

KURY HOMES
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

TOWN OF CLARKSTOWN, ROCKLAND COUNTY, NEW YORK

Tax Map Numbers:

Section 59.20, Block 1, Lot 3, Section 59.20, Block 1, Lot 4, Section 59.20, Block 1, Lot 5

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Written Comments Will be Accepted by the Lead Agency for Ten Days After Close of the Public Hearing.

March 23, 2006

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KURY HOMES
Draft Environmental Impact Statement
Town of Clarkstown, New York

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1.0 INTRODUCTION/EXECUTIVE SUMMARY

1.1 Action Overview

This Draft Environmental Impact Statement (DEIS) has been prepared in response to a Positive Declaration issued by the Town of Clarkstown Planning Board (the "lead agency") in connection with a residential subdivision application from Price Construction, LLC, the "project applicant" and property owner of the site located on Mountainview Avenue in the unincorporated area of Town of Clarkstown, Rockland County, New York. The DEIS has been prepared in accordance with the State Environmental Quality Review Act (SEQRA) and Part 617 of the regulations implementing SEQRA. The content of this DEIS was established by a scoping outline adopted by the Clarkstown Planning Board on December 4, 2002. The adopted scoping outline is included as Appendix A of this DEIS.

1.2 SEQRA Process

After the DEIS is accepted as complete for public review by the lead agency, a public hearing may be held at the option of the lead agency, and a 14-day minimum notice of public hearing on the DEIS is required. The public hearing is held within the DEIS comment period - the comment period must be held open at least 30 days. If substantive comments are raised by the public or reviewing agencies during the comment period, the lead agency will have the project sponsor prepare and submit a final environmental impact statement (FEIS) which addresses these substantive comments. The lead agency is responsible for the adequacy and accuracy of the FEIS, and must formally accept the FEIS document. After the FEIS document is accepted as complete, the public is afforded at least ten days to review the FEIS and comment upon it, before the lead agency may adopt a Findings Statement. The lead agency must prepare and adopt a Findings Statement prior to taking action on the subdivision application. The Findings Statement will summarize the impacts identified in the DEIS and FEIS, and will set forth the mitigation measures to be implemented to reduce or eliminate potential impacts.

The project site is located in the unincorporated area of the Town of Clarkstown, Rockland County, New York. The project site is approximately one-half mile north of Interchange 11 of the New York State Thruway. The easterly property line of the project site is approximately 600 feet west of the Town's boundary with the Village of Upper Nyack. The site is identified on the Town of Clarkstown tax maps as Section 59.20, Block 1, Lots 3, 4, and 5, and is approximately 10.3 acres in size. There were formerly three single-family residences on the project site which have been demolished.

The applicant, Kury Homes, Inc., intends to subdivide the project site, install the required infrastructure, and develop 12 single family residential dwellings in response to a continued strong market and demand for high quality housing in the Town of Clarkstown and Rockland County. The project would create a high-quality residential neighborhood for persons seeking to live in the unincorporated area of the Town of Clarkstown and with convenient access to major transportation routes such as the New York State Thruway.

The project applicant proposes to subdivide and develop approximately 10.3 acres of vacant land into 12 building lots accessed by two roads both ending in cul-de-sacs. The roads would be designed in accordance with Town specifications and offered for dedication to the Town of Clarkstown. The project site is zoned R-22 and would meet the minimum lot size of 22,500 square feet after subtracting from the minimum lot area environmental constraints as per the

requirements of Section 290-21.D. of the zoning law. The subdivision conforms to the bulk requirements of the zoning law for the R-22 district.

The subdivision's design includes an infiltration basin and dry swales to handle any increase in the rate of stormwater runoff emanating from the post-development project site. The infiltration basin will be on its own lot, however, the dry swales would be located on portions of Lots 11 and 12. An easement running to the benefit of the Town will be created on these lots for purposes of accessing and maintaining the dry swales. A maintenance agreement will be made a condition of final subdivision plat approval to allow the Town to access and maintain the infiltration basin.

Approximately 8.5 of the 10.3 acre site would be graded to accommodate the 12 single-family residences, proposed roads, and lawns. Less than one-tenth of an acre of Army Corps of Engineers (ACOE) regulated wetlands would be disturbed and is subject to a Nationwide Permit No. 39.

The applicant proposes to construct 12, four-bedroom single-family detached residences approximately 4,000 square feet in gross floor area to be connected to existing public water and public sewer service. The applicant estimates that the selling price for each home would be in excess of \$850,000. Using financial mortgage calculators available at the website, www.bankrate.com, and depending upon the amount of the down payment, an annual household income of approximately \$200,000 to \$275,000 is generally necessary to purchase a home in this price range. According to 2000 U.S. Census Bureau estimates, over eight percent of the current residents of the Town of Clarkstown have an annual income exceeding \$200,000. Similarly, over eight percent of the residents of Rockland County earn incomes in excess of \$200,000 per year.

1.3 Summary of Significant Impacts and Proposed Mitigation Measures

1.3.1 Geologic Resources

The project site is located in the eastern section of the New England physiographic province, more specifically the Triassic Lowlands. The bedrock identified on and near the project site is Palisade diabase located in the Newark Group. Based on deep hole tests conducted on the project site by the applicant, the depth to bedrock is in excess of 12 feet.

On-site soils have been mapped and described by the USDA Soil Conservation Service (SCS) in the Soil Survey of Rockland County, New York (Atlas Sheet 19), issued in 1990. Generally, the soils consist of Holyoke-Rock outcrop types, which are described as shallow, well-drained to excessively drained soils.

Of the 10.3 acres project site, 8.5 acres, or 82.5 percent of the site, would be disturbed. Approximately 1.8 acres, or 17.5 percent of the site, will remain undisturbed.

Slopes on the subject site are shown in Figure 3.1-6 - Existing Slope Map, of the DEIS. The figure distinguishes areas of slopes between 0 to 10 percent, 10 to 15 percent, and greater than 15 percent. Approximately 4.14 acres or 40.2 percent of the site, contains slopes in excess of 15 percent.

Potential Impacts

Grading is required to build the access road, install site utilities, prepare level areas for homes on individual lots, and to create an infiltration basin in the western portion of the project site. A majority of the land is proposed to be disturbed and graded due to the proposed size of homes relative to the size of the individual lots. Proposed grading is shown in Figure 3.1-2 - Site Grading Plan, of the DEIS. The project would result in the disturbance of 3.6 acres with slopes greater than 15 percent (See Figure 3.1-3, Slope Disturbance). Areas that would not be regraded include the northwestern corner of the property and a western portion of the site, both locations where wetland areas are present and development is not proposed.

A total of less than 0.1 acres of wetlands will be impacted. Minor wetland impact would result from the construction of the infiltration basin and roadway construction in the western portion of the property. Approximately 0.46 acres of wetland will remain undisturbed.

Based upon engineering estimates, the project will result in approximately 67,100 cubic yards of cut and 45,400 cubic yards of fill, resulting in 21,700 cubic yards of excess cut which must be removed from the site. This is a preliminary estimate based upon the current grading plan and information provided by the engineers. As shown in Figure 3.1-3, the bulk of the earth cuts would be located in the area of the access road's intersection with Mountainview Avenue, Lots 1 and 12, and at the rear of the property in the vicinity of Lots 4 through 10. Fill would occur primarily in the central portion of the site, in the vicinity of Lots 2, 3, 10, 11, and 12, as well as establishing grade on portions of the main access road. Grading is also required for the infiltration basin, located in the western section of the property. Excess material will be utilized on-site to the extent possible, minimizing the need for off-site transport.

An estimated 3.4 acres of slopes in excess of 15 percent will be graded.

As a result of soil and slope disturbance and vegetation removal, there is an increased potential for siltation to occur in areas downgradient of the site. The control of stormwater runoff during construction will be important to minimize construction-related soil erosion and sediment impacts. With proper construction, installation and maintenance, soil erosion control measures will minimize potential off-site impacts.

Proposed Mitigation Measures

An Erosion Control Plan is provided in the set of submitted subdivision plans. The primary objective of the plan is to reduce soil erosion from areas exposed during construction and prevent silt from reaching the on-site wetland and areas downstream. All soil erosion and sedimentation control practices would be installed in accordance with erosion and sediment control best management practices

The Town of Clarkstown will require a construction bond/fee to insure the proper installation and maintenance of sediment and erosion control measures, and for site restoration if necessary. The construction contractor will be required to install all sediment and erosion control measures and maintain them throughout the entire construction process.

The proposed plan minimizes the areal extent of soil exposure to the greatest extent practicable in accordance with the Erosion and Sediment Control Guidelines of the NYSDEC SPDES

General Permit for Stormwater Discharges from Construction Activities (Permit No. GP-93-06). Erosion and sedimentation will be controlled during the construction period by temporary devices according to the Erosion Control Plan developed specifically for the project (see project engineer's full size drawing at the rear of this document). The plan addresses erosion control and slope stabilization. The details of the practices to be followed are described in Section 3.1 of the DEIS. The drainage and erosion control plan will be reviewed by the Town of Clarkstown Department of Environmental Control and approved by the Clarkstown Planning Board as part of final subdivision plan approval.

The applicant conducted six deep hole tests which indicate that bedrock was not encountered at a depth of 12 feet, thus blasting is not anticipated. In the unlikely event that blasting is required, a formal blasting plan will be developed. The blasting plan will meet all New York State requirements and Chapter 220 of the Code of the Town of Clarkstown which regulates blasting activity. The use of proper blasting techniques will minimize the potential effects of blasting to nearby properties.

1.3.2 Water Resources

The project site is located in the Palisades diabase. Groundwater is encountered in the fractures and joints of this bedrock unit (secondary permeability). The number and location of the bedrock fractures (fractures typically contain greater quantities of usable water than joints) is dependent on the degree of deformation that the bedrock has undergone through its formation. Groundwater flow generally follows the topography in the vicinity of the project site.

Depth to water table (surficial groundwater elevations) varies on the site and during seasonally wet periods. Based on data in the USDA's *Soil Survey for Rockland County*, the on-site soils identified as Holyoke-Rock Outcrop complex (HoC and HoD) have a groundwater table greater than six feet below the surface throughout the year. Groundwater is presumed to flow to the south, generally following the topography of the site.

The project site and surrounding areas receive public water from United Water New York, which is proposed as the source of drinking water for this project. As public water serves the site and nearby properties, groundwater is not a significant issue for this application.

In terms of surface water, a seasonal stream feeds a small 0.91 -acre federally-regulated wetland located in the northwestern portion of the site, of which 0.56 acres are located on-site. The boundaries of this wetland were confirmed by the US Army Corps of Engineers in a jurisdictional determination received on June 29, 2001¹. A copy of the jurisdictional determination issued by the Corps is provided in Appendix B. The jurisdictional determination is considered valid by the Corps for five years. If approvals have not been received within the five year period, the jurisdictional determination may need to be reissued.

There are no natural or constructed surface water bodies, ponds, or basins on the project site.

Based on a review of Federal Emergency Management Agency (FEMA) maps, no flood hazard area exists on the project site (see Figure 3.2-4) of the DEIS.

¹ It is noted that the jurisdictional determination was issued after the January 9, 2001, U.S. Supreme Court decision, *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, which limited the scope of ACOE's regulatory permitting program as applied to isolated waters of the United States. No other statutory changes that would affect the wetland boundary determination have occurred since this decision.

Potential Impacts

There are no current proposals for use of groundwater resources for either potable or irrigation water supply. All water will be provided by connection to United Water New York's water supply system. There are no plans to use groundwater at this site. There will be no taking from the local aquifer. Recharge will be slightly affected by the installation of road, driveways and other impervious surfaces on the site. However, stormwater runoff collected from these surfaces will be directed into the stormwater control basins, which are designed for limited infiltration. Therefore, the project is not anticipated to adversely impact groundwater conditions in the area.

The proposed homes will be sewered. Therefore, the development is not projected to result in adverse groundwater-related impacts.

Construction of the proposed road to give access to the subdivision results in grading disturbance to approximately 4,300 square feet of the existing wetland. This minor impact, which is less than one tenth of an acre, is authorized by the US Army Corps of Engineer under the Nationwide Permit #39.

Proposed Mitigation Measures

A study of existing and proposed drainage conditions has been prepared for the proposed development is included as Appendix C. The project's design incorporates various stormwater controls to maintain pre-development rates of run-off.

With the introduction of pavement and buildings, vegetative clearing and stormwater control structures will result in a change to the project site's existing land cover that will alter drainage patterns from their current condition. Following construction, approximately 2.4 acres of the site would be covered with impervious surfaces.

Pursuant to Section 402 of the federal Clean Water Act, stormwater discharges from certain construction activities to waters of the United States are unlawful unless they are authorized by a national or state permit program. New York's State Pollutant Discharge Elimination System (SPDES) is a federally-approved program with permits issued in accordance with New York State Environmental Conservation Law. Discharges of pollutants to all other "Waters of New York State" such as groundwater are also unlawful unless they are authorized by a SPDES permit. Operators of construction activities that propose to disturb one acre or more require a SPDES permit. An applicant is required to prepare a Stormwater Pollution Prevention Plan (SWPPP) which is a plan for controlling runoff and pollutants from a site during and after construction. The SWPPP must be prepared in order to submit a Notice of Intent (NOI) and gain coverage under a SPDES general permit.

Design features have been incorporated into the subdivision plan to minimize off-site water quality impacts from the project, as per the requirements of the NYS DEC General Permit for Stormwater Discharges from Construction Activity (GP-02-01).

The introduction of pavement and impervious surfaces to the project site has the potential to increase pollutant contributions to local water resources, such as sand, silt, salts, oil and grease and to increase the rate of stormwater flow from the site. These potential impacts are being avoided or mitigated by structural stormwater controls and best management practices. An

infiltration basin will treat the stormwater runoff and will consist of a water quality diversion structure, forebay, an infiltration basin, and an overflow spillway.

All stormwater flowing through the developed portion of the site will be collected and directed to the stormwater management system. The system includes first flush treatment designed to capture and treat the initial stormwater runoff from developed areas. First flush capture results in the settlement of suspended solids and moderation of water temperature, thus improving the quality of stormwater exiting the site. The detained stormwater flows are treated through a subsurface infiltration system.

Sumps will be provided on all stormwater catch basins and stormwater inlet traps throughout the development. These sumps are designed to trap sand, grit and a portion of suspended solids contained in stormwater. Stormwater catch basins are proposed along the internal road and the stormwater inlet traps are proposed as shown on the subdivision plans.

Upon completion of the project, the basins and the internal roads will be offered for dedication to the Town. The long-term maintenance of stormwater drainage structures on the site will be the responsibility of the Town and will include annual inspections to ensure proper operation and good equipment condition. In addition, periodic removal of accumulated sediment in the drainage system will be necessary. A maintenance agreement allowing the Town access to maintain the infiltration basin will be made part of the final subdivision plat. The proposed project will generate tax revenues to the Town that can be used to fund these long-term maintenance responsibilities.

1.3.3 Biological Resources

The northeastern portion of the project site contains the remains of three former residential structures. The vegetation in this area consists of a mix of ornamental landscaping, unmaintained lawn areas and second growth woody vegetation around the property boundaries.

The remainder of the site is undeveloped except for the driveway and consists of successional woodlands, with primarily deciduous species. The wooded portion of the site comprises approximately 6.97 acres. A stream traverses the property from north to south in the western portion of the site. The stream flows through a three-foot diameter concrete culvert beneath the existing driveway. Associated with the stream is a small 0.91 acre riparian wooded wetland with hydrophytic vegetation, of which 0.56 acres are located on-site.

The wooded areas of the project site consists of second growth upland species. This community type supports a three strata system dominated by small to medium size trees (<12" to 18" diameter at 4.5 feet), shrubs, and a herbaceous layer.

The Natural Heritage Program's database identified historical findings for the following two state-listed plant species within the vicinity of the project site (refer to Appendix B):

- Thicket Sedge (*Carex abscondita*).
- Nodding Pogonia (*Triphora trianthophora*).

Neither plant was identified during on-site field surveys.

A variety of small terrestrial animals have been observed on the project site including rabbits, raccoons, squirrels, and chipmunks. Deer also utilize the property. The project site is also likely to provide habitat for a number of other local species including nocturnal species such as raccoon and opossum. The larger and dead trees on this site may also offer a cavity habitat for species such as owls, cavity nesting songbirds and small mammals.

The stream on the site is approximately four feet wide with a rocky bottom. The stream flows onto the site through an existing culvert from the adjacent northerly development. The stream does not support any fish species, but may support some small aquatic invertebrate species and amphibians.

According to the NYS DEC Natural Heritage Program, there are no rare or endangered wildlife species known to inhabit the site. On-site observations are consistent with this assessment.

Potential Impacts

The proposed development involves grading disturbance to approximately 8.5 acres of the project site. Of this area, approximately 2.8 acres is previously disturbed land associated with the three former residences on the site. The disturbance also involves 5.6 acres of wood area and less than 0.1 acres of wetland.

In general, as a project is developed, some species will relocate from the disturbed areas to undisturbed portions of the site or to similar habitats on nearby property. As habitat is eliminated, resident populations of some wildlife species will be reduced. In addition, the composition of the wildlife at the property will be altered somewhat following development, with increases in the populations of species with greater tolerance for human activity.

No protected plant species are known or expected to occur on the project site. Therefore, no impacts to rare or protected plant species are anticipated to result from the proposed action. The site is not known to provide habitat for any wildlife species listed as endangered or threatened by the New York State Department of Environmental Conservation. Therefore, no significant adverse impacts to protected wildlife species are anticipated. The project site may be acting as a wildlife corridor between the County park to the west of the site and the open space areas to the east of the site. Development of the project would diminish the overall width of the wildlife corridor although a natural area located along the border of the project site and the Forest Ridge development would remain.

Proposed Mitigation Measures

The following mitigation measures are proposed:

- Erosion and sediment controls will be utilized throughout the construction phase of the project until all disturbed area are fully developed or soils have been stabilized through vegetation plantings or other means. This will protect the existing wetland and areas downstream of the site.
- A stormwater management system would provide first flush water quality treatment and would meet the criteria of the New York State general permit for stormwater discharge from a construction activity. This would limit water quality impacts to receiving streams.

- Although not as valuable as natural undisturbed habitat, a mixture of ornamental and native landscaping plants are proposed which would provide some benefits, especially for wildlife species that can adapt to suburban environments. Many of these plants provide a certain degree of wildlife value such as food and nesting opportunities. Typical landscape plantings are likely to include those species included in Table 3.3-3 of the DEIS.

1.3.4 Aesthetic Resources

A visual assessment has been conducted in accordance with the NYSDEC guidance relating to assessing and mitigating visual impacts of proposed actions.

There were no significant aesthetic resources or public facilities of cultural importance identified within the site viewshed that would be sensitive to a change in the visual environment. However, there are two public locations from which the project may be visible that were assessed to determine whether the project is within their viewshed: the Mountainview Nature Park and the Long Path. The viewshed analysis determined that the site would not be visible from either location due to distance and intervening topography. The viewshed analysis was conducted through inspection of US Geological Survey topographic maps with the aid of 3D viewing computer software (Terrain Navigator Pro).

Photographs were taken from several vantage points in the viewshed area to document views of the site from Mountainview Avenue, Forest Ridge Road and the Mountainview condominium development. Line of sight profiles were also prepared.

Potential Impacts

The proposed project will result in the construction of 12 single family detached dwellings and associated subdivision roads. The view from Mountainview Avenue at its intersection with the new subdivision road will change from a view of woodlands to an entrance road with some of the residences visible. However, the slight curve in the road and existing trees along the stream corridor that would be preserved limit views into the site to a narrow corridor within 300 feet north and south of the site frontage on Mountainview Avenue. Given the fact that residential use is a predominate use in the site vicinity area, the changes in views at this location would be compatible to the surrounding uses.

Changes in views of the site will not result in a stark contrast in visual character as compared with the surrounding landscape, either in terms of type of use or in the make up of buildings and landscape treatment. The project as proposed will not dominate the view from any publicly accessible location.

Proposed Mitigation Measures

As no significant change to visual character will be evident from the perimeter of the site, from local roads, or from other publicly accessible locations, this project is not expected to have any adverse visual impact. No views from significant aesthetic resources have been identified that will be adversely affected by this project. The proposed development will be visually compatible with surrounding developed land. Streets trees within the subdivision will be reviewed by the Town's Architecture and Landscape Commission. The landscaping proposed as part of the subdivision plan will be reviewed by the Planning Board and will conform to the Town subdivision regulations

1.3.5 Construction-Related Impacts

Land use in the immediate vicinity of the project site is primarily vacant, multifamily residential, single-family attached residential, or single family residential. There are no major stationary sources of air pollutant emissions in the immediate vicinity of the project site. No sensitive receptors such as nursing homes or health care facilities were observed in the vicinity of the project site.

Air contaminants which are of concern with respect to construction-related projects include ozone, carbon monoxide, nitrogen oxides, and lead generated by construction traffic, as well as fugitive dust, or particulate matter. Presently, Rockland County is in a severe nonattainment area for 1-hour ozone, and is in a moderate nonattainment area for 8-hour ozone.

Potential Impacts

Construction of the project is expected to last for a duration of approximately 12-18 months. Construction activities on the project site would have a potential impact on the local air quality through generation of fugitive, i.e., airborne dust. Fugitive dust is generated during ground clearing and excavation activities. Throughout the construction period, earth moving and the passage of vehicles over temporary dirt roads and other exposed soil surfaces also generates fugitive dust, particularly during dry and windy conditions. On-site mitigation measures are proposed as part of the project during construction to limit the dispersal of fugitive dust.

Temporary impacts on local air quality are expected to occur during the construction phase of the project from mobile source emissions of construction vehicles and equipment. These air emissions will occur in those portions of the project site where construction activity is proposed. Construction-related air emissions will result primarily from the use of diesel fuel as a source of energy for construction vehicles and equipment. Some of the construction equipment may utilize gasoline as a source of fuel, but use of this equipment will be relatively low in comparison to diesel fuel consuming equipment and vehicles. Well maintained diesel engines are more fuel efficient than gasoline engines, however, they are a source of some air pollutants.

In terms of noise, daytime noise levels would increase in the immediate vicinity of the site during construction activities. Construction activities and operation of construction equipment have been the subject of numerous noise studies completed for various projects in the region. Table 3.5-2 of the DEIS presents maximum sound levels for the operation of diesel-powered equipment and activities at a range of receptor distances.

Noise levels due to construction activities will vary widely, depending on the phase of construction activities. Noise levels at the site property line are projected to temporarily range between 65 dBA and 90 dBA during construction, depending on the type and location of construction activity at a given time.

It is anticipated that nearby properties would experience temporary elevated noise levels at occasional periods during construction. This is a temporary, construction-related, unavoidable impact.

No odors are expected to be produced as a result of construction activities except for the paving of the subdivision road - pouring the macadam surface will result in short-term odors which cannot be avoided. .

Construction traffic would access the site via a stabilized construction entrance on Mountainview Avenue. Construction workers residing locally in the Clarkstown area would be expected to use local roads to access Mountainview Avenue and the site. Workers in the larger region, construction vehicles, and material deliveries would be expected to travel the New York State Thruway and/or Route 59 to access the southern end of Mountainview Avenue, traveling north along Mountainview Avenue to the project site.

Once construction machinery reaches the site, it is likely to remain on site until the completion of grading and excavation. The heaviest volume of construction traffic is expected to occur at the beginning of construction as site clearing and rough grading is conducted, and during the months that concrete and building materials are transported to the site. Construction material storage, equipment staging and soil stockpiling will occur on graded stabilized areas of the site. It may be expected that trucks will also be exporting excess cut from the construction site.

Proposed Mitigation Measures

The proposed mitigation measures described below are designed to meet NYS DEC guidelines for purposes of obtaining a SPDES general permit from this agency. The NYSDEC, the Planning Board and other regulatory agencies will review these mitigation measures to determine if they are appropriate as part of the SEQRA and subdivision application review. In accordance with the NYS DEC SPDES General Permit No. 02-01, the construction activities would be phased so that no more than five acres would be unstabilized at any time during the construction period. Limiting the amount of disturbed soils on the site reduces the potential for fugitive dust generation at the site.

Methods to control dust also include the use of mulch or other temporary covers on exposed soil areas, limiting the movement of trucks and construction equipment over exposed soil surfaces and covering haul trucks. During dry weather conditions spraying water on unpaved areas subject to construction vehicle traffic would control dust. Paved areas should also be kept clear of loose dirt that can be re-entrained into the air during vehicle passage. The use of stone tracking pads at the entrance to the site would reduce the tracking of soil onto adjacent roads. Haul vehicles will be covered to prevent fugitive dust. The following mitigations would be employed:

- Minimize the area of grading at any one time and stabilize exposed areas with mulch and seed as soon as practicable;
- Minimize vehicle movement over areas of exposed soil, and cover haul trucks transporting soil; and
- Spray unpaved areas subject to traffic with water to reduce dust generation;
- Construct truck vehicle tracking pads at the construction entrance to avoid the tracking of soil onto paved surfaces.

Although exhaust emissions from construction equipment is not as significant as fugitive dust generation, particulates from diesel exhaust emission should also be controlled through proper

tuning of the vehicles engine and maintenance of the air pollution controls. This would minimize additional contribution to site generated particulate emissions during construction.

In terms of mitigating potential construction-related noise impacts, the applicant would adhere to Chapter 205, Noise, of the Code of the Town of Clarkstown. Unnecessary sources of noise as they relate to construction activities would not be conducted during the time periods prohibited by the noise law. Generally, the time period during which noise from construction activities is prohibited are: during the week from Monday through Friday prior to 7:00 a.m. and after 8:00 p.m., on Saturdays prior to 8:00 a.m. and after 6:00 p.m., and on Sundays prior to 11:00 a.m. and after 5:00 p.m.

No mitigation measures are proposed to control potential odors associated with the paving of the subdivision roads.

The increase in construction-related vehicular traffic is a short-term, unavoidable impact, however, the construction of 12 single-family detached dwellings is not anticipated to have a significant impact on the local road network. The applicant will be required to adhere to the provisions Chapter 278, Vehicles and Traffic, of the Code of the Town of Clarkstown. This chapter establishes restriction on vehicle weights, traveling speeds, and parking within the Town and would limit potential impacts to Town roads.

1.3.6 Community Facilities and Services

Police Protection: The Clarkstown Police Department provides police protection services to properties within the 40 square miles that encompass the Town of Clarkstown, including the project site. The police department headquarters is located at 20 Maple Avenue, New City, approximately 7 miles northwest of the project site. Typical response time to the site would be approximately four minutes.

Fire Department: The proposed development is within Central Nyack Fire District and is served by the Central Nyack Fire Department which is a 100% volunteer fire department serving the Village of Nyack and points east generally to Route 303.

Ambulance and Health Services: The Nyack Volunteer Ambulance Corps or the Congers/Valley Cottage Volunteer Ambulance Corps provide emergency ambulance service to the project area. Average response time is between five and six minutes. The primary hospital serving the project area is Nyack Hospital located in Nyack.

Parks & Recreational Facilities: According to the Town of Clarkstown Parks Board and Recreation Commission, parkland in the Town of Clarkstown totals 570 acres which equates to a ratio of approximately 6.9 acres per 1,000 residents. This is well within the planning standards set forth by the National Parks and Recreation Association which recommends that 5 to 8 acres of parkland be provided per 1,000 residents.

The Long Path is a 330 mile hiking trail that currently runs from the George Washington Bridge in New York City to just west of the City of Albany. In Rockland County, the Long Path passes through a series of state and county parks before entering Harriman State Park. This trail is mostly off the public roads and provides recreation opportunities for town and county residents.

Library Services: The home library for residents of the proposed Kury Homes project would be the Nyack Library, which is part of the Ramapo Catskill Library System. In addition, residents of the Kury Homes project will have access to the following libraries: New City Library, Valley Cottage Library, West Nyack Library, Nanuet Library and the Nyack Library. These libraries are part of the Ramapo Catskill Library System, and as such, have interlibrary loan privileges with all libraries in the system. These libraries have a combined book stock of over 500,000 volumes and a combined circulation of 1.3 million volumes per year.

Potential Impacts

Demographic multipliers, published in the Urban Land Institute's (ULI) Development Impact Assessment Handbook, projects approximately 3.63 persons will reside in each of the 12, four bedroom single family units. The project would introduce 44 persons to the Town of Clarkstown's population. Based on 2000 US Census Bureau statistics, the average family household in the Town of Clarkstown had 3.27 persons. Since the ULI multipliers are specific to bedroom count and since use of the multipliers would present a more conservative analysis, the ULI multipliers are the basis of demographic projections in this DEIS.

Police: Chief of Police, William Sherwood, of the Town of Clarkstown (letter dated October 31, 2003) indicated that the addition of 12 dwellings at the Kury Homes site would not hinder the ability to provide these new residents with the same professional standard of police service afforded to existing residents. The projected increase of 44 persons has the potential to increase police staffing needs less than one tenth of a staff person and has no impact on the police personnel ratio of 2.06 personnel per 1,000 residents.

Fire: The fire department is currently staffed with 150 volunteers serving a population of about 82,082 persons or 1.83 fire department members per 1,000 population. The proposed development will reduce the fire department personnel ratio to 1.82 per 1,000 population, a change of 0.01 members per 1,000 population. A letter requesting comments on the proposed project was sent to the Central Nyack Fire Department on October 22, 2003. No written response has been received. This letter is contained in Appendix B, Correspondence.

Ambulance and Health Services: The projected 44 residents would increase EMS calls by less than 2 calls annually. The projected population would increase the demand for hospital beds by less than a quarter of 1 bed. Letters requesting comments on the proposed project were sent to the Nyack Volunteer Ambulance Corp and the Congers Volunteer Ambulance Corp. on October 22, 2003, no response has been received. These letters are contained in Appendix B, Correspondence.

Parks and Recreation: The proposed subdivision will increase demand for recreation facilities. The ratio of open space/parkland to residents would remain approximately 6.9 acres for every 1,000 residents. No connection is proposed to the Long Path. Trail connections exist within the Mountainview condominium development and just south of the Forest Ridge development, thus trail access is already provided within the project vicinity.

A letter from Charles F. Connington, Superintendent of Recreation and Parks, dated October 31, 2003, contained in Appendix A, Correspondence, states, "The town can easily absorb (up to) another 51 residents into our parks and recreation system, and we look forward to their participation."

The project applicant proposes to pay a one-time fee, in lieu of recreational land as determined by the Town of Clarkstown. Based on the 2006 fee of \$7,250 per building lot, \$65,250 for nine "additional" residential building lots would be provided. This amount is subject to change, based on any Town fee schedule changes that may occur over the course of the SEQRA review. No further mitigation is proposed. In addition, the project will generate property tax revenues to the Town which may also be used for recreational purposes.

Libraries and Cultural Facilities: The increased population from Kury Homes will not alter the ratio of books per person in the Town of Clarkstown. The additional population would place minimal demand on cultural facilities.

Schools: The project site is served by the Nyack Union Free School District. Ten (10) students are projected to live in the Kury Homes subdivision. The Nyack Union Free School District expressed that the multiplier used to generate the number of school children was acceptable.² The project would generate \$197,972 annually in property tax revenues to the school district. As costs to the school district would be \$162,980 annually, the project would result in an annual surplus of \$34,992. A conversation with the Assistant Superintendent of Business for the Nyack School District indicates the new students at Kury Homes should not present a capacity problem for the school district. A letter requesting comments on the proposed project was sent to the Nyack Union Free School District on October 22, 2003. No written response has been received.

Mitigation Measures

No mitigation measures are proposed.

1.3.7 Utilities

Potential Impacts

Water Supply: The project site is served by United Water of New York and is located in Central Nyack WD 013. Water supply for proposed Kury Homes subdivision will be provided by United Water New York. Based upon projections provided by the project engineer, the 12 four-bedroom homes are projected to use a total of 5,280 gallons per day.

Electric, Gas and Oil: Electricity and gas is provided to the project area by Orange & Rockland Utilities. Local oil distribution services are provided by a variety of local oil companies. The 12 single family residences at Kury Homes are anticipated to be heated either with home heating oil, electricity, or natural gas. Based on telephone communication on December 15, 2004, the individual residences are projected to require up to 850 kilowatt hours of electricity per month in the summer and an average of 150 million cubic feet of gas per month.

² E-mail record from Carleen Milsaps, Assistant Superintendent of Business for the Nyack Central School District. A copy of this e-mail, dated October 20, 2005 is included in Appendix B, Correspondence.

Orange & Rockland Utilities does not anticipate any problems accommodating the projected electrical or gas demands created by the proposed development. The design and plans for the development will take into account the New York State Energy Code. All utility lines will be underground and any connections will meet the Town Code and industry specifications

Communications: Telephone service is provided by a variety of companies including Verizon, AT&T, Optimum Voice. Cellular telephone phone service is provided by Verizon, Cingular, and Sprint. Cable television service is provided by Cablevision. Satellite television services are provided by Direct TV or Omnivision TV. There are a significant number of competing providers for local and long distance telephone service, cellular telephone service, and cable and satellite television distribution such that sufficient service is anticipated to meet the needs of 12 single family homes. .

Solid Waste Management: Refuse pick up is provided by private carriers contracted by the Town of Clarkstown for single family homes. Town refuse fees of approximately \$445 per household per year are collected as part of the municipal taxes. The development is expected to generate approximately 2.3 tons per month of solid waste. This represents less than 1/10 of a percent increase in solid waste to the Town of Clarkstown.

Wastewater: The project site is located within the Rockland County Sewer District #1. The project will connect to an existing sewer main which runs along Mountainview Avenue. The sewer system design reflects the required or recommended standards set forth in the "Ten States" standards. A total of 5,280 gallons per day of sewage is projected to be generated from the proposed development. This represents approximately 0.1 percent of the available capacity of the district's wastewater plant. Thus, no significant impact to wastewater facilities is anticipated.

Mitigation Measures

No mitigation measures are proposed. It is expected that the project will generate sufficient tax revenues to the applicable taxing jurisdictions to offset the demand placed upon community services.

1.3.8 Historic and Archaeological Resources

In response to the New York State Office of Parks, Recreation and Historic Preservation comments, a Phase IA and 1B investigation was conducted by Sheffield Archaeological Consultants. The Phase 1A and 1B Cultural Resources Investigation of the Kury Homes Development Property is included as Appendix F of this DEIS.

The results of the Phase 1A and 1B survey conclude that no archaeological resources are present on the property. The project site does not have the potential for containing evidence of prehistoric occupation or use.

While several structures and ruins were present within the property at the time the survey was conducted, including a cottage, garage, garden shed, an equipment and animal shed, and a Cape Cod style and ranch-style home, the Phase 1A and 1B survey concluded that the structures lacked research potential and are not architecturally or historically significant. The structures did not meet the required criteria of eligibility for nomination to the National Register of Historic Places. Since preparation of the Phase 1A and 1B analysis, these structures have been demolished.

The proposed residential subdivision is not anticipated to have any impact on historic or archeological resources based on the results of the Phase 1A and 1B survey .

1.3 Summary of Alternatives

SEQRA requires that the DEIS include a description and evaluation of the range of reasonable alternatives to the proposed action which are feasible, considering the objectives and capabilities of the applicant. The following alternatives were included in the adopted scoping outline. A table comparing impacts is provided at the end of Section 4.0 of the DEIS.

- No Action
- Alternative Subdivision Plan - Standard Alternate Layout
- Alternative Subdivision Plan - Average Density Layout

1.4 Listing of Permits and Approvals Required

Federal

U.S. Army Corps of Engineers - Nationwide Permit

New York State

NYSDEC SPDES Permit for General Construction Activities

Rockland County

Rockland County Planning Board - 239 GML Referral
Rockland County Health Department - Realty Subdivision approval
Rockland County Drainage Agency

Town of Clarkstown

Clarkstown Town Board - stream alteration permit (Chapter 128 of the Town Code)
Clarkstown Planning Board - subdivision plan approval
Clarkstown Highway Superintendent - road opening permit
Clarkstown Department of Environmental Control - sewer permit

1.5 List of Involved and Interested Agencies for DEIS Distribution

The following organizations have been identified as involved and interested agencies (see letter from Clarkstown Department of Environmental Control, dated August 9, 2001, included in Appendix A):

U.S. Army Corps of Engineers
New York State Department of Environmental Conservation, Region III
Rockland County Department of Planning
Rockland County Health Department
Rockland County Sewer District No. 1
Rockland County Drainage Agency
Clarkstown Town Board
Clarkstown Planning Board
Clarkstown Architecture and Landscape Commission
Clarkstown Traffic Advisory Board
Clarkstown Department of Environmental Control
Clarkstown Highway Department
Clarkstown Building Department
Clarkstown Planning Consultant
Clarkstown Town Attorney
Atzl, Scatassa, & Zigler, P.C.

2.0 DESCRIPTION OF THE PROPOSED ACTION

2.1 Regional and Town Location

This Draft Environmental Impact Statement (DEIS) has been prepared in response to a Positive Declaration issued by the Town of Clarkstown Planning Board in connection with a residential subdivision application from Price Construction, LLC, the "project applicant" and property owners of the site located on Mountainview Avenue in the unincorporated area of Town of Clarkstown, Rockland County, New York.

This DEIS has been prepared to evaluate potential environmental impacts associated with the proposed subdivision. The DEIS has been prepared in accordance with the State Environmental Quality Review Act (SEQRA) and Part 617 of the regulations implementing SEQRA. The content of this DEIS was established by a scoping outline developed by the Town of Clarkstown Planning Board, acting as the SEQRA lead agency, in coordination with all other involved agencies. The Planning Board adopted a scoping outline for the DEIS at a Planning Board meeting on December 4, 2002. The adopted scoping outline is included as Appendix A of this DEIS.

The project site is located in the unincorporated area of the Town of Clarkstown, Rockland County, New York. Rockland County is located on the west side of the Hudson River in the lower Hudson Valley region (see Figure 2-1). The Town of Clarkstown is located in the central and easterly portion of the County. Clarkstown adjoins the Town of Orangetown to the south, the Town of Haverstraw to the north, and the Town of Ramapo to the west. The New York State Thruway (I-87/I-287) traverses the southern portion of the Town in an east-west direction.

The project site is approximately one-half mile north of Interchange 11 of the New York State Thruway. The easterly property line of the project site is approximately 600 feet west of the Town's boundary with the Village of Upper Nyack.

2.2 Description of Proposed Action

The project site is identified on the Town of Clarkstown tax maps as Section 59.20, Block 1, Lots 3, 4, and 5, and is approximately 10.3 acres in size. There were formerly three single-family residences on the project site which have been demolished. The applicant, Kury Homes, Inc., intends to subdivide the project site, install the required infrastructure, and develop single family residential dwellings in response to a strong housing market and continued demand for high quality housing in the Town of Clarkstown and Rockland County. This project is expected to support "estate-style" housing developed in conformity with the Town's Comprehensive Plan adopted in 1999, and the Building Zone Ordinance of the Town of Clarkstown (the "Zoning Local Law") which intended that this area be developed for medium density residential use. The proposed project would create a high-quality residential neighborhood for persons seeking to live in the unincorporated area of the Town of Clarkstown and with convenient access to major transportation routes such as the New York State Thruway. Presently, there are single-family detached dwellings on the west side of Mountainview Avenue across from the project site.

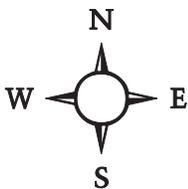
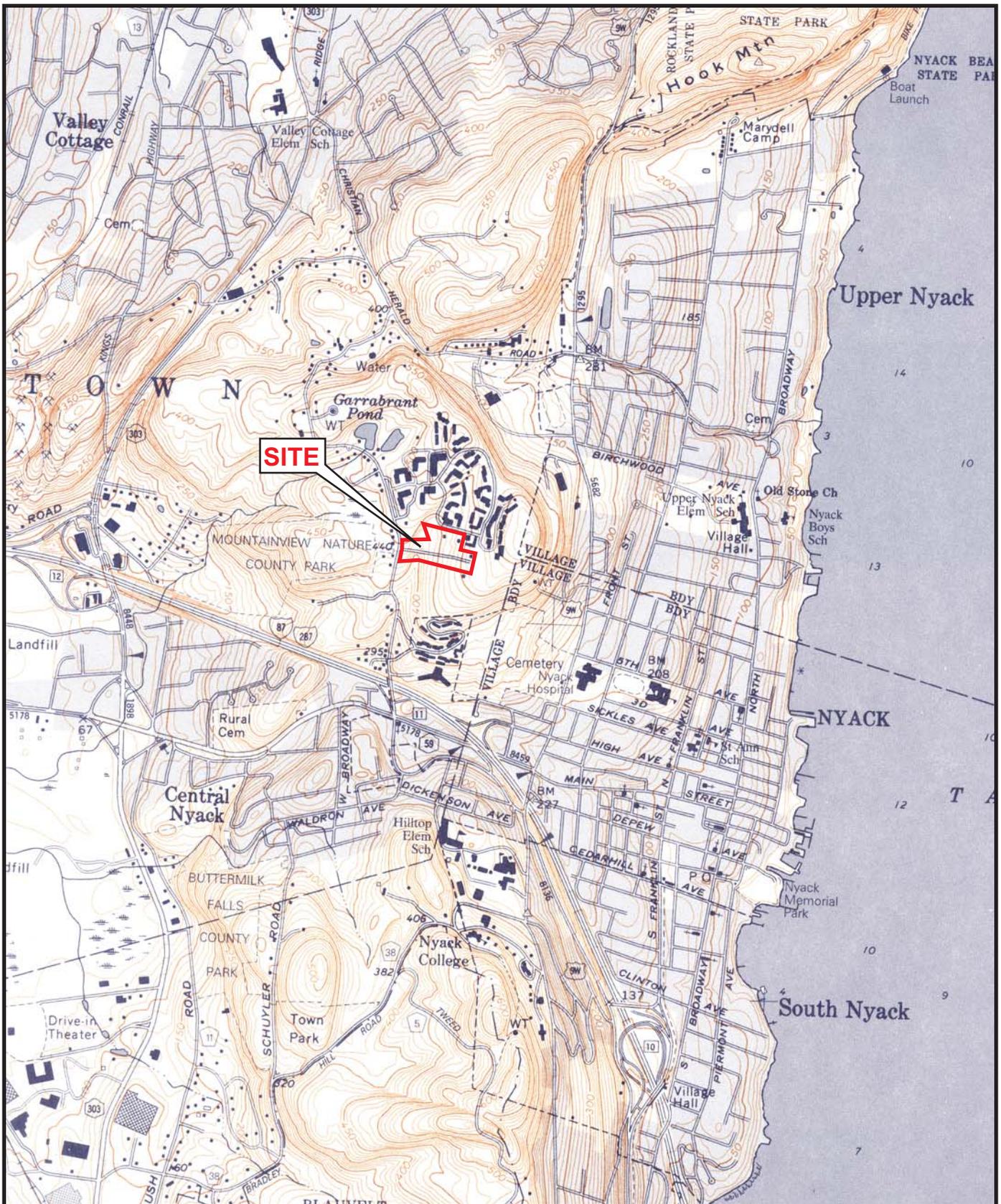


Figure 2-1: Project Location Map
Kury Homes

Town of Clarkstown, Rockland County, New York
Base Map: USGS Topographic Map, Nyack Quad
Scale: 1 inch = 2,000 feet

The project applicant proposes to subdivide and develop approximately 10.3 acres of vacant land into 12 building lots accessed by two roads both ending in cul-de-sacs. The road giving access to Mountainview Avenue is approximately 935 feet as measured from the property line along Mountainview Avenue to the farthest easterly point along the curb of the cul-de-sac. The shorter cul-de-sac is approximately 330 feet long as measured from the centerline of the intersection of main subdivision road to the farthest edge of the cul-de-sac's curb. The road's would be offered for dedication to the Town of Clarkstown. The minimum lot size would be 22,500 square feet after subtracting from the minimum lot area environmental constraints as per the requirements of Section 290-21.D. of the zoning law.

The subdivision's design includes an infiltration basin and dry swales to handle any increase in the rate of stormwater runoff emanating from the post-development project site. The infiltration basin will be on its own lot, however, the dry swales would be located on portions of Lots 11 and 12. An easement running to the benefit of the Town will be created on these lots for purposes of accessing and maintaining the dry swales. A maintenance agreement allowing the Town access to maintain the infiltration basin will be made part of the final subdivision plat.

Approximately 8.5 of the 10.3 acre site would be graded to accommodate the 12 single-family residences, proposed roads, and lawns. Less than one-tenth of an acre of Army Corps of Engineer (ACOE) regulated wetlands would be disturbed and is subject to a Nationwide Permit No. 39.

The applicant proposes to construct 12, four-bedroom single-family detached residences approximately 4,000 square feet in gross floor area to be connected to existing public water and public sewer service. The applicant estimates that the selling price for each home would be in excess of \$850,000. It is estimated that an annual income of approximately \$200,000 to \$275,000 would be required to purchase a home in this price range. According to the 2000 US Census Bureau estimates, over eight percent of the current residents of the Town of Clarkstown have an annual income of more than \$200,000. Similarly, more than eight percent of the residents of Rockland County as a whole earn more than \$200,000 per year.

2.3 Description of Existing Site Conditions

The proposed project is located in the southeastern portion of the Town of Clarkstown, Rockland County, New York. The property has approximately 306 feet of road frontage on Mountainview Avenue, a Town-maintained road. The regional setting is illustrated in Figure 2-1, and the proposed subdivision is shown in Figure 2-2. The project site is located approximately 500 feet from the Town's boundary with the incorporated Village of Nyack and approximately 600 feet from the Town's boundary with the incorporated Village of Upper Nyack.

The site is currently vacant but was formerly developed with three single-family dwellings that have been demolished. An existing macadam drive giving access to the former residences still exists. An existing seasonal stream crosses the westerly portion of the project site in a north-south direction. The stream drains in a southerly direction. A total of 0.56 acres of freshwater wetlands are located on the project site and are associated with an on-site stream. The 0.56 acres are part of a larger wetland that extends off-site and totals 0.91 acres; the entire wetland is regulated by the Army Corps of Engineers ("ACOE"). Approximately 6.97 acres of the site is wooded, and 2.77 acres are grass/disturbed areas associated with the former residences.

Two existing roads intersect with Mountainview Avenue approximately 400 feet on either side of the project site: Sierra Vista Road to the north, and Forest Ridge Road to the south. Sierra Vista Road provides access to Mountainview, a large multifamily condominium development. To the south, Forest Ridge Road gives access to a development of the same name, consisting of 50 newly constructed single-family attached (townhome) dwellings.

The project site is irregular in shape, and is located on the westerly slope of a ridge which rises approximately 70 feet above Mountainview Avenue in the vicinity of the project site.

The entire site is zoned R-22. In the project vicinity, the R-22 zoning district applies to the project site, and to a corridor of properties most with frontage on the west side of Mountainview Avenue. Existing land uses within the R-22 zone in which the project site is located consist primarily of single family detached dwellings. Land immediately to the north of the project site is zoned Professional Office ("PO") and Multi-Family, 14-18 units/acre ("MF-3"). Immediately to the south and east of the project site, land is zoned Multi-Family, 4-8 units/acre ("MF-1").

The Mountainview multifamily development is zoned MF-3. The Forest Ridge development as well as several Town-owned properties in the project vicinity is zoned MF-1. The PO zone contains one professional office building directly abutting the project site, and a single-family residence.

2.4 Structures and Site Improvements

Figure 2-2 illustrates the layout of the proposed lots, roads, home sites and individual driveways. The proposed layout is also illustrated in the full size Preliminary Plat drawings submitted with the DEIS, entitled Standard Layout. Each building lot has a driveway providing access to the proposed new Town road. Each residence will be designed with a garage that would accommodate at least two vehicles and would meet required parking standards for single-family detached dwellings.

Drinking water for each residence is proposed to be provided by a connection to the existing water main in Mountainview Avenue and supplied by United Water New York.

A sewer line serving the development is proposed to connect with an existing sewer line along Mountainview Avenue. The project is located within a Clarkstown sewer district and wastewater would be treated at the wastewater plant operated by the Rockland County Sewer District.

Due to the project site's small size, and the relatively limited demand placed on recreational facilities by the 12-unit subdivision, the applicant does not propose to set aside an area for recreation on-site. The applicant proposes to pay a fee in lieu of recreation land as per Section 254-24 of the Town's subdivision regulations. The project does not include any connection to the Long Path located to the east of the project site. Two trail connections already exist: one is located to the south of the Forest Ridge development, and another access point is located from the Mountainview condominium development to the north. Thus, it is the applicant's opinion that there are sufficient trail connections in the project vicinity to the Long Path.

If requested by the Planning Board, the applicant would establish a conservation easement or place a deed restriction on proposed lots 1, 2, and 3 in order to preserve the on-site wetlands. The clear cutting of trees on the project site must be approved by the Planning Board in conjunction with the approval of the subdivision plan.

The project would result in grading disturbance to approximately 8.5 acres of the project site. The limits of the grading disturbance are shown in Figure 3.1-2 in Section 3.1, Geologic Resources, of this DEIS, and on the preliminary subdivision plan attached to this document. The areas of disturbance have been calculated by the engineers for this project, Atzl, Scatassa, and Zigler, P.C. Any areas not covered by building's, driveways, or roads would be re-vegetated and landscaped.

Drawing Number 6, Standard Layout Cut & Fill Plan, provides a table of bulk requirements for each proposed lot, which is shown below as Table 2-1, and demonstrates that environmentally-constrained areas were deducted where applicable. Environmentally constrained areas include: freshwater wetlands, 100-year flood plains, utility easements, rock outcrops, and steep slopes. Per Section 290-21 of the Zoning Regulations, not more than 50% of the land area in a lot with impeded areas may be counted as part of the lot area. Environmental constraints result in impeded areas on Lots 1,2,3,11, and 12. Each of these lots meets the minimum required 22,500 square foot building area after appropriate deductions have been made for impeded areas. The amount of impeded area in each lot is shown in Table 2-1. The remaining lots do not contain any impeded areas. Because the proposed subdivision would utilize existing sewer and water service, the project would not involve site disturbance associated with individual septic fields.

Project Description
March 23, 2006

Table 2-1 Environmentally Constrained Areas													
Zone R-22	Required	Lot 1	Lot 2	Lot 3	Lot 4	Lot 5	Lot 6	Lot 7	Lot 8	Lot 9	Lot 10	Lot 11	Lot 12
Minimum Lot area	22,500 sf	28,887sf	54,007sf	30,306sf	30,600sf	22,925sf	22,673sf	28,510sf	27,495sf	27,998sf	24,000sf	35,824sf	29,700sf
*Total Impeded Lot Area	0 sf	5,146 sf	10,200 sf	3,150 sf	0 sf	0 sf	0 sf	0 sf	0 sf	0 sf	0 sf	568 sf	885 sf
**Area not counted in net area	0 sf	0 sf	0 sf	0 sf	0 sf	0 sf	0 sf	0 sf	0 sf	0 sf	0 sf	0 sf	0 sf
Net Area	22,500 sf	23,751sf	43,807sf	27,156sf	30,600sf	22,925sf	22,673sf	28,510sf	27,495sf	27,998sf	24,000sf	35,256sf	28,815sf
Minimum Lot Width	125 ft	1,047 ft	1,021 ft	183 ft	224 ft	209 ft	263 ft	98 ft	126 ft	323 ft	230 ft	205 ft	791 ft
Front Setback	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft
Side Setback	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft	20 ft
Total Side Setback	50 ft	50 ft	50 ft	50 ft	50 ft	50 ft	50 ft	50 ft	50 ft	50 ft	50 ft	50 ft	50 ft
Minimum Rear Setback	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft	35 ft
Maximum Floor Area Ratio	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Source: Atzl, Scatazza & Zigler - Standard Layout, Cut & Fill Plan, January 20, 2005.													
sf = square feet, ft = feet													
* Impeded area includes wetlands, 100 year flood plain per F.E.M.A., Overhead Utility Easements, Rock Outcrops and slopes between 30% and 50%.													
** Note: area within right of ways and slopes of 51% or more do not count in net area.													

Table 2-2 summarizes the dimensional (bulk) requirements applicable to the subdivided lots. The proposed project satisfies all of the applicable zoning dimensional requirements and does not require any variances. Single-family detached dwellings are permitted uses in the R-22 district.

Table 2-2 Dimensional Requirements for Single-Family Detached Dwellings lots in the R-22 Zoning District	
Feature	Required
Minimum Lot Area	22,500 square feet
Minimum Lot Width	125 feet
Minimum Front Yard	35 feet
Minimum Side Yard	20 feet
Minimum Total Side Yard	50 feet
Minimum Rear Yard	35 feet
Maximum Floor Area Ratio	.2
Maximum Building Height	10" per foot from lot line
Source: Town of Clarkstown Zoning Local Law, Chapter 290 of the Code of the Town of Clarkstown, 2005.	

The preliminary subdivision plan shows the extent of grading proposed to accomplish development of the road, driveways and houses. The project would result in 67,100 cubic yards of cut and 45,400 cubic yards of fill, resulting in approximately 21,700 cubic yards of excess cut and would require that soil be transported off the project site.

The preliminary subdivision plan also includes proposed drainage facilities necessary to attenuate the increase in stormwater runoff resulting from the development. Facilities include a water quality infiltration basin, dry swales, and catch basins. These facilities are designed to be low maintenance. The applicant proposes to dedicate the stormwater facilities to the Town of Clarkstown and will provide the necessary easements to allow the Town access to the stormwater facilities. A description of the proposed stormwater management plan is provided in Section 3.2 of the DEIS and in the Stormwater Management Report included as Appendix C.

The new subdivision road will be constructed by the applicant and built to Town of Clarkstown road specifications and would be offered for dedication to the Town. Upon acceptance of the offer of dedication, the Town's highway department would be responsible for maintaining the road. Proposed road profiles are illustrated on Drawing No. 5 of the subdivision plan attached to the DEIS. Sight Distance from the proposed access road is approximately 275 feet looking to the north and 425 feet looking to the south. This meets the American Association of State Highway Transportation Officials (AASHTO) recommended stopping sight distance for up to 35 miles per hour.

Fire hydrants would be installed along the subdivision road. The hydrants are generally spaced between 400 and 500 feet apart.

The project is scheduled to be fully built in 2007. The road and residences are expected to be built over a 12 to 18 month period after all approvals and permits are received.

The following describes the general sequence of activities that would occur to construct the project. A more detailed description is provided in Section 3.1 of the DEIS.

Construction Sequence

1. Install temporary erosion controls
2. Remove trees and stumps
3. Strip and stockpile topsoil
4. Rough grading
5. Install utilities and stormwater facilities
6. Stabilize disturbed areas with paving or permanent erosion control measures
7. Construct residences

Steps 1 through 6 involve construction of the roads and stormwater management facilities and would be completed prior to construction of the individual lots. The lots would then follow a similar sequence of construction: install erosion controls, tree removal, strip and store topsoil, grading, construction of utilities and buildings, and permanent stabilization.

The project will be constructed in phases to limit disturbance on the site to no more than 5 acres at any one time. Phase One will consist of building the infrastructure for the roads and drainage facilities - these areas will be stabilized as per the erosion control measures in advance of constructing the dwellings. Construction of the residences will then be divided into two additional phases - one phase for residences on the north side of the main access road, and one phase for residences on the south side of the access road.

Drawing No. 4 of the subdivision plan depicts the various measures proposed to provide for temporary and permanent stabilization of disturbed areas in accordance with New York State Department of Environmental Conservation best management practices ("BMPS").

As required by the Town's subdivision regulations, the applicant will be required to post a bond or other monetary guarantee to ensure the satisfactory completion of all required improvements.

3.1 Geologic Resources

3.1.1 Soils

3.1.1.1 Existing Conditions

The project site is located in the eastern section of the New England physiographic province, more specifically the Triassic Lowlands, which is characterized topographically by broad gentle valleys and a moderate pattern of ridges. Local and regional geology has been mapped by the State of New York and is depicted on the Geologic Map of New York Lower Hudson Sheet (reprinted 1995). The bedrock identified on and near the project site is Palisade Diabase located in the Newark Group.

According to the Surficial Geologic Map of New York, Lower Hudson Sheet (1989), the surficial deposits in the area of the project site consist of glacial tills. Tills are described as variable in texture (e.g. clay, silt-clay, boulder clay), that were deposited adjacent to melting glaciers. The thickness of the till material, or depth to bedrock on the property is not known.

On-site soils have been mapped and described by the USDA Soil Conservation Service (SCS) in the Soil Survey of Rockland County, New York (Atlas Sheet 19), issued in 1990. Generally, the soils consist of Holyoke-Rock outcrop types, which are described as shallow, well-drained to excessively drained soils. As observed in figures provided by the project engineers, a wetland area is present in Holyoke-Rock outcrop soils in the western portion of the site - this soil type is not identified as a hydric soil by the USDA SCS. However, a wetland has formed in these soils due to its location in a topographical depression, fed by a stream. The underlying bedrock, which limits permeability, has resulted in the formation of the on-site wetlands.

The soil mapping units found on the site, using the soil classifications and descriptions of the USDA SCS, are summarized below and depicted in Figure 3.1-1.

- Holyoke-Rock outcrop complex rolling (HoC) This soil unit is located on bedrock-controlled uplands. It consists of shallow, well drained or somewhat excessively drained Holyoke soils and areas of exposed bedrock. The exposed areas of bedrock commonly appear as ledges. This unit consists of 60 percent Holyoke soils, 15 percent rock outcrop, and 25 percent other soils. Slopes range from 3 to 15 percent. The depth of the Holyoke soils can be 16 inches thick and bedrock can be found between 10 to 20 inches below ground surface. The water table is found more than 6 feet below ground surface. The permeability of this soil type is characterized as moderate throughout. This soil type is found on the majority of the project site but more specifically on the eastern, central and western portions, covering 8.03 acres of the Property. See Figure 3.1-1 - Soil Survey Map.
- Holyoke-Rock outcrop complex, hilly (HoD) This soil unit is located on ridges and side slopes of bedrock-controlled uplands. It consists of shallow, well drained or somewhat excessively drained Holyoke soils and areas of exposed bedrock. The exposed areas of bedrock commonly appear as ledges. This unit consists of 55 percent Holyoke soils, 20 percent rock outcrop, and 25 percent other soils. The depth of the Holyoke soils can be 16 inches thick and bedrock can be found between 10 to 20 inches below ground surface. The water table is



Figure 3.1-1: Soil Survey Map

Kury Homes

Town of Clarkstown, Rockland County, New York

Source: Atzl, Scatassa & Zigler, P.C., March 1, 2004

Scale: 1 inch = 100 feet



found more than 6 feet below ground surface. The permeability of this soil type is characterized as moderate throughout. This soil type is mapped in a band on the western portion, covering 2.26 acres of the site, see Figure 3.1-1 - Soil Survey Map.

On-site soils have been formed from various types of glacial deposits. Soils which cover the entire portion of the site are Holyoke-Rock outcrop types which are uniform in drainage class (well drained to somewhat excessively well drained). The water table is primarily found more than 6 feet below ground surface in the Holyoke-Rock outcrop soils, possibly found in the bedrock.

Suitability of the Soils for Construction

The Soil Survey of Rockland County describes the different soil units and features which may restrict their use for building development. A list of soil characteristics is provided in Table 3.1-1. Development limitations are considered: *slight*, where soil properties are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate*, if soil properties are less favorable for the indicated use and special planning, design or maintenance may be needed to overcome or minimize the limitations; and *severe*, if soil properties result in the need to implement special design measures to construct a structure.

Table 3.1-1 Soil Characteristics and Limitations							
Soil Series	Hydrologic Group ¹	Permeability (in./hr.)	Erosion Factor	Potential Limitations for:			
				K ²	Local Roads and Streets	Dwellings w/ basements	Dwellings w/o basements
Holyoke-Rock Outcrop, rolling (HoC)	C/D	0.6-2.0 (0-16" deep)	0.20-0.43	Severe: depth to rock.	Severe: depth to rock.	Severe: depth to rock.	Severe: thin layer.
Holyoke-Rock outcrop, hilly (HoD)	C/D	0.6-2.0 (0-16" deep)	0.20-0.43	Severe: depth to rock, slope.	Severe: depth to rock, slope.	Severe: slope, depth to rock.	Severe: slope, thin layer.

¹ Hydrologic groups are used to estimate runoff from precipitation; they range from high infiltration (A) to low infiltration (D).
² Erosion Factor K indicates susceptibility to sheet and rill erosion by water measured in tons/acre/year. K values range from 0.05 to 0.69. Higher values indicate greater susceptibility
 Source: Soil Survey of Rockland County, New York, USDA SCS.

As noted in Table 3.1-1, the SCS identifies these soils as possessing potential limitations for development of roads, buildings, excavations, and lawns and landscaped areas due to a shallow depth to bedrock and in some areas, steep slopes. The presence of these constraints does not mean the land is undevelopable nor are they a rating of construction potential. The ratings reflect the difficulty and relative costs of corrective measures that may be necessary (e.g. erosion controls, footing drains or other drainage improvements) for development. The limiting characteristics of these soils must be overcome by careful project planning, design and management. Measures to overcome any limitations are provided in Section 3.1.1.2 Potential Impacts.

Due to the potential presence of bedrock, the applicant dug six (6) on-site deep test holes to determine the depth to bedrock. Based on the results of the tests, depth to bedrock is approximately 12 feet and greater on the project site.

3.1.1.2 Potential Impacts

All of the proposed development will occur in areas of Holyoke-Rock outcrop since the only soil type mapped on the project site is Holyoke-Rock outcrop. The majority of disturbance, 7.2 acres or 90 percent of the HoC soils on-site, will be disturbed which will result in less slope impact than development within HoD soils. Approximately 1.4 acres of HoD soils or 62 percent of the HoD soils located on the project site, will be disturbed.

Of the 10.3 acres project site, 8.5 acres, or 82.5 percent of the site, would be disturbed. Approximately 1.8 acres, or 17.5 percent of the site, will remain undisturbed. These undisturbed areas are located at the perimeter of the site and adjacent to the wetlands in the western portion of the site.

Grading is required to build the access road, install site utilities, prepare level areas for homes on individual lots, and to create an infiltration basin in the western portion of the project site. A majority of the land is proposed to be disturbed and graded due to the proposed size of homes relative to the size of the individual lots. The proposed homes, which are estimated to be approximately 4,000 square feet in gross floor area, are permitted to be 4,500 square feet in gross floor area based on a minimum lot size of 22,500 square feet, as the maximum floor area ratio permitted in the R-22 zone is 0.2. Note that the home sites depicted in the plan are approximately 45 feet in width by 70 feet in length in order to represent a conservative analysis of the potential maximum size of a building's footprint. Proposed grading is shown in Figure 3.1-2 - Site Grading Plan.

Based upon engineering estimates, a total of approximately 67,100 cubic yards of material will be cut and 45,400 cubic yards will be filled. The balance, or 21,700 cubic yards, will be removed from the site. This is a preliminary estimate based upon the preliminary grading plan and information provided by the engineers. As shown in Figure 3.1-3, the bulk of the earth cuts would be located in the area of the access road's intersection with Mountainview Avenue, Lots 1 and 12, and at the rear of the property in the vicinity of Lots 4 through 10. Fill would occur primarily in the central portion of the site, in the vicinity of Lots 2, 3, 10, 11, and 12, as well as to establish grades along portions of the main access road. Grading is also required to create the infiltration basin located in the western section of the project site. Excess material will be transported off-site.

Potential Soil Erosion

As a result of soil disturbance and vegetation removal, there is an increased potential for siltation to occur in areas downgradient of the subject site. The control of stormwater runoff during construction will be important to minimize construction-related soil erosion and sediment impacts especially downstream of the project site. With proper construction, installation and maintenance, soil erosion control measures will minimize potential off-site impacts.

Areas most susceptible to erosion are areas of the site with slopes 15 percent and greater. Topography and slopes are described in Section 3.1.2 below.



Figure 3.1-2: Site Grading Map

Kury Homes

Town of Clarkstown, Rockland County, New York

Source: Atzl, Scatassa & Zigler, P.C., March 1, 2004

Scale: 1 inch = 100 feet





Figure 3.1-3: Cut & Fill Map

Kury Homes

Town of Clarkstown, Rockland County, New York

Source: Atzl, Scatassa & Zigler, P.C., March 1, 2004

Scale: 1 inch = 100 feet



The potential for soil erosion and sedimentation will be minimized during the project's construction by adhering to the Erosion Control Plan, as described below in Section 3.1.1.3 below.

3.1.1.3 Proposed Mitigation Measures

The greatest potential impact associated with this project relative to soil disturbance would be from erosion and sedimentation during construction. An Erosion Control Plan has been prepared by the project engineers and is provided in the set of submitted subdivision plans. The primary objective of the plan is to reduce soil erosion from areas exposed during construction and prevent silt from reaching the on-site wetland and areas downstream. All soil erosion and sediment control practices would be installed in accordance with erosion and sediment control "best management practices" recommended by the New York State Department of Environmental Conservation and integrated into the Erosion Control Plan.

Prior to the disturbance of soils, erosion and sediment control measures would be installed in accordance with the specifications of the Erosion Control Plan. The construction contractor will be required to install all sediment and erosion control measures and maintain them throughout the entire construction process. The project will be constructed in phases to limit disturbance on site to no more than 5 acres at a time. Phase one will consist of the infrastructure for the roads and drainage facilities, these will be constructed and stabilized in advance of construction of residential units. Construction of the residential units will then be divided into two additional phases - one phase will include residences on the north side of the access road, and the other on the south side of the access road. Phasing will be refined based on the Town's review of the plans and as part of the SEQRA review process.

Proper of Erosion Control Measures shall be subject to review and approval of the Town of Clarkstown Planning Board and implementation shall be monitored by the Town's Department of Environmental Control. In accordance with Section 254-13 of the Town's subdivision regulations, the Town may also require a bond or other acceptable type of monetary guaranty to ensure the proper installation and maintenance of improvements, including sediment and erosion control measures.

The proposed plan minimizes the areal extent of soil exposure to the greatest extent practicable in accordance with the Erosion and Sediment Control Guidelines of the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (Permit No. GP-93-06). Erosion and sedimentation will be controlled during the construction period by temporary devices according to the Erosion Control Plan developed specifically for this project (see project engineer's full size drawing at the rear of this document).

Following construction, erosion will be prevented by the establishment of vegetation and by the stormwater management facilities shown on the plan. Construction of the permanent infiltration basin system will commence as part of the earthwork for the installation of the internal road network so that these systems are functional as early as possible in the construction period.

The design elements included in the Erosion Control Plan will be phased as follows:

Phase 1 occurs immediately after clearing the project site:

1. stabilize the construction entrance, and
2. secure silt fencing.

Phase 2 follows installation of the drainage system:

1. install storm inlet traps around all catch basins.

Phase 3 follows the paving of the access road:

1. install curb inlet protection around all of the catch basins.

The following lists the erosion control measures that will be followed:

1. The filter fabric fence will be installed along downhill sides of adjacent properties and along all disturbed areas.
2. Temporary seeding shall be applied to disturbed areas that are left bare for 15 days unless construction begins within 30 days of disturbance. If construction is suspended or completed, areas shall be seeded or mulched immediately.
3. Structural measures must be maintained to be effective. In general, these measures must be periodically inspected to insure structural integrity, detect vandalism damage, and for maintenance and repair whenever is necessary.
4. A stabilized construction entrance will be installed at the beginning of the proposed road.
5. Macadam surfaces shall be swept "broom clean" at the end of each day during construction.
6. Construction equipment shall be limited to areas within the silt fence sediment protection area.

The following details are included on the Erosion Control Plan:

Stabilize the Construction Entrance - The use of 2" stone or reclaimed or recycled concrete equivalent to a length of not less than 50 feet and a thickness of not less than 6 inches will be maintained. The width of the construction entrance will be a minimum of 30 feet, but not less than the full width at points where ingress and egress occur. A filter cloth will be placed over the entire area prior to the placement of the stones. The surface water flowing towards the construction entrances will be piped across the entrance; if that is impractical, a mountable berm with 5:1 slope will be constructed. The entrance will be maintained as to prevent any tracking of construction material or debris onto public rights-of-way. If any material is tracked onto a public right-of-way it will be removed immediately. Washing of construction vehicles will be conducted on an area stabilized with stones that have drains leading to a stabilized sediment trap. Inspections of this entrance will be conducted periodically and maintenance provided after each rain event.

Install Silt Fencing - Silt fencing will be but together in such a way that if two pieces are to be adjoined they will be overlapped by 6 inches and folded. Maintenance on the silt fencing will occur as needed and material removed when “bulges” develop.

Storm Inlet Trap - When sediment accumulates to approximately ½ the design depth of the trap, the sediment will be removed. The removed sediment will be disposed of in a suitable area and in a manner that it will not erode. The volume of sediment storage available shall be 1,800 cubic feet per acre of contributory drainage. The storm inlet trap will be inspected after each rain and repairs will be conducted on an as-need basis. All construction operations will be carried out to minimize erosion and sedimentation. The sediment trap will be removed and the area stabilized when the constructed drainage area has been finally stabilized. All cut slopes will be 1:1 or flatter.

Curb Inlet Protection - The filter fabric used will have an EOS or Equivalent Opening Size of 40-85 (US stand sieve sizes). The wooden frame will be constructed of 2” x 4” construction grade lumber. A continuous piece of 30” wire mesh will stretch across the throat with a minimum length of 4 feet longer than the throat and then nailed securely to a 2” x 4” weir. The weir will be securely nailed to 2” x 4” spacers that are nine feet long and spaced no more than six feet apart. This assembly will be placed against the inlet and secured by anchors 2” x 4” and two feet long which will extend across the top of the inlets and held in place by sand bags and alternate weights.

With the above measures in place, potential soil erosion will be minimized to the maximum extent practicable. The project would result in 67,100 cubic yards of cut and 45,400 cubic yards of fill, resulting in approximately 21,700 cubic yards of excess cut which would require that soil be transported off the project site.

3.1.2 Topography and Slopes

3.1.2.1 Existing Conditions

Topography in the vicinity of the site is varied and rolling, as can be seen in Figure 3.1-4 - Area Topography/Location Map. Local topography reflects the underlying bedrock of the Palisades Diabase. The terrain on the site is gently to moderately sloping as shown in Figure 3.1-5 - Existing Slopes Map. Elevations above mean sea level range from approximately 413 feet at a low point in the wetland area on the western portion of the project site to a high point of approximately 513 feet in the eastern corner of the site. Topography rises approximately 100 feet across the site.

In general, topography on the site rises from west to the east. Based upon the surrounding topography and local drainage patterns, it does not appear that the project site has been graded in the past. There are no mines or quarries shown in the vicinity of the site on the USGS map.

Slopes on the subject site are shown in Figure 3.1-5 - Existing Slope Map. The figure distinguishes areas of slopes between 0 to 10 percent , 10 to 15 percent, and greater than 15 percent. Approximately 4.1 acres or 40.2 percent of the site, contains slopes greater than 15 percent.

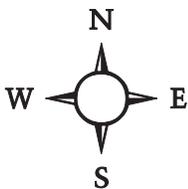
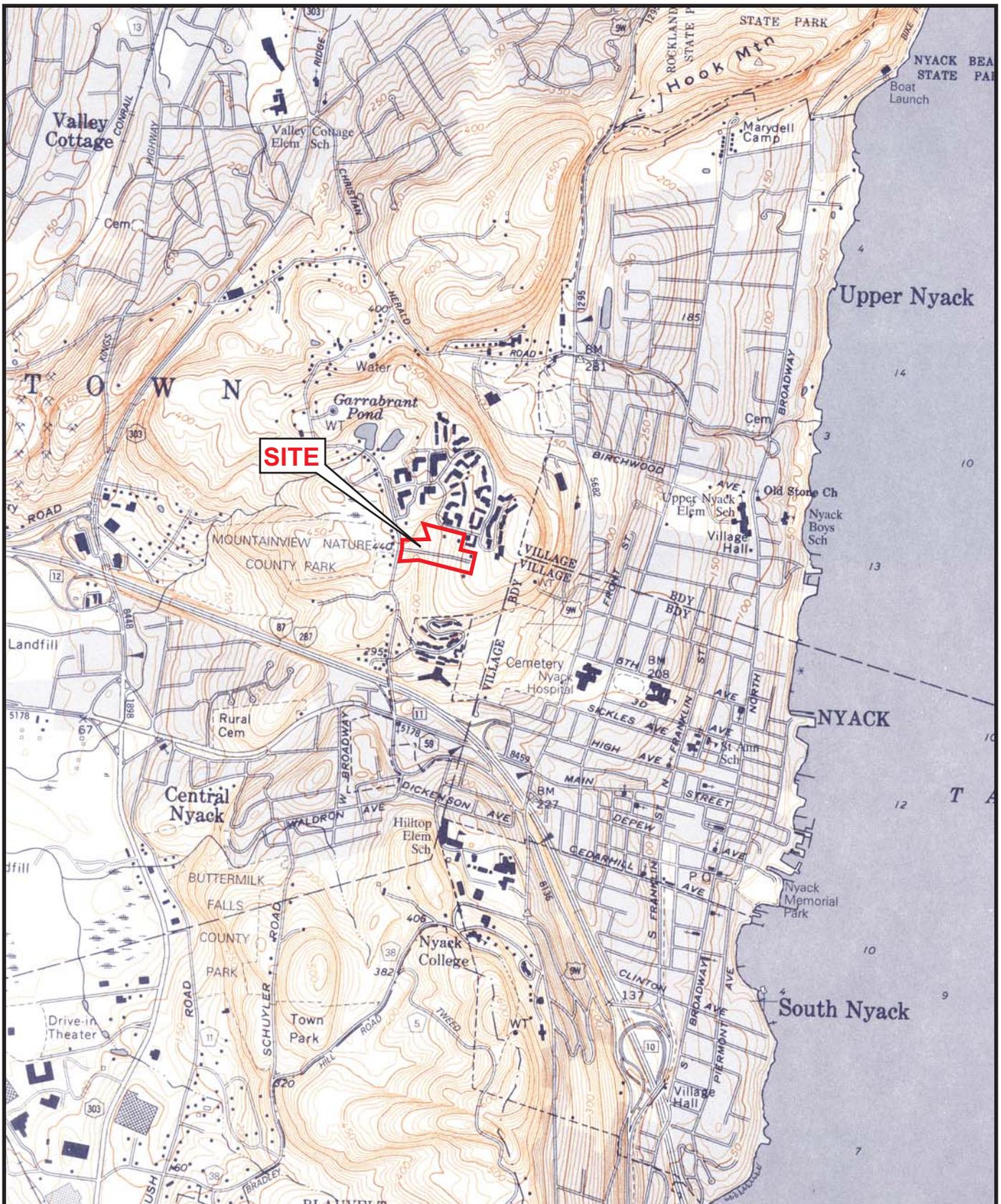


Figure 3.1-4: Area Topography Location Map
 Kury Homes
 Town of Clarkstown, Rockland County, New York
 Base Map: USGS Topographic Map, Nyack Quad
 Scale: 1 inch = 2,000 feet



SLOPE LEGEND

	AREA
0-10% SLOPE	3.1 AC.
10-15% SLOPE	3.1 AC.
15% + SLOPE	4.1 AC.



Figure 3.1-5: Existing Slopes Map
 Kury Homes
 Town of Clarkstown, Rockland County, New York
 Source: Atzl, Scatassa & Zigler, P.C., November 17, 2005
 Scale: 1 inch = 100 feet

Topography and elevations in the vicinity of the property are similar to on-site topography, with gentle to moderate slopes.

3.1.2.2 Potential Impacts

Steep Slopes

Construction on slopes greater than 15 percent must be considered carefully during residential construction since grading such slopes increases the potential for soil erosion and may impact slope stability. Since the project site consists of rolling topography, disturbance to various slopes for the construction of the road and residences will occur.

This site contains 4.1 acres of slopes 15 percent and greater. Approximately 3.4 acres of 15 percent and greater slopes will be disturbed by the proposal. Impacts to areas of steep slopes are shown in Figure 3.1-6 - Proposed Slope Disturbance Map.

Table 3.1-2 compares pre-development slope ranges to post-development slope ranges.

Table 3.1-2 Comparison of Pre-Development and Post-Development Slope Ranges		
Slope Category	<i>Approximate Acres</i>	
	Pre-Development	Post Development
0%-10%	3.1	4.2
10%-15%	3.1	2.5
>15%	4.1	3.6
Total Acres	10.3	10.3
Source: Atzl, Scatassa & Zigler P.C		

3.1.2.3 Proposed Mitigation Measures

Potential impacts to slopes will be mitigated through implementation of the Erosion Control Plan developed for the project and detailed in Section 3.1.1.3. The project will be constructed in phases to limit disturbance on site to no more than 5 acres at a time. Phase one will consist of the infrastructure for the roads and drainage facilities; soil disturbances in these areas will be stabilized prior to construction of the residences. Residences will be constructed in two subsequent phases: those located north of the access road, and south of the access road. Erosion control measures will be reviewed by the Clarkstown Planning Board and Department of Environmental Control, and must be approved, with whatever revisions are determined appropriate by the Town agencies, as part of the final subdivision plan. The implementation and monitoring of erosion control measures will be overseen by the Town's Department of Environmental Control.

As mentioned previously, the applicant dug six (6) on-site deep test holes to determine the depth to bedrock. Based on the results of the tests, depth to bedrock is approximately 12 feet and greater on the project site. Thus, it is not anticipated that any blasting will be required. If rock is encountered, the first course of action will be to remove rock by mechanical means.

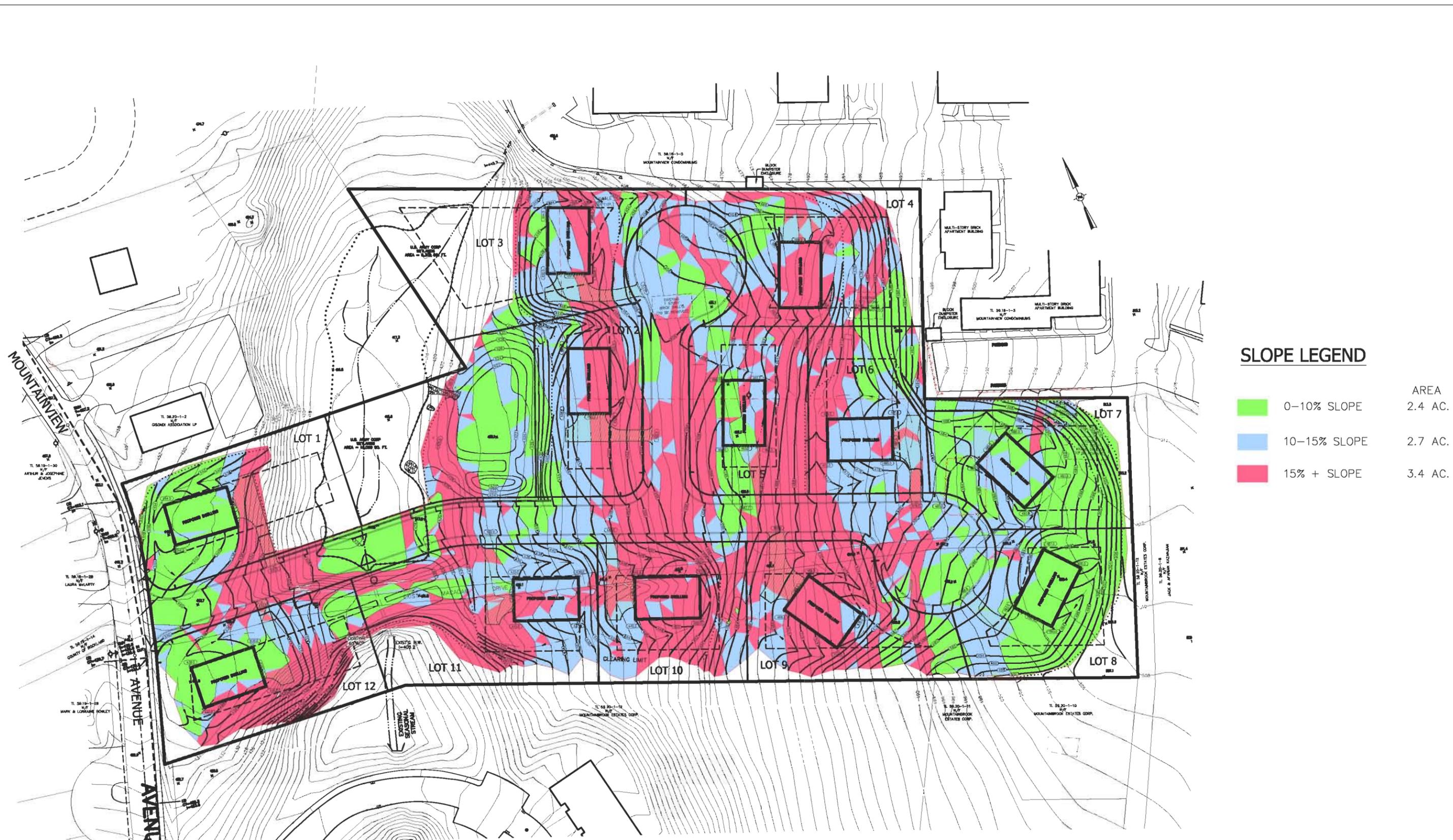


Figure 3.1-6: Slope Disturbance Map

Kury Homes

Town of Clarkstown, Rockland County, New York

Source: Atzl, Scatassa & Zigler, P.C., March 1, 2004

Scale: 1 inch = 100 feet



In the unlikely event that blasting is required, the activity would be conducted in accordance with Chapter 220, Quarrying and Blasting, of the Code of the Town of Clarkstown.

As stated in the Code, "Because the dimension of nuisance is added to intrusions affecting health and safety when quarries and others engaging in blasting activities operate during hours when town residents expect relative tranquility, the Town Board hereby asserts its right to designate acceptable hours for blasting operations and to control the degree of velocity and displacement of vibrations during those hours when blasting is authorized."

No blasting is permitted except between the hours of 7:00 a.m. and 7:00 p.m., excluding Sundays and public holidays, when no blasting is permitted at any time.

During the hours when blasting is permitted, peak particle velocity and overpressure produced by any blast, at a distance measured by the distance from the blast to the closest structure or building not owned or used by the entity conducting the blast, shall not exceed seventy-five hundredths (0.75) inch per second for frequencies less than forty (40) hertz (Hz) or two and zero-hundredths (2.0) inches per second for frequencies of forty (40) hertz or more. In addition, air pressure levels emanating from such blasts shall not exceed one hundred thirty-one (131) decibels (dB) for a high pass filter of one-tenth (0.1) hertz, or one hundred twenty-eight (128) decibels for a high pass filter of two (2) hertz, or one hundred twenty-five (125) decibels for a high pass filter of six (6) hertz.

With these measures in place, blasting activities would not have a significant impact. As mentioned previously, it is not expected that blasting will be necessary based on the deep hole tests that were conducted on the site.

3.2 Water Resources

3.2.1 Groundwater

3.2.1.1 Existing Conditions

Groundwater is the subsurface water found in the saturated zones within the soil and rock mantle of the earth. This soil and rock mantle consists of unconsolidated sediment and bedrock and is referred to as an aquifer. Locally, groundwater is found in joints, fractures and other spaces contained in the hard gneissic bedrock.

Geologically, the project site is located in the Palisades diabase which consists of igneous and meta-igneous rocks within the Newark group formation of bedrock. The relatively recent rock formations are associated with the Upper Triassic period of the Mesozoic Era. Bedrock groundwater resources occur in the fractures and joints of this bedrock unit (secondary permeability). The number and location of the bedrock fractures (fractures typically contain greater quantities of usable water than joints) is dependent on the degree of deformation that the bedrock has undergone through its formation. Groundwater flow generally follows the topography in the vicinity of the project site.

Depth to water table (surficial groundwater elevations) varies on the site and during seasonally wet periods. Based on data in the USDA's *Soil Survey for Rockland County*, the on-site soils identified as Holyoke-Rock Outcrop complex (HoC and HoD) have a groundwater table greater than six feet below the surface throughout the year. Groundwater is presumed to flow to the south, generally following the topography of the site.

The project site and surrounding areas receive public water from United Water New York, which is proposed as the source of drinking water for this project. As public water serves the site and nearby properties, groundwater use is not a significant issue for this application.

There are no current proposals for use of groundwater resources for either potable or irrigation water supply. All water will be provided by connection to United Water New York's water supply system.

The primary source of groundwater is precipitation which infiltrates through the surface of the ground and percolates into the water table. The majority of rainfall is "lost" to surface water runoff and evapo-transpiration. Depending on the physical characteristics of the recharge area, between 15 and 40 percent of the annual precipitation can recharge the aquifer.

Evaluation of groundwater recharge with respect to a specific project or land use is usually done by evaluation of projected water demand and the ability of the local watershed to recharge the aquifer. Generally, the groundwater table in an unconfined aquifer will loosely follow the surface topography of the land. Groundwater would be expected to flow from drainage boundaries, such as ridges, toward points topographically lower in the watershed. Groundwater in storage and recharge "collected" within the natural drainage basin area would be available to replenish or recharge the aquifer. Due in part to the anisotropic (irregular) nature of the bedrock aquifer, however, only a portion of total basin recharge could transmit water to any given pumping area. The rate of aquifer recharge would also depend on other specific hydrogeological conditions present at each location. For example,

heavily faulted and fractured bedrock zones are capable of transmitting larger quantities of water to recharge the bedrock aquifer than are less fractured zones.

3.2.1.2 Potential Impacts

There are no plans to use groundwater at this site. There will be no taking from the local aquifer. Recharge will be slightly affected by the installation of road, driveways and other impervious surfaces on the site. However, stormwater runoff collected from these surfaces will be directed into the stormwater control basins, which are designed for limited infiltration. Therefore, the project is not anticipated to adversely impact groundwater conditions in the area.

In addition, the proposed homes will be sewered. Therefore, the development is not projected to result in adverse groundwater-related impacts.

3.2.2 Surface Water (Wetlands and Waterbodies)

3.2.2.1 Existing Conditions

Wetlands and Waterbodies

There are no New York State DEC-regulated wetlands located on or near the project site (see Figure 3.2-1).

A small 0.56-acre federally-regulated wetland is located in the northwestern portion of the site. The boundaries of this wetland were confirmed by the US Army Corps of Engineers in 2001. A copy of the jurisdictional determination issued by the Corps is provided in Appendix B. The jurisdictional determination is considered valid by the Corps for five years.

This wetland area is also identified on the US Fish and Wildlife Service's National Wetland Inventory Map (see Figure 3.2-2), which describes it as a "*Palustrine Emergent Wetland*".

This on-site wetland is associated with a small stream that flows from north to south across the property (see Figure 3.2-3). The water that flows in this stream collects on the Mountainview multifamily development to the north and is discharged via a pipe onto the project site. The stream flows through a culvert under the existing driveway on the project site. Another driveway crossing occurs on the adjacent property to the south for the Forest Ridge development. The vegetative characteristics of this wetland are described in Chapter 3.3 of this DEIS.

There are no natural or constructed surface water bodies, ponds, or basins on the project site.

According to the Federal Emergency Management Agency (FEMA), no flood hazard areas exist on the project site (see Figure 3.2-4).

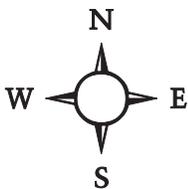
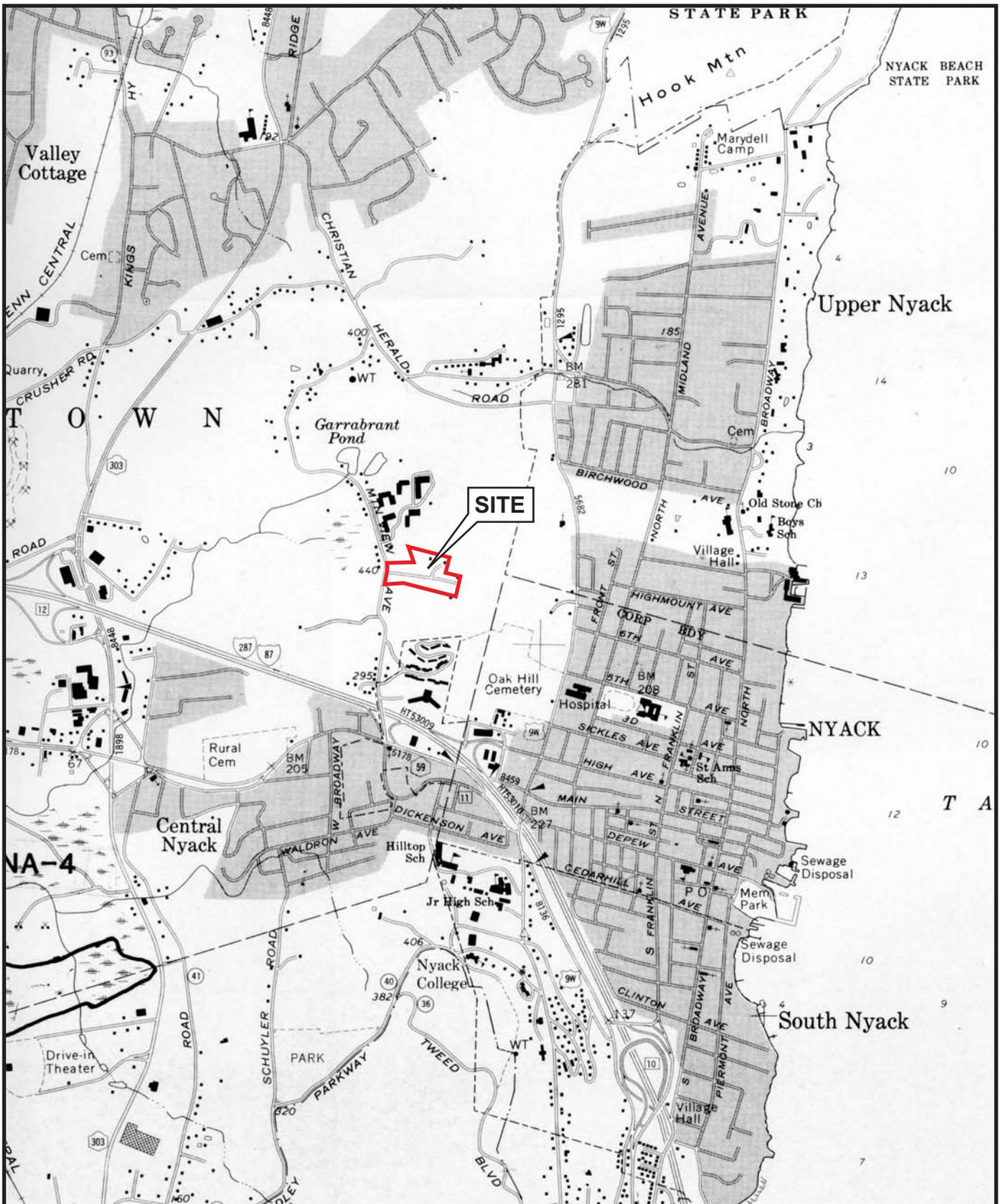


Figure 3.2-1: Project Site on NYS DEC Wetlands Map
 Kury Subdivision
 Town of Clarkstown, Rockland County, New York
 Base Map: NYSDEC, Nyack Quad
 Scale: 1 inch = 2,000 feet

File 0399 - 11/16/04
 JS:\0399\Fig 3.2-1 NYSDEC Wetlands.cdr

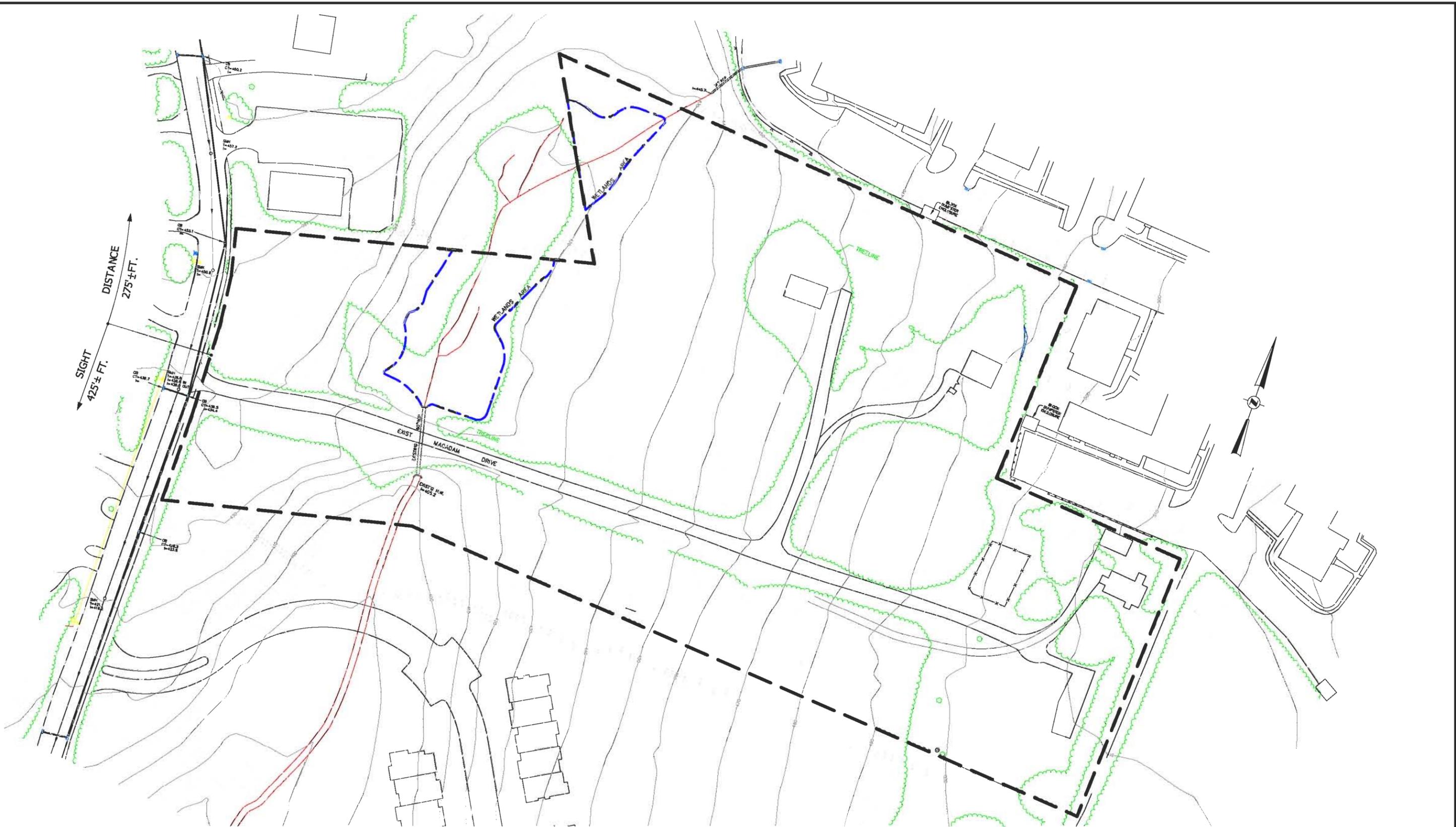


Figure 3.2-3: Existing Wetland and Stream Map

Kury Homes

Town of Clarkstown, Rockland County, New York

Source: Atzl, Scatassa & Zigler P.C., March 1, 2004

Scale: 1 inch = 100 feet



- Property Line
- - - Wetland Boundary
- Streams

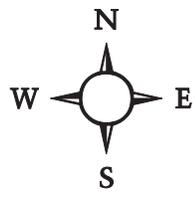
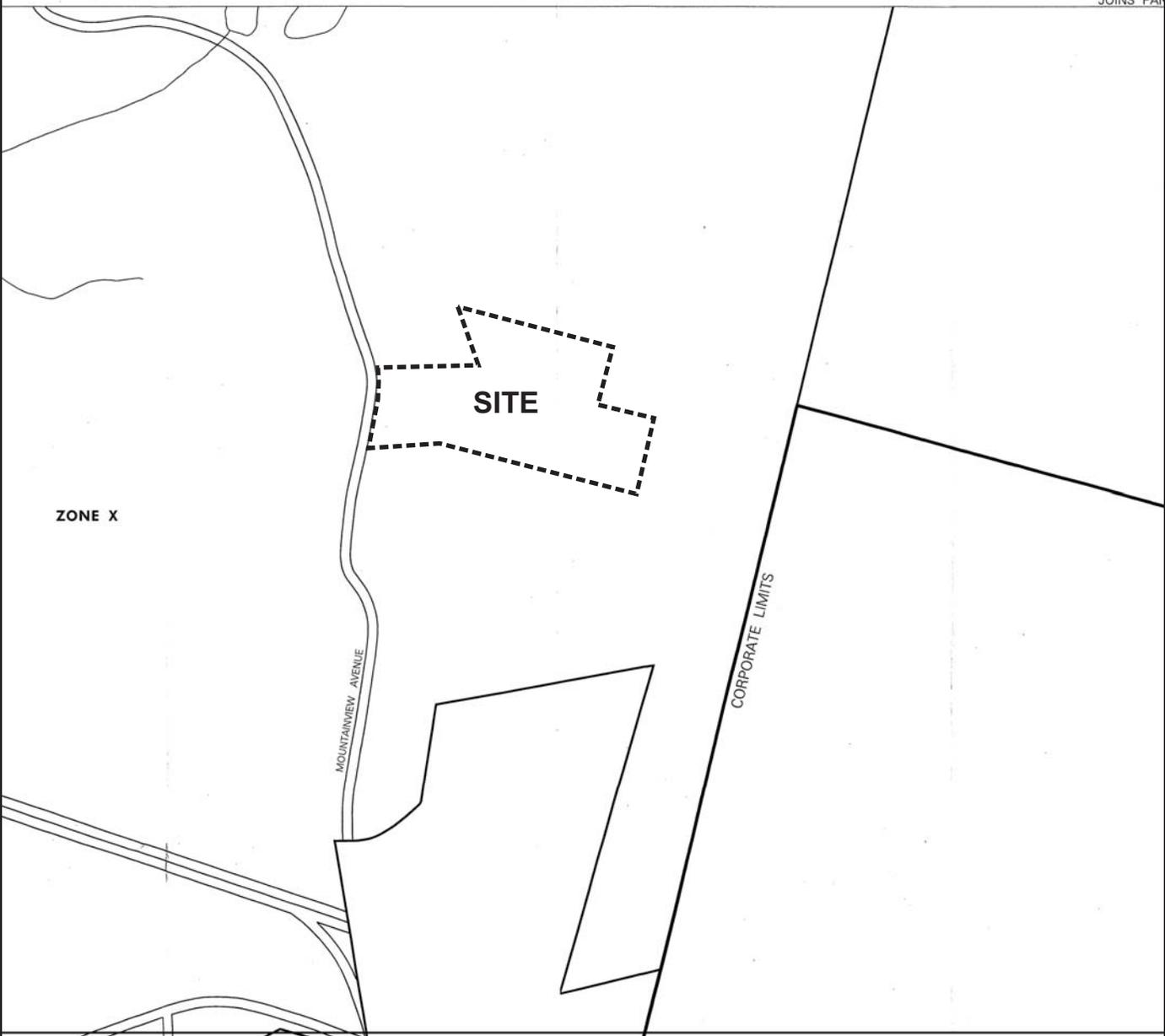


Figure 3.2-4: Project Site on FEMA Map
Kury Homes
Town of Clarkstown, Rockland County, New York
Source: Flood Insurance Rate Map (rev. 05/18/00)
Federal Emergency Management Agency
Scale: 1 inch = 625 feet

File 0399 11/22/04
JS:0399\Fig 3.2-4 FEMA Map.cdr

Existing Stormwater Runoff Conditions

Stormwater in the project area is currently controlled by natural topography, soils and vegetation. Stormwater from the project site drains to the on-site stream and flows off-site to the south.

McDougall Engineering Associates and Joseph Gottlieb, P.E., P.C., conducted a detailed analysis of pre- and post-development drainage conditions. The Stormwater Management Report is provided as Appendix C. The methodology utilized to conduct the stormwater analysis is described in the report.

3.2.2.2 Potential Impacts

Wetlands and Waterbodies

Construction of the proposed road to give access to the subdivision results in grading disturbance to approximately 4,300 square feet of the existing wetland (see Figure 3.2-5). This minor impact, which is less than one tenth of an acre, is authorized by the US Army Corps of Engineer under the Nationwide Permit #39. As noted above, the stream that flows through this wetland is crossed by the existing driveway. The new road will cross the stream slightly to the north of the existing crossing.

Future Drainage Conditions

A study of existing and proposed stormwater drainage conditions has been prepared for the proposed development, as described below and in the Appendix C. The project's design incorporates the various stormwater controls to maintain pre-development rates of run-off from the site.

The proposed drainage system consists of swales, collection piping, dry swales, an infiltration basin and a detention basin. The subdivision piping consists of 15-inch diameter to 27-inch diameter reinforced concrete pipe (RCP) and 60-inch RCP for the outlet of the detention basin. The proposed detention basin is designed in accordance with SCS TR-55 methodology to maintain existing outflows for 2, 25 and 100 year storms. The proposed site drainage features are shown on the full size subdivision plan maps in the rear of the DEIS.

With the introduction of pavement and buildings, vegetative clearing and stormwater control structures will result in a change to the project site's existing land cover that will alter drainage patterns from their current condition. Following construction, approximately 2.4 acres of the site would be covered with impervious surfaces.

In accordance with NYS DEC methodology, post-development flow rates have been calculated for the 2-, 25-, and 100-year storm events and compared to pre-development rates. The drainage analysis shows that no significant increases in stormwater runoff rates will result from the proposed action.

Pursuant to Section 402 of the federal Clean Water Act, stormwater discharges from certain construction activities to waters of the United States are unlawful unless they are authorized by a national or state permit program. New York's State Pollutant Discharge Elimination System (SPDES) is a federally-approved program with permits issued in accordance with

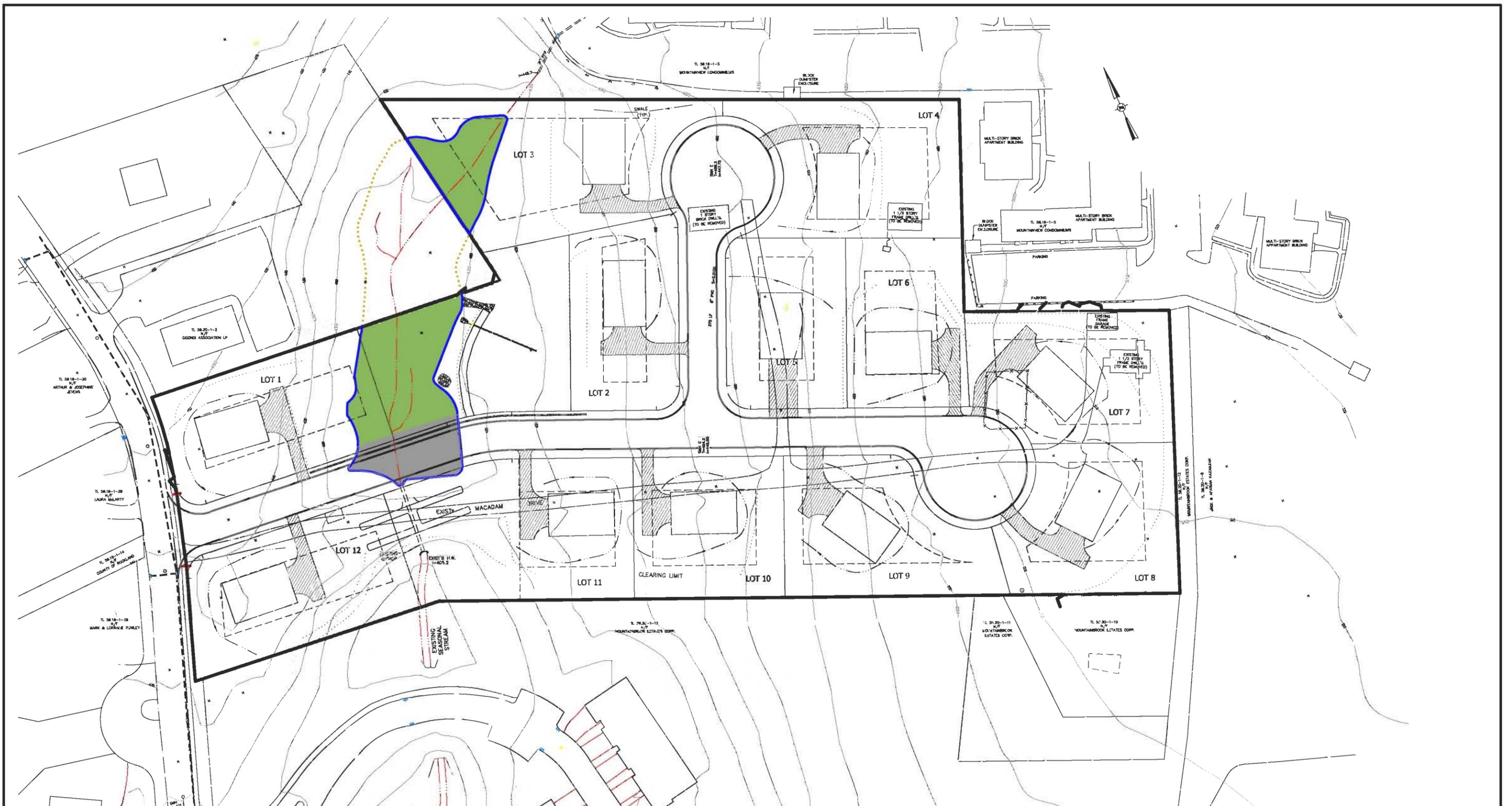


Figure 3.2-5: Post Development Wetland and Stream Map

Kury Homes

Town of Clarkstown, Rockland County, New York

Source: Atzl, Scatassa & Zigler P.C., March 1, 2004

Scale: 1 inch = 100 feet



New York State Environmental Conservation Law. Discharges of pollutants to all other "Waters of New York State" such as groundwater are also unlawful unless they are authorized by a SPDES permit. Operators of construction activities that propose to disturb one acre or more require a SPDES permit. An applicant is required to prepare a Stormwater Pollution Prevention Plan (SWPPP) which is a plan for controlling runoff and pollutants from a site during and after construction. The SWPPP must be prepared in order to submit a Notice of Intent (NOI) and gain coverage under a SPDES general permit.

Thus, design features have been incorporated into the project plans in order to minimize off-site water quality impacts from the project, as per the requirements of the NYS DEC General Permit for Stormwater Discharges from Construction Activity (GP-02-01).

Adding pavement and impervious surfaces to the project area has the potential to increase pollutant contributions to local water resources, such as sand, silt, salts, oil and grease. The addition of pavement and stormwater collection systems also has the potential to increase the rate of stormwater flow from the site. These potential impacts are being avoided or mitigated by structural stormwater controls and "best management practices", which are discussed in further detail below.

The stormwater management system has been designed in accordance with the NYS Stormwater Management Design Manual (August 2003) by using dry swales and an infiltration basin. The dry swales will treat the stormwater runoff from disturbed areas of Lots #1, #11 and #12 (1.2 acres) and will consist of a forebay and 232 linear feet of a storage in a 7 foot wide swale.

An infiltration basin will treat the stormwater runoff from Lots #2 through #10 (7.1 acres) and will consist of a water quality diversion structure, forebay, an infiltration basin, and an overflow spillway.

Once grading and subdivision plan is finalized and approved by the Clarkstown Planning Board, and the Stormwater Pollution Prevention Plan is deemed acceptable by the Board and its consultants, the applicant will submit a Notice of Intent (NOI) to the NYSDEC for a SPDES General Permit for Stormwater Discharges from Construction Activities (GP-02-01).

Pursuant to the Clarkstown Drainage and Water Course Law (Chapter 128) of the Clarkstown Code, it is unlawful for any person, firm or corporation to fill, obstruct, dam, divert or otherwise change or alter the natural flow of water through any stream, ditch, culvert, watercourse or other drainage system shown on the Official Map of the Town of Clarkstown except in accordance with the regulations set forth in Chapter 128. A drainage and watercourse permit will be required to alter the on-site stream corridor due to proposed improvements to allow the stream to flow under the proposed access road and through a proposed stormwater management system.

The applicant must present plans and specifications prepared by a licensed professional engineer to the Town Clerk. The plans and specifications will be forward to, and reviewed by, the Director of Environmental Control. The Director of Environmental Control will prepare a report with recommendations, and will forward it to the Planning Board. The Planning Board will review the report and the proposed plans and specifications and make recommendations to the Town Board within forty-five (45) days. If the Town Board approves the proposed changes, the Town Clerk shall issue a permit. The applicant must furnish a cash bond in an

amount to be determined by the Director of Environmental Control for purpose of securing the performance of the terms and conditions of the permit. The cash bond will be held by the Town of Clarkstown for a period of one (1) year after expiration of said permit.

3.2.3 Proposed Mitigation Measures

As discussed, the stormwater management system has been designed in accordance with the NYS Stormwater Management Design Manual (August 2003) by using dry swales and an infiltration basin. The dry swales will treat the stormwater runoff from disturbed areas of Lots #1, #11 and #12 (1.2 acres) and will consist of a forebay and 232 linear feet of a storage in a 7 foot wide swale.

An infiltration basin will treat the stormwater runoff from Lots #2 through #10 (7.1 acres) and will consists of a water quality diversion structure, forebay, an infiltration basin, and an overflow spillway.

All stormwater flowing through the developed portion of the site will be collected and directed to the stormwater management system. The system includes first flush treatment designed to capture and treat the initial stormwater runoff from developed areas. First flush capture results in the settlement of suspended solids and moderation of water temperature, thus improving the quality of stormwater exiting the site.

The detained stormwater flows are treated through a subsurface infiltration system. This infiltration system uses a medium of sand and peat, which provides physical and biological treatment of the percolating flows. The top layer of the basin bottom is 12 inches of peat, followed by 4 inches of a sand/peat mix, 24 inches of sand, and 8 inches of run of bank gravel. In the gravel layer is a perforated 6-inch polyvinyl chloride (PVC) pipe, which collects the filtered waters and discharges it into the control structure for routing to the detention basin.

In addition, sumps will be provided on all stormwater catch basins and stormwater inlet traps throughout the development. These sumps are designed to trap sand, grit and a portion of suspended solids contained in stormwater. Stormwater catch basins are proposed along the internal road and the stormwater inlet traps are proposed downgradient of the homes on Lots 9, 10 and 11 as shown on the full size subdivision plan in the rear of the document.

Upon completion of the project, the basins and the internal roads will be offered for dedication to the Town. The long-term maintenance of stormwater drainage structures on the site will be the responsibility of the Town and will include annual inspections to ensure proper operation and good equipment condition. In addition, periodic removal of accumulated sediment in the drainage system will be necessary. A maintenance agreement allowing the Town access to maintain the stormwater facilities will be made part of the final subdivision plat. The proposed project will generate tax revenues to the Town that can be used to fund these long-term maintenance responsibilities.

Additional stormwater treatment will be provided by velocity dissipaters and level spreaders leading to naturally wooded or vegetated areas.

Proposed stormwater management infrastructure is shown on the full size subdivision plan in the rear of the DEIS.

Construction Stormwater Management

Stormwater drainage from the site during construction will be strictly managed to avoid off-site impacts (see full size Erosion Control Plan in the rear of the document). A key aspect in the maintenance of stormwater quality and the control of soil erosion is the proper sequencing of construction. All structural sediment and erosion control features will be installed prior to grading and earthwork.

Structural sediment and erosion control features include: the construction of temporary swales, earthen dikes and use of the first flush and detention basins for control of stormwater. At the conclusion of construction, the first flush and detention basins will be cleaned and all sediment will be properly disposed. The temporary erosion control measures are indicated on the Erosion Control Plan for the project. Each device is noted and is shown to its proper scale – ensuring these will all fit on the site.

Various measures have been incorporated into project plans which are intended to offset potential impacts. These include the following:

1. Erosion control measures appropriate to the proposed construction activities shall be specified so as to minimize erosion during the construction phase. Erosion control measures are shown in the Erosion Control Plan in the rear of the document.
2. The provision of stormwater control measures as described in the Stormwater Management Report (Appendix C), designed to avoid stormwater related adverse impacts.

3.3 Biological Resources

3.3.1 Existing Conditions - Vegetation

Regional Context

The project site is located on 10.3 acres in the Town of Clarkstown near the Town's border with the Villages of Nyack and Upper Nyack. The property is located on the east side of Mountainview Avenue, approximately one-half mile north of Interstate-87/287. Immediately to the north of the property is the Mountainview multifamily development. Adjoining the property to the south is the Forest Ridge multifamily development. The adjacent property to the east and southeast is an undeveloped wooded property. The "Long Path" is located to the east of the project site (refer to Figure 3.4-1 for its location). Information on this walking trail is described later in this chapter. Beyond this vacant land to the southeast is Oak Hill Cemetery. To the west, on the opposite side of Mountainview Avenue are single family residences. Behind these residences is the 73-acre Mountainview Nature County Park. A pedestrian connection to the park is available from Mountainview Avenue.

An aerial photograph of the project site and surrounding area is provided in Figure 3.3-1.

Mountainview Nature Park is an approximately 73-acre County park representing the largest tract of undeveloped land near the project site. This area was acquired by Rockland County in 1979. It was a gift from the Winston Perry family, donor's of the county's 50 percent share of the acquisition cost. It is located along a portion of the Palisades ridge and consists primarily of upland second growth woodland vegetation. The majority of the undeveloped land in Rockland County is located in the northwestern portion of Rockland County within Harriman and Bear Mountain State Parks.

Vegetation

The northeastern portion of the project site contains the remains of three former residential structures. The vegetation in this area consists of a mix of ornamental landscaping, unmaintained lawn areas and second growth woody vegetation around the property boundaries.

The remainder of the site is undeveloped except for the driveway and consists of successional woodlands, with primarily deciduous species. The wooded portion of the site comprises approximately 6.97 acres. A stream traverses the property from north to south in the western portion of the site. The stream flows through an existing 3-foot diameter concrete culvert beneath the existing driveway. Associated with the stream is a small 0.56 acre riparian wooded wetland with hydrophytic vegetation.

There is minimal natural vegetation on the adjacent properties to the north and south where multifamily developments are located. The adjacent property to the east is an undeveloped wooded lot consisting of second-growth, primarily deciduous vegetation.

To the west of the property are single family homes on the opposite side of Mountainview Avenue. Behind these homes is the 73-acre Mountainview Nature County Park.

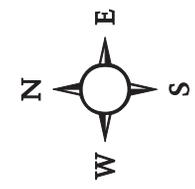


Figure 3.3-1: Site on 2001 Aerial Photo
Kury Homes
Town of Clarkstown, Rockland County, New York
Source: Rockland County Dept. Of Planning Aerial 200 Data
Scale: N/A

Species Composition

The wooded areas of the project site consists of second growth upland species. This community type supports a three strata system dominated by small to medium size trees (<12" to 18" diameter at 4.5 feet), shrubs, and a herbaceous layer. As the wooded portions of the site are in an early successional stage, a full tree canopy has not developed.

A mix of predominantly deciduous tree species occurs on the project site and includes the following species: catalpa (*Catalpa speciosa*), mulberry (*Morus rubra*), crab apple (*Malus sp.*), white oak (*Quercus alba*), red oak (*Quercus rubra*), pin oak (*Quercus palustris*), sugar maple (*Acer saccharum*), black cherry (*Prunus serotina*), tree of heaven (*Ailanthus altissima*), tulip tree (*Liriodendron tulipifera*), paper birch (*Betula papyrifera*), black birch (*Betula lenta*), Norway spruce (*Picea abies*), weeping willow (*Salix discolor*), hickory (*Carya sp.*), black locust (*Robinia pseudoacacia*), basswood (*Tilia americana*), beech (*Fagus grandifolia*), juniper (*Juniperus virginia*), mimosa (*Mimosa speciosa*), black walnut (*Juglans nigra*), and ironwood (*Carpinus caroliniana*).

The shrub layer includes younger saplings of many of the tree species identified in the preceding paragraph as well as the following: Japanese knotweed (*Polygonum cuspidatum*), winged euonymous (*Euonymous alta*), witch-hazel (*Hamamelis virginiana*), spicebush (*Lindera benzoin*) and Rhododendron (*Rhododendron sp.*). Included with this layer are vining and cane species such as poison ivy (*Toxicodendron radicans*), fox grape (*Vitis labrusca*), honeysuckle (*Lonicera sp.*), greenbriar (*Smilax sp.*) multiflora rose (*Rosa multiflora*), barberry (*Berberis sp.*), brambles (*Rubus sp.*) and bittersweet (*Celastrus scandens*).

The herb layer is composed of various herbaceous plants and lower growing vine species including onion grass (*Allium canadense*), garlic mustard (*Alliaria officinalis*), goldenrod (*Solidago sp.*), New England astor (*Aster novae-angliae*), chickory (*Cichorium intybus*), christmas fern (*Polystichum acrostichoides*), mugwort (*Artemisia vulgaris*), milkweed (*Asclepias syriaca*), ox-eye daisy (*Chrysanthemum leucanthemum*), thistle (*Cirsium sp.*), mullein (*Verbascum sp.*), sneezeweed (*Helenium autumnale*), butter and eggs (*Linaria vulgaris*), bittersweet, virginia creeper, and poison ivy.

The dominant plant species within the wetland areas adjacent to the stream include the following: red maple (*Acer rubrum*), American elm (*Ulmus americana*), common reed (*Phragmites australis*), cattail (*Typha latifolia*), smart weed (*Polygonum sp.*), sensitive fern (*Onoclea sensibilis*), jack-in-the-pulpit (*Arisaema triphyllum*), umbrella sedge (*Cyperus strigosus*), pussy willow (*Salix babylonica*), jewelweed (*Impatiens capensis*), greenbriar and multiflora rose.

Rare or Unusual Plant Species

Correspondence from the New York State DEC Natural Heritage Program indicates that there are no known occurrences of rare or unusual habitat types on this property. The Natural Heritage Program's database identified historical findings for the following two state-listed plant species within the vicinity of the project site. Because the Natural Heritage Program considers its database findings as sensitive information, this correspondence is not included in Appendix B. Precise mapping of these findings was not available to determine the exact locations.

- Thicket Sedge (*Carex abscondita*).
- Nodding Pogonia (*Triphora trianthophora*).

According to the Natural Heritage records, the thicket sedge is a state-protected threatened species. Its last recorded sighting occurred in 1891 in a location described as "Palisades, near powder house". This 4 to 8 inch tall plant is a herbaceous perennial graminoid species with grass-like leaves and a triangular stem. Its diagnostic characteristics are inconspicuous green flowers produced late spring and brown seeds during the summer.

The thicket sedge has not been identified on the project site. Given the very lengthy period of time (113 years) since the last recorded sighting in the vicinity and the fact that the site was previously disturbed by residential use, this species is not likely to occur on the project site. During on-site field investigations conducted during 2003 and 2004 by the applicant's environmental consultants, no specimens of thicket sedge were located on the project site.

According to the Natural Heritage records, the nodding pogonia is a state-protected endangered species. Its last recorded sighting occurred in "1871" in a location described only as "Palisades". This 4 to 8 inch tall herbaceous species is found in rich moist humus of mature hardwood forests. The plant has green succulent stems with purple shading and alternating ovate shaped clasping leaves. Its diagnostic characteristics are small pink to white flowers produced, usually in sets of three, from late summer to early fall.

The nodding pogonia has not been identified on the project site. Given the very lengthy period of time (133 years) since the last recorded sighting and the fact that the site was previously disturbed for residential use, this species is not likely to occur on site. During on-site field investigations conducted during 2003 and 2004 by the applicant's environmental consultants, no specimens of nodding pogonia were located on the project site. Further, the condition of the site does not appear to closely match the habitat preferences of this species, as the existing wooded areas are in an immature successional stage without a fully developed canopy in most areas or significant accumulations of humus on the ground.

3.3.2 Existing Conditions - Wildlife

Known and Potential Wildlife Species

A variety of small terrestrial animals have been observed on the project site including rabbits, raccoons, squirrels, and chipmunks. Deer also utilize the property. The project site is also likely to provide habitat for a number of other local species including nocturnal species such as raccoon and opossum. The larger and dead trees on this site may also offer a cavity habitat for species such as owls, cavity nesting songbirds and small mammals.

The stream on the site is approximately four feet wide with a rocky bottom. The stream flows onto the site through an existing culvert from the adjacent northerly development. The stream does not support any fish species, but may support some small aquatic invertebrate species.

Table 3.3-1 provides a list of wildlife species common to the area which are known or could reasonably be expected to utilize the site. This list identifies common species that are likely to utilize the habitat types available at the project site. It is noted that this list is not limited to actual observations at the site, but is a compilation of observations that have occurred throughout Rockland County in similar habitat conditions.

According to the NYS DEC Natural Heritage Program, there are no rare or endangered wildlife species known to inhabit the site. On-site observations are consistent with this assessment.

Table 3.3-1 Known or Potential Wildlife			
Common Name	Scientific Name	Common Name	Scientific Name
Mammals		Birds	
white-tail deer*	<i>Odocoileus virginianus</i>	turkey	<i>Meleagris gallopavo</i>
cottontail rabbit	<i>Sylvilagus floridanus</i>	ruffed grouse	<i>Bonasa umbellus</i>
raccoon*	<i>Procyon lotor</i>	wood thrush	<i>Hylocichla mustelina</i>
red fox	<i>Vulpes vulpes</i>	pileated woodpecker	<i>Dryocopus pileatus</i>
gray fox	<i>Urocyon cinereoargenteus</i>	hairy woodpecker	<i>Picoides villosus</i>
opossum		downy woodpecker	<i>Picoides pubescens</i>
eastern chipmunk*	<i>Eutamias sp.</i>	yellow shafted flicker	<i>Colaptes auratus</i>
gray squirrel*	<i>Sciurus carolinensis</i>	ovenbird	<i>Seiurus aurocapillus</i>
striped skunk	<i>Mephitis mephitis</i>	yellow-billed cuckoo	<i>Coccyzus americanus</i>
white-footed mouse	<i>Peromyscus leucopus</i>	red-tailed hawk	<i>Buteo jamaicensis</i>
deer mouse	<i>Peromyscus maniculatus</i>	robin*	<i>Turdus migratorius</i>
woodchuck*	<i>Marmota monax</i>	catbird*	<i>Dumetella carolinensis</i>
short-tailed shrew	<i>Blarina brevicauda</i>	mockingbird*	<i>Mimus polyglottos</i>
common shrew	<i>Sorex cinereus</i>	flycatchers	<i>Empidonax sp.</i>
star-nosed mole	<i>Codylura cristata</i>	eastern phoebe	<i>Sayornis phoebe</i>
eastern mole	<i>Scalopus aquaticus</i>	American redstart	<i>Setophaga ruticella</i>
little brown bat	<i>Myotis lucifugus</i>	red-eyed vireo	<i>Vireo olivaceus</i>
red bat	<i>Lasiurus borealis</i>	crow*	<i>Corvus brachyrhynchos</i>
		blue jay*	<i>Cyanocitta cristata</i>
Reptiles		scarlet tanager	<i>Piranga olivacea</i>
box turtle	<i>Terrapene carolina</i>	American goldfinch	<i>Carduelis tristis</i>
garter snake	<i>Thamnophis sirtalis</i>	cardinal	<i>Cardinalis cardinalis</i>
eastern racer	<i>Coluber constrictor</i>	chipping sparrow	<i>Spizella passerina</i>
ringneck snake	<i>Diadophis punctatus</i>	towhee	<i>Pipilo erythrophthalmus</i>
milk snake	<i>Lampropeltis triangulum</i>	junco	<i>Junco hyemalis</i>
hognose snake	<i>Heterodon pletyrhinus</i>	mourning dove*	<i>Zenaida macroura</i>
brown snake	<i>Storeria dekayi</i>	chickadee	<i>Parus spp.</i>
		nuthatch	<i>Sitta spp.</i>
Amphibians		turkey vulture	<i>Cathartes aura</i>
American toad	<i>Bufo americanus</i>	E. screech owl	<i>Otus asio</i>
gray treefrog	<i>Hyla versicolor</i>	great horned owl	<i>Bubo virginianus</i>
newt	<i>Notophthalmus viridescens</i>	wren*	<i>Troglodytes sp.</i>
spotted salamander	<i>Ambystoma malculatum</i>		
red-backed salamander	<i>Plethodon cinereus</i>		
<p>* Direct or indirect observation at project site. This list represents many species that could potentially inhabit this site. It is not, however, an exhaustive list, particularly relative to migratory bird species. Source: Tim Miller Associates, Inc., 2004.</p>			

3.3.3 Potential Impacts

The proposed development involves grading disturbance to approximately 8.5 acres of the project site. Of this area, approximately 2.8 acres is previously disturbed land associated with the three former residences on the site. The disturbance also involves 5.6 acres of woodland and less than 0.1 acres of wetland.

In general, as a project is developed, some species will relocate from the disturbed areas to undisturbed portions of the site or to similar habitats on nearby property. As habitat is eliminated, resident populations of some wildlife species will be reduced. In addition, the composition of the wildlife at the property will be altered somewhat following development, with increases in the populations of species with greater tolerance for human activity.

The portions of the project site where disturbance to existing woodland is proposed is shown on Figure 3.3-2. The areas of disturbance shown on this figure includes areas that would be impacted by the construction activities, but would be landscaped and replanted with native and ornamental species.

As previously described, no protected plant species are known or expected to occur on the project site. Therefore, no impacts to rare or protected plant species are anticipated to result from the proposed action. The site is not known to provide habitat for any wildlife species listed as endangered or threatened by the New York State Department of Environmental Conservation. Therefore, no significant adverse impacts to protected wildlife species are anticipated.

The proposed project would not impact existing parkland or the species located therein as it is not directly adjacent to any designated parkland (Mountainview Nature Park) nor would it impact or disturb open space to the east. The project site, which is vacant, may be serving as a "wildlife corridor" for deer and other mammals, connecting the County Park to the west with open space to the east of the site. There will still be a limited narrow vegetative corridor which would consist of open space on the north side of the Forest Ridge development, and portions of the backyards of the proposed lots on the south side of the proposed access road which may remain undisturbed. However, construction of the project would reduce the width of any corridor that may exist presently.

The stream corridor may provide limited habitat for amphibians, however, the stream has been altered and channeled to the north and south of the project site, and thus does not represent a significant natural corridor.



Figure 3.3-2: Post Development Land Cover

Kury Homes

Town of Clarkstown, Rockland County, New York

Source: Atzl, Scatassa & Zigler P.C., March 1, 2004

Scale: 1 inch = 100 feet



3.3.4 Proposed Mitigation Measures

To reduce potential impacts to the on-site wetland habitat that would remain undisturbed, as well as to protect off-site undisturbed natural areas, , the following mitigation measures are proposed to reduce the potential for soil erosion and sedimentation to these areas. The stormwater management system is designed to ensure that the existing water quality of the stream that flows through the site is not degraded.

- Erosion and sediment controls would be utilized throughout the construction phase of the project until all disturbed area are fully developed or soils have been stabilized through vegetation plantings or other means. These measures are described in Chapter 3.1 of the DEIS and illustrated in the full size Erosion Control Plan in the rear of the DEIS.
- Introduction of a stormwater management system that would provided first flush water quality treatment and would meet the criteria of the New York State general permit for stormwater discharge from a construction activity.

Although not as valuable as natural undisturbed habitat, the mixture of ornamental and native landscaping plants that are proposed would provide some benefit to wildlife species that can adapt to suburban environments. Many of these plants provide a certain degree of wildlife value such as food and nesting opportunities. Typical landscape plantings are likely to include those species included in Table 3.3-2 or similar selections.

Table 3.3-2 "Typical" Upland Condition Landscaping Plantings	
Trees	Shrubs
Deciduous Trees - Major	Deciduous Shrubs
horse chestnut (<i>Aesculus hippocastanum</i>)	bottlebrush buckeye (<i>Aesculus parviflora</i>)
red maple (<i>Acer rubrum</i>)	oak leaf hydrangea (<i>Hydrangea quercifolia</i>)
American beech (<i>Fagus grandifolia</i>)	Witchhazel (<i>Hamamelis virginiana</i>)
white oak (<i>Quercus alba</i>)	staghorn sumac (<i>Rhus typhina</i>)
red oak (<i>Quercus rubra</i>)	beautybush (<i>Kolkwitzia amabilis</i>)
little leaf linden (<i>Tilia cordata</i>)	bayberry (<i>Myrica pennsylvanica</i>)
American elm (<i>Ulmus americana</i>)	viburnum (<i>Viburnum sp.</i>)
Deciduous Tees - Minor	Evergreen shrubs
shadblow (<i>Amelanchier canadensis</i>)	inkberry (<i>Ilex glabra</i>)
paperbark birch (<i>Betula papyrifera</i>)	Virginia red cedar (<i>Juniperus virginiana</i>)
flowering dogwood (<i>Cornus florida</i>)	mountain laurel (<i>Kalmia latifolia</i>)
crabapple (<i>Malus sp.</i>)	rosebay rhododendron (<i>Rhododendron maximum</i>)
cherry (<i>Prunus sp.</i>)	white rhododendron (<i>Rhododendron album</i>)
plum (<i>Prunus sp.</i>)	leatherleaf viburnum (<i>Viburnum rhytidophyllum</i>)
Coniferous Trees	
white fir (<i>Abies concolor</i>)	
Colorado spruce (<i>Picea pungens</i>)	
Norway spruce (<i>Picea abies</i>)	
douglas fir (<i>Pseudotsuga mensiesii</i>)	
white pine (<i>Pinus strobus</i>)	
red pine (<i>Pinus resinosa</i>)	
SOURCE: Tim Miller Associates, Inc., 2004.	

3.4 Aesthetic (Visual) Resources

3.4.1 Existing Conditions

Introduction

The visual assessment that is presented below has been conducted in accordance with the NYS DEC guidance relating to assessing and mitigating visual impacts of "facilities". When a proposed "facility" is to be located within the potential viewshed of a designated *aesthetic resource*, a visual assessment is appropriate. Viewshed is defined as the geographic area from which a proposed action may be seen. An *aesthetic resource* is a formally designated place visited by the public for the purpose of enjoying its beauty. For purposes of this assessment, the resource may be designated by a local jurisdiction, a State agency, or a Federal agency. (Note that the NYS DEC guidance explicitly excludes evaluation of locally designated resources.) Additionally, other scenic resources may be considered significant aesthetic resources for the purposes of the visual assessment based on their unique characteristics.

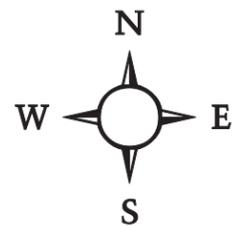
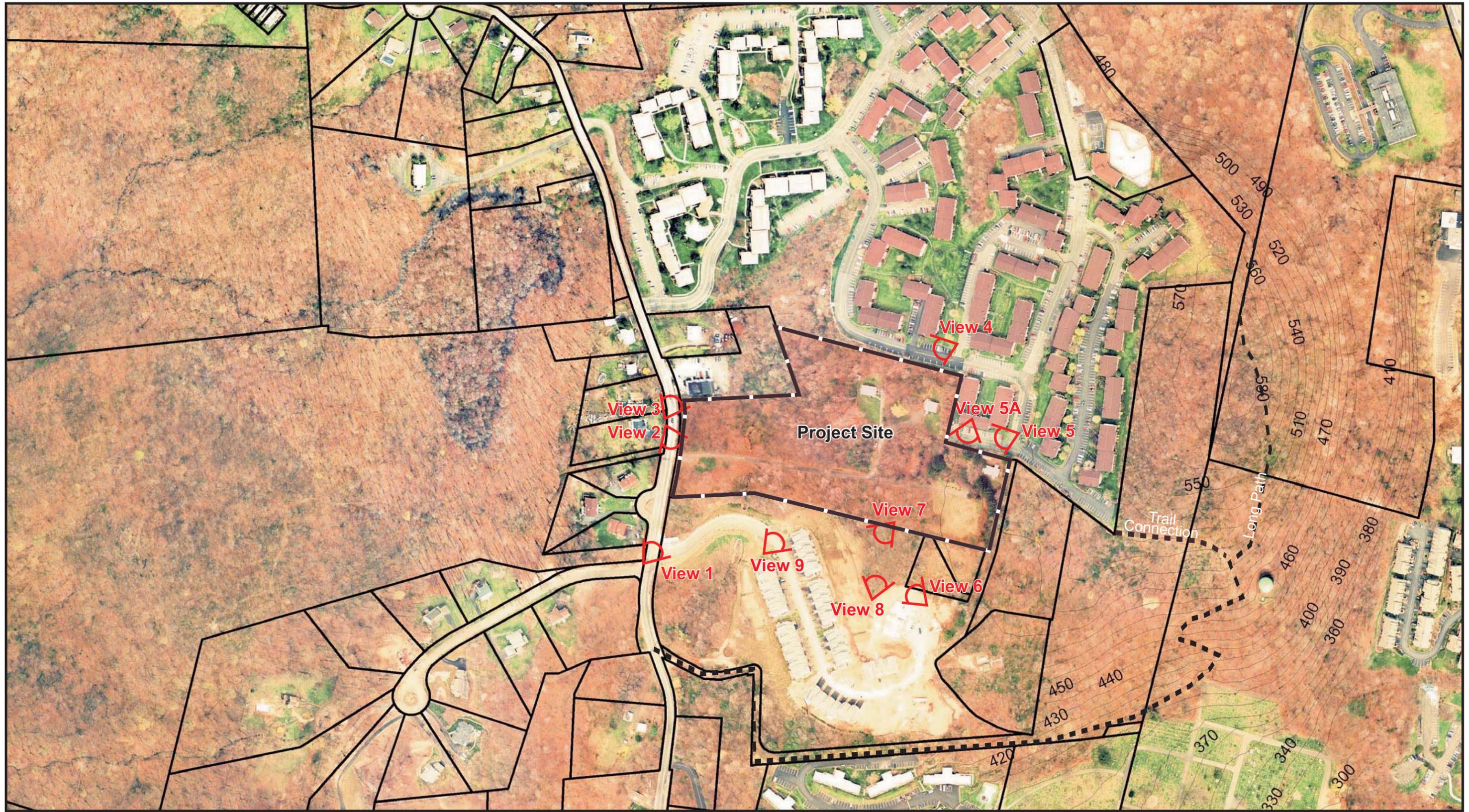
A visual assessment is an analytical technique that determines the viewshed of a particular property, identifies important aesthetic resources within the viewshed, determines the potential impact of a change to that property (such as a new building) on aesthetic resources, and identifies strategies to avoid, eliminate or reduce adverse impacts. The visual assessment can incorporate line-of-sight profiles to demonstrate potential visibility of the facility from a particular sensitive viewpoint. A line-of-sight profile is a to-scale graphic depiction of the topography taken along a straight path between a facility and a sensitive viewpoint, with the straight line depicting the line of view between those two locations.

Other variables associated with the actual visibility of a facility include atmospheric perspective (diminishing clarity and contrast of view due to atmospheric interference) and size perspective (reduction of apparent size of objects as distance increases). It is noted that the mere visibility of a facility, even startling visibility, does not automatically mean it has an adverse visual impact. Impact occurs when there is a demonstrated detrimental effect on the public enjoyment of an aesthetic resource. Visual impact occurs when mitigation measures, or the mitigating effects of atmospheric and size perspective, do not adequately reduce the visibility of a facility from an aesthetic resource to an insignificant level.

Existing Visual Character and Views into the Site

Access into the project site is via a single entrance and driveway from Mountainview Avenue. The remainder of the site is undeveloped and wooded. Vegetative clearings can be found on the project site in areas where there were formerly residences. The site was observed and photographed during the winter months when it would be most visible due to the lack of leaves on trees and vegetation. An aerial photograph (Figure 3.4-1) illustrates the condition of the site as viewed from the air in 2000. Since that time, the three dwellings on the project site have been removed. Also note that the construction of Forest Ridge has been completed.

The highest elevations of the site are located at the eastern portion of the site. Topography on the site's elevation decreases from the east to west. Elevations range from approximately 513 feet in elevation at the site's highest point to about 413 feet in elevation along the stream corridor. The site rises from the stream corridor up to Mountainview Avenue where the elevation is approximately 440 feet in elevation.



Legend

- Trails
- Project Site Boundary

Figure 3.4-1: Key Map to Views on 2000 Aerial Photos

Kury Homes

Town of Clarkstown, Rockland County, New York

Source: Rockland County Dept. of Planning GIS Data

Scale: 1 inch = 300 feet

Date: 12/21/04

An office building is located adjacent to the project site to the north. Mountainview condominiums and the Forest Ridge townhouse development are adjacent to the project site to the north/northeast and south, respectively. Land to the south and southeast is vacant. Single-family residences are located to the west of the site along Mountainview Avenue. Thus, the project site is within a viewshed that has already been developed with residential structures.

Aesthetic Resources of Significance

The Long Path is located to the east of the project site and is the only resource of significance from which the project site may be visible. Figure 3.4-1 illustrates the Long Path and trail connections to it. Trail connections exist to the south of the Forest Ridge development, and from a southeasterly parking lot within the Mountainview condominium development. Also, the Mountainview Nature Park is located on the west side of Mountainview Nature Park and was assessed to determine whether the site is visible from it.

Viewshed Determination

A viewshed analysis was first conducted to identify locations in the project vicinity from which the project site may be visible. The viewshed analysis was conducted through inspection of US Geological Survey topographic maps with the aid of three-dimensional viewing computer software (Terrain Navigator Pro), which reveal the potential visibility of the project site based on changes in topography, i.e., not yet accounting for vegetation, buildings, and other obstructions that would limit views of the site. Based on a review of topography alone, the viewshed of the subject property from which the site may be *potentially* visible includes: an approximate 0.4-mile corridor north and south of the project site encompassing Mountainview Avenue; an area approximately 0.3 miles to the north of the site within the Mountainview condominium complex; an area approximately 0.5 miles to the south within the Forest Ridge development; and, an area less than 0.15 miles west of the project site. The project site is potentially visible from points approximately 0.1 miles to the west. Beyond this distance, the elevations slope steeply down as one travels east, and thus the project site is no longer visible due to the change in elevation.

As mentioned previously, the only potential sensitive viewpoint would be views from the Long Path located to the east of the project site. As the Long Path is located on the downslopes to the east, the project site would not be visible from the Long Path. The viewshed analysis also indicates that the site would not be visible from Mountainview Nature Park as a result of intervening topography.

Field surveys are conducted to refine the initial viewshed analysis and take into consideration factors which serve to further limit views of the site, including actual changes in elevation as observed in the field, vegetation, and buildings. The field surveys identified the *actual viewshed* from which the proposed project is visible. The *actual viewshed* of the project site is limited to views of the site from Mountainview Avenue about 350 feet and 380 feet north and south, respectively, of the existing on-site driveway, an area extending 280 feet south of the project site as viewed from Forest Ridge Road, and an area 200 feet north of the project site within the Mountainview condominium development. No views of the site were found to exist at other public accessible locations, including the Long Path, due to intervening vegetation and the topography of the area. The surrounding roads and residential developments from which the site may be visible are not aesthetic resources of significance.

Photographs were taken from several vantage points in the viewshed area to document views of the site from Mountainview Avenue, Forest Ridge Road and the Mountainview condominium development. Figure 3.4-1 is a key map to views and photographs described below. Figures 3.4-2 to 3.4-7 show wintertime (November 13, 2004) photographs taken from these locations, which are described below. Figures 3.4-21 is a key map to line of sight profiles and 3.4-22 presents the line of sight profiles, also described below. Additional Views from Forest Ridge Condominiums are shown in Figure 3.4-8. Existing views from the Kury Homes site looking southwest are shown in Figure 3.4-9. Figure 3.4-13 is an aerial key map of long views of the Kury Homes site from Route 59, I-87/I-287 and from Route 9W, which are shown in Figures 3.4-14 through 3.4-20.

Views from Mountainview Avenue

Mountainview Avenue, a two-way Town road with a sidewalk extending along the eastern edge of the road, borders the project site's frontage to the west. Existing land use along Mountainview Avenue is mostly residential with very limited commercial and office use.

View 1 depicts a panoramic view into the project site from Mountainview Avenue at the intersection of Forest Ridge Road and Mountainview Avenue. The wooded land in the background is on the project site.

View 2 depicts a panoramic view of the site frontage on Mountainview Avenue looking south. Other than the driveway opening, the project site is mostly wooded at this location. The interior of the project site is not visible from this view point. Figure 3.4-4 depicts a photo simulation of View 2 after construction of the Kury Homes project.

View 3 depicts a panoramic view of the site frontage on Mountainview Avenue looking north. The project site is also mostly wooded at this location. The office building shown on this photo is located north of the project site.

Views from Mountainview condominium development looking South

Views 4 and 5 depict panoramic views of the project site from Mountainview condominiums. The project site is approximately eight (8) feet beyond the curb at this location. The interior of the project site is not visible from these vantage points due to dense vegetation along the property boundary at these locations. Figure 3.4-8 shows a photo simulation of View 5 after construction of the Kury Homes project.

Views from Forest Ridge development

View 6 depicts a panoramic view of the site from the backyard of the townhouse located at the highest elevation on Forest Ridge Road. The project site can be seen at the rear of the townhouses. The interior of the project site is not visible from this vantage point due to intervening buildings, change in topography and dense vegetation, as shown in Figures 3.4-11 and 3.4-12.

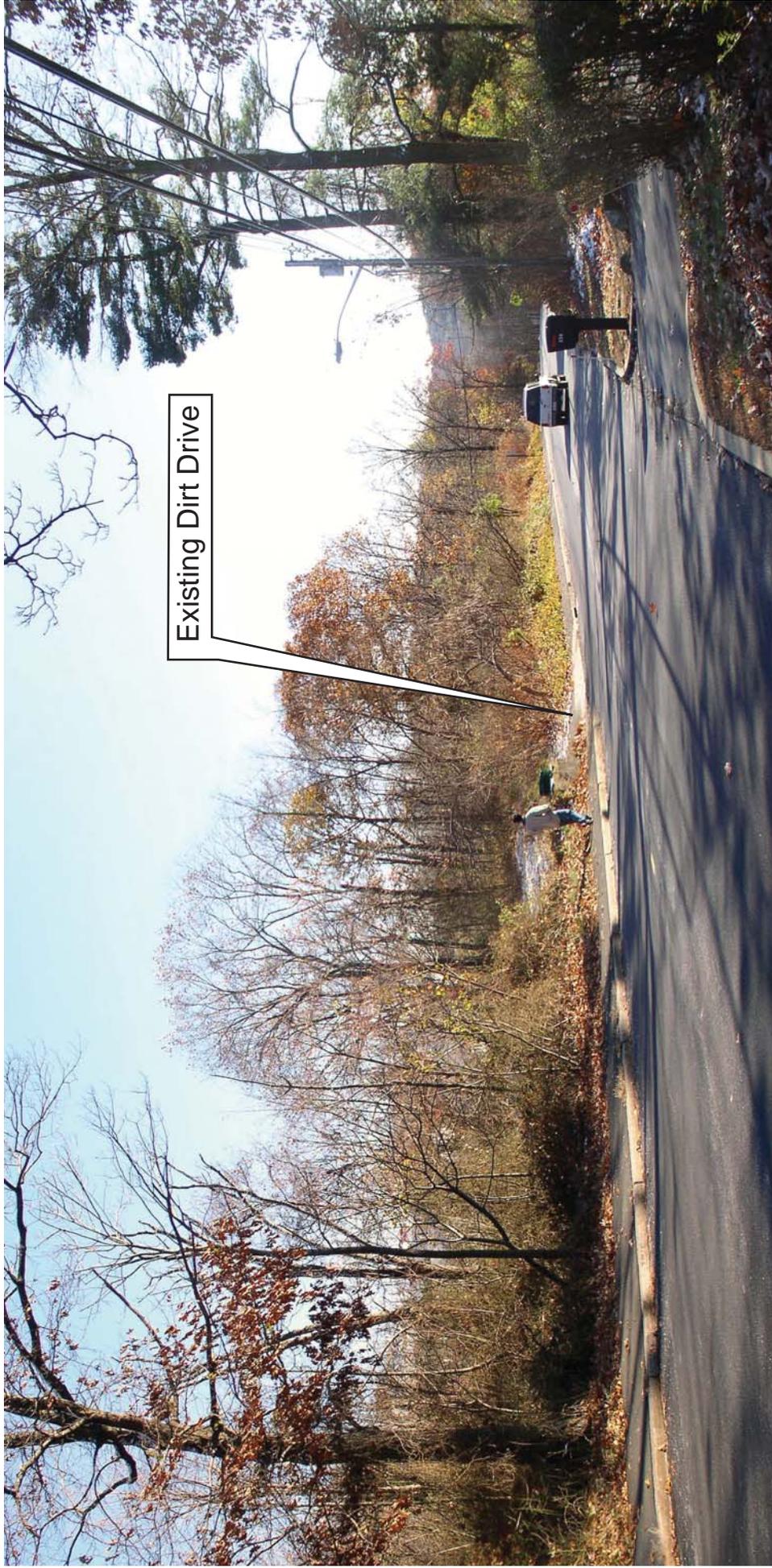
Views from the Kury Homes Site

Figure 3.4-10 depicts the view from the high point of the Kury Homes site looking southwest. A view of the Forest Ridge development is visible from this point.

Project Site



Figure 3.4-2: View 1
Mountainview Avenue and Forest Ridge Road Looking Northeast
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos 11/13/2004
Date: 12/15/04



Existing Dirt Drive

Figure 3.4-3: View 2
Site Frontage on Mountainview Avenue Looking Southeast
Kury Homes

Town of Clarkstown, Rockland County, NY
Source: TMA Photos 11/13/2004
Date: 12/15/04



Figure 3.4-4: View 2s
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 11/13/04

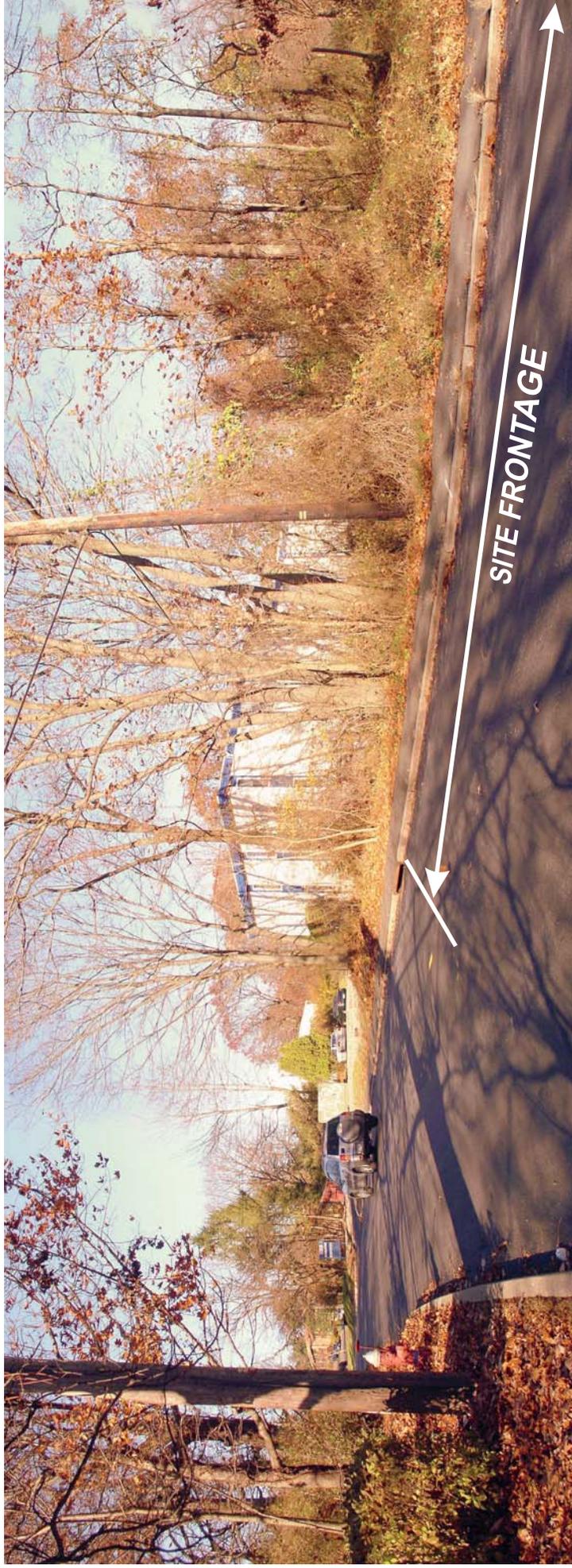


Figure 3.4-5: View 3
Site Frontage on Mountainview Avenue Looking Northeast
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 11/13/04



Figure 3.4-6: View 4
Project Site from Mountainview Condominiums Looking Southwest
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 11/13/04



Figure 3.4-7: View 5
Project Site from Mountainview Condominiums Looking Southwest
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 11/13/04



Before



After

Figure 3.4-8: View 5s
Project Site from Mountainview Condominiums Looking Southwest
- Photo Simulation with Kury Homes
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 02/08/06

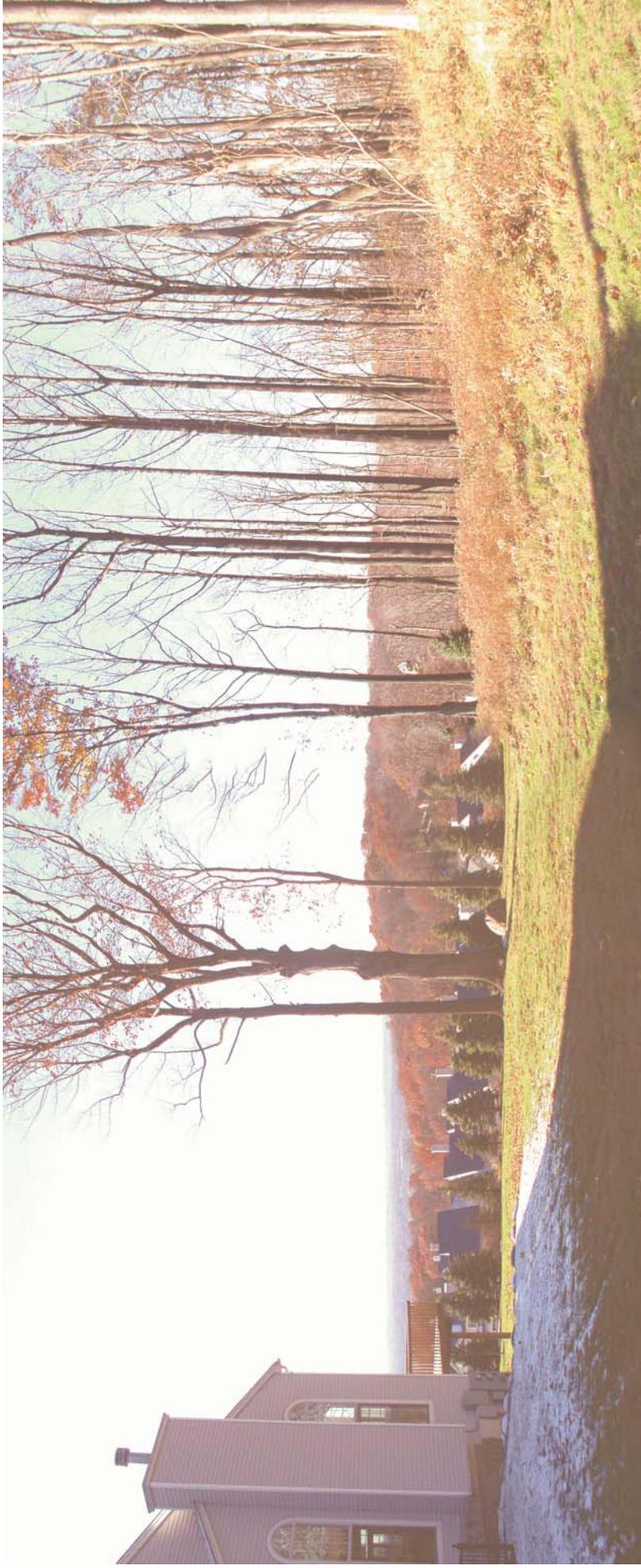


Figure 3.4-9: View 6
Panoramic Views from Residence on Forest Ridge Road Looking Northwest
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 11/13/04



Figure 3.4-10: View 7
Top of Kury Homes Site Looking Southwest
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 02/08/06



Figure 3.4-11: View 8
View from Forest Ridge Looking North Toward Kury Homes Site
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 02/08/06



View from Forest Ridge Looking Northeast Toward Kury Homes
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 02/08/06



Figure 3.4-13: Long Views on 2004 Aerial Photo
Kury Homes
Town of Clarkstown, Rockland County, New York
Source: NYS GIS Clearinghouse
Scale: 1 inch = 300 feet

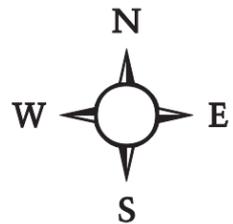




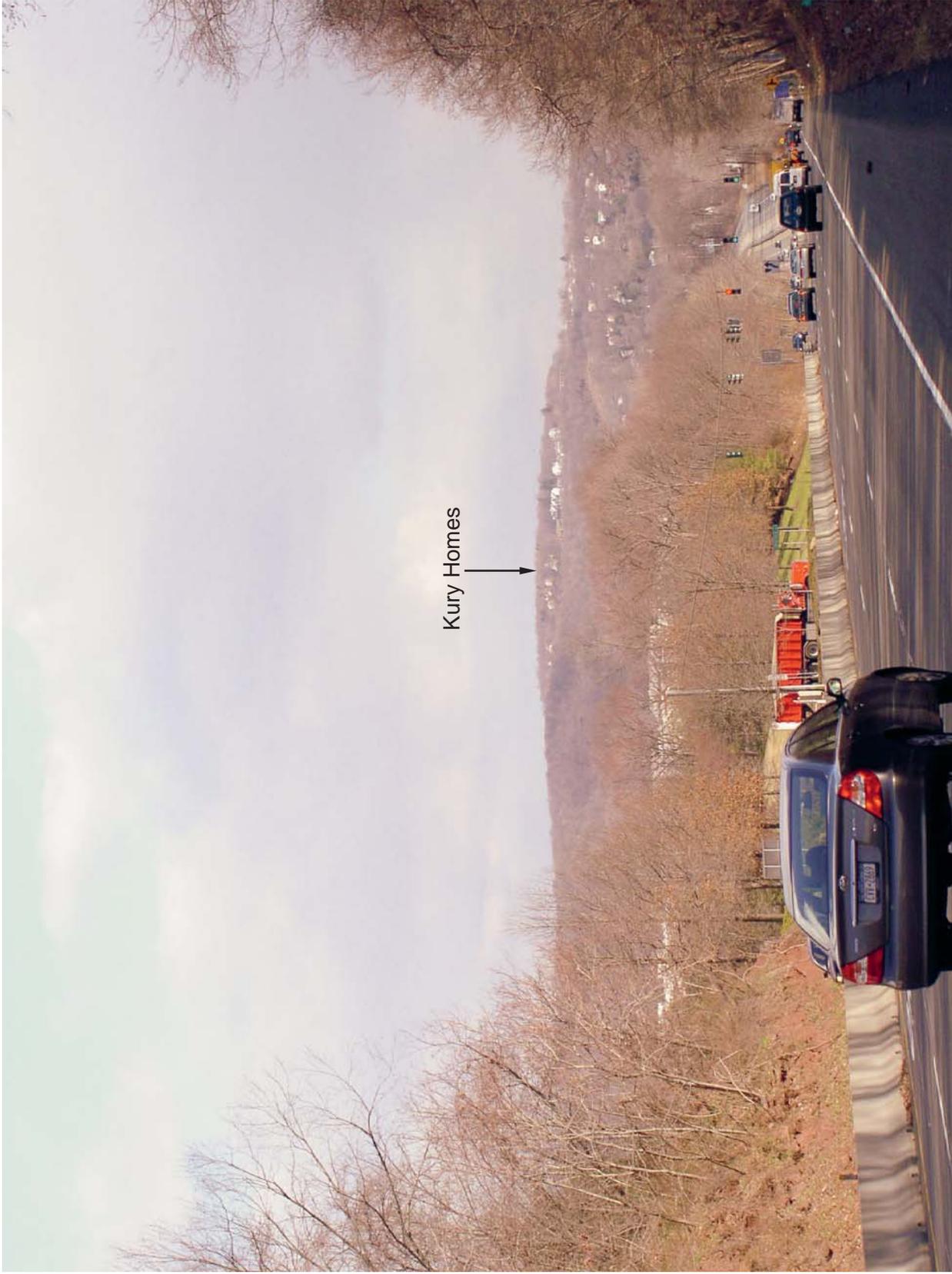
Figure 3.4-14: View 10
I-87 at Exit 12 Looking Eastbound
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 11/13/04



Figure 3.4-15: View 10s
I-87 at Exit 12 Looking Eastbound - Photo Simulation with Kury Homes
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 11/13/04



Figure 3.4-16: View 11
Route 59 at Crosfield Avenue Looking Eastbound
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 02/08/06

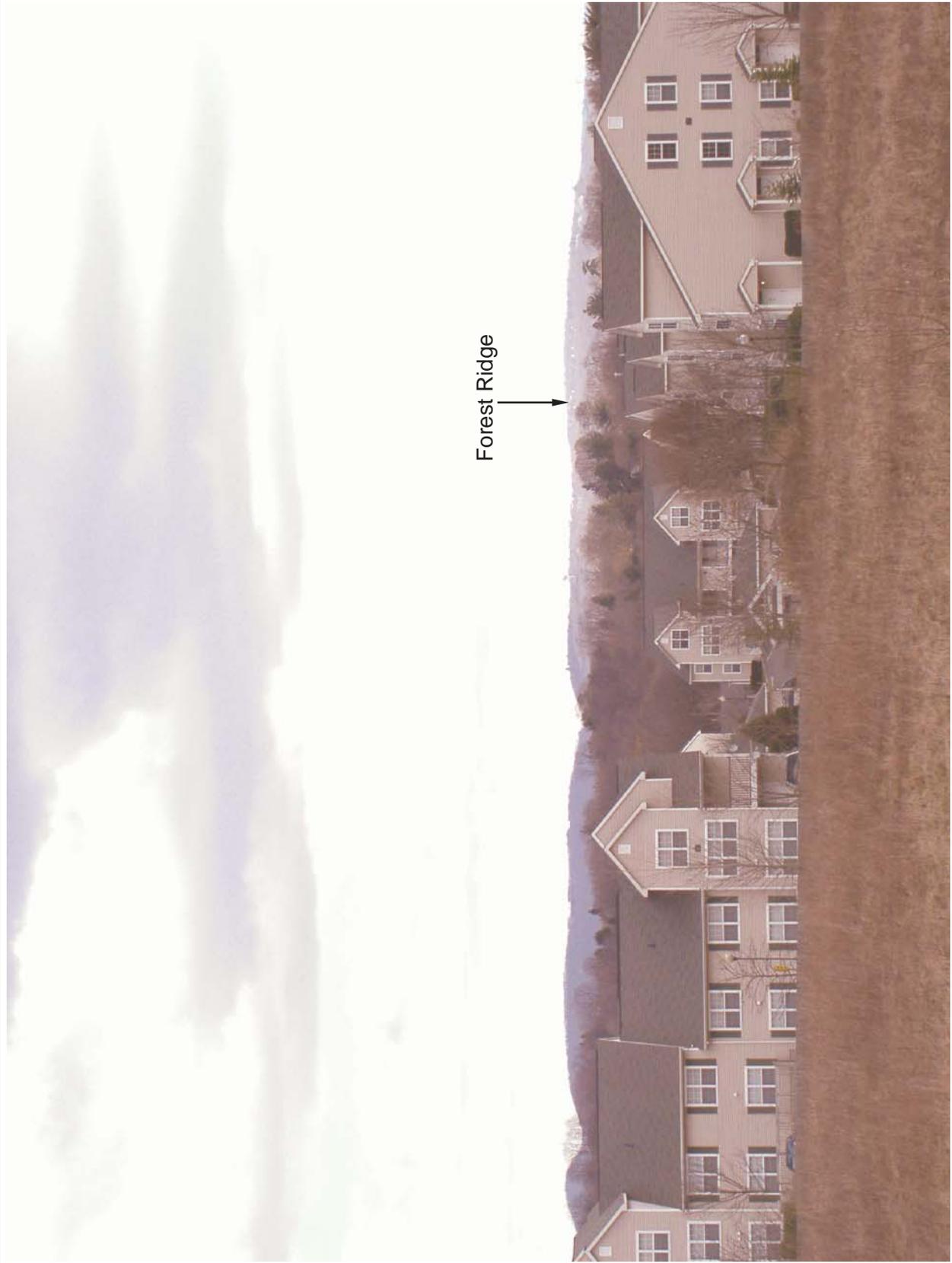


Kury Homes

Figure 3.4-17: View 11s
Route 59 at Crosfield Avenue Looking Eastbound - Photo Simulation with Kury homes
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 02/08/06



Figure 3.4-18: View 12
Route 9W at I-87 Looking North - No View of Kury Homes
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 02/08/06



Forest Ridge

Figure 3.4-19: View 13
Overlook at Avalon Gardens Looking East
Vicinity of I-84 Exit 14
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 02/08/06



Figure 3.4-20: View 13s
Overlook at Avalon Gardens Looking East
Vicinity of I-84 Exit 14 - Photo Simulation with Kury Homes
Kury Homes
Town of Clarkstown, Rockland County, NY
Source: TMA Photos, 02/08/06

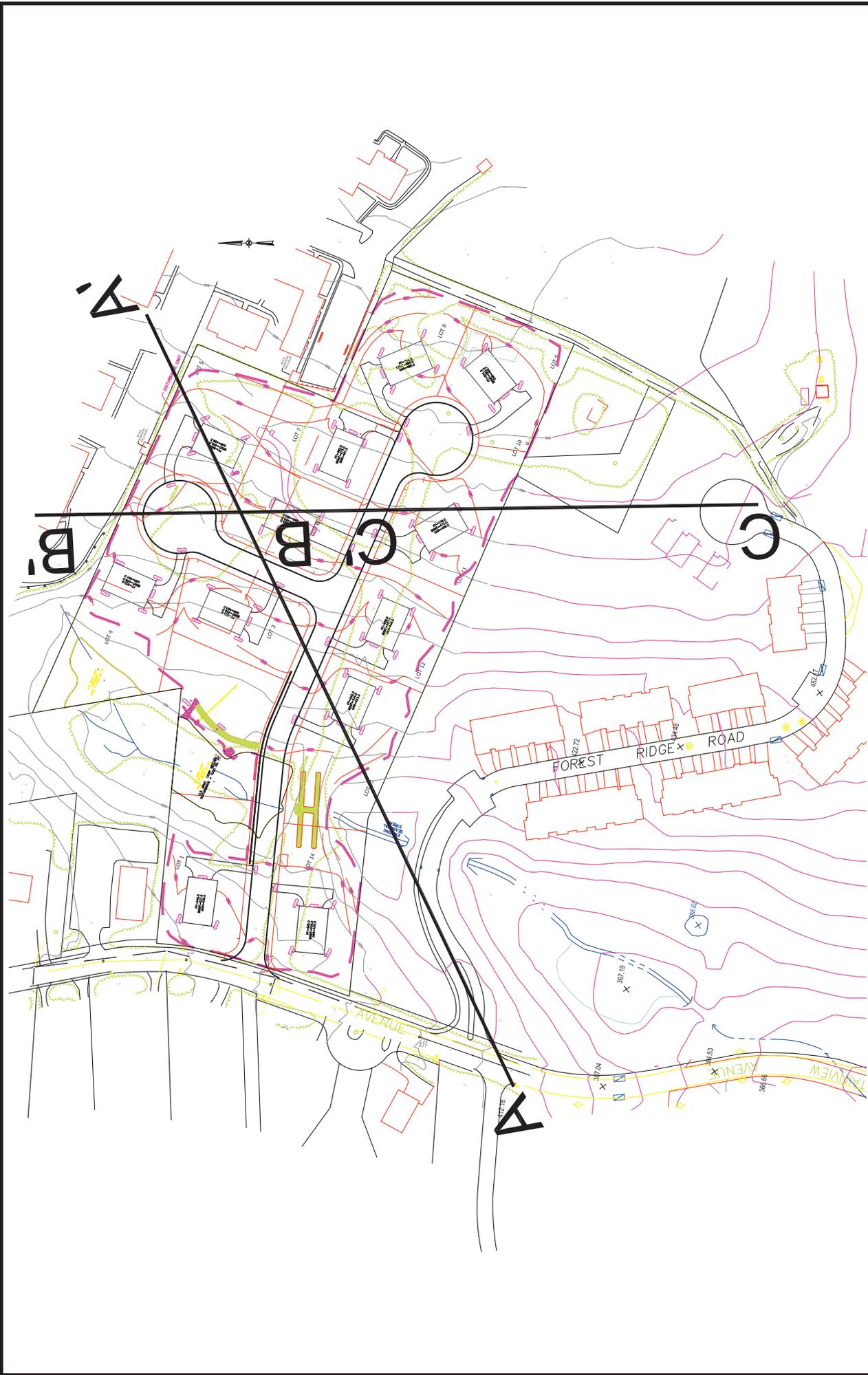


Figure 3.4-21: Key to Sight Line Profiles
 Kury Homes
 Town of Clarkstown, Rockland County, NY
 Base Map: Atzi, Scatassa & Zigler, P.C.
 Scale: 1 inch = 200 feet

No other views of the site were identified from other local roads in the site's immediate vicinity due to the topography and vegetative cover of the area.

Long Views of the Kury Home Site.

Figure 3.4-13 shows an aerial view of the roadway network from which the Kury Site may be visible from remote vantage points. Figure 3.4-14, view 10 shows the view from the NYS Thruway looking eastbound. Figure 3.4-15, view 10S shows a photo simulation of this view anticipated after construction of the Kury Homes project is complete. The Mountainview project, located north of the Kury Homes site, and the Forest Ridge development, located south of the Kury Homes site are both slightly visible from this vantage point. Construction of the Kury Homes project is similar in scale and visibility to these existing views.

Figure 3.4-16, View 11 depicts the view from NYS Route 59 looking eastbound. The Forest Ridge project and the homes on the south side of the Mountain are highly visible from this vantage point. Figure 3.4-17, View 11S, depicts a photo simulation of conditions upon completion of the Kury Homes project. Construction of the Kury Homes project is similar in scale and visibility to these existing views.

Figure 3.4-18, View 12 depicts the view from NYS Route 9W from the I-87 overpass looking north. Although the Forest Ridge development is highly visible from this location the topography precludes any view of the Kury Homes site.

Figure 3.4-19, View 13 depicts the view from Overlook in the vicinity of Avalon Gardens looking east. This location is more than 5 miles from the Kury Home site. Figure 3.4-20, View 13S depicts a photo simulation of conditions upon completion of the Kury Homes project. Construction of the Kury Homes project is similar in scale and visibility to the existing views and is only slightly visible from this vantage point.

3.4.2 Potential Impacts

The proposed project will result in the construction of 12 single family detached dwellings and subdivision roads. The view from Mountainview Avenue at its intersection with the new subdivision road will change from a view of woodlands to an entrance road - some of the residences will be visible from this location. However, the slight curve in the road and existing trees along the stream corridor that will be preserved will limit views into the site to a narrow corridor within 300 feet north and south of the site's frontage on Mountainview Avenue. It is further noted that all proposed new houses will be built receive new landscape treatment to create a high-quality residential neighborhood. As the proposed residential use is a predominate use in the site vicinity area, the changes in views at this location would be compatible to the surrounding uses.

Photo simulations have been provided to show views of what the project site will look like after construction is complete. Although a long view of the project will be visible from these roadways, the visual impact is consistent with current conditions. View 12 shows the view from Route 9W near the Thruway overpass looking toward Main Street in Nyack, and demonstrates that the Kury Homes site is not visible from this vantage point.

Sight line profile drawings were constructed to illustrate potential visibility of the project after development from Mountainview Avenue, Forest Ridge Road, and Mountainview condominiums where Views 1, 5 and 6 were taken. Figure 3.4-21 is a key map to the sight line profiles. The profiles are depicted in to-scale drawings generated from available topographic mapping and aerial photography, with actual tree lines shown. Woodland tree cover in the study area is assumed to be 60 feet in height, although there are trees on-site that are taller. The profiles depict not only the landscape features and buildings that are located directly on the line of the profile but those located close to the profile line for visual context. The illustrative profiles include horizontal elevation lines for reference.

Figure 3.4-22 sight line profile AA' illustrates the post-development sight line profile at View 1. Existing views into the site from the intersection of Mountainview Avenue and Forest Ridge Road are primarily of woods. As previously stated, existing vegetation at the southwestern portion of the project site will be preserved. In addition, woodland exists on the Forest Ridge site at this location. The proposed development is not expected to be visible from this vantage point.

Figure 3.4-22 sight line profile BB' illustrates the post-development sight line profile at View 5. While no openings are proposed in the existing perimeter tree cover, summertime views into the project from Mountainview condominium will be largely obscured by the existing perimeter vegetation, while wintertime views are expected to reveal portions of house facades.

Figure 3.4-22 sight line profile CC' illustrates the post-development sight line profile at View 6. Due to the large area of intervening woodland at this location, the proposed development is not expected to be visible at this location.

The described changes in views of the site will not result in a stark contrast in visual character as compared with the surrounding landscape, either in terms of type of use or in the make up of buildings and landscape treatment. The project as proposed will not dominate the view from any publicly accessible location.

3.4.3 Mitigation Measures

As no significant change to visual character will be anticipated to be evident from the perimeter of the site, from local roads, or from other publicly accessible locations, the project is not expected to adversely impact the visual environment.

As per Section 254-21.E of the Town's subdivision regulations, the Architecture and Landscape Commission may require the planting of new trees, consistent with the requirements of the Shade Tree Regulations. This would further "soften" the appearance of the new subdivision on the landscape. Additional landscaping treatments will be incorporated into the subdivision's design upon the Planning Board's substantive review of the plan. No further mitigation measures are proposed.

3.5 Construction-Related Effects

3.5.1 Air Quality

3.5.1.1 Existing Conditions

Air Quality Standards

Several air contaminants have been identified by the U.S. Environmental Protection Agency (EPA) as being of concern nationwide. These criteria pollutants include carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃) (also termed photochemical oxidants), particulate matter, sulfur dioxide (SO₂), and lead (Pb). Particulate matter standards regulate particles with diameters less than 10 microns which are inhalable. The sources of these contaminants, their effect on human health, and their final disposition in the atmosphere vary considerably.

Air pollutants emanating from construction projects include ozone, carbon monoxide, nitrogen oxides, and lead generated by emissions from construction traffic, as well as fugitive dust, "particulate matter", generated primarily from land disturbances.

The Clean Air Act, which was last amended in 1990, requires EPA to set **National Ambient Air Quality Standards** (NAAQS) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. **Primary standards** set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. **Secondary standards** set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. Except for sulfur dioxide and particulates, the primary and secondary standards are identical (refer to Table 3.5-1). The states were directed to develop state implementation plans (SIP's), which consist of emission reduction strategies with the goal of achieving the NAAQS by the legislated date.

The Act, which was adopted in 1970, was amended in 1977 primarily to set new dates for achieving attainment of NAAQS since many areas of the U.S. had failed to meet the deadlines. The 1990 amendments to the Clean Air Act in large part were intended to meet insufficiently addressed problems such as acid rain, ground-level ozone, stratospheric ozone depletion, and air toxins.

Existing Air Quality

The Clean Air Act sets forth a process for New York and all other states to achieve clean air through the submission of a State Implementation Plan (SIP) to the EPA for criteria pollutants which are not in attainment with the NAAQS. The SIPs describe how each state will attain and maintain air quality standards in non-attainment areas. At the present time, New York State is under mandate to develop SIPs to address ozone, carbon monoxide, and particulate matter of less than 2.5 and 10 microns.

**Table 3.5-1
National Ambient Air Quality Standards**

Pollutant	Primary Standard	Averaging Times	Secondary Standard
Carbon Monoxide	9 ppm (10 mg/m ³)	8-hour ¹	None
	35 ppm (40 mg/m ³)	1-hour ¹	None
Lead	1.5 µg/m ³	Quarterly Average	Same as Primary
Nitrogen Dioxide	0.053 ppm (100 µg/m ³)	Annual (Arith. Mean)	Same as Primary
Particulate Matter (PM ₁₀)	50 µg/m ³	Annual ² (Arith. Mean)	Same as Primary
	150 µg/m ³	24-hour ¹	
Particulate Matter (PM _{2.5})	15.0 µg/m ³	Annual ³ (Arith. Mean)	Same as Primary
	65 µg/m ³	24-hour ⁴	
Ozone	0.08 ppm	8-hour ⁵	Same as Primary
	0.12 ppm	1-hour ⁶	Same as Primary
Sulfur Oxides	0.03 ppm	Annual (Arith. Mean)	-----
	0.14 ppm	24-hour ¹	-----
	-----	3-hour ¹	0.5 ppm (1300 µg/m ³)

¹ Not to be exceeded more than once per year.

² To attain this standard, the expected annual arithmetic mean PM10 concentration at each monitor within an area must not exceed 50 µg/m³.

³ To attain this standard, the 3-year average of the annual arithmetic mean PM_{2.5} concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m³.

⁴ To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 65 µg/m³.

⁵ To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.

⁶ (a) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is ≤ 1, as determined by appendix H.
(b) The 1-hour NAAQS will no longer apply to an area one year after the effective date of the designation of that area for the 8-hour ozone NAAQS. The effective designation date for most areas is June 15, 2004. (40 CFR 50.9; see Federal Register of April 30, 2004 (69 FR 23996).)

Source: USEPA, 2004.

Construction-Related Effects

March 23, 2006

Presently, Rockland County is in a severe non-attainment area for 1-hour ozone, and is in a moderate non-attainment area for 8-hour ozone. Ozone has declined locally and regionally over the past 15 years. Significant further reductions are expected to occur through 2007 as a result of more stringent emission control programs. As required under the Clean Air Act, New York State drafted a SIP to achieve compliance with the ozone NAAQS by November 15, 2007.

The draft SIP is currently undergoing review by the EPA for approval. The draft SIP cites strategies to be implemented at the state level for reducing ozone including limits on gasoline volatility, lower gasoline sulfur levels, annual inspections for heavy duty diesel and other measures. Table 3.5-2 presents a summary of 2003 data for NYSDEC Region 3 which encompasses Rockland, Westchester, Orange, Putnam, Sullivan, Ulster, and Dutchess counties.

Table 3.5-2 Summary of NYS DEC Air Quality Data (2003)						
OZONE						
Monitoring Station	Highest 1 Hour Average (in ppm)	AAQS (in ppm)	12-Month Average (in ppm)	AAQS	Days/Year with Average >0.12 ppm	AAQS (in ppm)
White Plains	0.128	0.12	0.024	----	1	1 per year / 3 years
Mt. Ninham	0.112	"	0.031	----	0	"
Valley Central	0.109	"	0.029	----	0	"
Belleayre Mtn.	0.100	"	0.036	----	0	"
Millbrook	0.094	"	0.028	----	0	"
SULFUR DIOXIDE						
Monitoring Station	Running 3 Hour Average (in ppm)	AAQS (in ppb)	12-Month Average (in ppm)	AAQS (in ppb)	24-Hour Average (in ppb)	AAQS (in ppb)
Mt. Ninham	45.8	500	2.4	30	25	140
Belleayre Mtn.	22.5	"	1.7	"	15.1	"
INHALABLE PARTICULATES (less than 2.5 microns)						
Monitoring Station	Highest 24-hour concentration (in ug/m³)	AAQS (in ug/m³)	12-Month Average (in ug/m³)	AAQS (in ug/m³)	Days/Year with Average >150 ug/m³	AAQS (in ug/m³)
Belleayre Mtn.	49.0 ug/m ³	150	13.0 ug/m ³	50	0	per year / 3 years
Poughkeepsie	32.8 ug/m ³	"	10.7 ug/m ³	"	0	"
Newburgh	48.5 ug/m ³	"	12.4 ug/m ³	"	0	"
Mamaroneck	44.4 ug/m ³	"	12.2 ug/m ³	"	0	"
White Plains	55.4 ug/m ³	"	11.9 ug/m ³	"	0	"
LEAD						
Monitoring Station	Highest 24-hour concentration (in ug/m³)	AAQS	3-Month Average (in ug/m³)	AAQS (in ug/m³)	12-Month Average (in ug/m³)	AAQS
Walkkill	0.6	----	0.08	1.5	0.05	----
Walkkill	0.71	----	0.24	"	0.07	----
Scotchtown	0.05	----	0.03	"	0.03	----
Source: NYSDEC, Division of Air Resources, Bureau of Air Quality Surveillance, 2004.						

Monitoring stations are located at White Plains and Mamaroneck in Westchester County, Mt. Ninham in Putnam County, Valley Central, Newburgh, Wallkill (2), and Scotchtown in Orange County, Millbrook and Poughkeepsie in Dutchess County and Belleayre Mountain in Ulster County. There are presently no air quality monitoring stations within Rockland County.

Sampling information for other pollutants is not collected in NYS DEC Region 3 and is collected at locations distant from the project site. Information from distant locations would not be representative of ambient air quality conditions.

Land use in the immediate vicinity of the project site is primarily vacant, multifamily residential, single-family attached residential, or single family residential. There are no major stationary sources of air pollutant emissions in the immediate vicinity of the project site. No sensitive receptors such as nursing homes or health care facilities were observed in the vicinity of the project site.

3.5.1.2 Potential Impacts

Construction of the project is expected to last for a duration of approximately 12-18 months. Construction activities on the project site would have a potential impact on the local air quality through generation of fugitive, i.e., airborne dust. Fugitive dust is generated during ground clearing and excavation activities. Throughout the construction period, earth moving and the passage of vehicles over temporary dirt roads and other exposed soil surfaces also generates fugitive dust, particularly during dry and windy conditions. On-site mitigation measures are proposed as part of the project during construction to limit the dispersal of fugitive dust.

Temporary impacts on local air quality are expected to occur during the construction phase of the project from mobile source emissions of construction vehicles and equipment. These air emissions will occur in those portions of the project site where construction activity is proposed. The heaviest concentration of trucks on site is at the beginning of construction when it is likely two excavators and two skidders will be on site, for a total of four heavy vehicles. After the initial excavation is complete, daily operation is likely to consist of one large backhoe and one small backhoe working on a daily basis.

Construction-related air emissions will result primarily from the use of diesel fuel as a source of energy for construction vehicles and equipment. Some of the construction equipment may utilize gasoline as a source of fuel, but use of this equipment will be relatively low in comparison to diesel fuel consuming equipment and vehicles.

Well-maintained diesel engines are more fuel efficient than gasoline engines, however, they are a source of some air pollutants. Pollution from these engines comes from the combustion process in the form of exhaust.

Construction is expected to last approximately 12 to 18 months. The heaviest volume of construction traffic would occur at the beginning of the construction as site clearing and rough grading is conducted, and when asphalt and building materials are transported to the site. Based upon engineering estimates, the project will result in the export of approximately 21,700 cubic yards of material from the site. This represents approximately 1,008 truck loads of material to be removed from the site (assuming a 28 ton truck). The number of truck loads of material will range from less than two truck loads per day over an 18 month construction period to approximately 6 trucks per day if all the grading occurs in the first six months of the project.

3.5.1.3 Proposed Mitigation Measures

In accordance with the NYS DEC SPDES General Permit No. 02-01, construction activities would be phased so that no more than five acres would be unstabilized at any time during the construction period. Limiting the amount of disturbed soils on the site reduces the potential for fugitive dust generation at the site. The following practices will be followed:

- Minimize the area of grading at any one time and stabilize exposed areas with mulch and seed as soon as practicable;
- Minimize vehicle movement over areas of exposed soil, and covering all trucks transporting soil; and
- Spray unpaved areas subject to traffic with water to reduce dust generation;
- Stabilize the construction entrance to avoid tracking soil onto paved surfaces.

Methods to control dust also include the use of mulch or other temporary covers on exposed soil areas, limiting the movement of trucks and construction equipment over exposed soil surfaces and covering haul trucks. During dry weather conditions spraying water on unpaved areas subject to construction vehicle traffic would control dust. Paved areas should also be kept clear of loose dirt that can be re-entrained into the air during vehicle passage. The use of stone tracking pads or tire washing stations at access points to the site would greatly lessen the tracking of soil onto adjacent roads. Haul vehicles should always be covered to prevent dust emissions while in transit to the disposal site.

With minimal site maintenance and careful attention to construction activities, impacts from fugitive dust can be maintained below the NAAQS. Although exhaust emissions from construction equipment is not significant, particulates from diesel exhaust emission should also be controlled through proper tuning of the vehicles engine and maintenance of the air pollution controls. This would minimize additional contribution to site generated particulate emissions during construction.

The NYS DEC, NYS DOT, and the EPA are among the primary agencies responsible for programs and policies to reduce emissions which lead to ozone formation in New York State. Stringent limits on gasoline volatility, hydrocarbon vapor control during refueling, tailpipe emission standards, inspection and maintenance programs, warning systems when emission controls malfunction and other programs have contributed to the overall downward trend of ozone in metropolitan New York since the early 1980's.

The potential for emissions from construction vehicle exhaust can be reduced by the proper maintenance of engines and air pollution controls. The applicant will conform to emission reduction measures during construction through routine vehicle inspection and maintenance, application of diesel emission controls, use of clean diesel gasoline and efficient operations.

The EPA is in the process of setting new Federal standards for diesel engine emissions that will require significant reduction in air pollutants and will continue to reduce these pollutant levels in the future.

3.5.2 Noise

3.5.2.1 Existing Conditions

The project site does not presently generate significant levels of noise as it is vacant. The adjoining properties that are developed for multifamily or single-family attached dwellings would generate noise levels consistent with typical residential neighborhoods.

There are a variety of noise sources that contribute to the existing ambient noise levels in the project vicinity. These include the following:

- off-site vehicular traffic along Mountainview Avenue, and to a lesser extent, traffic traveling along the New York State Thruway are an element of the background noise audible from the site;
- off-site noise from overhead aircraft;
- off-site activities on nearby properties, including residential uses;
- "nature sounds", including birds, other wildlife, and trees rustling.

3.5.2.2 Potential Impacts

Noise is generally regarded as undesirable or unwanted sound. Most of the sounds heard in the environment are not composed of a single frequency, but are a band of frequencies, each with a different intensity or level. Levels of noise are measured in units called decibels. Since the human ear cannot perceive all pitches or frequencies equally well, these measures are adjusted or weighted to correspond to human hearing. This adjusted unit is known as the A-weighted decibel, or dBA.

Daytime noise levels would increase in the immediate vicinity of the site during construction activities. Construction activities and operation of construction equipment have been the subject of numerous noise studies completed for various projects in the region. Table 3.5-3 indicates representative maximum sound levels for the operation of diesel-powered equipment and activities at a range of receptor distances.

Table 3.5-3 Typical Construction Noise Levels (dBA)				
Equipment/Activity	Maximum Sound Level			
	50 feet	200 feet	500 feet	1000 feet
Backhoe	82-84	70-72	62-64	56-58
Blasting	93-94	81-82	73-74	67-68
Concrete Pump	74-84	62-72	54-64	48-58
Generator	71-87	59-75	51-67	45-61
Hauler	83-86	71-74	63-66	57-60
Loader	86-90	74-78	66-70	60-64
Rock Drill	83-99	71-87	63-79	57-73
Trucks	81-87	69-75	61-67	55-61

SOURCE: Tim Miller Associates, Inc.

To the average person, a noise level increase of 2 to 3 dBA is barely perceptible, an increase of 5 dBA is noticeable, and an increase of 20 dBA is perceived as a dramatic change. Annoyance frequently results from increases of 10 dBA or more, depending on the frequency and duration of the noise events.

The level of impacts of these noise sources depends on the type and number of pieces of construction equipment being operated, as well as the distance from the construction site. The noisiest period of construction will occur during site clearing and rough grading activities.

Noise levels due to construction activities will vary widely, depending on the phase of construction activities. Noise levels at the site property line are projected to temporarily range between 65 dBA and 90 dBA during construction, depending on the type and location of construction activity at a given time, which may represent an increase of 10 to 20 dBA.

It is anticipated that nearby properties would experience temporary elevated noise levels at occasional periods during the 18 month to 24 month construction period. This is a temporary, construction-related, unavoidable impact.

3.5.2.3 Proposed Mitigation Measures

The applicant would adhere to Chapter 205, Noise, of the Code of the Town of Clarkstown. The following are identified as being unnecessary sources of noise as they relate to construction activities and would not be conducted during the time periods specified below.

- Any sound of any bulldozer, back hoe or other excavation or earth moving equipment operated anywhere in the unincorporated portion of the Town of Clarkstown during the week from Monday through Friday prior to 7:00 a.m. and after 8:00 p.m., on Saturdays prior to 8:00 a.m. and after 6:00 p.m., and on Sundays prior to 11:00 a.m. and after 5:00 p.m.
- The sound of any gasoline or diesel engine or the sound produced by the operation of any motor vehicle, as defined by the Vehicle and Traffic Law of the State of New York, when said engine or vehicle is not properly equipped with a muffler, or which has defective equipment, or is operated so as to produce a sound not commonly associated with the operation of such vehicle, which is of a level that constitutes unreasonable noise.
- The sound of any power tool, machinery or equipment in use in any construction project during the week from Monday through Friday prior to 7:00 a.m. and after 8:00 p.m., on Saturdays prior to 8:00 a.m. and after 6:00 p.m., and on Sundays prior to 11:00 a.m. and after 5:00 p.m. in any residential zone when such sound is of a level that constitutes unreasonable noise.
- Any sound produced by the operation of any pump, compressor or generator during the week from Monday through Friday between the hours of 8:00 p.m. and 7:00 a.m., on Saturdays between the hours of 6:00 p.m. and 8:00 a.m., and on Sundays between the hours of 5:00 p.m. and 11:00 a.m. in any zone when such equipment is not housed within a closed structure or equipped with sound-suppressing equipment so as to prevent the sound of operation from reaching the adjoining property line.

No other mitigation measures are proposed.

3.5.3 Odors

3.5.3.1 Existing Conditions

The existing property is vacant and maintains no resources or depositions which would generate odors.

3.5.3.2 Potential Impacts

The project proposes construction of 12 single-family detached dwellings. No odors are expected to be produced as a result of construction activities except for the paving of the subdivision road - pouring the macadam surface will result in short-term odors which cannot be avoided.

3.5.3.3 Proposed Mitigation Measures

No mitigation measures are proposed.

3.5.4 Construction Traffic

3.5.4.1 Existing Conditions

There is currently no construction-related traffic associated with the undeveloped project site.

3.5.4.2 Potential Impacts

It is expected that construction-related traffic would access the site during the anticipated construction period which is anticipated to be approximately 12 to 18 months in duration. As discussed, the heaviest volume of construction traffic would occur at the beginning of the construction as site clearing and rough grading is conducted, and when asphalt and building materials are transported to the site. Based upon engineering estimates, the project will result in the export of approximately 21,700 cubic yards of material from the site. This represents approximately 1,008 truck loads of material to be removed from the site (assuming a 28 ton truck). The number of truck loads of material will range from less than two truck loads per day over an 18 month construction period to approximately 6 trucks per day if all the grading occurs in the first six months of the project. The duration of construction and associated truck traffic will vary depending on seasonal factors and market conditions.

Construction traffic would access the site via a stabilized construction entrance on Mountainview Avenue. Although individual contractors have not yet been selected for this project, it is anticipated that construction-related traffic would originate within Clarkstown and neighboring communities in Rockland County. Some workers would also be expected to travel from northern New Jersey as well as the lower Hudson River Valley region, including Orange and Westchester counties.

Construction workers residing locally in the Clarkstown area would be expected to use local roads to access Mountainview Avenue and the site. Workers in the larger region, construction vehicles, and material deliveries would be expected to travel the New York State Thruway and/or Route 59 to access the southern end of Mountainview Avenue, traveling north along Mountainview Avenue to the project site.

Once construction machinery reaches the site, it is likely to remain on site until the completion of grading and excavation. The heaviest volume of construction traffic is expected to occur at the beginning of construction as site clearing and rough grading is conducted, and during the months that concrete and building materials are transported to the site. Construction material storage, equipment staging and soil stockpiling will occur on graded stabilized areas of the site.

3.5.4.3 Mitigation Measures

The increase in construction-related vehicular traffic is a short-term, unavoidable impact, however, the construction of 12 single-family detached dwelling is not anticipated to have a significant impact on the local road network. The applicant will be required to adhere to the provisions Chapter 278, Vehicles and Traffic, of the Code of the Town of Clarkstown. This chapter establishes restriction on vehicle weights, traveling speeds, and parking within the Town and would limit potential impacts to Town roads from the operation and delivery of construction vehicles.

3.6 Community Facilities and Services

3.6.1 Police, Fire and Emergency Services

3.6.1.1 Existing Conditions

Police Protection

The Clarkstown Police Department provides police protection services to properties within the 40 square mile area that comprises the Town of Clarkstown. The police department headquarters is located at 20 Maple Avenue, New City, approximately 7 miles northwest of the project site.

The Town of Clarkstown police force provides police protection for the Town of Clarkstown including the hamlets of Bardonia, Central Nyack, Congers, Nanuet, New City, Rockland Lake, , Valley Cottage, West Nyack and portions of the Villages of Nyack, Spring Valley and Upper Nyack. The Clarkstown Police Department employs 169 police officers and 25 civilian employees who provide 24-hour per day coverage. A letter received from Chief of Police William T. Sherwood on October 31, 2003, indicates that the department handles approximately 55,000 service calls per year. The population data from the 2000 census indicates there are 82,082 persons residing in the Town of Clarkstown. Based upon these figures, the police department receives 0.056 calls per month per capita. There are presently 2.06 police officers per 1,000 residents.

Sworn personnel are also involved in various programs including Crime Prevention, Accident Investigation and Reconstruction, STOP DWI, Commercial Vehicle Enforcement, Intelligence, Youth Court, Explorers, Smart Sales, and Child Vehicle Restraint.

Typical response time to a residence at Kury Homes would be approximately four minutes.

Fire Department

The proposed development is within the Central Nyack Fire District and is served by the Central Nyack Fire Department which is a 100% volunteer fire department serving the Village of Nyack and points east generally to Route 303.

Based on information provided by the fire department, the department is headed by a Chief, 6 Assistant Chiefs, 6 Captains, and 2 Lieutenants who oversee firematic operations. The civil division of the department is headed by the President, Vice President, 3 Trustees, 2 Secretaries and a Treasurer who perform administrative operations.

The Nyack Department currently operates 8 engines, 2 tower ladder trucks, 2 heavy rescue vehicles, 1 dive rescue unit, 1 rescue boat, 1 brush unit, 6 Chiefs' and 6 Assistant Chiefs' vehicles. These units are staffed by 100 volunteer members who respond from two fire stations. In 2003, the department responded to approximately 1,000 alarms. These alarms consisted of structural fires, motor vehicle accidents (MVA's), automatic alarms, vehicle fires, brush fires, underwater rescue, mutual aid, and various other calls for assistance. The Nyack Fire Department does not respond to medical emergency calls. This service is provided by Nyack Ambulance Corps and Congers/Valley Cottage Ambulance Corps.

Although the Nyack Fire Department responds to a variety of emergencies, the majority of serious incidents are structural fires. These incidents have ranged from small one-room fires to large commercial fires requiring the response of over 20 fire departments from two counties. The Nyack Fire Department is assisted by many mutual aid departments. In addition to receiving mutual aid, the Nyack Fire Department has provided assistance to many Departments, located primarily in Rockland County.

Ambulance and Health Services

The Nyack Volunteer Ambulance Corps and the Congers/Valley Cottage Volunteer Ambulance Corps provide emergency ambulance service to the project area. Average response time is between five and six minutes. Each Corps has approximately 50 active volunteers and responds to an average of 1,200 calls per year. The combined coverage of these two ambulance corps serves an area of approximately 30 square miles within the Town of Clarkstown. Both Corps are private and members are volunteers.

Volunteer staff have been augmented with paid EMTs to cover day tours from Monday through Friday when most volunteers are at their full time jobs. The Executive Board and members determined this was necessary in order to meet their mission to provide the highest quality of pre-hospital emergency medical care to the community.

The primary hospital serving the project area is Nyack Hospital located in Nyack. Services offered by this hospital include: alcohol & substance abuse, ambulatory surgery, cardiopulmonary center, center for sleep & breathing, diagnostic imaging, emergency services, mental health unit, MRI center, nutritional services, occupational therapy, pediatrics, physical therapy, prostate cancer treatment, a quicklab, speech & hearing, and a wound care center.

Nyack Hospital operates approximately 350 beds including: medical, surgical, intensive care, recovery, maternity, pediatrics, and behavioral health services.

According to Nyack Hospital, its physicians represent all of the medical specialties and offer their patients the latest in medical care supported by nursing, clinical, and technical staff. Nyack Hospital also offers various outreach programs that present preventive medicine and wellness subjects.

3.6.1.2 Potential Impacts

Demographic multipliers published in the Urban Land Institute's Development Impact Assessment Handbook, projects approximately 3.63 persons will reside in each of the 12, four bedroom single family units. Thus, 44 persons are estimated to be generated by the project. In 2000, the Town of Clarkstown had an average family household size of 3.27 according to the U.S. Census Bureau. Since the ULI multipliers are specific to bedroom count, and would present a more conservative analysis, these multipliers are used for the demographic projections in this DEIS.

Police Department

Chief of Police, William Sherwood, of the Town of Clarkstown (October 31, 2003) indicates that the Town of Clarkstown was ranked as the eighth safest community in the nation and the fifth safest community of its size. The Police Department, the Police Commission, and the Town government officials are committed to providing the citizens of the Town of Clarkstown with professional service. The Police Chief's letter of October 31, 2003, states: "The addition of 12 dwellings at the Kury Homes site would not hinder the ability to provide these new residents with the same professional standard of police service."

Based on planning standards contained in the Development Impact Assessment Handbook published by the Urban Land Institute (1994), model factors for police protection recommend two (2) police personnel per 1,000 persons which further breaks down to 1.5 police personnel per 1,000 persons for residential uses and 0.5 police personnel per 1,000 persons for nonresidential uses. Based on this standard, 44 persons would increase police staffing needs by less than one tenth of a person which is not likely to have an impact on the Town's police personnel ratio of 2.06 personnel per 1,000 residents.

Fire Department

Based on planning standards published in the Development Impact Assessment Handbook, approximately 1.65 fire department personnel per 1,000 population is recommended to provide adequate fire protection service. Forty-four new residents would generate demand for an additional 0.07 fire department personnel. The project would generate \$10,804 in annual property tax revenues to the fire district to offset the additional demand (see Section 3.6.5 below). The proposed subdivision roads will be designed in accordance with Town road specifications and can adequately accommodate emergency service vehicles. Fire hydrants will be installed according to Town standards.

A letter was sent to the Central Nyack Fire Department on October 22, 2003 (refer to Appendix B correspondence). No response was received, therefore, it is assumed that there will not be a significant impact.

Emergency Medical Service

Based on planning standards contained in the Development Impact Assessment Handbook, approximately 36.5 calls per 1,000 population are made annually. Based on this standard, the 44 residents would increase EMS calls by less than 1.6 calls annually on average.

A letter was sent to the volunteer ambulance service providers on October 22, 2003 (refer to Appendix B correspondence). No response was received, therefore, it is assumed that there will not be a significant impact.

Hospital

Based on planning standards contained in the Development Impact Assessment Handbook, four (4.0) hospital beds should be provided per 1,000 persons. Based on this standard, the projected population increase associated with the Kury Homes project has the potential to increase the need for beds in hospitals serving the Rockland County area by less than a quarter of a bed. This is not considered a significant impact.

3.6.1.3 Mitigation Measures

Police

As stated in the police Chief's letter of October 31, 2003, there is no impact anticipated to police service in the Town of Clarkstown as a result of the construction of Kury Homes, therefore no mitigation is proposed.

Fire and Emergency Services

There is no significant impact anticipated to fire and emergency service provision in the Town of Clarkstown as a result of the construction of Kury Homes, therefore no mitigation is proposed.

The proposed project would generate revenues to mitigate potential increases in the cost to various municipal and other district services. (see Section 3.6.5 below).

3.6.2 Parks & Recreation Facilities

3.6.2.1 Existing Conditions

Mountainview Nature Park is an approximately 73-acre County park representing the largest tract of undeveloped land near the project site. This park is located west of Mountainview Avenue behind the single family residences adjacent to the road. This area was acquired by Rockland County in 1979. It was a gift from the Winston Perry family, donor's of the county's 50 percent share of the acquisition cost. It is located along a portion of the Palisades ridge and consists primarily of upland second growth woodland vegetation. A pedestrian connection to the park is available from Mountainview Avenue.

The Long Path

The "Long Path" is located to the east of the project site (refer to Figure 3.4-1 for its location). The Long Path is a 330± mile trail that extends from the New Jersey side of the George Washington Bridge to John Boyd Thacher State Park, about 15 miles west of Albany. For the first 40 miles it follows the Palisades Escarpment along the Hudson River. The trail then enters Harriman State Park where it intersects the Appalachian Trail. It then travels through Orange County towards Shawangunk Ridge and into the Catskill Forest Preserve.

Much of the southern portion of the trail is through the Palisades Interstate Park system and county and town parks. However, some of the links along the way are located on private property and there is some road walking in Rockland County and Orange County.

Within Rockland County, the Long Path travels north from Tallman Mountain State Park to Blauvelt State Park, across I-87/287 at Mountainview Road, behind the Mountainview and Forest Ridge developments, across Christian Herald Road, across Hook Mountain, Nyack Beach and Rockland Lake State Parks, to High Tor State Park and eventually Harriman State Park.

The portion of the trail near the project site is maintained by the New York-New Jersey Trail Conference. The trail route is blazed with turquoise color trail rectangular markers. No fires, camping, or littering is permitted, and only foot travel is allowed.

An aerial photograph of the project site and surrounding area is provided as Figure 3.3-1.

The Town of Clarkstown has over twenty parks to serve the recreational needs of its residents. According to the Annual Report of the Town of Clarkstown Parks Board and Recreation Commission, parkland in the Town of Clarkstown totals approximately 570 acres which equates to approximately 6.9 acres per 1,000 population. Of this 570 acres, approximately 300 are in active parkland and 270 are in passive recreation areas. This is well within the planning standards set forth by the National Parks and Recreation Association which recommends that 5 to 8 acres of parkland be provided per 1,000 population. Table 3.6-1 provides a list of parkland within the Town of Clarkstown and other major parkland in the County.

Table 3.6-1 Parkland in Clarkstown and Rockland County			
State Parks in Clarkstown	Acres	Other Major Parkland In County	Acres
Rockland Lake State Park	1,079	Palisades Interstate Park - Harriman Bear Mtn. Section	26,120
Nyack Beach State Park	61	High Tor State Park	564
Hook Mountain	676	Tallman Mountain State Park	687
County Parks in Clarkstown		Blauvelt State Park	590
Buttermilk Falls County Park	72	Kakiat County Park	353
Kennedy-Dells County Park	177	South Mountain County Park	273
Demarest Kill Recreation Area	30	Tackamack Town Park	105
Dutch Gardens	3	Viola Town Park	49
Mountainview Nature Park	73	Cheesecote Mountain Town Park	317
Town Parks in Clarkstown (Active Parkland)			
Germonds Park	78.3		
Congers Lake Memorial Park	77.9		
Lake Nanuet Park	33.5		
Zukor Park	30.4		
Kings Park	60		
Tennyson Park	9		
Hemlock Park	3.5		
Twin Ponds Park	24.9		
Source: Rockland County Planning Department Databook, 1994. Clarkstown Recreation Commission, 2004.			

3.6.2.2 Potential Impacts

The project will add 44 persons to the Town of Clarkstown population and would minimally increase demand for active recreation facilities. The additional population does not measurably reduce the current Town ratio of parkland to population. No significant adverse effect on recreational or open space resources is expected. A letter from the Town of Clarkstown Parks and Recreation Commission, dated October 31, 2003, states, "The Town can easily absorb another 51 residents into our parks and recreation system, and we look forward to their participation.

A conservation easement has been dedicated to Rockland County for use as park land in the Forest Ridge development south of Kury Homes. This conservation easement provides access to the Long Path from Mountainview Avenue, one quarter mile south of Kury Homes. Proximity

of the Long Path to the project site will enable residents of Kury Homes to easily access to the 330-mile length of the Long Path which extends both north and south of the project site. A trail connection to the Long Path also exists from the Mountainview condominium development. Thus, no additional trail connection is proposed as part of this proposed subdivision.

A letter from Charles F. Connington, Superintendent of Recreation and Parks, dated October 31, 2003, states: *"The town can easily absorb (up to) another 51 residents into our parks and recreation system, and we look forward to their participation."*

3.6.2.3 Mitigation Measures

It is the applicant's opinion that there is no area on the project site suitable for recreation land. In accordance with the Town's subdivision regulations, and in an effort to help the Town meet its goal of creating more local small scale parks, the project applicant proposes to pay a fee in lieu of recreation land for this project. As the project site formerly was developed with three dwellings, it is the applicant's position that only nine additional residential lots are being created that would be subject to the Town of Clarkstown \$7,250 per lot fee in lieu of recreation land. Based on the current Town fee schedule, the project applicant will pay a one-time recreation fee of \$65,250 for the 9 "additional" residential building lots. It is noted that this amount is subject to change, as the fee schedule is amended from time to time, and the fee amounts may be revised prior to approval of the subdivision plan. No further mitigation is proposed. In addition, the project will generate property tax revenues to the Town which may also be used for recreational purposes.

3.6.3 Library & Cultural Facilities

3.6.3.1 Existing Conditions

Libraries

The home library for residents of the proposed Kury Homes project would be the Nyack Library, which is part of the Ramapo Catskill Library System. In addition, the Town of Clarkstown has four libraries that are also part of the Ramapo Catskill Library System. The libraries are the New City Library, Valley Cottage Library, West Nyack Library, and Nanuet Library. . Collectively, these libraries have over 500,000 volumes and a circulation of 1.3 million volumes per year. This indicates a ratio of over 6 volumes per person.

Cultural Facilities

Rockland County is rich with cultural activities including art galleries, live theater performances, jazz clubs, museums, and movie theaters. Specifically, the Town of Clarkstown is home to the Rockland County Summer Theater Festival, the Rockland Lake Museum, and numerous movie theaters including the IMAX theater at Palisades Center.

3.6.3.2 Potential Impacts

The proposed Kury Homes community will add 44 persons to the Town of Clarkstown population and could increase the local demand for library & cultural facilities. Based upon planning standards published by the Urban Land Institute, the suggested ratio of books to population is 2.5 to 2.75 volumes per capita. The increased population from Kury Homes has

no impact on the ratio of books per person in the Town of Clarkstown. As such, no significant adverse effect on library or cultural resources is expected.

3.6.3.3 Mitigation Measures

As no significant impact on library or cultural facilities is anticipated, no mitigation measures are proposed at this time.

3.6.4 Schools

3.6.4.1 Existing Conditions

The project site is served by the Nyack Union Free School District. The District includes three K-5 elementary schools, one middle school (grades 6, 7 and 8), and one high school. The Nyack Union Free School District geographically includes the hamlets of South Nyack, Central Nyack, West Nyack and Valley Cottage and portions of the Village of Nyack.

According to information provided by the School District¹, enrollments have been increasing in the District since 1990. As of October 2005, 2,923 students were enrolled in the District. Table 3.6-2 below summarizes the 2005-2006 grade distributions and enrollments of the various schools within the District:

Table 3.6-2 Nyack Union Free School District (2005-2006 School Year)		
School	Grades Served	2005 Enrollment
Liberty Elementary School	K-5	477
Upper Nyack Elementary School	K-5	399
Valley Cottage Elementary School	K-5	412
Nyack Middle School	6-8	631
Nyack High School	9-12	946
BOCES Special Ed Placement		54
Private Special Education Placement		4
TOTAL		2,923
Nyack Union Free School District, 2005. .		

All of the schools in this School District received a rating of “5” from the New York State Public School Report Card of Comprehensive Information (1999-2000) with respect to the “district need to resource capacity”. This rating states that “this is a school district with average student needs in relation to district resources capacity”.

¹ Information provided via Phone conversation 12/15/2004 with Gail Fleur, Public Information officer of the Nyack Union free School district. Enrollment information updated as per e-mail from Carleen Millsaps, Assistant Superintendent of Business Administration for the Nyack Union Free School district, dated October 20, 2005 (see Appendix B, Correspondence.)

3.6.4.2 Potential Impacts

Demographic multipliers for common configurations of standard housing types for school-age children published in the Urban Land Institute's Development Impact Assessment Handbook project that 0.87 school age children per household would be generated by a four-bedroom single family residence in the northeast region. Based upon this multiplier, approximately 10 students are projected to reside in the Kury Homes development. This multiplier was deemed acceptable by the Nyack Union Free School District.³

As discussed in 3.6.5 below, the project will generate additional revenues to the School District. Based on a cost of \$16,298 per student, Kury Homes would result in \$162,980 annually in school district costs.

The Kury Homes development would generate \$197,972 in property tax revenues annually to the school district. Thus, the overall impact on the district's budget is projected to be positive with an annual surplus of \$34,992. The projected revenues presented are based on 2005-2006 tax rates for the Nyack Union Free School District.

Construction is projected to take 12 to 18 months which is likely to be spread over two school years. The increased student population is also expected to be distributed throughout the grade levels, resulting in an average of less than one student per grade. The multi-year phasing and distribution of students will allow for an additional 10 students to be integrated to the local schools with minimal impact. No further mitigation is anticipated. Conversation with the Public Information officer for the Nyack School District⁴ indicated absorption of the new students at Kury Homes should not present a capacity problem for the school district.

The District expressed a desire to review the proposed Kury Homes site plan to address transportation safety, bus turning radius and bus stop location. The DEIS and development plans will be forwarded to the School District for review and comment.

3.6.4.3 Proposed Mitigation Measures

Since no impacts to the school district are anticipated, no mitigation measures are proposed.

3.6.5 Fiscal Analysis

The proposed project is a residential development consisting of 12 single family residential dwellings. The project will including a public road and appurtenances. The homes would be served by municipal sewer and water provided by United Water New York. .

The single family units are proposed as four bedrooms, which will contain up to 4,000 square feet of gross floor area. According to the applicant, the estimated sales price of the single family residences is \$850,000.

Demographic multipliers, published in the Urban Land Institute's Development Impact Assessment Handbook, projects approximately 3.63 persons will reside in the four bedroom single

³ E-mail record from Carleen Millsaps, Assistant Superintendent of Business Administration for the Nyack Union Free School District. A copy of this E-mail, dated October 20, 2005 is included in Appendix B, Correspondence.

⁴ Information provided via phone conversation, 12/15/2004 with Gail Fleur, Public Information officer of the Nyack Union free School district.

family units. This would indicate a population increase of 44 persons. By Comparison, 2000 U.S. Census Data indicate that the average household size for the Town of Clarkstown is 2.90 persons, and the average family size is 3.27 persons. As mentioned previously, of this total, it is projected that 10 schoolage children (grades K-12) would be generated.

Existing and Projected Tax Revenues

Table 3.6-2 summarizes the taxes generated by the property presently in comparison to the taxes to be generated by the project. Tax revenues are based on current 2005 tax rates (2005-2006 tax rate for the Nyack Union Free School District).

Current and Projected Assessed Value

The current assessed value of the project site is \$149,200. According to the Clarkstown Assessor's office, In 2004, the total annual property taxes, including highway taxes, generated by the project site and paid to the Town of Clarkstown are \$2,931, while the annual property taxes paid to the school district are \$7,187.

The market value of the proposed project would total \$10,200,000. Using the current 2004 residential assessment ratio (RAR) of 37.5 percent, the total assessed value of the proposed project would be \$3,825,000.

Current and Projected Tax Revenues

As presented in the table below, annual tax revenues to the Town of Clarkstown would be approximately \$75,857. The net increase in total tax revenues generated by the site and paid to the Town is approximately \$72,926 annually. According to the Town of Clarkstown, Receiver of Taxes, the Town's tax rate includes town governmental services, highway maintenance, public parking, lighting and special assessments for water and sewer districts; the taxes to the Nyack Fire and Ambulance Districts are also included.

Table 3.6-3 Current & Projected Taxes Generated by Project Site				
Taxing Authority	Tax Rate ⁽¹⁾	Current Taxes (\$)	Projected Taxes - Total (\$)	Difference Between Current & Projected Taxes (\$)
Rockland County	\$4.0186	\$600	\$15,371	\$14,772
Town of Clarkstown	\$13.5159	\$2,017	\$51,698	\$49,682
Open Space	\$0.1061	\$16	\$406	\$390
Nyack Ambulance District	\$0.0671	\$10	\$257	\$247
Central Nyack Fire	\$2.8247	\$421	\$10,804	\$10,383
Consolidated Lighting District	\$0.2107	\$31	\$806	\$775
Rockland Sewer No. 1	\$1.2112	\$38	\$4,633	\$4,595
Refuse /Garbage District**	\$95.0000	\$0	\$1,140	\$1,140
Garbage Collection**	\$350.0000	\$0	\$4,200	\$4,200
County Solid Waste**	\$50.0000	\$0	\$600	\$600
Consolidated Water No. 1	\$0.3433	\$51	\$1,313	\$1,262
Total Town of Clarkstown		\$2,931	\$75,857	\$72,926
Nyack Union Free School District	\$44.8936	\$6,698	\$184,444	\$177,746
Nyack Schools Library Tax	\$3.2800	\$489	\$13,529	\$13,040
Total Nyack School District Tax		\$7,187	\$197,972	\$190,785
TOTAL		\$10,718	\$289,200	\$278,482

Notes:
⁽¹⁾ Tax Rate per \$1,000 of Assessed Valuation.
 ** Tax Rate is assessed per unit
 Municipal taxes are based upon 2004 tax rates.
 Nyack Union Free School Tax Rates are for the 2005-2006 school year.

The net project-generated annual tax revenues to Rockland County would be approximately \$15,371 annually.

Annual tax revenues to the Nyack Union Free School District would be approximately \$197,972 . The net increase between the total current tax revenues generated by the site and paid to the School District and the total future project-generated revenues for the subdivision is projected to be approximately \$190,785.

Costs Associated with the Proposed Project

An approximate estimate of costs to the Town of Clarkstown associated with the proposed residential development may be obtained by obtaining a reasonable composite of current costs on a per capita basis and multiplying this amount by the anticipated population of the proposed project.

Through a review of the Town's operating budget, the amount of expenditures can be derived and, by dividing the population into the amount of expenditures, the per capita cost can be determined. To estimate the portion of the per capita cost which is paid for by property tax revenues (as opposed to other forms of income to the Town), the per capita cost is multiplied by the proportion that property tax revenue comprises of the overall income stream. In this instance, the adopted 2004 municipal budget for the Town of Clarkstown including the *General Town Fund, Highway Maintenance, Water, Sewer, Lighting, Public Parking and Fire Services* amounts to \$111,605,119. The total amount to be raised by taxes is \$67,221,209.

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This represents 60 percent of the total municipal budget. The 2000 estimated service area population for the Town is 82,082. Dividing the budget to be raised by taxes by the 2000 population results in a per capita municipal cost of \$816 per person for municipal services.

As described earlier, the proposed project is projected to increase the population of the Town of Clarkstown by 44 persons, including 10 school aged children. With the current annual per capita property tax levy for municipal services estimated at \$816, the additional costs payable through the property tax which would be induced by the proposed Kury Homes residential development to the Town of Clarkstown are projected to be approximately \$35,904.

As presented in Table 3.6-3, overall revenues to the Town from the proposed Kury Homes development would amount to a total of \$75,857. Thus, an annual surplus of \$39,953 is projected to the Town of Clarkstown. A portion of this surplus would be used by the Nyack Ambulance and Central Nyack Fire District.

The budget for the 2005-2006 school year for the Nyack Union Free School District totaled approximately \$57,744,500 . With a current enrollment of 2,923 students, per-student costs are \$19,755. The portion of the budget to be raised through taxation is \$47,638,899 - approximately 82 percent of the budget is met through the property tax levy. Thus, the cost per student to be raised through property taxes is approximately \$16,298 per student. Projected costs to the school district would be \$162,980 annually based on an estimated 10 students that would be generated by the project.

The proposed Kury Homes development will generate \$197,972 in annual property tax revenues to the school district. Thus, the overall effect on the district's budget is projected to be an annual surplus of \$34,992.

3.7 Utilities

3.7.1. Water Supply

3.7.1.1 Existing Conditions

The project site is currently served by United Water of New York and is located in the Central Nyack WD 013. United Water New York draws about 80 percent of its water supply from wells throughout Rockland County. The remaining 20 percent is supplied from Lake DeForest Reservoir in Clarkstown which has a capacity of 5.6 billion gallons. The treatment capacity of the water treatment plant for the reservoir is approximately 20 million gallons per day. In 2003, the average daily demand placed on the entire United Water New York system was 28.54 million gallons per day and maximum daily demand was 37.35 million gallons per day.

Water pressure conditions for Mountain Brook Estates, now the Forest Ridge development, were described by United Water New York¹. Water from this project “*would be fed from the 12” water main we have in Mountainview Avenue. This area is served by our 250,000 gallon Valley Cottage elevated tank located, about 2,800 feet to the north on Mountainview Avenue. The tank has an overflow elevation of 630’ U.S.G.S. The elevations of the proposed townhouses range between 414’ and 490’, which will result in pressures at the dwellings ranging between 55 and 90 psi.*” According to the project engineers, there is no water pressure issue in the project vicinity. A letter from United Water New York (July 3, 2003) does not indicate any water pressure problem in the system. The letters are included in Appendix B.

3.7.1.2 Potential Impacts

Water supply for the Kury Homes subdivision will be provided by United Water New York. Based upon projections provided by the project engineer, design estimates for a four bedroom dwelling are 110 gallons per day per bedroom. Twelve (12) four-bedroom homes would consume 5,280 gallons of water per day. Sufficient water supply exists to serve the project. However, the capacity of the water treatment plant would ultimately limit the ability to provide water supply. The water treatment plant for the Lake DeForest Reservoir has a 20 million gallon per day capacity. During periods of peak demand, the plant produces approximately 8 million gallons per day, leaving an excess capacity of approximately 12 million gallons per day. The 5,280 gallons per day represents less than one tenth of a percent of the excess capacity of the water treatment plant. Based upon the letters from United Water New York, (July 19, 1996 and July 3, 2003) it is expected that adequate water supply will be available to the project.

A copy of the site plan and a request for Willingness to Serve the Kury Homes project, including a commitment as to the availability of adequate water supply and water pressure, has been sent to United Water of New York, dated February 13, 2006. A copy of this request is included in Appendix B, correspondence.

Per New York State requirements, new construction is required to utilize water saving toilets and fixtures. The proposed development will conform to these requirements. In the event of a drought situation, the residences would adhere to any water-saving measures required by Town of Clarkstown regulations.

¹ Letter from Philip Federico, United Water New York, to Atzl, Scatassa & Zigler PC, dated July 19, 1996.

Based upon United Water of New York's analysis of Mountainview Estates (now Forest Ridge) which is to the south of the proposed project, no water pressure problems are anticipated. A utility plan for the project will be submitted to United Water of New York for their review.

3.7.1.3 Proposed Mitigation Measures

Upon completion of the project, it is anticipated that \$1,313 will be generated annually in taxes to the water district. These funds will be used for the operation and maintenance of United Water New York distribution facilities. No further mitigation is proposed.

3.7.2 Electric, Gas and Oil

3.7.2.1 Existing Conditions

Electricity and gas is provided to the project area by Orange & Rockland Utilities. Local oil distribution services are provided by a variety of local oil companies.

3.7.2.2 Potential Impacts

The 12 single family residences are anticipated to be heated with home heating oil, electricity, or natural gas. Energy consumption will occur during construction and occupancy of the proposed residences. During construction, energy will be used for power equipment and various construction vehicles. Once construction is completed and the residences occupied, energy will be required for space heating, air conditioning, and the use of household appliances and electrical equipment. Electrical and gas service to the project site will be provided by Orange & Rockland Utilities.

Based on telephone communication on December 16, 2004, with Orange & Rockland Utilities², the individual residences are projected to demand an average of 850 kilowatt hours of electricity per month and an average of 150 million cubic feet (mcf) of gas per month.

Orange & Rockland Utilities does not anticipate any problems accommodating the projected electrical or gas demands created by the proposed development (conversation on December 15, 2004 with Orange & Rockland). The new residents would pay fees to the utility company for electric and gas service.

The design and plans for the development will take into account the New York State Energy Code. All utility lines will be underground and any connections will meet the Town Code and industry specifications.

3.7.2.3 Proposed Mitigation Measures

No impact is anticipated to the supply of electricity, home heating oil or natural gas, therefore no mitigation measures are proposed.

² Phone Conversation on 12/16/04 with Joe Nash of Orange & Rockland Utilities.

3.7.3 Communications

3.7.3.1 Existing Conditions

Telephone service is provided by a variety of companies including Verizon, AT&T, and Optimum Voice. Cellular telephone phone service is provided by Verizon, Cingular, and Sprint. Cable television service is provided by Cablevision including digital cable online services. Satellite television services are provided by Direct TV or Omnivision TV.

3.7.3.2 Potential Impacts

Potential impacts from the introduction of 12 additional single family homes are expected to be minimal due to the number of competing providers for local and long distance telephone service, cellular telephone service, and cable and satellite television distribution available in the area.

3.7.3.3 Proposed Mitigation Measures

No impact is anticipated to communication services, therefore, no mitigation measures are proposed.

3.7.4 Solid Waste Management

3.7.4.1 Existing Conditions

For single-family dwellings, refuse is picked up by private companies contracted by the Town of Clarkstown. A Town refuse fee of approximately \$445 per household per year is collected as part of the municipal taxes. Household garbage is picked up twice per week, recycling once per week and bulk trash is picked up once per month. Refuse is taken to a transfer station on Route 303 in West Nyack and then disposed of in approved landfills in upstate New York.

3.7.4.2 Potential Impacts

Based on 0.00175 tons per person per day, the projected 44 persons would generate approximately 2.3 tons per month of solid waste. Of this total, the project will generate 1.725 tons per month of non-recyclable solid wastes and 0.575 tons per month of recyclables. This represents less than one tenth of a percent increase in solid waste to the Town of Clarkstown and is not expected to have significant impact.

3.7.4.3 Proposed Mitigation Measures

Based on current tax rates, an annual town refuse fee of \$445 will be collected from each residence for solid waste services. The project is expected to generate \$5,340 annually in refuse taxes to offset the additional demand. No further mitigation is proposed.

3.7.5 Wastewater

3.7.5.1 Existing Conditions

The project site is located within the Rockland County Sewer District #1. Wastewater is treated at the Rockland County Water Pollution Control Facility (WPCF) located in Orangetown, New York. The design capacity of the WPCF plant is approximately 29 million gallons per day. Demand on the WPCF is approximately 19 to 24 million gallons per day, thus available capacity is approximately 5 million gallons per day³ during peak periods.

3.7.5.2 Potential Impacts

The project will be sewered by an existing sewer main which runs along Mountainview Avenue. The proposed project will be served by facilities owned and operated by Rockland County. The proposed wastewater collection system is shown on the enclosed engineering plans.

The project will be connected to the existing sewer main in Mountainview Avenue. Manholes will be spaced at intervals where the sewer changes grade or direction. All of the proposed house connections will be either 4-inch polyvinyl chloride (PVC) or cast iron pipes with a minimum slope of two (2) percent that will extend just past the right-of way line. Clean out traps will be provided and 6-inch transition pipes will be provided and capped.

The sewer system design for Kury Homes reflects the required or recommended standards set forth in the "Ten States" standards promulgated by the Great Lakes - Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers and recommended by the NYS DEC.

The sanitary sewage flow from the site is proposed to go to the Rockland County Water Pollution Control Facility (WPCF) via existing gravity sewer mains. Based on up to 440 gallons of sewage production per day per household, a total of 5,280 gallons per day of sewage is projected to be generated from the proposed development. This represents approximately 0.1 percent of the available capacity of the WPCF. The effluent undergoes a two stage treatment and is chlorinated before being ultimately discharged into the Hudson River at a location in the Village of Piermont. Based upon the analysis of the project engineer, it is expected that the dilution of the discharge would be of sufficient magnitude so as not to cause an adverse impact.

3.7.5.3 Proposed Mitigation Measures

When the proposed project is developed, it is estimated that the projected taxes to the Rockland County Sewer District will be \$4,633. These funds will be used for the operation and maintenance of Rockland County Water Pollution Control Facility (WPCF).

As adequate capacity exists at the Rockland County WPCF to handle the increased sewer flow from the project, no additional mitigation is proposed beyond the payment of the necessary taxes by future residents and dedication of the on-site collection system to the Town.

³ Phone conversation on 12/15/04 with Joseph La Fiandra of Rockland County Water Pollution Control Facility.

3.8. Historic and Archaeological Resources

3.8.1 Existing Conditions

Methodology

The New York State Office of Parks, Recreation and Historic Preservation was contacted to determine whether the project site should be assessed for the potential presence of archaeological (prehistoric) and/or historic resources. In a letter dated March 27, 2002, the New York State Parks, Recreation and Historic Preservation (OPRHP) commented that an archaeological site exists in or adjacent to the project site, and that a Phase 1 archaeological survey is warranted.

In response to OPRHP comments, a Phase IA and 1B investigation was conducted by Sheffield Archaeological Consultants (May 2002), a firm qualified to conduct archaeological surveys in accordance with 36 CFR 61. The Phase 1A and 1B Cultural Resources Investigation of the Kury Homes Development Property is included as Appendix E of this DEIS. The objectives of the Phase 1A and 1B investigation were: to determine the presence or absence of Native American (prehistoric) or historic period cultural resources within or immediately adjacent to the proposed development; assess the research potential and significance of any identified cultural resources; and, determine any impacts upon such resources.

Prior to the beginning of field investigations, several sources were consulted to acquire historical or archaeological information on the project site area. The background research consisted of the examination of historical maps, local and county historical studies, and relevant prehistoric and archaeological literature. These sources were consulted for references to known or potential historical or archaeological resources within one mile of the project area.

Several local residents, a Rockland County Park Ranger, and an avocational archaeologist were also consulted for information regarding the project site and local archaeology and history.

The archaeological consultants conducted an intensive pedestrian survey of the project area. This involved a walkover and observation of the landscape during which a search was made for evidence of cultural features, artifacts, and landscape alteration and disturbance.

Lastly, archaeological test excavations were conducted within the property in areas determined to have potential for containing evidence of prehistoric or historic cultural resources as indicated by background research, environmental assessment, and pedestrian reconnaissance. Appendix E includes a map indicating the locations of test pits.

Results

The earliest map available with any indication of settlement and ownership in the project area is the 1859 Beers, French and Smith map of Rockland County. On this map Mountainview Avenue (not named) is present in its entirety. The study area falls within lands owned by "J. Lyon". Just east of this property, in Nyack, is Oak Hill Cemetery. Other maps reference the same family name, however, no genealogical data were found to indicate the potential importance of the family.

The project area is a ten-acre portion of the much larger Lyon property. The pedestrian survey reveals the presence of a frame cottage typical of the early twentieth century. A local informant indicated that the house that had been located on-site was the groundskeeper or servant of an estate served by a mansion in existence in the 1940s.

3.8.2 Potential Impacts

The results of the Phase 1A and 1B survey conclude that no archaeological resources are present on the property. The project site does not have the potential for containing evidence of prehistoric occupation or use.

While several historic period structures and ruins were present within the property at the time the survey was conducted, including a cottage, garage, garden shed, an equipment and animal shed, and a Cape Cod style and ranch-style home, the Phase 1A and 1B survey concluded that the structures lacked research potential and are not architecturally or historically significant. The structures did not meet the required criteria of eligibility for nomination to the National Register of Historic Places. Since preparation of the Phase 1A and 1B analysis, these structures have been demolished.

Based on the results of the Phase 1A and 1B survey, the proposed residential subdivision will not have any impact on archaeological or historic resources.

3.8.3 Proposed Mitigation Measures

No mitigation is proposed, based on the conclusions of the Phase IA and IB surveys.

4.0 ALTERNATIVES

Section 617.9(b)(5) of the regulations implementing SEQRA requires that a draft environmental impact statement include a description and evaluation of the range of reasonable alternatives to the proposed action which are feasible, considering the objectives and capabilities of the project sponsor. The range of alternatives must include the "No Action" alternative.

In addition to the No Action alternative, the Scoping Document for this DEIS requires an evaluation of two alternatives in addition to the No Action: an alternative standard layout; and, an average density layout. These three alternatives are described and evaluated below. A summary matrix of the varying impacts associated with each alternative is provided as Table 4-1 at the end of this section.

4.1 No Action Alternative

In accordance with SEQRA regulations, the No Action alternative must evaluate the adverse or beneficial impacts that would occur in the reasonably foreseeable future in the absence of the proposed action. For purposes of this analysis, the No Action alternative assumes that the proposed project site would remain vacant.

The No Action alternative would be inconsistent with the objectives of the applicant/property owner. In order for the entire site to remain in its current state or as open space, the Town or a land conservation organization would need to acquire the property for open space purposes and compensate the property owner accordingly.

Under the No-Action alternative, none of the impacts identified in this report, whether adverse or beneficial, would occur.

Geologic Resources: There would be no disturbance to geology, soils, or topography under the No Action alternative. There would be no grading disturbance to 8.3 acres of the project site, nor alteration of 3.6 acres of slopes in excess of 15 percent. The No Action alternative would not result in any potential disturbance to bedrock.

Water Resources: Like the proposed action, the No Action alternative would not result in any impact to a flood plain. There would be no 0.1 acre disturbance to the federally-regulated wetland. The No Action alternative would not result in the alteration of drainage patterns on the project site nor the introduction of 2.4 acres of impervious surfaces that would increase stormwater runoff rates. The No Action alternative would not result in any increase in nutrient loading beyond what currently results from overland flow carrying nutrients from the existing vacant land. There would be no impact to groundwater resources.

Biological Resources: No disturbance or removal of 6.97 acres of woodland vegetation would occur under the No Action alternative. The site would continue to provide habitat and cover for local wildlife. There would be no disturbance to 0.1 acres of wetland habitat.

Aesthetic Resources: The site would remain vacant. Existing views of the site from Mountainview Avenue and other viewing locations would remain unaltered.

Construction-related Impacts: Under this alternative, the short term impacts associated with construction including noise and fugitive dust would not occur. There would be no temporary increase in vehicular traffic resulting from construction activities.

Community Facilities and Services: There would be no demand placed on community services and facilities as a result of the No Action alternative.

Utilities: Under this alternative, there would be no demand placed on water supply, wastewater treatment facility capacity, electric or gas.

Historic and Archaeological Resources: There are no historic or archaeological resources located on the project site .

A comparison of impacts between the proposed action and this alternative is provided in Table 4-1.

4.2 Alternative Subdivision Plans

As per the Scoping Outline adopted for this DEIS, two alternative layouts have been prepared and are compared to the proposed action's impacts. The alternatives have been designed by the project engineers, Atzl, Scatassa, and Zigler, P.C. For purposes of this discussion, "Standard Layout" refers to the proposed action which is the subject of this DEIS.

4.2.1 Standard Alternate Layout

This alternative would also result in a 12-lot subdivision for purposes of constructing 12 single-family detached dwellings.. Given the project site's size and configuration, there are few options to design an alternative standard, i.e., conventional, layout that conforms to existing zoning bulk requirements. Figure 4-1 illustrates a standard alternate layout that proposes a subdivision with 12 single-family detached dwellings that have been located closer to the front lot line and have smaller front yard setbacks. The reduced setback would require a zoning variance. The result would be that there would be slightly less clearing disturbance along the periphery of the project site as a result of the change in setback. Table 4-1 identifies summarizes impacts with this alternative.

Geologic Resources: This alternative would result in approximately 0.4 acres less disturbance than the Standard Layout . The amount of slopes in excess of 15 percent that would be disturbed would be the same as the proposed action. Like the Standard Layout, this alternative would not likely result in any disturbance to bedrock.

Water Resources: Like the Standard Layout , this alternative would result in less than 0.1 acres of wetland disturbance. There would be no flood plain impacts. The amount of impervious surface proposed under this action would be approximately the same as the Standard Layout , therefore, the need for and design of stormwater management facilities would be the same. The length of driveways would be reduced minimally.

Biological Resources: This alternative would result in 0.2 acres less woodland disturbance than the Standard Layout . With the exception of the stream and wetland ecosystem, the majority of the site would be disturbed - this would be the same under the Standard Layout .

Aesthetic Resources: Views of the project site post-development would be almost the same as with the Standard Layout . The visual character of the subdivision would be slightly different when viewed from the internal road system as the proposed dwellings would have smaller front yard setbacks than the Standard Layout . In addition, the smaller front yard setbacks may allow additional vegetation to be preserved at the periphery of the site.

Construction-related Impacts: Under this alternative, the short term impacts associated with construction including noise and fugitive dust be the same as the Standard Layout . There would be the same level of construction activity, thus short-term increases in vehicular traffic would be the same as the Standard Layout .

Community Facilities and Services: This alternative would result in the same number of dwellings, population and school age children as the proposed action, thus, impacts to community facilities and services would be the same.

Utilities: Under this alternative, demand placed on water supply, wastewater generation, electric and/or gas would be the same as with the proposed action.

Historic and Archaeological Resources: There are no historic or archaeological resources located on the project site .

A comparison of impacts between the proposed action and this alternative is provided in Table 4-1.

4.2.2 Average Density Alternative

This alternative would also result in a 12-lot subdivision for purposes of constructing 12 single-family detached dwellings. Figure 4-2 illustrates an average density layout that proposes a subdivision with 12 single-family detached dwellings that have been located along a single cul-de-sac; the shorter cul-de-sac road has been eliminated. This average density layout would be allowed under Section 278 of New York State Town Law.¹

This alternative would allow 50-foot wide strip of natural vegetation to be preserved along the easterly property boundary at the rear of lots 7 and 8. In addition, a 20-foot strip of undisturbed open space could be preserved on the north and east sides of lot 5, and on the north side of lots 3 and 4. Compared to the Standard Layout, this alternative would result in a reduction in clearing disturbance of 0.6 acres, a reduction in impervious surface of 0.5 acres and a reduction in woodland disturbance of 0.6 acres. Figure 4-2a illustrates the land cover for this alternative, highlighting the areas that would remain as undisturbed woodland.

Table 4-1 summarizes impacts with this alternative.

Geologic Resources: This alternative would result in approximately 0.6 acres less disturbance than the proposed action. The amount of slopes in excess of 15 percent that would be disturbed would be reduced by 0.1 acres as compared to the Standard Layout. Like the proposed action, this alternative would not likely result in any disturbance to bedrock.

¹ Note that Section 154-10B of the Town's subdivision regulations is intended to regulate cluster subdivisions. However, the subdivision regulations reference Section 281 of the NYS Town Law, which regulates "municipal improvements in streets"; the regulations governing approval of cluster developments are now contained in Section 278 of the NYS Town Law.

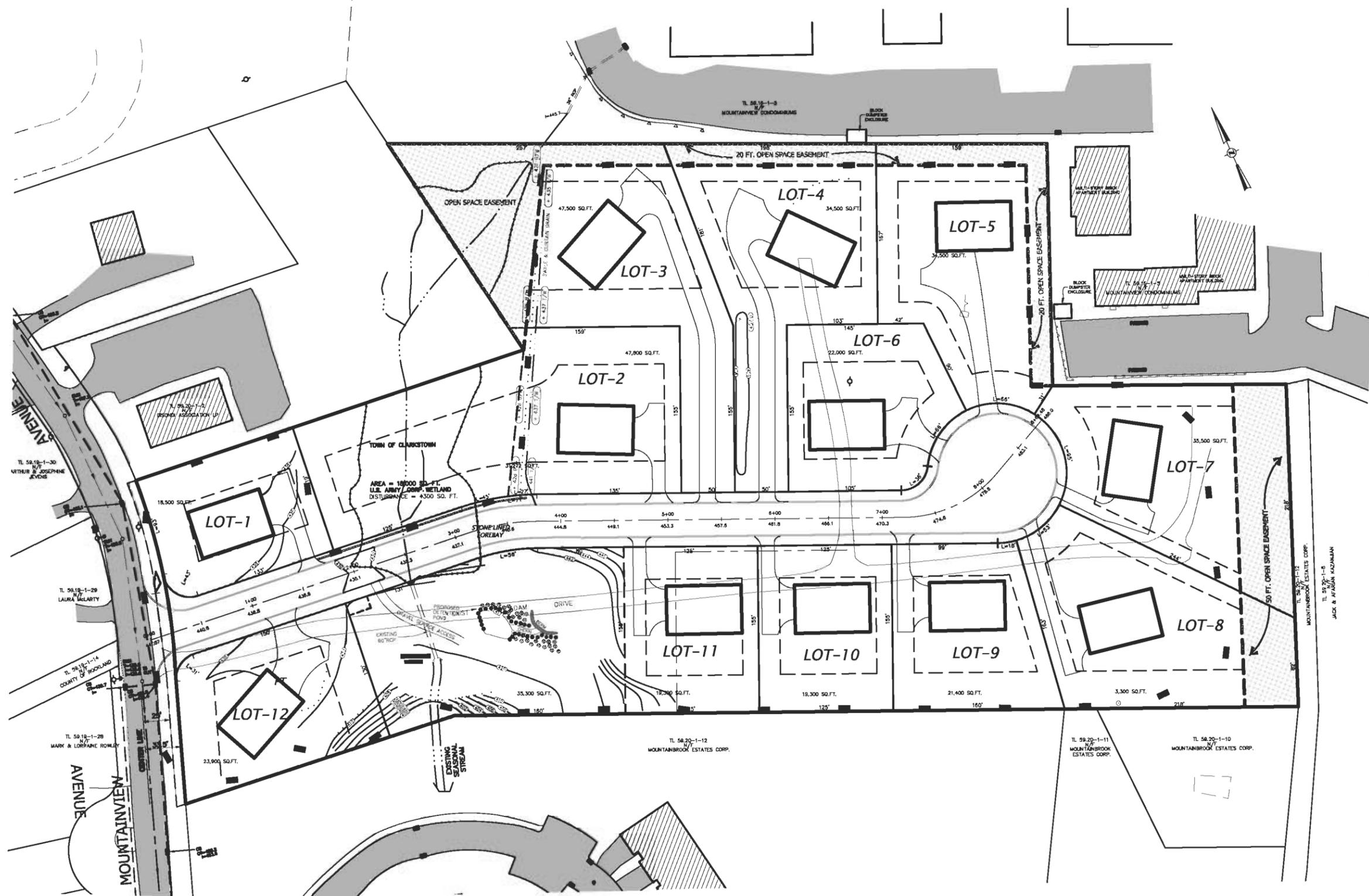


Figure 4-2: Average Density Alternative
 Kury Homes
 Town of Clarkstown, Rockland County, New York
 Source: Atzl, Scatassa & Zigler, P.C., November 17, 2005
 Scale: 1 inch = 100 feet





Figure 4-2a: Average Density Post Development Land Cover

Kury Homes

Town of Clarkstown, Rockland County, New York

Source: Atzl, Scatassa & Zigler, P.C., March 1, 2004

Scale: 1 inch = 100 feet



Water Resources: Similar to the proposed action, this alternative would result in less than 0.1 acre of wetland impacts. There would be no flood plain impacts. The amount of impervious surface proposed under this action would be reduced by 0.5 acres compared to the Standard Layout as a result of the elimination of the second cul-de-sac road. The need for and design of stormwater management facilities would be similar.

Biological Resources: This alternative would result in 0.6 acres less woodland disturbance than the Standard Alternative. *As previously stated, this action would create conservation easements along the north and east site boundaries.*

The project site may provide a wildlife corridor between the County park to the west of the site and the open space areas to the east. Development of the project would reduce the overall width of this natural corridor. The open space area along the perimeter of the Average Density alternative would provide an expanded area of undisturbed woodland.

Aesthetic Resources: Views of the project site post-development would have additional screening along the northern and eastern project site boundaries provided as a result of conservation easements that would be established. The visual character of the subdivision would be different when viewed from the internal road system since the project will contain only one cul-de-sac instead of two as in the Standard layout.

Construction-related Impacts: Under this alternative, the short term impacts associated with construction including noise and fugitive dust be the same as the proposed action. There would be the same level of construction activity, thus short-term increases in vehicular traffic would be the same as the proposed action.

Community Facilities and Services: This alternative would result in the same number of dwellings, population and school age children as the proposed action, thus, impacts to community facilities and services would be the same.

Utilities: Under this alternative, demand placed on water supply, wastewater generation, electric and/or gas would be the same as with the proposed action.

Historic and Archaeological Resources: There are no historic or archaeological resources located on the project site .

4.3 Impact Comparisons

Table 4-1 below summarizes the quantitative impacts associated with the proposed subdivision plan and the various alternative layouts.

Table 4-1 Alternative Impact Comparisons				
Area of Concern	No Action	Standard Layout	Standard Layout Alternative	Average Density Layout
Land Use				
Impervious Surfaces (acres)	2.77	2.4	2.4	1.9
Lawn/ Stormwater (acres)		6.1	5.9	4.5
Total Project Cut (cubic yards)	0	67,100	63,000	34,000
Total Project Fill (cubic yards)	0	45,400	42,000	47,000
Net Cut to be exported (cubic yards)	0	21,700	21,000	-13,000
Residential Units				
Residential Units	0	12	12	12
Natural Resources				
Total Site Area (acres)	10.3	10.3	10.3	10.3
Total Area of Disturbance (acres)	0	8.5	8.1	7.9
Woodland Disturbance (acres)	0	5.6	5.2	5.0
Wetland Disturbance (acres)	0	<0.1	<0.1	<0.1
Lawn/Already Disturbed (acres)	0	2.8	2.8	2.8
Steep Slope Disturbance (>15%) (acres)	0	3.4	3.4	3.3
Community Resources				
Population	0	44	44	44
Residential Trips (peak hour)	0	16	16	16
Water Demand / Sewage Flow (based on 110 gallons per bedroom per day)	0	5,280	5,280	5,280
School-age Children	0	10	10	10
Notes: Estimates are approximate. Source: Atzl, Scatassa, & Zigler, P.C.; Tim Miller Associates, Inc., 2005.				

5.0 ADVERSE ENVIRONMENTAL IMPACTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

The development of the proposed project will result in some adverse environmental impacts which cannot be avoided. Although these impacts cannot be avoided, many can, to some extent, be mitigated as noted in each of the preceding chapters. Some of these impacts will be temporary or short term impacts associated with the construction phase of the project, while others will be long term impacts associated with occupancy of the residences.

Short Term Impacts

- ◆ presence of construction and delivery vehicles on the site and on surrounding roads;
- ◆ localized increase in noise levels due to operation of construction vehicles and equipment; and

Long Term Impacts

- ◆ loss of woodland vegetation and associated wildlife habitat;
- ◆ loss of less than 0.1 acres of federally-regulated wetland
- ◆ increase in resident population and concomitant increase in demand for community services; and
- ◆ alterations to existing topography to grade areas for the proposed road, cul-de-sacs, and home sites.

6.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The proposed project would commit approximately 8.5 acres of land to residential use for the construction of 12 single family detached dwellings. Once committed to residential use, the site would be unavailable for other uses for the foreseeable future.

After completion of the proposed development, approximately 1.8 acres, or 17.5 percent of the site, would remain undisturbed and in open space.

The finite resources that would be irretrievably committed by the proposed action would be materials and energy required to construct and maintain the subdivision upon completion. Construction would involve the commitment of resources including concrete, asphalt, steel, lumber, paint products, and other building materials.

The operation of construction equipment would result in consumption of fossil fuels and other finite energy sources. When completed, the new residences would require electricity and the use of fossil fuels either directly as heating fuel or indirectly as electricity.

7.0 EFFECTS ON THE USE AND CONSERVATION OF ENERGY RESOURCES

Short-term and long-term energy consumption is anticipated. Short-term energy consumption would occur during construction of the proposed subdivision. Energy would be consumed to power equipment and construction vehicles.

Once constructed, the 12 dwelling units would be inhabited by households that would place demand on various energy sources. In a residential dwelling, energy is consumed for space heating, air-conditioning, water heating, refrigerators, appliances and lighting. According to data published in the 1997 Residential Energy Consumption Survey (Source: U.S. Department of Energy), approximately 123 million BTUs are consumed per household annually in New York State. It is expected that 12 households would demand 1.5 billion BTU¹ of energy annually.

Electricity, provided by Orange and Rockland Utilities, would be extended to the project site via electrical lines along poles that run along Mountainview Avenue. For space heating, gas heating would be used.

Energy conservation is regulated at the state level. The design and plans for residential buildings must comply with the New York State Energy Conservation Construction Code. The code specifies basic requirements that are mandatory for all buildings. Requirements apply to heating and cooling systems, the hot water system, electrical system, material and equipment specifications and, sealing the building envelope.

¹ BTU, or British Thermal Unit, is a unit of heat equal to the amount of heat required to raise one pound of water one degree Fahrenheit at one atmosphere pressure; equivalent to 251.997 calories.

8.0 GROWTH INDUCING IMPACTS OF THE PROPOSED ACTION

As indicated in previous sections of the document, the proposed project will add a projected 44 persons to the population of Clarkstown.

The project site's environs is served by public water and sewer service. Therefore, the project will not introduce any new infrastructure that could induce future growth.

The project will promote increased construction employment and, on a cumulative basis, an increased long term demand for goods and services that will have a steady multiplier effect in the project area.

The market value of the proposed project would total approximately \$10,200,000. Construction of the project would require a commitment of person hours of labor, which can be viewed as beneficial to the community, the local economy, and the construction industry with respect to the generation of jobs. Based on labor hour estimates published by the Urban Land Institute (1994), and accounting for secondary employment resulting from the construction, this project would generate approximately 24 person-years of employment in the various construction trades associated with this project.

It is anticipated that a number of construction workers would come from Rockland County and nearby New York counties in the lower Hudson River valley as well as northern New Jersey. These workers are expected to have a positive impact on existing local businesses that provide such services as food convenience shopping, gasoline, etc.

Future residents would utilize area retail, personal service, and other commercial services. It is estimated that approximately 30 percent¹ of a typical household's income is spent on retail goods and services. As stated earlier, a household income of \$200,000 to \$275,000 annually would be required to support a residence valued at \$850,000. Thus, it is estimated that 12 households would spend upwards of approximately \$958,000 annually. A portion of these expenditures would be made at area restaurants, supermarkets, local convenience stores, apparel stores, and service businesses such as gas stations and hair salons.

¹ According to figures from the US Bureau of Economic Analysis published in the ULI Development Assessment Handbook, up to 40 percent of Total Personal Consumption Expenditures is composed of Shopping goods and Convenience goods. To provide a conservative analysis an estimate of 30 percent has been used for this DEIS.