

Draft Environmental Impact Statement (DEIS)

MOUNTAINSIDE WOODS

Hilltop Lane and Vista Drive
Town of Lloyd
Ulster County, New York

Town of Lloyd Tax Lots
87.004-3-14; 87.004-5-1.2; 87.004-5-2

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Date of Submission: March 8, 2011

Date of Acceptance:

Date of Public Hearing:

Date Comments Due: 10 days after the Public Hearing is Closed

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Region 3 – Division of Regulatory Affairs
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Highland, New York 12528

Town of Lloyd Building Department
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Ulster County Health Department
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Interested Agencies:

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Town of Lloyd Water and Sewer Department
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Town of Lloyd Police Department
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Town of Lloyd Recreation Commission
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Highland Central School District
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1.0 EXECUTIVE SUMMARY

1.1 Introduction and Background

Mountainside Woods is a proposed residential community on three parcels of land (Section 87.004 Block 3, Lot 14 and Block 5, Lots 1.2 and 2) totaling 153.07 acres. As proposed, the project involves the subdivision of approximately 40.11 acres of the site into 175 single family residential lots. The remaining 112.96 acres of the site will be protected from further development through a conservation easement and then dedicated to the Town or a local not-for-profit as open space. The site is currently vacant land.

On or about November 24, 2009, the applicant, Mountainside Woods, LLC, filed a petition with the Town of Lloyd Town Board seeking to amend the zoning for the site. The largest of the three parcels, SBL 87.004-5-1.2, had previously been proposed for development as the Westport Senior Residential Development. That 84 acre parcel is currently zoned “Planned Residential Development” (“PRD”) and was the subject of a long pending application to develop the site with 324 age-restricted residential units and associated amenities. The adjoining parcels are 37.39 acres (SBL 87.004-5-2), zoned R-1 and R-1/4 and 31.68 acres (SBL 87.004-3-14), zoned R-1.

The proposed plan takes the density proposed for the Westport property (324 units), reduces it to 175 single family homes, and distributes that density across all three properties.

The Westport project had been the subject of a completed DEIS and DSEIS and a public hearing was held in October, 2007. The other two parcels had only been proposed for projects at the conceptual stage and have never been the subject of an environmental review.

After reviewing preliminary sketches for the proposed single family subdivision, the Town Board declared its intent to become Lead Agency, under the New York State Environmental Quality Review Act (“SEQR”) on January 7, 2010. Acting in its capacity as Lead Agency, the Town Board, by resolution, issued a Positive Declaration on February 10, 2010, determining that the proposed project may have a significant impact on the environment and instructed the applicant to prepare a Draft Environmental Impact Statement (“DEIS”).

On March 10, 2010, the Town Board held a public scoping session to consider and discuss the potentially significant adverse impacts related to the proposed project that were to be addressed in the DEIS. The final scope was adopted on April 7, 2010, a copy of which is included in Appendix A of this DEIS.

The DEIS is an initial statement prepared by the Applicant that describes the proposed project, studies potentially significant environmental impacts, proposes mitigation measures and examines possible alternatives. Once the DEIS is determined to be complete by the Lead Agency, it is circulated to all involved and interested agencies and made available for public review.

Once the Lead Agency has determined that the DEIS is ready for public review, it will schedule and conduct a public hearing concerning the action.

1.2 Site Description and Proposed Action

The project site is 153.07 acres in size and is located on Hilltop Lane and Vista Drive in the Town of Lloyd, Ulster County, New York. The site consists of three Town of Lloyd tax lots, Section 87.004, Block 3, Lot 14 and Section 87.004, Block 5, Lots 1.2 and 2.

These three tax parcels form an irregularly shaped area of land that is bordered by single and multi-family residences, municipally owned land, roads and facilities as well as privately owned vacant land. Illinois Mountain and the Town of Lloyd water treatment plant and reservoirs are located west of the property.

The property contains variable slopes ranging from level to severely sloped. Generally the site slopes downward from the east and the west to a central low corridor which contains a stream that flows in a northerly direction. The existing site cover consists predominantly of woods with some low brush cover. There are existing streams and water bodies within these wooded areas. There are approximately 10.265 acres of wetlands on the site, all jurisdictional wetlands are under the jurisdiction of the U.S. Army Corps of Engineers.

The three parcels are zoned Planned Residential Development (“PRD”)(SBL 87.004-5-1.2); R-1 (SBL 87.004-3-14) and R-1 and R-1/4 (SBL 87.004-5-2). The Applicant is seeking a rezoning of all properties to PRD, which allows for single family residential development. A more complete description of the site can be found in Section 2.1 of this DEIS.

The Applicant is proposing to develop 175 single family homes that will be serviced by municipal sewer and water. Access to the site will be provided via Vista Drive/Toc Drive and Hilltop Lane. The Applicant is proposing to extend Vista Drive and connect it to Hilltop Lane. At the north end of the current terminus of Vista Drive a traffic circle is proposed from which three primary roads will lead to residential areas. Pedestrian access will be provided via 4 foot sidewalks, located on both sides of the streets, throughout most of the development. Two parking spaces will be available at each home site, with one in the garage and one on the driveway. Additional parking will be available on the street.

The 175 single family residences will be marketed with three bedrooms, two and one half baths, a one car garage and a basement. The Applicant anticipates that some of these homes will be constructed with 4 bedrooms, rather than 3, although the footprint of the structure will remain the same. All homes will be held in fee simple ownership and the roads, sewer and water infrastructure, stormwater facilities, recreational amenities and open space will be dedicated to the Town of Lloyd. Once the dedication is accepted, the Town will be responsible for the maintenance of this infrastructure and open space.

Pockets of open space will be retained throughout the area of development, which could be developed by the Town of Lloyd as parks and/or playgrounds. The Applicant is proposing to connect the development to the Hudson Valley Rail Trail (“Rail Trail”) via a “pedestrian only” walkway. In addition, the applicant is working with Scenic Hudson, a regional not-for-profit, to explore connecting the trails being developed at Berean Park, to the south, with the Rail Trail, through the development of trails on the project site. The Applicant is also proposing to construct a seasonal parking area for trail access that will contain approximately 18 spaces.

The project will be constructed in five phases over a period of 5 ½ years. Assuming construction begins in April 2012, it is expected that the full build-out would be completed around October, 2017. Between 21 and 49 units and associated infrastructure are projected to be constructed during each phase. Depending on market demand and completion of the required infrastructure, the phasing and/or timing of the construction may vary. A more complete description of the construction phasing plan can be found in Section 2.3 of this DEIS.

1.3 Summary of Significant Potential Impacts and Proposed Mitigation

The following topics were identified by the Town Board as issues requiring further study and consideration in the DEIS.

Table 1.3A: Summary of Potential Impacts and Proposed Mitigation		
ISSUE	POTENTIALLY SIGNIFICANT IMPACTS	PROPOSED MITIGATION
<i>Water Resources: Surface Water and Groundwater</i>	<ul style="list-style-type: none"> • Minor disturbance to 100 year flood plain in 5 areas; • Water quality impacts from erosion and sedimentation; • Increase in impervious areas can increase peak stormwater flow rates and degrade water quality; • Water quality may be impacted by pesticides and herbicides applied during landscape maintenance. • Classification of the dams may need to be revised. • Contamination of groundwater from stormwater. 	<ul style="list-style-type: none"> • Obtain Flood Plain Development Permit from Town of Lloyd Building Department; • Prepare and implement Erosion and Sediment Control Plan in accordance with DEC standards; • Prepare and implement Stormwater Pollution Prevention Plan in accordance with DEC regulations; • Implement green development techniques including conserving natural areas, roof top disconnects and grass swales to reduce stormwater volume and improve the water quality of runoff; • Phasing Plan will minimize the amount of site disturbance at any one time; obtain waiver from DEC for disturbances over 5 acres; • Homeowners will apply herbicides and pesticides in accordance with all local and State regulations.

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<p><i>Soils, Topography and Geologic Resources</i></p>	<ul style="list-style-type: none"> • Potential for encountering ground water during site work; • Presence of rock may necessitate use of blasting or other rock removal special techniques; • Physical disturbance of existing soils can cause soil erosion and sedimentation. • Removal of 72,000 yards of earth from the site which will increase truck traffic during construction. • Construction on steep slopes can exacerbate erosion. 	<ul style="list-style-type: none"> • Prepare and implement grading plan to minimize amount of earthwork necessary; • Utilize dewatering of excavation for structures; direct water to appropriate erosion control structure; • Minimize need for blasting by attempting to remove rock by mechanical means. If blasting is necessary, it will be performed by a fully insured and licensed blasting contractor in accordance with all applicable state and local requirements; • Prepare and implement Erosion and Sediment Control Plan in accordance with DEC standards; • Top soil will be stripped and stockpiled for later use onsite; • Avoid construction on steep slopes to greatest extent practicable; • install slope stabilization matting.
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<p><i>Transportation and Traffic</i></p>	<ul style="list-style-type: none"> • Increased number of vehicles on local roadways; • Increase in truck traffic during construction period. 	<ul style="list-style-type: none"> • Increased number of vehicles is an unavoidable impact of the project; • Increased number of trucks and construction vehicles is an unavoidable impact of the project • Monitor intersection of Toc Drive and NYS 44/55 for traffic signal; applicant to pay fair share of necessary improvements; • Install traffic calming measures; • Add double yellow centerline to Reservoir Road, Brescia Boulevard, Toc Drive and Tillson Avenue at the approach to Vineyard Avenue to better delineate and control vehicular movement.
<p><i>Utilities:</i> Water Supply, Sanitary Sewer, Drainage, Gas and Electric, Solid Waste,</p>	<ul style="list-style-type: none"> • Increase water supply demand by 40,260 GPD; • Increase in sanitary sewer demand by 40,260 GPD; • Increase in demand for gas and electric services; • Increase of 1,208.25 lbs per day of solid waste. 	<ul style="list-style-type: none"> • Conserve water through installation of water saving fixtures and appliances; • Increase in demand for water, sewer, gas and electric is an unavoidable impact of the project; • Homeowners will pay for garbage collection services; • Residents will recycle to reduce quantity of solid waste.

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<p><i>Community Services:</i> Population, Police, Fire, Emergency Services, Schools Recreation, Housing Availability, Fiscal Resources</p>	<ul style="list-style-type: none"> • Increase of 537 persons to the Town of Lloyd population over a period of 5 ½ years; • Increase of 100 school age children expected to enroll in Highland Central School District; • Increase in demand for active recreation facilities. 	<ul style="list-style-type: none"> • Increase in population is an unavoidable impact of the project; • Taxes generated by the project will mitigate the additional demand on police, fire and emergency services; • Provide on site recreation areas that could be developed as parks; connect project to rail trail; dedicate over 112 acres of open space to Town; work with Scenic Hudson to develop trail connection between Rail Trail and Berean Park; provide seasonal parking for hikers; • Obligation to pay recreation fees to be determined based on all applicable State and local laws and studies. • Taxes generated by the project will provide a net annual surplus to the Town, Highland Water District; County and School District.
<p><i>Cultural Resources</i></p>	<ul style="list-style-type: none"> • No impacts identified 	<ul style="list-style-type: none"> • No mitigation measures are proposed
<p><i>Terrestrial and Aquatic Ecology</i></p>	<ul style="list-style-type: none"> • Site clearing will result in loss of trees, vegetation and associated habitat; • Erosion and sedimentation from construction activities may impact wetlands and watercourses; • Site clearing may displace certain species. 	<ul style="list-style-type: none"> • Minimize site clearing and grading to reduce potential for habitat disruption; • Preserve regulated wetlands; • Preserve all vegetation outside identified area of development (112 acres); • Manage stormwater runoff; • Prepare and implement soil erosion and sediment control plan; • Utilize landscaping materials that can provide food and nesting areas for small animals and birds.

1.4 Alternatives Considered

1.4.1 Conventional Development Plan – Alternative #1

As the zoning is different on each of the three parcels included in this project, the proposed plan relies on the Town Board approving the Applicant's request for a rezoning of all parcels to PRD.

The Conventional Development Plan, described in Section 5.1 of this DEIS and depicted in Figure F-5.1A and Appendix J, indicates the potential build-out of the property under the existing zoning designations. Overall, the plan proposes a total of 435 residential units. Of that total, 324 units will be apartments; 90 units will be multi-family; and 21 units are proposed as single family residences.

The apartments are proposed on SBL 87.004-5-1.2, in the center of the site. The apartments will be constructed in 9 buildings of 36 units each. There are proposed a total of 50 one bedroom units and 274 two bedroom units. Associated parking (502 spaces) is provided under and adjacent to the buildings. This section of the development will have a boulevard entrance off of Vista Drive and a clubhouse.

The multifamily units are proposed on SBL 87.004-3-2, on the southeastern portion of the site. These units are proposed as two-family homes with 3 bedrooms each. Parking will be provided in the driveways at the front of the units and in garages on the first floor of each unit.

The single family units are proposed on SBL 87.004-3-14, in the northeast section of the property. These single family homes will be sited on large lots of at least one acre and each will have 4 bedrooms and 2.5 baths. Given the larger size of the homes, the price of these units is expected to average \$375,000, \$100,000 more than the homes proposed in the preferred plan.

Municipal water and sewer will service the site. Water and sewer demand for this alternative will be substantially higher. Total water demand/wastewater demand is likely to be 50% more than the estimate for the preferred plan, which is approximately 40,260 gallons per day for the proposed plan.

Total site disturbance necessary to accomplish this plan will be greater than the preferred plan. As proposed, Alternative #1 will require approximately 55 acres of site disturbance, including 0.5 acres of federal wetland disturbance, as compared to the

preferred plan which will require only 40.11 acres of disturbance and no wetland disturbance.

Given the additional 260 units included in Alternative #1 (435 – 175), there will be a substantial increase in population and school children as a result of this plan resulting in a negative fiscal impact to the Town, School and County and impacts to the Town's community service providers.

In addition, the number of vehicles on the roadways will increase substantially, resulting in more traffic related incidents and lower levels of service at the studied intersections.

Given these significant adverse impacts, the Applicant does not believe that the Conventional Plan is the best development approach for these parcels and this area of Town.

1.4.2 No Cul de Sac Plan – Alternative #2

Alternative #2, as described in Section 5.2 of this DEIS and depicted in Figure F-5.2A and Appendix K of this DEIS, illustrates the development of the project site without cul-de-sacs at a density (175 residential units) similar to the proposed plan. Accordingly, many of the impacts studied in this DEIS will remain the same including community services, fiscal, traffic and utilities. The no-cul-de-sac plan, however, will have greater environmental impacts including a greater area of development, filling of wetlands, grading on steep slopes, more impervious surface and longer roads

The AOD for this plan is estimated to be 50 acres. This greater area of disturbance will impact wetlands. It is estimated that 0.5 acres of wetland will be filled to accomplish the road connections necessary to eliminate the cul-de-sacs. There will also be additional steep slope areas in the locations of lots 82 thru 95 that will be disturbed.

The length of the road and therefore the impervious surface area is also expected to increase slightly due to the inefficiencies road network that would be created.

Given these significant adverse impacts, the Applicant does not believe that the No Cul-de-sac Plan is the best development approach for these parcels and this area of Town.

1.4.3 No Action Alternative

One alternative is to develop nothing on the site. Should this project not be developed, the Town of Lloyd, as well as various agencies, including the school district, would not receive any additional revenue projected to be collected as a result of this project. Regardless of the project being built, traffic in the area will increase; however, the additional trips generated by future residents of the site would not occur. Most significantly, the Vista Drive Extension would not be built. This connection will provide a much needed emergency access for several hundred residents that now only have one means of emergency access. Should this project not be developed on the site, there would also be no additional demand on utilities and community services.

It is conceivable that if this project is not built, alternative proposals for the site may have a much greater density as allowed under the current zoning and would not meet the housing needs identified by the Town of Lloyd for this area of the Town near the hamlet of Highland

1.5 Local, County, State Permits and Approvals Required

1.5.1 Local

- PRD Approval – Town of Lloyd Town Board.
- Site Plan Approval – Town of Lloyd Planning Board.
- Subdivision Approval – Town of Lloyd Planning Board.
- Flood Plain Development Permit – Town of Lloyd Building Department

1.5.2 County

- 239 L, M and N Ulster County Planning Department.
- Water Main Extension – Ulster County Health Department.
- Realty Subdivision – Ulster County Health Department.

1.5.3 State

- SPDES permit (Stormwater) - New York State Department of Environmental Conservation.
- Sewer Main Extension - New York State Department of Environmental Conservation.

1.6 Involved and Interested Agencies

Involved Agencies:

NYS Dept. of Environmental Conservation
Region 3 – Division of Regulatory Affairs
21 South Putt Corners Road
New Paltz, NY 12561

Town of Lloyd Building Department
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Ulster County Health Department
300 Flatbush Avenue
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Interested Agencies:

NYS Office of Parks, Recreation
and Historic Preservation
Pebbles Island Resource Center
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Town of Lloyd Police Department
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Highland Central School District
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Highland, New York 12528

Town of Lloyd Recreation Commission
12 Church Street
Highland, New York

Highland Fire Department
25 Milton Avenue
Highland, NY 12528

2.0 PROJECT DESCRIPTION

2.1 Location

The property is \pm 153.07 acres and includes three parcels of land referenced on the Town of Lloyd tax maps as Section 87.004, Block 3, Lot 14 and Block 5, Lots 1.2 and 2. Table 2.1A provides information regarding each of these tax lots.

S-B-L	Acres	Zoning
87.4-3-14	31.68	R-1
87.4-5-1.2	84	PRD
87.4-5-2	37.39	R-1 & R-1/4
Total	153.07	

The property is located on the west side of Hilltop Lane and Vista Drive, and to the southwest of New Paltz Road in the Town of Lloyd, Ulster County, New York. The northwestern boundary of the site is Illinois Mountain. Figures F-2.1A and F-2.1B depict the location of the property at both the local and regional levels. Figure F-2.1C provides an aerial view of the property.

As indicated in Figure F-2.1D, the three tax parcels are zoned differently. SBL 87.004-3-14 (31.68 acres) is zoned R-1; SBL 87.004-5-2 (37.39 acres) is zoned R-1 and R-1/4; and SBL 87.004-5-1.2, the largest parcel (84.00 acres) is zoned PRD. If these parcels were developed under the current zoning, they could accommodate approximately 550 residential units. The applicant has submitted a Zoning Petition to the Town of Lloyd Town Board seeking a rezoning of these three parcels to PRD. As a condition of the rezoning, the applicant agrees to reduce the density on the three parcels from a potential of approximately 550 units to no more than 175 residential units.

The Mountainside Woods project advances the goals of the Town of Lloyd comprehensive plan (2005) in a number of ways including preserving the rural atmosphere of the Town (Comp Plan, Chapter 3, p. 3-2). The site has been planned using innovative planning techniques which cluster the homes on smaller lots thereby enabling the permanent preservation of approximately 112 acres of open space, or \pm 73% of the property (Comp Plan, Chapter 3, p. 3-4). This open space is a critically important natural

and visual resource in the Town of Lloyd as it forms the base of Illinois Mountain. The applicant plans to offer the protected open space to the Town or a local not-for-profit conservation organization.

Additionally, the proposed development would further the goals of the comprehensive plan by providing housing for all residents, including the elderly, young people, etc. (Comp Plan, Chapter 3, p. 3-17) The target market for the proposed housing are young people just entering the housing market, older residents seeking to downsize and those seeking to find moderately priced quality homes.

Finally, the project will advance the goal of increasing recreational opportunities in the Town (Comp Plan, Chapter 11, p. 11-4). The project proposes to create a pedestrian connection to the Hudson Valley Rail Trail which will increase access to the trail for area residents. In addition, the applicant is in discussions with Scenic Hudson, a regional not-for-profit organization, which is interested in linking the proposed trails that are being developed at the Town of Lloyd's Berean Park with the Rail Trail by developing trails through the site. The applicant has met with Scenic Hudson's trails coordinator, Jill Sprance, to discuss how the proposed trails could connect the Town Park to the rail trail and potentially create opportunities for additional trails up Illinois Mountain. The applicant has included a small parking area on its site to facilitate access to these future trails and the Mountain.

The neighborhood is predominantly residential in nature. To the east of the property are the Sunny Brook residences and other multi-family residential developments (along Toc Drive). Also to the east, along Hilltop Lane, there are single family homes. To the south, on Reservoir Road is Berean Park. The proposed development will complement the existing uses in the area.

2.2 Project Design and Layout

2.2.1 Total site area

The 153.07 acre site consists of approximately 131.05 acres of woodland; 11.68 acres of brush; 0.07 acres old fields and 10.27 acres of wetlands. Figure 2.2A depicts the existing site conditions.

The portions of the project site proposed for development on the boundary between undeveloped forest land to the north, south and west with developed residential

properties to the east were largely already disturbed during previous site development activity. The proposed area of development (AOD) is restricted to 40.11 acres of the 153.07 acre site (26.2%), with 112.96 acres (73.8%) of the property remaining undisturbed. Of the 112.96 acres of preserved open space, 83.5 acres are usable, with the remaining acres consisting of steep slopes (>25%) and wetlands.

The proposed areas of disturbance for each tax lot are summarized in Table 2.2.1A below. In total, the proposed development will require the removal of 39.69 acres of woodlands (24% of total woodlands); 8.35 acres of brush (71.4% of total brush); and 0.07 acres of old fields (100%). There is no proposed disturbance to the wetlands.

The development will also result in the creation of 24.01 acres of lawn/landscaping and 16.1 acres of impervious surface coverage.

Table 2.2.1A: Amount of Land to be Cleared by Type			
Parcel 1 (87.4-3-14)	Existing (Ac.)	Proposed (Ac.)	Change (Ac.)
Woodlands	26.82	9.30	-17.52
Brush	0.03	0.00	-0.03
Old Fields	0.00	0.00	0.00
Wetlands	4.83	4.83	0.00
Lawn/landscaping	0.00	10.93	10.93
Impervious/buildings	0.00	6.62	6.62
TOTAL	31.68	31.68	
Parcel 2 (87.4-5-1.2)	Existing (Ac.)	Proposed (Ac.)	Change (Ac.)
Woodlands	73.12	67.78	-5.34
Brush	8.48	0.71	-7.77
Old Fields	0.05	0.00	-0.05
Wetlands	2.35	2.35	0.00
Lawn/landscaping	0.00	7.89	7.89
Impervious/buildings	0.00	5.27	5.27
TOTAL	84.00	84.00	
Parcel 3 (87.4-5-2)	Existing (Ac.)	Proposed (Ac.)	Change (Ac.)
Woodlands	31.11	22.28	-8.83
Brush	3.17	2.62	-0.55
Old Fields	0.02	0.00	-0.02
Wetlands	3.09	3.09	0.00
Lawn/landscaping	0.00	5.19	5.19
Impervious/buildings	0.00	4.21	4.21
TOTAL	37.39	37.39	

Stormwater management ponds will be constructed to collect, detain and treat stormwater runoff from impervious surfaces on site. A total of 6 ponds will be constructed. Green infrastructure drainage techniques have been incorporated into the design to reduce the amount of stormwater that needs to be collected and treated. Further detail and descriptions of the stormwater management and drainage plans can be found in Section 3.1 of this DEIS.

2.2.2 Structures

The project proposes to construct 175 single family residences on 175 lots that will be distributed along the roadways throughout the proposed AOD. Figure 2.2B depicts the proposed site plan.

Mountainside Woods has been designed to create an “old style” neighborhood with 175 smaller, moderately priced single-family homes, with front porches, set close to the street on small lots. Homes will range from $\pm 1,200$ SF to 2,400 SF with an average size of $\pm 1,750$ SF. Figure F- 2.2C1 depicts a typical elevation of one of the three models that are anticipated to be offered on site. Figure 2.2C2 depicts a typical floor plan. Lots will average 50' by 80'.

The 175 single family homes will be marketed with 3 bedrooms, 2.5 baths and a one-car garage. For purposes of this DEIS, it is anticipated that 26 of these homes will be developed with 4 bedrooms. The homes may also be developed as two bedrooms plus a den, however for purposes of this DEIS, it is assumed that 149 of the homes will be 3 bedroom and 26 will be 4 bedrooms. Accordingly, the total number of bedrooms will be 551.

It is not possible to know, until the homes are sold to third party buyers, how many of each of the three models will be developed; however, external building materials and colors will be varied to provide for visual interest and diversity on the streetscape.

2.2.3 Access

The proposed road system has been designed to provide safe and convenient access to the homes and accordingly, the applicant is proposing to connect Vista Drive, to Hilltop Lane, via a new road, referred to as the “Vista Drive Extension”. Figure F-2.2D depicts the proposed road layout and pedestrian access plan. Fourteen homes are proposed along Vista Drive and the Vista Drive Extension.

The applicant is proposing two access points to the internal areas of site. The main access will be via a traffic circle which is proposed at the north end of Vista Drive. Figure F- 2.2E depicts the proposed main entrance area. The site will also be accessible from proposed “Road I”, which will be located to the north of the intersection of Hilltop Lane and Tano Drive. Figure F-2.2F provides details on the proposed access from Hilltop Lane.

Pedestrian access to the site will be provided via sidewalks that are proposed on the west side of Vista Drive and the Vista Drive Extension as well as on both sides of the streets throughout the majority of the proposed development. The sidewalks are proposed to be 4 feet wide and will be separated from the street by a 5.5 foot grassed median.

On site roads “A”, “D” and “H” will be accessible from the traffic circle. Roads “B” and “C” intersect with Road “A”, providing access to the home sites on the north east end of the property. Road “E” intersects with Road “D”, providing access to the home sites on the west side of the stream and wetlands. Road “H” runs parallel to Vista Drive, the Vista Drive Extension and Hilltop Lane. Road “H” intersects with Road “I”, providing secondary access to Hilltop Lane and Vista Drive.

All internal roads are proposed to be 36 feet wide, with 6” curbs on both sides and a 56 foot right of way. All roads and sidewalks will be offered for dedication to the Town of Lloyd and once accepted, will be maintained by the Town. Emergency access to the onsite road system will be via Hilltop Lane and Vista Drive.

Pedestrian access, as described above, will be provided along all internal roadways as well as on the west side of Vista Drive (and Extension) up to the boundaries of the property making access to nearby Berean Park and the Town’s commercial core more pedestrian friendly. There are sidewalks north of Reservoir Road on NYS Route 44/55; however there are none on the side streets connecting to Hilltop Lane and Vista Drive. For pedestrians to reach the commercial center, they would be able to utilize the new sidewalks installed on Vista Drive and the Vista Drive Extension and then walk along Toc Drive until reaching the sidewalks on NYS Route 44/55.

In addition, pedestrian access will be provided to the rail trail, as depicted in Figure F-2.2D, above. A 4 foot wide paved pedestrian path will be constructed linking the northern end of the property to the Hudson Valley Rail Trail. The proposed access to

the path will be designated at the entrance and allow only pedestrians and certain non-motorized vehicles such as bicycles. The pedestrian path has been designed to accommodate wheelchairs and strollers. The pedestrian path will be offered for dedication to the Town or to such not-for-profit as the Town may determine to be appropriate. Once accepted, the Town or not-for-profit will be responsible for maintenance and enforcement of any restrictions on the pedestrian path.

2.2.4 Parking

Pursuant to the Town code, the subdivision must include 2 parking spaces per unit. The applicant proposes that two parking spaces will be provided at each residence (one in the garage and one on the driveway) for a total of 350 spaces. Additional parking, at least one and in certain areas two spots per unit, will be available on the street, which has been designed to allow for parking on both sides. The Town of Lloyd Police Department will be responsible for enforcement of all parking regulations.

2.2.5 Landscaping Plan

A landscaping plan has been proposed that in the opinion of the applicant will create a visually pleasing environment on site. The landscaping plan, along with a list of plantings, is part of the full set of plans included in Appendix L of this DEIS.

Outside the area of development, removal of healthy trees and vegetation will be avoided. Construction materials will not be stored and machinery will not be operated outside the limits of disturbance, which is clearly delineated on the subdivision plans.

The landscaping focuses on supplemental plantings for the areas of the site that will be cleared for development, includes street trees, shrubs and plants. The plan as proposed meets the requirements of the Town Code. A typical lot landscaping plan is included in Figure F-2.2G.

Except for the east side of the property, where homes are sited to front along Vista Drive and the Vista Drive Extension, all other areas of the site have substantial buffers. To the west of the site lies Illinois Mountain; to the south, Town lands and Berean Park; in the northeast of the site there will be at least a 100' wooded buffer between the Hudson Valley Rail Trail and the proposed homes. Steep topography in this area will prevent the homes from being seen from the Rail Trail. There will also be approximately 105' between the Sunnybrook Apartment buildings and the homes on Mountainside Woods (It

is approximately 45' from the Sunny Brook residences to the lot line and an additional 65' to the proposed home sites.)

2.2.6 Lighting

Lighting has been developed for the site that is designed to protect the safety and security of residents. It is recognized, however, that detrimental impacts can be created by excessive illumination and accordingly “dark sky” features have been incorporated to minimize the potential of onsite lighting impacting off site areas. Such features include pole mounted lighting limited in height to 14 feet and fixtures which will be traditional in design with downward directed, shielded light sources. The light fixture type and fixture placement will minimize fugitive light. Figure F-2.4H illustrates the typical lighting fixture and pole that will be located throughout the site. The light distribution pattern will vary based upon the location of the light poles. The net effect of this design is a lighting plan that maintains a neighborhood feel, with even light distribution and no significant impacts to neighboring properties. The location of the poles for street lights can be found in the full plan set located at Appendix L of this DEIS.

2.2.7 Recreation

In addition to the more than 112 acres of open space that will be preserved on site, most of which is wooded or wetlands, pockets of open space have been reserved throughout the Area of Development (AOD) and will be offered for dedication to the Town. These areas could be developed in the future as public parks or could remain open space. In addition, the applicant has been in discussions with Scenic Hudson, a regional not-for-profit organization that has been working with the Town to develop a trail system at Berean Park. The Town and Scenic Hudson would like to connect the new park trails to the Rail Trail and are seeking to make that connection via trails to be located on the project site. As the environmental review process continues, the applicant will continue to work with Scenic Hudson and the Town to identify the proper location for these potential trails. The subdivision plan includes 18 seasonal parking spaces for hikers that will be located near the hiking trails which currently cross the western undeveloped portions of the property providing access to Illinois Mountain. This parking area will also be offered for dedication to the Town.

As indicated above, pedestrian access from the site to the Highland Rail Trail will also be a featured amenity. The applicant proposes to construct a paved 4 foot wide pedestrian path that is designed to be handicapped and stroller friendly. With this pedestrian connection, hikers and bicyclists on the Rail Trail will potentially be able to access the trails on Illinois Mountain and Berean Park. The pedestrian path will be offered for dedication to the Town or to such not-for-profit as the Town may determine to be appropriate. Figure F-2.2I depicts the proposed recreation areas and amenities.

In addition to providing the Town with potential parkland and recreational amenities, the applicant's obligation to pay parkland fees will be determined based on all applicable State and local regulations and studies.

2.2.8 Snow Removal

Snow removal on all roads will be performed by private contracts until such time as the roads are dedicated to the Town of Lloyd. In preparing the plan, the site engineers worked closely with the Town Engineer to establish a road geometry that allows room for snow removal. The plan incorporates two primary features for snow storage. A six foot wide snow storage strip has been provided between the sidewalk and the face of curb along all roadways. This strip allows for storage of snow through windrows which are plowed up on the sides of each road as snowplowing proceeds up and down the streets. The second snow storage feature is the design of the cul-de-sacs. Each cul-de-sac is designed with a minimum six and one half foot snow stockpile area around the entire interior of the cul-de-sac. (See Figure F-2.2J; the snow removal areas are also indicated on the complete plan set in Appendix L). In addition to providing snow storage, the cul-de-sacs are also designed to drain inward to a low point which will minimize the runoff from snow melt entering the road and creating icing conditions.

2.3 CONSTRUCTION AND OPERATION

2.3.1 Construction

A construction phasing plan has been developed for the project. Based on the phasing plan and current market conditions, it is estimated that the project will be fully developed over a period of five and one-half years from final approval. The anticipated phases are shown in Figure F-2.3A, entitled “Construction Phasing Plan”. Depending upon future market demand and the completion of the required project infrastructure, the phasing and/or timing may vary.

To minimize cut and fill on the site, as well as to accommodate necessary infrastructure improvements, more than 5 acres will need to be disturbed at one time. Accordingly, the applicant will seek a waiver of the 5 acre disturbance limit by filing the necessary paper work and the Stormwater Pollution Prevention Plan with the Town as the operator of the Municipal Separate Storm Sewer System (MS4) and the NYSDEC. If a waiver is obtained, it will allow the contractor to stockpile and transport material about the project site more efficiently during construction and to better balance the cut and fill throughout the project, thereby reducing the overall area of disturbance. Figure F-2.3A includes details with regard to the proposed size of each area to be disturbed during each phase. Figure F-2.3B depicts the proposed limits of disturbance also referred to as the Area of Development (“AOD”).

It is likely that phasing timeframes will overlap as site work will commence on a subsequent phase while building construction is being finalized in a previous phase. As the commencement of the project is dependent on various factors beyond the control of the project sponsor, an estimated start date of April, 2012 has been utilized for purposes of illustration.

A detailed schedule of construction is included below.

The proposed general sequencing of construction activities within each phase is as follows:

1. Installation of erosion control measures (i.e. silt fence, stabilized construction entrance, etc);
2. Site clearing and grubbing;
3. Stripping and stockpiling of topsoil for later use;
4. Excavation for temporary sediment basins, ponds and swales (permanent and temporary);
5. Excavation and grading for road right of ways, utilities and storm water infrastructure;
6. Installation of utilities;
7. Fine grading of roadways, installation of sub-base, base and first course of asphalt, construction of sidewalks and curbs;
8. Residential unit construction and utility service connection to mains;
9. Spreading of stockpiled topsoil, landscaping and lawn installation; and
10. Removal of temporary erosion control measures after vegetation has been established.

When installing erosion control measures, the following sequence will be utilized.

- Mark and delineate limits of clearing and grading by installing silt fencing and where necessary orange plastic construction fence material in “critical areas”; install stabilized construction entrances. “Critical areas” are defined as areas with significant trees, vegetation, wetlands and/or any other natural resource area requiring protection. The areas where orange construction fencing is to be installed are identified on the plan set.
- Strip and stockpile topsoil after clearing and grubbing; stabilize topsoil stockpiles with temporary seeding and silt fence.
- Install temporary erosion control devices (sediment traps, diversion swales, and check dams) prior to commencing earth moving activities.

- During and/or immediately after rough grading, install as necessary additional temporary erosion control measures including intermediate silt fences, diversion swales and check dams.
- Fine grade, spread topsoil and complete stabilization within two weeks of establishing final grade.

The following describes each construction phase and the projected improvements that will be necessary to support that phase. Assuming that construction commences in April, 2012, it is expected that full build out would be completed in five and one half years or October, 2017.

- Phase 1: The first phase will consist of the main entry drive from Vista Drive, the traffic circle, the interconnection with Hilltop Lane and thirty-nine (39) homes and associated infrastructure. Construction access will commence from Vista Drive as the homes and associated infrastructure connections in the first phase are located in or near the Vista Drive entrance. The connection of the project site with Hilltop Lane will ensure that adequate secondary means of emergency vehicle access is in place prior to the completion of Phase 1.
- Phase 2: The second phase will extend south from phase one and will connect the two access points established during phase one by completing the loop road. Utility connections established during the first phase will be extended. Phase 2 will include an additional thirty-five (35) homes and associated infrastructure.
- Phase 3: The third phase will extend the project and road system north of the traffic circle to the land area adjacent to the rail trail. Included in this phase will be a sewer connection to the sewer main along the Hudson Valley Rail Trail below the Sunny Brook community, twenty-one (21) residences and associated infrastructure.
- Phase 4: During the fourth phase, the project sponsor will complete the development on the north side of the project by completing the loop road, constructing forty-nine (49) homes and associated infrastructure.

- Phase 5: The last phase is proposed to the west of the traffic circle across the stream. This area will be developed with two cul-de-sacs and the remaining thirty-one (31) homes and associated infrastructure.

The following provides more specific information regarding each phase. Please note that the timing and schedules are estimates only and may need to be revised from time to time.

Phase 1 (April 2012 – October 2013): Approximately 18 months

This phase involves the construction of the upgrades to and extension of Vista Drive from the traffic circle to its connection with Hilltop Lane, 800 feet of Road H, Road G cul-de-sac, stormwater Pond H, and lots 1 through 25 and 61 through 74. All driveways, curbs, sidewalks, retaining walls, water, sewer, drainage facilities and utilities to service the proposed units in Phase 1 will also be installed at this time. Occupancy of the units will begin around October 2012.

A construction trailer will be utilized during this phase and is proposed to be located near the traffic circle.

Months 1-18	Erosion Control	Locate limits of disturbance. Install stabilized construction entrance, silt fence, temporary sediment pond at Pond H, temporary diversion swales, and construction trailer. Install orange plastic construction fencing around critical areas. Dust control will be applied as necessary.
	Site Features	Construct/reconstruct Vista Drive from traffic circle to Hilltop Lane, traffic circle Road H to station 8+00 and Road G. Roadways shall be cleared and excavated to proposed grade, curb shall be installed and the sub-base, base and first course of asphalt constructed. Install sidewalks adjacent to constructed portions of roads.
	Water	Install 2,900 LF of 8” Ductile Iron Pipe (DIP) water main and six fire hydrants.
	Sewer	Install 2,500 LF of 8” gravity sewer trunk main and 16 sewer manholes.
	Drainage	Install 3,200 LF of storm drainage pipes, 34 catch basins, 9 yard drains and 3 manholes. Towards the completion of Phase 1,

		remove the collected sediment and finalize the construction of Pond H.
	Buildings	Construct homes on lots 1-25 and 61-74.

Phase 2 (April 2013 – October 2014): Approximately 18 months

This phase involves the completion of the remainder of Road H and the construction of Road I. This phase will also include the construction of homes on 35 additional lots. All driveways, curbs, sidewalks, retaining walls, water, sewer, drainage facilities and utilities to service these lots will also be installed during Phase 2. Occupancy of the units will begin around October 2013.

Table 2.3.3B - Phase 2 Schedule

Months 12-30	Erosion Control	Locate limits of disturbance. Install silt fence, stabilized construction entrance(s) and temporary diversion swales. Excavate temporary sediment basins (F & G). Install orange plastic construction fencing around critical areas. Dust control will be applied as necessary.
	Site Features	Complete the construct of Road H and construct Road I. Roadways shall be cleared and excavated to proposed grade, curb shall be installed and the sub-base, base and first course of asphalt constructed. Install sidewalks adjacent to constructed portions of Roads H and I. Install trail head parking area.
	Water	Install 2,000 LF of 8" Ductile Iron Pipe (DIP) water main and 3 fire hydrants.
	Sewer	Install 1,600 LF of 8" gravity sewer main and 11 sewer manhole.
	Drainage	Install 1,650 LF of storm drainage pipes, 13 catch basins, 3 yard drains and 2 drainage manholes. Towards the completion of Phase 2, remove the collected sediment and finalize the construction of Pond F & G.
	Buildings	Construct homes on lots 26 through 60. Plant landscaping and lawns.

Phase 3 (April 2014 – May 2015): Approximately 14 months

This phase involves the construction of the portions of Road A from the traffic circle to its intersection with Road B and the construction of Road B. This phase will also consist of the construction of homes on 21 additional lots. All driveways, curbs, sidewalks, retaining walls, water, sewer, drainage facilities and utilities to service these homes will also be installed during Phase 3. Occupancy of the units will begin around October 2014.

Table 2.3.3C - Phase 3 Schedule

Months 24-38	Erosion Control	Locate limits of disturbance. Install silt fence, stabilized construction entrance(s) and temporary diversion swales. Excavate temporary sediment basins within Pond. Install orange plastic construction fencing around critical areas. Dust control will be applied as necessary.
	Site Features	Road A from the traffic circle to its intersection with Road B and construct all of Road B. Roadways shall be cleared and excavated to proposed grade, curb shall be installed and the sub-base, base and first course of asphalt constructed. Install sidewalks adjacent to constructed portions of Roads A and B.
	Water	Install 1,100 LF of 8" Ductile Iron Pipe (DIP) water main, 2 fire hydrants.
	Sewer	Install 1,950 LF of 8" gravity sewer main and 14 sewer manholes.
	Drainage	Install 1,150 LF of storm drainage pipes, 12 catch basins, 2 yard drains and 2 drainage manholes. Towards the completion of Phase 2, remove the collected sediment and finalize the construction of Pond I.
	Buildings	Construct homes on lots 141-158 and 173-175. Plant landscaping and lawns.

Phase 4 (December 2015 – October 2016): Approximately 22 months

This phase involves the construction of Road A from station 1+75 to its intersection with Road C and Road C in its entirety. This phase will also consist of the construction of an additional 49 homes. All driveways, curbs, sidewalks, retaining walls,

water, sewer, drainage facilities and utilities to service these homes will also be installed during Phase 4. Occupancy of the units will begin around June 2015.

Table 2.3.3D - Phase 4 Schedule		
Months 32-54	Erosion Control	Locate limits of disturbance. Install silt fence, stabilized construction entrance(s) and temporary diversion swales. Install orange plastic construction fencing around critical areas. Dust control to be applied as necessary.
	Site Features	Construct Road A from station 1+75 to intersection with Road C and Road C in its entirety. Roadways shall be cleared and excavated to proposed grade, curb shall be installed and the sub-base, base and first course of asphalt constructed. Install sidewalks adjacent to constructed portions of Roads A and C and walkway connecting sidewalks to Hudson Valley Rail Trail.
	Water	Install 2,550 LF of 8" Ductile Iron Pipe (DIP) water main, 4 fire hydrants.
	Sewer	Install 2,100 LF of 8" gravity sewer main and 14 sewer manholes.
	Drainage	Install 2,050 LF of storm drainage pipes, 15 catch basins, 3 drainage manholes and 2 yard drains.
	Buildings	Construct homes on lots 106-119, 120-140 and 159-172. Plant landscaping and lawns.

Phase 5 (April 2016 – October 2017): Approximately 18 months

This phase involves the construction of the Roads D, Road E and Road F in their entirety. This phase will also consist of the construction of 31 additional homes. All driveways, curbs, sidewalks, retaining walls, water, sewer, drainage facilities and utilities to service these homes will also be installed during Phase 5. Occupancy of the units will begin around October 2016.

Table 2.3.3E - Phase 5 Schedule		
Months 48-66	Erosion Control	Locate limits of disturbance. Install silt fence, stabilized construction entrance(s) and temporary diversion swales. Install orange plastic construction fencing around critical areas. Dust

		control will be applied as necessary.
	Site Features	Construct Road D, Road E and Road F in their entirety. Roadways shall be cleared and excavated to proposed grade, curb shall be installed and the sub-base, base and first course of asphalt constructed. Install sidewalks adjacent to constructed portions of Road D, Road E and Road F.
	Water	Install 1,550 LF of 8" Ductile Iron Pipe (DIP) water main, 4 fire hydrants.
	Sewer	Install 2,220 LF of 8" gravity sewer main and 13 sewer manholes.
	Drainage	Install 1,000 LF of storm drainage pipes, 10 catch basins, 2 drainage manhole and 1 yard drain.
	Buildings	Construct homes on lots 75-105. Plant landscaping and lawns.

Construction Access and Traffic: As indicated above, it is proposed that Vista Drive will be utilized as the primary construction access point to the site. At the end of Phase 1, a second access point will be created into the site from Hilltop Lane. It is proposed that this second access point be limited to use by residents and only that construction traffic necessary to build the road connection. All other construction traffic for the remainder of the project will be directed to use the Vista Drive entry and routed internally to minimize disturbance to existing residences. Construction traffic will primarily consist of construction workers' personal vehicles and large trucks and tractor trailers delivering equipment and materials to facilitate the construction of the site. Traffic volume will increase; however, the increase is temporary in nature and will only last the duration of the construction period.

Rock Removal: There is the potential that rock will be encountered during construction and will need to be removed either by mechanical means or by blasting. As discussed in detail in Section 3.2.1, during the soils investigation, rock was encountered in some areas where significant cuts are necessary. While the location of rock is difficult to determine, rock is likely to be encountered in the following areas: along Road D including the area of lots 1 and 33-35; along Vista Drive in the area of Pond H and lots 11-15; along the steep cut slope to the rear of lots 85-96; along Road B in the area of lots

143-145; and at the intersection of Road B and Road C, extending to the rear of lots 164-169.

In removing bedrock, the contractor will minimize the need for blasting by first attempting to remove rock by mechanical means. If blasting is necessary, it will be performed by a fully insured, licensed blasting contractor in accordance with all applicable state and local requirements.

Erosion and Sediment Control: As more fully discussed in Section 3.2.2, erosion due to soil disturbance is unavoidable and will be mitigated as shown on the erosion control plans included in the full set of plans located at Appendix L of this DEIS. To reduce the potential for soil erosion, preventative measures will be implemented in conformance with NYSDEC standards. All construction activities will proceed in a manner that is designed to prevent sediment from entering into any wetland, watercourse, water body, and/or conduit carrying water. Proposed measures to be employed during construction include minimizing disturbance, stabilizing the site immediately upon establishment of final grade, installation of silt fences, installation of check dams and the installation of sediment traps, among others. Please refer to Section 3.2, Soils, Topography and Geology and Section 3.1, Water Resources, for additional information.

All erosion control measures will be inspected in accordance with NYSDEC standards by a qualified professional for the duration of the construction process. Specifically, the site will be inspected every seven (7) days by a qualified inspector and proper logs and reports will be maintained to ensure that there is proper maintenance of all erosion controls.

2.3.2 Operation and Use of Property

All homes will be owned in fee simple and maintenance of all homes and individual lot landscaping will be the responsibility of the homeowner. The proposed roads and right of ways, drainage pipes, stormwater facilities, water and sewer infrastructure as well as all open space and recreational amenities will be offered for dedication to the Town of Lloyd. Once the dedication is accepted, operation and maintenance of the infrastructure, open space and recreational amenities will be the responsibility of the Town of Lloyd.

The project will have a temporary sales office located within a construction trailer during the early stages of Phase 1 until construction of the model homes is completed, on or near lots 14 and 15. The model homes will serve as the sales office until the project is sold out. It is anticipated that there will be advertising regarding the availability of homes for sale through the use of the internet, mailings and signage. All signage shall be in conformance with the sign regulations of the Town of Lloyd.

During construction of the project, vehicular access to all existing residences will be maintained and all vehicles will be protected from potential conflicts with construction and construction vehicles (e.g. utility trenches, excavation equipment etc.). The most likely location of conflict is the area near Vista Drive, Toc Drive and Sunny Brook Circle.

During the construction of the Vista Drive “Extension”, between Vista Drive and Hilltop Lane, the existing Vista Drive will be reconstructed. The roadway will be widened, paved and entirely redefined with new curbing and utilities. The reconstruction of Vista Drive will be completed on an expedited basis. To accomplish this, it is proposed that Vista Drive be closed to the public with the exception of access to two buildings within the Sunny Brook community (100-121 Vista Drive) that get their sole access from Vista Drive. One lane will remain open to allow access for these residents, emergency vehicles and buses. All other residences within the Sunny Brook community will be directed to access either Toc Drive or Sunny Brook Circle directly. Except for units 100 – 121 Vista Drive, all others will continue to have unobstructed ingress and egress by using Sunny Brook Circle and Toc Drive and exiting the area to the southeast. Limiting access in this way on Vista Drive will improve safety by reducing the potential for conflicts between construction vehicles and the residents. A maintenance and protection of traffic plan will be provided to the Town for review and approval prior to work commencing on Vista Drive.

Once Vista Drive and Vista Drive Extension are completed, they will be reopened to public traffic. The reconstruction of Vista Drive and its interconnection with Hilltop Lane will greatly improve traffic patterns in the area by providing two means of ingress and egress to the Sunny Brook community, Hilltop Lane and the future project. All other

road improvements will be internal to the project site and will not conflict with the continued operation and use of the existing public streets in the area.

2.4 PERMITS AND APPROVALS

2.4.1 Local

- PRD Approval – Town of Lloyd Town Board.
- Site Plan Approval – Town of Lloyd Planning Board.
- Subdivision Approval – Town of Lloyd Planning Board.
- Flood Plain Development Permit – Town of Lloyd Building Department

2.4.2 County

- 239 L, M and N Ulster County Planning Department.
- Water Main Extension – Ulster County Health Department.
- Realty Subdivision – Ulster County Health Department.

2.4.3 State

- SPDES permit (Stormwater) - New York State Department of Environmental Conservation.
- Sewer Main Extension - New York State Department of Environmental Conservation.

2.5 PROJECT PURPOSE, NEED AND BENEFITS

On or about November 24, 2009, the applicant, Mountainside Woods, LLC, filed a petition with the Town of Lloyd Town Board seeking to amend the zoning for the site. The largest of the three parcels, SBL 87.004-5-1.2, had previously been proposed for development as the Westport Senior Residential Development. That 84 acre parcel is currently zoned for Planned Residential development (PRD) and was the subject of a long pending application to develop the site with 324 age-restricted residential units and associated amenities. The two other lots proposed for development lie on either side of that parcel and are 37.39 acres (SBL 87.004-5-2), zoned R-1 and R-1/4 and 31.68 acres (SBL 87.004-3-14), zoned R-1.

The proposed plan takes the density proposed for the Westport property (324 units), reduces that density to 175 single family homes and distributes that density across

all three properties. The plan is designed to create a residential community with a neighborhood feel; houses will be set on small lots, with front porches, set close to the street. Sidewalks will line both sides of the streets throughout most of the development to facilitate pedestrian circulation throughout the site and a paved pedestrian pathway will connect the project to the Rail Trail.

The Mountainside Woods project advances the goals of the Town of Lloyd Comprehensive Plan (2005) in a number of ways including preserving the rural atmosphere of the Town (Comp Plan, Chapter 3, p. 3-2). The new concept plan reduces the potential density on the site from approximately 550 units to 175 dwelling units. (See Section 5.1 of this DEIS for a discussion of the As-Of-Right development plan.) In addition, the site has been planned using innovative planning techniques which cluster the homes on smaller lots there by enabling the permanent preservation of approximately 120 acres of open space, or $\pm 73\%$ of the property (Comp Plan, Chapter 3, p. 3-4). This open space is a critically important natural and visual resource in the Town of Lloyd as it forms the base of Illinois Mountain. The applicant plans to offer the protected open space to the Town or local not-for-profit conservation organization.

The proposed development will also further the goals of the comprehensive plan by providing housing for all residents, including the elderly, young people, etc. (Comp Plan, Chapter 3, p. 3-17) The target market for the proposed housing are first time homebuyers which are often young people just entering the housing market; older residents seeking to downsize but still stay in the community; and anyone seeking to purchase moderately priced quality homes.

Finally, the project will advance the goal of increasing recreational opportunities in the Town (Comp Plan, Chapter 11, p. 11-4). The project proposes to create a pedestrian connection to the Hudson Valley Rail Trail which will increase access to the Rail Trail for area residents. In addition, the applicant is in discussions with Scenic Hudson, a regional not-for-profit organization, which is interested in linking the proposed trails that are being developed at the Town of Lloyd's Berean Park with the Rail Trail. The applicant has met with Scenic Hudson's trails coordinator, Jill Sprance, to discuss how the proposed trails could connect the Town Park to the Rail Trail and potentially create opportunities for additional trails up Illinois Mountain. The applicant has included a small parking area on its site to facilitate access to these existing and future trails.

The objectives of the Project Sponsor include securing all necessary permits and approvals required to construct a well designed, moderately priced 175 unit single family detached development with associated recreational amenities.

3.0 ENVIRONMENTAL SETTING, POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES

3.1 WATER RESOURCES

3.1.1 Surface Water Resources

EXISTING CONDITIONS

Several studies were conducted to define onsite surface water features. These studies included a review of Federal Emergency Management Association (FEMA) flood plain maps, a NYSDEC Protection of Waters Inquiry, two Wetland Delineation Reports prepared by A.V. Agovino Associates, LLC, a wetland delineation performed by Robert Torgerson and a Stormwater Pollution Prevention Plan prepared by Engineering Properties P.C. (EP). Surface water resources located on the project site include 100 year flood plains, Army Corps of Engineers (ACOE) designated wetlands, classified streams, natural and manmade drainage ways, and watershed collection areas. Figure F-3.1A depicts the location of surface water features found on the project site.

Surface water resources are currently not used for drinking water or fishing. The surface water resources are used for animal habitats, however no critical habitats were observed during any of the site investigations.

NYSDEC protected waterways: The New York State Department of Environmental Conservation (NYSDEC) Final Freshwater Resource Map, included as Figure F-3.1B, does not show any New York State designated wetlands located within or immediately adjacent to the project. There are also no NYSDEC designated freshwater wetlands located downstream of the project site. The nearest regulated freshwater wetland body is NYSDEC Freshwater Wetland PO-3 which is located on a separate tributary approximately one half mile north of the site. Figure F-3.1B also identifies the onsite stream (NYSDEC H-116-1-2a) is a Class C stream (Class D being the lowest classification and Class AA being the highest classification). This designation is the same for all downstream waterways from the site to the stream's discharge to the Hudson River. According to the NYSDEC, a classification of C is for waters supporting fisheries and suitable for non – contact activities. Disturbing a Class C stream does not require a protection of waters permit.

Flood plain: As shown on Figure F-3.1C, the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) designates flood plains that extend onto the project site. These flood plains did not appear on the previous FEMA mapping but have been recently added to the 2009 maps. This flood plain is designated as a Zone A, special flood hazard area, which depicts the potential limits of flooding from the 1% storm (aka 100 year storm). In Zone A flood hazard areas, associated 100 year storm flood elevations have not been determined, only a more general flood area has been shown.

ACOE Wetlands: The evaluation for the presence of federally regulated freshwater wetlands at the site was performed using methodologies outlined in the "Federal Manual for Identifying and Delineating Jurisdictional Wetlands" (Federal Interagency Committee for Wetland Delineation 1989). Using this manual, a field survey of vegetation, soils, and hydrologic conditions was performed to identify and characterize upland, wetland, and/or other aquatic habitats at the site. The field surveys were completed for SBL 87.004-5-2 and 87.004-3-14 by AVAA during April, 2006. Robert Torgerson prepared the field surveys for SBL 87.004-5-1.2 during July, 2004, which was subjected to review during the Westport EIS proceedings.

Based on these surveys, the wetlands have been mapped and a Jurisdictional Determination (see Appendix I) received from the Army Corps of Engineers (ACOE) for SBL 87.004-5-2 and 87.004-3-14. In addition, the data sheets for the wetland delineation performed on SBL 87.004-5-1.2 are included in Appendix I. This determination and the wetland delineation by Robert Torgerson for SBL 87.004-5-1.2 designate a total of ± 10.265 acres of federal wetlands onsite, of which ± 0.214 acres are considered "isolated" wetlands. The wetlands as delineated are shown in Figure F-3.1D.

The wetland areas "A", "F" and "H" are located adjacent to the onsite stream that traverses the central portion of the site. Wetlands "D" and "G" are located west of the stream corridor. Wetlands "C", "D" and "E" are west of the stream and can be considered isolated wetlands. In all, there are a total of 10.265 acres of wetlands on site.

Stormwater: A Stormwater Pollution Prevention Plan (SWPPP) found in Appendix B of this DEIS was prepared to meet NYSDEC technical standards and to satisfy the SPDES General Permit (GP-0-10-001) requirements. *The New York State Stormwater Management Design Manual* (June 2010) includes stormwater best

management practices designed to protect surface waters from impacts associated with stormwater runoff, such as water quality degradation, volume increases and peak rate increases. The manual sets forth design standards and general specifications for the stormwater practices that are to be included in the Stormwater Pollution Prevention Plan.

The Stormwater Pollution Prevention Plan for this site identifies five existing watershed drainage areas which include both on and offsite drainage areas that cumulate at five distinct stormwater discharge design points. The first design point (A) is located at a point where the onsite stream exits the project site on the north. The second design point (B) is an area of sheet flow along the eastern property line to the rear of the homes along Hilltop Lane. Design point three (C) is a sheet flow to the area of Cambridge Court and Toc Drive, area four (D) discharges to Vista Drive and area five (E) discharges to the Rail Trail below the Sunny Brook community. Table 3.1A identifies each existing drainage area, its acreage, and peak runoff rates at the design points for the 1, 10, and 100 year rainfall events. The existing boundaries of the drainage areas are shown on Figure 3.1E and are further described in the Stormwater Pollution Prevention Plan included as Appendix B of this DEIS.

Watershed Discharge Design Point	Size (Acres)	1 Year Storm (cubic feet per second)	10 Year Storm (cubic feet per second)	100 Year Storm (cubic feet per second)
A	127.28	78.29	265.19	477.75
B	2.44	0.00	0.11	1.38
C	10.37	7.13	24.00	43.35
D	9.35	9.45	26.31	44.35
E	17.70	10.89	36.88	66.44
TOTAL	167.14	-	-	-

As more fully discussed and analyzed below, there is the potential for the water quality within area wetlands and streams to be affected by an increase in erosion and sedimentation during construction.

Downstream water bodies: Water from the project site primarily flows to the onsite stream and then flows north to the Rail Trail before entering the hamlet and

eventually the Hudson River. A small portion of the site is collected in a drainage system along Vista Drive or along the Rail Trail and then passes through the Sunny Brook community before it discharges under the Rail Trail where it also enters the hamlet before discharging to the Hudson River. All downstream waters are Class C streams until the point where they discharge into the Hudson River. See Figure F-3.1B.

Upstream water bodies: Directly upstream from the site are the Town of Lloyd Reservoirs. In total, there are four reservoirs, #1, #2, #4 and #5 (see Figure F-3.1F). Reservoir #3 was a small reservoir that was located directly below Reservoir #2 but has since been abandoned. Reservoirs #1 and #2 have a dam classification of "A", while Reservoirs #4 and #5 have a dam classification of "B". According to the NYSDEC, a class "A" dam failure will damage nothing more than isolated farm buildings, undeveloped lands or township or country roads. A class "B" dam failure can damage homes, main highways, minor railroads, or interrupt use or service of relatively important public utilities. Based on the NYSDEC data base, the following information is available regarding these reservoirs:

RESERVOIR NUMBER	MAXIMUM VOLUME (AC-FT)	DAM HEIGHT (FT)	DAM CONSTRUCTION	RISK CATEGORY	DRAINAGE AREA (SQ. MILES)
1	9	15	Earth	A	0.21
2	4	12	masonry/rock fill	A	Not Available
4	27	12	concrete/masonry	B	0.36
5	92	18	Earth	B	0.43

The total watershed area of these reservoirs is approximately 0.79 square miles (both reservoir #1 and #2 are up upstream of reservoir #4) and consists almost entirely of undeveloped woodlands along the eastern slope of Illinois Mountain.

POTENTIAL IMPACTS

Direct Impacts: The development of the project will not result in any disturbance of wetlands, streams or reservoirs as the project has been carefully planned to avoid any direct disturbance of these water resource features. There will however be disturbance to

the 100 year flood plain. This disturbance is located in several areas. A very small disturbance of approximately 580 s.f. is proposed in the area of station 11+50 of Road H; a slightly larger disturbance of 3,150 s.f. is proposed in the area of the cul-de-sac of Road E; an area of 5,350 s.f. will be filled in the area of the cul-de-sac on Road F; an area of 7,040 feet will be filled at the existing Road D stream crossing; and an area of 15,400 s.f. will be filled in the area of units 67-69. The only units proposed to be placed in and raised above the flood plain are units 67, 68 and 69. All other disturbance areas do not contain residential units and are necessary due to infrastructure improvements. Construction within the designated flood plain will require a flood plan development permit in accordance with the Town of Lloyd Town Code, Chapter 60 requirements.

Indirect Impacts: Although there are no direct impacts to wetlands or streams, potential erosion impacts occur when stormwater flows increase due to removal of vegetation and the addition of impervious area such as homes and pavement. Siltation of streams and wetlands may occur from silt laden runoff discharging from disturbed areas. Both of these are minimized by proper erosion and sediment controls and appropriately designed storm management plans.

The increase in impervious surface areas, which include buildings, roads and parking areas, have the potential to increase peak stormwater flow rates and to degrade water quality. In the Stormwater Pollution Prevention Plan (“SWPPP”), the peak flow rates for post development stormwater flows at the five design points have been calculated and are included in Table 3.1C. These flows have been calculated for the 1, 10, and 100 year rainfall events. The proposed watershed boundaries are shown on Figure 3.1G and further described in the SWPPP included in Appendix B of this DEIS.

Watershed Discharge Designation	Size (Acres)	1 Year Storm (cubic feet per second)	10 Year Storm (cubic feet per second)	100 Year Storm (cubic feet per second)
A	126.6	76.52	260.57	477.62
B	0.98	0.00	0.07	0.64
C	3.70	4.04	11.98	20.60
D	12.49	4.12	19.12	41.65
E	23.37	7.75	24.56	43.06
TOTAL	167.14	-	-	-

The stormwater facilities will also treat sediment and pollutants from proposed roads by allowing sufficient time for settlement of pollutants. These facilities will be owned and maintained by the Town of Lloyd. Regular inspection and maintenance of the proposed ponds is required to ensure their long term function. All stormwater facilities will be located within lands to be owned by the Town, or within easements granted to the Town by the applicant, to ensure access for future maintenance.

To detain peak stormwater flows and treat stormwater quality, six pond areas have been proposed. Pond F, located behind lot 53; Pond G, located behind lot 60; Pond H, located between Vista Drive and lots 20-25; Pond J, located next to lot 75 and Road D; Pond K, located between lots 89 and 90; and Pond I, located on a triangular shaped parcel between the Sunny Brook community and the Rail Trail. These ponds are designed to detain stormwater from developed areas to ensure that post-development peak flows at each design point do not exceed pre-development peak flows.

To ensure treatment of post construction sedimentation and pollutants resulting from construction of new roads, buildings and landscape areas, the stormwater management ponds have also been designed to treat the necessary “Water Quality Volume (WQv)” as defined by the NYSDEC. Each of the proposed ponds provides storage of the required WQv ensuring that post-development pollutant removal requirements have been met.

Another potential indirect impact to water quality within wetlands and streams is runoff contaminated by pesticides and herbicides applied during landscape maintenance after construction is complete. The maintenance of lawns and landscaping will be the responsibility of the individual homeowners. If a homeowner chooses to apply pesticides to these areas, they will be required to comply with all applicable State, County and/or local regulations. Appropriately applied pesticides and herbicides should not significantly impact water resources on or off-site.

Although there are no direct impacts to the Town of Highland Reservoirs, as they are upstream from the site, there is a potential that the classification of the dams will need to be revised. This determination can only be made once a detailed study is conducted to analyze the height of the dam, its maximum impoundment capacity, the physical characteristics of the dam site and the location of downstream facilities. In this analysis,

if a reservoir failure could cause loss of life, serious damage to homes, industrial or commercial buildings, important public utilities, main highways, and railroads a classification of “C” would be assigned to the dam and future upgrades to the dam would need to consider this new classification.

The Town of Highlands reservoirs are maintained by the Town and periodically inspected by the NYSDEC. According to Town documents, Reservoirs #1, #2 and #4 were renovated in 1986-1987. In addition, Reservoir #4, the largest reservoir, underwent significant upgrades in the early 1990’s under DEC permit 3-5132-19/3-0. Due to the efforts of the Town, dam failure and potential impacts to the project site are highly unlikely but do exist.

MITIGATION

Erosion and Sediment Control Plan: To control the impacts that site development may have to onsite wetlands and downstream surface waters, a detailed Erosion and Sediment Control Plan has been prepared and is included in the full set of plans at Appendix L of this DEIS. This plan incorporates many best management practices to minimize the potential impacts from erosion and sedimentation. Silt fences will be placed down gradient of proposed disturbance areas to protect wetlands and other surface water features. Grassed swales will also be utilized to filter runoff and direct stormwater to stone filter inlets and temporary sediment basins for treatment. Temporary sediment basins will be installed in each proposed stormwater facility. These measures will help to limit potential siltation. To help reduce the amount of erosion and minimize the presence of bare soil, disturbed areas will be stabilized within 7 days of final disturbance in accordance with the typical waiver provisions from the NYSDEC.

All erosion and sediment control measures have been designed in accordance with the New York State Department of Environmental Conservation’s *New York Standards and Specifications for Erosion and Sedimentation Control* (April 2005). Even with these protections in place, some sediment loading will result from site disturbance during construction.

Stormwater Management: NYSDEC regulations provide that all construction activities involving one acre or more of land disturbance must obtain a SPDES General Permit (GP-0-10-001) for stormwater discharge from construction activities. To obtain coverage under the General Permit, applicants must prepare a Stormwater Pollution

Prevention Plan (SWPPP) and file a Notice of Intent (NOI) with the NYSDEC. The permit requires that post-development peak stormwater flows be maintained at or below pre-development levels. The permit also requires treatment of the Water Quality Volume (WQv), which is designed to mitigate water quality impacts from proposed construction with stormwater management practices that are designed to capture and treat 90% of the average annual stormwater runoff volume. The SWPPP prepared for the Mountainside Woods project utilizes the recommended stormwater management practices and confirms that the project will meet the outlined WQv requirements. This plan was developed using the June 2010 *New York State Stormwater Management Design Manual*. Once coverage under the permit is obtained, weekly inspections of the erosion and sediment control measures outlined in the plan must be performed during the construction period to ensure that they are correctly installed and functioning properly.

In preparing the SWPPP, it was determined that six (6) on-site stormwater ponds are necessary to mitigate the stormwater runoff from the proposed site improvements. Two of the facilities are designed as permanent sediment basins, which will provide water quality benefits but no peak rate control. The remaining facilities have been designed to provide both water quality and peak rate control. Two of these facilities are designed as Micropool Extended Detention Ponds and the remaining two facilities are designed as Pocket Ponds in accordance with NYSDEC Phase II stormwater guidelines. Based on the use of these ponds, the post development peak stormwater flow rates have been maintained at or below predevelopment levels. Below in Table 3.1D is a summary of the net change for each of the peak flow rates for the five watersheds analyzed.

Watershed Designation	1 Year Storm (cubic feet per second)	10 Year Storm (cubic feet per second)	100 Year Storm (cubic feet per second)
A	-1.77	-4.62	-0.13
B	0.00	-0.04	-0.74
C	-3.09	-12.02	-22.75
D	-5.33	-7.19	-2.70
E	-3.14	-12.32	-23.38

Stormwater facilities designed as Micropool Extended Detention Ponds have contributing areas of greater than 10 acres in accordance with the NYSDEC stormwater manual recommendations. Stormwater facilities designed as Pocket Ponds are proposed to have a contributing area of less than 5 acres at build out of the project.

The stormwater facilities will be offered for dedication to the Town of Lloyd. Once accepted, the facilities will be owned and maintained by the Town of Lloyd. Regular inspection and maintenance of the proposed stormwater facilities will be performed to ensure their long term water quality affects and peak discharge rate reduction. In addition, all stormwater discharges and stormwater improvements will be reviewed by the Town as part of its Municipal Separate Storm Sewer Systems (MS4) responsibilities.

Green Technologies: To reduce the volume and improve the quality of runoff, a number of green development techniques are being incorporated including conservation of natural areas, roof top disconnects, and grass swales. These measures will be incorporated into the project's detailed design plans to ensure that these mitigation measures are carried through to construction.

Roof top disconnects allow stormwater from roof leaders to discharge to lawns or other natural areas. This method of stormwater management allows stormwater to flow over natural areas prior to discharge to the stormwater collection system allowing water to infiltrate naturally and reduce stormwater volumes. In addition, this technique lengthens the time it takes stormwater to discharge from the site thereby reducing peak flow rates. Grass swales provide similar benefits as they slow stormwater flows, thereby reducing peak runoff rates as well as allowing water to infiltrate naturally. Both techniques also provide water quality benefits since the storm water is allowed to infiltrate through the soil which acts as a natural filter.

Phasing: The site construction will be phased to minimize the amount of site disturbance at any one time. Even with phasing, the area of disturbance for each phase will exceed 5 acres and a waiver from the NYSDEC will be obtained.

Flood Plains: Construction within the designated flood plain will require a flood plain development permit in accordance with the Town of Lloyd Town Code, Chapter 60 requirements. As part of this permit, base flood elevations will be provided to determine

the extent of the impact, if any, on the flood plain and to verify that the location and elevation of the proposed homes are in compliance with the regulations.

Reservoirs: As the majority of the buildable area of the project site is located below the Town's reservoirs, the opportunity to redesign the site to avoid potential impacts from dam failure is very limited. To redesign the site at a similar density while keeping the development entirely out of the potential reservoir impact area would require the construction of several multi story structures directly behind the residences on Hilltop Lane, along Vista Drive and on the buildable land nearest the Rail Trail. This type of development is inconsistent with the planning and zoning goals in this area of the Town and therefore the potential impact to the property, due to the presence of the Town's reservoirs, is unavoidable.

3.1.2 Groundwater Resources

EXISTING CONDITIONS

Ground water resources on the site, and in the adjacent area, consist primarily of bedrock aquifers with the potential for gravel aquifers at or near the ground's surface. The annual precipitation for Ulster County is about 49 inches per year. A large portion of the annual precipitation is returned to the atmosphere by evaporation, transpired by vegetation or returned to streams and lakes as surface runoff. Only a small portion of the total precipitation infiltrates through the soil to eventually reach and recharge the groundwater in the gravel or bedrock. In areas where the recharge is significant, the land is identified as an aquifer. According to the NYSDEC, the site has not been identified as a primary, principal or sole source aquifer.

In addition, the site and surrounding area are located entirely within the Highland Water District and therefore ground water sources in the area of the site are limited. Based on our review of the district maps there appear to be only four water supply wells located near the property. All of these wells are located up gradient of the proposed project on lands owned by the Town of Lloyd. Three of the wells are vertical water supply wells and one well is a horizontal water supply well the locations of these wells will be added to Figure F-3.1H once the locations are identified by the Town. These wells serve as supplemental sources to the Town's reservoirs.

POTENTIAL IMPACTS

The project will be connected to the Town water supply for potable water and fire protection and does not propose to use onsite wells as a water source. Although there will be the addition of impervious surface areas to the site, since the site has not been identified as a primary, principal or sole source aquifer there is not expected to be any significant impact to groundwater recharge. Potential impacts due to contaminants from stormwater do exist, but have been minimized by the stormwater plan discussed above. In addition, the only identified water supply wells in the area are up gradient of the proposed site improvements.

MITIGATION

Based on the foregoing analysis, the proposed project is not anticipated to have a significant impact on groundwater resources and no mitigation is proposed.

3.2 SOILS, TOPOGRAPHY AND GEOLOGIC RESOURCES

3.2.1 Subsurface Geology

EXISTING CONDITIONS

Based on the Soil Survey of Ulster County, the site contains seven different types of soils. The following Table 3.2.1A below, Site Soils, lists the soil types present on site and depth to rock.

Soil	Symbol	Depth to Rock
Bath Nassau	BnC	20”- 52”
Bath Nassau Rock	BoD	20”- 60”
Hoosic	HgC	>80”
Lyons Atherton	Ly	50”- 65”
Mardin	MdB	>60”
Nassau Bath Rock	NbF	20”- 60”
Volusia	VoB & VSB	>70”

In addition to the soil survey, in October and November, 2010, EP performed a preliminary geotechnical exploration of the site. The exploration included the excavation and observation of 35 test pits extending from depths of 3’-0” to 17’-5”. These test pits

were examined to determine the presence of rock, water table and general soil composition. Figure F-3.2A shows the locations of the test pits in relation to the current proposed site layout.

This subsurface exploration found the topsoil layer to generally range from 4 to 12 inches in thickness and to include leaves, twigs and roots in an organic silt soil matrix. Below the topsoil, silt loam with varying quantities of gravel and cobbles was encountered. In isolated locations, sandy loam and ripable shale were also encountered. The natural soils extend the full depth of the test pit. Below the silt loam, many of the test pits encountered a well drained sandy loam soil layer.

Rock was encountered in a number of test pits, specifically test pits 8, 7, 10, 15-17, 21-23, 26, 30 and 33, at varying depths below grade. Groundwater or groundwater indicators were also observed in a number of test pits on the lower elevations of the site. These indicators were evident from 4'4" to 13'10". The Soil Investigation Report is included in this DEIS as Appendix C.

POTENTIAL IMPACTS

The site is comprised mostly of well drained and moderately well drained soils with some poorly drained soils leading to the potential for encountering ground water during construction. The bulk of the poorly drained soils are located along the stream corridor in the center of the site. In several of the test pits, there was evidence of a seasonal high ground water table. Most of these areas were at stormwater pond locations with the exception of one location where water was encountered near a proposed residence at the rear of lot 29.

In addition to the potential for encountering ground water during site work, there is also the potential for impacts due to the removal of rock that will be necessary to construct site improvements. While the location of rock is difficult to determine, rock is likely to be encountered in several areas: along Road D, including the area of lots 1 and 33-35; along Vista Drive in the area of Pond H and lots 11-15; along the cut slope to the rear of lots 85-96; along Road B in the area of lots 143-145; and at the intersection of Road B and Road C, extending to the rear of lots 164-169.

The presence of shale or bedrock may necessitate the use of blasting or other special rock removal techniques to aid in the construction of the project.

MITIGATION

While the disturbance of soils is unavoidable, a detailed grading plan has been designed to minimize the amount of earthwork to the greatest extent practicable. The grading design is shown on the site plans included in the full set of plans located at Appendix L of this DEIS.

To help control seasonal high groundwater that may be encountered during grading of the site, dewatering of excavation for structures will be utilized. Any water from these excavations will be directed to an appropriate erosion control structure capable of handling the water discharge (i.e. sediment trap, swale with check dam, etc).

In removing bedrock, the contractor will minimize the need for blasting by first attempting to remove rock by mechanical means. If blasting is necessary, it will be performed by a fully insured licensed blasting contractor in accordance with all applicable state and local requirements.

3.2.2 Surface Geology

EXISTING CONDITIONS

Based on the Soil Survey of Ulster County, the site contains several different types of soils. Only the Mardin (MdB) soils are classified as agricultural soils. The following is a brief description of each soil type present on site:

- **Bath-Nassau complex (BnC & BoD)** soils cover ± 82.91 acres or 54.16% of the site. This soil consists of deep, well drained Bath soil and shallow, somewhat excessively well drained Nassau soil. This moderately sloping soil is found on ridges generally oriented in north and south direction. This soil unit is 50 percent Bath and 30 percent Nassau soils. The water table varies from 24" to >72". Permeability is moderate in the surface layer and in the upper part of the subsoil. Rock is present in about 15% of the area for BoD soils. Slopes for these soils units range from 8-25%.
- **Hoosic Gravelly loam (HgC)** covers ± 3.03 acres ($\pm 1.98\%$) of the site. These deep, somewhat excessively well drained soils are

formed in glacial outwash deposits. This soil is found predominantly on outwash terraces and kames. The slopes range from 5 to 16 percent. The water table is generally deeper than six feet. Permeability of the soil is rapid in the surface layer and very rapid in the substratum.

- **Lyons Atherton complex (Ly)** covers ± 16.54 acres (10.81%) of the site. It is a deep, nearly level soil that is formed in glacial till in depressions and along drainage ways. This soil unit is poorly drained to very poorly drained and has a slope range of 0 to 3 percent on lower hillsides and along shallow drainage-ways. Ground water is at or near the surface in the fall, winter and early spring. Permeability is moderate to moderately slow in the subsoil and is slow to very slow in the substratum.
- **Mardin Gravelly silt loam (MdB)** covers ± 10.96 acres ($\pm 7.16\%$) of the project site. This deep, moderately sloping soil is a moderately well-drained soil formed in glacial till deposits. The soil is found in concave hilltops and convex foot slopes. Slopes range from 3 to 8 percent. Late in fall and early in spring a temporary high water table is perched above a slowly permeable fragipan. Permeability is moderate above the dense fragipan.
- **Nassau-Bath-Rock outcrop complex (NbF)** soil covers ± 21.23 acres ($\pm 13.87\%$) of the site and has a slope range of 35 to 65 percent. This soil consists of shallow, somewhat excessively drained Nassau soils; deep, well drained Bath soils; and rock outcrop. These soils are formed in glacial till and found on hillsides, valley sides and mountains. The depth to the water table is limited by the presence of rock, which can be found at depths of 20"-60".
- The remaining soil on the site is **Volusia gravelly silt loam and Volusia very stony soils (VoB & VsB)**. These soil units cover ± 18.4 acres ($\pm 12.03\%$) of the site and have a slope range of 3 to 8

percent. These deep soils are poorly to somewhat poorly drained and are formed in glacial till deposits at the foot of slopes, along broad hilltops and in drainage ways. The depth to the water table is perched near the surface during wet periods. Permeability is moderate above the fragipan and slow in the fragipan and substratum.

Table 3.2.2A below, Site Soils, lists the soil types present on site and relevant acreage. Figure F-3.2B identifies the location of each individual soil type.

Soil	Symbol	Acres	Slope Range	Erosion Potential	Depth to Rock	Water Table
Bath Nassau	BnC	15.56	8 - 25%	Slight	20''- 52''	24''- >72''
Bath Nassau Rock	BoD	67.35	15 - 25%	Slight	20''- 60''	>72''
Hoosic	HgC	3.03	5 - 16%	Slight	>80''	>72''
Lyons Atherton	Ly	16.54	0 - 3%	Slight	50''- 65''	±0''
Mardin	MdB	10.96	3 - 8%	Slight	>60''	18''- 24''
Nassau Bath Rock	NbF	21.23	35 - 65%	Moderate	20''- 60''	24''- >72''
Volusia	VoB & VSB	18.4	3 - 8%	Slight	>70''	6''- 18''

As discussed above, in October and November, 2010, EP performed a preliminary soils investigation of the site. The exploration included the excavation and observation of 35 test pits extending to depths of 3'0'' to 17'5''. These test pits were examined to determine the presence of rock, water table and general soil composition. Figure F-3.2A shows the locations of the test pits in relation to the proposed site layout.

In general, the test pits confirmed that the area of proposed development contains soils that are suitable for development of utilities, roads and residential structures. This onsite subsurface exploration found the topsoil layer to generally range from 4 to 12 inches in thickness and to include leaves, twigs and roots in an organic silt soil matrix. Below the topsoil, silt loam with varying quantities of gravel and cobbles was encountered. In isolated locations sandy loam and rippable shale were also encountered. The natural soils extended the full depth of the test pits. Below the silt loam, almost all test pits that did not encounter rock at shallow depths encountered a well drained sandy loam soil layer.

Rock was encountered in a number of test pits, specifically test pits 8, 7, 10, 15-17, 21-23, 26, 30 and 33, at varying depths below grade. Groundwater or groundwater indicators were also observed in a number of test pits on the lower elevations of the site. These indicators were evident from 4'4" to 13'10". The Soil Investigation Report is included in this DEIS as Appendix C.

POTENTIAL IMPACTS

The first potential impact is the disturbance of soils due to the physical alteration of the site for the construction of roads, walkways, homes and utilities. The physical disturbance of existing soils has the potential to cause soil erosion and sedimentation which occurs during construction. This potential for erosion can be exacerbated by creating large areas of disturbance, disturbing steep slopes (>25%), disturbing highly erodible soils and poor site management of soils and erosion control techniques.

The total disturbance of the project is estimated to be approximately 44 acres. It is estimated that approximately 7 to 11 acres may be disturbed at any one time. The site grading will require the excavation of approximately 183,000 yards of soil and rock and the placement of 111,000 yards of fill. This area of disturbance and subsequent movement of soil has the potential to increase erosion. In addition, the project earthwork will result in the need to remove 72,000 yards of earth from the site. This export of soil from the site will result in an increase in truck traffic to and from the site during the construction period. Assuming the soil is removed with a 14 yard dump truck, there would be 5,143 round trips from the site over a five and one half year period. Assuming there are 250 business days in a year, it is estimated that there will be an average of less than 4 round trips per day (5,143 round trips/250 business days per year x 5.5 years)=3.74 round trips).

The site is roughly evenly comprised of well drained and poorly drained soils. The bulk of the poorly drained soil is located within low lying areas of the site along the stream corridor and will be disturbed during construction. Therefore, there is potential for groundwater to be present in excavations.

None of the soils are rated as severe for the potential for erosion.

MITIGATION

While the disturbance of soils is unavoidable, a detailed grading plan has been designed to minimize the amount of earthwork, to the greatest extent practicable. The grading design is shown on the site plans included in the full set of plans located at Appendix L of this DEIS.

All topsoil will be stripped and stockpiled for later use onsite. Cut soils generated by the project will be reused onsite as fill to the greatest extent practicable to minimize removal of soil from the site. Unusable material, if any, will be disposed of on site in an acceptable manner.

Erosion due to soil disturbance is unavoidable and will be mitigated to the greatest extent possible as shown on the erosion control plans included in the full set of plans located at Appendix L of this DEIS. To reduce the potential for soil erosion, preventative measures will be implemented in conformance with NYSDEC standards. All construction activities will proceed in a manner that is designed to prevent sediment from entering into any wetland, watercourse, water body, and/or conduit carrying water. Proposed measures to be employed during construction include the following:

- Disturbed areas that have established final grade or temporary grade and will be idle for more than 7 days will be stabilized immediately to minimize potential exposure to erosion and sedimentation.
- Storm water runoff from the site will be controlled and treated to remove sediment prior to discharge.
- Existing vegetation will be retained where practical. Following construction, permanent vegetation will be established on all exposed soils.
- Site preparation activities will be designed to minimize the area and duration of soil disturbance.
- Permanent traffic corridors will be established and routes of convenience (“shortcuts”) avoided. Stabilized construction entrances will be installed at the point of entry into the project site and to each independent phase to minimize dust and tracking of material from construction areas.

- Storm drain sediment inlet filters will be constructed at storm drains as required. These measures will be maintained in good condition until the final vegetative cover is well established on all disturbed areas upstream of the inlet.
- Drainage ditch stone check dams will be utilized to trap sediments and minimize their release off-site until the site is stabilized. These dams will be constructed within each ditch beginning at its downstream terminus and placed at intervals as required and as depicted in the construction details.
- No erodible materials will be stockpiled within 25 feet of any ditch, stream or other surface water body.
- Removal of healthy trees along the limits of disturbance will be avoided, whenever possible. No construction materials will be stored and no machinery operated outside the limits of disturbance, as shown on the site plans.
- All slopes of 2:1 or steeper will be stabilized with jute netting and hydro-seed.
- Any washouts will be immediately repaired, reseeded and protected from further erosion.
- All accumulated sediments will be removed and contained in appropriate spoil areas.
- Water will be applied to newly seeded areas as needed until grass cover is established.
- To effectively control wind erosion, water will be applied to all exposed soils as necessary.

All erosion control measures will be inspected in accordance with NYSDEC standards, by a qualified professional, for the duration of the construction period. Specifically, the site will be inspected every seven (7) days by a qualified inspector and proper logs and reports will be maintained. Proper maintenance of all erosion control items will ensure the optimum operation of these erosion and sediment controls.

Construction on existing steep slopes has been avoided to the greatest extent possible. To minimize impacts from the potential erosion caused by the post construction steep slope areas, slope stabilization matting will be installed to minimize erosion on the slopes and to improve establishment of vegetation.

To help control seasonal high groundwater that may be encountered during grading of the site, dewatering of excavation for structures will be utilized. Any water from these excavations will be directed to an appropriate erosion control structure capable of handling the water discharge (i.e. sediment trap, swale with check dam, etc).

A specific construction phasing plan has been designed which limits the area of disturbance within each phase to that which is specifically necessary to construct each phase. Specific details of the phasing plan can be found in Section 2.3 of this DEIS, Construction & Operation.

3.2.3 Topography

EXISTING CONDITIONS

The project site's topography is divided into three primary areas. There is a rolling hill at the front of the site along Vista Drive, Hilltop Lane and the Rail Trail; parallel and just west of this hill is a stream corridor that bisects the site from north to south; and west of the stream corridor is Illinois Mountain.

The hilly area at the eastern edge (front) of the site general slopes gradually upward from east to west until the crest of the hill is reached at the eastern edge of the stream corridor. Here the topography drops to the west until a low point is reached in the stream. The stream flows cross slope from south to north through the site. On the western side of the stream there is a gently sloping area that rises to the west until the base of Illinois Mountain is reached where the topography rises steeply to the western property line.

Elevations on the site range from a low of 296 feet above mean sea level (MSL) along the Rail Trail to a high of approximately 830 feet above MSL at the western most property line. The area of the site with the highest elevations is proposed to be dedicated to the Town and is not proposed for development. The highest areas to be disturbed as part of the site development reach an elevation of approximately 408 feet above MSL.

This elevation occurs in two locations, one along the base of Illinois Mountain behind lot 89 and the second at the high point in the area of cul-de-sac for Road H.

Slopes on the site generally follow the topographic patterns discussed above. Slopes are flattest (0%-5%) along the stream corridor with moderate slopes of 5%-15% with some small areas of steeper slopes (>15%) in the hill area at the front of the site and in the flatter areas adjacent to the stream. The steep slopes (>15%) are primarily found along the western portion of the site on the side slopes of Illinois Mountain. Figure F-3.2C depicts the different slope ranges on the site and Table 3.2.3A below itemizes the site area and percentage of the site covered by each slope range.

Table 3.2.3A - Site Slopes		
Slope Range	Site Area	Percent of Site
0 – 15 %	96.27	62.90%
15 – 25 %	32.53	21.25%
25 % +	24.27	15.86%

The prominent and unique topographic feature of the site is Illinois Mountain which, as indicated above, begins to rise on the western portion of the site and extends beyond the project site’s boundaries. No development is proposed for that portion of the site and a conservation easement will prevent any future development in this area, preserving this unique and prominent topographic feature.

POTENTIAL IMPACTS

Construction on the steep slopes can exacerbate the erosion potential unless additional erosion control methods are implemented. Below in Table 3.2.3B a slope analysis indicating the area of each slope type on the site and the area of disturbance of each slope type:

Table 3.2.3B – Slope Disturbance				
	Slope			Total Area (Ac)
	0%-15%	15%-25%	>25%	
Disturbed Area (Ac)	38.33	1.39	0.39	41.97

The existing slopes within the majority of the developed portion of the site are not severe ($\leq 25\%$) and therefore no significant impacts to slopes are expected; however,

construction of the site will result in some steep slopes being altered. These slopes primarily occur as smaller isolated areas spread throughout the front development areas (between Hilltop Lane, Vista Drive, the Rail Trail and the stream). One larger area of concern is the steep slopes (>25%) at the rear of lots 85 through 96. These slopes will be disturbed to accommodate new homes and drainage improvements.

MITIGATION

Construction on existing steep slopes has been avoided to the greatest extent practicable. To minimize impacts from the potential erosion caused by the disturbance of steep slopes at the rear of lots 85 through 96, slope stabilization matting will be installed to minimize erosion on the slopes and to improve establishment of vegetation.

3.3 TRANSPORTATION AND TRAFFIC

John Collins Engineers, P.C. completed a Traffic Impact Study of the project, a copy of which is included in Appendix D of this DEIS. The study evaluated existing traffic conditions and the potential traffic impact of the Mountainside Woods project.

EXISTING CONDITIONS

The surrounding road network includes NYS Route 44/55, also known as Vineyard Avenue, Toc Drive, Hilltop Lane, Brescia Blvd, Reservoir Road, Tano Drive and Vista Drive. The following is a brief description of each of these roadways.

NYS Route 44/55 (Vineyard Avenue) is a state highway which traverses in an east/west direction through much of eastern New York State. In the vicinity of the site, the roadway generally consists of one lane, approximately 12 feet wide, in each direction and serves a combination of residential and commercial land uses. In the study area, the roadway intersects with Reservoir Road, Brescia Boulevard and Toc Drive at unsignalized intersections. The roadway has a posted speed limit of 30 mph in the study area and the pavement is generally in good condition.

Toc Drive is a town road that originates at an unsignalized intersection with NYS Route 44/55. The roadway traverses to the northwest, past unsignalized intersections with Tano Drive, Cambridge Court and Sunnybrook Circle. The roadway terminates at a "T" intersection with Vista Drive near the property line of the proposed project. Toc Drive, which serves residential homes, consists of one lane in each direction with no

centerline striping and has a speed limit of 30 mph. The roadway varies in width from 24 to 29 feet and the pavement is generally in good condition.

Hilltop Lane is a town road that travels generally in a north/south direction between unsignalized intersections with Reservoir Road and Tano Drive. It also intersects with Brescia Boulevard and Talia Street at unsignalized intersections. Hilltop Lane serves existing residential homes and consists of one lane in each direction with no centerline striping. The roadway has a speed limit of 30 mph. Hilltop Lane is approximately 27 feet wide for its entire length and the pavement is generally in good condition. The proposed Mountainside Woods development will be accessed via an extension of the northern end of Hilltop Lane.

Brescia Boulevard is a town road that travels generally in an east/west direction between unsignalized intersections with NYS Route 44/55 and Hilltop Lane. The roadway has an unsignalized intersection with Cross Road. Brescia Boulevard serves existing residential homes and consists of one lane in each direction with no centerline striping. The roadway has a speed limit of 30 mph and varies in width from 20 to 25 ft. The pavement is generally in good condition.

Reservoir Road is a town road that travels generally in an east/west direction between unsignalized intersections with NYS Route 44/55 and Hilltop Lane. The roadway also has an unsignalized intersection with Cross Road. Reservoir Road serves existing residential homes and consists of one lane in each direction with no centerline striping. The roadway has a speed limit of 30 mph and varies in width from 22 to 26 ft. The pavement is generally in good condition. Approaching NYS Route 44/55, the road slopes down at a grade of approximately 5%.

Tano Drive is a town road that travels generally in an east/west direction between unsignalized intersections with Toc Drive and Hilltop Lane. The roadway also has an unsignalized intersection with Talia Street. Tano Drive serves several existing residential homes and consists of one lane in each direction with no centerline striping. The roadway is approximately 22 to 23 ft wide, has a speed limit of 30 mph and the pavement is generally in good condition.

Vista Drive is a town road that extends to the north from the intersection of Toc Drive and Sunnybrook Circle. The roadway is used to access existing townhouses. It terminates at a dead end approximately 500 ft. north of the Toc Drive intersection. The

proposed Mountainside Woods development will be accessed via an extension of Vista Drive. The roadway is approximately 20 to 22 ft. wide and the pavement is generally in good condition.

Existing traffic conditions at the following intersections were evaluated:

- Reservoir Road and Vineyard Ave (NYS Route 44/55);
- Brescia Blvd and Vineyard Ave (NYS Route 44/55); and
- Toc Drive/Tillson Ave and Vineyard Ave (NYS Route 44/55).

Figure 3.3A shows the studied intersections and their location in relation to the project site. This Traffic Impact Study examined the listed intersections and monitored their functionality. The turning movement traffic counts for these intersections were collected on a 15 minute basis between the hours of 6:30 a.m. and 9:15 a.m. and between 3:30 p.m. and 6:30 p.m.

These counts were supplemented with traffic counts obtained from the NYSDOT as well as previous count data collected by the traffic engineer's office for the area roadways. Based upon the results of these traffic counts, the peak hours were determined to occur generally as follow:

Weekday Peak AM: 7:15 a.m. – 8:15 a.m., which coincides with the school operational peak period.

Weekday Peak PM: 5 p.m. – 6 p.m.

Figures F-3.3B and F-3.3C depict the Existing Traffic volumes for the AM and PM peak hours, respectively.

Currently the local roadways including Toc Drive, Brescia Boulevard and Reservoir Road have school bus traffic, which connects to and from Vineyard Avenue. At Reservoir Road, the school buses enter from Vineyard Avenue. Buses also enter and exit via Brescia Boulevard.

Sight distances at the studied intersections are generally good except for exiting Reservoir Road onto Vineyard Avenue where the existing grade and vegetation restricts the sight line looking left. Also, from Tillson Avenue onto Vineyard Avenue the sight distance is somewhat limited but is improved when the vegetation is maintained.

There is currently no construction related traffic and noise in the area.

The intersections identified above were examined for capacity analysis for each of the peak hours utilizing the existing traffic volumes based on procedures from the

Institute of Traffic Engineers 2000 Highway Capacity Manual. The terminology used in identifying traffic flow conditions is “Levels of Service” or “LOS”. An LOS “A” represents the best condition and an LOS “F” represents the worst. An LOS “C” is generally used as a design standard while an LOS “D” is acceptable during peak periods. An LOS “E” represents an operation near capacity. The following is a description of the study area intersections and the capacity analysis for existing volumes:

- Reservoir Road intersects NYS Route 44/55 (Vineyard Avenue) at a “T” shaped unsignalized intersection. Each of the approaches consists of one lane and the Reservoir Road approach is controlled by a “stop” sign. There is a sidewalk on the east side of NYS 44/55; however it terminates immediately north of this intersection before it reaches Reservoir Road. Capacity analysis conducted utilizing the 2010 Existing Traffic Volumes indicates that this intersection is currently operating at an overall Level of Service “B” or better during both the Weekday Peak AM and PM hours.
- Brescia Boulevard intersects NYS Route 44/55 (Vineyard Avenue) at an unsignalized “T” shaped intersection. Each of the approaches to the intersection consists of one lane and the Brescia Boulevard approach is controlled by a “stop” sign. A sidewalk is provided along the east side of NYS Route 44/55 at this intersection. Capacity analysis conducted utilizing the 2010 Existing Traffic Volumes indicates this intersection is currently operating at a LOS of “B” or better during each of the Peak Hours.
- Toc Drive intersects NYS Route 44/55 at an unsignalized intersection approximately 75 feet south of the intersection of Tillson Avenue and NYS Route 44/55. Due to the proximity of these two intersections, they operate as a single full movement intersection rather than two separate “T” shaped intersections and must be analyzed accordingly. Each of the approaches to the intersection consists of one lane and the Toc Drive and Tillson Avenue approaches are controlled by “stop” signs. Sidewalks are provided along the east side of NYS Route 44/55 and a crosswalk is provided for crossing Tillson Avenue. Capacity analysis conducted utilizing the 2010 Existing Traffic Volumes indicates this intersection is currently operating at a LOS of “C” or better during each of the Peak Hours.

Pedestrian circulation in the area is limited by the lack of sidewalks on the secondary streets. Of the area roadways studied, only Route 44/55 has a sidewalk, on the east side.

POTENTIAL IMPACTS

Using data published by the Institute of Transportation Engineers (ITE), future traffic volumes were projected under various scenarios. The first scenario, referred to as a “No Build” scenario, projects traffic volumes in the year 2013 using a background growth factor of 2% per year, for a total growth factor of 6%, which is added to the existing traffic volumes. This growth factor of 6% accounts for normal growth and traffic from other potential development traffic in the area.

The 2013 No-Build Traffic Volumes do not include any traffic associated with the project. Figures F-3.3D and F-3.3E depict the 2013 No-Build Traffic Volumes for the AM and PM peak hours, respectively.

A “Build” scenario, which projects site related traffic volume for the proposed project was developed to analyze the impact that the development would have on traffic in the area. Estimates of the amount of traffic to be generated by the Mountainside Woods project during each of the peak hours were developed based on data published by the Institute of Transportation Engineers (ITE) as contained in their publication entitled, Trip Generation, 8th Edition, 2008. The ITE Land Use Category 210 for single family homes was used to estimate the peak hour trip generation rates.

In general, the project is expected to generate a total of 132 vehicle trips during the AM Peak Hour and 174 vehicle trips during the PM Peak Hour. Figures F-3.3F and F-3.3G indicate site trip distribution assignments for the AM and PM peak hours, respectively. Figures F-3.3H and F-3.3I provide Site Generated Traffic Volumes for the AM and PM peak periods.

The intersections identified above were examined for capacity analysis for each of the peak hours utilizing the No Build and 2013 Build scenarios. Figure F-3.3J contains a Level of Service Summary Table.

- Reservoir Road and Vineyard Ave (NYS Route 44/55): Capacity analysis conducted utilizing the No Build and 2013 Build volumes indicates that the intersection will continue to operate at an overall Level of Service “B” or better during each of the peak periods.

- Brescia Blvd and Vineyard Ave (NYS Route 44/55): Capacity analysis conducted utilizing the No Build and 2013 Build volumes indicates that the intersection will continue to operate at a Level of Service B or better during each of the peak periods.
- Toc Drive/Tillson Ave and Vineyard Ave (NYS Route 44/55): Capacity analysis conducted utilizing the No Build and 2013 Build volumes indicates that the intersection will continue to operate at a Level of “C” during the weekday peak AM hour while a Level of Service “D” or better will be experienced during the PM peak hour.

Nearby, Berean Park is used seasonally for summer recreational programs; however, it is not anticipated that this use would impact traffic in the area as programs generally start after the AM peak period and with respect to the PM peak, the traffic counts for the traffic report included in Appendix D of this DEIS were collected in May, 2010, which should include general activity at the park. During the period of time that the summer recreation program is ongoing, the background traffic is lower, typically 5 to 10% lower than normal, during Peak AM and PM hours, due to vacations. This reduction in normal traffic should offset any increases in traffic due to recreational programming activity at the park.

Once the project has been approved, the applicant will meet with the school bus company to identify appropriate locations for school bus stops during the construction period and once the streets have been dedicated and accepted. As the roads will be dedicated at the end of each construction phase, the applicant will meet periodically with the bus company to determine whether school bus stops should be altered.

There is the potential for safety related issues for school age children during the construction phase of the project given the increase in construction related traffic and accordingly appropriate traffic control measures will be implemented to ensure the safety of the school age children. Of particular concern is the period of time when Vista Drive is being reconstructed and the Vista Drive Extension is being constructed. The construction of these roads will be accomplished on an expedited basis. Prior to construction, a maintenance and protection of traffic plan will be provided to the Town for review and approval. At all times during construction of the Vista Drive and Vista Drive Extension, one lane will be kept open for emergency vehicles, buses and local

traffic. For additional information relating to potential construction impacts, see Section 2.3 of this DEIS.

The existing traffic volumes were compared with historical data from NYSDOT and the projected traffic volumes are consistent with growth factor and projects from NYSDOT for long range planning.

MITIGATION MEASURES

Traffic calming: due to the residential nature of the roadways that will be used to access the proposed Mountainside Woods Development, it will be necessary to explore potential traffic calming measures to maintain travel conditions in the area. The roads for which traffic calming measures may be necessary include Reservoir Road, Brescia Boulevard, Toc Drive, Tano Drive and Hilltop Lane. Potential traffic calming measures along these roadways could include warning signs, speed bumps or a combination of both. The intent of these traffic calming measures would be to ensure that the traveling speeds along the roadways do not increase with the additional traffic from the proposed development.

A double yellow centerline should be added to Reservoir Road, Brescia Boulevard, Toc Drive and Tillson Avenue at the approach to Vineyard Avenue to better delineate and control vehicular movement at these intersections.

The Applicant has been asked to evaluate the traffic warrants at the intersection of Toc Drive and Vineyard Avenue to determine if a stop light is necessary at this intersection. As indicated above, in the Potential Impact Section, that intersection will operate at an LOS "C" during the AM peak period and an LOC "D" during the PM peak. Accordingly, the intersection should continue to be monitored in the future and if warranted, the Applicant would agree to pay its fair share contribution toward any necessary improvements at this intersection.

3.4 UTILITIES

EXISTING CONDITIONS

Water Supply: The site is located within the Town of Lloyd Highland water district. This district is supplied with water from the Hudson River and four reservoirs and is supplemented by water from four bedrock wells. This combination of surface water and ground water sources is treated at the Town filtration plant located adjacent to

the site off of Reservoir Road, within Berean Park. Based on the approved water takings and the treatment plant capacity, the system is approved to treat and supply 3.0 million gallons per day of potable water. After filtration, the finished water enters the distribution system which contains 2.75 million gallons of finished water storage capacity. This capacity is provided in 3 water storage tanks. In review of the records for 2009, the system had an average daily water demand of approximately 0.6 MGD leaving an available capacity 2.4 MGD. Operation and maintenance of the water system is performed by the Town of Lloyd Water Department.

To determine system pressures and fire flow conditions, hydrant testing was performed on Hilltop Lane and on Vista Drive in the vicinity of the site. The testing was performed on June 2, 2010 and was witnessed by the Town of Lloyd Water Department. Based on these tests (see Engineers Report, Appendix E) normal operating pressures were 52 pounds per square inch (PSI) and 78 PSI at the residual pressure hydrants with an adjacent ground elevation of ± 372 feet and ± 311 feet respectively. Flow at the test hydrants was estimated at 1,030 gallons per minute (GPM) each with a residual pressure of 63 PSI at the Hilltop Lane pressure hydrant and 47 PSI measured at the Vista Drive residual pressure hydrant. These tests yielded a calculated available fire flow of 2,138 gpm at Vista Drive flow hydrant and 2,807 gpm at the Hilltop Lane flow hydrant.

Sanitary Services: The project site is located partially within the service area of the Town of Lloyd Highland Sewer District (See sewer district boundary map Figure F-3.4A) and the project sponsor has contractual rights to sewer from the Town of Lloyd Highland Sewer District, which is serviced by the Highland Wastewater Treatment Plant (HWWTP).

The portion of the site that is in the district is that portion of tax lot 87.004-3-14 near the Rail Trail and all of tax lot 87.004-5-1.2 per an existing agreement with the Town. This agreement involved the commitment of sewer capacity to the former Westport project by the Town of Lloyd Town Board in January, 1998. This agreement with the Town of Lloyd provides for an extension of the district boundaries and assurance for future sewer treatment plant capacity of up to 75,634 GPD in exchange for donations to the district for sewer improvements.

While a district extension will be necessary to legally service the entire project site, the property is located in an area that can physically be serviced by HWWTP. This

plant is located just above the Hudson River along a tributary, approximately 1.25 miles east of the site. The plant is operated by the Town of Lloyd and has a full design capacity of 1.75 MGD and is currently treating an average of 1.0 MGD, based on the 2009 and 2010 flow records. In consideration of this data, the plant has an excess capacity of 0.75 MGD or 750,000 gallons per day. It should be noted that a large portion of this capacity (0.52 MGD) is allotted to other users leaving a remaining available capacity of 0.23 MGD.

Operation and maintenance of the sewer system is performed by the Town of Lloyd Sewer Department.

Drainage Facilities: The site is located within or is directly adjacent to the Town of Lloyd regulated Municipal Separate Storm Sewer System. (MS4). This designated area within the Town requires that the Town maintain a permit for the discharge from this storm sewer system and to regulate activities within the boundary of the system in compliance with NYSDEC general permits for construction and industrial activities.

The only existing drainage facilities onsite consist of two large box culverts that were installed by a previous owner as part of a now abandoned development plan. These two culverts bridge the onsite streams in two locations and were installed to allow access to developable areas of the site on the west side of the stream that bisects the property.

Gas and Electric Services: The site is currently located within the franchise service area of Central Hudson Gas and Electric (CHG&E) and will be serviced by electric and gas from this utility provider. These services are located within Toc/Vista Drive and Hilltop Lane.

Solid Waste: Solid waste collection and removal in this area of the Town of Lloyd is provided by private waste haulers. Currently there is no solid waste produced on the project site.

POTENTIAL IMPACTS

Water Supply: To service the proposed project, the project sponsor is proposing to install an onsite water system. Figure F-3.4B, Overall Water System, depicts the proposed layout of the onsite water system. The system will consist of 9,450 linear feet (l.f.) of 8" diameter class 52 double cement lined ductile iron water main to service the project. The new watermain will create a looped connection between the existing

watermain on Hilltop Lane and the 8" watermain on Vista Drive. As an alternative third connection point, the applicant is pursuing its rights to use an existing easement through tax lot 88.013-11-12 to connect to the water main in Old New Paltz Road. If the ability to use this easement is confirmed, this alternative may be utilized.

This system will be constructed by the applicant at their expense to the Town of Lloyd's specifications and then offered for dedication to the Town. Upon acceptance of the dedication, the Town will be responsible for operation and maintenance of the onsite water system. This water system will provide the water necessary to service the project's potable water and fire protection needs.

The proposed potable water demand for this project has been calculated to be 40,260 gallons per day (GPD) or 0.04026 million gallons per day (MGD). Based on an available capacity of 2.4 MGD, the Town has sufficient capacity to service the project.

The needed fire flow for the project has also been calculated in the Engineers' Report and has been established as 1,500 gallons per minute (GPM). It is a New York State Department of Health standard that a minimum of 20 PSI of pressure be maintained in all parts of the system under fire flow conditions and maximum daily flow conditions (56 GPM). Based on the fire flow analysis in the engineers report the minimum pressure in the system during these flow demands is estimated to be 28.9 PSI.

Sanitary Services: The project will increase sanitary sewer by an average of 40,260 GPD or 0.04026 MGD. Based on an available capacity of 0.23 MGD, the Town of Lloyd wastewater treatment plant currently has sufficient capacity to service the project. A sewer district extension will be necessary to include the entire project area within the Highland Sewer District.

The applicant is proposing to install a sewer collection system to service the project. Wastewater from the project will be collected in a proposed sewer main network that will consist of 66 sanitary manholes and approximately 10,350 linear feet of 8" PVC SDR-35 gravity sewer main. The onsite sewer collection system will discharge to offsite 8" mains located in Sunny Brook Circle just east of Vista Drive and downstream of Sunny Brook Circle where the Town's sewer main intersects the Rail Trail. As an alternative to the second connection point, the applicant is pursuing their rights to use an existing easement through tax lot 88.013-11-12 to connect to the sewer main located in Old New Paltz Road. If the ability to use this easement is confirmed, this alternate

connection may be utilized. An overall sewer system plan is depicted in Figure 3.4C. This system will be constructed by the Applicant to the Town of Lloyd's and NYSDEC's specifications and then offered for dedication to the Town. All costs for construction will be paid for by the Applicant. Upon acceptance of the dedication, the Town will be responsible for operation and maintenance of the onsite sewer system. For more information on the proposed sewer system, see Appendix F of this DEIS which contains the Engineer's Report for the Sewer Main Extension.

The previous owner entered into an agreement for sewer capacity with the Town of Lloyd Town Board in January, 1998. This agreement with the Town of Lloyd provides for an extension of the district boundaries and assurance for future sewer treatment plant capacity of up to 75,634 GPD in exchange for donations to the district for sewer improvements. A copy of the Agreement is included in the Engineer's Report in Appendix F of this DEIS.

Drainage Facilities: As the construction of this site will disturb more than 1 acre, it will be regulated under the State's general stormwater permit for construction activity. However the completed site will not require coverage under the Industrial Stormwater (aka Multi-Sector) General Permits.

There will be significant drainage improvements installed as part of the development plan for the site. Catch basins and flared end sections will be installed to capture stormwater runoff from roads and swales that collect stormwater runoff from around homes. Once the stormwater enters the collection system, it will be conveyed by a series of high density polyethylene (HDPE) drainage pipes. These pipes will convey the runoff to one of the proposed six ponds. These stormwater management ponds will then treat and/or detain the stormwater runoff before releasing it. There are three locations of discharge from the site for the new drainage system: one discharge is at the location of the existing 24" corrugated metal pipe (CMP) under Vista Drive; the second is the stream that passes through the site; and the third is the drainage swale along the rail trail. There are no known drainage capacity problems downstream from any of the three discharge points.

Once completed, these facilities will be dedicated to the Town of Lloyd which will be responsible for long term operation and maintenance of all drainage improvements.

Gas and Electric Services: Once all plans for the development have been finalized and construction is imminent, CHG&E will meet with the owner to plan service extensions to the site from their existing infrastructure. These services will be brought into the site through a series of extensions based on the phasing plan for the project. Any upgrades to the infrastructure to service the site are the responsibility of CHG&E and may or may not have to be subsidized by the applicant depending on usage formulas established by CHG&E and approved by the Public Service Commission.

Solid Waste Removal: The development of the Mountainside Woods project is designed for a total of 175 single family homes. The proposed solid waste to be generated for this project has been calculated based upon a demand of 2.25 pounds per resident per day. The estimated population to be generated by the project is 537. Accordingly, it is anticipated that the project will produce $\pm 1,208.25$ lbs per day (537×2.25) of solid waste or $\pm 37,455.75$ pounds per month; and ± 221 tons per year.

Each homeowner will be responsible for pick-up and removal of solid waste. All solid waste and recyclables will likely be transported, after pickup, to the Town of Lloyd Transfer Station in Highland, New York or the Ulster County Resource Recovery Center located off of Route 32 North in New Paltz.

MITIGATION MEASURES

Water Supply: As sufficient capacity and pressure is available to meet the demands of the project no system improvements are necessary.

To reduce the use of the Town's potable water resources, water will be conserved through the installation of water saving fixtures and appliances including water efficient showerheads and other home plumbing fixtures, dishwashers and washing machines. Native species and other water efficient plants will be utilized in landscaping to reduce the need for irrigation.

It is proposed that the water system will be dedicated to the Town of Lloyd for future operation and maintenance. It is envisioned that dedication would be performed at the completion of each phase of development. All necessary maintenance bonds and dedication documents will be provided to the Town at that time.

Sanitary Services: The Mountainside Woods project will generate a need to treat 40,260 GPD of sanitary sewage. An existing agreement for sewer system capacity

provides more capacity than the project will require in services. In addition, the Town of Lloyd Wastewater Treatment Plant has sufficient capacity to provide sanitary sewer service to the site. The use of the water conservation devices and methods discussed above will decrease the effluent flow to the Town's sewage treatment plant.

As a sewer district extension will be necessary to include all lands of the project within the district, a petition for district extension and a map, plan and report of the proposed extension will be prepared by the applicant for review and action by the Town Board

It is proposed that the sewer systems will be dedicated to the Town of Lloyd for future operation and maintenance. All necessary maintenance bonds and dedication documents will be provided to the Town at that time.

Drainage: The drainage system will be designed and constructed in accordance with the Town of Lloyd and NYSDEC requirements. A Stormwater Pollution Prevention Plan has been prepared for the site indicating compliance of the overall stormwater management plan with State requirements (see Section 3.1, Water Resources). Prior to dedication of the drainage facilities to the Town, all construction will be inspected by the Town's engineering representative to ensure proper materials and installation. Upon dedication of the drainage system, a maintenance bond will be posted that will cover the cost of any repairs to the system for a period of one year from dedication.

Gas and Electric Services: No mitigation necessary.

Solid Waste: Homeowners will pay for garbage collection services. The Mountainside Woods residents will mitigate the amount of solid waste generated by the site through recycling which is mandated by New York State law. Residents will separate glass, aluminum, and plastic from regular household trash before it is collected by the private hauling company. This will reduce the amount of solid waste that is not reusable and sent to designated landfills.

3.5 COMMUNITY SERVICES

3.5.1 Municipal, Schools and Emergency Services

EXISTING CONDITIONS

Town population and taxes: The U.S. Census 2009 population estimate for the Town is 10,669 (US Census Bureau, 2009 Population Estimates, factfinder.census.gov). As discussed in detail in Section 3.6 of this DEIS, the 2010 municipal budget for the Town of Lloyd including the General Fund, Highway Fund, Ambulance, Fire Districts, Lighting Districts, Sewer and Water capital and operating costs is \$9,424,739. Dividing the overall budget by the 2009 estimated population provides a per capita municipal cost of \$883.38 per person. Approximately 65.5 percent of this amount or \$6,174,905 would be raised by the property tax. This amounts to a per capita cost of \$578.61 per person.

Highland Central School District: The project site is served by the Highland Central School District which is located at 320 Pancake Hollow Road in Highland, NY. The District includes one elementary school, (grades K to 5), one middle school (grades 6 to 8), and one high school (grades 9 to 12). According to information provided by the School District, Business Official, Paul Kandetzke, enrollments have been stable in the District since 2000. As of October 2009, approximately 1,950 students were enrolled in the District. The current capacity of the school district to educate students is approximately 2,150.

All of the schools in this School District received a rating of “2” from the New York State Public School Report Card of Comprehensive Information 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”.

Fire Protection: The proposed Mountainside Woods development is within the Highland Fire District and is served by the Highland Fire Department, a 100% volunteer fire department, serving the Town of Lloyd. The Highland Fire District currently operates 2 fire stations and is staffed by 51 volunteers. The closest fire station to the project site is the fire district headquarters located at the intersection of NYS Route 9W and Milton Avenue. Current response time within the Highland Fire District is an average of six to nine minutes depending upon location and traffic conditions. The

second fire station is located on Old New Paltz Road, close to the intersection of NYS Route 299 and Old New Paltz Road.

Based on information provided by the Fire Chief Daniel Bassanese in a telephone interview on July 15, 2010, the department is headed by a Chief, 3 Assistant Chiefs, 1 Captain, and 2 Lieutenants who oversee firematic operations. The civil division of the department is headed by the President, Vice President, Secretary, Recording Secretary and a Treasurer who perform administrative operations.

The Highland Fire Department currently operates three (3) fire engines, one (1) tanker truck, one (1) heavy rescue vehicle, one (1) brush/utility truck and an emergency medical response vehicle. These units carry a combined water supply of 4,000 gallons of water for an initial fire attack. Over the past four years, the department has responded to an average of approximately 475 alarms per year. These alarms consisted of structural fires, motor vehicle accidents, automatic alarms, vehicle fires, brush fires, mutual aid, and various other calls for assistance. The Highland Fire Department does not respond to medical emergency calls. This service is provided by Mobile Life Ambulance Corps.

The Highland Fire Department is dispatched for emergency calls through the Ulster County Emergency Communications Center equipped with an E911 call system. The Highland Fire Department is the primary fire service provider to the proposed project site with mutual aid provided as requested under the Ulster County Mutual Aid Plan.

Police Protection: The Town of Lloyd Police Department provides police protection services to properties within the 33.5 square mile area that comprises the Town of Lloyd. The police department headquarters is located at 25 Milton Avenue, Highland, NY, less than two miles south of the project site.

The Town of Lloyd police force provides police protection for the Town of Lloyd including the Highland hamlet area. The Police Department employs 23 police officers, 3 full time dispatchers and 6 part time dispatchers who provide 24-hour per day coverage. A letter, dated August 11, 2010 submitted by Lieutenant Wade Sargent indicates that the department handles approximately 7,000 service calls per year. The police department estimates that it receives 0.054 calls per month per capita. There are presently 2.1 police officers per 1,000 residents.

The police department provides 24 hour patrol coverage with an average of 2 manned vehicles on the road at all times. Sworn personnel are also involved in various

programs including Crime Prevention, Accident Investigation, STOP DWI, Commercial Vehicle Enforcement, Intelligence, Youth Court, and other community service programs.

Typical response time to a residence at Mountainside Woods would be approximately two to four minutes, depending upon the nature of the call and the priority level.

Ambulance & Health Services: The Mobile Life Support Services provides emergency ambulance service to the project area. Average response time is between three and five minutes. Mobile Life Support is a fee for service ambulance provider. Paid EMTs provide 24 hour ambulance coverage. The Mobile Life ambulance station is located in the same building as the Highland Fire Station, but with access doors leading onto Van Wagner Road. This station has approximately 25+ employees and responds to an average of 200 calls per year. The coverage area of the Mobile Life Substation serves an area of approximately 33 square miles in the Town of Lloyd. In general Mobile Life Support Services has a staff of approximately 350 personnel operating a fleet of forty-eight (48) Paramedic Units, six (6) four-wheel drive ALS First Response Vehicles and providing helicopter medivac services in cooperation with the New York State Police. Units are deployed from nineteen (19) operational stations located throughout Orange, Ulster and Dutchess Counties.

The Mountainside Woods site is located in proximity to two acute care facilities - Vassar Brothers Hospital located in Poughkeepsie, and Kingston Hospital located in Kingston. Vassar Brothers Medical Center is a 365 bed facility that has been serving New York's Mid-Hudson Valley since 1887. Located on the banks of the Hudson River, Vassar Brothers has established centers of excellence in cardiac services, cancer care and women and children's health services. The Kingston Hospital is a 150-bed acute care hospital specializing in medical/surgical care, ambulatory surgery, diagnostic imaging, emergency, obstetrics, and rehabilitation and acute and chronic renal dialysis services.

Housing Availability and Pricing: As of March 2011, there were approximately 110 residential units available for purchase within the Town of Lloyd and Hamlet of Highland. These units include single family homes (95), Condo/Townhomes (13) and multi-family units (2). In addition, there were approximately 15 rentals available most of which are multi family homes, condo/townhouses or apartments.

The average selling price for the single family homes as of March 2011 was approximately \$326,000 while the average selling price of the 15 multi family and condo/townhomes was approximately \$209,000.

Recreation and open space: The Town of Lloyd has more than 575 acres of parks to serve the recreational needs of its residents

- *Berean Park:* Berean Town Park is the major recreational facility for the Town of Lloyd, consisting of 265 acres. This park is located at the end of Reservoir Road, at its' intersection with Hilltop Lane, approximately a one quarter mile from the project site. The Town's recreational programs are held primarily at this location including the six week Summer Fun program for school age residents.
- *Tony Williams Park:* Tony Williams Town park is 57 acres and includes active recreation facilities including basketball courts, tennis courts and ball fields for residents use. This park is located approximately 5 miles to the north on North Road.
- *Franny Reese State Park:* Franny Reese State Park, located on the banks of the Hudson River, is a beautiful park area for hiking. It is comprised of 2.5 miles of carriage trails and footpaths in 250 acres of ridge line and steep, wooded slopes just south of the Mid-Hudson Bridge. It overlooks the Hudson River and the city of Poughkeepsie. This open space was preserved by Scenic Hudson in 2003 and transferred to New York State Parks Department in 2006. A trail connects it to the Walkway Over the Hudson Historic State Park.
- *The Hudson Valley Rail Trail:* The Hudson Valley Rail Trail is a 2.5 mile stretch of scenic abandoned railroad right-of-way that is maintained and upgraded by the Hudson Valley Rail Trail Association. It currently is paved and open from Commercial Ave in the center of the hamlet of Highland out to Tony Williams Field on North Road. There are three access points - Commercial Ave Extension, The Hudson Valley Rail Trail Depot located at 101 New Paltz Road, and Tony Williams Field. Future Development will link it to the Walkway over the Hudson and out to South Street and NYS Route 299 eventually completing a 7.5 mile trail in Highland. There are also future plans to connect to the 30 miles of the Dutchess County Rail Trail Network.

POTENTIAL IMPACTS

Population: As more completely discussed in Section 3.6 of this DEIS, the total population that would be introduced by the project was estimated in order to project potential costs associated with servicing the new development. As no locally generated multipliers are available, multipliers published by Rutgers University Center for Urban Policy Research (June 2006) were utilized as they are the most recent (updated 2006) and based on demographic information for New York State. Based on the analysis as reflected in Table 3.5.1A, it is estimated that Mountainside Woods would introduce approximately 537 persons to the Town of Lloyd population over a five year period commencing in 2013.

Units	Total	Population Multiplier	Total Population
3 Bedroom	149	2.95	440
4 Bedroom	26	3.74	97
Total	175		537

This estimate of 537 persons represents an increase of approximately 5% of the Town's total population of 10,669 (2009 Census) and is not expected to have a significant negative impact on the Town or its services. A discussion of the fiscal impacts associated with this population increase is contained in Section 3.5.2 of this DEIS.

Highland Central School District: As more fully explained in Section 3.6 of this DEIS, to estimate the number of public school age children that this project will generate, multipliers from the Rutgers University Center for Urban Policy Research (June 2006) were utilized. Table 3.5.1B shows the projected number of public school age children to be generated by this project.

Type of Unit	Total # of Units	Student Population Multiplier	Total Student Population
3 Bedroom	149	0.5	75
4 Bedroom	26	0.98	25
Total	175		100

Based on these calculations, it is estimated that the number of students that would be introduced by Mountainside Woods into the Highland School District, Grades K-12 will be 100.

Based on information provided by the Rutgers University Center for Urban Policy Research (June 2006), the estimated number of public school children can be further broken down by grades as follows in Table 3.5.1C.

Units	K-6	Grades 7-9	Grades 10-12
3 Bedroom	46	16	13
4 Bedroom	16	5	4
Total	62	21	17

Based on discussions with Paul Kandetzke, Business Official, Highland School District, the school district has available capacity in its existing school buildings to accommodate the projected student population.

Construction is estimated to begin in April, 2012 and take a period of 5 1/2 years to complete (October, 2017). The estimated 100 school children would be phased in over that 5 1/2 year period. Based on the Construction Phasing Plan more fully described in Section 2.3 of this DEIS, the number of children entering the public schools per year is estimated as follows:

**Table 3.5.1D: Projected Public School Age Children
Per Phasing Plan**

Construction Phase	#Units	# of Public School Children
Year 1 (2012)*	39	22
Year 2 (2013)	35	20
Year 3 (2014)	21	12
Year 4 (2015)	49	28
Year 5 (2016)	31	18

** It is estimated in the Phasing Schedule that the first units will not be available for occupancy until approximately 6 months after construction begins. It is highly unlikely that all units in this phase will be built, sold and occupied by the end of 2012, however, this chart is for illustrative purposes and accordingly we have assumed that all units will be constructed, sold and occupied at the beginning of the phase.*

Fire Protection: 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. Up to 537 new residents (see Section 3.6 of this DEIS for a detailed explanation of how the number of new residents was estimated) would generate demand for an additional 0.89 fire department personnel. It is expected that at least one additional volunteer will be among the new residential population. The proposed access roads will be designed in accordance with Town specifications and can adequately accommodate emergency service vehicles. Fire hydrants will be installed according to Town standards.

On July 29, 2010, the project engineers received a letter from Chief Daniel Bassanese of the Highland Fire Department (a copy of which is included in Appendix G) which contained information about the Fire Department as well as a list of potential impacts on the fire department including an increase in traffic and potential accidents associated therewith (see Section 3.3 of this DEIS for a discussion of traffic impacts); an increase in false fire alarm activation responses; and an increase in calls involving general fire department calls for service. In response to these concerns, the applicant is not proposing to install fire or home security systems that would be directly linked to the fire department and therefore the number of false alarms should be minimized. The project would generate \$44,434 in annual property tax revenues to supplement firematic operations (see Section 3.6 of this DEIS, Fiscal Analysis more a more detailed explanation of the tax revenues to be generated by the project) which is expected to offset

any increase in costs associated with the additional services required by the projects increase in population and service related calls.

The Chief's letter also contained a list of questions regarding access and in particular regarding emergency access via the rail trail. Given the Fire Department's concerns regarding using the rail trail for emergency access, that portion of the project has been redesigned and is no longer proposed. Emergency access for the site will be via public roads including Vista Drive and Hilltop Lane.

Police Protection: Based on planning standards contained in the Development Impact Assessment Handbook published by the Urban Land Institute, model factors for police protection recommend two (2) police personnel per 1,000 persons. Based on this standard, even considering the projected population growth, the Town's police personnel ratio would remain more than 2 police personnel per 1,000 residents.

A letter received from Police Lieutenant Sargent, on August 11, 2010 did not indicate there would be any additional burden to police protection as a result of the proposed Mountainside Woods project. A copy of this correspondence is included in Appendix G.

Ambulance & Health Services: Based on planning standards contained in the Development Impact Assessment Handbook, approximately 36.5 calls per 1,000 population for ambulance service can be expected annually. Based on this standard, the additional 537 residents would cause an annual increase in EMS calls of approximately 20 calls on average. Since Mobile Life Support Service is a fee for service ambulance provider with the ability to hire personnel as needed, it is anticipated that there will not be a significant impact on emergency medical services.

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 Mountainside Woods project has the potential to increase the need for beds in hospitals serving the Ulster County area by approximately 2.15 beds. It is not anticipated this will be a significant impact.

Recreation and Open Space: The project will add 537 persons to the Town of Lloyd population of which approximately 100 will be children of public school age. It is anticipated that these new residents may increase demand for active recreation facilities.

The Town of Lloyd has more than 575 acres of parks to serve the recreational needs of its residents which equates to approximately 53.6 acres per 1,000 population. This is well above 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.

Housing Availability and Affordability: According to a housing study entitled *A Three County Regional Housing Assessment: for Orange, Dutchess and Ulster Counties From 2006 to 2020*, dated April 2009, Ulster County has a housing affordability problem. The study established that the median sales price of single family homes in the County had risen sharply, increasing by 97.9% during the period of 1998 – 2004. It is important to note, however, that much of the data for this study was collected when the housing market was robust and prices had not yet dropped dramatically due to the economic collapse of the housing industry.

Offering housing options that are affordable to a range of household incomes is an important component for achieving “livable or healthy communities.” A full range of housing options allows for diversity; life long residents can continue to live in the community through their retirement years and young families can begin their lives in the same place they grew up.

As indicated above, there are 95 single family homes available for sale as of March 2011 (www.realtor.com). The average selling price of those homes is \$326,000, approximately \$57,000 higher than the projected average selling price of the proposed single family residential units at Mountainside Woods..

Of the 95 homes for sale, 40 (42%) were priced at or below the projected average sales price for units at Mountainside Woods (\$269,000). Of those units, only 29 are comparable in size to the proposed Mountainside Woods units (three and four bedroom units with 2.5 baths.) Thus, of the single family houses available, 59% are being offered at prices in excess of the average expected sales price for the Mountainside Woods units and only 30% of comparable units are at or below the average projected selling price. Accordingly, the housing units being proposed at Mountainside Woods will fill a need for moderately priced single family homes in the region.

MITIGATION MEASURES

Highland School District: There appears to be sufficient capacity to accommodate the new school children within the existing infrastructure. Any additional

costs associated with servicing the proposed development will be offset by additional tax revenue generated by the project. See Section 3.5.2 below for a complete discussion of the anticipated fiscal impacts and estimated taxes to be generated by the project.

Police Protection: No significant impacts are expected. Any additional costs associated with servicing the proposed development will be offset by additional tax revenue generated by the project.

Fire and Emergency Services: Any additional costs associated with servicing the proposed development will be offset by additional tax revenue generated by the project.

Recreation and Open Space: In addition to the more than 112 acres of open space that will be preserved on site, most of which is wooded or wetlands, pockets of open space have been reserved throughout the Area of Development (AOD) and will be offered for dedication to the Town. These areas could be developed in the future as public parks or could remain open space. In addition, the applicant has been in discussions with Scenic Hudson, a regional not-for-profit organization that has been working with the Town to develop a trail system at Berean Park. The Town and Scenic Hudson would like to connect the new park trails to the Rail Trail and are seeking to make that connection via trails to be located on the project site. As the environmental review process continues, the applicant will continue to work with Scenic Hudson and the Town to identify the proper location for these potential trails. The subdivision plan includes 18 seasonal parking spaces for hikers that will be located near the hiking trails which currently cross the western undeveloped portions of the property providing access to Illinois Mountain. This parking area will also be offered for dedication to the Town.

The applicant's obligation to pay recreation fees shall be determined based upon all applicable State and local regulations and studies.

3.5.2 Fiscal Analysis

Paul Anderson, CPA completed a Fiscal Analysis for the project, a copy of which is included in Appendix G of this DEIS. The study reviewed existing conditions and projected the potential impacts of the Mountainside Woods Subdivision on the fiscal resources of the Town of Lloyd and community services including police, fire, emergency medical services and education.

EXISTING CONDITIONS

The project site is currently unimproved land and therefore requires very little in the way of municipal services. The project site consists of three tax lots identified on the Town of Lloyd tax rolls as Section-Block-Lot: 87.004-3-14, 87.004-5-1.2, and 87.004-5-2. According to the most recent property tax bills (2010) these lots pay taxes to the following entities: Ulster County, Town of Lloyd (including the General Fund, Town Highway, Highland Light, Highland Fire, Highland Ambulance, Highland Water and Highland Sewer Operations, Maintenance and Capital Improvement), Highland Library and Highland Central School District. Currently, the site has a total assessed value of \$435,745 and pays approximately \$12,281 in total property taxes annually.

POTENTIAL IMPACTS

To determine the tax revenue to be generated by the project, the total assessed value must be established. As per data supplied by the applicant, the residential units will consist of three and four bedroom homes that will be offered for sale to third party buyers. These units will be moderately priced and offered at market rates ranging from \$239,000 to \$304,000, with an average sales price of \$269,000 for the three bedroom unit and \$304,000 for the 4 bedroom.

The assessed value is determined by multiplying the market value by the Town's equalization rate, which is 100 percent. Therefore, the market value and the assessed value are the same.

Based on the above assumptions and calculations shown below in Table 3.5.2A, the total market value and assessed value of the residential units at the Mountainside Woods development would be \$47,240,000.

3-Bedroom Dwellings	149 Units
4 Bedroom Dwellings	26 Units
Avg Sales Price per 3 Bedroom dwelling	\$264,000
Avg Sales Price per 4 Bedroom dwelling	\$304,000
Total Market Value	\$47,240,000
Total Assessed Value	\$47,240,000

As presented in Table 3.5.2B below, the annual tax revenues to be generated from the site will be approximately \$1,344,995.22. Of that total, the Town of Lloyd will receive approximately \$158,565, which includes the general fund and highway department taxes. The project-generated annual tax revenues to Ulster County would be approximately \$186,815. Annual property tax revenues for the Highland Central School District would total \$817,788. The Highland Fire District would receive approximately \$44,434 annually. The Highland Sewer District would receive approximately \$43,239 and the Highland Water District would receive approximately \$63,935 in annual revenues.

Table 3.5.2B: Projected Property Tax Rates and Revenues

Taxing Jurisdiction	Tax rate (per \$1,000 AV*)	Property Tax revenues
Ulster County General Fund	\$3.954583	\$186,814.50
Town of Lloyd General Fund	\$2.01556	\$ 95,215.05
Town of Lloyd Highway	\$1.34103	\$ 63,350.26
Highland Ambulance	\$0.213200	\$ 10,071.57
Highland Fire	\$0.940600	\$ 44,433.94
Highland Light	\$0.139700	\$ 6,599.43
Highland Sewer	\$0.9153	\$ 43,238.77
Highland Water	\$1.3534	\$ 63,934.62
Highland School District	\$17.311340	\$ 817,787.70
Highland Library	\$0.286820	\$ 13,549.38
Total	\$28.4715330	\$1,344,995.22
*AV = Assessed Value, taxes have been rounded to the nearest dollar.		

As more fully described in the Fiscal Report included in Appendix G, to determine the potential fiscal impacts to the Town and its community service providers, a population projection was calculated utilizing the Rutgers University Center for Urban Policy Research (June 2006) demographic multipliers. While multipliers are published by other sources, the Rutgers multipliers are the most recent (2006) and based upon

demographic information for New York State. Other sources are older and based on averages for the Mid-Atlantic region or national averages. In addition, the Rutgers multipliers differentiate based upon the price of the housing, the housing type, the number of bedrooms and the type of ownership. As the project is proposed to offer two different types of housing (a three bedroom unit and a four bedroom unit), two different multipliers were used. In accordance with accepted professional planning methodology, a household multiplier of 2.95 was used for the three bedroom units (149) and a household multiplier of 3.74 was used for the four bedroom units (26).

Based on the analysis as reflected in Table 3.5.2C below, it is estimated that Mountainside Woods would introduce approximately 537 persons to the Town of Lloyd's population over a five year period commencing in 2012.

Table 3.5.2C: Projected Population			
Units	Total	Population Multiplier	Total Population
3 Bedroom	149	2.95	440
4 Bedroom	26	3.74	97
Total	175		537

As more fully described in Section 3.5.1 above, the number of public school age children was calculated using Rutgers University Center for Urban Policy Research (June 2006) multipliers for public school age children. A multiplier of 0.5 was used for the three bedroom units and 0.98 for the four bedroom units.

Table 3.5.2D: Projected Public School Age Children			
Units	Total	Student Population Multiplier	Total Student Population
3 Bedroom	149	0.5	75
4 Bedroom	26	0.98	25
Total	175		100

Based on these calculations, it is estimated that the number of students that would be introduced by Mountainside Woods into the Highland School District, Grades K-12 will be 100, over a period of 5 years beginning at the earliest in 2013.

In summary, the proposed residential subdivision is projected to add 537 residents to the Town of Lloyd's population, of which 100 would be public school age children (ages 5 through 18).

Highland School District: As indicated above, the project is anticipated to generate 100 public school aged children which are expected to enroll in the Highland Central School District. This projected student population would be introduced into the School District over a 5 year period as homes are constructed and occupied. The 100 students would be enrolled in various grades, K-12.

The fiscal analysis calculates the per capita student cost raised through property taxes in 2010-2011 to be \$8,087 annually. Therefore, the increased cost to educate 100 additional students would be \$808,703 annually. The analysis further determines that the project would generate \$817,788 in taxes to the school district annually. Thus, the project would generate net revenues of \$9,085 annually to the Highland Central School District mitigating any potential impacts to the district. A more detailed analysis of the projected school tax revenue is contained in the Fiscal Analysis report, which is included in Appendix G of this DEIS.

Fire District: As indicated in the Table 3.5.2B above, the Highland Fire District would receive approximately \$44,434 in annual revenue from projected property tax revenue. The applicant believes that any additional costs to service this project will be offset by the additional tax revenue derived from the project.

Police Department: Based on planning standards published in the Development Impact Assessment Handbook, (Urban Land Institute), model factors for police protection recommend two (2) police personnel per 1,000 people in the service area. Including the projected population growth, the Town's police personnel ratio would remain more than 2.0 police personnel per 1,000 residents. (Current population 10,669 + estimated additional population 537 = 11,206, which would require 22.4 police officers. The Town's current police staff is 23). Any additional costs to service this project will be offset by the additional tax revenue derived from the project.

Emergency Medical Services: Based on planning standards published in the Development Impact Assessment Handbook, (Urban Land Institute), approximately 36.5 calls per 1,000 population for ambulance service can be expected annually. Based on this standard, the additional 537 residents would increase EMS responses by approximately

20 calls annually. Since Mobile Life Support Service is a fee for service ambulance provider with the ability to hire personnel as needed, it is anticipated that there will not be a significant impact on emergency medical services as the corresponding increase in demand will be offset by the fees charged by the provider.

Ulster County: An estimate of the costs to Ulster County associated with the proposed Mountainside Woods development has been obtained through analyzing the 2011 Ulster County Budget excluding non-residentially induced expenditures to determine an appropriate per resident cost of services provided. Per this review, it was determined that the current per resident cost of services provided is \$291 (actual number is \$290.525). Based on this per capita cost, the addition of 537 residents would add approximately \$156,012 to the cost of services. Based on the projected assessed value of the project and current tax rates, the project is expected to generate \$186,815 in revenue to Ulster County through property taxes, thus a net benefit of \$30,803 is expected.

Town of Lloyd: As more completely detailed in the Fiscal Report contained in Appendix G, the estimated current per capita cost for municipal services in the Town of Lloyd is estimated to be \$578.61 per person. Accordingly, it is estimated that it would cost the Town approximately \$310,714 (537 x \$578.61) annually to service the new development. As indicated in Table 3.5.2B above, the project is expected to generate tax revenue to the Town totaling \$326,844. The Town can therefore expect that once the Mountainside Woods project is completed, it will receive a net benefit of \$16,130 annually, beyond the cost to service the new residents. As previously noted, the municipal costs are likely overstated, since all costs were assumed to be attributable to residential uses, thus the net benefit is likely to be even greater.

School District: As discussed more fully above, the School District is expected to receive a net tax revenue of approximately \$9,085 annually.

Highland Water District: As more fully detailed above, the current cost of water service within the district is approximately \$100 per person. The project is estimated to add 537 new persons to the district for an estimated additional cost of \$53,700 in services. As provided in Table 3.5.2B above, the project is estimated to provide an additional \$63,934.62 in tax revenue to the water district, thus a net benefit of \$10,234.62.

There is a potential that the liability insurance for Dam #4 will be increased due to this development. The net tax benefit discussed above should be sufficient to cover the potential increase in the premium, beyond current premium prices.

MITIGATION MEASURES

As no significant environmental impacts have been identified, no mitigation measures are proposed.

3.6 CULTURAL RESOURCES (Historic and archaeological resources)

The New York State Office of Parks, Recreation and Historic Preservation (OPRHP) was contacted to determine the project site's sensitivity to historical and/or prehistoric cultural resources. A Phase 1 study (Parts A and B) was conducted by City/Scape: Cultural Resource Consultants on SBL 87.004-3-14 ("Parcel 1") and SBL 87.004-5-2 ("Parcel 3") in January, 2010. A similar investigation on SBL 87.004-5-1.2 ("Parcel 2") was completed in 2007. City/Scape's report is included in Appendix H of this DEIS. Please note that City/Scape's report was prepared when the project included an access road onto Old New Paltz Road. Based upon comments from the Planning Board, that access road has been removed from the plan design and any references to that access should be disregarded. The elimination of the Old New Paltz Road access point does not affect the findings or conclusions of the cultural resources study. The following is a summary of the findings of that study.

EXISTING CONDITIONS

The Phase 1A Cultural Resource Study consists of a literature review and sensitivity analysis. The literature review consists of reviewing state documents and maps at OPRHP's headquarters in Peebles Island, NY to determine if there are any known historic or prehistoric sites on the proposed project site and/or in the vicinity of the project. Based upon this review, no historic or prehistoric sites were identified within the project area; however, two prehistoric rockshelters had been identified in the vicinity. The Black Creek Rockshelter is less than a mile (1.6 km) north of the site and the Delardi Rockshelter is approximately a mile north of the site.

Based on the proximity of the project to these rock shelters, and the presence of wetlands and fresh water resources on site, it was determined that a Phase 1B survey should be conducted. A Phase 1B analysis consists of a systematic surface survey and

subsurface testing. The methodology for shovel testing in the areas of potential sensitivity involved excavating 40 cm (15.7") diameter shovel tests at 50' intervals along transects placed to conform to the land surface. Soils were passed through a 0.25" steel mesh screen and the materials remaining in the screens were carefully examined for historic and prehistoric artifacts.

The Phase 1B study of Parcel 1 included a total of 392 shovel tests along 55 transects. The area of potential effect was determined to be the entire parcel. A small waste area was identified in the western central portion of the parcel. Shovel tests yielded bottle glass, both clear and amber, various metal fragments and a button. A fragment of a semi-porcelain plate and a single fragment of a blue decorated hard paste porcelain dish were recovered. After cleaning and inspection, it was determined that the artifacts date to the mid 20th century and that the waste area did not warrant further investigation. No prehistoric cultural material was recovered.

The Parcel 2 study included a total of 35 shovel tests along 10 transects. The area of potential effect was confined to the southeastern portion of the parcel where development is proposed to occur. No cultural material of any kind was encountered on this Parcel.

The Parcel 3 study included 401 shovel tests along 37 transects. The area of potential effect was determined to be the entire parcel. No cultural material of any kind was encountered on this Parcel.

In summary, a total of 828 shovel tests were conducted. The only materials recovered were in the form of mid-20th century bottle glass and semi-porcelain. Based on these results, the project sponsor's consultants concluded that no further archaeological investigation of the site is warranted. The Phase 1 study has been submitted to OPRHP for review.

POTENTIAL IMPACTS

It is the opinion of the applicant's consultants that there are no projected impacts to the historical and/or cultural resources.

MITIGATION MEASURES

Since, in the opinion of the applicant's consultant there will be no impacts to the historical and/or cultural resources, no mitigation is proposed.

3.7 Terrestrial and Aquatic Ecology

A.V. Agovino Associates, LLC (AVAA) conducted a complete environmental and ecological review of the site, which included a request for information from appropriate Federal and State agencies regarding the potential for the presence of rare, threatened and/or endangered species on the site. Several field surveys were conducted between April, 2005 and November, 2010 for the purpose of documenting and inventorying existing vegetation and habitat cover types, plant and wildlife species. AVAA's full report and agency correspondence can be found in Appendix I of this DEIS. The following is a summary of existing conditions, potential impacts, and proposed mitigation measures.

3.7.1 Vegetation

EXISTING CONDITIONS

AVAA examined and inventoried the vegetation at the site on numerous occasions over a period of five years. These examinations included the identification of broad vegetation or habitat cover types, as well as specific plant species. General cover types were first identified by reviewing aerial photographs of the site and vicinity and then investigating the habitats for identification and classification purposes. The Plot Transect method was employed for the vegetation inventory. In addition, the Opportunistic Encounter and Systematic Area Search Technique were utilized to supplement the inventory. The property was walked, vegetation communities characterized and vegetation community boundaries were established. The survey was designed to provide a general assessment of the species of trees present. For a complete description of the process used, please see the full report from AVAA in Appendix I

Wetlands: As more completely described in Section 3.1 of this DEIS, approximately 6% of the total project site is classified as wetlands, considered to be of moderate value as biotic communities. See Figure 3.1D above and Table 3.7.1A, below, for a summary of the wetlands on the Mountainside Woods Site:

Wetland Area	Type	Buffer	Total Area (S.F)	Total Area (Ac.)	Isolated
A	ACOE	No	128,978	2.961	No
B	Other*	No	3,915	0.090	Yes
C	Other*	No	1,542	0.035	Yes
D	ACOE	No	12,241	0.281	No
E	Other*	No	3,888	0.089	Yes
F	ACOE	No	79,703	1.830	No
G	ACOE	No	50,767	1.165	No
H	ACOE	No	159,016	3.651	No
I	ACOE	No	7,110	0.163	No
Total			447,160	10.265	

* These wetlands are considered “non-jurisdictional” because of their status as “isolated”.

The on-site forested wetlands contain a mixture of tree canopy species dominated by Acer rubrum (Red Maple, FAC), Betula nigra (River Birch, FACW) and Quercus palustris (Pin Oak, FACW). Other tree species observed include Fraxinus pennsylvanica (Green Ash, FACW), Ulmus rubra (Slippery Elm, FAC), Betula populifolia (Gray Birch, FAC) and Platanus occidentalis (Sycamore, FACW-). The sloped wooded portions of these wetlands are comprised of second growth vegetation with the majority of trees having an 8 - 16 inch diameter at breast height (DBH) and estimated to be approximately 30 - 50 years old. Shrub species observed include Carpinus caroliniana (American Hornbeam, FAC), Lindera benzoin (Spice-Bush, FACW), Hamamelis virginiana (Witch Hazel, FAC-) and Viburnum recognitum (Northern Arrowwood, FACW-). Characteristic of this community was a closed tree canopy with moderate understory and herbaceous vegetation. Herbaceous plants in the wetlands include Symplocarpus foetidus (Skunk Cabbage, OBL), Impatiens capensis (Jewelweed, FACW), Onoclea sensibilis (Sensitive Fern, FACW), Lythrum salicaria (Purple Loosestrife, FACW+), Polygonum sagittatum (Arrow Leaved Tear-Thumb, OBL), Juncus effusus (Soft Rush, FACW+) and Carex stricta (Tussock Sedge, OBL).

The emergent wetland community on the site includes Sambucus canadensis (Elderberry, FACW-), red maple saplings, green ash saplings and Salix discolor (Pussy Willow, FACW). The herbaceous layer is dominated by Typha latifolia (Common Cattail, OBL), Leersia oryzoides (Rice cutgrass, OBL) and other emergents including Onoclea sensibilis (Sensitive Fern, FACW), skunk cabbage, Osmunda regalis (Royal

fern, OBL), Polygonum sagittatum (Arrow Leaved Tear-Thumb, OBL), Scirpus cyperinus (Woolgrass, FACW+) and purple loosestrife. The stream channel that runs through the wetland complex was observed to support Lemna minor (Duckweed, OBL) and Ludwigia palustris (Water purslane, OBL).

Threatened and Endangered Species

No federally listed rare or endangered plant species were identified for the site by the United States Fish and Wildlife Service (UFWS). Twelve state-listed threatened or endangered plant species were identified by the NYSDEC as occurring or possibly occurring on or in the immediate vicinity of the project site. The National Heritage Program (NHP) has indicated that there have been historical findings made within the vicinity of the project site or its surroundings between 1887 and 1903 for the 12 state-listed plant species. The NHP's database findings are considered sensitive information so the specific database search results are not provided by the NHP when it issues its findings.

Rare Forest Communities: In a November 14, 2005 Natural Heritage data search, the New York State Department of Environmental Conservation National Heritage Program identified the potential for a Hemlock-Northern Hardwood forest community at or near the site. This is a mixed forest that typically occurs on middle to lower slopes of ravines, on cool, mid-elevation slopes, and on moist, well-drained sites at the margins of swamps. It is a close-canopy forest with Tsuga canadensis (Eastern Hemlock, FACU) present in the canopy. Hemlock may occur in nearly pure stands, with nearly 100% canopy cover, or reach an abundance as low as 20% canopy cover, intermingled with other canopy trees. Tsuga canadensis (Eastern Hemlock, FACU) is co-dominant with any one to three of the following tree species: Fagus grandifolia (American Beech, FACU), Acer saccharum (Sugar Maple, FACU), Acer rubrum (Red Maple, FAC), Prunus serotina (Black Cherry, FACU), Pinus strobus (White Pine, FACU), Betula alleghaniensis (yellow birch, FACU), Betula lenta (Black Birch, FACU), Quercus rubra (Northern Red Oak, FACU-), and Tilia americana (Basswood, FACU). The relative cover of eastern hemlock is quite variable, ranging from nearly pure stands in some steep ravines to as little as 20% of the canopy cover. Acer pensylvanicum (Striped maple) is often prominent as a mid-story tree. According to the NYSDEC, this is a broadly defined and very widespread community with many variants. For example, in the Hudson Valley, eastern hemlock is

sometimes co-dominant with red oak; in the Adirondacks, yellow birch and sugar maple are sometimes co-dominant.¹

Additionally, the November 14, 2005 letter identified the potential presence of an Appalachian oak-hickory forest. This is a hardwood forest that occurs on well-drained sites, usually on ridge tops, upper slopes, or south- and west-facing slopes. The soils are usually loams or sandy loams. This is a broadly defined forest community with several variants. The dominant trees include one or more species of oak. Appalachian oak-hickory forests have less hemlock, sugar maple, and beech than hemlock-northern hardwood forests, but have a higher abundance of oaks and hickories (*Carya* spp.).

AVAA's inspection noted the conspicuous absence of hemlock dominance, with few individuals identified and those present were in the understory rather than in the canopy. Additionally, hickories were seldom identified throughout the site. Based upon the site inspections, AVAA characterizes the site-specific forest community as a Beech-maple mesic forest.

Rare Plant Species: Twelve state-listed threatened or endangered plant species were identified by the NYSDEC as occurring or possibly occurring on or in the immediate vicinity of the project site. The November 14, 2005 correspondence received from the NHP indicates that there have been historical findings made within the vicinity of the project site or its surroundings. Between the years 1887-1903, the following 12 state-listed plant species were believed to be sighted. For a complete description of these plant species and habitat, see the full report located in Appendix I of this DEIS.

- Yellow giant-hyssop (*Agastache nepetoides*),
- Puttyroot (*Aplectrum hyemale*),
- Virginia snakeroot (*Aristolochia serpentaria*),
- Straw sedge (*Carex straminea*),
- Golden corydalis (*Corydalis aurea*),
- Rattlebox (*Crotalaria sagittalis*)
- Stiff tick-trefoil (*Desmodium obtusum*),
- Purple bluets (*Houstonia purpurea* var. *calycosa*),
- Velvety bush-clover (*Lespedeza stuevei*),
- Large twayblade (*Liparis lilifolia*),
- Erect knotweed (*Polygonum erectum*), and
- Small-flowered crowfoot (*Ranunculus micranthus*).

¹ <http://www.acris.nynhp.org/guide.php?id=9991>. Accessed January 16th, 2011.

Despite extensive and repeated site investigations, none of these species was sited. Given the extensive period of time (100+ years) since the last recorded sighting and with no historical sightings in the area of the proposed development, it is our opinion that this species does not occur on the project site. In addition to the site specific surveys that AVAA conducted, the NHP has conducted recent searches in the Town of Highland for each of the above listed species and did not discover any remnant populations or individuals.

Wooded Areas: Much of the site is upland, dominated by second-growth mixed forests that are typical of those that grow in the region. Species such as Quercus alba (White Oak, FACU-), Fagus grandifolia (American Beech, FACU), Betula lenta (Black Birch, FACU), Quercus velutina (Black Oak, NL), Acer saccharum (Sugar Maple, FACU), Prunus serotina (Black Cherry, FACU), Quercus rubra (Northern Red Oak, FACU-) and Castanea dentata (American Chestnut, NL) were commonly observed.

As indicated above, AVAA characterizes the dominant site-specific forest community as primarily a Beech-maple mesic forest. This community is not protected and is widespread throughout upstate New York. It forms the matrix forest of the Northern Appalachian Ecoregion in the Adirondacks and Tug Hill. Beech-maple mesic forest communities are closed-canopy hardwood forests with co-dominating sugar maple and American beech. This is a broadly defined community type with several regional and edaphic variants. These forests occur on moist, well-drained, usually acid soils. There are many spring ephemerals that bloom before the canopy trees leaf out. Hemlock may be present at a low density. (Edinger et al. 2002). Beech-maple mesic forests have fewer hemlocks than hemlock-northern hardwood forests, but many of the other canopy species are similar.

Two other forest communities are also present on site. The Chestnut Oak Forests, which extend widely across the Appalachians on mid-elevation slopes with well-drained glacial soils, occur throughout this region on higher elevation lands and slopes that have not been recently cleared. The dominant trees are oaks (*Quercus* spp.) and red maple (*Acer rubrum*). Remnant clusters of vegetatively sprouting American chestnut (*Castanea dentata*) may be interspersed among the dominant tree species. This ecosystem type is recognized as being globally secure and apparently secure in New York State.

A mixed successional hardwood community, the Successional Northern Hardwood Forest, also develops in this region where lands have been cleared for farming, logging or otherwise disturbed in the more recent past. The dominant overstory trees in this hardwood community are usually any two or more of the following: poplars and aspens (*Populus* spp.), birches (*Betula* spp.), cherries (*Prunus* spp.), red maple (*Acer rubrum*), ashes (*Fraxinus* spp), and elms (*Ulmus* spp.) or other introduced species such as black locust (*Robinia pseudo-acacia*) or tree-of-heaven (*Ailanthus altissima*). This ecosystem type is recognized as being globally and locally secure.

These three forest community types are represented on specific portions of the project site. On the higher elevations, up to and including the northern ridgeline of Illinois Mountain, the species composition of the overstory trees includes oaks (primarily black and chestnut), maples (primarily sugar and red) and occasionally hemlock. Understory trees and shrubs include mountain laurel, lowbush blueberry, maple-leaf viburnum, Eastern hop hornbeam and seedlings and saplings of the overstory trees. Groundcover species include lowbush blueberry and poison ivy.

At mid-level elevations of the mountain slopes, the canopy consists of red and black oaks, sugar maple and black birch with some specimens of red maple, chestnut oak, sycamore, black willow, hemlock and paper birch. The understory in these areas includes tree saplings, lowbush blueberry, maple-leaf viburnum, spicebush and Eastern hop hornbeam.

The lowest elevations of the slopes of Illinois Mountain have a tree canopy layer that is dominated by white and red oaks, sugar maples and black birch with an understory that is comprised primarily of sassafras, maple-leaf viburnum, and saplings of the overstory trees. Other canopy or understory species observed on the lower slopes included hemlock, black oak, red maple, sassafras, American beech, yellow birch, Eastern hop hornbeam, witch-hazel, flowering dogwood, Virginia creeper, honeysuckles, maple-leaf viburnum, Christmas fern and lowbush blueberry.

The presence of old logging roads, decaying stumps and multi-stemmed regrowth of some trees indicates that the site had been partially logged in the past. Despite earlier logging activities, many of the trees located on the mountain are large specimens and have been estimated to be from 75 to 100 years old.

POTENTIAL IMPACTS

Clearing plan: The portions of the Mountainside Woods project site that are proposed for development are largely disturbed and exist on the boundary between undeveloped forested land to the north and west with developed residential and park properties to the east and south.

The proposed area of development (AOD) is restricted to 40.11 acres of the total 153.07 acres, which represents 26.2% of the site with 73.8% of the property remaining undisturbed. The vegetation removal required for construction would eliminate existing upland woodlands and the successional old field/shrubland. This vegetation is located in areas of the site where clear cutting and possibly mining activities have taken place. Most of the developed land will be located on the eastern portion of the site, near Vista Drive, while the remainder of the development would be located on the west side of the stream corridor and wetland, at the base of the existing wooded slopes of Illinois Mountain.

The proposed areas of disturbance are summarized in Table 3.7.1B below. Most of the proposed disturbance to woodland vegetation would be to the pioneering species that now dominate the site.

Table 3.7.1B: Vegetation Distribution and Disturbance			
Parcel 1 (87.4-3-14)	Existing (Ac.)	Proposed (Ac.)	Change (Ac.)
Woodlands	26.82	9.30	-17.52
Brush	0.03	0.00	-0.03
Old Fields	0.00	0.00	0.00
Wetlands	4.83	4.83	0.00
Lawn/landscaping	0.00	10.93	10.93
Impervious/buildings	0.00	6.62	6.62
TOTAL	31.68	31.68	
Parcel 2 (87.4-5-1.2)	Existing (Ac.)	Proposed (Ac.)	Change (Ac.)
Woodlands	73.12	67.78	-5.34
Brush	8.48	0.71	-7.77
Old Fields	0.05	0.00	-0.05
Wetlands	2.35	2.35	0.00
Lawn/landscaping	0.00	7.89	7.89
Impervious/buildings	0.00	5.27	5.27
TOTAL	84.00	84.00	

Parcel 3 (87.4-5-2)	Existing (Ac.)	Proposed (Ac.)	Change (Ac.)
Woodlands	31.11	22.28	-8.83
Brush	3.17	2.62	-0.55
Old Fields	0.02	0.00	-0.02
Wetlands	3.09	3.09	0.00
Lawn/landscaping	0.00	5.19	5.19
Impervious/buildings	0.00	4.21	4.21
TOTAL	37.39	37.39	

Water Quality: Whenever vegetation is cleared, there is a potential for erosion and sedimentation of surface waters. A comprehensive Erosion and Sediment Control Plan, as fully described in Section 3.1 of this DEIS and included in the full set of plans at Appendix L, will be implemented to control the potential impacts that site development may have to onsite wetlands and downstream surface waters. In addition, a Stormwater Pollution Prevention Plan (SWPPP), which is designed to maintain post-development peak stormwater flows at or below pre-development levels and mitigate water quality impacts from impervious surfaces, will be implemented as described in Section 3.1 of this DEIS. The SWPPP is designed to mitigate construction impacts from vegetation removal and the associated stormwater runoff.

Drainage and Grading plans: Altering the existing drainage can affect on site vegetation and habitat. The project was designed to maintain the existing drainage sheds and also to enhance and protect the natural features of over 112 acres of the property including existing vegetation, natural vistas, stone rows, and environmental constraints such as wetlands and steep slopes. By leaving drainage sheds intact, the wetlands undisturbed and the slopes of Illinois Mountain undeveloped, the project will maintain the functioning habitat provided by these features to the greatest extent practical

Threatened and Endangered Species: None of the species listed by the NHP were identified on site and therefore it is highly unlikely that there will be any significant impact to threatened and endangered species that may be in the area as a result of this development.

MITIGATION MEASURES

While construction of the project will result in the loss of vegetation on site, the following measures will be taken to reduce the impacts of proposed activities.

The project has been designed to preserve large areas of open space, limiting the area of disturbance and vegetation removal.

Tree and vegetation removal will be limited to the AOD.

Storm water runoff will be accomplished in accordance with applicable regulations under the supervision of municipal and state officials and will be required to meet the conditions imposed therein.

A comprehensive soil erosion and sediment control plan will be implemented during construction for the protection of the soils and surface water. Engineering Properties has submitted the supporting documentation for this aspect of the application. Soil Erosion and Sedimentation Control will be accomplished as described in the plans under the supervision of municipal, and state officials and will be required to meet the conditions imposed therein.

All solid waste materials generated by vegetative clearing during construction will be reused as mulch, sold as firewood or milled for use as building materials. Any materials not appropriate for reuse will be held onsite in suitable rolloffs, dumpsters or containers and will be disposed of in accordance with state, county and local regulations; therefore no impact is expected from this aspect of development.

3.7.2 Wildlife

Field surveys for wildlife species were conducted during each site visit by AVAA in April, May & June 2006, April, May, June and September 2009, and April and November 2010. AVAA's complete report is included in Appendix I of this DEIS. Surveys were conducted for mammals, birds, reptiles and amphibians. Species listed as special concern, threatened and endangered were the subject of special surveys targeted to the specific habitats for those species. Accordingly, multiple methodologies were utilized to increase the potential accuracy.

Mammals were identified based upon visual encounters, along with vocalizations, tracks, fur, bones, scrapes, rubs, droppings or other recognizable signs in the habitats on the site. Sampling routes were established along transects through the property and included all cover types. The routes were walked and species recorded. With regard to birds, AVAA used the methods described in the *Community Biodiversity Survey Manual* for identification of the avian species. Bird species encountered at the site through sightings, calls or nest evaluations were recorded. The strip transect method (where the

surveyor records all species seen or heard along a trail), the opportunistic bird sighting method (where the surveyor records randomly encountered birds) and the sign search (where the surveyor records signs such as feathers, nests, droppings and tracks) were all used during the field visits.

EXISTING CONDITIONS

A variety of wildlife habitats occur on the property within ecological communities occurring across the site. None of these habitats or populations is unique to the area or specifically to the project site. Vegetative cover of these habitat areas has been described in Section 3.7.1 above. Some populations of wildlife are known or can be expected to occur within these habitats, as described below. The NHP did not identify any endangered, threatened, or special concern species of fauna as occurring on, or in the immediate vicinity, of the property. The U. S. Fish and Wildlife Service (USFWS) noted the potential for the Federally- and State-listed endangered Indiana bat (*Myotis sodalis*) to occur within the proposed project area and that the project site is in the vicinity of historic bog turtle (*Clemmys muhlenbergii*) sites.

Second-growth Hardwood Forests: This community type includes mature and semi-mature tree species that provide food as mast (beech, oaks, hickories), forage or browse for deer and other mammals and also provide cover in the upper canopy and in standing dead trees. Deadfalls from trees, including limbs and stumps, were commonly observed across the site. Populations of insects, earthworms, snails and slugs within dead and decaying wood and in the leaf litter collectively form the basis for the food chain on this site. The proximity of the woodlands to wetland areas provides additional benefit to wildlife by offering a water source and additional forage opportunities. Lack of significant understory and thickets limits its use as cover for some smaller ground-based animals. A number of trees that are either standing dead or damaged provide potential habitat for cavity dwellers (e.g., woodpeckers, owls, flying squirrels and chipmunks).

Signs of deer and raccoon were observed throughout this habitat type, primarily near the wetland edges. It is likely that deer migrate through the wooded portion of the site, as well as utilizing the more open areas for foraging. The project site and surrounding properties contain “edge habitats” preferred by feeding deer.

Successional Shrubland: In areas of younger successional woodland, the tree canopy is not as dense and invading sunlight promotes a denser shrub and herb layer.

These habitats provide thickets of berry producing bushes and an open canopy that provides diverse habitat for smaller mammals, reptiles, some amphibians and many species of birds, particularly songbirds. These thickets are made up of raspberries, blackberries, elderberries, viburnums and multiflora rose. Indicators of predatory species, including coyote, bobcat and fox have not been found on the site, although habitat does exist that would encourage use by such species, and food sources are readily available. The grass areas seasonally support large numbers of grasshoppers, butterflies and other insects that provide forage for a wide variety of birds.

Wetlands:

- *Forested and Emergent Wetlands:* Signs of deer and raccoon were observed throughout the wooded wetland areas. It is likely that the deer migrate through the wooded wetland while also utilizing the on-site field areas and nearby residential lawn areas. These areas also provide habitat for a number of other animal species as identified in Table 3.7.2A, below. Small reptiles and amphibians living within the wetland areas offer an additional food source to some of the larger omnivorous mammals that may be present (i.e., raccoons, fox). Tree coverage over portions of the wetlands provides shade that moderates temperature fluctuations within the streams and the relatively undeveloped woodland floor. In addition, the vegetation along the watersheds draining to the central wetland/watercourse system moderates other water quality characteristics of the streams.

Small reptiles, amphibians and invertebrates living within the stream corridors provide additional food resources to some of the larger omnivorous mammals that may be present. The streams on the project site support smaller, warm water fish species, primarily minnows (Cyprinidae). Crayfish, green frogs and aquatic stream macroinvertebrates (caddisflies, mayflies) were also noted in the channel flowing off of the mountain upstream from the point of entry into wetlands. Muskrats may be present in the main stream channel that flows through the wetlands in the vicinity of the easternmost culvert.

- *Isolated Wetlands*: The isolated wetlands in the central portion of the site may provide breeding opportunities for spotted salamanders, wood frogs, spring peppers and some of the other common amphibians on the site, depending upon the retention of water after precipitation events.² The rock substrate, however, allows rapid drainage from the depressions. Herbaceous vegetation observed here included royal and marsh fern, smartweed, false nettle, and tussock sedge. Spicebush fringe the pool as do large green ash trees. The ash trees have buttressed trunks and very distinct watermarks in the form of moss. The area supports vegetation over approximately 50%, the remainder has no vegetative cover but some woody debris in various piles. The isolated and intermittent nature of these pools allows for the support of unique assemblages of animals that can develop in the absence of fish populations.

Table 3.7.2A below provides specific information on the various species identified as present or likely to be present on site:

Common Name	Scientific Name	Habitat Type			
		OF	Upl	Wet	Ed
MAMMALS					
White-tail deer * ²	<i>Odocoileus virginianus</i>	X	X	X	X
Coyote	<i>Canis latrans</i>	X	X	X	
Raccoon *	<i>Procyon lotor</i>		X	X	X
Red fox	<i>Vulpes vulpes</i>	X	X	X	X
Opossum	<i>Didelphis virginiana</i>		X	X	
Eastern chipmunk *	<i>Eutamias sp.</i>		X		X
Gray squirrel * ²	<i>Sciurus carolinensis</i>		X	X	
Cottontail rabbit *	<i>Sylvilagus floridanus</i>	X	X		X
Striped skunk	<i>Mephitis mephitis</i>		X		X
White-footed mouse	<i>Peromyscus leucopus</i>	X	X		X
New York weasel	<i>Mustela frenata</i>		X	X	X
Deer mouse	<i>Peromyscus maniculatus</i>	X	X		X
Meadow vole	<i>Microtus pennsylvanicum</i>	X			X
Muskrat *	<i>Ondatra zibethicus</i>			X	
Woodchuck *	<i>Marmota monax</i>	X	X		
Short-tailed shrew	<i>Blarina brevicauda</i>	X	X		X

² Calhoun, A.J.K. And M.W. Klemens. 2002. Best development practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States. MCA Tech. Paper No. 5. Metropolitan Conservation Alliance, Ridgefield, CT. 57pp.

Common shrew	<i>Sorex cinereus</i>	X	X		X
Indiana bat	<i>Myotis sodalis</i>		X	X	X
Little brown bat	<i>Myotis lucifugus</i>		X	X	X
Red bat	<i>Lasiurus borealis</i>		X	X	X
REPTILES		OF	Upl	Wet	Ed
Garter snake *	<i>Thamnophis sirtalis</i>	X	X	X	X
Brown snake	<i>Storeria dekayi</i>	X	X	X	X
Northern watersnake	<i>Nerodia sipedon</i>			X	X
Ratsnake *	<i>Elaphe obsoleta</i>	X	X		X
Milksnake	<i>Lampropeltis triangulum</i>	X	X		X
Box turtle *	<i>Terrapene carolina</i>		X	X	X
Wood turtle	<i>Clemmys insculpta</i>	X	X	X	X
Painted turtle	<i>Chrysemys picta</i>			X	X
Snapping turtle	<i>Chelydra serpentina</i>			X	X
AMPHIBIANS		OF	Upl	Wet	Ed
Red-backed salamander	<i>Plethodon cinereus</i>		X	X	X
Spotted salamander *	<i>Ambystoma maculatum</i>		X	X	X
Slimy salamander *	<i>Plethodon glutinosus</i>		X		
Red-spotted newt *	<i>Notophthalmus viridescens</i>		X	X	X
American toad *	<i>Bufo americanus</i>		X	X	X
Gray treefrog	<i>Hyla versicolor</i>		X	X	X
Wood frog *	<i>Rana sylvatica</i>		X	X	X
Pickerel frog *	<i>Rana palustris</i>			X	X
Green frog *	<i>Rana clamitans</i>			X	X
Spring peeper *	<i>Pseudacris crucifer</i>		X	X	X
BIRDS		OF	Upl	Wet	Ed
Mallard	<i>Anas platyrhynchos</i>			X	
Wood duck	<i>Aix sponsa</i>			X	
Great blue heron ¹	<i>Ardea herodias</i>				
Canada goose ¹	<i>Branta canadensis</i>				
Common grackle*	<i>Quiscalus quiscula</i>	X			X
Carolina wren *	<i>Thryothorus ludovicianus</i>	X		X	
Song sparrow *	<i>Melospiza melodia</i>	X			X
Chimney swift ¹	<i>Chaetura pelagica</i>				
Flycatchers *	<i>Empidonax spp.</i>	X			X
Worm-eating warbler *	<i>Helmitheros vermivorus</i>		X		
Hairy woodpecker *	<i>Picoides villosus</i>		X		X
Wild turkey *	<i>Meleagris gallopavo</i>	X	X		
Wood thrush *	<i>Hylocichla mustelina</i>	X	X		
Pileated woodpecker *	<i>Dryocopus pileatus</i>		X		
Downy woodpecker *	<i>Picoides pubescens</i>		X		X
Red-bellied woodpecker *	<i>Centurus carolinus</i>		X		X
Northern flicker *	<i>Colaptes auratus</i>		X		X
Ovenbird *	<i>Seiurus aurocapillus</i>		X		X

European starling *	<i>Sturnus vulgaris</i>	X			X
Sharp-shinned hawk	<i>Accipiter striatus</i>	X	X		X
Cooper's hawk	<i>Accipiter cooperii</i>	X	X		X
Broad-winged hawk	<i>Buteo platypterus</i>	X	X		X
Red-tailed hawk *	<i>Buteo jamaicensis</i>	X	X		X
American robin *	<i>Turdus migratorius</i>	X	X		X
Gray catbird *	<i>Dumetella carolinensis</i>	X	X		X
Northern mockingbird *	<i>Mimus polyglottos</i>	X			X
Great crested flycatcher *	<i>Myiarchus crinitus</i>		X		X
Eastern phoebe *	<i>Sayornis phoebe</i>		X		X
Golden-crowned kinglet * ²	<i>Regulus satrapa</i>		X		X
Common yellowthroat *	<i>Geothlypis trichas</i>	X			X
American redstart	<i>Setophaga ruticella</i>		X	X	X
Red-eyed vireo *	<i>Vireo olivaceus</i>		X	X	
American crow * ²	<i>Corvus brachyrhynchos</i>	X	X		X
Blue jay *	<i>Cyanocitta cristata</i>	X	X	X	X
Scarlet tanager *	<i>Piranga olivacea</i>		X	X	
American goldfinch * ²	<i>Carduelis tristis</i>		X	X	X
Pine siskin ²	<i>Carduelis pinus</i>	X	X		X
Northern cardinal *	<i>Cardinalis cardinalis</i>		X		X
Chipping sparrow *	<i>Spizella passerina</i>				X
Brown-headed cowbird *	<i>Molothrus ater</i>	X	X		X
Red-winged blackbird *	<i>Agelius phoeniceus</i>			X	
Eastern towhee *	<i>Pipilo erythrophthalmus</i>		X	X	
Tufted titmouse * ²	<i>Parus bicolor</i>		X		X
Indigo bunting *	<i>Passerina cyanea</i>	X			X
Blue-winged warbler *	<i>Vermivora pinus</i>		X	X	
Black-throated blue warbler *	<i>Dendroica caerulescens</i>		X		
Black-throated green warbler *	<i>Dendroica virens</i>		X		
Winter wren ²	<i>Troglodytes troglodytes</i>		X		X
Eastern pewee *	<i>Contopus virens</i>		X	X	
Dark-eyed junco	<i>Junco hyemalis</i>		X		X
Mourning dove *	<i>Zenaida macroura</i>				X
Black-capped chickadee * ²	<i>Parus atricapillus</i>		X	X	X
White-breasted nuthatch *	<i>Sitta carolinensis</i>		X	X	
Baltimore oriole *	<i>Icterus galbula</i>		X		X
Finches	<i>Carpodacus spp.</i>	X	X		X
Ruby-throated hummingbird *	<i>Archilochus colubris</i>	X			X
Yellow-billed cuckoo *	<i>Coccyzus americanus</i>	X	X		
Evening grosbeak	<i>Hesperiphona vespertina</i>		X		X
Turkey vulture ¹	<i>Cathartes aura</i>				
Green heron ¹	<i>Butorides striatus</i>				
Eastern Kingbird*	<i>Tyrannus tyrannus</i>				X
Eastern screech owl	<i>Otus asio</i>	X	X		X
White throated sparrow*	<i>Zonotrichia albicollis</i>	X	X		X

Black duck				X	
Great horned owl	<i>Bubo virginianus</i>	X	X		X
Barred owl	<i>Strix varia</i>		X		
Cedar waxwing	<i>Bombycilla cedrorum</i>	X			X
<p>*Observed individuals or species indicators during site visit(s): August, 2005; April 29, May 6, 15, 18, June 12, 27 and July 21, 2006 (TMA); April 17, 18, 19, May 10, 2006, April 23 & 24, May 7, 8, 14 & 21, June 2, 3, 17, 18, 25 and September 21, 2009, April 15 & 29, November 16, 2010 (AVAA).</p> <p>¹ Observed flying by the site.</p> <p>² Observed by Thomas R. Baptist, B.S. during site visits on November 21 and 22, 1987.</p> <p>Note: This list includes many species that could potentially inhabit the project site. It is not, however, an exhaustive list, particularly relative to migratory bird species.</p> <p>Source: A. V. Agovino Associates, LLC, 2006-2010; NYS BBA data, 1980-1985 and 2000-2004, Thomas R. Baptist reports, TMA reports.</p> <p>OF: Open field; WET: Wetland; UPL: Wooded Upland; ED: Edge habitat</p>					

Threatened and Endangered Species: Correspondence from the NYSDEC NHP and the USFWS indicates that there are no known occurrences of protected or rare wildlife species (including invertebrates, amphibians, fish, reptiles, mammals and birds) on the project site or adjacent properties (A copy of the letters received from these agencies are included in the Appendix of the Terrestrial & Aquatic Ecology Report included in Appendix I of this DEIS). However, the USFWS did advise that there is the potential for the regional, historical or seasonal occurrence of two federally- and state-listed endangered species (the Indiana bat and the bog turtle) on or in the vicinity of the project site. This letter is generally sent by the USFWS to all potential sites in the Hudson Valley region that are located in the vicinity of previously identified habitat for these two species. Accordingly, the USFWS requires most sites be investigated for the presence of potential Indiana bat habitat and potential bog turtle habitat.

Bog Turtle: The ecological habits of the bog turtle, as presented in the USFWS species recovery plan, generally define the animal as a semi-aquatic species, preferring habitat with cool, shallow, slow-moving water, deep soft muck soils, and tussock-forming herbaceous vegetation in areas of broadly open tree or shrub canopies. Nesting typically occurs on top of relatively tall and sparsely vegetated tussocks while shrub and tree root systems are frequently associated with hibernation sites. The Mountainside Woods site does not contain the habitat needed to support bog turtles and the NYSDEC Herpetological Atlas does not list the species as having been observed

within the mapping unit that includes the Mountainside Woods site. Thus, it is unlikely that the species would be present on or in the near vicinity of the project.

Indiana Bats: Indiana bats utilize caves for winter hibernation and trees with snags or strongly exfoliating bark for roosting during all other seasons. The USFWS letter indicates that the closest hibernaculum (hibernating cave) for the Indiana bat is approximately eleven miles distant from the site and roosting trees were approximately five miles from the site. Indiana bats have been reported to exploit several tree species for summer and nursery roosts including live deciduous trees with strongly exfoliating bark, coniferous trees providing dense shelter from wind and rain, and dead trees or branches which provide crevices for shelter.

Multiple environmental/ecological surveys of the site have been conducted and collectively these assessments lead AVAA to the conclusion that the only potential impact to Indian bats, if any at all, is that the Indiana bats may utilize the site for foraging activity. The site is not suitable for overwintering as the site does not have any exposed rock cave or crevices. The potential roost trees are generally outside of the AOD.

POTENTIAL IMPACTS

Potential impacts to species occurring from development of the property can come from a variety of factors. Habitat components such as cover, food, water, or migration routes may be altered or reduced. Potential impacts to fauna on the site may include:

- Habitat loss, which will cause a loss in the amount of vegetation on the site and subsequently may affect local wildlife populations on the site.
- Noise, which will occur during the construction phase, could affect local bird populations by allowing more aggressive non-native bird species such as starlings to dominate a niche.
- Increased human occupancy may permanently alter the population dynamics of game species such as deer.
- Post-development impacts to wildlife populations on the site will more than likely lead to the displacement of species that tend to utilize certain local niches.
- Bird/mammal species that prey on insects on the site may forage on adjacent properties causing a local increase in insects on the site.

The portions of the Mountainside Woods project site proposed for development are largely disturbed and exist on the boundary between undeveloped forested land to the north and west with developed residential and park properties to the east and south, therefore, their development for residential purposes would not constitute “fragmentation” of the local forest resource as there is connectivity between other open space parcels and the portions of the project site that are not to be developed. These parcels include large tracts of forested uplands encompassing nearly the entirety of Illinois Mountain. These areas provide contiguous upland habitat and movement corridors for existing wildlife to traverse. The only barrier to wildlife movement in the immediate vicinity of the project site is the existing residential development along the southeastern boundary on the opposite side of Vista Drive.

The large wetland complex that runs through the central portion of the site provides a good corridor for wildlife to move between habitats both on and off site. The proposed development, in leaving the wetland undisturbed and the slopes of Illinois Mountain undeveloped, should maintain the vast majority of the functioning habitat provided by these features. Many avian species and the "suburban" mammals (deer, raccoon, turkeys, squirrels, etc.) will continue to utilize developed land while forest interior species should continue to use the habitat on Illinois Mountain.

Some loss of wildlife habitat will result from the proposed development as described above in Section 3.7.1 of this DEIS. Portions of the on-site habitat would be cleared in the vicinity of the buildings and infrastructure improvements proposed for this development.

The alteration of the habitat immediately surrounding the central wetland corridor has been designed to prevent the resulting loss of connection between the wetland and the upland around portions of the wetland perimeter. Species most likely to be affected by the change would include muskrat, deer and some of the on-site amphibians.

The greatest potential impact to non-aquatic species lies in the loss of the successional old field/shrubland on the site. Bird species, including the blue winged warbler and indigo bunting, that use this habitat will have to relocate to other areas such as the surrounding residential landscaping where suitable habitat is available. Loss of this habitat will affect the insect population as well, thereby altering available prey for both bird and mammal species in the area.

It should be expected that a certain number of animals will be displaced by construction. However, because the construction will be completed in phases over 5 ½ years, the impact of this displacement will be minimized.

With regard to threatened, endangered or species of concern, none were sighted and it is generally felt that they are less likely to be impacted due to the preservation of large forest areas and all wetlands.

In general, as a project site is developed, some species will relocate to similar habitats either on- or off-site. Because only approximately 40.11 acres of the total 153.07-acre site will be altered, it is likely that on-site wildlife will relocate from the areas to be developed to adjacent undeveloped areas offering similar habitats. The composition of the wildlife population on the project site may be slightly altered immediately adjacent to developed areas, as species able to adapt to a suburban environment (e.g. squirrels, raccoons, opossum, woodchucks, mice and some songbirds) would have a greater ecological advantage in comparison to species that are less tolerant of human activity. Many species of trees and shrubs commonly chosen for landscaping use will provide food, shelter and nesting sites for small mammals, songbirds and other avian species.

MITIGATION MEASURES

The following measures are proposed to mitigate to the greatest extent practicable any potential impacts to wildlife and its habitat:

- The applicant proposes to leave approximately 112.96 acres of the site, including the upper portion of the project site, extending up the slopes of Illinois Mountain to its crest, as unimproved open space. This portion of the property is contiguous with similar forested habitat on protected Town watershed property south of the site. This open space will be protected from any future development through a conservation easement. The applicant proposes to make an offer of dedication of this protected land to the Town or to donate it to a local not for profit conservation organization.
- The existing trees and vegetation beyond the identified AOD will be preserved by the installation of stakes and fencing which will clearly identify the limits of disturbance. The small streams entering the property

will continue to provide a water and food source for local birds and mammals.

- Noninvasive native plants will be used for new landscaping projects. Newly planted street trees, shrubs and plants will cumulatively provide a variety of foraging, nesting and shelter benefits for the wildlife that repopulates the portions of the site within the proposed AOD.
- While the existing woodland vegetation will be replaced by ornamental plants, lawns and gardens within the developed areas, these introduced plantings could still be used as forage by deer and other wildlife and many of the tree and shrub species chosen for residential landscaping will provide habitat for songbirds and other avian species. Trees that are planted will mature in the long-term and would provide some roosting and nesting opportunities for birds that are adaptable to suburban conditions.

4.0 ADVERSE ENVIRONMENTAL IMPACTS WHICH CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

4.1 Temporary construction impacts

There will be several temporary adverse impacts associated with the project's construction. There is the potential for erosion to occur during construction, as more fully discussed in Sections 3.1 and 3.2 of this DEIS. In addition, the Applicant will request a waiver from NYSDEC to allow for construction on more than five acres at one time, which may increase the potential for erosion.

The construction of the Vista Drive Extension and reconstruction of Vista Drive will also necessitate a temporary disturbance to traffic on Vista Drive/Toc Drive.

Construction vehicles will generate noise when operating on the site and there will be an increase in the number of construction vehicles traveling on local roads as equipment and supplies are delivered to the site. Construction impacts are more fully discussed in Section 2.3 of this DEIS.

The use of blasting or other special rock removal techniques is expected to be employed, which will generate noise. This impact is more fully described in Section 3.2 of this DEIS.

These impacts will be mitigated to the greatest extent practicable as more fully discussed in each of the above referenced sections.

4.2 Impacts on natural site features.

There will also be adverse impacts to natural site features that cannot be avoided if the project is developed. The major impacts are associated with the conversion of vacant land to residential development. The project will create a total of 16.1 acres of impervious surface and grading will permanently alter the existing topography of the site. Clearing a portion of the site for development will necessarily require removal of woods and scrubland.

4.3 Operational impacts.

For the project to operate on a day-to-day basis, there will be some unavoidable impact including an estimated increase in water demand of approximately 40,260 gallons per day and a corresponding demand on sewer services. The population of the Town of

Lloyd is estimated to increase by five hundred thirty seven new residents (537) of which one hundred (100) are estimated to be public school age and will likely enroll in the Highland School District. There will be an increase in demand for electricity and gas and an increase in the amount of solid waste generated in the Town.

4.4 Impacts on transportation systems.

There will be an increase in the number of vehicles using the area roadways. In addition, as indicated in Section 4.1 above, the construction of the Vista Drive Extension and reconstruction of Vista Drive will necessitate a temporary disturbance to traffic. To minimize this disruption, the construction of these roads will be accomplished on an expedited basis. Prior to construction, a maintenance and protection of traffic plan will be provided to the Town for review and approval. At all times during construction of the Vista Drive and Vista Drive Extension, one lane will be kept open for emergency vehicles, buses and local traffic. During the construction phase, appropriate traffic control measures will be implemented to ensure the safety of pedestrians, school children and vehicles.

4.5 Visual Impacts.

The proposed site plan utilizes the topography of the site to greatly mitigate visual impacts; however, some of the development will be visible. In particular, the residences and stormwater ponds that are proposed to front Vista Drive and the Vista Drive Extension will be visible from those roadways. The stormwater pond will not be visible from Toc Drive as it will lie behind a large landscaped berm at the eastern edge of the site.

It is unlikely that the homes fronting along Road “H” and Road “G” will be visible as the topography drops off to the west, reaching a low point at the stream. This topographic feature will also prevent the homes on the west side of the stream from being visible.

The homes in the northern portion of the site are also protected by the topography and will not be visible from the public roads; however, the rear yards of a few of the homes may be visible from the rear of the Sunny Brook community.

5.0 ALTERNATIVES

5.1 Conventional Development Plan (As-Of-Right Plan) – Alternative #1

The three parcels of land that comprise the Mountainside Woods project are zoned Planned Residential Development (PRD), R-1 and R-1/4. Accordingly, the proposed plan that is the subject of this DEIS relies on the Town Board approving the Applicant's request for a rezoning of all parcels to PRD.

The Conventional Development Plan depicted in Figure F-5.1A, and included in a larger format in Appendix J, indicates the potential build-out of the property under the existing zoning designations. As the three properties are zoned differently, the plan creates three separate communities connected by a road system. Overall, the plan proposes a total of 435 residential units. Of that total, 324 units will be apartments; 90 units will be multi-family; and 21 units are proposed as single family residences.

The apartments are proposed on SBL 87.004-5-1.2, in the center of the site. The apartments will be constructed in 9 buildings of 36 units each. There are proposed a total of 50 one bedroom units and 274 two bedroom units. Associated parking (502 spaces) is provided under and adjacent to the buildings. This section of the development will have a boulevard entrance off of Vista Drive and a clubhouse.

The multifamily units are proposed on SBL 87.004-3-2, on the southeastern portion of the site. These units are proposed as two-family homes with 3 bedrooms each. Parking will be provided in the driveways at the front of the units and in garages on the first floor of each unit.

The single family units are proposed on SBL 87.004-3-14, in the northeast section of the property. These single family homes will be sited on large lots of at least one acre and each will have 4 bedrooms and 2.5 baths. Given the larger size of the homes, the price of these units is expected to average \$375,000, \$100,000 more than the homes proposed in the preferred plan.

Municipal water and sewer will service the site. Water and sewer demand for this alternative will be substantially higher. Total water demand/wastewater demand is likely to be 50% more than the estimate for the preferred plan, which is approximately 40,260 gallons per day for the proposed plan.

Total site disturbance necessary to accomplish this plan will be greater than the preferred plan. As proposed, Alternative #1 will require approximately 55 acres of site disturbance, including 0.5 acres of federal wetland disturbance, as compared to the preferred plan which will require only 40.11 acres of disturbance and no wetland disturbance.

Given the additional 260 units included in Alternative #1 (435 – 175), there will be a substantial increase in population and school children as a result of this plan resulting in a negative fiscal impact to the Town, School and County and impacts to the Town's community service providers.

In addition, the number of vehicles on the roadways will increase substantially, resulting in more traffic related incidents and lower levels of service at the studied intersections.

Given these significant adverse impacts, the Applicant does not believe that the Conventional Plan is the best development approach for these parcels and this area of Town.

5.2 No Cul-de-sac Plan

Alternative #2, depicted in Figure F-5.2A and included in a larger format in Appendix K, illustrates the development of the project site without cul-de-sacs at a density (175 residential units) similar to the proposed plan. Accordingly, many of the impacts studied in this DEIS will remain the same including community services, fiscal, traffic and utilities. The no-cul-de-sac plan, however, will have greater environmental impacts including a greater area of development, filling of wetlands, grading on steep slopes, more impervious surface and longer roads

The AOD for this plan is estimated to be 50 acres. This greater area of disturbance will impact wetlands. It is estimated that 0.5 acres of wetland will be filled to accomplish the road connections necessary to eliminate the cul-de-sacs. There will also be additional steep slope areas in the locations of lots 82 thru 95 that will be disturbed.

The length of the road and therefore the impervious surface area is also expected to increase slightly due to the inefficiencies road network that would be created.

Given these significant adverse impacts, the Applicant does not believe that the No Cul-de-sac Plan is the best development approach for these parcels and this area of Town.

5.3 No Action

One alternative is to develop nothing on the site. Should this project not be developed, the Town of Lloyd, as well as various agencies, including the school district, would not receive any additional revenue projected to be collected as a result of this project. Regardless of the project being built, traffic in the area will increase; however, the additional trips generated by future residents of the site would not occur. Most significantly, the Vista Drive Extension would not be built. This connection will provide a much needed emergency access for several hundred residents that now only have one means of emergency access. Should this project not be developed on the site, there would also be no additional demand on utilities and community services.

It is conceivable that if this project is not built, alternative proposals for the site may have a much greater density as allowed under the current zoning and would not meet the housing needs identified by the Town of Lloyd for this area of the Town near the hamlet of Highland.

6.0 APPENDICES

- A. SEQRA Documentation
- B. Stormwater Pollution Prevention Plan
- C. Soils Investigation Report
- D. Traffic Impact Study
- E. Engineer's Report and Specifications for the Water System
- F. Engineer's Report and Specifications for the Sewer Main Extension
- G. Fiscal Analysis, Letters from Highland Fire District and
- H. Cultural Resources Study
- I. Terrestrial & Aquatic Ecology Report, Wetland Report and Jurisdictional Determinations
- J. Alt Plan #1 – Conventional Development Plan
- K. Alt Plan #2 – No Cul De Sac Plan
- L. Full Plan Set