
 - occurrence of an extractive mineral resource
 - usefulness as construction material
 - b.) earthquake potential
2. Surface
 - a.) list of soil types
 - b.) discussion of soil characteristics
examples:
 - physical properties (indication of soils hydrological (infiltration) capabilities)
 - engineering properties (soil bearing capacity)
 - c.) distribution of soil types at project site
 - d.) suitability for use
examples:
 - agriculture
 - recreation
 - construction
 - mining
 - e.) other:
3. Topography
 - a.) description of topography at project site
examples:
 - slopes
 - prominent or unique features
 - b.) description of topography of surrounding area

B. WATER RESOURCES

1. Groundwater
 - a.) location and description of aquifers and recharge areas
examples:
 - depth to water table
 - seasonal variation
 - quality
 - quantity
 - flow

- b.) identification of present uses and level of use of groundwater
 - examples:
 - location of existing wells
 - public/private water supply
 - industrial uses
 - agricultural uses

2. Surface water

- a.) location and description of surface waters located on project site or those that may be influenced by the project
 - examples:
 - seasonal variation
 - quality
 - classification according to New York State Department of Health
- b.) identification of uses and level of use of all surface waters
 - examples:
 - public/private water supply
 - industrial uses
 - agricultural uses
 - recreation
- c.) description of existing drainage areas, patterns and channels
- d.) discussion of potential for flooding, siltation, erosion and eutrophication of water sources

C. AIR RESOURCES

1. Climate

- a.) discussion of seasonal variations and extremes
 - examples:
 - temperature
 - humidity
 - precipitation
 - wind

2. Air quality

- a.) description of existing air quality levels
 - examples:
 - list the National and State Air Quality Standards for the project area and the compliance status for each standard
- b.) identification of existing sources or pollutants-fixed or mobile

- c.) identification of any sensitive receptors in project area
 - examples:
 - hospitals, schools, nursing homes, parks
- d.) description of existing monitoring program (if applicable)

D. TERRESTRIAL AND AQUATIC ECOLOGY

1. Vegetation

- a.) list vegetation types on the project site and within the surrounding area
- b.) discussion of site vegetation characteristics
 - examples:
 - species present and abundance
 - age
 - size
 - distribution
 - dominance
 - community types
 - unique, rare and endangered species
 - value as habitat for wildlife
 - productivity

2. Fish and Wildlife

- a.) list of fish and wildlife species on the project site and within surrounding area, including migratory and resident species
- b.) discussion of fish and wildlife population characteristics
 - examples:
 - species present and abundance
 - distribution
 - dominance
 - unique, rare and endangered species
 - productivity

3. Wetlands

- a.) list wetland areas within or contiguous to the project site
- b.) discuss wetland characteristics
 - examples:
 - acreage
 - vegetative cover
 - classification
 - benefits of wetland such as flood and erosion control, recreation

Human Resources

A. TRANSPORTATION

- 1. Transportation services
 - a.) description of the size, capacity and condition of services
examples:
 - roads, canals, railroads, bridges
 - parking facilities
 - traffic control
 - b.) description of current level of use of services
examples:
 - a.m. and p.m. peak hour traffic flow
 - vehicle mix
 - sources of existing traffic volume
- 2. Public transportation
 - a.) description of the current availability of service
 - b.) description of present level of use
- 3. Pedestrian environment
- 4. Other:

B. LAND USE AND ZONING

- 1. Existing land use and zoning
 - a.) description of the existing land use of the project site and the surrounding area
examples:
 - commercial
 - residential
 - agricultural
 - business
 - retail
 - industrial
 - vacant
 - b.) description of the existing zoning of site and surrounding area
- 2. Land use plans
 - a.) description of any land use plans or master plans which include project site and surrounding area
 - b.) discussion of future development trends or pressures
- 3. Other: *Is proposed project compatible with existing surrounding land use.*

C. COMMUNITY SERVICES (for this section include a list of existing facilities and a discussion of existing levels of usage and projected future needs)

- 1. Educational facilities
- 2. Police protection
- 3. Fire protection
- 4. Health care facilities
- 5. Social services
- 6. Recreational facilities
- 7. Utilities
- 8. Other:

D. DEMOGRAPHY

- 1. Population characteristics
 - a.) discussion of the existing population parameters
examples:
 - distribution
 - density
 - household size and composition
 - b.) discussion of projections for population growth
- 2. Other:

E. CULTURAL RESOURCES

- 1. Visual resources
 - a.) description of the physical character of the community
example:
 - urban vs. rural
 - b.) description of natural areas of significant scenic value
 - c.) identification of structures of significant architectural design
- 2. Historic and archaeological resources
 - a.) location and description of historic areas or structures listed on State or National Register or designated by the community
 - b.) identification of sites having potential significant archaeological value

- 3. Noise
 - a.) Identification of existing level of noise in the community
 - b. identification of major sources of noise
 - examples:
 - airports
 - major highways
 - industrial/commercial facilities
- 4. Other:

V. Significant Environmental Impacts

Identify those aspects of the environmental setting in Section IV that may be adversely or beneficially affected by the proposed action and require discussion.

VI. Mitigation Measures to Minimize Environmental Impact

Describe measures to reduce or avoid potential adverse impacts identified in Section V. The following is a brief listing of typical measures used for some of the major areas of impact.

Natural Resources

A. GEOLOGY

- 1. Subsurface
 - a.) use excavated material for land reclamation
 - b.) use facility wastes (ash, sludge) for land reclamation
 - c.) other:
- 2. Surface
 - a.) use topsoil stockpiled during construction for restoration and landscaping
 - b.) minimize disturbance of non-construction sites
 - c.) design and implement soil erosion control plan
 - d.) other:
- 3. Topography
 - a.) avoid construction on areas of steep slope
 - b.) design adequate soil erosion devices to protect areas of steep slope
 - c.) other:

B. WATER RESOURCES

- 1. Groundwater
 - a.) design adequate system of treatment for stormwater runoff prior to recharge of groundwater
 - b.) maintain permeable areas on the site
 - c.) institute a program for monitoring water quality in adjacent wells
 - d.) other:
- 2. Surface water
 - a.) ensure use of soil erosion control techniques during construction and operation to avoid siltation
 - examples:
 - hay bales
 - temporary restoration of vegetation to disturbed areas
 - landscaping
 - b.) design adequate stormwater control system
 - c.) restrict use of salt or sand for road and parking area snow removal
 - d.) avoid direct discharges to surface water resources
 - e.) other:

C. AIR RESOURCES

- 1. Air quality
 - a.) assure proper construction practices
 - examples:
 - fugitive dust control
 - proper operation and maintenance of construction equipment
 - b.) design traffic improvements to reduce congestion and vehicle delay
 - c.) install and ensure the proper operation of emission control devices
 - d.) initiate a program for monitoring of air quality
 - e.) other:

D. TERRESTRIAL AND AQUATIC ECOLOGY

1. Vegetation
 - a.) restrict clearing to only those areas necessary
 - b.) preserve part of site as a natural area
 - c.) after construction, landscape site with naturally occurring vegetation
 - d.) purchase open space at another location and dedicate to local government or conservation organization
 - e.) other:
2. Fish and Wildlife
 - a.) provide adequate habitat (shelter and food) for remaining wildlife species
 - b.) schedule construction to avoid sensitive periods of fish and wildlife life cycles
 - c.) other:

Human Resources

A. TRANSPORTATION

1. Transportation services
 - a.) design adequate and safe access to project site to handle projected traffic flow
 - b.) install adequate traffic control devices
 - c.) optimize use of parking areas
 - d.) encourage car pooling and operation of facility during non-peak traffic times
 - e.) design special routing and restricted hours for delivery truck traffic
 - f.) other:
2. Public transportation
 - a.) adjust public transportation routes and schedules to service the facility
 - b.) encourage use of public transportation by using incentive programs for employees or by selling tickets in facility
 - c.) other:

B. LAND USE AND ZONING

1. Existing land use and zoning
 - a.) design project to comply with existing land use plans
 - b.) design functional and visually appealing facility to set standard and precedent for future surrounding land use
 - c.) other:

C. COMMUNITY SERVICES

1. Police protection
 - a.) minimize local police protection responsibilities by providing private security force
 - b.) provide security systems, alarms for facility
 - c.) provide equipment, funds or services directly to the community
 - d.) other:
2. Fire protection
 - a.) use construction materials that minimize fire hazards
 - b.) incorporate sprinkler and alarm systems into building design
 - c.) provide equipment, funds or services directly to the community
 - d.) other:
3. Utilities
 - a.) install utility services underground
 - b.) incorporate water saving fixtures into facility design
 - c.) incorporate energy-saving measures into facility design
 - d.) other:

D. CULTURAL RESOURCES

1. Visual resources
 - a.) design exterior of structure to physically blend with existing surroundings
 - b.) minimize visual impact through thoughtful and innovative design of lighting and signs (consider: height, size, intensity, glare and hours of lighting operation)
 - c.) design landscaping to be visually pleasing and to serve as a buffer between surrounding land uses, parking areas, operational equipment and facilities
 - d.) other:

2. Historic and archaeological resources

- a.) allow historical and archaeological officials access to the project site during excavation
- b.) devote space within project site to a display of historical and archaeological artifacts of local interest
- c.) preserve architecturally significant structures and make a photographic and statistical record of those that must be destroyed
- d.) other:

3. Noise

- a.) schedule construction/operation to occur during "normal business" hours, minimizing noise impact during sensitive times (early morning, night)
- b.) assure adherence to construction noise standards
- c.) design berms and landscaping to block and absorb noise
- d.) other:

VII. Adverse Environmental Effects that Cannot be Avoided if the Project is Implemented

Identify those adverse environmental effects in Section V that can be expected to occur regardless of the mitigation measures considered in Section VI.

VIII. Alternatives

This section contains categories of alternatives with examples. Discussion of each alternative should be at a level sufficient to permit a comparative assessment of costs, benefits and environmental risks for each alternative. It is not acceptable to make simple assertions that a particular alternative is or is not feasible. Identify those categories of alternatives which should be included in the EIS by placing a check in the box located to the left of the topic.

A. ALTERNATIVE DESIGN AND TECHNOLOGIES

- 1. Site layout
 - a.) density and location of structures
 - b.) location of access routes, parking and utility routes
- 2. Orientation
 - a.) compatibility with slope and drainage patterns
 - b.) site size and setback requirements
- 3. Technology
 - a.) pollution control equipment
 - b.) innovative vs. proven technologies
- 4. Mix of activities
 - a.) addition of businesses which would affect the operational nature of the facility

B. ALTERNATIVE SITES

- 1. Limiting factors
 - a.) availability of land
 - b.) suitability of alternate site to accommodate design requirements
 - c.) availability of utilities
 - d.) suitable market area
 - e.) compatibility with local zoning and master plan
 - f.) compatibility with regional objectives
 - g.) accessibility of site to transportation routes and the service population

C. ALTERNATIVE SIZE

- 1. Increase or decrease project size to minimize possible impacts
- 2. Increase or decrease project size to correspond to market and community needs

D. ALTERNATIVE CONSTRUCTION/OPERATION SCHEDULING

- 1. Commence construction at a different time
- 2. Phase construction/operation
- 3. Restrict construction/operation work schedule

*TRANS
DEV. REQS*

See A above

E. ALTERNATIVE LAND USE

1. Suitability of site for other uses
 - a.) other types of commercial uses
 - b.) other types of industry
 - c.) different types of housing
 - d.) other:
2. Public vs. private use

F. NO ACTION

1. Impacts of no action
 - a.) effect on public need
 - b.) effect on private developers' need
 - c.) beneficial or adverse environmental impacts

G. OTHER:

IX. Irreversible and Irretrievable Commitment of Resources

Identify those natural and human resources listed in Section IV that will be consumed, converted or made unavailable for future use.

X. Growth Inducing Aspects

Describe in this section the potential growth aspects the proposed project may have. Listed below are examples of topics that are typically affected by the growth induced by a project.

A. POPULATION

1. Increases in business and resident population due to the creation or relocation of business
2. Increases in resident population due to the construction of housing

B. SUPPORT FACILITIES

1. Businesses created to serve the increased population
2. Service industries created to supply new facility

C. DEVELOPMENT POTENTIAL

1. Introduction or improvement of infrastructure (roads, waste disposal, sewers, water) to service proposed project
2. Creation of further growth potential by construction of improved infrastructure

D. OTHER:

XI. Effects on the Use and Conservation of Energy Resources

Identify the energy sources to be used, anticipated levels of consumption and ways to reduce energy consumption. The examples listed below are typical issues to be considered when addressing this topic.

A. PROPOSED ENERGY SOURCES AND ALTERNATIVES

B. ANTICIPATED SHORT-TERM/LONG-TERM LEVELS OF ENERGY CONSUMPTION

C. INDIRECT EFFECTS ON ENERGY CONSUMPTION

1. Increased dependence on automobile use
2. Increased levels of traffic due to proposed project

D. ENERGY CONSERVATION MEASURES

1. Design methods to reduce fuel use for heating, cooling, and lighting

a.) conventional technology

examples:

- insulation
- thermopane windows
- use of low wattage lights

b.) innovative technology

examples:

- heat pumps
- solar panels
- wind energy
- use of waste heat from an industrial plant

c.) efficient layout

examples:

- orientation of structures in relation to summer and winter sunlight
- clustering of structures to maximize common walls
- shortening of utility runs
- shared insulation and heating

2. Indirect energy benefits

a.) location and design of facility to accommodate mass transit

b.) use of shuttle buses

c.) location of facility to minimize travel distance

E. OTHER:

XII. Appendices

Following is a list of materials typically used in support of the EIS.

A. List of underlying studies, reports and information considered and relied on in preparing statement

B. List all federal, state, regional, or local agencies, organizations, consultants and private persons consulted in preparing the statement

C. Technical exhibits (if any) at a legible scale

D. Relevant correspondence regarding the projects may be included (required in the Final EIS)

Additional Draft EIS Scoping Topics

Indicate any additional topics for discussion in the Draft EIS. Attach additional sheets if necessary.

Compare against
Town Comprehensive Plan

JILL
ESTATES

CHARLES VOORHIS & ASSOCIATES, INC.
ENVIRONMENTAL AND PLANNING CONSULTANTS

Terrestrial Ecology

FOR

Jill Estates

Hamlet of Dix Hills

Town of Huntington

New York

CVA No: 96-447-048

November 1996

TERRESTRIAL ECOLOGY

for

JILL ESTATES

**Hamlet of Dix Hills
Huntington, New York**

TABLE OF CONTENTS

I.	INTRODUCTION	Page 3
II.	ECOLOGICAL SETTING	Page 6
	A. Vegetation	Page 6
	B. Wildlife	Page 15
III.	IMPACTS	Page 24
	A. Vegetation	Page 24
	B. Wildlife	Page 25
IV.	MITIGATION	Page 34

TERRESTRIAL ECOLOGY

for

JILL ESTATES

Hamlet of Dix Hills
Huntington, New York

I INTRODUCTION

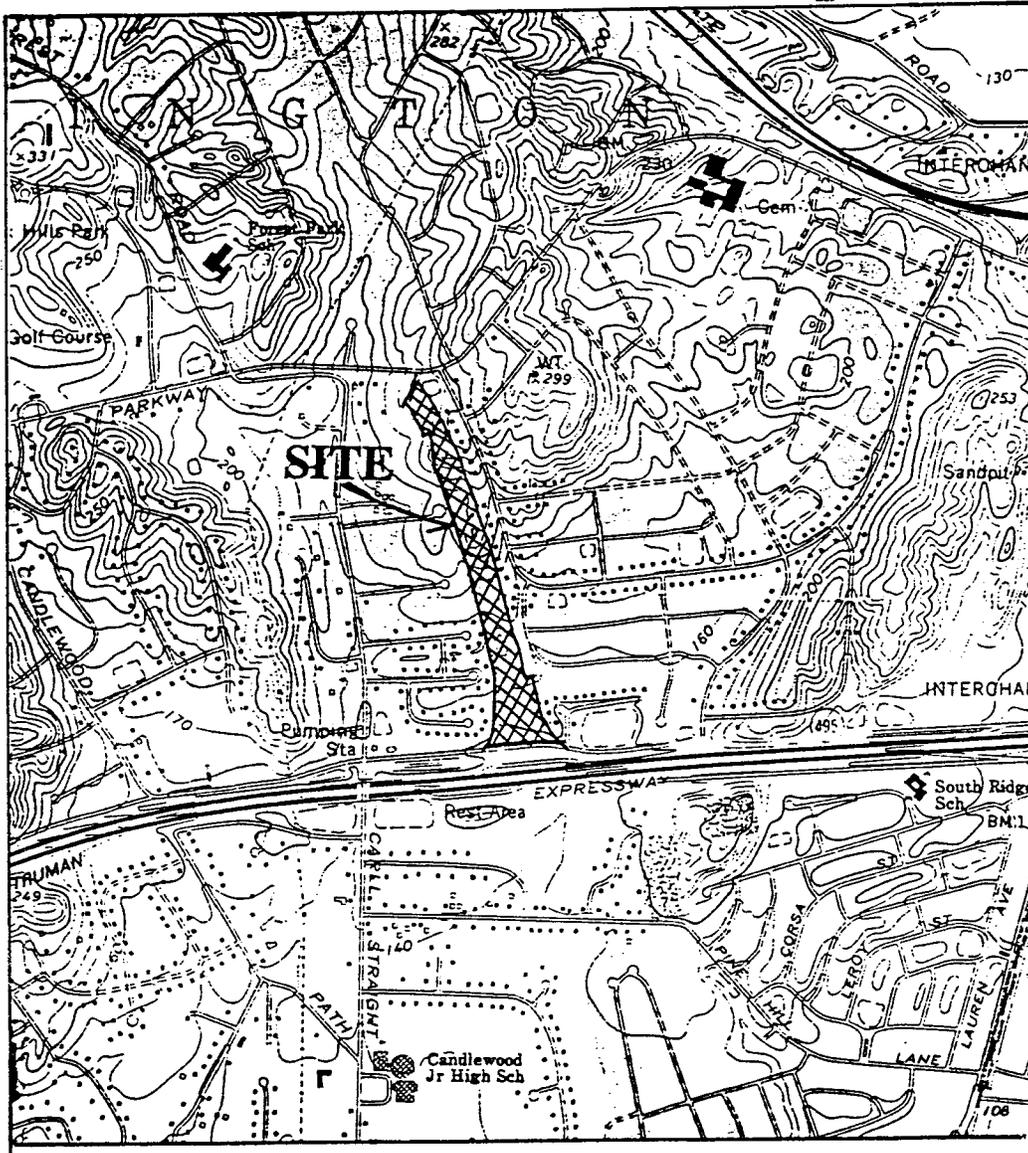
The following report presents a brief description of the terrestrial ecology for the site of a proposed single family subdivision to be known as Jill Estates in Dix Hills. Town of Huntington, Suffolk County, New York. The project sponsor intends to create 17 single family lots on a 20.59 acre parcel, with 10.7 acres to be dedicated to the Town as open space. The subject property is a long, narrow parcel, approximately 150 feet by 3900 feet, widening to approximately 600 feet to the south. The site runs from the Vanderbilt Motor Parkway to the North Service Road of the Long Island Expressway (LIE), approximately 200 feet east of Village Hill Drive. The site is bordered on both the east and west by single family residential development, with a recharge basin to the northeast.

The project site was part of a right of way for a road connecting the Long Island Expressway to the Northern State Parkway. There is a similar narrow parcel on the north side of Vanderbilt Motor Parkway which was recently subdivided and developed under the name of Vanderbilt Homes. Utility easements cross the project site at three points, linking the residential development to the east and west of the property. There are ten foot wide water and telephone easements on the southern portion of the site, approximately 350 feet and 525 feet from the LIE North Service Road. A third 20 foot wide utility easement crosses the center of the parcel approximately 1,885 feet south of Vanderbilt Motor Parkway.

The site is located on the south flank of the Ronkonkoma Moraine, one of two terminal moraines which form the north shore of Long Island. The topography in the vicinity of the site slopes generally to the southwest, although there are localized features which deviate from this general pattern. The elevation of the project site is approximately 235 feet in the northeastern corner, and 145 feet along the southern border. The highest elevation is 245 feet at a knoll approximately 730 feet south of Vanderbilt Motor Parkway. There is a second knoll with a height of 217 feet further to the south near the center of the site. These two knolls contain areas of steep slopes over 10 percent, and the proposed site plan will avoid construction within these areas. The native vegetation in the vicinity of the site is Oak-Tulip tree forest, and portions of the site contain this habitat. More than half of the site was cleared at some time in the past, and currently contains Successional Woodland vegetation.

FIGURE 1

LOCATION MAP



Source: USGS, 1967, Greenlawn Quadrangle
Scale: 1" = 2,000'

The northern 10.7 acres of the subject site is zoned Residence 40 (R-40), while the southern portion is zoned Residence 20 (R-20). The proposed project involves a clustered subdivision of seventeen lots on the southern portion of the site with access from a cul-de-sac onto the L.I.E. North Service Road. The northern 10.7 acres of the site will remain as parkland, including all of the R-40 lands and a portion of the R-20 lands. The proposed lot sizes on the southern portion of the site vary from 11,130 to 50,610 square feet in size, with two long, narrow lots over 45,000 s.f. at the northernmost portion of the cluster. A recharge basin would be located in the southeastern corner of the site. The dwelling would be located on the northernmost portion of the lot where the topography is relatively flat and construction on steep slopes would not be necessary.

II. ECOLOGICAL SETTING

A. Vegetation

The vegetation of the project site includes both native Oak-Tulip Tree Forest and previously cleared areas which are now revegetated with Successional habitats. Figure 2 shows the area of each habitat. The northern half of the site contains Oak-Tulip Tree forest, except for a small area of Successional Woodland habitat east of the Patri Court cul-de-sac. The southern portion of the site also contains Successional Woodland habitat, with a small area of old field vegetation in the southeastern corner. Table A provides the total area of each habitat found on site, and the following text provides a more detailed description of the habitats.

TABLE A
HABITATS ON SITE

Habitat/Use	Acreage	%
Successional Hardwoods	13.00	63.1
Oak - Tulip tree Forest	7.18	34.9
Old Field	0.41	2.0
Total	20.59	100

Source: Aerial Photograph and Field Investigation.

1. Oak - Tulip Tree Forest

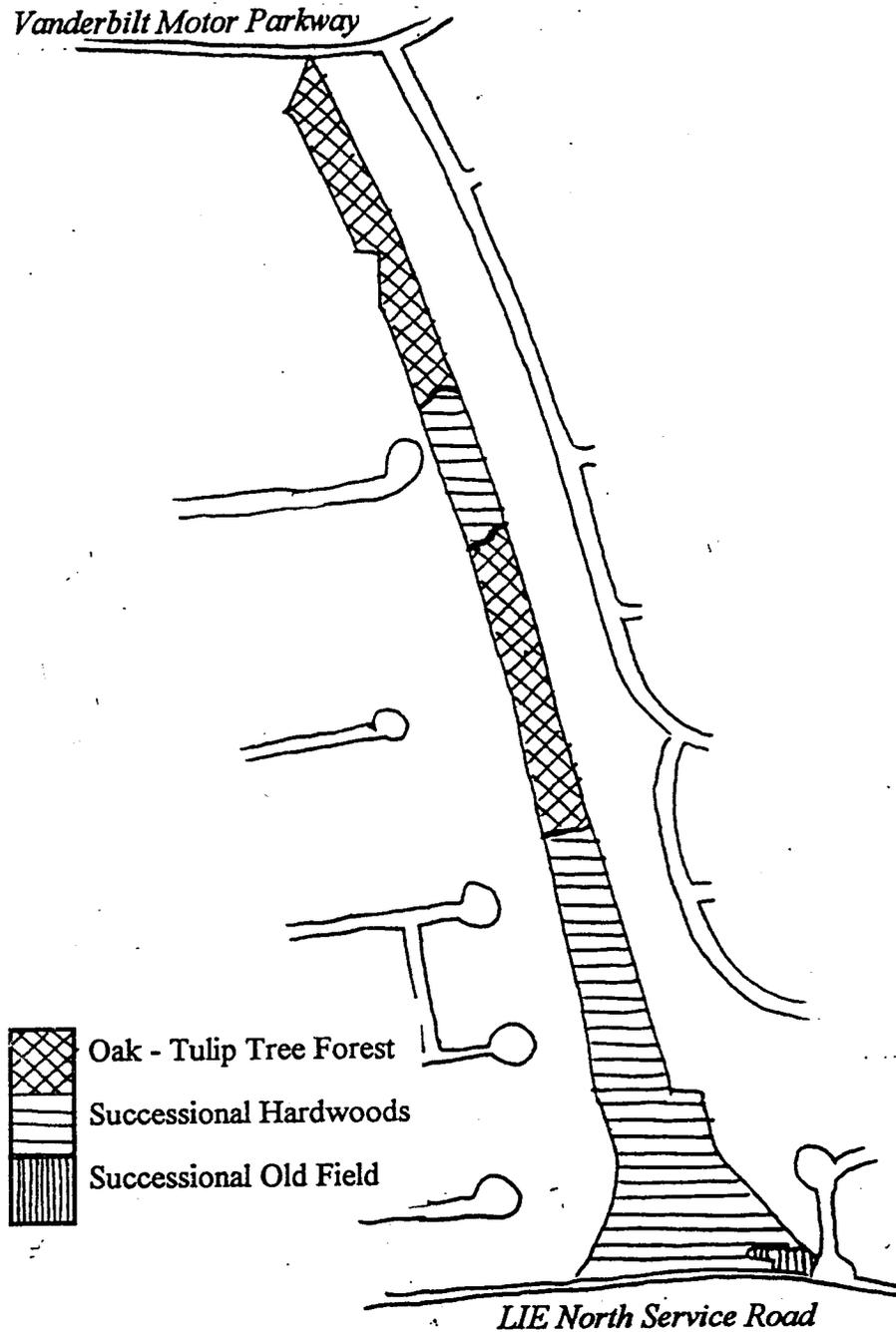
Oak-Tulip Tree Forest is the predominant native forest habitat on the moraines along Long Island's north shore. This habitat is a relatively moist woodland as compared to the Pine Barrens habitats found throughout most of the remainder of the island. As defined by the NYSDEC (Reschke, 1990), Oak-Tulip Tree forest is

"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."

At the site, the canopy of the Oak-Tulip Tree Forest is dominated by black oak, chestnut oak, white oak, and large sassafras, beech and occasional red maple are also present. The canopy is

FIGURE 2

HABITAT MAP



Source: Field Investigation and Aerial Photography
Scale: 1" = Approx. 600'



40 to 50 feet in height, and the larger trees are up to 16 inches in diameter. The soil is moist, with a thin, well decomposed leaf layer. Also present are smaller sub-canopy trees, including dogwood, sassafras, birch and cherry. Cedar is also present, particularly near openings in the canopy and adjacent to cleared areas.

The canopy is fairly open on site, and light penetration has allowed a dense shrub and vine layer in many areas. Greenbriar is the dominant species, and bittersweet is also common. Maple-leaved viburnum, poison ivy, gooseberry, and Virginia creeper are also present. Japanese barberry was also observed; this introduced species probably escaped from the adjacent residential area. Roses are present near the edge of the woodland. Blackberry and heath species are rare, probably because of the moist soils and light penetration which have allowed greenbriar to dominate. The herbaceous layer is sparse, but contains wild onion, garlic mustard, and bracken.

PLANT SPECIES LIST

Trees

* tree-of-heaven	<i>Ailanthus altissima</i>
* American beech	<i>Fagus grandifolia</i>
American chestnut	<i>Castanea dentata</i>
bear oak	<i>Quercus ilicifolia</i>
bigtooth aspen	<i>Populus grandidentata</i>
bitternut hickory	<i>Carya cordiformis</i>
black birch	<i>Betula lenta</i>
* black cherry	<i>Prunus serotina</i>
blackjack oak	<i>Quercus marilandicus</i>
black locust	<i>Robinia pseudoacacia</i>
* black oak	<i>Quercus velutina</i>
* chestnut oak	<i>Quercus prinus</i>
choke cherry	<i>Prunus virginiana</i>
crab apple	<i>Malus spp.; cultivars</i>
eastern hemlock	<i>Tsuga canadensis</i>
* eastern red cedar	<i>Juniperus virginiana</i>
European larch	<i>Larix decidua</i>
* flowering dogwood	<i>Cornus florida</i> [1]
* gray birch	<i>Betula populifolia</i>
holly	<i>Ilex opaca</i> [1]
mimosa	<i>Albizia julibrissin</i>
mockernut hickory	<i>Carya tomentosa</i>
northern catalpa	<i>Catalpa bignonioides</i>
northern red oak	<i>Quercus rubra</i>
Norway maple	<i>Acer platanoides</i>
Norway spruce	<i>Picea abies</i>
* red maple	<i>Acer rubrum</i>
red mulberry	<i>Morus rubra</i>
rock elm	<i>Ulmus thomasi</i>
* sassafras	<i>Sassafras albidum</i>

scarlet oak
silver maple
smooth sumac
staghorn sumac
sugar maple
sweetgum
* tulip poplar
* white oak
white pine
white spruce

Shrubs and Vines

* American bittersweet
autumn olive
bush honeysuckle
* cat briar
common nightshade
devil's walking stick
* gooseberry
English ivy
* Japanese barberry
grape
* maple-leaved viburnum
mountain laurel
* multiflora rose
northern bayberry
* poison-ivy
* raspberry
rhododendron
sweetfern
trailing arbutus
Virginia creeper
wineberry
winged euonymus
winged sumac
wintercreeper
yew

Herbaceous Species

aster
* bracken fern
broom sedge
bush clover
Christmas fern
cinnamon fern
club moss
cocklebur

Quercus coccinea
Acer saccharinum
Rhus glabra
Rhus glabra
Acer saccharum
Liquidambar styraciflua
Liriodendron tulipifera
Quercus alba
Pinus strobus
Picea glauca

Celastrus scandens [1]
Elaeagnus umbellata
Lonica spp.
Smilax glauca
Solanum nigrum
Aralia elata
Ribes sp.
Hedera helix
Berberis thunbergii
Vitis spp.
Viburnum acerifolium
Kalmia latifolia [1]
Rosa multiflora
Myrica pensylvanica [1]
Rhus radicans
Rhus spp.
Rhododendron spp. [1]
Comptonia peregrina
Epigaea repens
Parthenocissus quinquefolia
Rubus phoenicolasius
Euonymus alata
Rhus copallina
Euonymus fortunei
Taxus spp.

Aster spp.
Pteridium aquilinum
Andropogon virginianicus
Lespedeza violacea
Polystichum acrostichoides [1]
Osmunda cinnamomea [1]
Lycopodium spp. [1]
Xanthium chinense

common dandelion	<i>Taraxacum officinale</i>
common dewberry	<i>Rubus flagellaris</i>
common milkweed	<i>Asclepias syriaca</i>
common mullein	<i>Verbascum thapsus</i>
creeping thistle	<i>Cirsium arvense</i>
goldenrod	<i>Solidago spp.</i>
* garlic mustard	<i>Dentaria sp.</i>
pachysandra	<i>Pachysandra terminalis</i>
panic grass	<i>Panicum agrostoides</i>
periwinkle	<i>Vinca minor</i>
poke weed	<i>Phytolacca americana</i>
* wild onion	<i>Allium stellatum</i>
wintergreen	<i>Gaultheria procumbens</i> [1]

* Species identified on site by CVA staff on 6/11/96.

[1] NYS exploitably vulnerable protected species

2. Successional Habitats

Successional hardwoods, shrubland and old field habitats are stages of secondary succession. Secondary succession is the process by which an area which has been cleared or otherwise disturbed reverts to the original vegetation. The first species to colonize an area which has been cleared are generally herbaceous weeds and other plants with wide seed dispersal. These early successional species are replaced first by woody shrubs, then by saplings of tree species which seed in from adjacent wooded habitat or nearby cultivars. As time progresses, the trees dominate in both abundance and height and light penetration is reduced. The tree and shrub species which first colonized the area are then replaced by more shade tolerant species. The resulting forest generally resembles the original forest, although there may be significant differences in species composition, particularly if there is little native vegetation in the surrounding area. This final habitat is referred to as a climax community. The native climax habitat found in the vicinity of the site is the Oak - Tulip Tree habitat found elsewhere on site. The successional habitat found on the project site is intermediate between successional shrubland and woodland habitats, with a canopy of trees and tall shrubs. It has been identified as woodland because of the height of the canopy, which is typically 20 - 25 feet. There is also a small area of old field habitat in the southeastern corner of the site.

Any one of a number of species may dominate the canopy of successional shrubland and woodland habitats, depending on the original forest and nearby tree species. Cedar, birch, maples and oaks are some of the most common native species on Long Island. Also common are the introduced black locust, buckthorn and tree-of-heaven. Successional hardwood Forest is generally characterized by small sized trees and dense understory, although large specimen trees may be present if the site was originally landscaped. The dense understory exists because the tree canopy is open, allowing high levels of light

penetration. Given sufficient time, the trees will more fully occupy the canopy, and the dense understory will no longer exist. Successional Southern Hardwood habitat is defined as follows by the NYSDEC (Reschke, 1990):

"A hardwood or mixed forest that occurs on sites that have been cleared (for farming, logging, etc.) or otherwise disturbed. The dominant trees are usually any of the following: gray birch, hawthorns, sassafras, box elder, American elm, slippery elm, red maple, silver maple, and eastern red cedar. Certain introduced species are commonly found in successional forests, including black locust, tree-of-heaven, and buckthorn. Any of these may be dominant or codominant in a successional hardwood forest. This is a broadly defined community dominated by light requiring species that are well adapted to establishment following disturbance..."

A characteristic feature of successional forests is the lack of reproduction of the canopy species. Most of the tree seedlings and saplings in a successional forest are species that are more shade-tolerant than the canopy species. Shrub layer and groundlayer dominants may include many species characteristic of successional old fields, or they may include species that occurred on the site prior to disturbance."

At the site, Russian olive, tree-of-heaven and black cherry are the predominant canopy species within the woodland, although cedar and gray birch are also present. The canopy is open, allowing a dense growth of vines and shrubs in the sub-canopy. The soil is moist, and only a thin layer of leaves remains undecomposed. The predominant sub canopy species include roses, bittersweet, honeysuckle and greenbriar. Poison ivy, smooth sumac and Virginia creeper are also common. Little light reaches the forest floor, and there are few herbaceous species except at the edge of the habitat and in the old field area. Species present in these areas include rye grass, ragweed, hawkweed, asters, and daisies. Wild onion is present in the interior of the woodland.

The following is a list of plant species found on site, or expected to be on site given the conditions present, within the successional habitats. This list is not meant to be all inclusive but was prepared as part of several field inspections to provide a detailed representation of what is found on site. Care was taken to identify any species that might be unusual for the area.

SUCCESSIONAL HABITAT PLANT SPECIES

Woody Species

- * tree-of-heaven
- norway maple
- red maple
- American barberry
- * gray birch
- * bittersweet
- sweet fern

- Alianthus altissima*
- Acer platanoides*
- Acer rubrum*
- Berberis canadensis*
- Betula populifolia*
- Celastrus scandens [1]*
- Comptonia peregrina*

- * flowering dogwood
- silverberry
- * Russian olive
- forsythia
- huckleberry
- black walnut
- * eastern red cedar
- bush clover
- privet
- * honeysuckle
- stagger-bush
- mulberry
- bayberry
- * virginia creeper
- pitch pine
- white pine
- * aspen
- * black cherry
- white oak
- scrub oak
- scarlet oak
- scrub (bear) oak
- chestnut oak
- post oak
- black oak
- * multiflora rose
- * pasture rose
- black locust
- buckthorn
- * sumacs
- * brambles
- willows
- * sassafras
- * greenbriar
- common nightshade
- * poison-ivy
- highbush blueberry
- maple-leaved viburnum
- arrowwood
- grape

Herbs and Groundcovers

- poverty grass
- chokeberry
- * wild onion
- * ragweed
- * asters

- Cornus florida* [1]
- Elaeagnus commutata*
- Elaeagnus angustifolia*
- Forsythia* sp.
- Gaylussica baccata*
- Juglans nigra*
- Juniperus virginiana*
- Lespedeza* sp.
- Ligustrum vulgare*
- Lonicera* spp.
- Lyonia mariana*
- Morus alba*
- Myrica pennsylvanica* [1]
- Parthenocissus quinquefolia*
- Pinus rigida*
- Pinus strobus*
- Populus* sps.
- Prunus serotina*
- Quercus alba*
- Quercus ilicifolia*
- Quercus coccinea*
- Quercus marilandica*
- Quercus prinus*
- Quercus stellata*
- Quercus velutina*
- Rosa multiflora*
- Rosa* sp.
- Robinia pseudo-acacia*
- Rhamnus* spp.
- Rhus* sps.
- Rubus* sp.
- Salix* sps.
- Sassafras albidum*
- Smilax glauca*
- Solanum nigrum*
- Toxicodendron radicans*
- Vaccinium corymbosum*
- Viburnum acerifolium*
- Viburnum dentatum*
- Vitis* spp.

- Andropogon* sp.
- Aronia* sp.
- Allium stellatum*
- Ambrosia artemisiifolia*
- Aster* sps.

mustard	<i>Brassica sp.</i>
yarrow	<i>Achillea millefolium</i>
cress	<i>Arabis sp.</i>
milkweed	<i>Asclepias syriaca</i>
yellow rocket	<i>Barbarea vulgaris</i>
sedge	<i>Carex sp.</i>
spotted knapweed	<i>Centurea maculosa</i>
* oxeye daisy	<i>Chrysanthemum leucanthemum</i>
thistle	<i>Cirsium sp.</i>
nut grass	<i>Cyperus esculentus</i>
broom	<i>Cytisus scoparius</i>
Queen Anne's lace	<i>Daucus carota</i>
daisy fleabane	<i>Erigeron annuus</i>
cypress spurge	<i>Euphorbia cyparissias</i>
spotted Joe Pye weed	<i>Eupatorium maculatum</i>
common strawberry	<i>Fragaria virginiana</i>
avens	<i>Geum laciniatum</i>
ground ivy	<i>Glechoma hederaceae</i>
* hawkweed	<i>Hieracium sp.</i>
common St. Johnswort	<i>Hypericum perforatum</i>
* rye grass	<i>Lolium perenne</i>
evening primrose	<i>Oenothera biennis</i>
sensitive fern	<i>Onoclea sensibilis</i>
royal fern	<i>Osmunda regalis</i>
panic grass	<i>Panicum sp.</i>
poke weed	<i>Phytolacca americana</i>
plantain	<i>Plantago sp.</i>
cinquefoils	<i>Potentilla spp.</i>
buttercup	<i>Ranunculus acris</i>
common dewberry	<i>Rubus flagellaris</i>
black-eyed Susan	<i>Rudbeckia hirta</i>
bouncing bet	<i>Saponaria officinalis</i>
white campion	<i>Lychnis alba</i>
goldenrod	<i>Solidago spp.</i>
* common dandelion	<i>Taraxacum officinale</i>
cow vetch	<i>Vicia cracca</i>
common mullein	<i>Verbascum thapsus</i>
whorled loosestrife	<i>Lysimachia quadrifolia</i>
cocklebur	<i>Xanthium chinense</i>

* Species identified on site by CVA staff on 6/11/96.

[1] NYS exploitably vulnerable protected species

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. Only one plant, featherfoil (*Hottonia inflata*), was listed as present in the vicinity of the site. Featherfoil is an obligate wetland plant, and would not be found on site. It is probably known from the adjacent recharge basin.

Several plants listed by the NYSDEC as "exploitably vulnerable" protected plant species have been identified as on, or potentially on, the site based on field observation and the existence of suitable growing conditions. These plants are species which are not rare, but are likely to become threatened if causal factors, such as collection for flower arrangements, continue. Under ECL 9-1503.3, no person may "knowingly pick, pluck, sever, damage by the application of herbicides or defoliant or carry, without the consent of the owner thereof, protected plants" (NYSDEC, 1975). The fine attached to an offense of this section is not to exceed twenty five dollars (\$25.00). 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.

B. Wildlife

The natural vegetation types found on site provide habitat for a wide range of wildlife species. The following is a detailed discussion of individual species expected on site. Appendix A presents a detailed 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 species biological needs.

1. Birds

The habitats found on the subject parcel are suitable for a wide variety of avian species, including those found in forests and open and suburban habitat. Although the site is narrow with adjacent development, the Oak-Tulip Tree forest should support some avian species which prefer forest interior habitats, such as the towhees and warblers. Many forest interior species are relatively intolerant of noise and other human activity, and are absent or rare except where there are large tracts of open space. These area-sensitive forest species would not be expected to utilize the site because of the surrounding development.

Most birds which prefer the open habitats found on the southern half of the site are relatively tolerant of human activity, and will utilize the newly landscaped residential areas. There are a limited number of open habitat birds which avoid humans and suburban areas, including several game birds and sparrows. These species may be present on the subject parcel, but numbers would be expected to be low. Birds which prefer a mix of wet and upland habitats are also likely to be present, as there are two adjacent recharge basins to the east of the site. These basins probably also provide a breeding area for insects, which would support larger populations of insect feeding birds than a purely upland site. The following is a discussion of the avian species expected on site.

Woodpecker species, including the common flicker, red-bellied woodpecker, and downy woodpecker, are common in the mature wooded portions of Long Island and are likely to be found on site. The hairy woodpecker is secretive and avoids human activity, but might be present in the more isolated portions of the property. These species prefer mature woodlands where insects are abundant in both large mature trees and decaying trees. Suitable trees are present on site.

Smaller birds which feed on insects among trees are the black-capped chickadee, hermit thrush, tufted titmouse, and white-breasted nuthatch, all of which are year-round residents on Long Island (Bent, 1964). Similar birds which may also utilize the site are the golden-crowned and ruby-crowned kinglets, both of which are primarily winter visitors on Long Island and are found in both forested and open habitats. The veery and brown creeper, which prefer moist woods, could be present near the ponds, although the veery generally prefers larger tracts of forest (Bent, 1964). The wood thrush might use the wooded portions of the site, but prefers open habitats (Andrle and Carroll, 1988). Most of these species are relatively tolerant of human activity, and should be minimally impacted as long as the wooded habitat remains.

Birds from the flycatcher and the swallow families feed on flying insects in wooded and shrubby areas. The eastern wood-pewee is the most likely flycatcher to be present, though neither was observed (Bent, 1963; Andrie and Carroll, 1988). Both species are summer visitors on Long Island and prefer forest habitats. Common Long Island swallows include the barn and tree swallows, both of which adapt well to human activity. The tree swallow prefers wetland areas where insects are abundant, and may be present near the recharge basins. Barn swallows nest on barns and other buildings, but may use natural nest sites as well.

The cedar waxwing also occasionally feeds on flying insects, but is more commonly associated with orchards and suburban areas, where its diet consists primarily of fruit. This species would be expected on the southern portion of the site during summer months (Bull and Farrand, 1974). The scarlet tanager is extremely vulnerable to habitat fragmentation, and is usually found in wooded areas of over 50 acres. The species might be present but is not expected (Andrie and Carroll, 1988).

Warblers also feed on a variety of insects, and several species may be found on site. The forest canopy and understory as well as the old field provide excellent habitat for these species when they are present on Long Island during the warmer spring and summer months (Bent, 1963; Andrie and Carroll, 1988). The most likely forest dwelling warbler to be present is the blue-winged warbler. The black and white warbler, ovenbird and American redstart might be present but prefer larger tracts of open space. The black-and-white warbler and blue-winged warbler are also found in open habitats, and the yellow warbler, prairie warbler and chestnut-sided warbler would be expected on the southern portion of the site.

The nearby recharge basins are also likely to provide insects for the insect eating birds. Red-winged blackbirds nest on or near the ground in a variety of habitats including marshes, swamps, wet meadows, fields and thickets (Bent, 1965), and were observed on site.

Seed-eating birds, including grosbeaks, finches, towhees, juncos, and sparrows are expected in both the forest and open habitats (Bent, 1968, 1968). Species from these families that might use the site include the chipping sparrow, purple finch, rufous-sided towhee, house sparrow, field sparrow, American goldfinch, rose-breasted grosbeak, northern junco, white-throated sparrow, fox sparrow, song sparrow, common yellowthroat and northern cardinal. The fox, field and grasshopper sparrow may be present, but are relatively intolerant of human activity existing development. The indigo bunting is restricted to open habitats and could be present. This species has suffered from loss of early succession habitat on Long Island (Andrie and Carroll, 1988).

A variety of larger birds are also commonly found a mix of forest, old field and suburban habitats (Bent, 1964, 1965), including the American crow, mourning dove, grackle, blue jay, northern oriole, northern mockingbird and American robin. The blue jay, grackle, robin and mourning dove were all observed on the subject parcels. Other species within this group which may be present include the brown thrasher, gray catbird and yellow-billed cuckoo. The brown-headed cowbird might also be present on site. This species is a nest parasite

found in woodland edges and suburban areas, and feeds primarily on insects and some grains (Bent, 1965). All of these species are very tolerant of human activity. Although they will experience some habitat loss, they will be expected to return to the landscaped portions of the residential area.

The dense understory throughout the site should also provide habitat for game birds. Common bobwhite, ring-necked pheasant and ruffed grouse are game birds which are year-round residents on Long Island (Forbush, 1912; Bent, 1963; Andrie and Carroll, 1988). The ruffed grouse prefers more isolated areas, however, and is not likely to be present.

The site and surrounding area is suitable for use by raptor and owl species, which prefer to nest or roost in the forested areas near open area for hunting. These species be present given the mix of forest and open habitats in the vicinity. Most prefer to nest in high areas away from humans, and may nest on the higher portions of the property. Owls and raptors prey primarily on small mammals, which are likely to be abundant nearby. Although none were seen and no signs were observed, the eastern screech owl, American kestrel, red-tailed hawk and sharp-shinned hawk may be found on site. The red-tailed hawk, screech owl and kestrel are relatively tolerant of humans and may also be found in suburban areas and city parks (Bent, 1961; Andrie and Carroll, 1988).

The following bird species were observed, or evidence of same was observed on or near the site during field investigations which occurred in June 1996. The listing also includes species that are likely to occur given the type of habitat found on the site. This list is not intended to be all inclusive but provides a detailed representation of what is, or can be expected to be, found on site.

BIRD SPECIES

red winged blackbird
common bobwhite
northern cardinal
gray catbird
black-capped chickadee
brown-headed cowbird
brown creeper
American crow
mourning dove
house finch
purple finch
common flicker
American goldfinch
common grackle
rose-breasted grosbeak
red-tailed hawk
common nighthawk

Agelaius phoeniceus
Colinus virginianus
Cardinalis cardinalis
Dumetella carolinensis
Parus atricapillus
Molothrus ater
Certhia familiaris
Corvus brachyrhynchos
Zenaida macroura
Carpodacus mexicanus
Carpodacus purpureus
Colaptes auratus
Carduelis tristis
Quiscalus quiscula
Pheucticus colchicus
uteo jamaicensis
Chordeiles minor

blue jay	<i>Cyanocitta cristata</i>
northern junco	<i>Junco hyemalis</i>
American kestrel	<i>Falco sparverius</i>
killdeer	<i>Charadrius vociferus</i>
golden-crowned kinglet	<i>Regulus satrapa</i>
ruby-crowned kinglet	<i>Regulus calendula</i>
eastern meadowlark	<i>Sturnella magna</i>
northern mockingbird	<i>Mimus polyglottos</i>
white-breasted nuthatch	<i>Sitta carolinensis</i>
northern oriole	<i>Icterus galbula</i>
eastern screech owl	<i>Otus asio</i>
ring-necked pheasant	<i>Phasianus colchicus</i>
American robin	<i>Turdus migratorius</i>
chipping sparrow	<i>Spizella passerina</i>
field sparrow	<i>Spizella pusilla</i>
fox sparrow	<i>Passerella iliaca</i>
house sparrow	<i>Passer domesticus</i>
song sparrow	<i>Melospiza melodia</i>
white-throated sparrow	<i>Zonotrichia albicollis</i>
european starling	<i>Sturnus vulgaris</i>
barn swallow	<i>Hirundo rustica</i>
tree swallow	<i>Iridoprocne bicolor</i>
brown thrasher	<i>Toxostoma rufum</i>
tufted titmouse	<i>Parus bicolor</i>
rufous-sided towhee	<i>Pipilo erythrophthalmus</i>
hermit thrush	<i>Catharus guttatus</i>
black-throated blue warbler	<i>Dendroica caerulescens</i>
blue-winged warbler	<i>Vermivora pinus</i>
chestnut-sided warbler	<i>Dendroica pensylvanica</i>
yellow warbler	<i>Dendroica petechia</i>
yellow-rumped warbler	<i>Dendroica coronata</i>
cedar waxwing	<i>Bombycilla cedrorum</i>
downy woodpecker	<i>Picoides pubescens</i>
hairy woodpecker	<i>Picoides villosus</i>
red-bellied woodpecker	<i>Melanerpes carolinus</i>
carolina wren	<i>Thryothorus ludovicianus</i>
house wren	<i>Troglodytes aedon</i>
common yellowthroat	<i>Geothlypis trichas</i>

None of the species identified on the list are endangered, threatened or of special concern. A discussion of the impact of the proposed project on the species identified above will be presented in the section on Ecological Impacts.

b. Mammals

The habitats associated with this site should support a number of mammal species. Small rodents and insectivores such as mice, shrews and voles are expected to be the most abundant mammals on site, but they may support larger mammals.

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 probably numerous throughout the undeveloped portion of the site.

Two larger insectivores, the eastern and star nosed moles, are also found on Long Island. The star nosed mole prefers wetlands and is not expected, but the eastern mole may be present. This species 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. Its habitats also include pine barrens, dunes and salt marsh borders, but the species seems to avoid fresh water swamps and marshes (Connor, 1971). This mammal is expected on the upland portion of the site.

Several rodents would be expected on site. The white-footed mouse is found in a wide variety of habitats on Long Island, including wetlands, dry fields, woods and occasionally buildings (Connor, 1971). It is one of the most common mammals on the island, but local populations typically fluctuate greatly from year to year (Connor, 1971). The meadow mouse is very common in grasslands, dunes and marshes, but is not found in the dry woodlands found over most of Long Island (Connor, 1971). This species would not be expected on site. The pine mouse is less abundant than the shrews and other mice discussed above, but it is common in fields and woods with light sandy soils away from the shore, and it may be on site. Mice are typically omnivorous, feeding on grasses, herbs, roots, tubers and occasionally small invertebrates. The house mouse and Norway rat are introduced European species which prefer to be near human structures and are considered pests. These two species are likely to be present, particularly near the developed areas.

Of the other large rodents, the eastern gray squirrel and chipmunk would be expected on site. 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. The chipmunk prefers forest and edge habitats with thick understory vegetation, where it feeds on a variety of plant material,

and it will utilize suburban areas with sufficient cover (Connor, 1971; Godin, 1977). This species should be present throughout the site.

Bats typically prefer areas near water where there are abundant insects for feeding, and thus should be found on or near the site. 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, and may be present on site at times.

The eastern cottontail is the most common rabbit on Long Island, although the similar New England cottontail is also present. The cottontails occupy a variety of habitats, including both 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. Cottontails are probably abundant on 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, the largest mammal on Long Island, may also be present, although no signs were observed. Although deer populations declined after European settlement of the northeast, the absence of large predators, increase in edge habitat, and decline in hunting has allowed increases in deer populations in this century. Deer will use a variety of wooded habitats, including deciduous woods, pine barrens and swamp borders (Connor, 1971), but prefer thickets alternating with open glades and fields in which they "bed down" (Godin, 1977). Deer typically move in herds within a home range of 2 to 3 square miles (Godin, 1983), and there is limited undeveloped habitat in the vicinity of the site to support the species.

Long Island carnivores include red fox, raccoon, long tailed weasel, mink and skunk, of these the raccoon and fox are likely to be present. The raccoon is common throughout Long Island, but prefers brushy wooded habitats near water. The raccoon is tolerant of humans, and may become a pest, foraging in trash cans, gardens and agricultural fields. They will occasionally cause damage by denning in attics and other structures. Raccoons should be present throughout the site, and ample food sources are available to sustain the species.

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. The dense understory of the wooded areas on site should provide suitable cover, and fox are probably present. Prey species, including small mammals, particularly mice and rabbits, birds, and insects, should be abundant. Fox also feed on berries, carrion, and occasionally aquatic organisms. Reports of the home range size of foxes vary, and home range appears to be influenced greatly by habitat availability. 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 as though with diminished amounts of open land, the range of the fox increases. A study of red foxes done in New York state during the 1970's by the NYSDEC at Delmar found larger home range sizes of approximately one and a half square miles. The study also found that populations shifted greatly from year to year (personal communication, Ben Tullar, NYSDEC, December, 1989).

The following is a list of the mammal species which are expected to occur in the study area because of existing conditions in the area or immediately surrounding it. This list is not meant to be all inclusive but is intended to provide a list of the most common species. Additional information regarding these species and others can be found within Appendix A.

MAMMALIAN SPECIES

masked shrew	<i>Sorex cinereus</i>
short-tailed shrew	<i>Blarina brevicauda</i>
Virginia opossum	<i>Didelphis virginiana</i>
big brown bat	<i>Eptesicus fuscus</i>
southern flying squirrel	<i>Glaucomys volans</i>
red bat	<i>Lasiurus borealis</i>
hoary bat	<i>Lasiurus cinereus</i>
silver haired bat	<i>Lasionycteris noctivagans</i>
woodchuck	<i>Marmota monax</i>
meadow mouse	<i>Microtus pennsylvanicus</i>
house mouse	<i>Mus musculus</i>
long-tailed weasel	<i>Mustela frenata</i>
mink	<i>Mustela vison</i>
Keen's bat	<i>Myotis keeni</i>
little-brown bat	<i>Myotis lucifugus</i>
white-tailed deer	<i>Odocoileus virginianus</i>
muskrat	<i>Ondatra zibethicus</i>
white-footed mouse	<i>Peromyscus leucopus</i>
eastern pipistrelle	<i>Pipistrellus subflavus</i>
pine mouse	<i>Pitymys pinetorum</i>

raccoon
Norway rat
eastern mole
eastern gray squirrel
eastern cottontail
New England cottontail
eastern chipmunk
red fox

Procyon lotor
Rattus norvegicus
Scalopus aquaticus
Sciurus carolinensis
Sylvilagus floridanus
Sylvilagus transitionalis
Tamias striatus
Vulpes vulpes

c. Amphibians/Reptiles

The incidence of reptiles and amphibians on the site is likely to be low in both density and diversity, as there are no wetlands on site. The adjacent recharge basins may support some wetland species which occasionally utilize the site. The bullfrog and spring peeper are the most likely frogs to be present, as these species disperse from the breeding pond as adults. Most other frogs remain in or near the pond throughout their life cycle.

Terrestrial amphibians on Long Island include the toads and salamanders. Salamander species require both undisturbed moist woods for foraging, and standing water for breeding. The red-backed salamander is the most likely species, and prefers a dry woodland habitat with plenty of leaf litter and fallen logs to forage beneath (**Bishop, 1943**). Mole salamanders are not expected, as they need standing water to breed. The eastern spadefoot toad and the Fowler's toad are also found in dry forested areas with sandy or loose soils (**Wright, 1949**).

Several species of reptiles might be found in the woodland and open habitats habitat as well. Species of snakes that may be found in dry woodlands and/or fields include the eastern garter snake, the eastern hognose snake, the eastern milk snake, the racer and the northern ringneck snake (**Wright, 1957**). These feed on small amphibians, insects, and worms found in the forest. The only terrestrial turtle species possibly existing on site is the eastern box turtle. It is essentially a terrestrial species and requires very little water to ensure its survival (**Obst, undated**).

The following reptile and amphibian species were observed during field investigations or are likely to occur, given the type of habitats found on the site. Various references were used in compiling this list. This list is not intended to be all inclusive but provides a detailed representation of what is, or can be expected, to be found on site. Please also refer to **Appendix A** which provides further information concerning expected species.

AMPHIBIAN SPECIES

Fowler's Toad

Bufo woodhousei fowleri

spring peeper
bullfrog
red-backed salamander
eastern spadefoot toad

Hyla crucifer
Rana catesbeiana
Plethodon cinereus cinereus
Scaphiopus holbrooki

REPTILE SPECIES

racer
northern ringneck snake
eastern hognose snake
eastern milk snake
northern water snake
eastern box turtle
common garter snake

Coluber constrictor
Diadophis punctatus
Heterodon platyrhinos
Lampropeltis triangulum
Natrix sipedon
Terrapene carolina
Thamnophis sirtalis

[1] NYSDEC special concern species.

One reptile species, which is listed by the New York State Department of Environmental Protection (NYSDEC) as "Species of Special Concern", was identified as potentially being on the site because of the existing habitats. The eastern hognose snake (*Heterodon platyrhinos*), was not observed during the field investigations. Special concern species are those native species which are not recognized as endangered or threatened, but for which documented concern exists for their continued welfare in New York State, as a whole. Unlike endangered and threatened species, species of special concern receive no additional legal protection under Environmental Conservation Law Section 11-0535 (**Endangered and Threatened Species**). This category is presented primarily to enhance public awareness of these species which deserve additional attention (**NYSDEC, Endangered Species Unit**).

III. IMPACTS

The primary impacts to the ecological resources of a site are typically a direct result of clearing of natural vegetation and the resulting loss and fragmentation of wildlife habitat. The proposed development will require clearing of much of the southern portion of the site, although natural vegetation will be retained where possible. A large, 10.7 acre parcel will be dedicated to the Town of Huntington as an open space parcel. The following sections examine in detail the impact of clearing with regard to both vegetation and wildlife.

A. Vegetation

The proposed project will require clearing of portions of the site, although almost three quarters of the natural vegetation will remain. All of the Oak-Tulip Tree Forest will be preserved, as will areas of the Succession Hardwood Forest. The old field area will be entirely removed for installation of the recharge basin. A natural buffer will remain around the perimeter of the southern half of the site, and natural vegetation will be retained on the individual lots where possible.

Table B presents an estimate of the lot coverage's for each use or habitat type following construction. These figures are based on Table 1 of the Draft EIS, which indicated that 15.17 acres of the site were expected to be "pervious undisturbed" for the purposes of calculating recharge. Of this area, 0.74 acres will be the proposed recharge basin, and thus a total 14.4 acres of the existing natural vegetation of the site will be retained. All of the Oak-Tulip Tree Forest will remain, and 7.2 acres (55.4 percent) of the Succession Hardwoods will remain. The small area of old field will be removed for construction of the proposed recharge basin.

Oak Tulip Tree forest is the original vegetational community in the area of the project site, and relatively few undisturbed parcels of this habitat are present in the area. This habitat is dominated by native species, while the successional woodland to the south is dominated by a mix of non-native invasive species and native weeds. Although the Successional Woodland probably supports a greater diversity of both plants and wildlife, the Oak-Tulip Tree forest is considered more valuable as a native climax forest.

Both woodlands and overgrown fields are decreasing in the Town due to ongoing development. Although open space preservation typically focuses on acquisition of more mature woodlands, there are numerous edge habitats within the Town which will support the weedy species found on the southern portion of the site and barren areas are able to quickly revert to this habitat. The Oak - Tulip Tree Forest is preserved entirely under the proposed plan because of it's value as climax forest. It is important that successional areas be preserved as well, and approximately half of the Successional Woodland will be retained on site.

The project site is not unique or unusual in terms of native vegetation or habitat. There will be a significant change in the ecological character of the southern half of the site as a result of the proposed development, however, regional impacts are not expected to be significant. The following section will investigate the wildlife response to the anticipated habitat reduction.

TABLE B

COMPARISON OF PROPOSED AND EXISTING HABITATS

Habitat/Use	Existing	Proposed	Change
Oak Tulip Tree Forest	7.2	7.2	- 0.0
Successional Hardwoods	13.0	7.2	- 5.8
Old Field	0.4	0.0	- 0.4
Landscaped	0.0	(3.4)	(+ 3.4)
Impervious	0.0	2.0	+ 2.0
Recharge Basin	0.0	0.8	+ 0.8
Total	20.6	20.6	

2. Wildlife

The vegetation found on the project site provides habitat for a wide variety of wildlife. Many of these species are at least somewhat adaptable to human activities, but some species will be impacted by the proposed clearing. The proposed project will protect a all of the mature forest on site, although almost half of the sucessional woodland will be removed. As was discussed in the preceding section, both early sucessional and mature forest habitats are limited throughout the Town. These two vegetational communities both support a number of wildlife species, and the proposed plan will favor species which are restricted to the mature woodland habitat.

Forest interior species are often more vulnerable to development than species found in open habitats. Wildlife which are found predominantly in open areas will often utilize a range of habitats, including suburban yards, and thus adjust more easily to human activity. Species found in open, early successional habitats are also less likely to be sensitive to habitat fragmentation than forest interior species. Thus, the preservation of the northern portion of the site as proposed is preferable to alternative plans which would preserve the successional habitat at the expense of the mature woodland habitat. Those few wildlife species which prefer open habitats but are sensitive to human activity will be most affected by the proposed plan.

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 which 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 certain wildlife populations due to displacement of individuals by the construction phase of the proposed project. Ultimately, competition with both conspecifics and other species already occupying the ecological niches of the surrounding lands should result in a net decrease in population size for most species. However, 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. The species which are restricted to the wetlands on the adjacent site should not be affected. The impacts of habitat losses are cumulative, however, and impacts need to be considered in light of regional planning.

The Ecological Setting section provides a discussion of the wildlife populations associated with the subject site. In addition, **Appendix B** includes the results of a microcomputer model developed by CVA. 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 B** contains a computer generated table labeled "Species Adaptability". This list is another component of the program developed by CVA used for the preparation of the Wildlife Habitat computer model; however, in this application the "Adaptability" of the observed and expected species are 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.

a. Birds

Literature suggests that many avian species are able to adapt to both urban and suburban environments. Birds such as the American crow, American robin, blue jay, common grackle, gray catbird, northern cardinal, northern mockingbird, and mourning dove will be temporarily affected by the development of the property; however, these birds usually adjust quite well to human activities (**Andrie and Carroll, 1988; Bent, 1963, 1964, 1968**). The yellow-billed cuckoo is more secretive, but will continue to use suburban areas if thickets and dense growth remain. Any declines in population size that do occur are not expected to effect the regional populations to a significant degree. Following is a more detailed discussion of the impacts these species may incur as a result of the project:

The American crow is among the more common resident avian species of Long Island. The crow is most often associated with farmland habitats and hedgerows. Crows will use edge habitats extensively, and the number of crows on site is therefore not expected to decline.

The American robin is among the most common back yard species in developed areas of the northeastern United States, and is a summer visitor on Long Island. Given the ability of this species to tolerate development and human activities and preference for grassy areas, this species is also likely to remain stable.

The common grackle, brown thrasher, and gray catbird are associated with a wide variety of habitats including urban areas, woodlands, and thickets (Bent, 1965). Of these, only the grackle commonly overwinters on Long Island. Slight declines in these species may be expected due to habitat loss and increased human activity on the site following implementation of the project.

Both the blue jay and northern mockingbird are relatively common in forests habitats (Leck, 1979), yet prefer to nest near humans (Bent, 1964). Both species are residents on Long Island. They feed on insects, fruits and berries (Leck, 1979). The number of individuals may decline with the loss of nest sites, but the species are likely to utilize the revegetated areas and regional populations are not likely to be impacted.

The mourning dove and European starling are also frequently associated with human habitation, but may also be abundant in fields and other areas (Bent, 1963). Although these species may use the wooded portion of the site, they prefer the more open habitat found to the south. The starling is an introduced species which is often considered a pest. These species are unlikely to be impacted by the proposed project.

Some smaller birds which also adapt well to an urban setting include house finches, purple finches, house sparrows, house wrens, northern juncos, thrushes and most other sparrows (Andrle and Carroll, 1988; Bent, 1968). Many of these species are not expected to be numerous in the forested areas under existing conditions, and may increase in population size once the site is landscaped, as they typically find cover and food in edges and buffer zones. Any negative impacts to these populations are expected to be minor due to their abundance and documented adaptability. The following is a more detailed discussion of several of these species.

The house finch is an introduced species found in urban settings, and is often considered a pest as it prefers to nest on buildings (Bent, 1968). The house and chipping sparrows are also well adapted to areas inhabited by humans, and both are resident species on Long Island. Sightings of the house sparrow include towns and urbanized areas (Bent, 1968). While census information from Long Island is not available, numbers of house sparrows are generally believed to be on the increase. Populations of these species will likely remain constant.

The song sparrow is one of the most common sparrows in the northeastern United States. Its preferred habitats and nest sites include old field and open woods, although the species is

also found in the undergrowth in gardens and city parks (Farrand and Bull, 1977). This resident species is less adaptable to human activity than the other sparrows, but will remain in its preferred habitat. The field sparrow prefers abandoned fields and pastures that have grown up in weeds, scattered bushes and small saplings (Brown, 1947), and numbers may decrease following implementation of the proposed project.

The northern junco and fox sparrow prefer habitats of coniferous forest undergrowth in the winter when these species are present on Long Island, but are occasionally found in deciduous forests (Farrand and Bull, 1977). As these species do not breed on Long Island and the understory is relatively sparse, loss of the wooded areas on site should have minimal impact. The purple finch and hermit thrush, which are residents, also prefer coniferous forests, but will use suburban areas. As little of the wooded area will be cleared, local populations are likely to remain constant.

The successional habitat should support game birds such as the common bobwhite, ring-necked pheasant and ruffed grouse (Forbush, 1912; Bent, 1963; Andrie and Carroll, 1988). Numbers would be expected to decline on site, with significant local impacts. The indigo bunting, though not a game bird, also prefers successional shrubland habitat, and thus may be impacted if present.

Some birds cannot adapt 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 relocation. Many of these birds are fairly secretive and prefer woodlands with dense understory vegetation (Andrie and Carroll, 1988; Bent, 1964, 1968). The existing development immediately surrounding the site, as well as noise penetration from the surrounding roads, probably already limits the number of these species which are present on site. Any birds of this group which are present will be forced to find more suitable habitat in the area to the south, and are not expected to return to the site after the project is completed if indeed they have any contact with the site at present.

The yellow warbler and the black-throated blue warbler are the most likely warblers expected on site. These species prefer more mixed woodlands with cover (Leck, 1979). The black and white warbler is associated with oak woodlands (Leck, 1979) and woodland and wetland habitats (Bent, 1963), and may be present. All of these species are summer breeders on Long Island, and numbers of all these species would be expected to decline on site following construction.

The eastern wood pewee is associated with a wide range of habitats including cedar swamps (Leck, 1979), open mixed woods, woodland edges, fields and clearings (Bent, 1963). While this bird is considered a forest interior species, sightings in towns and villages are not uncommon (Bent, 1963). Due to this limited adaptability and presence in successional habitats regional populations are not expected to significantly decline.

Although woodpeckers can adapt 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 will decline slightly on site following clearing, although suitable habitat will remain. Included in this group are common flickers, downy woodpeckers, hairy woodpeckers and red-bellied woodpeckers, all of which are residents on Long Island. Clearing of the site will cause these species to relocate to other areas where large trees still exist, and may ultimately cause a slight decrease in local populations.

The downy woodpecker, one of the most common woodpeckers in the northeastern United States, is also one of the more adaptable to human activities. This species nests in tree cavities and is found in a wide variety of habitats including villages, towns and even large cities (Bent, 1965). The number of downy woodpeckers on site is expected to decline as a result of the proposed clearing, however, due to the adaptability of the species, regional populations of downy woodpeckers are not expected to decline. The hairy woodpecker has similar habitat requirements, but is secretive and is not tolerant of humans. If present, it would be expected to use only the more isolated open space portions of the site following development.

The red-bellied woodpecker and common flicker are associated with a variety of woodland habitats including woodland swamps, open deciduous woods and mixed coniferous woods (Bent, 1964), and are relatively adaptable if large trees remain for nesting and foraging. Given that some clearing of the Oak Forest is proposed, declines in woodpecker species are expected; however, these species will use edge habitats and will remain on the more isolated portions of the site. Slight local impacts can be expected.

Another species which feeds on flying insects but is only expected during the summer months is the cedar waxwing. The cedar waxwing is associated with coniferous woodlands of all kinds and has been frequently sighted in town and village settings (Bent, 1965). Due to this limited adaptability, regional populations are not expected to significantly decline provided woodland edges and mixed woods are present in the area.

Other smaller canopy-loving birds such as the black-capped chickadee, ruby-crowned kinglet, golden-crowned kinglet, tufted titmouse, brown creeper, and white-breasted nuthatch are fairly adaptable to development as long as large trees with plenty of seeds and insects remain (Andrle and Carroll, 1988; Bent, 1964). These species will be only slightly impacted.

The black-capped chickadee is a resident woodland species that is often sighted in towns and villages (Bent, 1946). The brown creeper prefers moist areas, but is also found in upland coniferous and deciduous forests. The proposed clearing may cause a localized decline of these species; however, they are fairly adaptable to human activity and regional populations should remain stable.

The tufted titmouse, which is related to the chickadee, is also associated with woodland habitats (Bent 1946) and is known to over-winter in pine barrens habitats (Leck, 1979).

This species typically undergoes greater impacts than its congener, and may suffer local population decline.

The white-breasted nuthatch may also over-winter in this area and is associated with pine barrens habitats (Leck, 1979). Clearing of the site as proposed will cause declines of this species, although it is fairly tolerant of human activity and will utilize the remaining wooded areas.

Other species of birds which prefer wooded edge and field habitat include owls and raptors. These species generally roost or nest in forested areas, hunting in adjacent open areas. The red-tailed hawk and American kestrel are the most likely raptors to be present, while the common screech owl is the most likely owl. Of these, only the kestrel adapts well to densely populated or heavily developed areas. Both the owls and raptors may be displaced, but may remain in the preserve areas. As long as suitable nest sites remain in nearby areas, these declines should not be significant. The following discussion provides more detailed information on these species:

The red-tailed hawk is a common raptor throughout North America (Farrand, 1983). It feeds mainly on rodents and rabbits (Farrand, 1983) and prefers habitats such as savannahs or farmlands where there are open areas with wooded nest sites (Brown, 1947). The species seeks nest sites high in trees near the tops of ridges and far from open water or forest openings, although the species can be found in a variety of settings, including city parks and cemeteries (Andrle and Carroll, 1988). The species is fairly adaptable, and can co-exist with humans as long as it is not harassed and adequate nest sites and foraging areas are available (Bull and Farrand, 1977). Potential nesting sites for this species will be reduced with the proposed action, and populations may decline slightly.

The American kestrel is the most common falcon in both open and semi-open country. This species feeds on insects, small birds, and rodents, capturing its prey on the ground rather than in the air. When small vertebrate animals are not available, it concentrates on grasshoppers and large invertebrates (Farrand, 1983). The American kestrel is distributed in a variety of habitats including open country, farmland, cities, and wood edges (Peterson, 1980). "It nests in tree cavities, crevices in buildings, and holes in earth banks or cliffs" (Farrand 1983). Unlike the larger falcons, the American kestrel has adapted fairly well to humans and nests even in large cities where it preys chiefly on house sparrows (Brown, 1947). It is often called the Sparrow Hawk. This species uses a variety of habitats and is tolerant of human activities, but will be impacted by clearing of the site.

The screech owl is associated with Pine-Oak Forest (Leck, 1979) and is the most likely owl to be on site. This species is considered common throughout its range. It is apparently somewhat adaptable to human habitation as it may nest in towns, orchards and even bird boxes. Its specific diet consists of a wide variety of animals including small birds, rodents, crustaceans and insects (Bent, 1961). If present, its numbers may decline, but regional populations should not significantly decrease.

The redwing blackbird and Carolina wren prefer wetland habitats with dense understory. These species should be provided with additional habitat with creation of the new recharge basin. Thus no negative impacts are anticipated.

b. Mammals

The mammalian fauna found on the site will also be only minimally impacted due to 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 in field habitats in nature. However, it 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 is 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 only minimally impacted, and regional population change of 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). As the species will utilize the landscaped and buffer areas, minimal impacts are expected.

The white-footed mouse prefers forest edge habitat and does not adapt 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 elsewhere on site. Thus, any declines should not be significant on a regional level. The pine mouse may utilize the landscaped area to a limited degree, and should be less impacted than the white-footed mouse. The house mouse and Norway rat are introduced pests found in or near humans in field habitats, and the rat is also found in urban settings and prefers 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 adapt quite easily to urban areas where larger trees remain for feeding and nesting, and are expected to use the lawn area extensively once it is landscaped. However, 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 and specimen trees will help to reduce the impacts to this species, and local populations will not be significantly

impacted. 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. Little edge habitat exists on site at present, 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).

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. 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 should not significantly impact these species unless the new structures provide additional nest sites, which would increase bat populations at the site. The silver haired bat and hoary bat are found on the island only during seasonal migrations, and would not be affected.

The eastern cottontail seems to do well in both suburban and natural habitat (Connor, 1971), which may be due in part to its adaptable 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). It is likely that cottontail populations will remain stable following development of the site, and the species will likely utilize the turf areas to a limited degree.

The white-tailed deer is the largest mammal known to be on site. This species is prominent in wooded areas, and prefers areas around fields and ponds (Connor, 1971). The species feeds on a variety of vegetation within a home range occupying an area of 2 to 3 square miles (Godin, 1983). If present, the species may suffer local declines.

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, although suitable cover will remain in the park and refuge. 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, mice and other small prey should still be available, and foxes will continue to use the surrounding area if they are present under existing conditions.

c. Amphibians/Reptiles

As noted in the setting section of this document, the incidence of reptile and amphibians on the upland portions of the site is low in both density and diversity. Although many of the herptile species which are found in dry woodlands adapt well to suburban areas, they are often less mobile than avian and mammal species, and may suffer direct elimination during construction. Any individuals which are destroyed are likely to be replaced from populations in natural areas adjacent to the site. The species which are restricted to wetlands adjacent to the site are not likely to be impacted by the proposed project.

Terrestrial amphibians which may be present include the toads and salamanders. Salamander species require both undisturbed moist woods for foraging and standing water for breeding. The red-backed salamander is the most likely species as it prefers dry woodland habitat (Bishop, 1943). The tiger salamander and other mole salamanders do not appear to be present (Cryan, 1984). 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 are aquatic breeders but travel long distances from the breeding site during the year. Thus, of the toads and salamanders, only the red-backed salamander and the two toad species would be expected to be impacted by the proposed project. None of 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.

Several species of reptiles were identified as potentially on site. The eastern garter snake, eastern hognose snake, eastern milk snake, the racer and northern ringneck snake may be present (Wright, 1957). Of these species, the eastern garter snake is the most adaptable to urban areas, and would be expected in the newly landscaped areas; however, even this species would be expected suffer temporary impacts due to direct loss during construction. Populations will partially recover after completion of the project, but minor impacts on the snake species would be expected. The most significant threat to these species is being killed on roadways due to increased traffic, although this should not be a significant factor under the proposed project.

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 minor impacts are expected.

The wood frog and spring peeper might occasionally be found on the upland portions of the site. Most frog species remain in close proximity to permanent water throughout their life cycle, however, these species may move considerable distances from the breeding site after hatching. Thus, the wood frog and spring peeper may suffer minor impacts as a result of the project, but populations should remain stable as long as the adjacent recharge basin remains.

IV. MITIGATION MEASURES TO MINIMIZE IMPACT

This section is intended to identify viable measures, conditions or techniques which can be employed to reduce the level of impact of the proposed project upon the vegetation and wildlife resources identified in previous sections of this report. The project itself will contain many mitigation measures by design which are intended to be incorporated into the project development and the development of the individual homes.

The proposed large single lot on the R-40 portion of the site will result in far fewer impacts than would full development of this area. Considering the development which would typically be allowed under zoning, the impact of the proposed project on the northern half of the site is substantially mitigated. The proposed subdivision of the R-20 portion of the site will be more consistent with the existing zoning.

The ability to mitigate the impacts to vegetation and wildlife is principally in the preservation and protection of the existing vegetation found on site. The following are some of the primary mitigation measures to consider with regard to the potential impacts:

- Minimize disturbance to the maximum extent practicable.
- Maintain standard for minimum percent of each lot to remain in its natural state. Where possible, the natural areas of the lots be designed to adjoin each other, thus providing larger areas of open, undisturbed vegetation. This should be possible along the rear of the lots along Jill Court.
- Improvements to parcels should be in areas of lesser slopes, avoiding the steep slopes of the individual parcel and of the site. This mitigation is incorporated into the current plan.
- Significant specimen trees should be marked to remain on site and clearing of understory should be limited, particularly on the northern portion of the site.
- Native and near native landscaping species should be utilized where possible in order to provide food and shelter to wildlife.

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**PROJECTION OF WILDLIFE ECOLOGICAL RESPONSE
CHARLES VOORHIS & ASSOCIATES, INC.
MICROCOMPUTER MODEL**

**SPECIES LIST
Appendix A**

PROJECTION OF WILDLIFE ECOLOGICAL RESPONSE (POWER)
CHARLES VOORHIS & ASSOCIATES, INC. MICROCOMPUTER MODEL

SPECIES LIST

Appendix A

INTRODUCTION

This appendix has been included to present the results of a computer model used to investigate the various wildlife species which can be expected to be found on the site considering the habitats established here. This model was developed by Charles Voorhis and Associates, Inc., using available information and references for the various species. The model utilizes the Lotus 1-2-3 spreadsheet to identify wildlife species commonly found in various Long Island habitats, based upon thorough research of available literature. The habitats were investigated were "Moist Oak Forest", equivalent to Oak-Tulip Tree Forest and **First Growth Woods**, equivalent to Successional Hardwood Forest. Many of the species listed in this model would not be expected on site given the small size of the vegetated portion of the parcel and surrounding development, but may be found on site.

The **first column** identifies the common name of the species, presented with the main common name in alphabetical order (for example: red-tailed hawk would come before blue jay). The scientific name of particular species is in **second column**. The **third column**, of particular importance to the environmental setting, contains information on: the frequency of the species in the habitat (abundant, common, rare and non expected); the species activity in the habitat (nesting, hunting and resting); and the duration the species is in the habitat (resident or seasonal by months of the year). The **fourth column** shows the legal status of the species, of which there are four possible entries (Endangered, Threatened, Special Concern and Local Concern). References are provided in the **sixth column**, with the reference list provided after this introduction. The **sixth column**, and last, contains "COMMENTS" on the particular species. Comments provide relevant information which was obtained from the literature, as regards special habits of the particular species, such as adaptability, nesting, food, etc. This column is particularly important in assessing the potential impacts to the species from proposed construction. The printout contained in this appendix, coupled with the discussions provided in the main body of the report, provides significant information of the wildlife found, or expected to be found on site.

OAK - TULIP TREE FOREST HABITAT SPECIES - INVENTORY AND CHARACTERISTICS

@ Jill Estates, Dix Hills, Huntington N.Y

COMMON NAME	SCIENTIFIC NAME	HABITS	PROT.	REF.	COMMENTS
Birds					
black capped chickadee	<i>Parus atricapillus</i>	A / N,F / R	none	4 11	abundant around parks, urban and suburban areas
brown creeper	<i>Certhia americana</i>	C / N,F / 3-10	none	4 9	prefers predominantly deciduous wooded areas extremely adaptable; omnivorous
American crow	<i>Corvus brachyrhynchos</i>	A / N,H / R	none	4 11	avoids human activity
black-billed cuckoo	<i>Coccyzus erythrophthalmus</i>	R / N,F / 5-9	none	4 11	avoids heavy urban areas; prefers wooded open or edges for nests
yellow-billed cuckoo	<i>Coccyzus americanus</i>	R / N,F / 5-9	none	4 12	abundant around parks, suburban and urban areas
common flicker	<i>Colaptes auratus</i>	C / N,F / R	none	4 14	prefers cool, damp, mature hardwood forests
Acadian flycatcher	<i>Epidonax virescens</i>	R / N,F / 5-9	none	4 15	prefers deciduous forests and deciduous open woodland
great crested flycatcher	<i>Myiarchus crinitus</i>	C / N,F / 5-9	none	4 15	prefers dense foliated trees along water ways
blue-grey gnatcatcher	<i>Poliophtila caerulea</i>	R / N,F / 4-8	none	4 7	adapts well to urban and suburban habitats
common grackle	<i>Quiscalus quiscula</i>	C / N,F / R	none	4 6	mainly found on north shore
rose-breasted grosbeak	<i>Pheucticus ludovicianus</i>	C / N,F / 5-10	none	4 20	avoids humans; nests only in dense forests; prefers to be near water
broad-winged hawk	<i>Buteo platypterus</i>	R / N,H / 4-9	none	4 16	no atlas sightings (non-breeder) on LI; needs extensive woodland
Cooper's hawk	<i>Accipiter cooperii</i>	N / N,H / 4-9	sp. concern	4 17	needs 100 foot radius undisturbed area for nest
red-tailed hawk	<i>Buteo jamaicensis</i>	C / N,H / R	none	4 16	avoids humans; nests in heavily forested areas
sharp-shinned hawk	<i>Accipiter striatus</i>	N / N,F / 4-9	none	4 16	extremely adaptable to human activity and other stresses
blue jay	<i>Cyanocitta cristata</i>	A / N,F / R	none	4 10	prefers forested area with elevation >300 meters; no LI atlas record
northern junco	<i>Junco hyemalis</i>	N / N,F / 3-10	none	4 21	prefers spruce vegetation; no atlas sightings on Long Island
golden-crowned kinglet	<i>Regulus satrapa</i>	R / N,H / R	none	4 7	occurs as non-breeding species; present during migration
ruby-crowned kinglet	<i>Regulus calendula</i>	R / N,H / R	none	4 7	abundant in parks, urban and suburban areas
white-breasted nuthatch	<i>Sitta carolinensis</i>	A / N,F / R	none	4 9	prefers deciduous woodland and shade trees
northern oriole	<i>Icterus galbula</i>	C / N,F / 5-9	none	4 6	nocturnal; nests in hollow trees, abandoned buildings, nest boxes
common screech owl	<i>Otus asio</i>	C / N / R	none	4 17	nocturnal; rare in wooded areas of less than 20 acres
great-horned owl	<i>Bubo virginianus</i>	C / N,H / R	none	4 17	nocturnal; prefers dense forested areas near water
long-eared owl	<i>Asio otus</i>	C / N,H / R	none	4 17	very adaptable; abundant in parks; nests in man-made structures
American robin	<i>Turdus migratorius</i>	A / N,F / 4-10	none	4 7	nests in tree cavity; found in parks, yards and gardens
yellow-bellied sapsucker	<i>Sphyrapicus varius</i>	C / N,F / 5-10	none	14	extremely adaptable to human activity; considered a pest
European starling	<i>Sturnus vulgaris</i>	C / N,F / R	none	4 23	rare in wooded area of less than 50 acres; affected by fragmentation
scarlet tanager	<i>Piranga olivacea</i>	C / N,F / 4-9	none	4	common in parks & suburban areas, wooded edges & dry/open areas
brown thrasher	<i>Toxostoma rufum</i>	R / N,F / 4-10	none	4 9	not common on Long Island; when present, prefers pine barrens
hermit thrush	<i>Catharus guttatus</i>	C / N,F / R	none	4 7	prefers vacant wood (trees >40 feet); may adapt of wooded suburban
wood thrush	<i>Hylocichla mustelina</i>	C / N,F / 4-10	none	4 7	common in suburban areas
tufted titmouse	<i>Parus bicolor</i>	C / N,F / R	none	4 11	

COMMON NAME	SCIENTIFIC NAME	HABITS	PROT.	REF.	COMMENTS
veery	<i>Catharus fuscescens</i>	C/N,F/5-9	none	4 7	prefers damp forest with undergrowth; affected by fragmentation
red-eyed vireo	<i>Vireo olivaceus</i>	C/N,F/5-9	none	4 23	found in parks and suburban areas with shade trees and undergrowth sensitive to fragmentation and urbanization
yellow throated vireo	<i>Vireo flavifrons</i>	C/N,F/5-9	none	4 23	primarily abandoned and overgrown field, and thickets
blue-winged warbler	<i>Vermivora pinus</i>	R/N,F/5-9	none	4 14	prefers open woodlands, orchards and residential areas
cedar waxwing	<i>Bombycilla cedrorum</i>	C/N,F/4-10	none	4 23 32	prefers suburban areas, parks and villages with shade trees
eastern wood-peewee	<i>Contopus virens</i>	C/N,F/4-9	none	4 15	prefers moist woodland and thicket near open fields
American woodcock	<i>Scolopax minor</i>	C/N,F/3-11	none	4 30	found in parks and suburban areas
downy woodpecker	<i>Picoides pubescens</i>	A/N,F/R	none	4 14	found mainly in deciduous forests
hairy woodpecker	<i>Picoides villosus</i>	C/N,F/R	none	4 14	prefers forest openings; mostly found on Long Island north shore
red-bellied woodpecker	<i>Melanerpes carolinus</i>	C/N,F/R	none	4 14	found in suburban areas and gardens; nests in crevices of buildings
house wren	<i>Troglodytes aedon</i>	R/N,F/5-10	none	4 9	
Mammals					
big-brown bat	<i>Eptesicus fuscus</i>	C/N,F/R	none	1 29	roosts in structures; found throughout LI; hunts over water
hoary bat	<i>Lasiurus borealis</i>	C/N,F/8-10	none	45	roosts in trees, sometimes found in parks
Keen's bat	<i>Myotis keenii</i>	R/N/6-10	none	1 29	roosts in buildings, crevices and bark; more common on eastern LI
little-brown bat	<i>Myotis lucifugus</i>	C/N,F/5-9	none	1 29	roosts in buildings and man made structures; hunts over water
red bat	<i>Lasiurus borealis</i>	C/N,F/5-1	none	1 29	feeds in marsh area; nests within 1000 yards of marsh in trees
silver-haired bat	<i>Lasionycteris noctivagans</i>	R/N,F/6-9	none	1 29	prefers wooded areas near water, primarily during summer months
eastern chipmunk	<i>Tamias striatus</i>	C/N,F/R	none	1 29	prefers open woods, thickets, and rocky areas
eastern cottontail	<i>Sylvilagus floridanus</i>	C/N,F/R	none	1 29	will adapt to suburban areas, if there is sufficient cover
white-tailed deer	<i>Odocoileus virginianus</i>	C/N,F/R	none	1 25 29	requires range of one-half square mile
red fox	<i>Vulpes vulpes</i>	C/H/R	none	1 29	builds den in wooded areas with loose-sandy soil and good drainage
eastern mole	<i>Scalopus aquaticus</i>	R/N,F/R	none	1 29	tunnels underground
meadow-jumping mouse	<i>Zapus hudsonicus</i>	R/N,F/R	none	1 29	found around water in pine barrens; prefers open areas with grasses
white-footed mouse	<i>Peromyscus leucopus</i>	R/N,F/R	none	1 29	common to most all habitats; does not adapt well to human activity
Virginia opossum	<i>Didelphis virginiana</i>	C/N,F/R	none	1 29	common in suburban areas, as well as woods, marsh and coastal areas
eastern pipistrelle	<i>Pipistrellus subflavus</i>	R/N,F/4-10	none	1 29	found near water in open woods, also found in buildings
raccoon	<i>Procyon lotor</i>	C/N,F/R	none	1 29	nocturnal; very adaptive; found in urban and forest areas
masked shrew	<i>Sorex cinereus</i>	C/N,F/R	none	1 29	tunnels underground; common in wood and wet habitats
short-tailed shrew	<i>Blarina brevicauda</i>	A/N,F/R	none	1 29	tunnels underground; abundant in a variety of habitats
striped skunk	<i>Mephitis mephitis</i>	N/N,F/R	none	1 29	prefers mixed wood & brush within 2 miles of water, eastern LI only
eastern gray squirrel	<i>Sciurus carolinensis</i>	A/N,F/R	none	1 29	found in parks, urban and suburban areas; very adaptable
southern-flying squirrel	<i>Glaucimys volans</i>	C/N,F/R	none	1 29	common in deep mixed, deciduous and coniferous woods
meadow vole	<i>Microtus pennsylvanicus</i>	R/N,F/R	none	29 45	tunnels underground; prefers open woodland
pine vole	<i>Microtus pinetorum</i>	C/N,F/R	none	1 29	tunnels underground; prefers sandy soil in woods and field; can swim

COMMON NAME	SCIENTIFIC NAME	HABITS	PROT	REF	COMMENTS
long-tailed weasel	<i>Mustela frenata</i>	R / N, H / R	none	1 29	prefers dense wood, but may appear in all land habitats near water
Herpiles					
common gray treefrog	<i>Hyla versicolor</i>	C / N, F / R	none	33 37	prefer mossy trees near ponds
wood frog	<i>Rana sylvatica</i>	R / N, F / R	none	33 37	prefers leafy pools and transient pools in wooded areas
red-spotted newt	<i>Notophthalmus viridescens</i>	C / F / R	none	36 38	prefers shallow ponds in wooded areas; open moist woods
spring peeper	<i>Hyla crucifer</i>	C / N, F / R	none	33 35 38	prefers pools/marsh near woodland; found high in trees in summer
red-backed salamander	<i>Plethodon cinereus cinereus</i>	C / N, F / R	none	34 36	terrestrial, prevalent in moist situations
spotted salamander	<i>Ambystoma maculatum</i>	R / N, F / R	sp.concern	34 36, 38	will breed in pond or vernal ponds in late March, early April
marbled salamander	<i>Ambystoma opacum</i>	R / N, F / R	none	34 36 38	moist to sandy areas; lays eggs in fall in low spots wet by rain
eastern garter snake	<i>Thamnophis sirtalis</i>	C / N, F / R	none	8 40	occupies a variety of habitats
eastern milk snake	<i>Lampropeltis d. triangulum</i>	C / N, F / R	none	8 39	occupies a variety of habitats
northern brown snake	<i>Storeria dekayi</i>	C / N, H / R	none	38	prefers fresh marsh, moist woods, but, adapts to urban environment
northern ringneck snake	<i>Diadophis punctatus</i>	C / N, H / R	none	38	prefers secluded moist areas under logs/stones; can adapt to suburb

LEGEND: Habits A: Abundant; C: Common; R: Rare; N: Not Expected

N: Nests; F: Forages; H: Hunts; R: Rests

R: Resident; 1-12: Months Present.

Prot. Protection Status

Ref. Reference List at end of Appendix

SUCCESSIONAL HARDWOOD FOREST HABITAT SPECIES - INVENTORY AND CHARACTERISTICS

@ Jill Estates, Dix Hills, Huntington N.Y

COMMON NAME	SCIENTIFIC NAME	HABITS	PROT	REF	COMMENTS
Birds					
gray catbird	<i>Dumetella carolinensis</i>	C/N,F/5-9	none	4 9	abundant around parks, urban and suburban areas
black capped chickadee	<i>Parus atricapillus</i>	A/N,F/R	none	4 11	abundant around parks, urban and suburban areas
brown-headed cowbird	<i>Molothrus ater</i>	A/N,F/3-10	none	4 6	lays eggs in other bird's nests; some stay during winter
brown creeper	<i>Certhia americana</i>	A/N,H/R	none	4 11	extremely adaptable; omnivorous
yellow-billed cuckoo	<i>Coccyzus americanus</i>	C/N,F/5-9	none	4 12	avoids heavy urban areas; prefers wooded open or edges for nests
mourning dove	<i>Zenaidura macroura</i>	C/N,H/4-9	none	4 8	abundant around parks, urban and suburban areas
rock dove	<i>Columba livia</i>	C/N,F/R	none	4 8	nests almost entirely on buildings; considered a pest species
house finch	<i>Carpodacus mexicanus</i>	A/N,F/3-11	none	4 20	abundant around parks, suburban and urban areas
common flicker	<i>Colaptes auratus</i>	A/N,F/R	none	4 14	adapts well to urban and suburban habitats
common grackle	<i>Quiscalus quiscula</i>	A/N,F/R	none	4 6	prefers dense cover, thick woods; avoids humans
ruffed grouse	<i>Bonasa umbellus</i>	R/N,F/R	none	4 8	mainly found on north shore
rose-breasted grosbeak	<i>Phoebastria ludovicianus</i>	R/N,F/5-10	none	4 20	no atlas sightings (non-breeder) on LI; needs extensive woodland
Cooper's hawk	<i>Accipiter cooperii</i>	N/N,H/4-9	sp. concern	4 17	needs 100 foot radius undisturbed area for nest
red-tailed hawk	<i>Buteo jamaicensis</i>	C/ H/R	none	4 16	avoids humans; nests in heavily forested areas
sharp-shinned hawk	<i>Accipiter striatus</i>	N/N,F/4-9	none	4 16	extremely adaptable to human activity and other stresses
blue jay	<i>Cyanocitta cristata</i>	A/N,F/R	none	4 10	prefers forested area with elevation >300 meters; no LI atlas record
northern junco	<i>Junco hyemalis</i>	R/N,F/3-10	none	4 21	adaptable; prefers open areas and parks; will nest near humans
American kestrel	<i>Falco sparverius</i>	C/N,H/R	none	4 17	very adaptable to human activities; prefers open areas
eastern kingbird	<i>Tyrannus tyrannus</i>	C/N,F/3-10	none	4 15	prefers spruce vegetation; no atlas sightings on Long Island
golden-crowned kinglet	<i>Regulus satrapa</i>	R/N,H/R	none	4 7	occurs as non-breeding species; present during migration
ruby-crowned kinglet	<i>Regulus calendula</i>	R/N,H/R	none	4 7	prefers to nest near humans
northern mockingbird	<i>Mimus polyglottos</i>	C/N,F/R	none	4 9	nocturnal; rare in wooded areas of less than 20 acres
great-horned owl	<i>Bubo virginianus</i>	C/N,H/R	none	4 17	nocturnal; prefers dense forested areas near water
long-eared owl	<i>Asio otus</i>	C/N,H/R	none	4 17	urbanization and agriculture have negative effects
American redstart	<i>Setophaga ruticilla</i>	C/N,F/5-11	none	4 19	very adaptable; abundant in parks; nests in man-made structures
American robin	<i>Turdus migratorius</i>	A/N,F/4-10	none	4 7	nests in tree cavity; found in parks, yards and gardens
yellow-bellied sapsucker	<i>Sphyrapicus varius</i>	C/N,F/5-10	none	14	boreal species, winters here in edge, thickets, brushy areas
fox sparrow	<i>Passerella iliaca</i>	R/ F/10-5	none	20 21	prefers buildings, urban, suburban, gardens; considered a pest
house sparrow	<i>Passer domesticus</i>	C/N,F/R	none	4 20	common to most habitats except deep forest, open field and marsh
song sparrow	<i>Melospiza melodia</i>	A/N,F/R	none	4 22	prefers brushy areas and thick undergrowth
white-throated sparrow	<i>Zonotrichia albicollis</i>	C/N,F/R	none	4 22	extremely adaptable to human activity; considered a pest
European starling	<i>Sturnus vulgaris</i>	A/N,F/R	none	4 23	

COMMON NAME	SCIENTIFIC NAME	HABITS	PROT	REF	COMMENTS
barn swallow	<i>Hirundo rustica</i>	C/N,F/5-9	none	4 15	nests almost entirely on buildings
brown thrasher	<i>Toxostoma rufum</i>	C/N,F/4-10	none	4 9	common in parks & suburban areas, wooded edges & dry open areas
hermit thrush	<i>Catharus guttatus</i>	R/N,F/R	none	4 7	not common on Long Island; when present, prefers pine barrens
wood thrush	<i>Hylocichla mustelina</i>	C/N,F/4-10	none	4 7	prefers vacant wood (trees >40 feet); may adapt of wooded suburban
rufous-sided towhee	<i>Pipilo erythrophthalmus</i>	A/N,F/5-10	none	4 20	may be present year round on Long Island
red-eyed vireo	<i>Vireo olivaceus</i>	C/N,F/5-9	none	4 23	found in parks and suburban areas with shade trees and undergrowth
black-and-white warbler	<i>Mniotilta varia</i>	C/N,F/4-9	none	4 18	builds nests under shrubs and/or trees
blue-winged warbler	<i>Vermivora pinus</i>	C/N,F/5-9	none	4 14	primarily abandoned and overgrown field, and thickets
chestnut-sided warbler	<i>Dendroica pensylvanica</i>	C/N,F/5-9	none	4 19	prefers first growth woods, with some open brush area
cedar waxwing	<i>Bombycilla cedrorum</i>	C/N,F/4-10	non	4 23 32	prefers open woodlands, orchards and residential areas
whip-poor-will	<i>Caprimulgus vociferous</i>	C/N/5-9	none	4 12	nocturnal; prefers open woods with adjacent fields
eastern wood-pee-wee	<i>Contopus virens</i>	C/N,F/4-9	none	4 15	prefers suburban areas, parks and villages with shade trees
American woodcock	<i>Scelopax minor</i>	R/N,F/3-11	none	4 30	prefers moist woodland and thicket near open fields
downy woodpecker	<i>Picoides pubescens</i>	A/N,F/R	none	4 14	found in parks and suburban areas
hairy woodpecker	<i>Picoides villosus</i>	R/N,F/R	none	4 14	found mainly in deciduous forests
red-bellied woodpecker	<i>Melanerpes carolinus</i>	R/N,F/R	none	4 14	prefers forest openings; mostly found on Long Island north shore
Carolina wren	<i>Thryothorus ludovicianus</i>	C/N,F/R	none	4 9	associated with woodland thickets and brushy areas, often near water
house wren	<i>Troglodytes aedon</i>	C/N,F/5-10	none	4 9	found in suburban areas and gardens; nests in crevices of buildings
Mammals					
big-brown bat	<i>Eptesicus fuscus</i>	C/N,F/R	none	1 29	roosts in structures; found throughout LI; hunts over water
hoary bat	<i>Lasiurus borealis</i>	C/N,F/8-10	none	45	roosts in trees, sometimes found in parks
Keen's bat	<i>Myotis keenii</i>	R/N/6-10	none	1 29	roosts in buildings, crevices and bark; more common on eastern LI
little-brown bat	<i>Myotis lucifugus</i>	C/N,F/5-9	none	1 29	roosts in buildings and man made structures; hunts over water
red bat	<i>Lasiurus borealis</i>	C/N,F/5-11	none	1 29	feeds in marsh area; nests within 1000 yards of marsh in trees
silver-haired bat	<i>Lasionycteris noctivagans</i>	R/N,F/6-9	none	1 29	prefers wooded areas near water, primarily during summer months
eastern chipmunk	<i>Tamias striatus</i>	C/N,F/R	none	1 29	prefers open woods, thickets, and rocky areas
eastern cottontail	<i>Sylvilagus floridanus</i>	A/N,F/R	none	1 29	will adapt to suburban areas, if there is sufficient cover
white-tailed deer	<i>Odocoileus virginianus</i>	C/F/R	none	1 25 29	requires range of one-half square mile
red fox	<i>Vulpes vulpes</i>	C/N,H/R	none	1 29	builds den in wooded areas with loose-sandy soil and good drainage
eastern mole	<i>Scalopus aquaticus</i>	C/N,F/R	none	1 29	tunnels underground
meadow-jumping mouse	<i>Zapus hudsonicus</i>	R/N,F/R	none	1 29	found around water in pine barrens; prefers open areas with grasses
white-footed mouse	<i>Peromyscus leucopus</i>	C/N,F/R	none	1 29	common to most all habitats; does not adapt well to human activity
Virginia opossum	<i>Didelphis virginiana</i>	C/N,F/R	none	1 29	common in suburban areas, as well as woods, marsh and coastal areas
raccoon	<i>Procyon lotor</i>	C/N,F/R	none	1 29	nocturnal; very adaptive; found in urban and forest areas
masked shrew	<i>Sorex cinereus</i>	C/N,F/R	none	1 29	tunnels underground; common in wood and wet habitats

COMMON NAME	SCIENTIFIC NAME	HABITS	PROT	REF	COMMENTS
short-tailed shrew	<i>Blarina brevicauda</i>	A/N,F/R	none	1 29	tunnels underground; abundant in a variety of habitats
striped skunk	<i>Mephitis mephitis</i>	N/N,F/R	none	1 29	prefers mixed wood & brush within 2 miles of water; eastern LI only
meadow vole	<i>Microtus pennsylvanicus</i>	R/N,F/R	none	29 4	tunnels underground; prefers open woodland
pine vole	<i>Microtus pinetorum</i>	C/N,F/R	none	1 29	tunnels underground; prefers sandy soil in woods and field; can swim
long-tailed weasel	<i>Mustela frenata</i>	R/N,H/R	none	1 29	prefers dense wood, but may appear in all land habitats near water
woodchuck	<i>Marmota monax</i>	R/N,F/R	none	1 29	appears primarily in scrub woods and brushy areas; not common on LI
Herpiles					
eastern garter snake	<i>Thamnophis sirtalis</i>	C/N,F/R	none	38 40	occupies a variety of habitats
eastern hognose snake	<i>Heterodon platyrhinos</i>	R/N,H/R	sp. conc.	38	sandy soil and sunny roadside; feeds on herpiles and insects
eastern milk snake	<i>Lampropeltis d. triangulum</i>	C/N,F/R	none	38 39	occupies a variety of habitats

LEGEND: Habits A: Abundant; C: Common; R: Rare; N: Not Expected
 N: Nests; F: Forages; H: Hunts; R: Rests
 R: Resident; 1-12: Months Present.
Prot. Protection Status
Ref. Reference List at end of Appendix

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PROJECTION OF WILDLIFE ECOLOGICAL RESPONSE

CHARLES VOORHIS & ASSOCIATES, INC.

MICROCOMPUTER MODEL

SPECIES ADAPTABILITY

Appendix B

PROJECTION OF WILDLIFE ECOLOGICAL RESPONSE (POWER)
CHARLES VOORHIS & ASSOCIATES, INC. MICROCOMPUTER MODEL

SPECIES ADAPTABILITY

Appendix B

INTRODUCTION

This portion of the appendix has been included to present the results of a computer program to identify "Species Adaptability". This list is another component of the program developed by CVA used for the preparation of Appendix B. However, in this application the "Adaptability" of the observed and expected species are shown. The "adaptability" as indicated in the table, refers to whether an individual species may potentially benefit from (+) a habitat change from natural to urban/suburban setting; or, be impacted (-), or remain constant (=), as a result of this change. These values are not intended to represent the dynamics of actual species on the subject site under post-development conditions. The preceding text considers the site specific aspects of the proposed development in regard to individual species. This Appendix is included to provide the reader with the benefit of what the literature which was consulted in connection with the Habitat Suitability Model suggests, in terms of generalized species dynamics resulting from land use. References are those used in previous appendix.

OAK - TULIP TREE FOREST HABITAT - SPECIES ADAPTABILITY

COMMON NAME	SCIENTIFIC NAME	ADAPTABILITY
Birds		
black capped chickadee	<i>Parus atricapillus</i>	=
brown creeper	<i>Certhia americana</i>	-
American crow	<i>Corvus brachyrhynchos</i>	=
black-billed cuckoo	<i>Coccyzua erythrophthalmus</i>	-
yellow-billed cuckoo	<i>Coccyzus americanus</i>	-
common flicker	<i>Colaptes auratus</i>	=
Acadian flycatcher	<i>Epidonax virescens</i>	-
great-crested flycatcher	<i>Myiarchus crinitus</i>	-
blue-grey gnatcatcher	<i>Polioptila caerulea</i>	=
common grackle	<i>Quiscalus quiscula</i>	=
rose-breasted grosbeak	<i>Pheucticus ludovicianus</i>	=
broad-winged hawk	<i>Buteo platypterus</i>	-
Cooper's hawk	<i>Accipiter cooperii</i>	-
red-tailed hawk	<i>Buteo jamaicensis</i>	-
sharp-shinned hawk	<i>Accipiter striatus</i>	-
blue jay	<i>Cyanocitta cristata</i>	=
northern junco	<i>Junco hyemalis</i>	-

COMMON NAME	SCIENTIFIC NAME	ADAPTABILITY
golden-crowned kinglet	<i>Regulus satrapa</i>	-
ruby-crowned kinglet	<i>Regulus calendula</i>	-
white-breasted nuthatch	<i>Sitta carolinensis</i>	=
northern oriole	<i>Icterus galbula</i>	=
common screech owl	<i>Otus asio</i>	=
great-horned owl	<i>Bubo virginianus</i>	-
long-eared owl	<i>Asio otus</i>	-
American robin	<i>Turdus migratorius</i>	=
yellow-bellied sapsucker	<i>Sphyrapicus varius</i>	=
European starling	<i>Sturnus vulgaris</i>	+
scarlet tanager	<i>Piranga olivacea</i>	-
brown thrasher	<i>Toxostoma rufum</i>	=
hermit thrush	<i>Catharus guttatus</i>	=
wood thrush	<i>Hylicichla mustelina</i>	=
tufted titmouse	<i>Parus bicolor</i>	=
veery	<i>Catharus fuscescens</i>	-
red-eyed vireo	<i>Vireo olivaceus</i>	=
yellow throated vireo	<i>Vireu flavifrons</i>	-
blue-winged warbler	<i>Vermivora pimus</i>	-
cedar waxwing	<i>Bombycilla cedrorum</i>	+
eastern wood-peewee	<i>Contopus virens</i>	=
American woodcock	<i>Scolopax minor</i>	-
downy woodpecker	<i>Picoides pubescens</i>	=
hairy woodpecker	<i>Picoides villosus</i>	=
red-bellied woodpecker	<i>Melanerpes carolinus</i>	=
house wren	<i>Troglodytes aedon</i>	=
Mammals		
big-brown bat	<i>Eptesicus fuscus</i>	+
hoary bat	<i>Lasiurus borealis</i>	=
Keen's bat	<i>Myotis keenii</i>	+
little-brown bat	<i>Myotis lucifugus</i>	+
red bat	<i>Lasiurus borealis</i>	-
silver-haired bat	<i>Lasiorycteris noctivar</i>	-
eastern chipmunk	<i>Tamias striatus</i>	=
eastern cottontail	<i>Sylvilagus floridanus</i>	=
white-tailed deer	<i>Odocoileus virginianu</i>	-
red fox	<i>Vulpes vulpes</i>	-
eastern mole	<i>Scalopus aquaticus</i>	=
meadow-jumping mouse	<i>Zapus hudsonicus</i>	=
white-footed mouse	<i>Peromyscus leucopus</i>	=
Virginia opossum	<i>Didelphis virginiana</i>	=

COMMON NAME	SCIENTIFIC NAME	ADAPTABILITY
eastern pipistrelle	<i>Pipistrellus subflavus</i>	=
raccoon	<i>Procyon lotor</i>	+
masked shrew	<i>Sorex cinereus</i>	=
short-tailed shrew	<i>Blarina breuicauda</i>	=
striped skunk	<i>Mephitis mephitis</i>	=
eastern gray squirrel	<i>Sciurus carol</i>	=
southern-flying squirrel	<i>Glaucimys volans</i>	-
meadow vole	<i>Microtus pennsylvanicus</i>	=
pine vole	<i>Microtus pinetorum</i>	=
long-tailed weasel	<i>Mustela frenata</i>	-
Herptiles		
common gray treefrog	<i>Hyla versicolor</i>	-
wood frog	<i>Rana sylvatica</i>	-
red-spotted newt	<i>Notophthalmus viridescens</i>	-
spring peeper	<i>Hyla crucifer</i>	=
red-backed salamander	<i>Plethodon cinereus cinereus</i>	-
spotted salamander	<i>Ambystoma maculatum</i>	-
marbled salamander	<i>Ambystoma opacum</i>	=
eastern garter snake	<i>Thamnophis sirtalis</i>	=
eastern milk snake	<i>Lampropeltis d. triangulum</i>	=
northern brown snake	<i>Storeria dekayi</i>	=
northern ringneck snake	<i>Diadophis punctatus</i>	=

LEGEND: Adaptability - (+) adapts positively to human stress
 (-) adapts negatively to human stress
 (=) not significantly affected by human stress
 As determined by references noted in previous Appendix.

SUCCESSIONAL HARDWOOD FOREST - SPECIES ADAPTABILITY

COMMON NAME	SCIENTIFIC NAME	ADAPTABILITY
gray catbird	<i>Dumetella carolinensis</i>	=
black capped chickadee	<i>Parus atricapillus</i>	=
brown-headed cowbird	<i>Molothrus ater</i>	=
brown creeper	<i>Certhia americana</i>	-
American crow	<i>Corvus brachyrhynchos</i>	=
yellow-billed cuckoo	<i>Coccyzus americanus</i>	-
mourning dove	<i>Zenaida macroura</i>	=
rock dove	<i>Columba livia</i>	+
house finch	<i>Carpodacus mexicana</i>	+
common flicker	<i>Colaptes auratus</i>	=
common grackle	<i>Quiscalus quiscula</i>	=
ruffed grouse	<i>Bonasa umbellus</i>	-
rose-breasted grosbeak	<i>Pheucticus ludovicianus</i>	=
Cooper's hawk	<i>Accipiter cooperii</i>	-
red-tailed hawk	<i>Buteo jamaicensis</i>	-
sharp-shinned hawk	<i>Accipiter striatus</i>	-
blue jay	<i>Cyanocitta cristata</i>	=
northern junco	<i>Junco hyemalis</i>	-
American kestrel	<i>Falco sparverius</i>	-
eastern kingbird	<i>Tyrannus tyrannus</i>	=
golden-crowned kinlet	<i>Regulus satrapa</i>	-
ruby-crowned kinglet	<i>Regulus calendula</i>	-
northern mockingbird	<i>Mimus polyglottus</i>	+
great-horned owl	<i>Bubo virginianus</i>	-
long-eared owl	<i>Asio otus</i>	-
American redstart	<i>Setophaga ruticil</i>	-
American robin	<i>Turdus migratorius</i>	=
yellow-bellied sapsucker	<i>Sphyrapicus varius</i>	=
fox sparrow	<i>Passerella iliaca</i>	-
house sparrow	<i>Passer domesticus</i>	+
song sparrow	<i>Melospiza melodia</i>	=
white-throated sparrow	<i>Zonotrichia albicollis</i>	-
European starling	<i>Sturnus vulgaris</i>	+
barn swallow	<i>Hirundo rustica</i>	+
brown thrasher	<i>Toxostoma rufum</i>	=
hermit thrush	<i>Catharus guttatus</i>	=
wood thrush	<i>Hylicichla mustelina</i>	=
rufous-sided towhee	<i>Pipilo erythrophthalmus</i>	-

COMMON NAME	SCIENTIFIC NAME	ADAPTABILITY
red-eyed vireo	<i>Vireo olivaceus</i>	=
black-and-white warbler	<i>Mniotilta vari</i>	-
blue-winged warbler	<i>Vermivora pinus</i>	-
chestnut-sided warbler	<i>Dendroica pensylvanica</i>	-
cedar waxwing	<i>Bombycilla cedrorum</i>	+
whip-or-will	<i>Caprimulgus vociferous</i>	-
eastern wood-peewee	<i>Contopus virens</i>	=
American woodcock	<i>Scolopax minor</i>	-
downy woodpecker	<i>Picoides pubescens</i>	=
hairy woodpecker	<i>Picoides villosus</i>	=
red-bellied woodpecker	<i>Melanerpes carolinus</i>	=
Carolina wren	<i>Thryothorus ludovicianus</i>	=
house wren	<i>Troglodytes aedon</i>	=
Mammals		
big-brown bat	<i>Eptesicus fuscus</i>	+
hoary bat	<i>Lasiurus borealis</i>	=
Keen's bat	<i>Myotis keenii</i>	+
little brown bat	<i>Myotis lucifugus</i>	+
red bat	<i>Lasiurus borealis</i>	-
silver-haired bat	<i>Lasionycteris noctivagans</i>	-
eastern chipmunk	<i>Tamias striatus</i>	=
eastern cottontail	<i>Sylvilagus floridanus</i>	=
white-tailed deer	<i>Odocoileus virginianus</i>	-
red fox	<i>Vulpes vulpes</i>	-
eastern mole	<i>Scalopus aquaticus</i>	=
meadow-jumping mouse	<i>Zapus hudsonicus</i>	=
white-footed mouse	<i>Peromyscus leucopus</i>	=
Virginia opossum	<i>Didelphis virginiana</i>	=
raccoon	<i>Procyon lotor</i>	+
masked shrew	<i>Sorex cinereus</i>	=
short-tailed shrew	<i>Blarina breuicauda</i>	=
striped skunk	<i>Mephitis mephitis</i>	=
eastern gray squirrel	<i>Sciurus carolinensis</i>	=
meadow vole	<i>Microtus pennsylvanicus</i>	=
pine vole	<i>Microtus pinetorum</i>	=
long-tailed weasel	<i>Mustela frenata</i>	-
woodchuck	<i>Marmota monax</i>	-
Herptiles		
eastern garter snake	<i>Thamnophis sirtalis</i>	=
eastern hognose snake	<i>Heterodon platyrhinos</i>	=
eastern milk snake	<i>Lampropeltis triangulum</i>	-

