# 3.0 Existing Conditions

## 3.1 Natural Resources

The proposed Project is located in the western part of Rensselaer County, which is part of the Hudson Champlain section of the Ridge and Valley physiographic province. This area consists of gently sloping lowland underlain by folded beds of metamorphosed shale and sandstone known as the Nassau Formation. This lower Cambrian age formation was formed approximately 600-650 million years ago and is estimated to be more than 1,000 feet thick. A period of mountain building 20 million years ago distorted the dark red and grayish green shale that alternates with thin beds of dark quartzite and sandstone. The depth to bedrock is variable and occurs at the surface to an estimated depth of 100 feet.

### 3.1.1 Geology

Information from the Soil Survey of Rensselaer County, New York, published by the USDA Natural Resources Conservation Service, and previous research studies have been utilized to make an initial determination of the soil types on the site. Refer to *Figure 5 - Soils* for additional information on the location of different soil types.

Bedrock in the area is overlain by unsorted glacial soils of the Bernardston-Pittstown and Bernardston-Nassau associations. The Bernardston-Pittstown soils consist of the gravelly silt loam that is deep and moderately well drained. A very firm hardpan is generally found at a depth of 18-28 inches and permeability is low. Soil may be wet during periods of prolonged rainfall. The Bernardston-Nassau soils are shallow, gently sloping and somewhat excessively drained shaley loam soils that are formed from till that is 10-20 inches thick over bedrock. The permeability of these soils is moderate. None of the soil is currently being proposed for use in construction on the site.

The geotechnical evaluation report, dated November 23, 2004, identified areas of bedrock outcroppings along with steeply dipping, shale bedrock at depths of less than one foot and 7 feet below grade in the southeast portion of the Project site. Specifically, the test pits (TP-5 and TP-5A) that detected these conditions were located in the area proposed for the Carriage Hill Landing-East development in the general area of the intersection of the cul-de-sac (Site Road B) with the loop road (Site Road B). This condition is likely to be prevalent in this area of the Project site. Based on this and subsequent geotechnical investigations, it appears that the shallow depth to bedrock is localized to the area in the vicinity of TP-5A. It is noted that fragments of shale were also noted in a soil boring (B-6) at depths around 11 to 13 feet, located in an area west of the Carriage Hill Landing West and Carriage Hill Land South development sites. For additional information on the results of the site assessment, refer to the Geotechnical Evaluation provided in Appendix 1

Subsequent geotechnical investigations were performed to obtain preliminary geotechnical design information in the vicinity of the Orchard Village senior housing (refer to report dated June 29, 2005) and supplemental information on the depth to bedrock where significant cuts are anticipated for infrastructure

and housing construction (refer to report dated August 23, 2005). The above referenced reports are provided in Appendix 1.

The geotechnical report pertaining to Orchard Village indicates that the senior housing structures may be supported with conventional spread footings with floor slabs bearing upon prepared sub-grades. It is noted that surfaces water runoff will need to be controlled and diverted away from the work areas during construction. Additional geotechnical recommendations for building and site development are provided in the report.

The geotechnical report providing supplemental information on depth to bedrock reported no findings of bedrock in the four (4) areas tested. The test borings ranged in depth from 22 feet to 51.5 feet. These findings indicate that bedrock is not likely to be encountered in the areas tested.

### 3.1.2 Topography

The Project site consists of widely sloping areas and generally slopes from the higher elevations at the center of the site to lower elevations at its perimeter. Relief is approximately 240 feet with the lowest elevation approximately 325 feet and the highest elevation approximately 565 feet (elevation as stated is in feet above sea level as established by USGS). Refer to Figure 6 Topographic Survey for a graphic depiction of the site's topographical characteristics.

### 3.1.3 Water Resources

#### 3.1.3.1 Groundwater

As noted at several test pit locations performed as part of the Geotechnical Evaluation, numerous perched water tables do exist throughout the site. These shallow perched groundwater levels result from precipitation infiltrating the ground surface and collecting within the shallow overburden soils, which overlay less permeable soils. At this site, the surficial soils have been loosened though seasonal frost penetrations and moisture variations. The surficial soils were found to be wet and loose or soft at many locations, particularly in the low-lying areas.

#### 3.1.3.2 Surface Water

The major surface water resource on the Project site includes the Poestenkill Creek, which flows generally from east to west along the northern boundary of the Project site. The Poestenkill Creek is Classified as a "Class C(T) Fresh Surface Water" by NYSDEC. There also exists an unnamed tributary of the Poestenkill Creek, Classified as a "Class C Fresh Surface Water" by NYSDEC which runs through the southern portion of the site. Generally, surface water drains from the higher elevations radially into each of the ten (10) different tributaries (discuss further below under ***DEIS Section 3.1.3.3 Wetlands***) of the Poestenkill Creek in almost every direction on the Project site.

In addition to the Poestenkill Creek, the nearest surface waterbody is the Sweet Milk Creek, located north of the Project site.

Pursuant to 6 NYCRR Part 701, the best usage of a Class C Waters is fishing. These waters shall be suitable for fish propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes. Regarding the Poestenkill Creek, the subclass (T) is an indication that the water quality can sustain trout population. The Poestenkill Creek is not on the list of protected waters with a defined Total Maximum Daily Load (TMDL) of a particular pollutant.

There are approximately 6 acres of the Project site within the 100-year floodplain of the Poestenkill Creek as identified by the Federal Emergency Management Agency (FEMA) on the Flood Insurance Rate Map (FIRM) for the Town of Brunswick and depicted on *Figure 7 – Water Resources.* The majority of the Project site within the 100-year floodplain is located north of NYS Route 2, with a much smaller section located south of NYS Route 2 and in the extreme northwestern corner of the Project site. No development is proposed to occur in or within the 100-year floodplain of the Poestenkill Creek.

### 3.1.3.3 WETLANDS

A preliminary wetlands analysis of the site has identified 21 wetlands as depicted on *Figure 7 – Water Resources* (several potential wetlands located along the western site boundary are yet to be delineated or determined). Wetland types have been categorized using the U.S. Fish and Wildlife Service (USFWS) classification system (Cowardin et al., 1979). They are classified as Palustrine Emergent (PEM), Palustrine Scrub-Shrub (PSS), Palustrine Forested (PFO) or a combination of types. Acreage and type of the individual U.S. Army Corps of Engineers (ACOE) jurisdictional wetlands are as follows:

| | | |
|---|---|---|
| > Wetland A | 1.49 Acres (0.02 Acres off site) | PEM/PSS |
| > Wetland B | 1.08 Acres | PSS |
| > Wetland C | 5.46 Acres (4.09 Acres off site) | PEM/PSS |
| > Wetland D | 0.68 Acres (0.10 Acres off site) | PSS |
| > Wetland E | 0.23 Acres | PEM/PSS |
| > Wetland F | 0.48 Acres | PSS |
| > Wetland G | 0.07 Acres | PSS |
| > Wetland H | 0.16 Acres | PFO |
| > Wetland I | 0.39 Acres | PFO |
| > Wetland J | 0.47 Acres | PFO |
| > Wetland L | 1.13 Acres | PSS |
| > Wetland M | 0.39 Acres | PFO |
| > Wetland N | 0.32 Acres | PFO |
| > Wetland P | 0.28 Acres | PFO |
| > Wetland Q | 1.57 Acres | PFO |
| > Wetland U | 0.35 Acres | PFO |
| > **Total:** | **14.55 Acres (4.21 Acres off site)** | |

Portions of Wetlands A, C, and D, are located off the Project site. Many wetlands serve as headwaters to tributaries of the Poestenkill Creek. There are ten (10) tributaries on the Project Site identified as follows:

| | |
|---|---|
| Tributary "1" | flows northeast from Wetland "A" into the Poestenkill Creek |
| Tributary "2" | flows north from Wetland "B" thru Wetland "C" to the Poestenkill Creek |
| Tributary "3" | originates in Wetland "J" and flows north with two more tributaries to the Poestenkill Creek |
| Tributary "4" | flows west thru Wetland "E" to a small pond on The Country Club of Troy property and eventually into the Poestenkill Creek |
| Tributary "5" | flows south thru Wetlands "I", "H", "G" and "F" to Tributary "4" |
| Tributary "6" | originates in Wetland "M" and flows southeast to Tributary "5" |
| Tributary "7" | flows southwest from Wetland "L" onto The Country Club of Troy and eventually into the Poestenkill Creek |
| Tributary"8" | flows north into Tributary "2" and ultimately into the Poestenkill Creek. This Tributary is considered ephemeral and therefore not under jurisdiction by the ACOE. |
| Tributary "9" | flows north into Tributary "4." |
| Tributary "10" | flows southwest from Wetland "N" to Wetland "P." |

The delineated wetland areas on site consist of both open and forested mineral soil wetlands of the Palustrine System, commonly characterized as emergent marsh, scrub-shrub and forested wetlands. Most of these wetlands are traversed by intermittent streams, most of which usually become seasonally dry by summer. A total of sixteen (16) ACOE jurisdictional wetlands as noted above have been identified within the delineation limits and ultimately drain into the Poestenkill Creek. Five (5) wetlands ("O, R, S, T, and V") have been determined to be "Isolated" and therefore not subject to ACOE jurisdiction.

These wetlands have been verified by ACOE and a Jurisdictional Letter from the ACOE is forthcoming.

According to the NYSDEC regulated Freshwater Wetlands Maps for Rensselaer County, there are no NYSDEC regulated wetlands mapped in the immediate vicinity of the proposed Project area. This finding was confirmed by the wetland inventory.

### 3.1.3.4 Stormwater

Currently, the site is essentially undeveloped forest and abandoned agricultural fields in various stages of regrowth. There is approximately one (1) acre of impervious surface on the site that includes an existing driveway and some abandoned structures. While the site has widely varying topography, the stormwater ultimately drains into the Poestenkill Creek. Specifically, the site drains to the north into the Poestenkill Creek, and to the south into the unnamed Class C tributary of the Poestenkill Creek.

Table 3-1 below, provides a summary of the land coverage, Pre- and Post-Development on the Project site.

**Table 3-1**
**Land Coverage, Pre- and Post-Development**

| Characteristics | Existing Conditions (in acres) | Full Build-Out (in acres) |
|---|---|---|
| Meadow or Brushland (Non-Agricultural) | 51.31 | 32.91 |
| Forested | 149.66 | 94.48 |
| Agricultural (active) | 0 | 0 |
| Wetlands | 12.03 | 11.60 |
| Tributaries | 6,196 lin. ft. | 6,196 lin. ft. |
| Unvegetated (Rock, earth or fill) | 0 | 0 |
| Roads, buildings, and other paved surfaces | 1 | 23 |
| Lawn, Landscaping | 0 | 52 |
| **TOTAL** | **214±** | **214±** |

Due to the fact that the proposed disturbance on the Project site will exceed one acre in size, the stormwater management facilities for the proposed development must be designed in accordance with the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity, Permit No. GP-02-01. The General Permit requires that a Stormwater Pollution Prevention Plan (SWPPP) be developed for the Project in accordance with the technical standards published by the NYSDEC. The SWPPP will address the design, implementation and maintenance of both the erosion and sediment control measures to be used during construction and the post-construction stormwater management facilities. The SWPPP must be completed prior to the start of construction in accordance with the notification requirements detailed in the General Permit.

Preliminary stormwater runoff calculations have been developed for the proposed development and these are provided in *DEIS Appendix 2*. The purpose of these calculations is to understand the magnitude of the required quality and quantity treatment facilities and ensure that appropriate locations are designated on site for these stormwater management facilities.

The general topography of the Project site results in the division of the overall site into nine (9) smaller drainage areas to be used in the existing conditions runoff calculations. These areas are defined on *Figure 8 – Existing Conditions Drainage Areas*. The developed condition as shown on *Figure 2 – Project Concept* results in the division of the overall site into eight (8) drainage areas to be used in the developed conditions runoff calculations as shown on *Figure 9 – Developed Conditions Drainage Area.* The southern portion of the site drains primarily in a southerly direction towards the unnamed Class C tributary that runs through the site from east to west and discharges to a pond located on The Country

Club of Troy property. Overflow from this pond enters the Poestenkill Creek. The northern portion of the site drains in a northerly direction to the Poestenkill Creek. The Poestenkill Creek is defined by the NYSDEC as a Class C trout stream, but is not on the list of protected waters with a defined Total Maximum Daily Load (TMDL) of a particular pollutant.

The runoff calculations are performed for each of the areas for both the existing and developed conditions utilizing Soil Conservation Service TR-55 methodology and the Eagle Point 2003 Watershed Modeling computer program. The 10 and 100 year, 24 hour storm events are analyzed, as on-site detention must be provided to limit the developed conditions peak runoff rates from these storms to the existing conditions rates. In addition, Water Quality and Channel Protection Volumes are calculated for each of the subareas and these volumes must also be treated and detained on-site, in accordance with the NYSDEC Requirements (80% removal of Total Suspended Solids, 40% removal of Total Phosphorus).

*DEIS Appendix 2* contains all of the calculated peak runoff rates, required storage volumes to limit runoff to pre-development rates and calculation methodology for each of the areas. These volumes dictate the use of surface treatment/detention basins from both construction feasibility and financial standpoints. Possible locations for the basins are shown on *Figure 9 – Developed Conditions Drainage Areas*. Runoff will be conveyed to these basins both as overland flow, in open channels and through newly constructed storm sewer systems. Once treated and detained as required, the runoff will be discharged to the two streams on the Project site.

The Town of Brunswick is designated by the NYSDEC as a Municipal Separate Storm Sewer System (MS4). This designation requires the Town to comply with the NYSDEC SPDES General Permit for Stormwater Discharges from MS4s, Permit No. GP-02-02. This General Permit requires that the municipality develop a Stormwater Management Program (SWMP) according to the designated minimum control measures. The Town Engineer has indicated that the Town of Brunswick's SWMP does not set any compliance requirements for construction Projects to be more stringent than those specified by the NYSDEC.

### 3.1.4 Terrestrial and Aquatic Ecology

#### 3.1.4.1 Vegetation

Currently, the site is undeveloped forest and abandoned fields in various stages of regrowth. Red maple, big tooth aspen and red oak dominate the overstory along with a mixture of other deciduous trees Buckthorn, rtarian honeysuckle, and blackberry dominate the understory, with asters, goldenrods, sedges, Christmas fern, spinulose wood fern and ground cedar prevalent in the herbaceous layer. In this community, the trees are widely spaced, allowing for an extensive understory layer. An unnamed Class C Tributary is located near the site's southern boundary. Other communities on the site include scrubby field community, open field community, scrub woods community, mixed coniferous and hardwood forest, floodplain forest and wet meadow.

NYS Department of Environmental Conservation, through the New York Natural Heritage Program, has classified ecological community types that are found in New York State. Although no two examples of a

community type are identical in composition or environment, they are similar within a given range of variability. PALUSTRINE refers to wetland communities, while TERRESTRIAL refers to uplands. The following ecological communities, as described by the New York Natural Heritage Program, can be found on the Project site.

***Ecological Communities***

*Shallow emergent marsh (Palustrine):*
A marsh meadow community that occurs on mineral soil or deep muck soils (rather than true peat), that are permanently saturated and seasonally flooded. This marsh is better drained than a deep emergent marsh; water depths may range from 6 in to 3.3 ft (15 cm to 1 m) during flood stages, but the water level usually drops by mid to late summer and the substrate is exposed during an average year. Shallow emergent marshes typically occur in lake basins and along streams often intergrading with deep emergent marshes, shrub swamps and sedge meadows, and they may occur together in a complex mosaic in a large wetland.

*Shrub swamp (Palustrine):*
An inland wetland dominated by tall shrubs that occurs along the shore of a lake or river, in a wet depression or valley not associated with lakes, or as a transition zone between a marsh, fen, or bog and a swamp or upland community. The substrate is usually mineral soil or muck. This is a very broadly defined type that includes several distinct communities and many intermediates. Shrub swamps are very common and quite variable. They may be co-dominated by a mixture of species, or have a single dominant shrub species.

*Red maple-hardwood swamp (Palustrine):*
A hardwood swamp that occurs in poorly drained depressions, usually on inorganic soils. This is a broadly defined community with many regional and edaphic variants. In any one stand red maple (Acer rubrum) is either the only canopy dominant, or it is co-dominant with one or more hardwoods. The shrublayer is usually well-developed and may be quite dense.

*Successional old field (Terrestrial):*
A meadow dominated by forbs and grasses that occurs on sites that have been cleared and plowed (for farming or development), and then abandoned. Shrubs may be present, but collectively they have less than 50% cover in the community.

*Successional shrubland (Terrestrial):*
A shrubland that occurs on sites that have been cleared (for farming, logging, development, etc.) or otherwise disturbed. This community has at least 50% cover of shrubs.

*Appalachian oak-hickory forest (Terrestrial):*
A hardwood forest that occurs on well-drained sites, usually on ridgetops, upper slopes, or south- and west-facing slopes. The soils are usually loams or sandy loams. This is a broadly defined forest community with several regional and edaphic variants.

*Hemlock-northern hardwood forest (Terrestrial):*
A mixed forest that typically occurs on middle to lower slopes of ravines, on cool, mid-elevation slopes, and on moist, well-drained sites at the margins of swamps. Canopy cover can be quite dense, resulting in low light intensities on the forest floor and hence a relatively sparse groundlayer.

A more detailed analysis and discussion of the Ecological Communities is located in *DEIS Appendix 3 – Final Wetlands Delineation Report.*

### 3.1.4.2 Fish and Wildlife

The variety of communities and the proximity of water all combine to support wildlife habitat. Deer, numerous species of small mammals, songbirds, game birds and birds of prey utilize this area. Hairy woodpeckers, chickadees, crows and a red tail hawk were observed in the open woods community. The scrubby field community and open field community are home to Eastern and New England cottontail, woodchuck, red fox and certain birds. The upland forest communities are home to deer, small mammals and various bird species. The floodplain forest and the wet meadow communities, because of the presence of water, are preferred habitat for beaver, mink, weasel, opossum, raccoon, river otter and certain species of frogs, turtles and snakes. In addition, many species of birds would be expected to use the site for nesting and feeding. A more detailed analysis and discussion of the Ecological Communities is located in *Appendix 3 – Final Wetlands Delineation Report.*

### 3.1.4.3 Protected Habitats and Species

According to a letter dated May 25, 2004 from the NYSDEC New York Natural Heritage Program, no record of known occurrences of rare or state-listed plants, significant natural communities, or other significant habitats exist on or in the immediate vicinity of the Project site (refer to Appendix 4 Correspondences.)

A letter dated April 11, 2005 from the U.S. Fish and Wildlife Service (USF&W) states the following:

*"Although the Indiana bat (Myotis sodalis), a Federally – listed endangered species, could potentially be present in the project area, which is 20.8 miles from an Indiana bat hibernaculum, they are present in such small numbers that it is extremely unlikely that they would be present and impacted by construction of this project."*

The letter went on to state: *"Except for the Indiana bat and other occasional transient individuals, no Federally – listed or proposed endangered or threatened species under our jurisdiction are known to exist in the project impact area. In addition, no habitat in the project impact area is currently designated or proposed "critical habitat" in accordance with provisions of the Endangered Species Act (ESA). Therefore, no further ESA coordination or consultation with the USF&W Service is required."*

Refer to *DEIS Appendix 4 Correspondences* for a copy of this letter.

### 3.1.5 CLIMATE AND AIR RESOURCES

#### 3.1.5.1 CLIMATE

The proposed development is located in the western edge of Rensselaer County, due east of the City of Troy. The climate in the Project area is primarily continental in character, but is subjected to some modification from the maritime climate, which prevails in the extreme southeastern portion of New York. The moderating effect on temperatures is more pronounced during the warmer months than in the cold winter season when outbursts of air sweep down from Canada with greater vigor than at other times of the year. In the warmer portion of the year, temperatures rise rapidly during the daytime to moderate levels. Temperatures fall rapidly after sunset, so that the nights are relatively cool. Occasionally, the area experiences extended periods of oppressive heat of up to a week or more in duration.

Winters are usually cold and occasionally fairly severe. Maximum temperatures during colder winter months often are below freezing and nighttime low temperatures frequently drop to 10 degrees Fahrenheit or lower. Subzero temperatures occur rather infrequently, about a dozen times a year. Snowfall in the area is quite variable and some of the higher nearby areas range up to 75 inches or more during a season. Precipitation is sufficient to serve the economy of the region in most years, and only occasionally do periods of drought conditions become a threat.

On the whole, wind velocities are moderate. The north-south Hudson River Valley has had a marked effect on the lighter winds and the warm months usually average out as a south wind. The area enjoys one of the highest percentages of sunshine that can be found in New York. Seldom does the area experience extended periods of cloudy weather or extended periods of smog. Occasionally during the warm months there are periods of high humidity coupled with temperatures above 85 degrees.

The area enjoys a rather extensive growing season for northern latitudes. On average, the growing season is 160 days or more. Based on over 80 years of records, the mean date of the last occurrence of freezing (32° F) temperatures is April 27. The mean date of the first occurrence of freezing weather in the fall is October 13. On average, frost depth in the soil penetrates to about three feet, although occasionally it can penetrate to four feet or more. According to the local climatological data from the National Oceanic and Atmospheric Administration (NOAA), the local area has an average yearly temperature of 46 degrees, average yearly precipitation of 38 inches, and an average yearly snowfall of 65 inches.

#### 3.1.5.2 AIR QUALITY

The proposed Project site is located in Rensselaer County, which is classified as marginal non-attainment for ozone and attainment for carbon monoxide. A monitoring station located in Rensselaer County in Grafton State Park, approximately 10 miles from the study area, monitors ozone. While data was unavailable for the 8-Hour Average period for the last 3 years (since data was not compiled in 2001) this station was in compliance with the New York State and National Ambient Air Quality Standards (NAAQS) for ozone for the 1-hour average period in 2003.

The monitoring station in Grafton also monitors sulfur dioxide. This station was in compliance with the NAAQS for one-hour and eight-hour averages for sulfur dioxide in 2003. The closest station that monitors carbon monoxide is located in Loudonville, approximately 15 miles from the Project site in Albany County. The Loudonville station was in compliance with the one-hour and eight-hour averages for carbon monoxide in 2003.

## 3.2 Human Resources

### 3.2.1 Transportation

Access to the site is proposed from NYS Route 2 to the north and Pinewoods Avenue to the south. A majority of the traffic would be coming from or heading towards the west to the City of Troy, Albany, and to access Interstates– 787, 87, 90, and the NYS Thruway.

NYS Route 2 is state-maintained roadway classified as an urban principal arterial, providing east-west access through the Project area. This road has a 12-foot wide travel lane in each direction with 3-foot shoulders and a posted speed limit of 55-mph. Pinewoods Avenue, also known as County Road 140 extends east from Pawling Avenue to Route 2 in Eagle Mills. This road has a 10-foot wide travel lane in each direction with shoulders less than 1-foot wide in the vicinity of the Project site with a posted speed limit of 30-mph.

The site will have a main internal road from which the Carriage and Estate homes and senior apartments will be accessible. The main road through the site along with all secondary roads, with the exception of the access roads serving the Senior Apartments, will be dedicated to the Town of Brunswick. There will also be a private driveway from Pinewoods Avenue that will provide access to three Estate Homes. The driveway will be owned and maintained by the CHHOA.

A Traffic Impact Study dated November 11, 2004 and last revised September 30, 2005 (see *Appendix 6*) has been included to document existing traffic conditions in the area, determine the projected traffic impact of the proposed Project, and offer mitigation measures if needed.

The study area as depicted on *Figure 11 – Traffic Impact Assessment Locations* for this analysis includes the following intersections:

- NYS Route 2/South Lake Avenue;
- Pinewoods Avenue/Pawling Avenue (NYS Route 66);
- NYS Route 2/Pawling Avenue (NYS Route 66); and
- Proposed entrances to the Project site from NYS Route 2 and Pinewoods Avenue

#### *Existing Traffic Conditions*

Existing traffic conditions were established by performing turning movement traffic counts at the study area intersections and installing automated traffic recorders on NYS Route 2 and Pinewoods Avenue near the proposed entrances to the Project, *(see Appendix 6)* for specific data. The automated traffic recorders were used to record directional traffic volumes and speed data.

The automated traffic recorders data indicated that the two-way traffic volume on Route 2 is approximately 470 vehicles during the AM peak hour and 510 vehicles during the peak PM hour. The 85th percentile speed recorded on NYS Route 2 was approximately 55 mph. The two-way traffic volume on Pinewoods Avenue is approximately 275 vehicles during the AM peak hour and 250 vehicles during the PM peak hour. The 85th percentile speed recorded on Pinewoods Avenue was approximately 48 mph.

The existing traffic count data indicates that the morning peak hour occurred from 7:30 to 8:30 am and the afternoon peak hour occurred from 4:30 to 5:30 pm. Heavy vehicle traffic volumes account for approximately 1% to 7 % of the traffic on NYS Route 2. No heavy vehicle traffic was observed on Pinewoods Avenue during the peak hours. Currently, traffic is not a major concern around the Project site. The resulting 2004 Existing Traffic Volumes are shown on Figure 2.1 in Appendix 6.

#### *NEW YORK DEPARTMENT OF TRANSPORTATION PROJECTS IN THE AREA*

The New York State Department of Transportation (NYSDOT) currently has one project scheduled in the general area of the proposed development, the replacement of the NYS Route 2 Bridge over the Poestenkill Creek in the Hamlet of Eagle Mills. This bridge project is scheduled to begin in Fall 2005 or Spring 2006 and conclude in Spring 2007.

### 3.2.2 LAND USE AND ZONING

#### 3.2.2.1 EXISTING LAND USE

The site is topographically variable ranging from flat to rolling to moderately steep with areas of dense coniferous and deciduous trees and light to thick brush. There is approximately 47 acres of open fields predominantly vegetated with native grasses. The Project site consists of three separate tax map parcels totaling approximately 214 acres, excluding the 11.2± acre parcel north of NYS Route 2. The remainder of the site is located south of NYS Route 2 and is divided by the 170' wide NMPC corridor running in a north-south direction. This corridor houses an overhead electric transmission line and an underground natural gas pipeline.

The site is essentially vacant with a few abandoned buildings and unimproved access drives. According to the Rensselaer County Office of Real Property, the Project site is classified as Vacant, that is, there is no existing land use and no structure is being occupied for any use. There are two landlocked residential parcels located in the northwestern corner of the Project Site. These residences are accessed via a private driveway, which is an existing ROW through the Project site from NYS Route 2. Refer to *Figure 12 – Existing Land Use Map* for additional information.

There are scattered medium to low-density residential development, including Brunswick Hills and Highland Hills, located northwest of the Project site across NYS Route 2 with several large vacant parcels located immediately north of the site. The western border of the site abuts The Country Club of Troy, classified as Recreation and Entertainment. The southwestern portion of the site borders a cul-de-sac residential development. The eastern portion of the site borders a 31± lot residential subdivision, east of

which is land classified as Agricultural. This agriculturally classified property extends north of NYS Route 2 and the Poestenkill Creek. The densest residential development near the Project site is located to the southeast and south of Pinewood Avenue, and consists of two residential developments.

#### 3.2.2.2 Agricultural Land Uses

The Project site is not an active agricultural use, nor has there been any recent agricultural activity on the site. Based upon historical aerial photographs, it does appear that at one time the site was hayed, and a barn and several outbuildings had existed. Also, farm debris (since removed – refer to ESA in Appendix 12 for more information) was observed in these aerial photographs. As mentioned above, there are large agriculturally classified parcels to the east and north as well as to the south. At one time, the Project site and surrounding area was likely predominantly agriculture. Over the years, large parcels were subdivided into residential developments seen today.

While the Project site is currently not an active agricultural use, it is located within an Agricultural District as defined by the NYS Department of Agriculture and Markets. In New York State, any project that is proposed within an agricultural district containing a farm operation or on property with boundaries within 500 feet of a farm operation located within an agricultural district, and that proposes to convert agricultural land to another purpose, must submit an Agricultural Data Statement (ADS). The ADS and related correspondence for this Project are provided in Appendix 7

#### 3.2.2.3 Existing Zoning

Development in the Town of Brunswick is regulated by *The Town of Brunswick Zoning Ordinance* (last revised April 1998), the Town's Subdivision Regulations, and other local laws. As depicted on *Figure 13 - Existing Zoning*, the Project site is currently zoned as Residential (R-40, R-25, and R-15), and Recreational (RCC), with the RCC and R-25 Districts making up the majority of the Project site.

The currently allowed uses in these districts include: private dwellings, churches and other places of worship and religious instruction; parish houses; rectories; convents in connection with schools; public schools; private schools offering general instruction; public recreation buildings and grounds; and governmental buildings and uses, libraries, police and fire stations.

If the site was developed under the current zoning and not through a PDD process, the R-25 and R-40 sections of the site would see the majority of the development at 1 unit per 25,000 sf and 1 unit per 40,000 sf respectively. Hypothetically, based upon the currently allowed densities, approximately 210 units could be allowed. This does not include any development within the RCC district portion of the site.

The Project involves a zoning amendment through the establishment of a residential Planned Development District (PDD) zone. The PDD is allowing for a more flexible and efficient method of development of the Project site. By utilizing a PDD, residential development can be clustered, the senior housing can be provided on a relatively small section of the site, and a significant amount of open space

will be left. Conversely, if developed under the current zoning regulations, medium to large lot residential development would likely occur utilizing all of the available land with little or no open space.

#### 3.2.2.4 LAND USE PLANS

The Town of Brunswick adopted its current Comprehensive Plan in February 2001 (the "Plan"). The Plan recognized that development pressures have been and continue to move slowly east from Troy and Lansingburgh into Brunswick, and that issues of controlled development are prevalent in many rural areas bordering major metropolitan areas such as Brunswick. The Plan was written in part to deal with certain growth "in a manner consistent with maintaining the rights of individual residents and landowners."

The Town acknowledges in the Plan that "growth is inevitable, and that growth and change should not diminish the quality of life enjoyed by the residents of the community, nor should it place an undue burden on present taxpayers". It is important to Town residents that the rate of development should increase slowly and that residential growth should be augmented by economic growth to provide employment opportunities within the Town.

Further, the Plan recommends the use of various development tools such as PDDs, in which homes may be clustered to minimize development and purchase costs and served by public water and sewer facilities. The summary of major land use policy in the Comprehensive Plan states: "Brunswick will encourage enhancement of site development standards, promotion of cluster development, conservation of natural resources and use of buffer areas. These policies will work to regulate commercial growth, improve the community's appearance and balance property rights with health, safety and welfare. The Town of Brunswick will work to provide land use policies that maintain scenic and rural qualities. Steps should be taken to raise the standards for development. The Town should embrace moderate levels of senior housing along with progressive forms of land use policies to encourage development that is environmentally friendly and provides buffers and open space. The Town should strive to limit commercial development to areas with adequate traffic and infrastructure capacity."

As proposed, the Project is consistent with the Town of Brunswick Comprehensive Plan. Specifically, the Project is in keeping with several of the Plan's Policies as previously outlined in *DEIS Section 2.3 Municipal Objectives*.

### 3.2.3 COMMUNITY SERVICES

Community facilities within the Town of Brunswick near the Project site primarily include municipal facilities, schools, emergency services, libraries, post offices, and senior services. In addition to the services described below, the Town also operates a Town Beach and Park, located on North Lake Avenue, that offers a variety of recreational activities several seasons of the year. Another important community-operated resource is the Brunswick Family Community Center, which was built on the foundation of the historic Center Brunswick Two-Room School. The Center provides over 3,000 sf of activity areas for Town residents and can accommodate meetings for up to 99 people.

### 3.2.3.1 General Government

The Project is located in the Town of Brunswick in Rensselaer County, east of the City of Troy. It is anticipated that the Town will be asked to take ownership to and be responsible for the maintenance of the proposed Site Roads and all associated water and sewer lines on-site and the sewer line proposed to be constructed in the Pinewoods Avenue ROW, up to the Town Line near the Crossways.

### 3.2.3.2 Educational Facilities

The Brittonkill (Brunswick) and Averill Park Central School Districts currently serve the Project site. The majority of the Project, and virtually all of the single-family residences, are located within the Averill Park district. The senior apartment homes are split almost evenly between Averill Park and Brittonkill.

***Brittonkill Central School District***

The Brittonkill Central School District (CSD) consists of three (3) separate buildings, Parker Community School, Tamarac Elementary School and Tamarac Secondary School (which houses Grades 6-8 and Grades 9-12 in the same facility). Parker Community includes grades 2-12 and is a "public special school" that exclusively serves students with disabilities. Tamarac Elementary is located on the same site as Tamarac Secondary School. Tamarac Middle School is located in the High School Buildings. The 2004-2005-enrollment breakdown by school for the Brittonkill CSD is depicted in Table 3-5 below.

**Table 3-5**
**Brittonkill CSD**
**2004-2005 Enrollment Figures**

| School | Grades | Current Enrollment |
|---|---|---|
| Parker Community School | 2-12 | 22 |
| Tamarac Elementary | K-5 | 577 |
| Tamarac Middle School | 6-8 | 385 |
| Senior High School | 9-12 | 457 |
| **Total** | | **1,441** |

***Historic Enrollment***

- From 1998 to 2002, the Brittonkill CSD experienced relatively flat enrollment levels at approximately 1,400 students per year;
- Enrollments were less than the projected levels of 1,600 per year.

**Brittonkill Enrollment 1998-2004**

| | |
|---|---|
| 1997-1998 | 1,411 |
| 1998-1999 | 1,419 |
| 1999-2000 | 1,371 |
| 2000-2001 | 1,399 |
| 2001-2002 | 1,396 |
| 2002-2003 | data not available |
| 2003-2004 | 1,419 |

***Averill Park Central School District***

The Averill Park CSD consists of George Washington Elementary School, Miller Hill/Sand Lake Elementary School, Poestenkill Creek Elementary School, West Sand Lake Elementary School, Algonquin Middle School and Averill Park High School. The 2004-2005-enrollment breakdown by school for the Averill Park CSD is depicted in Table 3-6 below.

**Table 3-6**
**Averill Park CSD**
**2004-2005 Enrollment Figures**

| School | Grades | Current Enrollment |
|---|---|---|
| George Washington Elementary School | K-5 | 157 |
| Miller Hill/Sand Lake Elementary School | K-5 | 485 |
| Poestenkill Creek Elementary School | K-5 | 322 |
| West Sand Lake Elementary School | K-5 | 536 |
| **Elementary School Subtotal** | -- | **1,500** |
| Algonquin Middle School | 6-8 | 852 |
| Averill Park High School | 9-12 | 1148 |
| **Total** | | **3,500** |

***Historic Enrollment***

Both Averill Park and Brittonkill School Districts have experienced flat or declining enrollment for the past several years, and both Districts are currently below their enrollment capacity.

The *Capital District Regional Planning Commission* conducted a study of School Enrollment Projections for the Averill Park School District and noted the following:

> From 1993 to 1998, Averill Park experienced dramatic enrollment increases, which were due to three major factors: 1) transfers from other districts; 2) an increase in births in the mid-

1980's; and 3) building renovation and expansion that occurred following the Brunswick common merger in 1996-97.

**Averill Park Enrollment 1988-1998**

| | |
|---|---|
| 1988-1989 | 2,650 |
| 1989-1990 | 2,630 |
| 1991-1991 | 2,656 |
| 1991-1992 | 2,762 |
| 1992-1993 | 2,844 |
| 1993-1994 | 2,918 |
| 1994-1995 | 3,076 |
| 1995-1996 | 3,317 |
| 1996-1997 | 3,444 |
| 1997-1998 | 3,487 |

> From 1998 to 2002, actual enrollment was flat;
> Actual enrollment the past several years has been less than projected.

**Averill Park Enrollments 1998-2003**

| | |
|---|---|
| 1998-1999 | 3,510 |
| 1999-2000 | 3,489 |
| 2000-2001 | 3,496 |
| 2001-2002 | 3,518 |
| 2002-2003 | 3,466 |

***Projected Enrollment***

> **Overall, enrollment is expected to decline over the next five years.** With stable building patterns and the decline in live births, a steady decline should continue for the next five years as larger graduating classes are replaced by smaller elementary classes;
> **First Grade enrollment is expected to decline moderately during the Project period,** based on live birth rates.
> **K-5 enrollments are expected to decline steadily,** and reach the mid 1,300's by 2007-08.
> **6-8 enrollments are expected to decline significantly** by 2005-06 as the current burgeoning middle school classes pass into high school. After 2005-06, middle school enrollment should stabilize.
> **9-12 enrollment was projected to decline over the period 2004 to 2008,** after peaking at 1,167 in 2003-04.

**Averill Park Enrollments Projections 2002-2008**

| | K-5 | 6-8 | 9-12 | Ungraded | Total |
|---|---|---|---|---|---|
| 2002-2003 | 1,441 | 873 | 1,137 | 15 | 3,466 |
| 2003-2004 | 1,464 | 822 | 1,167 | 18 | 3,471 |
| 2004-2005 | 1,448 | 793 | 1,142 | 18 | 3,401 |
| 2005-2006 | 1,441 | 771 | 1,101 | 18 | 3,331 |
| 2006-2007 | 1,395 | 800 | 1,083 | 18 | 3,296 |
| 2007-2008 | 1,376 | 803 | 1,036 | 18 | 3,233 |

### 3.2.3.3 Police Protection

The Rensselaer County Sheriff's Department and the New York State Police service the Project site. The Sheriff's Department is located at 1504 Fifth Avenue in Troy, approximately four miles from the Project site. The New York State Police substation is located on Route 7 in the Town of Brunswick, approximately three miles from the Project site.

### 3.2.3.4 Fire Protection

The Project is located within the Eagle Mills Fire District (EMFD) and is served from their fire house on Brunswick Road, approximately 2.5 miles to the east of the Project site. The Project is further supported by other fire companies in the area through the Rensselaer County Mutual Aid Agreement.

Fire departments in close proximity to the Project site include:

| Fire Department | Equipment | Approximate Distance to Site |
|---|---|---|
| **Eagle Mills Fire Department**<br>627 Brunswick Road<br>Troy, NY | 1 engine rescue<br>2 engine tankers<br>1 tanker for structure fires, vehicle fires, search & rescue, motor vehicle accidents& EMS | 2.5 miles |
| **Brunswick No. 1 Fire Department**<br>566 Hoosick Street<br>Troy, NY<br>Troy, NY | 1 95' ladder truck<br>2 engine tankers<br>1 rescue mini pumper | 2.9 miles |
| **Wynantskill Fire Department**<br>520 Church Street<br>Wynantskill, NY | 1 95' ladder truck<br>3 pumpers<br>1 rescue truck | 2.7 miles |
| **Troy Fire Department**<br>2175 Sixth Avenue<br>Troy, NY | 1 ariel ladder truck<br>1 tower ladder truck<br>5 pumpers | 3.5 miles |

| | | |
|---|---|---|
| | 1 rescue truck<br>2 haz mat units<br>3 ambulances | |
| **Mountain View Fire Company**<br>2 Shafter Avenue<br>Troy, NY | 2 engine tankers<br>1 first response medical vehicle<br>1 utility van<br>1 brush fire truck | 2 miles |
| **Volunteer Fire Company of Center Brunswick**<br>1045 Hoosick Road<br>Troy, NY | 2 engine tankers<br>1 rescue truck<br>1 utility truck | 6 miles |
| **DeFreestville Fire Department**<br>480 N. Greenbush Road<br>North Greenbush, NY | 3 pumpers<br>1 heavy rescue<br>1 brush fire truck<br>1 EMS | 7 miles |

### 3.2.3.5 Utilities

Niagara Mohawk, a National Grid Company (NIMO) supplies electric and natural gas utilities to nearby residences, and would be the electric and gas provider to the Project site. Verizon provides telecommunication services, while Time Warner Cable provides cable, broadband Internet connection and digital phone service to the area, and will be the providers of these services to the Project site.

### 3.2.3.6 Water Supply

The Project site will be served by public water supplied by the Town of Brunswick, which purchases its water from the City of Troy. The Project site, being undeveloped, is not directly served by public water utilities. The site's nearest public water line is a 16-inch diameter water main located along Pinewoods Avenue serving residences near the Project site, and within the Town of Brunswick's Water District No. 3.

The existing boundary of Water District No. 3 extends 500 feet from the centerline of Pinewoods Avenue. Due to the number of proposed units to be served by public water, a new water district will need to be created that will extend to the boundaries of the Project site. Country Club Lands, Inc. has submitted a petition to the Town Board of the Town of Brunswick for the purposes of establishing Water District #13. Refer to DEIS Appendix 4 Correspondences for a copy of the petition.

It is proposed that two new 10-inch water mains to serve the development be tied into the existing 16-inch main at the intersection of the new roadway through the development and Pinewoods Avenue. The new 10-inch mains would form a looped system along the access roads through the development, with smaller

diameter service lines branching off to serve the proposed lots. The looped system would stabilize the flow and pressure within the system. It would also allow for maintenance on the system with minimal interruption of water service. The cul-de-sacs would be supplied by dead end 8-inch water mains with a hydrant at the end for flushing the lines. Refer to *Figure 3A – On-Site Water Distribution* for further reference.

The existing 16-inch main is fed from a 2 million gallon water tank located off of Grange Road (Route 142). Hydrant flow test information in the vicinity of the Project site at Pinewoods Avenue and Colehammer Road shows a static pressure of approximately 115 pounds per square inch (psi) in the main and a residual pressure of 32 psi with a flow of 1,075 gallons per minute (gpm). At this hydrant, it is estimated that the available fire flow, with a minimum residual pressure of 20 psi, is 1,156 gpm. The hydrant flow test information is provided in *Appendix 8 Final Engineering Report – Water and Sewer.* It should be noted that this hydrant, located at the intersection of Colehammer Road and Pinewoods Avenue, is upstream of an existing pressure reducing valve pit, located along Pinewoods just west of the Project site. This testing location is important, as the proposed water line that would serve the development will be tied into the existing main, on the high-pressure side of the valve pit.

Engineering calculations (which can be found in Appendix 8) were performed to estimate the domestic water and fire flow demands for the proposed development. A hydraulic analysis using the Haestad WaterCAD Model program was used to determine if the proposed system has the capacity to meet the estimated water demands. Based on per capita usage and the estimated 556 residents as discussed in *DEIS Section 2.5.3 Project Design and Layout*, the average domestic daily demand is estimated to be 55,600 gpd and the maximum domestic daily demand is estimated at 111,200 gpd (77 gpm). The worst-case fire flow demand would be 750 gpm for the non-sprinklered residential homes. The total demand estimate for use in design and analysis would be the worst-case fire flow demand of 750 gpm plus the maximum domestic daily demand of 77 gpm for a total demand of 827 gpm with a minimum 20 psi maintained at any point in the main.

The hydraulic analysis indicates that the most critical location for evaluation is the high point in the system. The topography indicates that this location would occur approximately halfway along the main roadway through the site. The hydraulic analysis indicates that with the maximum domestic daily demand of 77 gpm applied to the system and the worst-case fire flow demand of 750 gpm applied at this point the resulting pressure in the system is approximately 30 psi.

The water supply facilities also have to provide the required 52 gpm at a minimum 40 psi for the fire sprinkler systems in the Senior Housing Units designed per NFPA 13R. The hydraulic analysis indicates that with the maximum domestic daily demand of 75 gpm applied to the system and the sprinkler fire flow demand of 52 gpm applied at the Senior Housing Units the resulting minimum pressure in the system is approximately 110 psi.

Based on the above, the existing water supply system has adequate capacity to provide water to the proposed development for domestic and fire fighting purposes.

### 3.2.3.7 Sewage Treatment

The Project will be served by municipal sewer services provided by Rensselaer County. The Project site is located east of the Rensselaer County Sewer District No. 1. Based on initial discussions with officials of the Town of Brunswick, Rensselaer County, Rensselaer County Health Department and prior investigations, it was determined that the only practical and feasible way to develop this Project was to access the Rensselaer County Sewer System. The nearest connection to this system is approximately 11,000 feet west of the Project site on Pinewoods Avenue, which will require the construction of a new sewer line along Pinewoods Avenue leading from the Project Site as depicted in Figures 4A, 4B and 4C. Due to the number of units proposed and the necessary off-site infrastructure requirements, the Project will result in the creation of a new sewer district. Country Club Lands, Inc. has submitted a petition to the Town Board of the Town of Brunswick for the purposes of establishing Sewer District #7. Refer to DEIS Appendix 4 Correspondences for a copy of the petition.

Effluent from the development will ultimately be received, treated and discharged to the Hudson River by the existing county-owned wastewater treatment plant located in the City of Troy. The calculations (refer to *Appendix 8 Final Engineering Report – Water and Sewer*) estimate the maximum daily flow from the development at approximately 0.08 MGD. There is excess capacity at the wastewater treatment plant, as it has a design capacity of 24 MGD and a current average daily loading of only 19 MGD.

### 3.2.3.8 Solid Waste Disposal

The proposed development will increase the amount of municipal solid waste generated in Rensselaer County. Information obtained from the U.S. Environmental Protection Agency (EPA) estimates that on the average each person generates 4.4 pounds of solid waste per day. Based on an estimated population of 556 persons for the proposed Project, this would mean that approximately 36.7 tons of additional municipal solid waste would be generated each month. These calculations and information from EPA are provided in Appendix – 9 Solid Waste Calculation Reference.

Two waste haulers are currently licensed in the Town of Brunswick to collect common household trash and recyclables within the Town; Ace Carting Corporation and Superior Waste. The collected waste is either hauled to the Town of Colonie Landfill or transferred to several western New York landfills. Future limitations on disposal are currently not anticipated. The Town's recycling center is located behind the Town Offices and is a drop-off location for common household trash contained in required bags and recyclables.

## 3.2.4 Socioeconomic Conditions

### 3.2.4.1 Population and Income

According to the 2000 census, the Town of Brunswick had a population of 11,719. Of the total population, approximately 26% are school aged (19 or under) and 15% are 65 years or older. Educational attainment in the Town is high, with over 90% of residents having graduated from high school and 36%

possessing a bachelors degree or higher. Over 96% of residents were born in the United States, with 3.4% of residents being foreign-born.

In 2000, over 70% of the Town's population was in the labor force and unemployment was a relatively low 2.7%. Within the labor force, 43% of residents worked in professional occupations, almost 30% in sales, 11% in service and 9% in production or transportation. The median household income is $56,528. Only 3% of families are classified as living under the poverty level.

Compared to surrounding communities such as Troy and Rensselaer County as a whole, the Town of Brunswick is relatively affluent. As shown in Table 3-7 – Comparative Demographics, below, Brunswick gained population between the 1990 and 2000 censuses, while the City of Troy lost over 10% of its population. Also noteworthy is Brunswick's median household income of $56,528, which is nearly double that of Troy, and also significantly higher than Rensselaer County as a whole.

**Table 3-7**
**Comparative Demographics**

| Municipality | Population 1990 | Population 2000 | Population % change | Median Household Income 2000 (in dollars) | Per Capita Income 2000 (in dollars) |
|---|---|---|---|---|---|
| Town of Brunswick | 11,093 | 11,719 | +5.3 | 56,528 | 26,554 |
| City of Troy | 54,269 | 49,170 | -10.3 | 29,844 | 16,796 |
| Rensselaer County | 154,429 | 152,538 | -1.2 | 42,905 | 21,095 |

*Source: 2000 U.S. Census*

This data demonstrates that Brunswick has been and will likely continue to be attractive to new families and highly educated persons with above average incomes. This also demonstrates that the Project will be a good fit in the community in that a wide variety of household incomes will be targeted, not just higher incomes, so as to assist in maintaining a diversity of housing values.

### 3.2.4.2 Housing

The Town of Brunswick is primarily a rural area with the majority of development being residential in character. According to the 2000 U.S. Census, 4,573 households existed within the town with an average size of 2.56 persons in 2000. Of the 4,618 occupied housing units, 3,558 were single-family homes. The remainder is a mix of semi-attached units and small- to medium-sized apartment buildings. Approximately 25% of the structures were built prior to 1940 and another quarter were constructed between 1940-1960. Approximately 16% of the units have been constructed since 1990.

The housing stock in the Town of Brunswick is generally older – based on the 2000 U.S. Census, almost one-half of the housing structures in the Town were over 40 years old (48%); 60% were over 30 years old, 70% were over 20 years old and 83% were over 10 years old.

Many residents have resided in the Town of Brunswick for a very long time – almost one-third of residents have lived in the Town for more than 20 years (32%) and more than 50% for more than 10 years. A great many of the Town's senior citizens in particular have chosen to remain as residents for a long period of time – the 18.2% of residents having lived in the Town for over 30 years correlates close to the 19.6% of residents aged 60 and older. This circumstance is consistent with national trends, which show that seniors strongly prefer to remain in their home communities. The problem facing most communities, however, is that there is generally a shortage of housing that is appropriate and affordable for seniors, which would allow them to continue living independently.

In the Town of Brunswick, there currently is no non-subsidized housing for mid-market seniors, although this group represents the great majority of seniors in the Town. Based on the 2000 U.S. Census, 66% of senior households (age 65+) had a household income of $30,000 or more (78% for age 60+). Projections for 2004 estimate that 71% of senior households (age 65+) have a household income of $30,000 or more (79% for age 60+).

### 3.2.5 Cultural Resources

#### 3.2.5.1 Historic and Archeological Resources

*Phase 1 and II Archeological Investigations* were performed for the 214 acres Project Site and a Phase 1A and 1B were completed for a 9-acre section (within the 214 acre Project Site) adjacent to 3 proposed Carriage Homes off Pinewoods Avenue, and for the proposed sewer line route along Pinewoods Avenue. The findings of these analyses are described as follows and are broken down by Project Site, 9-acre Section, and the Proposed Sewer Line:

*Project Site*

Based upon the background research; there are no previously recorded archaeological sites within the 214-acre area of potential effect. Historic maps do not show any historic structures within the Project area. The Phase I archaeological surveys identified ten (10) archaeological sites, comprised of five prehistoric, four historic sites, and one mid-20$^{th}$ Century to Modern site as depicted on *Figure 14 Historic and Archeological Site Locations.*

Phase IB investigations for the 214-acre Project Site entailed the excavation of 1,311 shovel tests and identified a total of nine archaeological sites, Sites A08302.000209-217. Phase II site evaluations were conducted for six sites A08302.000209-212, 215 and 216 as depicted on *Figure 14 – Historic and Archeological Site Locations*. Refer to *Appendix 10 – Phase I and II Archeological Investigations* for the complete report and findings.

*Site A08302.000209*

Site A08302.000209 is a small prehistoric site situated on a gently sloping upland sideslope facing the Poestenkill Creek drainage. The site is in a lightly wooded area near a historic dry laid stone wall. The Phase I shovel testing recovered three chert flakes and the Phase II generated an additional six chert flakes. No features were documented. Based upon Phase II evaluations, the site does not appear to be

eligible to the NRHP. While the site is proposed to be impacted by the Project, the site is not NRHP eligible and no additional work is recommended, provided OPRHP concurs.

*Site A08302.000210*

Site A08302.000210 is a small prehistoric site situated in the southern part of the Project area. The site is positioned on a gently sloping sideslope east of the NIMO transmission line and south of an ATV path. The site is in an area of tall grass and may be partially disturbed by erosion caused by the ATV path. Phase I shovel testing recovered three chert flakes. Based upon the Phase II investigations, the site does not appear to be NRHP eligible. While the site is proposed to be impacted by the Project, the site is not NRHP eligible and no additional work is recommended, provided OPRHP concurs.

*Site A08302.000211*

Site A08302.000211 is a small prehistoric site situated in the western portion of the Project area near the summit of prominent upland hill. The Country Club of Troy's property line is approximately 100 meters west of the site. A sparse stand of mature evergreens is found growing around the site. Phase I shovel testing recovered three chert flakes and one FCR (fire-cracked-rock). Based upon the Phase II investigation, the site does not appear to be eligible for the NRHP, as it only yielded two undiagnostic artifacts. While the site is proposed to be impacted by the Project, the site is not NRHP eligible and no additional work is recommended, provided OPRHP concurs.

*Site A08302.000212*

Site A08302.000212 is historic feature located in well-drained soils along an upland swale in the western portion of the Project area. The site is located in cleared grassy area that is surrounded by dense thickets. A north/south aligned ATV path is near the western boundary of the site. Eleven historic artifacts were recovered in shovel tests. A possible cobble/brick pavement feature was encountered between 11 and 30 centimeters below the present ground surface in one of the tests. The relationship, if any, with this site and historic house Site A08302.000213 (discussed below) that is located about 75 meters to the north, has not been determined. The site is considered potentially eligible to the NRHP. Based upon the Phase II site investigation the site does not appear to contain characteristics that would satisfy eligibility criteria of the NRHP. While the site is proposed to be impacted by the Project, the site is not NRHP eligible and no additional work is recommended, provided OPRHP concurs.

*Site A08302.000213*

Site A08302.000213 is a historic site located in the northwest part of the Project area near the O'Conner / Country Club Properties, Inc. property line. The site is comprised of a portioned dry laid rock foundation, a cistern, footings, and two outbuildings. Piles of modern debris have been tossed in the foundation and cistern. The site does not appear on any of the examined historic maps. Shovel testing recovered 241 artifacts. Artifact classes represented include ceramic, glass, metal and miscellaneous, and appear to date circa 1850-1900. Based upon the Phase IB site investigation, the site may be eligible for inclusion in the NRHP. The Project as currently designed will avoid and preserve the site. As a precautionary measure, a temporary fence shall installed 50 to 75 ft. out from the Phase 1B defined site to protect the site from encroachment by heavy equipment.

*Site A08302.000214*

Site A08302.000214 is razed historic site comprised of several outbuilding structures that are all in varying stages of collapse and ruins. The site is located on the north side of a small un-named drainage in the southern part of the Project area approximately 300 feet north of Pinewoods Avenue. The structures are comprised of a small cinder block building, concrete footings, and two partially collapsed wooden sheds. According to a local informant, the buildings were likely last used 30 or more years ago as farm buildings. No house is associated with the site. Modern debris dating from the last 50 years is dispersed in several areas around the site's surface. Only modern materials were recovered in shovel tests. The wooden buildings appear to date over 50 years of age. While the site is proposed to be impacted by the Project, based upon the Phase IB investigation, the site does not appear to be NRHP eligible and no additional work is recommended, provided OPRHP concurs.

*Site A08302.000215*

Site A08302.000215 is a small prehistoric site situated in the northeastern portion of the Project Site on an upland toe-slope. Three chert flake was recovered during the on-site investigations. While the site is proposed to be impacted by the Project, based upon the Phase II excavations, the site does not appear to be NRHP eligible and no additional work is recommended, provided OPRHP concurs.

*Site A08302.000216*

Site A08302.000216 is a small prehistoric site situated in the northeastern portion of the Project Site along the southern margins of the same toe-slope that Site 215 occupies. A total of two chert flakes were recovered. While the site is proposed to be impacted by the Project, based upon the Phase II excavations, the site does not appear to be NRHP eligible and no additional work is recommended, provided OPRHP concurs.

*Site A08302.000217*

Site A08302.000217 is a small historic site located approximately 33 ft. north of Pinewoods Avenue in the southern portion of the Project Site. The site is no longer proposed to be impacted by the Project and therefore, a Phase II investigation was not preformed. If the Project design changes and the site may be impacted, a Phase II investigation is recommended.

Upon OPRHP concurrence, the Project Site does not encompass any significant cultural resources and project clearance from an archaeological perspective is recommended.

*Proposed Sewer Line and 9-Acre Section*

A Phase IA and IB Cultural Resources Survey (Refer to *DEIS Appendix 11 Phase I and II Archeological Investigations*) were conducted for the route of the proposed sewer line along Pinewoods Avenue and a 9-acre section of the Project Site adjacent to three proposed Carriage Homes.

The first Phase 1 was conducted in May 2005 for the original 10,250 ft sewer route running approximately 4,000 ft. along the southern edge of Pinewoods Avenue from Deerfield Land to Banbury

Road, to a point approximately 150 ft. east of Banbury where the line would be directionally bored under Pinewoods Avenue and continue on the north side of Pinewoods Avenue to Maple Avenue. Crews discovered a total of 93 historic/modern artifacts (all of which are likely associated with random roadside refuse) from 22 STPs. No prehistoric artifacts were identified. Based upon the results of the subsurface testing along the 10,250 ft. route, it was recommended that this route would result in no adverse impact on significant cultural resources, and no additional archaeological work is recommended.

Due a change in the project design it was decided that the sewer line should run along the north side of Pinewoods Avenue the entire length to Maple Avenue. It was therefore necessary to conduct a second Phase 1 was conducted in August 2005 for an alternate route, a 3,400 ft. section along the north side of Pinewoods Avenue. This alternate route runs along the north side of Pinewoods Avenue from the Forests Hills Cemetery to approximately 820 ft east of Deerfield Drive. Subsurface testing was conducted from August 4, 2005 to August 10, 2005 which included the excavation of a total of 181 shovel test pits (STPs) placed at 49 ft intervals at the 9-acre parcel and 60 STPs along the proposed sewer line route.

Excavation along the proposed alternate sewer route resulted in the recovery of only one historic artifact (roadside refuse) and no prehistoric artifacts. Based on the results of the Phase 1A and 1B investigations it has been determined that the proposed alternate sewer line will have no adverse impact on significant cultural resources and no additional archaeological work has been recommended.

Excavation on the 9-acre section resulted in the recovery of a total of 702 historic artifacts from 35 STPs and the designation of one site, the W. J. Stillman site (SUBI-2537) as depicted on Figure 14. Within this site, 661 artifacts were recovered, but no prehistoric artifacts. Based upon the results of the investigation, this site is potentially eligible for the NRHP. The Project as proposed will avoid this site and therefore, a Phase II Site Examination is not required to determine eligibility as no impact is anticipated.

### 3.2.5.2 Visual Resources

**The Surrounding Landscape**

The Project site is located in the Town of Brunswick approximately 2 miles east of the City of Troy. This proximity means that the Town functions as a developing suburb of the City as well as the larger Capitol District. The project site is located between NYS Route 2, a principal arterial, and the Poestenkill Creek to the north. Single-family homes lie to the east; Pinewoods Avenue and additional single-family homes lie to the south while the County Club of Troy is a major presence to the west.

Because it is a developing suburb, the surrounding regional landscape consists of varied housing types and other suburban development including an expanding road system. Mixtures of natural wooded hills and open fields with an interspersed pattern of ornamentally vegetated landscapes are also characteristic.

**The Site**

The Project site is currently undeveloped and mostly vegetated with forests and open fields. However, an overhead electric transmission line passes through the eastern part of the site and there are a few abandoned structures as well. The topography is mostly rolling to moderately steep. Open areas and forest trees grow above a mixture of lower shrubs and herbaceous vegetation.

**Inventory of Aesthetic Resources**

Research was conducted to determine whether aesthetic resources are present within two miles of the proposed project. Aesthetic resources include all National, State and locally designated places as may be listed under The New York State Department of Environmental Conservation Program Policy "Assessing and Mitigating Visual Impacts", July 31, 2000, or as may be listed in official planning and or zoning documents of the Town.

One State-level resource was identified within two miles of the proposed development. The Garfield School, a designated historic property is located east of the project site along NYS Route 2. Figure 15A shows that the project will not be visible from any portion of the historic property.

At the outer two mile assessment distance is the Emma Willard Educational Institution and the Henry Coon House to the southeast.

***Other Potentially Sensitive Places***

A total of 8 other potentially sensitive locations that may afford views of the Project Site were identified during the public scoping process. As depicted on Figure 15B, these sites include (1) Brunswick Hills Development, (2) Highland Hills Development, (3) looking east on NYS Route 2, (4) looking west on NYS Route 2, (5) Pine Woods Hills Development, (6) Eagle Ridge Development, (7) the 7th fairway on the Troy Country Club, and (8) the 5th tee of the Troy Country Club.

The Brunswick Hills Development lies approximately 3,000 feet to the northwest of the Project and north of NYS Route 2 consists of more than 30 homes. Existing views consist of roads, housing and wooded and ornamentally vegetated landscapes.

Highland Hills Development is located approximately 1,750 feet to the northwest, just east of Brunswick Hills and consists of approximately 16 homes. Existing views consist of roads, housing and wooded and ornamentally vegetated landscapes.

NYS Route 2 provides arterial access to the Project. It is classified as an urban principal arterial with average daily traffic volumes of approximately 4,500 vehicles. The adjacent land uses are generally residential though passing motorists can see periodic views of wooded slopes and fields

Both Pine Woods Hills and Eagle Ridge residential developments are located approximately 1,000 feet to the southeast of the Project Site, south of Pinewoods Avenue. Pine Woods Hills is a large residential development with more than 30 homes, while Eagle Ridge is a much smaller development consisting of 6 homes. The existing view from both of these developments consists of housing, roads and wooded and ornamental landscapes.

### 3.2.5.3 Noise

The Town of Brunswick does not have a noise ordinance. The Project site is within a setting that could be defined as rural residential or wooded residential. As such, sound levels in the area are generally low with a somewhat limited number of sound producers. Sound producers generally can be classified as one of three types; fixed equipment or processes, mobile equipment or processes, and transport movement of products.

Sound pressure levels (SPL) or perceived loudness is expressed in decibels (dB) or A-weighted decibel (dBA) scale that is weighted towards those portions of the frequency spectrum to which the human ear is most sensitive. Decibels can be used to describe the sound environment in a number of ways. The Day Night Average Sound Level (Ldn) is the 24-hour average sound level. The Equivalent Sound level (Leq) is the average sound level for any particular time period under consideration. The time period may be a particular peak hour of sound or typical time periods for sound producers, such as over a given work day or regular period of operation.

As depicted in *Table 3-8* sound levels in the Project area can generally be expected to range from between 43 to 63 dBA depending on their location. The EPA (1974) provides typical Ldn sound levels of 40 to 46 dBA (average 43 dBA) for rural residential areas.

**Table 3-8**
**Typical Day-Night Noise Levels Associated With Different Residential Environments (USEPA 1974)**

| | |
|---|---|
| Rural | 40-46 dBA |
| Quite Suburban | 46-53 dBA |
| Suburban | 53-63 dBA |
| Urban, Low-Density Residential | 58-63 dBA |
| Urban, Medium-Density Residential | 63-68 dBA |
| Urban, High-Density Residential | 68-78 dBA |
| Urban, Downtown Business District | 74-81 dBA |

*Source: USEPA*

### 3.2.6 ENVIRONMENTAL CONDITIONS

A Phase 1 Environmental Site Assessment (*refer to DEIS Appendix 12*) was performed for the site. The assessment involved document research and three visual inspections of the subject property, which revealed no evidence of surficial contamination, unusual odor, stressed vegetation, or other physical evidence of an adverse environmental impact.

A junkyard was present along the southeastern portion of the subject property prior to 1952 and the debris/ "junk" was removed from the subject area before 1986. A debris field was observed north of the unnamed tributary to the Poestenkill Creek, east and south of an unimproved dirt surface trail, and west of partially collapsed structures noted in the southeastern portion of the subject property. The size and aerial extent of the debris field /disturbed area varied greatly during the time period reviewed (prior to 1952 to mid 90's when it was removed).

Numerous sources were contacted to obtain hard copy documentation for the removal of debris (including tires which were the source for one or more fires) from the subject property, but with no success. However, based on the review of historical aerial photographs and topographic maps, it is clear that the subject debris and tires were removed from the subject property. In addition, the interview of the subject property owner and key governmental agency representatives supported the conclusion that the environmental hazard(s) were removed from the subject property. There are no outstanding code violations, state permit conditions, consent orders or incidents of an environmental nature concerning the subject property. No stressed vegetation, staining, odors, or evidence of spillage were observed along this portion of the subject property during numerous Site inspections.

An occasional waste tire, bulky white item, used automobile parts, and other metallic debris have been dispersed throughout the subject property and surrounding area along a dirt trail frequented by quads. Three additional areas of note include a small shed east of the off-site private dwelling in the northwestern portion of the subject property and an old farm debris area along a localized segment of the southern portion of the subject property, located along the top of a ridge and slope north of a tributary to the Poestenkill Creek and west of the NMPC utility easement. The third area consists of scattered debris dumped in a ditch along the mid-northern portion of the subject property, located south of NYS Route 2 and east of the unimproved private driveway. Although small amounts of junked debris were observed, no containers that are known or suspected to contain hazardous substances were identified.

Three partially collapsed large structures (50'x 20'; 50'x30'; and 30'x30') and one partially collapsed shed (35'x10') are noted approximately 500 to 650 feet north-northwest of Pinewoods Avenue, east of the NMPC utility easement, and north of the west-flowing tributary of the Poestenkill Creek. These structures were built in 1960, based on the review of property records. Some other former structures were noted to the east of these buildings of poor condition. The former structures were built in 1926, based on information provided by the Town of Brunswick. The surficial area southwest, west and northwest of these structures did not appear to be disturbed or represent an active disturbance. Although a few heavy-duty tires were observed in the creek near the access road, no drum(s) or other large container known or

suspected to contain a hazardous substance was observed and no unlabeled container that might have contained a hazardous liquid was observed in this area.

The cleared land north and northeast of these structures was located in the vicinity of the former junkyard, which measures approximately 400 feet wide (north to south) by 600 feet long (east to west). Remnants of two west to east-oriented lanes that are 400 feet in length and numerous north to south-oriented paths were identified. A partially collapsed dairy barn was observed in the woods near the northwestern corner of the subject property. No debris was observed at surface, with the exception of scattered pieces along the wooded periphery, especially along the northern and western edges. No stressed vegetation, staining, or evidence of spillage was observed in this suspect area.

In addition, no tire dump(s) was identified on the subject property. Review of various environmental records and interview of key personnel revealed that a tire dump (source of tire fire(s)) had previously been located east of the NMPC utility easement and northeast of a creek in the southeastern portion of the subject property.

An off-site localized area of refuse/debris was noted along the northern third of the NMPC utility easement. Although small amounts of junked debris were observed in this area, no containers that are known or suspected to contain hazardous substances were identified. No drum(s) or other large container known or suspected to contain a hazardous substance was observed and no unlabeled container that might have contained a hazardous liquid was observed in this area.

Based upon EPA guidance documents, no materials were observed on the subject property that must be considered suspect asbestos- containing materials (ACM).

Stormwater runoff from the subject property apparently is via sheet flow to the Poestenkill Creek (tributary 236-4-1) or tributaries of the Poestenkill Creek (tributary 236-P406a-1). Standing (pooled) water was occasionally observed along select low-lying areas of the subject property (i.e., midwestern, southern, and northeastern corner).

No oil-filled transformer was observed on the subject property.

There is no refuse generated on the subject property.

Tanks Information gathered during the subject property reconnaissance and background research indicated that no stationary aboveground storage tank (AST) or underground storage tank (UST), excluding water tanks, is known to presently be or formerly have been on the subject property.

The performance of all tasks required for this Phase I ESA and numerous Site inspections did not reveal any impacts to soil or groundwater quality. No environmental concerns are present in this area.