

PATTERSON CROSSING RETAIL CENTER
DRAFT ENVIRONMENTAL IMPACT STATEMENT

VOLUME I

NYS ROUTE 311 at INTERSTATE 84 EXIT 18
Towns of Patterson and Kent, Putnam County, New York

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Public Hearing Date: _____

Deadline for Receipt of Public Comments: _____

July 27, 2006

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Draft Environmental Impact Statement

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1.0 EXECUTIVE SUMMARY

Introduction

The following Draft Environmental Impact Statement (DEIS) examines the potential environmental impacts associated with the construction and operation of a retail center in the Towns of Patterson and Kent, Putnam County, New York referred to as Patterson Crossing Retail Center (“the Proposed Action”).

1.1 Description of the Proposed Action

The Patterson Crossing Retail Center project site is an undeveloped 90.5 acre parcel located on the south side of Route 311, near the intersection of Route 311 and Interstate 84. Patterson Crossing Realty, LLC (“the Applicant”) proposes to construct a 405,850 square foot retail center and a 28,200 square foot garden center on the project site. Most of the new construction associated with the Patterson Crossing Retail Center project is proposed within the Industrial District of the Town of Patterson, while site access and a small portion of the proposed retail uses would be located south of NYS Route 311 in the Town of Kent. Retail uses would be housed in four separate buildings. The remainder of the site would support parking areas, stormwater management and wastewater treatment facilities and associated infrastructure. Approximately 22 acres of the site would remain undisturbed and 36 additional acres would be revegetated and landscaped.

The primary benefit of the project would be the utilization of the site as a retail destination for the community and the surrounding region. Such use would generate additional property and sales tax revenues for the Towns of Patterson and Kent, the taxing districts in which the site is situated, and Putnam County as well as the State of New York and the Metropolitan Commuter Transportation District (MCTD). The site presently generates approximately \$56,000 in property taxes to the County, the towns of Kent and Patterson, and affiliated taxing districts, and the Carmel Central School District. Future projected annual property taxes would be approximately \$840,000 to these districts.

Annual retail sales are projected to fall between \$200 and \$240 million. This would generate between \$13.9 and \$16.6 million in sales tax revenues per year. Putnam County would receive \$6.2 to \$7.4 million annually and the State of New York would collect an additional \$7.0 to \$8.4 million a year. Construction employment and part- and full-time long term retail employment opportunities would also be generated by the proposed action.

Consistent with the Town of Patterson Comprehensive Plan and the Town of Kent Master Plan, the project would advance both Towns’ visions for the site by providing commercial development in proximity to the interstate highway, and would reduce vehicle miles traveled by local residents who now must travel out of the area for many of their shopping needs. Given the recent escalation in fuel costs, this would represent a financial savings to local residents, and reduce the release of associated vehicular emissions to the local and regional environment.

1.2 Involved and Interested Agencies

The following agencies are potentially Involved Agencies under SEQRA.

Site Plan

- Town of Patterson Planning Board
- Town of Kent Planning Board

Special Use Permit/Variance for Height of Fence and/or Signage and/or Tire Center/Public Garage and/or Property/Municipal Line Set Backs for the Northern Building

- Town of Patterson Zoning Board of Appeals
- Town of Kent Zoning Board

Section 239 Referral (within 500 feet of Municipal Border, State Road)

- Putnam County Department of Planning and Development

Stormwater Pollution Prevention Plan/Subsurface Sewage Disposal System/Watercourse Diversion Permit

- New York City Department of Environmental Protection

Stormwater Pollution Prevention Plan

- New York State Department of Environmental Conservation
- Town of Patterson Planning Board

Highway Work Permit

- Putnam County Department of Highways & Facilities
- New York State Department of Transportation, Region 8

Wastewater Permit

- Putnam County Department of Health

Water Supply Permit

- Putnam County Department of Health
- New York State Department of Health

Steep Slopes and/or Erosion Control Permit

- Town of Patterson Planning Board
- Town of Kent Planning Board

State Pollution Discharge Elimination System (SPDES) Permits for Wastewater Treatment System and Water Supply System

- New York State Department of Environmental Conservation

1.3 Potential Impacts and Proposed Mitigation

1.3.1 Geology

Potential Impacts

Based upon an analysis of site conditions, some blasting would likely be required for project construction. It is anticipated that blasting would be limited to areas that have greater than four feet of material cut. As a result, blasting would occur primarily in the south-central section of the property. Areas with less cut may permit rock removal through mechanical means, such as chipping, ripping or hammering. Approximately 119,000 cubic yards of rock would be excavated to allow for the proposed development of the site. All cut rock is expected to be utilized on the site. On-site recycling of this material will eliminate truck trips associated with the movement of rock to or from the site.

Mitigation Measures

Given the area on the site where rock removal is likely to occur, potential impacts to nearby properties are anticipated to be mitigated by following the proposed blasting procedures. Any required blasting would be done in full conformance with all blasting regulations. The Town of Patterson requires that blasting be performed in compliance with the New York State Code (Title 12 of the New York Code of Rules and Regulations 12 NYCRR Part 39). Blasting is not anticipated to be needed in the Town of Kent portion of the site which contains the only on-site wetland and all on-site watercourses. Prior to blasting, a general blasting schedule would be developed and a blasting permit would be obtained from the Building Inspector covering the specific blasting operation.

Although extremely rare, blasting can cause shifts in local bedrock fractures and affect the yield of existing wells (no public water supply exists in this area). Any documented impact to private or local wells would be remedied by the blasting contractor. In order to document or substantiate claims of well damage due to blasting the applicant has developed a Blasting Mitigation Plan which details the proposed data to be collected (and method of collection) on wells within 500 feet of blasting sites, before, during and after blasting. Foundation surveys of structures within 500 feet of the blasting sites have been included in this plan. Copies of all documentation concerning off-site structures, including photographic and/or video documentation, will be provided to the Towns of Patterson and Kent. Refer to the plans at the rear of this document.

Neighboring property owners and appropriate municipal representatives (Town Clerk and Police Department) would be notified of the intent to blast not more than 30 days nor less than 72 hours prior to planned blasting activities, and such persons would be notified not more than 72 hours nor less than 24 hours prior to the commencement of blasting. Notification would be accomplished through mailings and by telephone calls to the residents.

1.3.2 Soils

Potential Impacts

Grading would be required for the construction of building sites, roads, storm water management basins and utilities. Grading would require the disturbance of approximately

68.4 acres of the 90.5 acre site. Approximately 22.1 acres of the site would remain undisturbed following construction of the proposed commercial development.

Total earthwork for the Patterson Crossing Retail Center site is currently estimated to involve approximately 566,500 cubic yards of material to be cut and nearly 508,500 cubic yards of fill. The final site plans to be generated for this project will balance the earthwork required to develop the project site, thereby eliminating any impacts associated with the need to bring fill to or remove fill from the property. The volume of material is representative of 0% compaction/expansion of material. Based on the current estimate, the building pads for the Home Improvement Center, the Wholesale Warehouse, and the Electronics Store, Clothing Store and Sporting Goods Store complex, will be elevated less than one foot in order balance the earthwork on the site.

The soil types on the site are typical of those that have been built on throughout Putnam County. None are atypical or unusual. Proper planning and engineering design will be required to address any potential soil limitations for development of roads, buildings and excavations.

Mitigation Measures

The impacts to soils associated with the project are mostly temporary and relate to erosion potential. Soils that would be covered with impervious surfaces would be permanently stabilized. Virtually all of the disturbed area not to be covered with impervious surfaces, including the storm water management basins, would be graded, seeded and landscaped.

The presence of soil constraints does not mean the land cannot be developed, rather that engineering methods to compensate for soil limitations, such as erosion controls, footing drains or other drainage improvements would be required. The limiting characteristics of these soils have been addressed by careful project planning and design.

Erosion and sedimentation would be controlled during the construction period by careful construction sequencing and temporary devices applied in accordance with a Soil Erosion and Sediment Control Plan developed specifically for this site and this project. A draft plan was developed in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (April 2005) as referenced in the NYSDEC State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities (Permit No. GP-02-1) to address erosion control and slope stabilization. Devices for erosion and sediment control include a stabilized construction entrance, inlet protection, silt fencing, stone check dams, and temporary soil stockpiling areas. Project phasing would be used to limit exposed soils and reduce erosion.

Once construction is completed, sedimentation would be prevented by established vegetation and by the stormwater management and stormwater quality devices specified by the project engineer. Construction of the permanent stormwater management systems would commence as part of the initial earthwork so that these systems would be functional at the completion of construction. Maintenance of erosion control features is critical to their effectiveness and proper functioning. Regular inspections of these features are required under NYSDEC SPDES General Permit.

Soil erosion and sediment control would be achieved by utilizing a collective approach to managing runoff, i.e. the use of Best Management Practices (BMPs). BMPs proposed for this project include the following:

- Construction Sequencing
- Diverting clean runoff
- Phasing of grading and construction to minimize soil exposure
- Retaining existing vegetation wherever feasible
- Stabilizing disturbed areas as soon as possible
- Minimizing the area of steep slopes to be disturbed
- Maintaining low runoff velocities
- Trapping sediment on-site and prior to reaching critical areas such as wetlands
- Establishing a thorough maintenance and repair program
- Assigning responsibility for the maintenance program
- Implementing Retaining Walls

1.3.3 Topography

Potential Impacts

The Project will result in disturbance to 68.4 acres, some of which involves slopes greater than 15 percent. Because the site is a gently sloping hillside and commercial projects of this nature require large level building pads and gently sloping parking lots, the net result of construction will be cutting and filling to create a more level environment. Impacts from disturbance to steep slopes are directly related to the potential for soil erosion during construction. Acres of land being disturbed in various slope categories are summarized as follows: 32.2 acres of the 0-8% slope range, 23.9 acres of the 8-15% slope range, 9.9 acres of the 15-25% slope range and 2.4 acres of slopes greater than 25%.

The majority of the disturbance will occur in areas with slopes of less than 15%. Building locations and parking lots, as well as storm water basins, have been carefully located on the site to minimize disturbance to steep slopes.

Mitigation Measures

Exposing soils on steep slopes during construction increases the potential for erosion in the short term. These potential impacts would be mitigated by adherence to soil erosion and sedimentation control practices described in this DEIS and shown on erosion control plans that are part of the site engineering design. Following construction, sedimentation from the property is expected to be minimal since disturbed areas would be stabilized with vegetation, pavements and buildings and the proposed stormwater management features would be fully functional.

1.3.4 Groundwater Resources

Potential Impacts

The Project will require approximately 10,740 gallons per day (gpd) or 7.5 gallons per minute (gpm) of water. Sustained well yields from approved pump tests are many times greater than the projected need and meet the regulatory requirements of the New York State Department of Health and the Putnam County Department of Health. No influence or drawdown attributable to the on-site pumping wells was observed in any of the private off-site

monitoring wells. The recharge analysis completed for the project demonstrates that more water is recharged to the aquifer, on the subject property, than is proposed to be used by the project.

The project will result in 32.26 acres of impervious surface thereby reducing the amount of area on which rainfall can directly fall on pervious surface and potentially recharge the aquifer. All stormwater from impervious surfaces will be directed to stormwater treatment facilities, such as vegetated swales and detention basins thereby allowing some of the precipitation falling on impervious surfaces to potentially contribute to aquifer recharge.

Some blasting is expected to be required for the development of the project site. As a result, there is potential for impacts to nearby private wells.

Mitigation Measures

Pump tests were conducted to verify sufficient water supply for the proposed project. The on-site test wells were pumped for 72 hours at a rate of 22 gallons per minute each. This is a rate of three times the proposed project's need.

While no adverse impacts to groundwater resources are expected, several mitigation measures may prevent any future impacts to groundwater. Undeveloped and landscaped portions of the site will remain undeveloped and will allow continued recharge of the aquifer. The majority of stormwater collected from impervious surfaces will be collected and treated in stormwater management facilities where some of it may infiltrate into the ground contributing to recharge of the groundwater on-site.

Any documented impact to private local wells caused by the project construction, including as a result of blasting, will be remedied by the blasting contractor. Such mitigation may include monitoring of wells for potential impacts, hydrofacing wells, the deepening of wells through drilling or drilling replacement wells. In order to document or substantiate claims of well damage due to blasting the applicant has developed a Well Monitoring Plan to obtain water level data on wells within 500 feet of blasting sites, before, during and after blasting. Blasting performed by qualified and experienced contractors rarely results in damage to nearby wells.

1.3.5 Surface Water Resources

Potential Impacts

The project site is located on the divide between two different drainage areas (Middle Branch System and East Branch System) within the watershed of the Croton Reservoir System. The New York City Department of Environmental Protection (NYCDEP) regulates certain activities within this watershed for purposes of protecting the drinking water resources within their control.

The development of the proposed project would involve the construction of approximately 32.26 acres of new impervious area (building roofs, parking areas, etc.) on the site. As a result, without mitigation the peak rates of runoff from the development areas would increase and the response time (time of concentration) would decrease. Although construction of the project would require the regrading of much of the central and western portions of the site,

existing drainage patterns would generally be maintained. There would not be any significant diversion of runoff from one drainage area to the other.

Mitigation Measures

The preliminary Stormwater Pollution Prevention Plan (SWPPP) was developed to be in compliance with all applicable town (Towns of Patterson and Kent), NYCDEP Watershed Regulations, and NYSDEC General Permit GP-02-01, and guidelines, including the New York State Stormwater Management Design Manual and the New York State Standards and Specifications for Erosion and Sediment Control. It will be reviewed by applicable agencies and authorities and will be modified if necessary to their satisfaction prior to commencing construction.

Specific attention has been given to generally maintain existing reservoir basin drainage divides, to create TMDL (Total Maximum Daily Load) benefits, to attenuate peak discharges in comparison to the pre-development conditions and to meet NYCDEP and NYSDEC stormwater treatment criteria.

Stormwater runoff would be collected in constructed drainage systems and transported to stormwater basins for ultimate discharge from the site at three design points. The treatment train for the bulk of the runoff would be constructed in a series of three sequential stormwater basins. A smaller portion of the development would receive two levels of treatment through paired basins. The last pond in either series of basins is designated as a "wet extended detention pond" per the NYSDEC Design Manual. Stormwater detention basins were sized to meet the 90% treatment requirement of the NYSDEC for average runoff events.

As part of the proposed project, the highly eroded channel receiving unattenuated and untreated runoff from Concord Road would be repaired. This would minimize future transport of eroded sediments to the Middle Branch of the Croton River and ultimately to Lake Carmel. The discharge from Concord Road would be piped to a "pocket pond" for treatment/deposition of sediments. All discharges to the Middle Branch of the Croton River, including that from the Concord Road improvement area, would be collected in a piping/swale system which would provide stable discharge points bankside to the river.

The East Branch basin would continue to receive the majority of the runoff from the project site. Future peak flow rates for each of the 24-hour events considered in the model are expected to be less than existing flows, as required by the NYCDEP and NYSDEC.

Total annual loads (as lbs/yr) for BOD, phosphorus, nitrogen, and total suspended solids were calculated for post-development discharges into each of the three design points. Post-development loads are approximately equal to or less than the pre-development loads, as required by NYCDEP regulations. These patterns are maintained for the discharge into the Middle Branch of the Croton River even with discounting the specific improvements proposed for treating the existing unmanaged runoff from the Concord Road housing development. Treatment methods include only natural processes; no chemical treatment of the runoff is allowed. All treatment methods will comply with NYSDEC stormwater treatment criteria.

In addition to construction sequencing, prior to, and throughout the construction phase, four basic principles of runoff management, developed in the preliminary SWPPP, would be

applied at the site to control erosion and sedimentation: 1) stabilization of disturbed areas, (2) containment of sediments, (3) treatment of dirty water, and (4) diversion of clean water.

Implemented, monitored, and enforceable Best Management Practices (BMPs) would be utilized during the construction phase as the primary means of erosion and sediment control. All soil erosion and sedimentation control practices would be installed in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (April 2005), NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (Permit No. GP-02-01), and the town municipal codes and under guidance of the Putnam County Soil Conservation Service.

1.3.6 Wetlands, Streams and Waterbodies

The project site contains one wetland which measures 0.52 acres in size. It is regulated by the Town of Kent and the Army Corps of Engineers. This wetland is located adjacent to the Middle Branch of the Croton River, in the northwest corner of the project site. No NYSDEC regulated wetlands are on the subject site. Lake Carmel is located downstream of the project site.

The applicant has not contacted the US Army Corps of Engineers (USACE) for a jurisdictional determination (JD) for this site. Due to a heavy work load, the USACE does not currently require JD's for projects where impacts to wetlands are not expected. At some point, based on USACE feedback during the environmental review process, the applicant may need to provide data sheets and other documentation to the agency to support these conclusions. Data sheets are provided in Appendix P of this DEIS.

Potential Impacts

The Applicant is sensitive to the need to maintain the water quality of Lake Carmel. An analysis of drainage of stormwater runoff reveals that 19 percent of all impervious surfaces on the site will drain toward Lake Carmel. This runoff will be intercepted and treated by the stormwater management systems which will be installed on site.

A report prepared by the NYSDEC in 1999 included an inventory of waterbodies which have existing impairments. Lake Carmel (DEC Index no. H-31-P44-23-P59-6-P62a) was listed as being impaired for public bathing due to high nutrients (particularly phosphorus), with the suspected source being the "failing and/or inadequate on-site septic systems serving many homes along the lake shore and from other runoff from urban/suburban development in the watershed" (DEC, 1999, Putnam County WQCC, 1996).

The Kent-regulated wetland would not be disturbed by construction. Only treated stormwater discharges would be directed toward the wetland via an existing channel.

With the exception of stream channel improvements proposed for the intermittent stream which drains from Concord Road, no changes are proposed to existing streams on the site.

Mitigation Measures

Proposed stormwater mitigation measures would protect and preserve the wetlands, streams and water bodies downgradient of the project site. The stormwater quality features that are incorporated into the preliminary Stormwater Pollution Prevention Plan (SWPPP) would

prevent nutrient loading and other potential water quality impacts to the on-site wetland. No direct impacts to the wetland would result from the project and no physical expansion or replacement of wetland areas is proposed.

As a result of the design and mitigation measures proposed for the Patterson Crossing Retail Center, impacts to Lake Carmel would not occur. Capture of existing runoff from the Concord Road area and diverting it through the stormwater treatment facilities proposed for the project will eliminate a source of sediment and nutrients to the Middle Branch of the Croton River and ultimately to Lake Carmel. Existing pollutant sources, including failing septic systems and stormwater runoff from the densely populated areas around the lake, are expected to continue to contribute sediments and nutrients that impact the water quality of Lake Carmel.

1.3.7 Vegetation and Wildlife

The project site consists almost entirely of successional deciduous woodland with limited brushlands and one wetland. The woodlands provide wildlife habitat for a number of common species, including deer, raccoon, opossum, chipmunk and gray squirrel among others. Bird species that selectively reside within woodlands are also likely to be present, including wood thrush, owls, warblers and vireos. The woodlands on this site offer a number of cavities for owls, cavity nesting songbirds and small mammals. The site was investigated for the potential presence of rare and endangered species on a number of days in the spring and summer of 2005, and none were found. Primary wildlife survey dates were 3/22/05, 3/29/05, 4/13/05, 5/10/05, 6/1/06 and 6/2/05. Additional observations were made on 1/18/05, 5/3/05, 5/17/05, 7/21/05 and 8/9/05.

Potential Impacts

The land subject to grading and development (68.4 acres) will be lost as future wildlife habitat. The existing vegetative cover and habitat on the balance of the site would not be disturbed by the project. These areas would continue to provide habitat for many typical woodland species although the habitat value would be lessened by the presence of the retail shopping center proximate to the remaining habitat.

Wildlife currently using habitat on the project site would relocate to areas with similar habitat off-site. Most wildlife movement from this site would be expected toward the north, south and east (beyond Interstate 84) of the property. These areas offer similar habitat and are less densely developed than the areas to the west.

Many of the interior woodland bird species found on the project site are migratory. Therefore, they have always left the project site during certain times of the year. Most migratory species would adaptively seek other nearby or regionally available environments in response to alterations to their habitat. Most of these species would be expected to find alternative habitat in the existing undisturbed woodland areas located in close proximity to the site.

After the project development is completed, the composition of the wildlife population on the project site would adjust to final site conditions. Species better able to adapt to open and landscaped environments (such as raccoons, opossum, woodchucks, mice and certain songbirds) would have a greater ability to populate the site in comparison to species that are less tolerant of human activity.

Many species of trees and shrubs chosen for the proposed landscaping would provide both forage and nesting sites for birds, and or denning sites for small mammals, while the preserved habitat areas and re-vegetated open space areas would still be used by deer and other wildlife. The septic area in the southern part of the site would be re-vegetated as open meadow, and would provide a contrast to the surrounding tree line and new habitat opportunities for bird, reptile and small mammal species.

Mitigation Measures

The proposed site plan minimizes the amount of vegetation to be removed while allowing for the scheduled program of temporary and permanent uses and the needs for associated parking and infrastructure.

All areas that are not proposed to be impervious surfaces would be re-vegetated, including the large area on the southern portion of the site that would serve as the septic area. Upon completion of the proposed development, approximately 58 acres of the site would be vegetated; a combination of existing vegetative communities and landscaped areas.

The developed areas of the project site would be landscaped with native vegetation, where possible to maximize the available wildlife habitat.

1.3.8 Traffic and Transportation

Potential Impacts

Traffic was examined at six intersections in the Town of Patterson and six intersections in the Town of Kent, as per the Scope adopted by the Lead Agency. The proposed access road intersection with NYS Route 311 was studied as part of the 2010 future network traffic with the project site traffic (Build-Condition). Eight intersections within the site were also studied as part of the Build Condition.

There are a number of projects pending, approved, or under construction that could generate traffic that would influence study intersections. Traffic from such projects along with background growth were projected and evaluated with respect to local intersections to ascertain future conditions in the year 2010, without the Patterson Crossing Retail Center. Such traffic growth will increase delays particularly at unsignalized side streets connecting to NYS Route 311.

The proposed action is expected to generate 1,571 external trips during the weekday p.m. peak hour and 2,152 external trips at the Saturday peak hour, including trips already passing the site. Although the effect of traffic generated by the site may be found on roads in the nearby area, the bulk of the traffic would travel the 880 feet along NYS Route 311 between the site access and Exit 18 of Interstate 84. An estimated 25 percent of site trips are already on the network. Of the remaining trips, 57 percent are expected to travel directly to/from Interstate 84.

The proposed project would be accessed by a two lane privately owned and maintained boulevard style drive that would be approximately 3,400 feet long and 30 feet wide. Parking lots would be provided in front of each commercial building. The four turn lanes at the intersection of NYS Route 311 and the site access would provide easy turn movements

between the site access and NYS Route 311. The maximum grade of the site access drive is 7.96 percent.

With or without the anticipated development of the project site, there would be decreases in level of service on intersections along NYS Route 52 and NYS Route 311. The delays entering NYS Route 52 and NYS Route 311 would increase. With the installation of the road and intersection improvements identified in section 4.8.4, all studied signalized intersections should operate at or better than level of service D, the minimum level of service recommended by NYS DOT for signalized intersections.

With the noted improvements, all studied unsignalized intersection are anticipated to perform at level of service D or better with the exception of Longfellow Drive /NYS Route 311 intersection, which should perform at level of service E. A reduction in the delay at this intersection is expected as traffic diverts to an adjoining intersection (intersection of Terry Hill Road and NYS Route 311) which is to be signalized.

During construction the site will generate traffic associated with construction vehicles arriving at the beginning of the construction period, trucks carrying materials onto the site and vehicles carrying workers to the site daily. Construction truck traffic would access NYS Route 311 from Interstate 84 and travel 880 feet to the project site entrance on the state road except for local contractors. As a result, it is expected that heavy construction truck traffic would not travel local roads to reach the site thereby minimizing road damage and limiting impacts on the Towns roads.

The construction workers typically arrive and depart the site prior to standard peak hours of traffic as would the initial construction vehicles. Trucks bringing construction materials (concrete, steel, wood, doors, windows) and removing the excess materials would arrive and leave during the day. The number of trucks moving soil to or from the site would be minimal as the site cut and fill is proposed to balance. Primary access for construction traffic will be by NYS Route 311 via exit 18 of Interstate 84, With local contractors using NYS Route 52, NYS Route 22 NYS Route 164, and NYS Route 311.

Truck traffic after construction is expected to be almost entirely from Interstate 84 and would not affect local streets to any significant degree.

Network improvements would reduce delays to acceptable levels. The project is anticipated to capture trips passing by on Interstate 84 currently destined for other shopping opportunities. The project is also expected to capture commuter trips passing the site during the p.m. weekday commute and capture Saturday trips of local residents that might otherwise have left the Town, County, and/or state for other shopping opportunities. This will reduce the number of longer distance trips currently taken by local residents.

Changes in traffic volumes occurring under various conditions on NYS Route 52 and NYS Route 311 during the weekday p.m. and Saturday peak hour periods are shown in the table below. The "Site Generated Volume" shows the additional number of vehicle peak hour trips that are projected to occur when Patterson Crossing Retail Center is complete. Since most of the traffic is expected to travel to and from the interstate, increases in volume beyond Interstate 84 to the east in Patterson, and to the west in Kent, are relatively modest during peak hours as shown in Table 1-1.

Table 1-1 Changes in NYS Route 311 Traffic Volume Summary				
Intersection Roads and Condition	P.M. Weekday Peak Hour		Saturday Peak Hour	
	Eastbound	Westbound	Eastbound	Westbound
Town of Patterson NYS Route 311 east of I-84				
Existing Volume	489	344	282	260
Future Growth (Background and other projects)	+83	+70	+55	+53
Future No Build Volume (Existing plus Future Growth)	572	414	337	313
Site Generated Volume	+87	+79	+107	+119
Future Build Volume (No Build plus Site Generated)	659	493	444	432
Town of Kent NYS Route 311 west of site access				
Existing Volume	385	610	367	307
Future Growth (Background and other projects)	+129	+129	+82	+81
Future No Build Condition (Existing plus Future Growth)	514	739	449	388
Site Generated Volume	+162	+181	+246	+222
Future Build Volume (No Build plus Site Generated)	676	920	695	610

Mitigation Measures

The Applicant understands that traffic continues to be a planning issue in the area, recognizes that a project like the Patterson Crossing Retail Center has the potential to exacerbate traffic conditions, and that a remedy is warranted. As set forth in this document, most of the problems relating to poorly operating intersections in the vicinity of the proposed project exist under current conditions and are a result of regional and local growth. Identified mitigation is warranted under the Existing Condition, No Build Future Condition and with the Proposed Action.

The improvements identified in this DEIS will improve current conditions and allow the studied intersections to operate at acceptable levels, set by NYS DOT, with the proposed development. The project will facilitate road and intersection improvements that will improve existing conditions as well as improvements necessary to mitigate project specific impacts, helping to pay for both. The Applicant will be responsible for mitigating the project specific impacts to the greatest extent practicable and will work with the NYS DOT and others to fund

and construct other improvements that would help alleviate traffic issues under the current conditions.

Specifically, the Applicant is committed to participate in a significant way in the funding of intersection improvements in the area. In addition to the widening and signalization of Route 311 in front of the Applicant's property, the Applicant will work with the appropriate authorities to identify intersections where improvements are warranted as a result of the proposed action and will share in the cost of those improvements. The applicant also commits to working aggressively with the Town, the County and the DOT towards funding an improvement program for road and infrastructure updates in the project vicinity to ensure that the intersections in the study area operate at levels acceptable to the NYS DOT into the future.

1.3.9 Noise

Analysis of existing and future noise levels requires the identification of noise receptors, or locations which can be expected to be affected by the noise generated from the project. The primary noise "receptor" in the vicinity of the project is the existing residential neighborhood located along the western edge of the property. No man-made noise is currently generated on the Patterson Crossing Retail Center property, since the site is undeveloped. Existing noise levels in the vicinity of the Patterson Crossing Retail Center site reflect surrounding land uses, which are primarily residential, but also include Interstate 84 and US Route 311. The highest levels of noise currently measured on the site are generated by the vehicular traffic on Interstate 84, which runs along the eastern border of the property.

The DEIS Scoping Document specifically identified three receptor locations to be monitored for noise, *1) In the general area of northeast terminus of Greenwood Court, 2) At the property line abutting residential properties along Concord Road, and 3) at the property line abutting residential properties along Vernon Drive.* These three receptor locations were monitored for existing noise conditions.

Potential Impacts

Local daytime ambient noise levels would increase both on and off of the project site during construction. Construction activities and the operation of construction equipment are an expected and required consequence of any new residential, commercial or industrial project, and cannot be avoided. Thus, some noise impacts would be expected. It is important to note that noise impacts as a result of construction activities are an, intermittent, short term, temporary impact, dependent on the construction activity and the proximity to the local receptors, and would cease upon completion of the project construction.

It is anticipated that nearby residences on surrounding local roads, primarily Vernon Drive and Concord Road would experience these temporary elevated noise levels. Highest noise levels are expected at the beginning of construction as grading and tree clearing occur. Noise levels at the site property line are projected to range between 65 dBA and 90 dBA, depending on the actual location of construction equipment and the construction activity.

The level of impact from these construction noise sources depends upon the type and number of pieces of construction equipment being operated, the duration of the construction activities, as well as the receptors distance from the construction activity. Noise levels due to construction activities will vary widely, depending on the construction phase. Rock

processing will occur on the site during the initial phase of construction, when rough grading for the project is completed.

Rock removal is expected to be required around areas of rock outcrop in the south-central portion of the project site. Construction methods, other than blasting will be evaluated, such as cutting, ripping, or chipping. Any blasting required would be done in full conformance with applicable codes.

Typically, blasting results in very short term, loud noise impacts. As indicated above, blasting may result in short term (seconds), noise in the range 68 to 100 dBA within 500 feet of the blasting site.

Project operation related noise levels would be associated with a variety of on- and off-site factors, which would include normal vehicular traffic, truck deliveries for commercial merchandise, snow plowing and shoveling, garbage disposal activities, heating and air-conditioning equipment.

Operation of the retail facility would result in an increase in ambient noise levels in the immediate vicinity of the site. Operational noise would primarily result from vehicular traffic associated with the proposed commercial development. Based upon the measurements at a similar development, noise within the parking lots and adjacent to the access driveways will be in the range of 54 to 61 dBA. These noise levels range from 4.3 to 9.9 dBA above the current average ambient noise conditions (50.1 dBA) along the western property line of the Patterson Crossing Retail Center site.

It should be noted that noise levels are reduced (or attenuated) as noise travels over the ground surface from source to receptor. Therefore, a sustained noise level of 61 dBA measured at the future access road would be reduced to approximately 56.5 dBA over the 100 foot distance from the access road to properties on Concord Road (a 4.5 dBA reduction for a doubling of distance over soft ground). Residents along Vernon Drive will be a minimum of 500 feet from the proposed access drive and approximately 750 feet from the proposed wholesale warehouse store. Therefore, a sustained noise level of 61 dBA measured at the future access road will be reduced to 46 dBA over the 500 foot distance from the access road to properties on Vernon Drive. The projected noise levels described above are provided *without* any noise mitigation and only account for the lessening of noise over distance. Therefore, with mitigation we project that no significant, long term noise impact will result from the project.

Mitigation Measures

Several mitigation measures are proposed to reduce potential noise impacts to nearby residents. These mitigation measures include planning and operational measures, as well as the construction of physical noise barriers, in conjunction with the project development and construction.

Construction Noise Mitigation

Construction activity would be limited to hours between 7:00 AM and 6:00 PM, Monday through Saturday, exclusive of Sundays and national holidays. Typically, construction activities would be expected to cease prior to 6:00 PM. All construction vehicles and equipment would be expected to be well maintained and operated in an efficient manner.

Should the need arise for blasting, any blasting would be done in full conformance with applicable codes. Prior to blasting, a general blasting schedule would be developed and a blasting permit would be obtained from the Building Inspector covering the specific blasting operation. Blasting would be conducted between the hours of 8:00 AM and 5:00 PM Monday through Friday, and would *not* be conducted on Saturdays, Sundays or national holidays. It is anticipated that rock blasting would occur for short periods of time over a two month interval.

A temporary berm of soil or rock would be constructed around the rock processing equipment which will be placed as far as practical from residents on Concord Road and Vernon Drive to lessen the noise impacts associated with this operation.

Operational Noise Mitigation

The Patterson Crossing Retail Center project has been designed to minimize impacts to adjoining residential properties, including impacts from noise. The majority of buildings would be located towards the eastern edge of the property, adjoining Interstate 84. Loading docks and refuse collection areas for the retail buildings adjoining Interstate 84 would be located at the rear (east side) of the buildings. Noise associated with truck deliveries, unloading and garbage pickup would be mitigated to a large degree by the location of the buildings between the loading docks and the residential properties along the western property line.

To avoid impacts to neighboring residents, *no* outdoor loudspeaker systems would be used in any of the proposed stores including the proposed home improvement center and the wholesale warehouse store.

Physical Noise Mitigation

Noise walls or fences are proposed in two locations to reduce both operational noise and existing noise generated from Interstate 84. The row of retail buildings located between Interstate 84 and Concord Road/Vernon Drive residents would act as a noise barrier for the existing traffic noise from Interstate 84. Since there is a gap between the proposed wholesale warehouse store and the home improvement center, the applicant has proposed a landscaped sound barrier wall in this location, to provide a more continuous noise barrier along the Interstate. An eight foot high wooden fence is proposed along the western property line between the existing telecommunications facility access drive and Brentwood Road.

It is expected that with the installation of the noise barriers and fences, the placement of the buildings along Interstate 84, and operational controls (loading behind buildings), noise levels for residences adjoining the site would not change substantially from existing conditions.

1.3.10 Utilities

Wastewater Disposal

Potential Impacts

The Patterson Crossing Retail Center development would result in the generation of approximately 10,740 gallons per day of wastewater. This waste stream would need to be treated prior to release back into the environment. The largest contributing sources of

wastewater from the proposed uses would include the lavatories in each of the proposed retail stores and the water used in conjunction with food sales at the proposed wholesale warehouse store.

Mitigation Measures

A collection system of gravity fed concrete septic tanks would service each building. A proposed primary subsurface sewage treatment system (SSTS), with an area of approximately 8.7 acres, would be located in the southeast corner of the site. The proposed SSTS designed for the proposed action would meet all the requirements and standards set forth by the Putnam County Department of Health (PCDH) and the NYCDEP. Negative water quality impacts associated with the proposed method of wastewater treatment and disposal would not occur. All wastewater would be treated on-site and discharged subsurface. Water quality impacts including increased levels of phosphorous would not result from the proposed project. Participation in the NYCDEP Pilot Phosphorous Offset Program would not be required.

Electricity

Potential Impacts

The entire project is estimated to have a total electric load of 10,000 to 13,000 amps. This demand assumes all building heating and cooling systems operate on electricity.

Mitigation Measures

The design and plans would meet the requirements of the New York State Energy Code, as well as other applicable state and town building codes. All building systems, including electrical, mechanical, heating and insulation would be modern and energy-efficient. Similarly, the project would utilize energy efficient lighting fixtures and equipment to the greatest extent practicable, including the use of "Energy Star" rated merchandise.

Solid Waste Disposal

Potential Impacts

The project is expected to generate approximately 188.9 tons of solid waste material per year. Of this amount, approximately one third is expected to include recyclable materials.

Mitigation Measures

The solid wastes would be transported by private contractor to an existing disposal facility in Danbury, CT. No municipal trash collection services are proposed for this development.

Source reduction and recycling at the individual proposed commercial operations would help to minimize the wastes produced at the proposed development. There would be a cost incentive passed onto the individual stores to reduce the volume of solid wastes produced, encouraging the reuse of packaging materials and the separation of other recyclable materials, including plastic, glass, paper and cardboard from the waste stream.

Several measures are proposed to control litter and maintain the development in a clean condition. First, all dumpsters and refuse storage areas would be covered and screened to physically contain solid wastes within designated areas. Second, trash cans and recyclable only cans would be placed in convenient locations between the parking lot and the stores for use by patrons. These facilities would have covered lids that would help to reduce the chance of litter falling out. Finally, the development would retain personnel to routinely patrol and remove litter from the project site. In addition, a street sweeping/vacuum vehicle would be used on a weekly basis (more often as needed) to maintain trash-free project site roads and parking areas.

1.3.11 Community Services

Police Protection

Potential Impacts

Police protection for the project site would be provided by a combination of Putnam County Sheriff's Office, Town of Kent Police Department and the New York State Police. In addition, individual stores may employ their own security services. The Putnam County Sheriff's Department anticipates no significant impact to service as a result of the proposed project. Due to the increase in development county wide, there is an expectation for an increase in law enforcement resources in the forthcoming years. However, there is no specific plan to that effect.

The Town of Kent Police Department has made comment regarding the impacts of additional traffic on the local road network. (Details regarding future traffic conditions are discussed in Chapter 4.8, Transportation.) Chief Smith noted that impacts not related to traffic were difficult to determine at this time.

The concerns for the police departments would be those associated with traffic to and from the retail center, the use of the neighboring residential properties for access to the proposed development, and general security at the retail center.

Mitigation Measures

Road improvements including the addition of right and left turn lanes and a signal at the proposed entrance to the development would reduce the potential for development related traffic accidents.

The Applicant proposes an emergency access drive connecting to an existing gravel driveway that accesses the existing cellular communications tower site. This existing drive connects to Echo Road. The proposed 12-foot wide emergency drive would split from the access drive just south of the property line, and connect with the retail parking area near the proposed wholesale warehouse store. The emergency access drive would be gated at both ends to prevent unauthorized use. Routine police patrols would further ensure no unauthorized use of this emergency access occurs.

In addition to the police protection provided by the local forces, site security would be provided based on the needs of the retail establishments. Each store would have its own internal security system including burglar alarms, which would be directly connected to the Putnam County Sheriff's Office, and security cameras. Some of the stores may also choose

to hire their own security personnel. The stores would also have exterior lighting and security cameras to help deter criminal activity. Parking areas would be illuminated as an additional security measure. It is expected that the major stores at Patterson Crossing Retail Center would be served by private security guards, possibly with car patrols during nighttime hours.

An eight-foot high wood fence and two rows of evergreens would be installed along the western property line to protect neighboring residences from pedestrian traffic cutting through their yards as a means to access the project site, as well as a providing a visual buffer.

Fire Protection

Potential Impacts

The applicant met with the Patterson Fire Department and the Department has agreed to provide coverage to all of the Patterson Crossing Retail Center site, even though a small section is located within the Lake Carmel Fire District. Calls for fire/medical emergencies would be routed through the Putnam County Emergency Operations Center (EOC), where dispatchers would notify the Patterson Fire Department. The existing Mutual Aid agreement for all Fire Departments in Putnam County ensures that additional fire fighting and rescue resources are available if required.

The majority of the Patterson Crossing Retail Center project falls within the Town of Patterson, with only a small section in the Town of Kent. Fire protection for all buildings of the Patterson Crossing Retail Center development would be provided by the Town of Patterson Fire District, which includes the Patterson Fire Department and the Putnam Lake Fire Department. Response to vehicular accidents occurring at the project site would be determined based on the location of the accident. It is anticipated that accidents at the project entrance would trigger a response from the Lake Carmel Fire Department, as the entrance is in the Town of Kent, and accidents within the project site would be addressed by the Patterson Fire District.

According to the Patterson Fire Department, the proposed project would not result in a significant impact to the Department. The Patterson Fire Department has all necessary equipment and manpower to respond to calls from the project site.

Mitigation Measures

All buildings would be equipped with sprinkler systems. The proposed water supply and storage facility's 270,000 gallon storage tank(s) is over four times that requested by the Patterson Fire Department and would cover all fire protection water requirements for the entire project site.

The proposed access roads are designed to accommodate fire engines and truck traffic. In addition to access from Route 311, emergency vehicle access is proposed at the existing cellular tower access drive. Fire hydrants would be installed according to Town standards.

Health Care Facilities

Potential Impacts

The need for emergency care at the Patterson Crossing Retail Center project would be met by contacting the “911” call center, where a dispatcher would determine the type of emergency response required and send the nearest appropriate unit. The anticipated response times to the project site for first responders would be under five minutes.

Mitigation Measures

Emergency responders have established protocol for responding to emergency situations, including vehicular accidents. Police and fire personnel would respond to any vehicular accidents occurring on-site, with ambulance transport service responding as necessary. Larger individual retail stores would have standard operating procedures for employees responding to emergency situations within the stores, as well as emergency first aid kits.

1.3.12 Socioeconomics

There is limited existing retail development in the Towns of Patterson and Kent, as well as overall in Putnam County. The Hamlets of Lake Carmel and Patterson, located approximately one mile to the west and three miles to the east of the Patterson Crossing Retail Center project site respectively, have a very limited range of retail and service establishments. Further to the east lies the community of Putnam Lake. Existing businesses in all of these areas primarily serve the communities immediately surrounding them with neighborhood convenience retail and services. These businesses are limited in terms of their variety of goods and hours of operations. The proposed project would be expected to serve a much wider market area than do the businesses in the Putnam Lake, Lake Carmel and Patterson Hamlet areas. Overlap of products offered is expected with some of the retailers at the Highlands in Southeast, roughly 3.5 miles south of the proposed project.

Potential Impacts

Some overlap of goods and services provided by the proposed uses at Patterson Crossing Retail Center and the goods and services offered by establishments in the Putnam Lake, Lake Carmel and Patterson Hamlet areas would be expected. This would most likely occur in the home improvement sector. Both of the Hamlets contain several stores that specialize in construction material sales, garden supplies, and hardware; Putnam Lake has no similar retailer. However, these establishments are likely to provide more specialized products and assistance for area contractors that now patronize them. Competition with the Home Depot and Linens-n-Things and to a lesser extent Kohl’s at the Highlands has the potential to provide shoppers with a greater selection for the purpose of comparison shopping.

The coffee shop proposed at Patterson Crossing Retail Center would have little overlap with existing local restaurants but may compete with local convenience stores. However, the coffee shop is expected to serve those patronizing Patterson Crossing Retail Center and is likely to increase and enhance dining options in the area.

The proposed project is expected to have an overall positive economic effect on nearby commercial centers in the Lake Carmel and Patterson Hamlets. Highway oriented businesses such as gas stations and convenience stores are expected to see an increase in

business. Some patrons of the proposed retail center would be expected to make purchases at local shops and take advantage of area restaurants and services. In addition, the proposed project would provide residents an alternative to long-distance shopping for major purchases by providing nearby retail establishments. This is anticipated to increase sales taxes for Putnam County by capturing a significant proportion of the retail spending that is currently lost to retail centers in surrounding parts of the region.

The introduction of over 400,000 square feet of retail space may draw some shopping dollars away from the surrounding downtown areas. This would be more likely to occur among existing retailers that have a high degree of overlap with the goods and services to be provided at Patterson Crossing Retail Center. The increase in competition for a store like Dill's Best Home Center could potentially lead to secondary displacement should these establishments no longer remain viable from a competitive standpoint. Although unlikely, should secondary displacement occur, the vacated sites would most likely be reused by some other commercial enterprise allowed pursuant to zoning. This transition of businesses would not result in significant long term economic impacts to either the Lake Carmel or Route 22 commercial centers.

Mitigation Measures

There is no mitigation measure to offset the affects of retail competition. This has occurred historically in the region and will continue to occur in a capitalistic system of economics. Competition is not expected to cause land use blighting, and therefore avoidance measures are not needed.

In his 2006 Budget Message delivered in September of 2005, after noting the increases in the sales (1/2 percent) and property (10 percent) taxes and increases in costs exceeding \$14 million over the past 5 years, he noted that "the County has benefited from increased sales tax revenue generated by the opening of the Highlands Retail Shopping Center". Mr. Bondi proceeded to state the following: "Putnam County needs more retail shopping opportunities to generate the sales tax revenue necessary to fund our increasing mandated services and costs without raising taxes. Putnam County needs a second major retail shopping project, such as Patterson Crossing, to be approved quickly and begin generating sales tax dollars, otherwise our citizens will pay increasing sales and property taxes in future budgets. Without the additional sales tax dollars generated through increased shopping opportunities, the County will not be able to fund the debt service generated from an open space bond resolution without raising property taxes. There simply is not another source of revenue available to fund these purchases at this point in our history." The proposed project would generate an estimated \$6.2 to \$7.4 million in sales tax revenue annually to the County thereby offsetting future cost increases and reducing the need for future tax increases at the County level.

County Executive Bondi, in his 2006 State of the County Address, discusses the need to keep more of local resident's disposable income in the County and "solve the 'Putnam Paradox'". Currently, two thirds of the County's resident's disposal income, and its associated tax benefits, is spent outside of Putnam County. Mr. Bondi discussed a new partnering program that will "...help capture this 'Putnam Paradox' by providing an economic incentive to local municipalities to fast track smart commercial retail development" through providing a "...portion of the future sales tax revenue generated from new shopping opportunities back to the local municipalities for a project that they desire." This money could be used to assist in funding the development of "...a new library, town hall, or ball fields..."

In addition, the proposed project would support the County's "Shop Putnam" initiative. Through this initiative, residents are made aware of the goods and services available to them at businesses throughout the County.

Local residents would have a wider variety of retail offerings than currently exists in Putnam County, precluding the need to travel long distances for comparative shopping and selection of goods that are currently available only in surrounding counties. This will potentially reduce vehicle miles traveled (VMT), resulting in lower vehicular emissions at the regional level, and a significant gas and time savings that would enhance quality of life for these residents.

The project would not generate significant costs to either the Town of Patterson or the Town of Kent and would be expected to generate significant tax revenues that would benefit both municipalities, the County and other taxing jurisdictions.

1.3.13 Cultural Resources

Historic and Archaeological Resources

Potential Impacts and Mitigation Measures

No historic resources are located on the project site. Therefore, the proposed project would not result in any significant impacts to historic resources. A Phase 1A and B Archeological Assessment was conducted for the project site. No resources of cultural import were found and therefore no mitigation is needed.

Visual Resources

Potential Impacts

Construction of the project as proposed will remove some 68 acres of existing woods on the middle portions of the site and replace it with buildings and pavement, thus creating a change to the visual character of the site. The four buildings are proposed to be situated on the east side of the property along the Interstate 84 frontage such that they will be visible from the highway. Parking and most circulation will occur west of the buildings and out of view from points east. Portions of the parking areas and the buildings beyond may be visible from residential properties immediately to the west and from public roads in the vicinity including Concord Road and the easternmost ends of Echo Road and several other roads. The two central buildings will have truck dock facilities located on the rear of the buildings facing the highway. Additionally, as previously stated, potential views of the northern two buildings and associated parking and circulation are possible over a distance of about 2,000 feet from Longfellow Drive to the northwest. A short portion of Route 311 will have views to the site as well. The highest point of the site in the southern end of the property is proposed to remain wooded, and an existing telecommunications facility in this area will not change.

The proposed development plan includes landscaping, signage and lighting for aesthetics, information and safety purposes. While specific design plans have not yet been developed, the conceptual designs for this development include street trees and lighting along all internal roads and in the parking areas.

An entrance sign is proposed at the vehicular access point to the project on Route 311 in the Town of Kent. A project sign visible to motorists on Interstate 84 would be located on the eastern side of the property in the Town of Patterson and facing the highway.

Site lighting is proposed to illuminate the site at night to provide pedestrian and vehicle safety and security throughout the developed portion of the project site and will be designed to comply with applicable Town standards. A regular pattern of pole-mounted lights will illuminate the entrance area and internal roadways and parking lots. A pole height and luminaire style has been specified that will provide sufficient ground illumination while minimizing the light spillage to non-pavement areas and impact to neighboring residences and local motorists.

Mitigation Measures

The proposed project plan for the site will result in various changes to views of the landscape from identified nearby locations. No views from significant aesthetic resources have been identified that will be adversely affected by this project. The development plan optimizes the location of the subject property adjacent to an interstate transportation corridor for visibility and for access. The design of the structures, as well as their physical siting, project access, and utilization of the site as they affect visibility have been considered in the project design.

Design of the project signs and lighting will take into consideration the potential visibility from off-site locations. This will be done in order to minimize the visual impact to residential properties. The height, size and location of signs will be designed for optimal visibility from Interstate 84 and at the project entrance road. Lighting height, size, intensity, and glare has been considered in the lighting design for the project to minimize the visual impact to the surrounding area. Hours of lighting will focus on the hours of nighttime operation of the stores, with minimal security lighting during non-operating hours.

Through the careful selection of building colors and materials that will not create stark visibility of the project from off-site, visual impact of the proposed buildings will be minimized. Additionally, the project landscaping is designed to be visually attractive, functional, and low maintenance to create a long lasting complement to the area. Where the project is located adjacent to residential properties, a landscaped buffer strip is proposed that will include evergreen tree planting and a screen fence to minimize adverse views from these uses.

1.3.14 Cumulative Impacts

Ecology. From a cumulative perspective, the disturbance and loss of wildlife habitat on the project site contributes to overall losses of wildlife habitat in the region resulting from human activity and development. The proposed development of the project site would result in a net reduction of open space available as wildlife habitat. The project site does not currently function as a significant wildlife corridor to off-site habitat areas, due to the surrounding roadways and development therefore, the project would not fragment an existing wildlife corridor between off-site habitat areas.

Traffic. The traffic analysis provided in Chapter 4.8 evaluates a future condition that includes traffic from annual background growth and other approved or pending developments in Patterson, Kent, Carmel and Southeast that are expected to be built by the year Patterson Crossing Retail Center is operational. The cumulative impacts on traffic from the proposed project along with existing and anticipated future traffic on all of the study intersections and

roadways is presented in Chapter 4.8 as the future “Build Condition”. With the road improvement and mitigation measures proposed, the traffic resulting from the project in conjunction with anticipated growth would not have a significant adverse impact on the operation of the study intersections and roadways.

Energy Consumption. The proposed retail development would increase demand for electricity to meet its energy needs. As new construction, the project must meet current applicable building code standards and utilize modern equipment, which would help to minimize the increased energy demands. Existing infrastructure is capable of handling the increased load required to operate the retail center.

In addition, gasoline and/or diesel fuel would be consumed during the construction activities and by shoppers, employees, and delivery vehicles when the project is operational. The creation of a local shopping destination in eastern Putnam County would have the benefit of reducing gasoline consumption for many residents that currently travel to more distant retail centers. The overall energy demands created by the project would contribute to the cumulative energy demands generated within the eastern Putnam County, however, significant energy-related impacts are not anticipated.

Solid Wastes. As described in Chapter 4-10, the Patterson Crossing Retail Center development is projected to generate approximately 189 tons per year of solid wastes. Of this amount, approximately one third is expected to include recyclable materials. The solid waste generated by the project would add to the overall waste stream produced within eastern Putnam County. However, as this waste would be privately carted to an existing facility in Danbury, CT, the project is not anticipated to contribute to any significant cumulative impacts relating to solid waste collection or disposal.

Police, Fire, and EMS Protection. As described in Chapter 4-11, the Patterson Crossing Retail Center development is expected to have minimal increases on demand for local police, fire and EMS service providers. These service providers also face increasing demands resulting from other development projects in eastern Putnam County, which can strain their resources (i.e. personnel, equipment, etc.). The property tax revenues generated by the Patterson Crossing Retail Center development could be expected to help offset any added strain put on these service providers as a result of the project, and contribute towards their continued improvements.

Air Quality. The air quality analysis provided in Chapter 4.15 evaluates a future condition that includes the Patterson Crossing Retail Center emissions as well as the vehicular emissions of “Build-Condition” traffic taking into consideration annual background growth and other approved or pending developments in eastern Putnam County. As described in Chapter 4.15, cumulative significant air quality impacts are not anticipated to result in the future build condition.

1.3.15 Air Quality

Potential Impacts

Air quality impacts from projected vehicular traffic associated with the project have been analyzed for build year 2010. The screening analysis performed at various intersections in the vicinity of the project revealed that traffic generated by the proposed project was insufficient to require a refined air analysis of any intersection. However, one intersection

(Route 311 and Interstate 84 East Bound Ramps) was selected as a worse-case scenario for a refined analysis to quantify the actual impacts expected.

The impact analysis results indicate that carbon monoxide (CO) levels for “Build-Conditions” would be within established air quality standards for both 1-hour and 8-hour averaging periods. The analysis shows that traffic generated air quality pollutant levels are expected to increase from existing conditions to “No Build” and “Build-Conditions” due to the natural increase in traffic with or without the site being developed. However, levels at the worst-case receptor would only be at 50 percent of the 8-hour standard.

Construction related impacts would vary based on the proximity of the activities to the adjacent properties and the type and amount of construction equipment used for each project phase. Construction activities would have a potential impact on the local air quality through generation of fugitive or airborne dust. Fugitive dust is generated during ground clearing and excavation activities, and generally when soils are exposed during dry periods. Residences, on Concord Road, closest to the proposed areas of grading and would have the greatest potential to be impacted by dust. Construction-related air emissions would result from the use of diesel fuel as a source of energy for construction vehicles and equipment. Pollution from the construction vehicle engines comes from the combustion process in the form of exhaust. If the proposed mitigative measures are properly applied, adverse air quality impacts should be minimized; therefore, a quantitative impact analysis related to construction activities was not performed.

The operation of the facilities proposed for the project would result in minor increases in the overall atmospheric air pollutant burden. Heating and air conditioning systems may release small amounts of air pollutants that when compared to the regional burden are insignificant and should not cause an exacerbation of applicable standards or guidelines. The net difference in total air pollution burden is considered to be minimal for this proposed new construction project. The relative air pollution burden added by the construction and operation of the project is insignificant when compared to the current and expected conditions in 2010.

Mitigation Measures

The air quality analysis of the proposed project focused on CO impacts from traffic generated by the project, which is the critical impact from an air quality perspective. The analyses show that the existing conditions for the year 2004 along with the “No Build” and “Build-Conditions” for the year 2010 are not expected to cause a violation of the current regulatory standards. Therefore, no mitigation measures during facility operations would be required beyond those anticipated in the traffic analysis. The traffic analysis was performed at selected intersections and contained a variety of mitigation measures consisting of intersection roadway configuration modifications and signal changes. The air quality analysis included these proposed changes, and therefore, the project as designed would contain adequate safeguards (keeping truck idling times limited to 5 minutes or less) to maintain air quality standards. During construction, standard mitigation measures such as dust control and others should be adequate to maintain air quality levels within applicable standards. These methods include:

- Minimizing the area of grading at any one time and stabilizing exposed areas with mulch and seed as soon as practicable;

- Minimizing vehicle movement over areas of exposed soil, and covering all trucks transporting soil; and
- Spraying unpaved areas subject to traffic with water to reduce dust generation.

The potential for emissions from construction vehicle exhaust can be reduced by the proper maintenance of engines and air pollution controls.

1.4 Alternatives Considered

The New York State Environmental Quality Review Act (SEQRA) calls for a description and evaluation of the range of reasonable alternatives to the action which are feasible, considering the objectives and capabilities of the project sponsor. Alternatives for the Patterson Crossing Retail Center that have been analyzed include a “No-Build Alternative”, an “Alternative Scale or Magnitude” development plan, and an “Alternative Use” development plan,

No-Build Alternative

The No-Build Alternative represents a scenario in which the project site would remain undeveloped. Considering the objectives of the applicant, the allowable uses permitted under local zoning for the site, the relative scarcity of developable land that can be readily accessed by major roadways, and the increasing demand for such land in the market place, this alternative is unlikely. In order for the site to remain vacant, either a government agency or a conservation organization would need to purchase the property for permanent open space protection and compensate the property owner accordingly. Such use of the site would not be consistent with the designated zoning uses at the property, would not support the Comprehensive Plans for either the Town or Patterson or the Town of Kent, would not support the 2003 draft master plan for Putnam County, known as “Vision 2010”, since it would not provide residents the opportunities to live and work locally and finally, this alternative would be contradictory to the County’s “Shop Putnam Today” program, which was designed to help stem the drain of retail dollars to neighboring counties. Under the No-Build Alternative, significant tax revenues would not be realized by the local, county and state governments.

Although inconsistent with the objectives of the local governments, the No-Build Alternative would eliminate some of the impacts identified in this report, whether adverse or beneficial.

Should the proposed action not occur, none of the direct impacts of construction identified in this report would take place.

Alternative Scale or Magnitude

The Scope requests that alternative scale and magnitude alternatives be examined. These alternatives are an Alternative Site Plan Layout which includes altering the building orientation on the site and minimizing the parking area with a multi-story parking facility.

An alternate building orientation for a retail project was considered that concentrated the proposed buildings on the western side of the property and the parking on the eastern side. This alternative provides approximately 426,000 square feet of building space, a 28,600 square foot garden center and 2,138 parking spaces. The mixture of buildings and uses in this layout include a restaurant, office supply store, supermarket, and a home improvement

store and garden center among others. Impacts associated with this alternative would be similar to or greater than those of the proposed action.

An alternative which incorporated a multistory parking facility for approximately 1,000 vehicles was considered. Typical costs for construction of such above ground parking facilities ranges from \$15,000 to \$23,000 per parking space. However, construction costs for below ground parking facilities are greater and typically cost \$18,000 or more per parking space due to the additional construction requirements and infrastructure, such as ventilation systems. For areas where rock removal is required, construction costs may exceed \$30,000 per parking space. Thus, a 1,000 space parking garage would cost between \$15 and \$30. To pay for this, the development would require an increase in leasable floor area. Although a parking garage would reduce the area of impervious surface by paved parking, the necessary additional retail buildings would offset this, resulting in little to no overall reduction in impervious surfaces. Without this additional floor space, the center could not be leased at reasonable rates and would therefore fail. The Applicant does not believe that the cost of this additional construction is justified, since the environmental impacts are the same or greater (more construction related to the garage and more traffic associated with the additional retail floor space) required. Community impacts would also increase with the construction of a parking garage, since neighboring residents would incur additional visual impacts as a result of multilevel parking garage and noise and air pollution related to its construction.

Alternate Project Size

Under this alternative the northernmost building pad (consisting of three retail stores and a coffee shop) and associated parking area would be eliminated. This alternative has a total of 353,100 square feet of building area, a decrease by 52,750 square feet from the 405,850 square feet proposed with the Patterson Crossing Retail Center plan. This site plan requires 1,766 parking spaces and would provide a total of 1,773 parking spaces. This alternative simplifies the internal road network by eliminating the turning lanes proposed to accommodate the vehicular movements into and out of the northernmost building pad that is part of the proposed development.

It should be noted that this alternative, by reducing the total area of retail development at the project site, does not utilize the site to its full potential, does not provide retail synergy between tenants, nor does it provide adequate gross square footage for ancillary retail. This scenario would likely result in the development of other sites in the area to provide supporting retail space and food services for the existing market demand.

Impacts of this alternative are similar or less than those of the proposed action. In addition, this alternative would result in a decreased tax revenue generation for the taxing districts. The cumulative impacts would be less than that of the proposed development, until such time as other retail sites are developed.

The reduction in retail floor space renders this alternative unfeasible for the applicant.

Alternative Use

An alternative consistent with site zoning was considered. This alternative evaluates the development of the project parcel as light industrial. The site plan prepared for this alternative shows four buildings of warehouse space, totaling 740,000 square feet. However,

due to lower parking requirements for warehousing, only 802 parking spaces are proposed for this alternative.

Impacts would be similar to, greater than or less (depending on the impact category) than those related to the proposed action. As with the Alternate Project Size Alternative, tax revenues collected by the local, county and state governments would be less than those projected for the proposed action.

1.5 Matters to be Decided

At this time there are no matters to be decided outside of those addressed previously in this Section.

Table 1-2 Comparison of Alternatives					
	Proposed Development	No Action	Alternate Building Layout	Alternate Project Size	Alternative Use
Land Use	Retail	Vacant	Retail	Retail	Light Industrial
Intensity of Use	405,850 sf	Vacant	426,000 sf	353,100 sf	740,000 sf
Number of Parking Spaces/Square Footage	1,886/376,800	None	2,138/427,600	1,773/354,600	802/160,400
Geology, Soils, Topography	119,000 CY of Rock Excavation, 68.4 Acres of Grading, 566,500 CY of cut, 12.3 Acres of Disturbance to 15%+ Slopes	None	Increased Impact due to greater area of impervious surface	Reduced Impact due to less area of impervious surface	Reduced Impact due to less area of impervious surface
Groundwater ¹	10,740 gallons per day (gpd) and 32.26 Acres of Impervious Area	No Disturbance to Soils or Rock Excavation Required	No Disturbance to Soils or Rock Excavation Required	Increased Impact due to greater area of impervious surface	Reduced Impact due to less area of impervious surface
Surface Water, Wetlands, Streams and Waterbodies ²	Impacts Related to 32.26 Acres of Impervious Area Addressed by SWPPP, BMPs and LID	No Water Use or Impervious Surfaces Required	Increased Impact: 11,457 gpd and 35.4 Acres of Impervious Area	Reduced Impact: 8,799 gpd and 30.9 Acres of Impervious Area	Reduced Impact: 4,884 gpd and 29.6 Acres of Impervious Area.
		No Impact	Similar Impact	Similar Impact	Similar Impact

¹ Water usage for other retail stores and light industrial warehouse uses in the alternatives are based on information provided by probable tenants and/or on the NYSDEC "Design Standards for Wastewater Treatment Works". Water usage for supermarkets and restaurants are based on information provided by the project engineer, Insite Engineering, Surveying & Landscape Architecture, P.C. Refer to Tables 4.4-1, 4.4-2 and 4.4-3 herein for details regarding hydraulic loading rates.

² Impervious Area provided by Insite Engineering, Surveying & Landscape Architecture, P.C., 2006

Table 1-2 (Continued)
Comparison of Alternatives

	Proposed Development	No Action	Alternate Building Layout	Alternate Project Size	Alternate Use
Vegetation and Wildlife	68.4 Acres of Site Disturbance, 58 Acres of Vegetative Cover	No Impact	Increased Impact due to greater area of impervious surface and area to be cleared	Reduced Impact due to less impervious surface and smaller area to be cleared	Reduced Impact due to less impervious surface and smaller area to be cleared
Traffic and Transportation ³	1,571 external trips weekday and 2,152 at Saturday peak hours	No Impact	Increased Impact: 1,629 trips weekday and 2,220 trips Saturday peak hours	Reduced Impact: 1,440 trips weekday and 1,965 trips Saturday peak hours	Reduced Impact: 345 trips and 317 trips for AM and PM peak hours respectively
Noise	Variable Increases Based on Phase of Construction and Operation	No Impact: No construction, operation or traffic-generated noise	Increased Impact: Larger retail area would result in more construction, operation and traffic-generated noise	Reduced Impact: Smaller retail area would result in less construction, operation and traffic-generated noise	Similar Impact: Larger building area results in increased construction noise - use results in increased truck and reduced auto noise.
Community Facilities and Utilities	Services In-place, Wastewater Processed On-site	No Impact	Similar Impact: Services In-place, Wastewater Processed On-site	Similar Impact: Services In-place, Wastewater Processed On-site	Similar Impact: Services In-place, Wastewater Processed On-site
Socioeconomic ⁴	516 Full-time Jobs Created During Operation, Significant Tax Benefits	No Job Creation, No Tax Benefit	Similar Tax Benefits: 503 Full-time Jobs Created During Operation	Less Tax Benefits, 457 Full-time Jobs Created During Operation	Less Tax Benefits, 407 Full-time Jobs Created During Operation

³ Traffic estimates for alternatives provided by Tim Miller Associates, Inc., 2006.

⁴ Number of employees is based on information provided by the Energy Information Administration website (www.eia.doe.gov).

Table 1-2 (Continued)
Comparison of Alternatives

	Proposed Development	No Action	Alternate Building Layout	Alternate Project Size	Alternate Use
Historic Resources	No Historic or Archeological Resource Impact	No Impact	No Historic or Archeological Resource Impact	No Historic or Archeological Resource Impact	No Historic or Archeological Resource Impact
Visual Resources	Limited Visual Impact	No Impact	Increased Impact: Larger building and parking area	Reduce Impact: Smaller building and parking area, fewer buildings, less road area	Increased Impact: Larger building area
Cumulative Impacts	Impacts Would Occur due to impervious area, traffic, noise, air and construction affects	No Impact	Increased Impacts due to larger size of project	Reduced Impacts due to smaller size of project	Overall, Reduced Impacts
Air Quality	Construction and Traffic Related Impacts, No Operational Impacts	No Impact	Increased Impact: Larger area of construction and increased traffic, No operational impacts	Reduced Impact: Smaller area of construction and decreased traffic, No operational impacts	Similar Overall Impact: Larger building area results in increased construction impacts, increased truck traffic, reduced auto traffic

Source: Tim Miller Associates, Inc.

2.0 PROJECT DESCRIPTION

2.1 Location

2.1.1 Background and History

Patterson Crossing Realty, LLC ("the Applicant") proposes to construct a 405,850 square-foot retail center and a 28,200 square-foot garden center, referred to as Patterson Crossing Retail Center ("the Proposed Action") on approximately 90.5 acres of predominantly undeveloped land that straddles the border of the Town of Kent and the Town of Patterson in Putnam County, New York (see Figure 2-1, Regional and Local Settings). A schematic layout of the project is presented later in this document as Figure 2-6 and in the larger scale drawings at the rear of this DEIS. The project site's location at the crossroads of Interstate 84 and NYS Route 311 make it ideally suited for major retail uses that will draw patrons from other parts of the county and region.

The property consists of 16.4 acres in the Town of Kent that are commercially zoned, and 74.1 acres in the Town of Patterson that are zoned Industrial (57.9 acres) and R-4 residential (16.2 acres). No new construction is proposed in the residential zone which is located in the southern portion of the site. The project site is located in the New York City regulated watershed and consists predominately of second growth woodlands that were former pasture land. Single family residences in the Town of Kent and the Town of Patterson abut the site to the west. The site currently contains a cellular telecommunications facility near its southern end that will remain in operation. This facility is accessed from a gated entry drive located off Echo Road to the west of the site.

Most of the new construction associated with the Patterson Crossing project is proposed within the Industrial District of the Town of Patterson, while a small portion of the proposed retail uses including the site access would be located in the Commercial District in the Town of Kent. Retail is a permitted principal use within the Kent Commercial District. The retail uses proposed within the Industrial District of the Town of Patterson are permitted uses subject to special use permit approval. The proposed retail uses at Patterson Crossing would be housed in four separate buildings within the eastern and central portion of the site. The remainder of the site would support parking areas, stormwater management facilities and associated infrastructure. Over one third of the site would be retained as open space.

This Draft Environmental Impact Statement (DEIS) has been prepared in accordance with Section 8-0101, et. seq. of the New York State Environmental Conservation Law and the regulations promulgated by the New York State Department of Environmental Conservation (NYS DEC) thereunder, which appear at 6 NYCRR, Part 617, NY State Environmental Quality Review Act ("SEQRA"). The DEIS scope was established by a scoping outline developed by the Town of Patterson Planning Board, acting as lead agency, in cooperation with all other involved agencies and interested parties. The Planning Board held a public scoping meeting on January 31, 2005 and maintained an open public comment period for an additional 30 days. The accepted scope outlining the information to be covered in the DEIS was adopted on April 14, 2005 and is provided in Appendix A of this document. Also provided in Appendix A is a copy of the Environmental Assessment Form (EAF) prepared for this project and used by the lead agency to determine the significance of the proposed action. This DEIS provides updated information that was not available during preparation of the EAF.

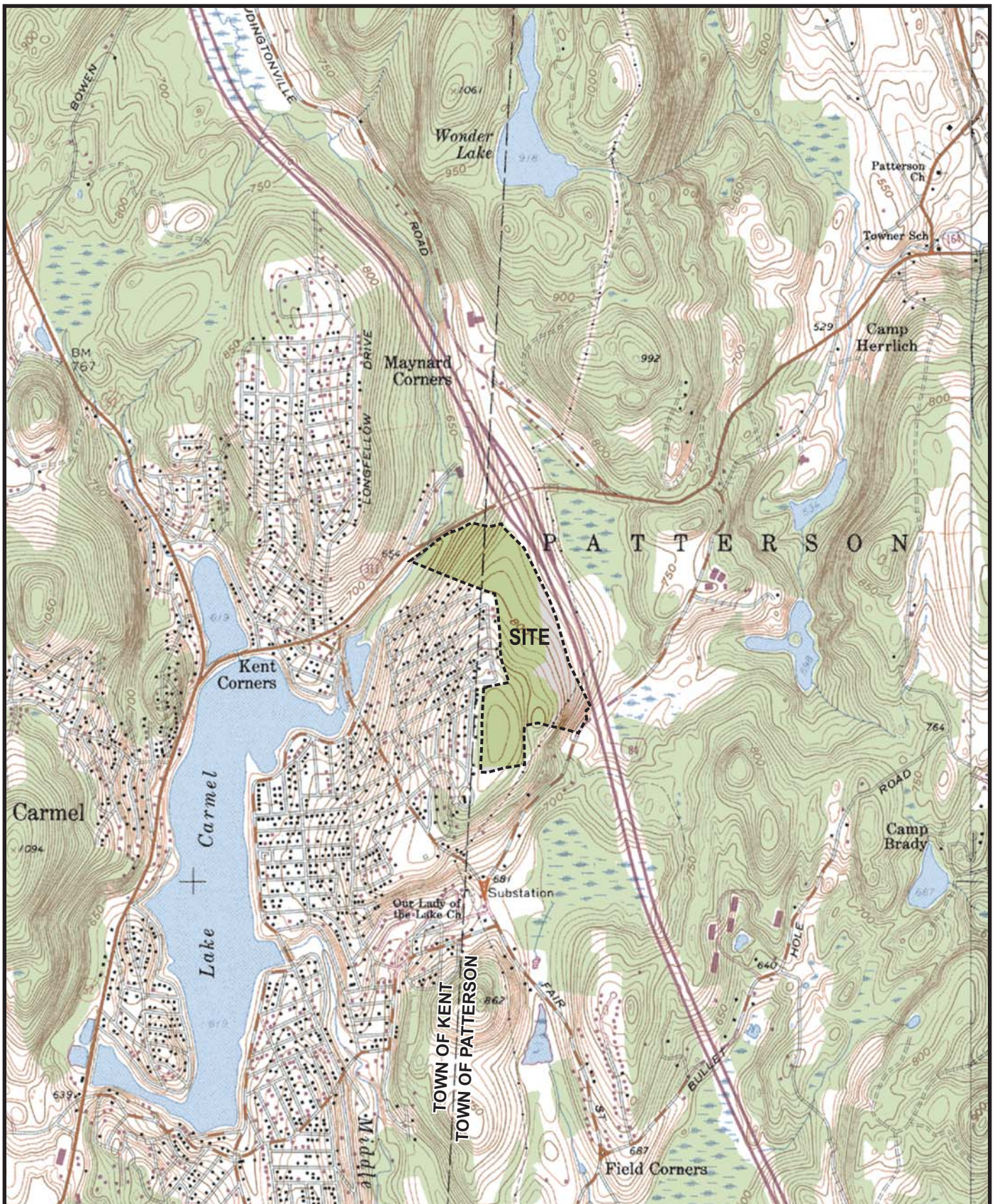
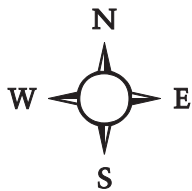


Figure 2-1: Regional and Local Setting
 Patterson Crossing Retail Center
 Town of Patterson and Town of Kent,
 Putnam County, New York

Source: USGS 7.5-minute Topographic Map, Lake Carmel Quad
 Scale: 1 inch = 2,000 feet



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The Applicant has developed residential and commercial properties throughout Putnam County over the past 16 years and has been in contract to purchase the subject property for the past four years. The portion of the site in the Town of Patterson was rezoned in 2003 as a result of recommendations found in the Town of Patterson Comprehensive Plan. While neighboring residential uses in the Lake Carmel Hamlet of the Town of Kent are generally located on quarter-acre size lots, the southwestern portion of the site was rezoned to the R-4 Residential District, requiring four-acre minimum lot sizes for residential development, with stricter bulk and setback requirements than had existed previously.

To meet the growing demand for retail in Putnam County, the Applicant proposes a commercial development which would include a wholesale warehouse store, a home improvement center, a home goods store, an electronics store, and several other smaller commercial uses, including a coffee shop. By providing large scale stores that would offer a wider range of goods and products than are currently available in the County, the proposed project would respond to the need for increased retail services both locally and in Putnam County as a whole that have resulted from the primary focus of past planning efforts on residential needs. The proposed project would enhance the convenience of comparative shopping for county residents and would make certain goods available locally, including electronics and some durable goods, that are more readily found in other parts of the region.

The proposed plan for the Patterson Crossing retail center evolved over the last three years and resulted from extensive meetings with local leaders, neighboring residents, and environmental groups. Early outreach included presentations to the Town Boards of the Town of Kent and the Town of Patterson in April 2004.

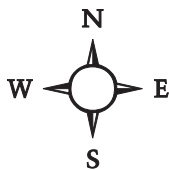
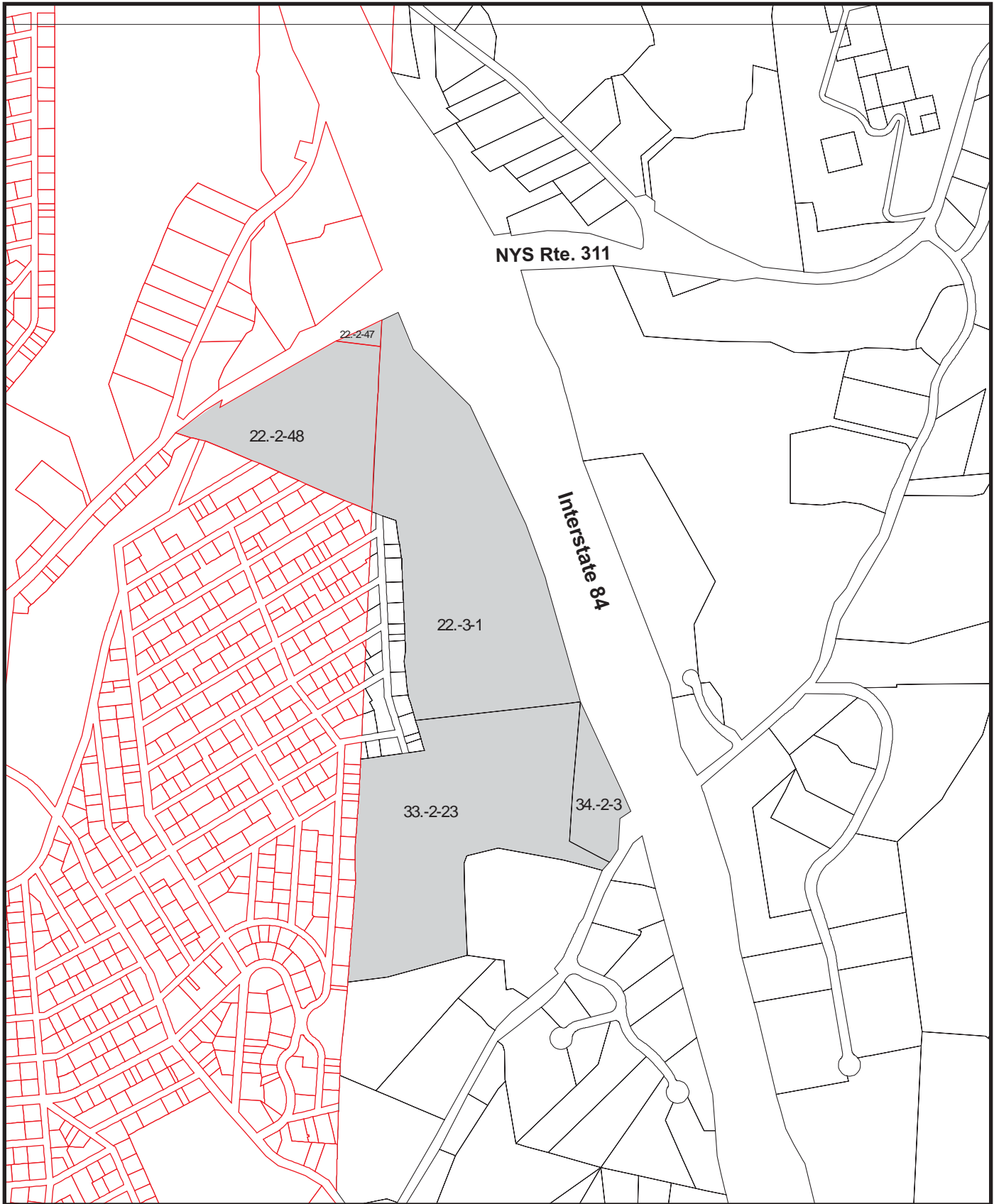
The proposed project has been designed to avoid impacts to natural features and to respect the environment through the incorporation of measures such as recycling captured rainwater for irrigation. The proposed action also includes implementation of a SWPPP and a state-of-the-art wastewater treatment system, and the incorporation of human scale lighting and extensive landscaping to minimize the environmental and visual impacts of the project. The proposed plan would also maintain over one third of the project site as undeveloped open space. In addition, as part of the proposed project, a noise barrier would be constructed to reduce the noise from Interstate 84 to neighboring residential areas. Other project features include an extensive stormwater management program and the use of pervious pavers and depressed landscaped islands to reduce stormwater runoff from the site.

2.1.2 Geographic Boundaries of the Project Site

The project would be located to the west of Interstate 84, southwest of its intersection with NYS Route 311. Regional and local settings are shown in Figure 2-1.

The project site consists of five tax parcels, as shown in Figure 2-2, Existing Tax Lots. The three lots located in the Town of Patterson (22-3-1, 33-2-23, 24-2-3) have a combined area of approximately 74.1 acres. The remaining two tax lots in the Town of Kent (22-2-47 and 22-2-48) have a combined area of 16.4 acres.

NYS Route 311, as well as Fair Street to the south, are east-west roadways that cross Interstate 84. Other local roads near the site include Concord Road and Vernon Drive, which are residential streets running parallel to and west of the project site. Narrow east-west



- Subject Property
- Parcels in Town of Kent
- Parcels in Town of Patterson

800 0 800 Feet

Figure 2-2: Existing Tax Lots
 Patterson Crossing Retail Center
 Town of Patterson and Town of Kent,
 Putnam County, New York
 Source: Putnam County GIS Department, 11/16/04

streets in the neighborhood that terminate near the western property boundary of the project site, include Brentwood Road, Greenridge Road, Lakeside Road and Como Road. Residential streets terminating at Concord Road or Vernon Drive include Ridgeway Road, Echo Road, Huntington Road, Woodstock Road, Walden Road, and Beechmont Road. Proposed site access is located approximately 880 feet west of Interstate 84 Exit 18. The project site's proximity to Interstate 84 would provide easy access for construction and delivery vehicles and store patrons while directing site generated traffic away from the residential streets to the west.

2.1.3 Objectives of the Project Sponsor

The Applicant intends to create a financially viable project that is compatible with the needs of the community and conforms to applicable zoning and land use regulations, including long-range plans for the area. The majority of the site is designated for industrial and commercial use. Its location at the crossroads of Interstate 84 and NYS Route 311, which is a major east-west thoroughfare in Putnam County, make the site appropriate for the size and type of development proposed. As indicated through the site's current zoning and in local plans, the project is consistent with plans and policies of local municipalities.

Putnam County has experienced substantial residential growth in the past 20 years. This project would address the increasing public demand for commercial facilities by creating a regional retail center that would draw patrons from an approximately 20-plus-mile market area including surrounding towns and counties. The projected market area would be roughly bounded by northern Westchester County to the south, southern Dutchess County to the north, the Hudson River to the west and Fairfield County, Connecticut to the east.

Another important objective of the project is the integration of its proposed retail uses within an attractive setting that includes a substantial amount of open space. The proposed project design includes extensive landscaped areas and would limit the amount of impervious surfaces and site disturbance. As part of the site layout, a 25 to 50 foot landscaped Reservation Area is proposed along the neighboring properties to the west between the existing telecommunications facility access drive on the south and Brentwood Road on the north. This reservation area would contain a privacy fence 25 to 50 feet inside the Patterson Crossing site separating the residential properties from the site. The Reservation Area would be accessible to the neighboring property owners for passive use with mechanisms in place permitting such possible use. In addition, approximately one third of the site would be maintained as open space following completion of the project.

The Applicant seeks to utilize environmentally responsible design and maintenance practices to the maximum extent practicable to produce a development that limits impacts on area residents from construction and operation of the proposed facility. Proposed Best Management Practices (BMPs) include stormwater management techniques that will comply with the stringent requirements of the New York City Department of Environmental Protection (NYCDEP), and maintenance techniques that reflect the latest concepts related to controlling pollutants and treating runoff from paved surfaces and building areas such as use of phosphorus free fertilizers and limited use of road salt.

Measures promoted by the US Environmental Protection Agency referred to as Low Impact Development (LID) will be employed, including recycling rain water captured on the roofs of the two largest buildings for use in watering plants sold at the proposed garden center and plantings in the landscaped islands, and for general irrigation purposes, and use of pervious pavers in certain parking areas to reduce stormwater runoff.

In order to improve the quality of runoff that is ultimately conveyed to Lake Carmel, the project includes improvements to an existing eroded drainage way that carries off-site runoff from the residential neighborhood to the west through the northwestern corner of the site. Finally, the design and layout of the project has been prepared in a manner that limits effects of the proposed project on adjacent neighboring residences through use of landscaped buffers, a 25 to 50 foot Reservation Area and appropriate fencing. Truck loading areas and an associated truck access route are located to the east of the proposed stores rather than on the sides of these structures that face residential properties to the west, whenever possible.

Several mitigation measures are proposed to reduce potential noise impacts to nearby residents. These mitigation measures include planning and operational measures, as well as the construction of a physical noise barrier. A sound barrier wall is proposed to run parallel to the site's eastern property line between the wholesale warehouse store and the home improvement center. In addition, a naturally colored modular concrete block retaining wall is proposed along the eastern property line which will contribute to the reduction of Interstate 84 traffic generated noise for residential receptors on Concord Road/Vernon Drive. The proposed buildings would also function as barriers limiting the highway noise that reaches the residential areas to the west. Finally, a fence, which is expected to provide limited noise reduction for residents on Concord Road, is proposed along a portion of the western property line between the existing communications facility access drive and Brentwood Road. The areas surrounding all proposed walls will be landscaped.

A truck route is planned for the east side of the proposed buildings to accommodate deliveries. Placing truck access generally on the eastern side of the proposed development would also help to reduce noise from the project.

The Applicant has carefully considered "Quality of Life" issues throughout the conception and planning of the Proposed Action. Perceived impacts to local communities and neighbors' "Quality of Life" resulting from changes in lighting, noise, air quality, water quality and traffic associated with this project have been limited wherever possible. In most cases, changes in these parameters fall well within federal, state and/or local limits. Detailed discussions of each issue can be found in the specific chapters within this DEIS.

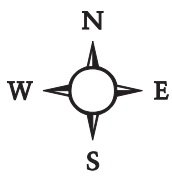
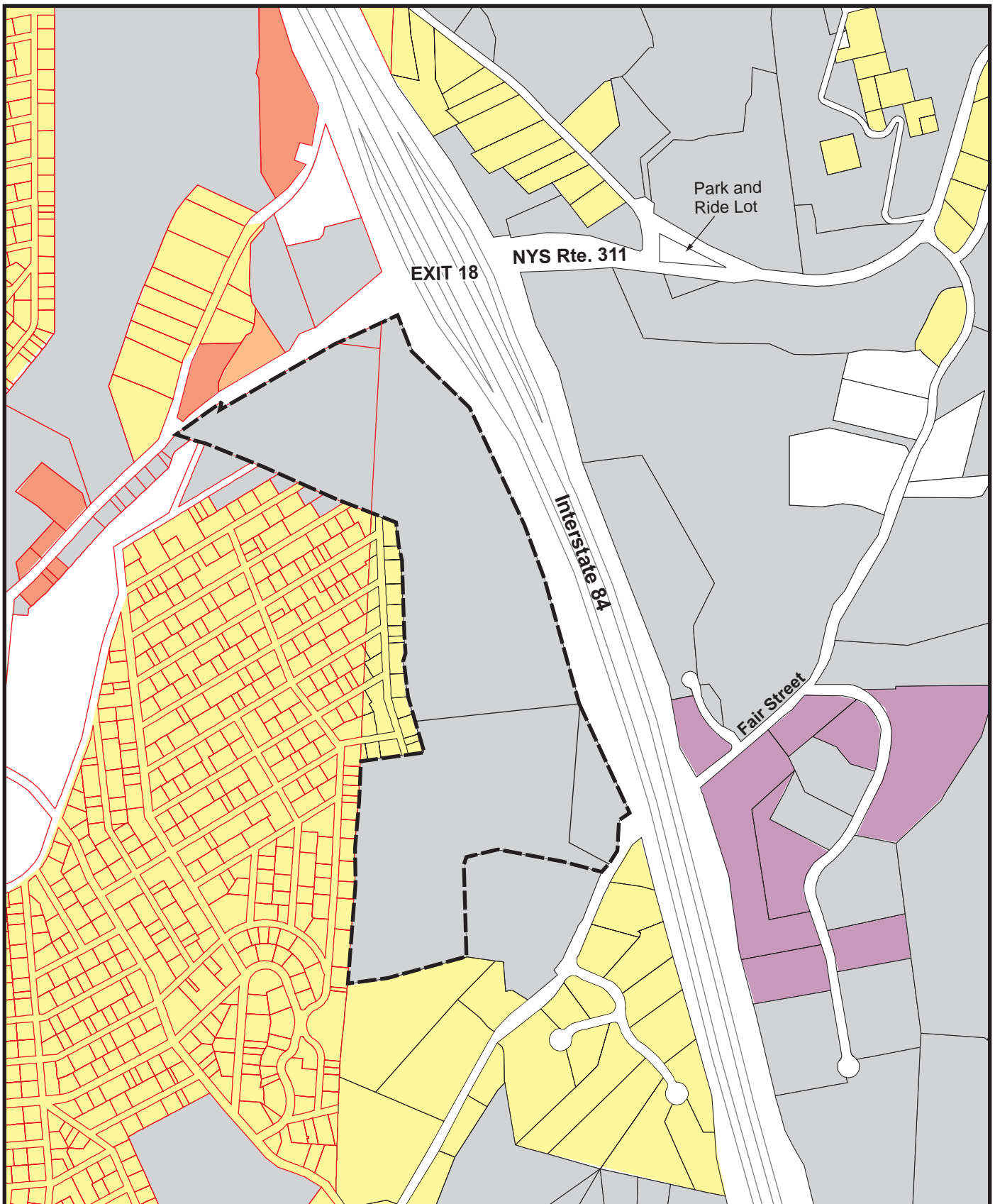
2.2 Regional Setting

2.2.1 Existing Land Use and Zoning

Existing Land Use

The 90.5-acre project site primarily consists of vacant, wooded land that straddles the border of the Towns of Patterson and Kent. The Town of Patterson portion of the site abuts Interstate 84 to the east, vacant land to the south and north (Kent portion of project site) and single family residential uses to the west. The project site consists generally of second growth woodlands. Stone walls associated with former agricultural use delineate steeper subareas of the site, former pasture limits and property lines. Existing land use of the site and surrounding area is shown in Figure 2-3, Existing Land Use.

The southern portion of the site in the Town of Patterson contains an existing telecommunications facility. This cell tower is currently leased by telecommunications providers and is served by a gravel driveway that connects to Echo Road.



- Subject Property
- Residential
- Commercial
- Industrial
- Office
- Vacant Land
- Public
- Town of Kent Parcels
- Town of Patterson Parcels

800 0 800 Feet

Figure 2-3: Existing Land Use
Patterson Crossing Retail Center
Town of Patterson and Town of Kent,
Putnam County, New York
 Source: Tim Miller Associates, Inc. Field
 Survey, 12/04 and 2001 Aerial Photo

An existing NYS Electric & Gas utility right-of-way runs through the southeastern corner of the site. An unimproved roadway used for equipment access enters the site from Route 311 and extends south to the locations of test wells that have been drilled on the site.

Consistency with Town Comprehensive Plans

Town of Patterson Comprehensive Plan

On December 13, 2000, the Town of Patterson adopted a Comprehensive Plan to guide the future growth of the town. The plan included updated land use policies. The Comprehensive Plan seeks to preserve the natural and rural qualities of the town, protect environmental resources, ensure orderly growth while respecting private property rights, encourage regional cooperation, preserve the town's historic resources, improve public utilities and recreational facilities, improve traffic conditions, promote environmentally sound management of the town's waste steam, promote non-residential growth in suitable areas, and accommodate new growth while protecting the town's semi-rural character. Recommendations of the Comprehensive Plan that have relevance to the proposed Patterson Crossing project include the following:

- Land development patterns should not detract from the efficiency of bordering major streets.
- New development should have sufficient water for fire protection purposes, with special fire protection methods potentially needed in the design and construction of large proposed projects.
- Larger areas of open space and environmentally sensitive areas, such as scenic vistas, scenic roadways, waterways, floodplains and wetlands, should be protected through land purchase or acquisition, conservation easements, property tax incentives, land conservancies, design considerations, transfer of development rights and tax foreclosures.
- A Trail system is proposed on the eastern side of Interstate 84 across from the project site (see Figure 2-4, Draft Town of Patterson Master Plan Open Space Plan). In this part of the Town of Patterson, the proposed trail system extends southeast from the Town's border with the Town of Kent and connects with Route 22 and a Rails-to-Trails railway near the Town's southern border. No portions of the project site or lands on the west side of Interstate 84 are affected by railway proposals in the Comprehensive Plan.

Town of Kent Master Plan

In 1989, the Town of Kent adopted a revised Master Plan that provided an update to the previous 1973 Master Plan. The 1973 plan had recommended the project site for "Urban" land use. The 1989 Master Plan provides recommendations for the future pattern of land use and development in the Town of Kent. The plan addresses issues including the environment, land use, transportation, housing, economic development and community services and recommended implementation measures related to zoning, subdivision ordinance changes, capital improvements, administrative and enforcement procedures, and intergovernmental cooperation.

SITE

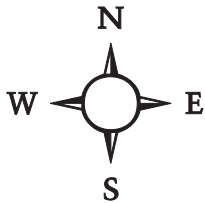
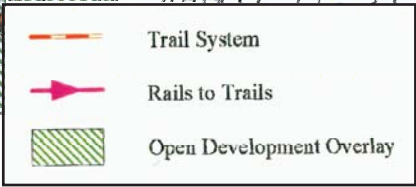
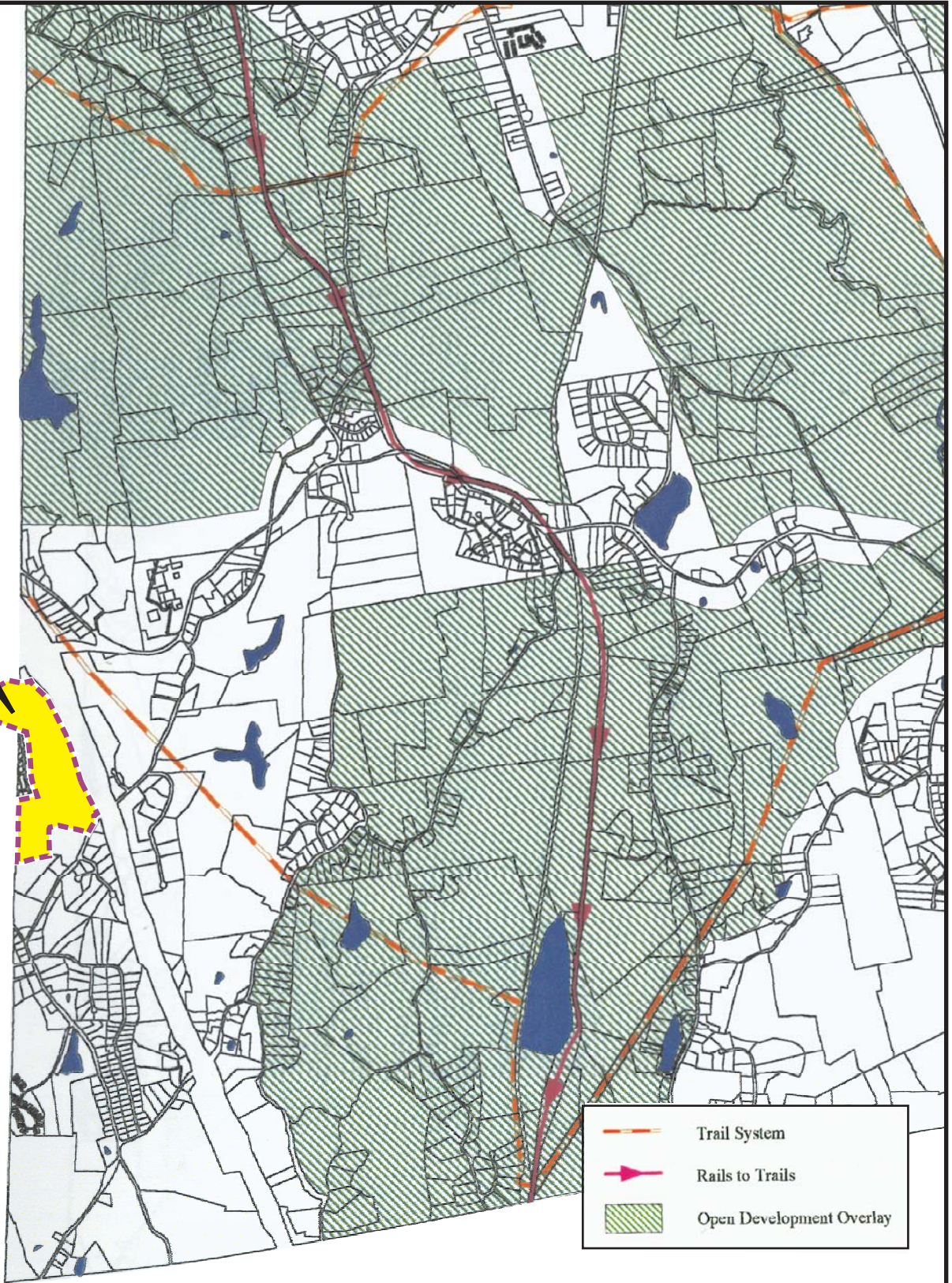
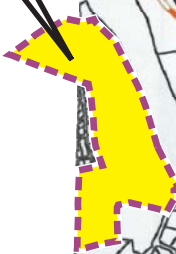


Figure 2-4: Draft Town of Patterson Master Plan Open Space Plan
Patterson Crossing Retail Center
Town of Patterson and Town of Kent,
Putnam County, New York

Source: Patterson Planning Department (07/10/00)
Scale: 1 inch = 3,000 feet

For the project site, the Town's Land Use Plan recommends Medium Density Residential use; one dwelling unit per 0.25 acres. Land to the north of NYS Route 311 in this area was recommended for Industrial and Medium Density Residential uses.

Goals and objectives of the Master Plan related to land use that are relevant to the subject site include maintaining the low density, rural character of the town, and providing for zoning at appropriate densities and for a variety of land uses to ensure a balanced array of services. Zoning ordinance changes that were recommended and that are relevant to the project site include rezoning commercially and industrially zoned land with severe environmental constraints, increasing setbacks on arterial roadways, and precluding the residential rezoning of land appropriately utilized for commercial or industrial purposes.

With respect to the project site, having a location at the crossroads of Interstate 84 and NYS Route 311 makes the development of regional retail uses at this location consistent with these Master Plan goals. The deep building setback of proposed development in the Town of Kent is another feature of the project that is consistent with goals of the 1989 Master Plan.

The plan also made a general recommendation to discourage expansion of the existing pattern of strip commercial development. Identification of a suitable parcel for development of a supermarket was also recommended. Other economic development recommendations included attracting office operations, tourism and distribution facilities.

The proposed retail center would provide for a greater variety of land uses within the Town of Kent, consistent with the Master Plan, and would focus future commercial growth in an appropriate location, near major transportation infrastructure while not creating strip commercial development, which the Master Plan discourages.

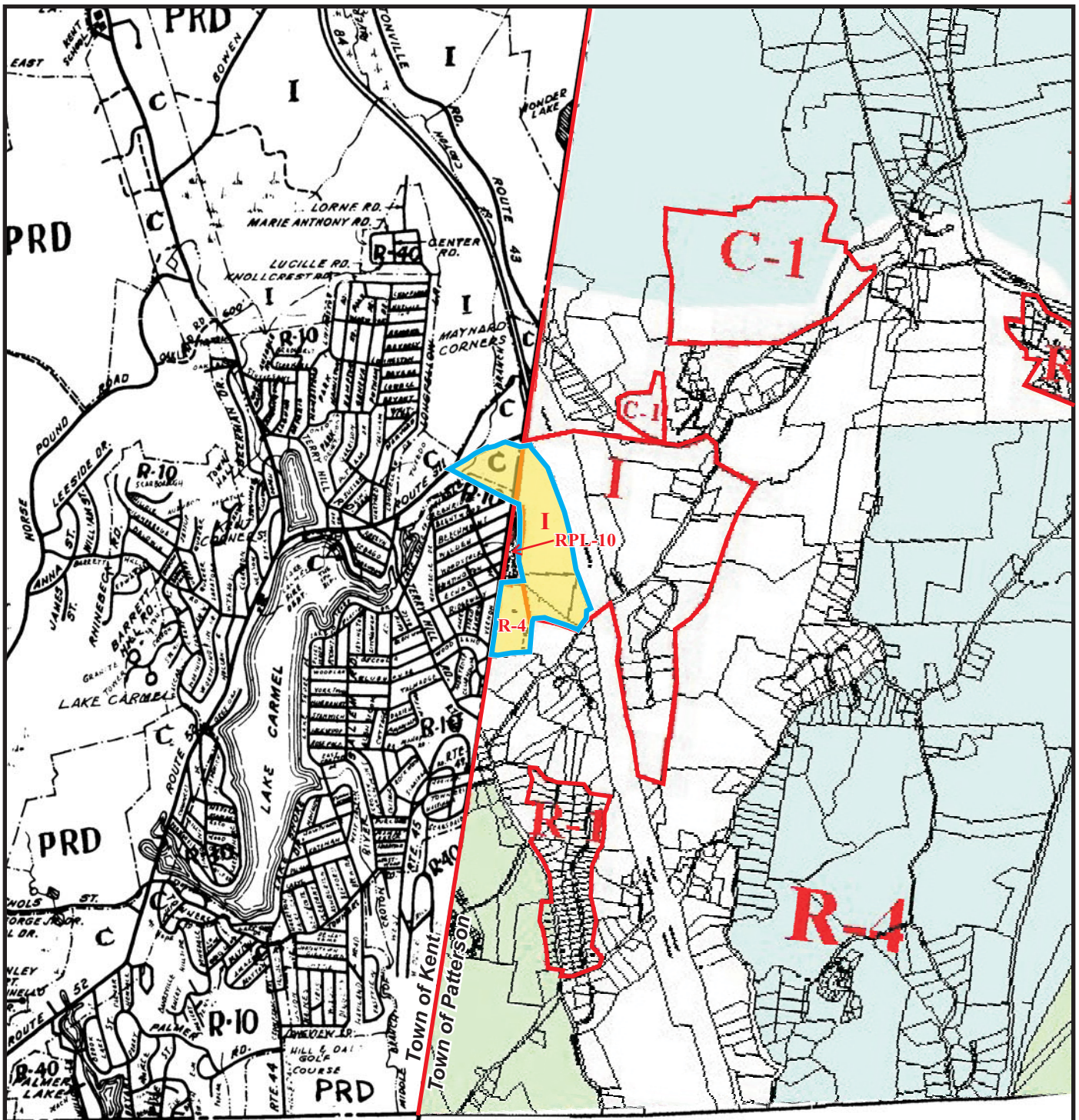
Existing Zoning

Town of Patterson

Zoning of the Town of Patterson portion of the project site is split between the Industrial (I) District and the R-4 Residential District (see Figure 2-5, Site on Towns of Kent and Patterson Zoning Maps). The majority of the site is zoned for industrial and commercial use. The southwestern corner of the site is zoned R-4 and contains the existing telecommunications tower. No development is proposed in the R-4 zone.

According to the Town of Patterson's Zoning Code, Chapter 154 of the Town Code, permitted uses in the "I" district are as follows:

1. Manufacturing, converting, altering, finishing or fabrication of products.
2. Warehouses for storage and wholesale sales.
3. Product transfer facility.
4. Contractor's offices, equipment and storage yards, provided yards are fenced.
5. Greenhouses and nurseries.
6. Distribution terminal.
7. Electrical substation.
8. Restaurants, taverns, drive-in and fast food establishments.
9. Banks.
10. Indoor theaters.
11. Veterinary hospitals and kennels.
12. Hotels and motels.



- Site Boundary
- Town of Patterson Zoning Boundaries
- Town of Patterson Cluster Overlay Zone
- Town of Patterson Multifamily Overlay Zone
- Town of Kent Zoning Boundaries

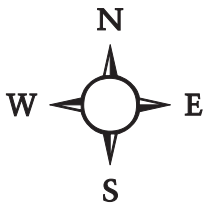


Figure 2-5: Site on Towns of Kent and Patterson Zoning Maps
 Patterson Crossing Retail Center
 Town of Patterson and Town of Kent,
 Putnam County, New York

Source: Town of Patterson Zoning Map, Rev. 12/04
 Town of Kent Zoning Map
 Approx. Scale: 1 inch = 2,500 feet

13. Health clubs.
14. Active indoor and outdoor for-profit recreational sports facilities.
15. Small and large farms.
16. Individual retail stores not exceeding 50,000 square feet, medical and professional offices.

Permitted accessory uses in the Industrial District include:

1. Locker rooms and shower facilities.
2. One (1) indoor recreational lounge.
3. Restaurant excepting prefabricated diners, drive-ins or curb service establishments.
4. Shops incidental to the sale of sporting goods and clothing.
5. Signs.
6. Off-street parking and loading areas.
7. Fences.
8. Lighting facilities.

Buildings that contain two or more stores or service operations are considered to be a retail center under the Zoning Code. Such retail centers must be approved by "special use" permit. The Patterson Crossing Retail Center project falls into this category and requires special use approval. Section 154-111 of the Zoning Code states:

"On a lot of not less than 40 acres in the I district, a special use permit may be granted, after public hearings by the Zoning Board of Appeals for a retail center with a total building coverage exceeding 75,000 square feet provided that the following conditions are met in addition to the requirements of Article XVI.

- A. Access shall be only from a State or County Road.
- B. The minimum setback of all buildings, structures, parking areas and access drives shall be sixty-five (65) feet. Sixty-five (65) feet from any rear or side property line shall be maintained as a vegetated buffer, and shall not contain any surface or subsurface improvements including waste disposal system or utility lines.
- C. All other dimensional requirements of the particular district are conformed to, except that total area of all impervious surfaces shall not exceed 50% of the total lot area.
- D. The individual uses permitted on the site shall include all those uses permitted in General Business (GB) Districts, including indoor theaters and fast food establishments may be permitted."

The bulk requirements for uses in the Industrial District are compared to the proposed project in Table 2-1 below.

Table 2-1 Town of Patterson Zoning Ordinance for Regional Retail Centers (Special Use), Bulk Requirements for Uses in the Industrial and R4 Districts and Proposed Development Parameters		
Features	Requirements	Proposed Parameters
Lot Area	40 acres minimum	74.1 acres
Minimum Road Frontage	200 feet	Greater than 200 feet on Fair Street. Access to be in the Town of Kent.
Maximum Lot Coverage	50 percent impervious surface	35.6 Percent overall, 43.5 percent in Patterson
Front Yard	65 feet Principal Building/ 40 feet Accessory Structures	Greater than 65 feet/ Greater than 40 feet
Each Side Yard	65 foot setback for surface and subsurface improvements	Greater than 65 feet from side property line
Rear Yard	65 foot setback for surface and subsurface improvements	Greater than 65 feet from rear property line
Minimum Floor Area	75,000 square feet	405,850 square feet*
Entrance Location	Within 2,000 feet of Interstate 84	Entrance in the Town of Kent approximately 880 feet from Interstate 84
Site Access	Only from a State or County Road	Site Access from State Road
Building Height	35 feet	35 Feet
Sources: Town of Patterson Zoning Code and Insite Engineering, Surveying and Landscape Architecture, P.C., 2005 *Plus a Garden Center of 28,200 square feet.		

The proposed project would conform with the Special Permit requirements for a Regional Retail Center in a Non-residential District along with the bulk requirements of the Industrial District in the Town of Patterson, excepting a proposed 8 foot high privacy fence along the western border of the site that will require a variance from the 6-foot maximum height called for in the zoning ordinance.

In April 2005, changes to the Town of Patterson Zoning Code were enacted, including changes to some Definitions. These changes do not affect development of regional retail uses.

Town of Kent

The portion of the project site that is located in the Town of Kent is the triangular-shaped area that lies in the northwest corner and fronts onto Route 311. As shown in Figure 2-5, this area is zoned Commercial (C). The following principal uses are permitted on an as-of-right basis in the Commercial District.

1. Fully enclosed stores and personal service establishments.
2. Restaurants and drinking establishments.

3. Offices and banks.
4. Theaters, excluding drive-in theaters.
5. Dry cleaners.
6. Funeral homes.
7. Nursing homes.
8. Garden supply sales, storage and displays.
9. Business and vocational schools.
10. Animal hospitals.
11. Hotels and motels.
12. Museums, galleries and community centers.
13. Parks and playgrounds.
14. Places of Worship.
15. Clubs and lodges.
16. Public utilities.
17. Shopping centers.
18. Other uses deemed by the Town Board to be harmonious and appropriate for adjacent districts.
19. Nursery schools or day care centers.

Following are permitted accessory uses in the Commercial District.

1. Off-Street parking and loading.
2. Accessory signs.
3. Other customary uses and buildings.

Following are conditional uses permitted in the Commercial District subject to certain provisions.

1. Gasoline stations and commercial garages.
2. Motor vehicle sales establishments.
3. Recreational facilities.
4. Lumber or building equipment sales, storage and service establishments.

The bulk requirements for uses in the Commercial District are compared to the proposed project in Table 2-2 below:

Table 2-2 Town of Kent Zoning Ordinance Bulk Requirements for Uses in the Commercial District and Proposed Development Parameters		
Features	Requirements	Proposed
Lot Area	15,000 square feet	16.4 Acres (710,000 SF)
Lot Width	100 feet	Greater than 100 feet
Maximum Lot Coverage	25 percent	15,500 SF = 2.2 percent
Front Yard	30 feet	Greater than 30 feet
Each Side Yard	10 feet	Greater than 10 feet
Rear Yard	30 feet	Greater than 30 feet
Minimum distance from accessory buildings or uses and parking/loading to property line	30 feet	Greater than 30 feet
Features	Maximum Permitted	Maximum Proposed
Building Height	30 feet or 2.5 stories	30 Feet

Source : Town of Kent Zoning Code and Insite Engineering, Surveying and Landscape Architecture, P.C., 2005

The proposed project would conform with the bulk requirements of the commercial district in the Town of Kent.

Existing Land Uses within the Surrounding Area

Areas surrounding the project site contain a mix of residential, commercial, office, transportation, and community facility uses, as well as vacant land (see Figure 2-3). Abutting the site to the west in the Lake Carmel Hamlet is a grid of residential streets generally characterized by smaller single family residences from the mid-to-late 20th century. The site is adjacent to the rear yards of 11 single family homes that front onto Concord Road, which is located in the Town of Patterson. Also abutting the site to the west, in the Town of Kent, are 12 single family homes that have frontage on Vernon Drive. The triangular-shaped Town of Kent portion of the site abuts several single family homes that are located off the cul-de-sac of Brentwood Road. Brentwood Road terminates at the western boundary of the project site, as do other east-west running residential streets including Greenridge Court, Lakeside Road and Como Road.

Land use patterns of the surrounding area are characterized by a mix of residential uses and vacant land to the west, the Interstate 84 corridor to the east, and industrially zoned land further to the east of Interstate 84 containing a welding establishment and the Putnam County Highway Facilities Department. There is a 50-space Park-and-Ride lot in the Town of Patterson northeast of the site on the opposite side of Interstate 84. Residential uses extend further to the east along NYS Route 311 and Fair Street in the Town of Patterson.

North of the site, across NYS Route 311, is vacant land, a medical office building (dental offices) occupying a low scale wood frame building, and a self storage facility. Single family residences are just beyond these uses, facing Ludington Court, which ends at a commercial nursery and the Town of Kent Highway Department. A cluster of commercial buildings face NYS Route 311 immediately west of the project site, including a pub, deli, general store,

wash & dry establishment, realtor's office and towing company/garage. Vacant and residentially occupied land lies adjacent to the south of the site abutting Fair Street.

Lake Carmel, which is surrounded by single family homes, is located between one quarter and one half mile to the west of the project site. The Hamlet of Lake Carmel, with its limited range of retail and service uses, is centered around Route 52 in the Town of Kent, less than a mile to the west. Within one half mile of the site to the north and west are the Hamlets of Maynard Corners and Kent Corners, respectively. The municipal complex of the Town of Kent, including Town Hall, police station and library, and the recently constructed Kent Fire House, are located to the north on Route 52. A single family home neighborhood is located north of Lake Carmel on the north side of Route 311.

The Lake Carmel business district contains a cluster of commercial establishments on its eastern end, including a pharmacy, a bank, , auto body shops, a used car dealership, and building supply establishments, medical offices and other retail uses spread out along Route 52. Further to the west in the Town of Carmel is Carmel Plaza, a shopping center anchored by ShopRite supermarket and containing approximately one dozen retail uses. Downtown Carmel contains office uses, restaurants, shops and the Putnam County Government Center (courthouse and offices).

Land use patterns in areas to the east of Interstate 84 include wooded vacant land consisting of former farmland, the County Highway Facilities Department, and low density residential uses. Three miles to the east lies the Hamlet of Patterson, centered on NYS Route 311 and containing a mix of residential and commercial uses, anchored by the Patterson Metro North Railroad Station on Front Street on the east and the Patterson Presbyterian Church on the west. Commercial uses in the Hamlet center include a building supply store, a local pub, a small apparel shop and a Chinese food restaurant. There is also a small shopping plaza in the Hamlet.

Approximately one mile east of downtown Patterson are more intensive commercial uses centered around Route 22, including Patterson Commons, a shopping center containing an A&P supermarket. Route 22 contains antique stores, a farm stand and restaurants that give it local character, although its commercial uses are more auto oriented than those in the Hamlet center and draw patrons from a wide area for convenience shopping and auto services. Between the Hamlet area and Route 22 are open space lands including portions of the Great Swamp, a large freshwater wetland.

Further to the east lies the lake community of Putnam Lake. This area is mainly residential with many smaller, seasonal homes that have been converted to year round residences. The main intersection and "downtown" area supports multiple retail and service uses including auto supply/repair companies, a market and discount liquor store, a bank and dental offices. Most of these businesses, which occupy one- and two-story buildings, are oriented towards serving the local community.

2.3 Project Design and Layout

The Patterson Crossing Retail Center consists of four separate buildings with three buildings running parallel to Interstate 84 on the eastern side of the project site, and the fourth located on the northern portion of the site closest to the site entrance. A total of nine separate uses

are proposed. A site layout is shown in Figure 2-6, Patterson Crossing Retail Center Site Plan. Likely users are noted below.

The site will support 405,800 square feet of retail space and a 28,200 square foot garden center through a combination of individual and shared buildings. Located from south-to-north, proposed retail uses include a free standing 145,000 square foot wholesale warehouse store, a free standing 135,200-square foot home improvement center; a 72,200 square foot building containing a 20,000 square foot clothing store, a 22,200 square foot sporting goods store, and a 30,000 square foot electronics store; and a building containing a 24,800-square foot home goods store, two additional retail stores (13,700 square feet and 10,200 square feet), and a coffee shop (4,750 square feet).

The building with four separate tenants is located on the northern portion of the site, closest to the site entrance and is served by a common parking area. This building straddles the Towns of Kent and Patterson, with portions of two of the proposed stores and the entire coffee shop being within the Town of Kent. Of the total of 53,450 square feet proposed for this building, approximately 37,803 square feet is located in the Town of Patterson with the remaining 15,647 square feet located in the Town of Kent. Parking fields serving the other retail uses are located to the west of the respective building. The proposed stores are located at the furthest distance possible from the residential development located to the west. No development is proposed in the residentially zoned southern portion of the site.

Earlier plans for the proposed Patterson Crossing Retail Center project included a gas station in the southwest corner of the development. The applicant removed the proposed gas station from the plan in response to preliminary comments from the town and the community.

Proposed access into the site is from NYS Route 311 on the northern side of the site in the Town of Kent. A signalized intersection is proposed. The site entrance will be landscaped and a combination of trees and shrubs will be planted along the length of the main driveway. Truck traffic is diverted from employee and customer traffic using two drives near the entrance of the first building. The truck access roads run from the site access road to the rear of the buildings. Seven internal driveways are proposed to intersect the main site access road that will connect to customer/employee parking areas. Thus, the internal site is designed to separate most truck delivery services from customer activities and keep them away from the existing residential areas where possible. The majority of truck loading, unloading, and movement occurs behind the proposed buildings which limit visual and noise impacts to local residents. The customers and employees will use the front and/or side of the buildings for parking and access.

The project design includes walkways between the parking areas and the sidewalks for each of the buildings. Parking and access are specifically provided to accommodate those with handicaps. Shopping cart storage areas are included in the parking areas. Individual store employees will actively collect shopping carts from the parking areas throughout the business day. Garbage will be collected twice per week for all uses that include the preparation and/or sale of food. The remainder of the Patterson Crossing Retail Center garbage facilities will be serviced at least once per week.

Seven basins are proposed to collect and treat stormwater runoff as part of the project's stormwater management system. Three are located on the northern portion of the site, with

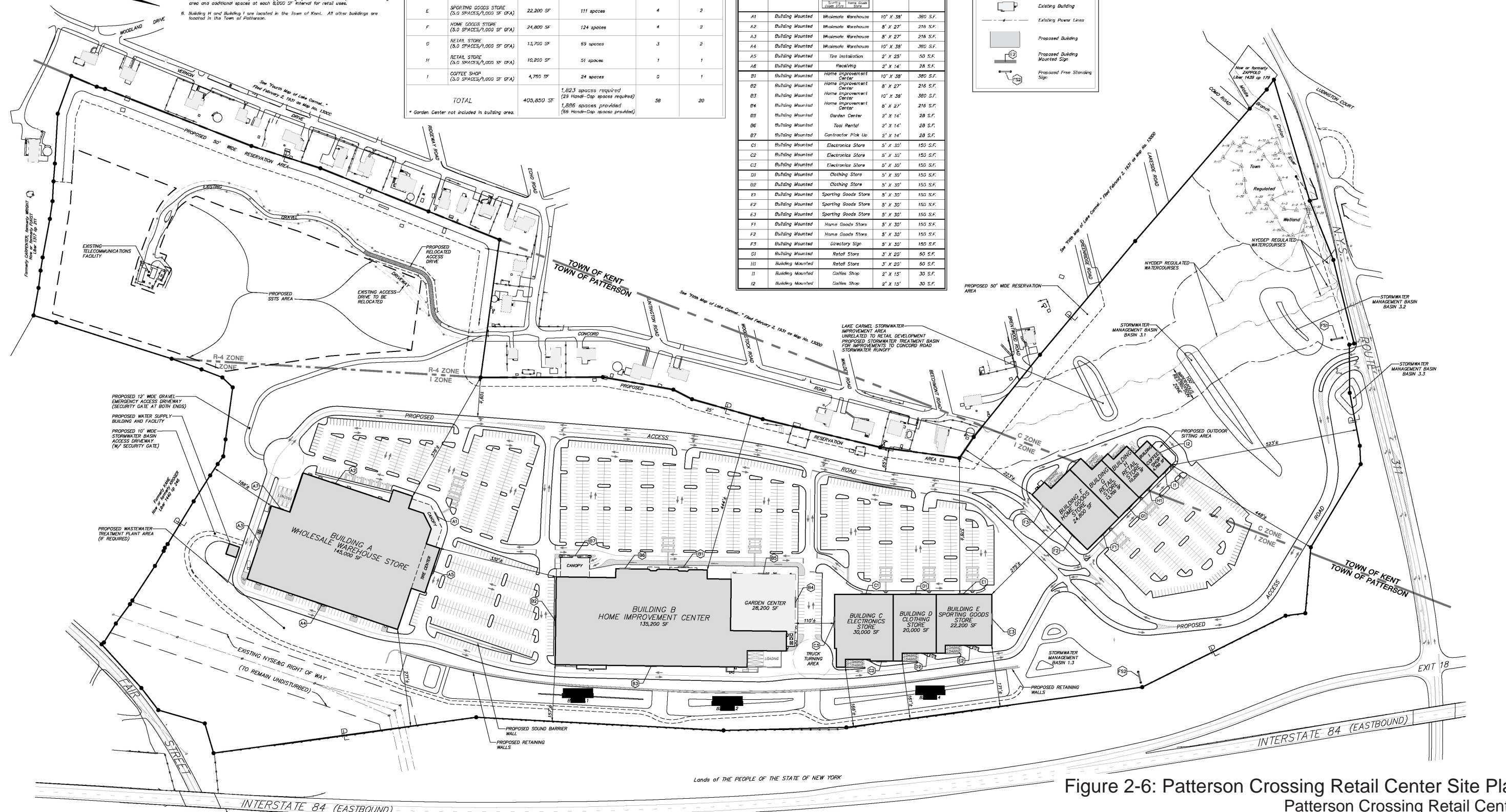
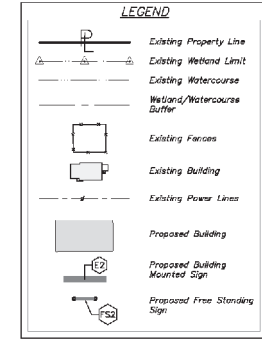
Parking & Loading Notes:

1. Required parking for retail use in the Town of Kent is based on 1 parking space for each 200 square feet of building area.
2. Required parking for retail use in the Town of Patterson is based on 1 parking space for each 200 square feet of building area, except for the Wholesale Warehouse and the Home Improvement Center which are based on user specific parking requirements.
3. Section 154-73 of the Patterson Zoning Code permits the Planning Board to approve the required number of parking and loading spaces for specific uses.
4. The Town of Kent requires one (1) loading space at the first 5,000 SF of building area and an additional loading space at each 20,000 SF interval for retail uses.
5. The Town of Patterson requires one (1) loading space at the first 3,000 SF of building area and an additional loading space at each 6,000 SF interval for retail uses.
6. Building H and Building I are located in the Town of Kent. All other buildings are located in the Town of Patterson.

BUILDING AREA, PARKING AND LOADING TABLE					
BUILDING DESIGNATION	BUILDING DESCRIPTION	BUILDING AREA (SF)	REQUIRED PARKING	REQUIRED LOADING SPACES	PROVIDED LOADING SPACES
A	WHOLESALE WAREHOUSE STORE (4.0 SPACES/1,000 SF OFA)	145,000 SF	653 spaces	19	4
B	HOME IMPROVEMENT CENTER (4.0 SPACES/1,000 SF OFA)	135,200 SF *	541 spaces	18	4
C	ELECTRONICS STORE (3.0 SPACES/1,000 SF OFA)	30,000 SF	150 spaces	5	2
D	CLOTHING STORE (5.0 SPACES/1,000 SF OFA)	20,000 SF	100 spaces	4	2
E	SPORTING GOODS STORE (3.0 SPACES/1,000 SF OFA)	22,200 SF	111 spaces	4	2
F	HOME GOODS STORE (5.0 SPACES/1,000 SF OFA)	24,800 SF	124 spaces	4	2
G	RETAIL STORE (5.0 SPACES/1,000 SF OFA)	11,700 SF	89 spaces	3	2
H	RETAIL STORE (5.0 SPACES/1,000 SF OFA)	10,200 SF	51 spaces	1	1
I	COFFEE SHOP (5.0 SPACES/1,000 SF OFA)	4,750 SF	24 spaces	0	1
TOTAL		405,850 SF	1,823 spaces required (29 Hand-Cap spaces required)	58	20

* Garden Center not included in building area.

SIGN TABLE				
Designation	Type	Text	Size (Height X Width)	Area
FS1	Free Standing (Town of Kent)	Patterson Crossing	16' X 20' (Each Side)	320 S.F. (Each Side)
FS2	Free Standing (Town of Patterson)	Patterson Crossing	20' X 24' (Each Side)	480 S.F. (Each Side)
A1	Building Mounted	Wholesale Warehouse	10' X 38'	380 S.F.
A2	Building Mounted	Wholesale Warehouse	8' X 27'	216 S.F.
A3	Building Mounted	Wholesale Warehouse	8' X 27'	216 S.F.
A4	Building Mounted	Wholesale Warehouse	10' X 38'	380 S.F.
A5	Building Mounted	Tire Installation	2' X 25'	50 S.F.
A6	Building Mounted	Recycling	2' X 14'	28 S.F.
B1	Building Mounted	Home Improvement Center	10' X 38'	380 S.F.
B2	Building Mounted	Home Improvement Center	8' X 27'	216 S.F.
B3	Building Mounted	Home Improvement Center	10' X 38'	380 S.F.
B4	Building Mounted	Home Improvement Center	8' X 27'	216 S.F.
B5	Building Mounted	Garden Center	2' X 14'	28 S.F.
B6	Building Mounted	Tool Rental	2' X 14'	28 S.F.
B7	Building Mounted	Contractor Pick Up	2' X 14'	28 S.F.
C1	Building Mounted	Electronics Store	5' X 30'	150 S.F.
C2	Building Mounted	Electronics Store	5' X 30'	150 S.F.
C3	Building Mounted	Electronics Store	5' X 30'	150 S.F.
D1	Building Mounted	Clothing Store	5' X 30'	150 S.F.
D2	Building Mounted	Clothing Store	5' X 30'	150 S.F.
E1	Building Mounted	Sporting Goods Store	5' X 30'	150 S.F.
E2	Building Mounted	Sporting Goods Store	5' X 30'	150 S.F.
E3	Building Mounted	Sporting Goods Store	5' X 30'	150 S.F.
F1	Building Mounted	Home Goods Store	5' X 30'	150 S.F.
F2	Building Mounted	Home Goods Store	5' X 30'	150 S.F.
F3	Building Mounted	Directory Sign	5' X 30'	150 S.F.
G1	Building Mounted	Retail Store	3' X 20'	60 S.F.
H1	Building Mounted	Retail Store	3' X 20'	60 S.F.
I1	Building Mounted	Coffee Shop	2' X 15'	30 S.F.
I2	Building Mounted	Coffee Shop	2' X 15'	30 S.F.



General Notes:

1. Property boundary existing conditions and topography shown hereon taken from survey entitled "Topographic Map of Property prepared for Putnam Valley Society Corporation" prepared by Boddy & Watson Surveying and Engineering, P.C. dated May 14, 2001.
2. The wetland flagging shown hereon was field delineated by Tim Miller Associates, Inc. on May 10, 2005, and survey located by Insite Engineering, Surveying and Landscape Architecture, P.C. on June 14, 2005.
3. D.E.P. Watercourse shown hereon were delineated in the field by the N.Y.C.D.E.P. and survey located by Boddy & Watson Surveying and Engineering, P.C.

Figure 2-6: Patterson Crossing Retail Center Site Plan
 Patterson Crossing Retail Center
 Town of Patterson and Town of Kent,
 Putnam County, New York
 Source: Insite Engineering, Surveying &
 Landscape Architecture, P.C, 08/31/05.
 Scale: 1 inch = 300 feet

one sited directly east of the site entrance. The other four stormwater basins are located along the eastern property line.

An eighth basin is proposed on the northwestern portion of the site, in the vicinity of Greenridge Court and Brentwood Road. This basin is unrelated to the proposed retail development and is intended to treat stormwater runoff from Concord Road that presently runs untreated into Lake Carmel. Between two of the project-related stormwater basins and the Concord Road basin is a 100-foot wide corridor constituting a restricted zone where no impervious surfaces will be permitted. This zone ends at the Middle Branch of the Croton River, just south of NYS Route 311.

A "Reservation Area" is proposed for a portion of the western site boundary behind the existing residences on Concord Road extending to the north and west proximate to the homes at the ends of Beechmont and Brentwood Roads. The Reservation Area will be visually and physically connected to the adjoining residential land and a privacy fence will be placed on the Patterson Crossing Retail Center side of the Reservation Area to emphasize this intent. The Reservation Area would be accessible to the neighboring property owners for passive use with legal mechanisms in place permitting such possible use.

2.3.1 Structures

As stated above, three proposed freestanding buildings at Patterson Crossing run parallel to Interstate 84 on the eastern side of the project site away from the nearest residences that exist to the west of the site. The proposed wholesale warehouse store would be housed in the largest building, having a total floor area of 145,000 square feet, situated at the southern end of the developed portion of the site. The northern side of the building will contain a Tire Center with an abutting entrance covered by a canopy. Loading facilities will be located on the southern side of the building.

A water supply and storage facility is proposed to be located just south of the wholesale warehouse store. A 10-foot wide driveway leads to the proposed stormwater basins from the southern end of the wholesale warehouse store.

The second largest building is the proposed home improvement center store, which would be located approximately 320 feet north of the wholesale warehouse store. Parking would be situated between the two buildings. This one-story building would have a total of 135,200 square feet of indoor retail space, and a 28,200-square foot garden center on its northwestern side. A canopy-covered entrance is proposed at the southwestern corner of the building. Loading is proposed on the eastern side of the building, facing Interstate 84.

A roadway running alongside the eastern side of the three largest buildings is proposed in order to limit truck traffic in the vicinity of existing homes to the west. A truck turning area is proposed along this roadway between the home improvement center and the third building which is located 140 feet to the north of the home improvement center. A second truck turning area is proposed at the south end of the Wholesale Warehouse, close to where the emergency access road intersects with the main access road. The truck roadway and turning areas were sited to decrease noise impacts to existing homes.

With a total of 72,200 square feet, the third building would house three stores, including a 30,000 square foot electronics store, a 22,200 square foot sporting goods store, and a

20,000 square foot clothing store. Loading areas for these stores are located on the east side of this building.

The fourth building is situated closest to the entrance and includes four smaller stores: a 24,800-square foot home goods store, a 13,700-square foot retail store, a 10,200-square foot retail store, and a 4,750-square foot coffee shop. The proposed coffee shop would have an outdoor eating and sitting area. Loading areas for these uses would be located on the western side of the building.

The proposed retail uses will offer a variety of goods and services ranging from food sales and convenience shopping to specialty products and big ticket electronic items such as televisions and computers. These uses, which are representative of uses that can be expected at the Patterson Crossing Retail Center, are based on conversations with perspective retailers and may change based on future circumstances.

The wholesale warehouse store is expected to have a variety of food sales including fresh meat and produce, a bakery, and a food court. Other services typically offered at this type of retail store include a photo center, an optical department, a pharmacy, an auto buying program, and tire service center.

Home improvement centers typically sell a wide range of hardware and building supplies, including tools, lumber, and building materials; home decor, heating and cooling merchandise; lawn and garden supplies; outdoor power equipment; paint; flooring; electrical supplies, doors and windows; cabinets; plumbing supplies; cleaning supplies; and lighting.

Other proposed structures include a noise wall, retaining walls, and fences. A noise wall is proposed to run parallel to the site's eastern property line in the vicinity of the parking lot between the wholesale warehouse store and the home improvement center. The area around this wall will be planted with trees and shrubs to provide a visual buffer.

An eight-foot high wooden privacy fence is proposed along the western property line between Brentwood Road and the existing telecommunications facility access drive. Section 154-15 of the Town of Patterson Zoning Code states that fences shall be limited in height to six feet, and four feet along lot frontage. Therefore, a variance will be required for the proposed fence. A mix of evergreens are proposed for planting along the Patterson Crossing Retail Center side of the fence.

Two parallel retaining walls are proposed along the eastern side of the proposed buildings roughly parallel to the eastern site boundary and Interstate 84. Construction of these walls will allow for a substantial reduction in site disturbance by reducing embankment regrading behind the buildings proposed to house the electronics, sporting goods, clothing stores and home improvement center. The proposed retaining walls will be constructed of naturally colored modular concrete block that will blend in with the environment. The area surrounding the wall will be landscaped to provide a visually appealing view from Interstate 84.

The project site area currently has electric service provided by New York State Electric & Gas (NYSEG). The proposed development would use buried electric for aspects of energy supply including to heat and cool the buildings. Infrastructure and capacity are in place to support the anticipated load of between 10,000 to 13,000 amps. The design and plans will meet the requirements of the New York State Energy Code, as well as other applicable state

and town building codes. Natural gas will not be used at the project site. The Grading and Utility Plan drawings included in this DEIS provide additional information on the proposed utilities.

Site plans are included with the DEIS. The plans detail the building layouts, footprints and elevations.

The applicant has prepared a preliminary Stormwater Pollution Prevention Plan which addresses the treatment and conveyance of all surface waters and drainage from the site (Appendix F). This plan will be reviewed by the NYSDEC and NYCDEP during the SEQRA review process. Details of the stormwater basins can be found in the site plan drawings at the back of this DEIS.

Wastewater service will be provided by on-site facilities that will be constructed as part of this project. A subsurface sewage treatment system (SSTS) will be employed to treat the wastewater from the proposed buildings.

2.3.2 Parking and Loading

Six parking areas are proposed at the Patterson Crossing Retail Center, providing a total of 1,886 parking spaces, 66 of these will be handi-cap spaces. The first parking area closest to the site entrance, services the coffee shop, home goods store and two retail stores. It gains access from the project's internal road approximately 1,200 feet south of the entrance to the site.

Each of the other buildings is served by its own parking lot located to the west of the buildings with separate parking areas located between the southern three buildings. The number of parking spaces for the project is based on the Towns of Patterson's and Kent's required five spaces per 1,000 square feet of retail floor space with the exception of the wholesale warehouse center and the home improvement center. Parking space requirements for these two proposed tenants both located in the Town of Patterson are based on user specified needs which are less than "pure" retail operations and less than the number specified in the Town Code. The Town of Patterson Planning Board has review authority over the number of parking spaces required for a given project. Table 2-3 summarizes proposed parking for each building.

Proposed parking areas will have landscaped islands with tree and shrub plantings, and interspersed street lights. Pervious surface parking is proposed for the outer row of parking spaces surrounding the larger lots to reduce the volume of runoff from impervious surfaces.

Truck loading spaces (20 in total) would be provided for each of the individual uses proposed for the retail center. The Town of Kent requires one loading space for the first 5,000 square-feet of building area and one additional loading space for each additional 20,000 square-feet of building retail area. In the Town of Patterson, the initial 3,000 square-feet of building area requires one loading space. Additional loading spaces are then required for each 8,000 square-foot interval of building retail area.

The two uses located within the Town of Kent, the Coffee Shop and the 10,200 square-foot Retail Store meet or exceed the Town's parking loading space requirements. Loading space requirements for the remaining uses, all located within the Town of Patterson, are based on

user specified requirements (Wholesale Warehouse and Home Improvement Stores) or estimates and common practices related to use and square-footage of the proposed retailers. The number of loading spaces proposed for all of the retailers in the Town of Patterson are less than the number specified in the Town Code. As with the number of parking spaces, the Town of Patterson Planning Board has review authority over the number of loading spaces required for a given project. Table 2-3 summarizes required and proposed loading spaces for each retail use.

Screen walls have been proposed at each of the loading areas to limit direct line of sight of the loading spaces and delivery trucks with the exception of the loading area at the Coffee Shop. As the loading area for the Coffee Shop is perpendicular to the building, a screen wall would impede access. However, the final grade of the area between the northwest corner of this building and the residents to the west, along with the existing vegetation to remain undisturbed and the proposed fence and landscaping will effectively block this loading area from the adjacent resident's view.

Table 2-3 Proposed Building Areas and Parking and Loading Requirements			
Building	Area (Square Feet)	Parking Required	Loading Spaces Required/Provided
Coffee Shop	4,750 SF	24 spaces	0/1
Retail Store	10,200 SF	51 spaces	1/1
Retail Store	13,700 SF	69 spaces	3/2
Clothing Store	20,000 SF	100 spaces	4/2
Sporting Goods Store	22,200 SF	111 spaces	4/2
Home Goods Store	24,800 SF	124 spaces	4/2
Electronics Store	30,000 SF	150 spaces	5/2
Home Improvement Center	135,200 SF***	541 spaces*	18/4
Wholesale Warehouse Store	145,000 SF	653 spaces**	19/4
Total	405,850 SF	1,823 spaces required (including 29 Handi-Cap)	58/20
		1,886 spaces provided (including 66 Handi-Cap)	
<p>* Based on industry specified needs of 4.0 spaces per 1,000 SF. The Garden Center is not included in the parking calculation. ** Based on industry specified needs of 4.5 spaces per 1,000 SF. *** The Garden Center is not included in the building area. Source : Insite Engineering, Surveying and Landscape Architecture, P.C., 2006</p>			

2.3.3 Access

Access is proposed from NYS Route 311, approximately 880 feet west of the entrance and exit ramps from Interstate 84, and approximately 700 feet east of Ludington Court. A signalized intersection is proposed at the site entrance. Right and left turn lanes into the site will be provided from the west, and east, respectively.

The Applicant proposes an emergency access drive connecting to an existing gravel driveway that accesses the existing cellular communications tower site. This existing drive

connects to Echo Road. The proposed 12-foot wide emergency drive would split from the access drive just south of the property line, and connect with the parking area near the proposed wholesale warehouse store. The emergency access drive would be gated at both ends to prevent unauthorized use.

The applicant proposes a two-way road connecting to NYS Route 311 which will be used for exiting and entering the site. Seven internal driveways are proposed to intersect the main site access road that will connect to parking areas. At the site entrance off of NYS Route 311 in the Town of Kent, a landscaped traffic island will divide traffic entering and exiting the site for the first 150 feet of the roadway. The onsite roadway will run parallel to the northern property line for nearly 400 feet before crossing the town line and continuing along the western property line in the Town of Patterson. The length of the access road from the entrance to its southernmost terminus is approximately 3,500 linear feet.

The site internal road has a separate left turn lane so trucks can be directed onto the rear service road behind the main buildings and away from houses along the western frontage road. One truck turn around is provided between the middle two buildings and a second at the south end of the wholesale warehouse store to allow trucks to return to the site exit without traversing the western frontage road. Most of the major truck activities in the eastern part of the site will be buffered by the site buildings for visual and noise purposes from the nearby residential housing west of the project site.

No sidewalks currently exist on NYS Route 311 in the vicinity of the project site and none are proposed. Marked pedestrian crossings will connect parking areas with sidewalks on the sides of proposed buildings abutting the parking areas.

An eight foot high wooden fence along the "Reservation Area" parallel to the western property line between Brentwood Road and the access drive for the existing telecommunications facility and behind the existing residences, will prevent pedestrian access to the retail center through adjoining residential neighborhoods.

2.3.4 Landscaping Plan

The proposed development includes landscaping, lighting and signage for aesthetics public safety and information/advertisement purposes. Conceptual design schemes for landscaping, lighting and signage have been developed as described below.

The development includes street trees and lighting along the internal roads and parking areas. The street plantings would provide shade and create an attractive setting. Landscape plantings would also be provided within islands distributed across the parking areas. These plantings would include a combination of grasses, shrubbery, ornamental and shade trees.

At the western property line, between Brentwood Road and the existing telecommunications access drive, the landscaping plan shows evergreen plantings to provide an effective buffer screening for neighboring properties to the west. An eight foot high solid wood fence is also proposed along this stretch of the proposed "Reservation Area" to provide an additional visual barrier for neighboring residences. The evergreens will be planted on the Patterson Crossing Retail Center's side of the wooden fence. Additional details of the plantings

(quantity and location) are shown on the enclosed Layout & Landscape Plan (Drawing Nos. SP-2.1, 2.2, and 2.3) at the back of this DEIS.

The project sponsor proposes that fertilizers for lawn and landscaping maintenance would be limited to those that do not contain phosphorus.

An entrance sign is proposed at the vehicular access point to the project site. A project sign visible to passing motorists on Interstate 84 would be located on the eastern side of the property, on fairly open land that slopes downward to the highway. Refer to Drawing SP-1, Overall Site Plan, for details on all of the signs proposed for the site. The signs will be designed to strike a balance between users needs and Town regulations. Signs within the proposed Patterson Crossing Retail Center will be as depicted on the engineer's Layout & Landscape Plan (Drawing No. SP-2.1, 2.2 and 2.3) at the back of this DEIS. A variance for all signs not in conformance with Town Zoning Codes will be sought from the Town of Patterson Zoning Board of Appeals and/or the Town of Kent Zoning Board.

2.3.5 Water Supply

The uses proposed at the Patterson Crossing retail center were selected with the intention of limiting the water demand of the proposed development thereby limiting the amount of wastewater generated by the project. The uses that would require the greatest amount of water are the wholesale warehouse store and the coffee shop. Total water demand is projected to be less than 11,000 gallons per day.

Two on-site wells will supply the water demand of the project. The locations of these wells were selected in order to limit potential draw-down effects on neighboring wells. Well monitoring tests conducted for the project indicate that there is ample water supply available at the project site, and that operation of the facility will not result in impacts to off-site wells serving nearby residents. Water for some irrigation purposes will be provided through recycled rain water collected from the rooftops of the two larger buildings. The collected rain water will be stored in underground tanks.

Water supply for fire fighting purposes will be provided from a storage facility, consistent with the requirements of the proposed development and a request by the Patterson Fire Department. The water storage facility is proposed to have a capacity of 270,000 gallons in underground storage tanks located south of the wholesale warehouse building. An approximately 900 square-foot building would house the pumps and other equipment for this system.

2.3.6 Sewage Disposal System

There is currently no municipal sewer service at or near the project site. Because it is in the New York City watershed area, the project will utilize a subsurface treatment system compliant with NYCDEP watershed area requirements and those of the County Health Department. The proposed subsurface sewage treatment system is designed to treat a calculated flow of approximately 11,000 gallons per day and is proposed for the southern end of the project site between the gravel drive serving the cellular communications tower and the proposed emergency access drive. The subsurface sewage treatment system will be located at least 200 feet from the nearest residential property well to the west.

2.3.7 Site Lighting

Lighting is proposed in accordance with Town standards using accepted industry guidance for parking lot lighting of the Illuminating Engineering Society of North America (IESNA). The proposed light poles will be eighteen feet high and the light sources will be recessed in the fixtures to ensure that lighting will not spill over into the surrounding community and glare will not impact motorists on the nearby roadways. The scale of proposed light poles and the proposed light fixtures are intended to provide adequate levels of illumination for safety, while maintaining an attractive look for site visitors and surrounding residents. A lighting plan is shown in this document on Figure 4.13-6 and in Drawing L-1 Lighting Plan.

2.3.8 Site Coverage

Under the proposed plan, approximately 58.24 acres of the site would remain pervious (existing vegetative communities and proposed landscaped areas) upon completion of the project with the remaining 32.26 acres being converted to impervious surfaces (roofs and paved areas). The proposed development coverage in each district would comply with the maximum lot coverage allowed in the zoning code. (Refer to Section 2.2.1 herein for a complete description of the project's compliance with zoning.)

Porous pavers will be utilized to limit the amount of impervious surfaces created. Approximately one third of the site will be open space upon completion of the project. The areas to be cleared are currently wooded. These areas include a strip of land separating the onsite roadway from residential properties to the west, areas that will be left undeveloped on the northwestern portions of the site, and the southern portion of the site that is proposed to house the project's underground subsurface sewage treatment system.

2.4 Construction and Operation

2.4.1 Construction

Construction Period, Sequencing and Phasing

The development is expected to be constructed over a 24 to 36 month period with completion by 2010. Prior to the beginning of construction, a representative of the project sponsor will conduct a pre-construction conference with municipal and State representatives to review the provisions of the SWPPP and discuss their implementation. In general, underground utilities and drainage will be installed in the early phases and stormwater will be directed to the appropriate sediment basins throughout construction activities.

Construction will follow sequencing and phasing that adheres to NYSDEC SPDES general permit requirements relating to erosion control and the NYCDEP stormwater requirements. Each phase of construction will disturb no more than five acres. Disturbed areas will be stabilized with paving or other appropriate land cover prior to initiating subsequent phases. All stormwater will be directed to the designated temporary sediment basins.

Grubbing and tree removal will be required with each phase of construction. Prior to any tree removal and grubbing all sediment and erosion control measures will be in place. On a phase by phase basis all finished slopes with a ratio of greater than 3:1 will be immediately

stabilized. Additional details of construction sequencing and phasing can be found in the engineer's Overall Phasing Plan (Drawing No. SP-4.1) contained herein.

Erosion and Sedimentation Control to be Utilized During Construction

A preliminary Stormwater Pollution Prevention Plan is provided in Appendix F of this DEIS. As required for coverage under the NYSDEC SPDES General Permit No. GP 02-01, the project engineer has prepared an Erosion Control Plan that conforms with the technical departments requirements as contained in the document "New York Standards and Specifications for Erosion and Sediment Control". A full-size version of this plan is provided in the rear of this document. This plan has been developed to reduce soil erosion from areas exposed during construction and prevent silt from reaching off-site areas.

The objectives of the Erosion Control Plan are the following:

- control erosion at its source with temporary control structures;
- minimize the amount of sediment-laden runoff from areas of disturbance, and control the runoff prior to discharge to off-site areas; and
- Reestablish vegetative growth as soon as practicable.

Prior to any grading activity, erosion and sediment control measures will be installed in accordance with the Erosion Control Plan and specifications attached to final construction drawings. The project sponsor would engage the services of a Erosion and Sediment Control Specialist and ensure that erosion control features are properly installed, maintained in good condition, and left in place until permanent vegetative cover is established. These measures include the use of silt fencing around the perimeter of the site, storm inlet and curb drain inlet protection devices, installation of slope stabilization measures including blankets and/or mulch, and/or hydroseed, and use of stabilized anti-tracking construction entrances. Full size engineering details of these measures are provided in the rear of the document. In addition, temporary seeding and/or mulch would be applied to any disturbed area where grading is complete or where no activity is expected for 15 days or more.

In accordance with the NYSDEC regulations, the contractor will be required to install all sediment and erosion control measures and maintain them throughout the entire construction process. These measures will be monitored during construction by the site engineer and representatives of the Towns. The stormwater management facilities and control structures will be installed and stabilized during the early stages of the construction. In addition, construction phasing has been planned to adhere to the NYSDEC's five-acre ground disturbance guideline. For each phase of work, sediment and erosion control measures will be installed in accordance with best management practices and prior to clearing or grubbing operations commence.

In order to minimize potential erosion in the areas of disturbance, silt fence will be installed as shown on the Erosion Control Plan.

In addition, storm drainage during the construction period will be routed to temporary sediment basins. A binder course will be applied to the internal road soon after it has been rough graded to minimize erosion. Following construction, erosion will be prevented by the established vegetation and by the stormwater management devices shown on the plans. Construction of the permanent stormwater management systems will commence as part of

the initial earthwork for the project so that these systems are functional as early as possible in the construction period.

The limits of site clearing and grading are established from the grading plans, which are included with this document, and would be delineated on the site prior to the site clearing operations to protect the adjoining soils and vegetation.

The following is an outline of erosion and sediment control measures which will be followed during all construction operations, in accordance with the approved plan.

1. Temporary structural erosion and sediment control measures (i.e. silt fence, hay bales) will be installed at down slope areas from all proposed grading operations throughout the construction process.
2. Topsoil will be stockpiled in areas as shown on the approved plans. These stockpile areas will be protected from impacting surrounding areas by erecting sediment control fencing around the stockpile.
3. Drainage will be channeled into swales directed towards temporary sediment basins and traps at strategic points throughout the site. Install sediment barriers around all storm drain inlets and maintain until all disturbed areas are stabilized with vegetation and all pavements are paved with a base course.
4. All disturbed areas which will remain undisturbed for a period of 15 days or more will be stabilize and/or seeded with temporary grass cover.
5. If construction is temporarily suspended, all disturbed areas will be stabilized and/or seeded immediately. After completion of each stage of site construction all lawn areas will be fine graded with a layer of topsoil and seeded with permanent lawn mix.
6. During construction, all temporary structural erosion and sediment control measures will be actively maintained as necessary to prevent clogging with sediment.
7. After pavement is in place and permanent vegetative cover and planting is established, temporary structural erosion and sediment control measures will be removed and the areas seeded. All seeded and planted areas will be maintained to ensure a viable stabilized vegetative cover.

Construction equipment will be restricted to those areas planned for development to reduce the impact on the soils and wooded areas to be undisturbed.

Erosion controls will be monitored by on-site personnel during the entire construction period in accordance with the NYSDEC and NYCDEP requirements, and will be subject to routine field inspection by local, city and state officials.

Truck Traffic

The earthwork on the site under the proposed plan is currently balanced to within one percent of the total volume of material to be cut during construction of the project. The final site plans to be generated for this project will balance the earthwork required to develop the project site. Balancing the cut and fill required on the site minimizes the environmental impacts (e.g. air quality and noise) associated with truck traffic.

Construction traffic would use a stabilized construction entrance on NYS Route 311. Once construction machinery reaches the site, it is likely to remain on site until the completion of grading and excavation. Site construction activities would comply with Town ordinances with regard to construction restrictions. The heaviest volume of construction traffic is expected to occur at the beginning of each construction phase as site clearing and rough grading are conducted, and during the months that concrete and building materials are transported to the site. Concrete and materials deliveries are sporadic, however, and would be consistent with commercial traffic that typically uses NYS Route 311.

Truck traffic will be generated initially during the mobilization of activities to clear the site and install roads and infrastructure, and later as the retail buildings are built, to bring in supplies including concrete, steel, framing materials and related building materials. Construction truck traffic would access NYS Route 311 from Interstate 84 and travel 880 feet to the project site entrance on the state road except for local contractors. As a result, it is expected that heavy construction truck traffic would not travel local roads to reach the site. This should minimize road damage and limit impacts on the Towns roads resulting from construction vehicles. The number of truck trips generated per day during construction will vary depending upon the phase and pace of construction. The grading plan has been designed to closely balance earthwork thereby limiting trucks moving materials on- or off-site.

Dust Suppression

Construction-generated dust will be controlled by the following procedures: i) minimizing the extent of soil left unvegetated at any one time; ii) using fast-germinating seed with mulch or other temporary soil cover; iii) spraying water on unpaved areas and areas of construction traffic when needed; and iv) covering construction vehicles used to transport soil.

Winter Operations

Construction during the winter will comply with the NYSDEC SPDES general permit requirements. Erosion and sediment control measures and winter site stabilization techniques for each phase of construction will be implemented to mitigate potential impacts per the SWPPP and in compliance with the SPDES general permit.

The frozen ground will protect against the generation of dust, compaction, mixing and rutting of the soil, and the alteration of on-site drainage thereby limiting erosion potential. In addition, the erosion control measures described above will be in place to stabilize the site when the ground is thawed.

Procedures for snow removal to be used by commercial entities during operation in the winter and after construction are defined in the Section 18-45 "Snow Disposal and Storage and Use of Winter Highway Maintenance Material" of the Final "Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources" (NYCDEP). The Proposed Action will employ all applicable guidance included in this section.

Blasting Operations

Rock removal by blasting will be avoided wherever practicable however it is expected that some blasting will be required primarily in the south-central portion of the site. Blasting will generally be limited to those areas requiring rock removal of greater than four feet in depth

where other mechanical means are not feasible. All blasting would conform with applicable town and state regulations as set forth in Section 4.1.4 of this document.

2.4.2 Operation

Hours of Operation - Construction

Construction activity would be limited to hours between 7:00 a.m. and 6:00 p.m., Monday through Saturday, exclusive of Sundays and national holidays. Typically, construction activities would be expected to cease prior to 6:00 p.m.

Should the need arise for blasting, any blasting would be done in full conformance with applicable codes. Prior to blasting, a general blasting schedule would be developed and a blasting permit would be obtained from the Building Inspector covering the specific blasting operation. Blasting would be conducted between the hours of 8:00 a.m. and 5:00 p.m. Monday through Friday, and would *not* be conducted on Saturdays, Sundays or national holidays.

Hours of Operation - Retail Sales

The Patterson Crossing project will support various uses and the hours of operation will be established by individual tenants. Retail stores are likely to operate during typical business hours, which are often 10:00 AM to about 8:00 PM, six days a week, with shorter hours on Sundays.

Hours of operation for the home improvement center are expected to be longer than the average retail store in order to meet the needs of contractors. Hours of operation typically extend from 7:00 AM until 9:30 PM Monday through Saturday and from 8:00 AM to 7:00 PM on Sundays.

Hours of operation for the wholesale warehouse store would typically be from 11:00 AM to 8:30 PM Monday to Friday, and from approximately 10:00 AM to 6:00 PM on weekends.

Deliveries - Construction

Delivery times and methods will vary depending on the equipment and materials being supplied to the site. As the on-site earthwork (cut and fill) will be balanced on the final site plans, the delivery or removal of these materials will not be required. Deliveries would be expected during the mobilization activities to clear the site and install roads and infrastructure, and later as the retail buildings are constructed. Initially construction equipment would be delivered to the site and later building supplies including concrete, steel, framing materials and other related materials would be delivered. Concrete and building material deliveries would be sporadic and on an as needed basis. All deliveries to the site would take place during the above noted hours of operation and are expected to be by truck appropriate for the equipment or material being brought to the site.

Deliveries - Retail

Deliveries will vary depending on the specific use. For the coffee shop, deliveries may be scheduled during normal business hours, Monday through Saturday, with early deliveries of some goods such as fresh bread.

Tractor trailer deliveries may be scheduled after store hours. For this reason, loading areas and the truck route to them have been placed on the east side of the proposed buildings where possible, away from the nearest residences located to the west.

Lighting and Security - Construction

Lighting is not expected to be required or used during the construction of the proposed project. The site will be secured during construction through the use of signs, fencing and locked gating at the construction entrance to prevent unauthorized access.

Lighting and Security - Retail

As described above, lighting for the proposed project has been designed to minimize visual effects on surrounding residences and Interstate 84. The site specific lighting plan, which specifies maximum light levels and integral light control devices, addresses the illumination requirements of the site during store operating hours. After-hour lighting, that reduces the site illumination by roughly 50 percent between the hours of 11:00 PM and 6:00 AM, is also considered as part of the development plan. Site lighting will consist of building lighting, street lighting, and lighting within parking areas. The landscaped center median at the site entrance will have two sets of street lights, with light poles placed at approximately 100-foot intervals along the remainder of the onsite roadway.

Site security will be provided based on the needs of the retail establishments. Each store will have its own internal security system that will include burglar alarms, directly connected to the Putnam County Sheriff's Office, and security cameras. Some of the stores may have their own security personnel. The stores will also incorporate exterior lighting and security cameras to help deter criminal activity. Parking areas will be illuminated as an additional security measure. It is expected that the major stores at Patterson Crossing will be served by private security guards, possibly with car patrols during nighttime hours.

Equipment and Material Storage/Staging Areas

Construction equipment will be brought to the site at the initiation of clearing and grubbing and will include bulldozers, backhoes and excavators, dump trucks and ancillary vehicles that will be used to clear, grub and rough grade the site, install temporary sediment basins, permanent sediment basins, utilities and building pads and foundations. It is expected that such equipment will be brought to the site and remain on-site until the work is completed.

Staging areas for construction equipment, soils and supplies are shown on the Overall Phasing Plan (Drawing No. SP-4.1) included with this DEIS. The proposed staging area for the initial mobilization of construction equipment will be completed during the first phase. All materials stripped/excavated from the site will be stockpiled in appropriate locations for reuse. All areas of stockpiled soils will be stabilized and protected until ready for future use.

Construction materials required for the project development will be brought to the site shortly before they will be used. These materials will be placed in areas appropriate for their short-term storage and proximate to the portion of the site on which they will be used. For example, materials to be used in the construction of a building will be placed within or near the building footprint.

Anticipated Number of Employees

It is anticipated that the majority of the construction-related workers at the site will come from the Towns of Patterson and Kent and other municipalities in the immediately vicinity. The Patterson Crossing project is expected to generate up to 151 person-years of construction employment.

At full operation, it is estimated that future businesses at the proposed development will employ approximately 516 people. Post-construction employment opportunities provided by the proposed retail development would include local part- and full-time positions that do not currently exist in this area.

2.5 Permits and Approvals

The following agencies are potentially Involved Agencies under SEQRA.

Site Plan

- Town of Patterson Planning Board
Town Hall, 1142 Route 311
P.O. Box 470
Patterson, NY 12563
- Town of Kent Planning Board
Town Hall, Route 52
Carmel, NY 10512

Special Use Permit/Variance for Height of Fence and/or Signage and/or Tire Center/Public Garage and/or Property/Municipal Line Set Backs for the Northern Building

- Town of Patterson Zoning Board of Appeals
Town Hall, 1142 Route 311
P.O. Box 470
Patterson, NY 12563
- Town of Kent Zoning Board
Town Hall, Route 52
Carmel, NY 10512

Stormwater Pollution Prevention Plan/Subsurface Sewage Treatment System/Watercourse Diversion Permit

- New York City Department of Environmental Protection
465 Columbus Avenue, Suite 350
Valhalla, NY 10595

Stormwater Pollution Prevention Plan

- New York State Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, NY 12561
- Town of Patterson Planning Board
Town Hall, 1142 Route 311
P.O. Box 470
Patterson, NY 12563

Highway Work Permit

- Putnam County Department of Highways & Facilities
842 Fair Street
Carmel, NY 10512
- New York State Department of Transportation, Region 8
4 Burnett Boulevard
Poughkeepsie, NY 12603

Wastewater Permit

- Putnam County Department of Health
1 Geneva Road
Brewster, NY 10509

Water Supply Permit

- Putnam County Department of Health
1 Geneva Road
Brewster, NY 10509
- New York State Department of Health
Corning Tower
Empire State Plaza,
Albany, NY 12237

Steep Slopes Permit and/or Erosion Control Permit

- Town of Patterson Planning Board
Town Hall, 1142 Route 311
P.O. Box 470
Patterson, NY 12563
- Town of Kent Planning Board
Town Hall, Route 52
Carmel, NY 10512

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State Pollution Discharge Elimination System (SPEDES) Permits for Wastewater Treatment System and Water Supply System

- New York State Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, NY 12561

3.0 ECONOMIC AND SOCIAL BENEFITS

3.1 Benefits of the Proposed Action

3.1.1 Economic

Overall Tax Revenue

The Patterson Crossing Retail Center is projected to generate overall tax revenues (sales tax combined with property tax) in the range of \$14.7 to \$17.4 million annually. Putnam County's share of the projected combined tax revenues (sales and property) will range from just over \$6.2 to more than \$7.4 million annually. This is a significant amount of capital that will be available to a County that has recently cut 30% from the budgets of outside agencies providing services to the county and has called for residents to pay an additional 10% in property taxes to cover the County's proposed budget¹. In addition, the Carmel Central School District stands to benefit from roughly \$600,000 annually in estimated property taxes to be generated by the proposed project. Finally, it is projected that New York State will realize between \$7.0 and \$8.4 million and the Metropolitan Commuter Transportation District (MCTD) will receive between \$660,000 to \$790,000 per year in sales tax revenue should the project be developed as proposed.

Existing Tax Revenues

The net annual property taxes currently generated by the project site are \$56,735. The existing site has generated property tax revenues to both the Town of Patterson and the Town of Kent, Putnam County, the Carmel Central School District, and other local taxing jurisdictions including Fire, Library and Parks Districts for many years without incurring any notable costs to local governments. The current assessed valuation of the project site totals \$1,496,393 as indicated Table 3-1.

Table 3-1 Tax Lots and Current Assessed Value		
	Tax Lots	Current Assessed Value
Town of Patterson	22.-3-1	\$466,256
	33.-2-23	\$791,827
	34.-2-3	\$113,567
Town of Kent	22-2-48	\$124,743
Subtotal		\$1,496,393
Source: Towns of Patterson and Kent Assessor and Tax Receiver. Prepared by: Tim Miller Associates, Inc., 2005		

The amount of existing taxes paid to each of the various taxing districts based on this assessed value is provided in Table 3-2.

¹ The Putnam County Courier, "Bondi's proposed \$124 million budget raises taxes by 10 percent", Eric Gross, September 8-14, 2005.

Table 3-2 Existing Annual Property Taxes Generated By Project Site			
Taxing Jurisdiction	Tax Rate*	Taxable Value	Existing Taxes
Putnam County collected in Patterson	\$1.66	\$1,371,650	\$2,272
Putnam County collected in Kent	\$1.69	\$124,743	\$211
Putnam County Total			\$2,483
Patterson Town	\$3.60	\$1,371,650	\$4,933
Library	\$0.37	\$1,371,650	\$503
Fire #1	\$0.85	\$1,371,650	\$1,165
Park	\$0.12	\$1,371,650	\$169
Kent Town	\$5.19	\$124,743	\$647
Lake Carmel Fire	\$0.66	\$124,743	\$83
Combined Town and County Property Taxes			\$9,983
Carmel Central School in Patterson	17.05	\$1,371,650.0	\$23,384
Carmel Central School in Kent	17.04	\$124,743	\$2,125
School Tax Total			\$25,509
Total Combined Property & School Tax			\$37,975
*Based on 2005 tax rates for all taxing jurisdictions. Rates have been rounded to the nearest cent. Source: Town of Patterson Assessor Tax Receiver and Town of Kent Tax Receiver. Prepared by: Tim Miller Associates, Inc., 2005			

Existing Costs of Services

In its current undeveloped condition, the project site does not require any municipal services or generate costs to the Town of Patterson, Town of Kent, or Putnam County. The site does not currently support residential use, so it does not create any expenses for the Carmel Central School District. The existing cellular communications tower on the site generates de minimus costs related to administration of taxes, and ensuring emergency service access to the tower.

Projected Property Tax Revenues Generated by the Project

Projected property tax revenues are \$839,934 annually, representing a \$801,959 annual increase. Of this, \$604,646 will go to the Carmel Central School District annually. For the purpose of projecting future property taxes, a per square foot construction cost of \$80 is assumed for the proposed 405,850 square foot retail development and a linear foot cost of \$300 for construction of the nearly 10,000 feet of roadway. Future market value is defined as land value plus costs spent on improvements. Based on the projected equalization rate of 100 percent, the total projected future assessed valuation, including land and improvements used in the analysis, is \$35,468,000.

The projected revenues presented are based on 2005 tax rates. These rates are likely to increase over time.

Table 3-3 shows the existing property taxes paid on the project site, as well as the property tax revenues that are projected to be generated when the Patterson Crossing Retail Center project is fully built and occupied.

Table 3-3			
Existing and Projected Annual Property Taxes Generated By Project Site			
Taxing Jurisdiction	Existing Taxes	Projected Taxes	Net Increase
Putnam County collected in Patterson	\$2,272	\$56,172	\$53,900
Putnam County collected in Kent	\$211	\$2,629	\$2,418
Putnam County Total	\$2,483	\$58,801	\$56,318
Patterson Town	\$4,933	\$121,982	\$117,049
Library	\$503	\$12,441	\$11,938
Fire #1	\$1,165	\$28,795	\$27,630
Park	\$169	\$4,188	\$4,019
Kent Town	\$647	\$8,050	\$7,403
Lake Carmel Fire	\$83	\$1,032	\$949
Combined Town and County Property	\$9,983	\$235,288	\$225,305
Carmel Central School in Patterson	\$23,384	\$578,210	\$554,826
Carmel Central School in Kent	\$2,125	\$26,436	\$24,311
School Tax Total	\$25,509	\$604,646	\$579,137
Total Combined Property & School	\$35,492	\$839,934	\$804,442

*Based on 2005 tax rates for all taxing jurisdictions. Rates have been rounded to the nearest dollar.
Source: Town of Patterson Assessor, Tax Receiver and Town of Kent Receiver
Prepared by: Tim Miller Associates, Inc., 2005

Projected Sales Tax Revenues Generated by the Project

Total projected sales tax revenues for the proposed Patterson Crossing Retail Center range from \$13.9 to \$16.6 million annually. Currently, Putnam County generates significantly lower county tax revenues per capita through its sales taxes than other counties in New York State. This should be somewhat offset in the future as, effective September 01, 2005, the County will raise the tax it charges on sales to 3.5%.

In his 2005 Budget Message presented in September 2004, and in his 2004 State of the County Address, Putnam County Executive Robert J. Bondi noted the need for increased retail in Putnam County to avoid future increases in the County's sales tax rate. In his 2006 Budget Message delivered in September of 2005, after noting the increases in the sales (1/2 percent) and property (10%) taxes and increases in over \$14 million in costs over the past 5 years, he noted that "the County has benefited from increased sales tax revenue generated by the opening of the Highlands Retail Shopping Center". Mr. Bondi proceeded to state the following: "Putnam County needs more retail shopping opportunities to generate the sales tax revenue necessary to fund our increasing mandated services and costs without raising taxes. Putnam County needs a second major retail shopping project, such as Patterson Crossing, to be approved quickly and begin generating sales tax dollars, otherwise our citizens will pay increasing sales and property taxes in future budgets. Without the additional sales tax dollars generated through increased shopping opportunities, the County will not be able to fund the debt service generated from an open space bond resolution without raising property taxes. There simply is not another source of revenue available to fund these purchases at this point in our history." With the estimated \$6.2 to \$7.4 million annually in sales tax revenue the project would generate for the County future increases in costs could be offset thereby reducing the need for future County tax increases.

Economic and Social Benefits

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In addition, the proposed project would support the County's "Shop Putnam" initiative. Through this initiative, residents are made aware of the goods and services available to them through businesses throughout the County. As part of the initiative, the website ShopPutnamToday.com encourages citizens to patronize Putnam County businesses by providing a convenient source of information on locally available goods and services. The Putnam County Economic Development Corporation's website states that "[s]hopping locally helps our County's economy by supporting local businesses and creating jobs, especially for young people and senior citizens. It also keeps our sales tax dollars working for us by providing the revenue necessary to provide vital services while keeping sales and Real Property tax rates low." The proposed action would provide short and long-term employment opportunities, expand the number and types of goods available locally and provide a substantial amount of money to the County in the form of tax revenues all of which are in-line with the County's initiative.

The project would introduce significant sales tax revenues. The substantial increase in commercial rates would also come with no increase in the resident population or the number of public school students. Additional visitors to the area are likely to increase sales at existing, non-competing, business establishments as a secondary benefit of the project, strengthening the local business climate.

To project future sales at the proposed development, average sales per square foot for various shopping centers around the country were reviewed based on data compiled by the International Council of Shopping Centers. Given the likely tenants for this project, the range of sales per square foot of retail space is projected to fall between \$500 and \$600. Annual sales at the proposed development based on these rates would thus range between \$200 to \$240 million.

A portion of the annual sales at the proposed 145,000 square foot wholesale warehouse center would be exempt from sales tax. The proposed wholesale warehouse center sells many items, including various food products, beverages, health supplements, drugs and medical supplies which are exempt from sales tax in New York State. Based on information provided by a similar tenant, which currently operates 13 warehouse centers in New York, approximately 35 percent of their total sales are exempt from sales taxes. This would equate to roughly 12 percent of the total sales of the shopping center.

Applying the 7.875 percent sales tax to the proposed retail uses (including 65 percent of the wholesale warehouse center sales) and the coffee shop, future sales tax revenues generated from the proposed development are expected to be in the range of \$13.9 to \$16.6 million annually.

According to the New York State Tax Finance Department and Putnam County Finance Department, sales tax revenues derived from the tax collected in Patterson will be allocated as follows:

- 4.0 % to New York State - effective June 01, 2005
- 3.5% to Putnam County - effective September 01, 2005
- 0.375% to the MCTD - effective June 01, 2005

Table 3-4 below shows the projected annual tax revenue that would be generated by the project based projected annual sales for the proposed retail center.

Table 3-4 Tax Revenues from Projected Annual Sales			
Jurisdiction	Tax Rate	Annual Sale \$200 M Taxable Sales \$176 M	Annual Sale \$240 M Taxable Sales \$211 M
New York State	4.0%	\$7,040,000	\$8,440,000
Putnam County	3.5%	\$6,160,000	\$7,380,000
MCTD	0.375%	\$660,000	\$790,000
	TOTAL	\$13,860,000	\$16,610,000
Prepared by: Tim Miller Associates, Inc., 2005			

Many of the potential patrons of establishments at the proposed commercial developments are currently spending money at the limited number of establishments in Patterson and Kent that sell goods similar to those that would be offered at the proposed stores. Most are probably spending much larger amounts on these goods in other counties including Westchester and Dutchess in New York, and Fairfield in Connecticut. Some amount of the household income available for retail expenditures is either not spent at all, or is not currently spent in the tri-county area.

Of the \$13.9 to \$16.6 million in sales tax revenue that would be generated to the aforementioned taxing agencies, at 3.5 percent, Putnam County would realize \$6.2 to \$7.4 million annually. New York State's share of the sales tax revenues estimated to be generated by the project would range from \$7.0 to \$8.4 million. A certain amount of these taxes would not be net income to Putnam County or New York State as some of those sales are already taking place at existing establishments either in the County or in the State. It is not known what the actual net increase may be as the spending patterns of persons in the trade area of the proposed shopping center are undocumented. It is projected, however, that the majority of sales taxes generated by the project will represent a net increase to taxing jurisdictions. The MCTD's 0.375% share of the overall sales tax revenues range from \$660,000 to \$792,000 per year.

No portion of the County's sales tax receipts are provided to municipalities or school districts.

It should be noted that the projected property and sales tax revenues are estimates as some of the actual uses and future tenants at the center are not known at this time. The actual tax revenue generated by the proposed development may vary from the figures presented above based on the manner in which the property is actually developed and assessed.

Costs of Services Generated by the Project

Based on the Draft Town of Patterson Comprehensive Plan 2000, recently, several communities were studied to determine the impact of differing types of development on municipal budgets. The cost of providing services for residential, commercial, and open space was compared to the revenue they generated. Table 3-5 summarizes the results of those studies.

Table 3-5 Cost of Development Revenue / Expenditure Ratio in Dollars			
	Residential	Commercial	Open Space
Amenia	1/1.23	1/0.25	1/0.17
Fishkill	1/1.23	1/0.31	1/0.74
Redhook	1/1.11	1/0.20	1/0.2
Beekman	1/1.12	1/0.18	1/0.48
Northeast	1/1.36	1/0.29	1/0.21
Average	1/1.21	1/0.25	1/0.36
Source: Scenic Hudson and American Farmland Trust.			

As indicated in the Draft Comprehensive Plan, in all cases, for every dollar of taxes generated by the residential land use category, the cost of servicing that land use was more than a dollar. By contrast, both open space and industrial/commercial land uses cost less than a dollar to service for every dollar in taxes generated.

As a retail/commercial operation, the proposed development would generate minimal direct expenses to the Towns of Patterson and Kent. The project would not increase the local resident population, and thus not require any additional municipal expenses relating to social services, recreation services, or other residentially-induced expenses. The project would be served by a private water supply and septic treatment systems, and thus not require any connections to existing municipal infrastructure. Increased need for roadway maintenance would be limited due to the nearly direct highway access of the project. Because most of the traffic generated by the project would travel on Interstate 84, State routes or County roads (see Chapter 4-8), the potential wear and tear and added maintenance on local town roads as a result of the project is not expected to be significant. A portion of the tax revenues collected by Patterson and Kent can be used by the local highway departments for maintenance of local roads.

There would be no cost to the Carmel Central School district because the proposed commercial development would not result in an increase in the number of school-aged children. In addition, the project would generate more than \$550,000 in annual taxes for the school district. This revenue would benefit all tax payers within the school district.

As described in Chapter 4-11, police protection in the Town of Patterson is provided by the County Police or New York State Police. It is expected that routine patrols of the property by these police forces would occur when the project is operational and one or both forces would respond to emergency call situations at the completed development site. The provision of police services by the County and State would not have a direct cost on the Town of Patterson. However, there will be taxes generated by the project to both State and County coffers that would cumulatively accommodate growth in the service areas of the police.

The Town of Kent has its own police force that could potentially respond to situations at the project site entrance on Route 311 located in the Town. A portion of one of the building pads falls within the Town of Kent. However, it is not known to what extent the Kent Police would patrol this portion of the project site, as it is only accessible by traveling through the Town of Patterson.

Also, as the vast majority of the proposed building space is within the Town of Patterson, it may be inefficient for the Town of Kent Police to provide police services to a small portion of the proposed development. As such, it is likely that the County and State Police would provide police service within the development site and that the project would generate minimal demand on the Kent Police Department.

The provision of other emergency services (e.g., fire and medical) to the project site would only occur as needed and would not have a direct cost to Patterson or Kent. As indicated in Table 3-3, the project would generate tax revenues to the Patterson Fire District and the Lake Carmel Fire Department. These taxing districts exist to generate funds to support the operations of these emergency service providers.

As described in Chapter 4-11, the Patterson Fire Department is expected to have the equipment and manpower necessary to serve the project. No additional demand on fire or police protection services are expected that would generate significant costs. The additional calls that would be expected would be an incremental increase for existing service providers.

3.1.2 Environment

The project would result in the improvement of drainage conditions, especially for the portion of the site that drains towards Lake Carmel. The applicant proposes to repair the highly eroded drainage channel that conveys runoff from roads in the development to the west, through the site and to the Middle Branch of the Croton Reservoir. In addition to the extensive measures proposed to treat runoff from the project site, this aspect of the project would improve the quality of runoff generated from off-site locations.

The project will also reduce travel time, mileage and fuel consumption for local residents that currently travel long distances to shopping centers out of the county or state. The proposed project will benefit local residents by providing them with a wider variety of retail offerings than currently exists in Putnam County, precluding the need for them to travel long distances for comparative shopping and selection of goods that are currently available only in surrounding counties. This could potentially result in a significant reduction in vehicle miles traveled (VMT), resulting in lower vehicular emissions at the regional level, and a significant gas and time savings that would enhance quality of life for these residents. For local households in the Towns of Kent and Patterson that might shop at the future Patterson Crossing Retail Center on a weekly basis instead of traveling to major retail stores in surrounding counties, the reduction in distance traveled one way would be 10 to 15 miles with a corresponding reduction in the annual VMT of 6% to 8%. With high gasoline prices in the region and the potential for prices to rise in the future, a savings of over \$150 per year per household in fuel costs could be realized assuming an average vehicle performance of 20 miles per gallon. This is based on a typical annual household VMT of approximately 18,400 miles per year.²

3.1.3 Social

Putnam County and areas surrounding the project site are areas of steadily growing population and continuing demand for commercial services. Putnam County is also one of the fastest growing counties in New York State. However, major retailers providing a wider

² New York State Energy and Research Authority (NYSERDA), 2002 NYS Energy Fast Facts, NYSERDA website, 2005.

range of goods and retail services than local stores, with added convenience in terms of hours of operation, have not located to the county in significant numbers. Demand for such retailers in Putnam County is generally met through stores in neighboring counties, resulting in an export of shopping dollars and the need for residents to travel unnecessarily long distances to meet some of their shopping needs. The Hamlets of Lake Carmel and Patterson, located approximately one mile to the west and three miles to the east of the Patterson Crossing Retail Center project site, respectively, have a limited range of retail and service establishments. Existing businesses in these areas primarily serve their immediately surrounding communities with neighborhood convenience retail and services.

Retailers generally locate in an area where population growth has already occurred and can therefore sustain the substantial investment in land, construction and infrastructure that is required for a regional center such as Patterson Crossing Retail Center.

The proposed project will provide residents with shopping variety and convenience, and will significantly reduce local residents' needs to travel outside of the area for certain purchases. A significant proportion of the shopping dollars that are now captured at retail centers in surrounding parts of the region, such as Danbury and Brookfield, Connecticut, and in Westchester and Dutchess Counties in New York, are expected to be spent locally once the center is opened. This would result in increased sales taxes for Putnam County, increased local employment, and spin-off sales at local establishments. These revenues would be available for County public projects and programs, such as parks and open space preservation, and social service programs, resulting in an enhanced quality of life for county residents.

Demographic data, market surveys, (refer to Section 4.12 herein) as well as local municipal policies articulated in local and county comprehensive plans all support the need for the proposed project. Moreover, no retailer will make the investment to locate to a particular site without substantial and strong market demographics and sales potential that support such an investment.

The strong buying power of households in the Towns of Kent and Patterson, in Putnam County in general, and in immediately surrounding parts of the region, is demonstrated through U.S. Census Bureau statistics and through proprietary surveys of area spending patterns. Surveys of available retail offerings in the local hamlets surrounding the project site conducted for this DEIS also document the need for the project, with businesses in the Hamlets of Patterson and Lake Carmel being generally locally oriented and limited in terms of their variety of goods and hours of operations.

As stated above, existing nearby businesses such as the neighborhood pharmacy, deli, or hardware store primarily serve the local population. Retail data provided by Claritas, Inc., a highly regarded national demographics analysis company (see Appendix C), indicate that there are four retail establishments that have more than 20 employees located within three miles of the project site (two are restaurants and two are retailers that deal in building materials, lumber and/or garden supplies). Yet average household incomes in this immediately surrounding area and within the surrounding towns are relatively high, suggesting that significant additional retail uses may be supportable in this area. In fact, Putnam County has one of the highest median incomes of counties in New York State. Households within a 10-mile radius market area of the project site show similarly affluent income characteristics. For example, households within 10 miles of the project site are

projected to support nearly \$100,000,000 in annual sales of hardware, lumber and garden store goods alone, with a total retail trade (all goods) potential of \$1.6 billion in annual purchases. These households have an average annual income of \$102,578, which is expected to increase to \$118,749 over the next five years.³

Related to demand for the proposed coffee shop, the surrounding area also shows excellent potential for additional restaurant sales. With a total population of 1,312,000 persons and an average household income of \$115,981, the Westchester/Rockland/Putnam region has some of the highest average household spending levels in the nation, contributing to the viability of its retail and food service sectors. In 2002, the Westchester/Rockland/Putnam region had average household expenditures of \$62,991. Of this amount, each household spent on average \$6,120 on dining out.⁴

Another socioeconomic effect of the Patterson Crossing Retail Center project relates to anticipated spin-off of economic benefits for local merchants. While much of the traffic associated with the proposed project is expected to access the site via Interstate 84, development of retail shops and a coffee shop, on the project site would bring some additional visitors to this area and increase the share of expenditures captured by the local economy in the vicinities of Lake Carmel and downtown Patterson. Reducing the number of outside shopping trips would result in a benefit for shops and services in the area. This would include increased sales at local restaurants, gas stations, and in some cases retailers through price comparison shopping by patrons of the proposed retail center that would otherwise not be shopping locally.

Stated objectives of the County and local municipalities also support the need for the Patterson Crossing Retail Center. The 1989 Town of Kent Master Plan describes the lack of shopping opportunities in the town, stating that most residents drive to Carmel for supermarkets located along Route 6 and Route 52, and that deficiencies probably exist with respect to other retail goods categories such as convenience stores, apparel stores, auto supply stores and full service and fast food restaurants. The Master Plan notes that the advantages associated with the Town's location, particularly access to Interstate 84 at Route 311, present an opportunity for attracting businesses in the future.

As with the Town of Kent and the Lake Carmel Hamlet, the range of stores in downtown Patterson is similarly limited, supporting the need for additional retail both to serve town residents and residents of Putnam County that currently shop elsewhere. The Comprehensive Plan of the Town of Patterson specifically describes the area of the project site, located at the intersection of Interstate 84 and Route 311, as being a major corridor of development that is appropriate for large scale non-residential development. It should also be noted that the Executive Board of the Patterson Chamber of Commerce, an organization comprised of local businesses in the Town of Patterson and organized to advance the business, professional, commercial, industrial, civic, and general residential interests of the Town of Patterson, has also indicated its support for the proposed Patterson Crossing Retail Center project.

County plans and policies also provide support for the introduction of additional retail opportunities in Putnam County, including the 2003 draft master plan for Putnam County,

³ Claritas, Inc., 2005.

⁴ Claritas, 2002; Dunn & Bradstreet, November 2002; Bureau of Labor Statistics, January-September 2002; R.L. Polk 2002, from The Journal News website.

known as "Vision 2010." The *Report of the Task Force on Vision 2010: Guiding Putnam Into the Next Decade* notes that the county's per capita retail sales lie far below the potential for an affluent community such as Putnam County and that residents are generally shopping elsewhere. The County launched a "Shop Putnam Today" program in 2003 to help stem the drain of retail dollars to neighboring counties. Recommendations to achieve the economic vision of "Vision 2010", which also support objectives of the Applicant for the proposed Patterson Crossing Retail Center, include fostering economic development opportunities to enable Putnam residents to work locally and increasing local retail activity to fill the gap for such uses.

3.1.4 Employment

Existing Employment Conditions in the Area

Based on the Census 2000 data and the Town of Patterson Comprehensive Plan, the 1980 Census reported that the median income in Patterson was \$21,352 per household and per capita income was \$7,472. By 1990 the household median income for Patterson had risen to \$53,471 while per capita income for Patterson had risen to \$17,543. Patterson's median income, while being above the New York State average, was slightly below the Putnam County average. Of all families living in Patterson, 6.3 percent had an income that was below the poverty level as defined by the Federal government. This is a slight increase over the 1980 level of 4.6 percent.

Of the 4,145 workers in Patterson who reported their place of work in the 1990 Census, 32 percent worked in Putnam, 52 percent worked in other New York locations, such as White Plains or Manhattan, and 16 percent worked out of state, presumably in nearby Danbury, Connecticut, or other Fairfield County locations. This is similar to the destinations of workers throughout Putnam County. The average commute was 33 minutes for Patterson workers and the majority travel to work by car.

Employment Opportunities During Construction

It is anticipated that the majority of the construction-related workers at the site will come from the Towns of Patterson and Kent and other municipalities in the immediately vicinity. These workers are expected to have a positive impact on existing local businesses, purchasing food, convenience items, gasoline, etc.

In addition to direct employment, total employment resulting from construction expenditures on this project would include the creation of jobs in business establishments providing goods and services to project contractors. A secondary effect multiplier of 1.5 has been utilized to calculate this benefit, meaning that each new construction employee job would generate 0.5 additional jobs. A multiplier of 1.0 would mean that the construction employee jobs would have no additional job generation effect.

Based on labor hour estimates included in the *Development Impact Assessment Handbook*, published by the Urban Land Institute (1994), the Patterson Crossing Retail Center project is expected to generate up to 151 person-years of construction employment. Adding the indirect job creation figures brings the total directly and indirectly generated construction-related jobs to approximately 226 person-years of employment.

Post-Construction Employment Opportunities

In addition to convenience and tax benefits, the project would also generate a variety of employment opportunities. It is estimated that upon completion and full operation, future businesses at the proposed development will employ approximately 516 employees. These jobs would represent a sizable increase in employment in the Towns of Patterson and Kent and in Putnam County, providing local part- and full-time employment opportunities that do not currently exist in this area. Potential benefactors of these new jobs would include younger workers such as high school students and seniors. The part-time job opportunities would also provide jobs for those recently unemployed as they transition to other full-time employment. According to information from the NYS Department of Labor, a total of 22,850 people were employed within Putnam County in July, 2002. The projected distribution of employment within the proposed development is shown in Table 3-6.

Long term employment opportunities would be created on the project site for retail and service workers. These jobs would include sales positions, stock positions, managerial positions, coffee shop workers, maintenance workers and administrative positions. Salaries would range from moderate income sales positions and administrative positions to lower paying full time jobs, including clerks and stock personnel, janitorial staff, and service staff. Part time jobs such as some sales clerk positions would provide an employment benefit for local seniors and youth that often seek this type of employment exclusively. The U.S. Department of Labor Bureau of Labor Statistics indicates that nonsupervisory retail industry workers earned an average of \$12.26 per hour in February 2005. For the leisure and hospitality industry, the average hourly wage was \$9.03 in February 2005.⁵

Table 3-6 Projected Employment /Job Generation		
Use	Intensity	Employees
Coffee Shop*	4,750 SF	9 employees
Retail Store	10,200 SF	10 employees
Retail Store	13,700 SF	14 employees
Home Goods Store	24,800 SF	25 employees
Clothing Store	20,000 SF	20 employees
Sporting Goods Store	22,200 SF	23 employees
Electronics Store	30,000 SF	30 employees
Home Improvement Store	135,200 SF	200 employees
Wholesale Warehouse Store	145,000 SF	185 employees
Total		516 employees
Source: *Based on information provided by Energy Information Administration website (www.eia.doe.gov) for the Food Services Industry. Number of employees for the Wholesale Warehouse store and the Home Improvement Store is based on information provided by industry sources. Number of employees (1,000 per square foot per worker) for the remainder of the proposed retail uses are based on research conducted by the Energy Information Administration.		

⁵ U.S. Department of Labor, Bureau of Labor Statistics website, March 4, 2005.

4.0 ENVIRONMENTAL SETTING POTENTIAL IMPACTS AND MITIGATION

4.1 Geology

4.1.1 Existing Conditions

Geologic Setting

The project site is located in the Hudson Highlands physiographic province, a region that is characterized by complexly folded and faulted metamorphic and igneous rocks that are often host to iron deposits. The bedrock geology of the area has been described in large scale mapping by the New York State Museum - Geologic Survey, and published as the "Geologic Map of New York, Lower Hudson Sheet" (Reprinted 1995). The project site is underlain by two separate bedrock formations. The Wallomsac formation, part of the Trenton Group during the Middle Ordovician period, is made up of phyllite, shist and metagraywacke, while the other formation is part the Middle Proterozoic period and is made up of biotite-quartz-plagioclase gneiss with subordinate biotite granitic gneiss.

The advance and retreat of glaciers during the Pleistocene Epoch, left behind landform features and glacial till deposits across much of Putnam County. These till deposits generally vary in composition from clay, to silt, sand and gravel. The project area is covered by various thicknesses of till. Soil borings were completed on-site between March 29 and March 31 of 2004 by Connecticut Test Borings, LLC of Seymour, Connecticut. Thirty-two (32) borings were completed and logged. Boring depths ranged from one and a half feet to approximately 37 feet, where ever the drill rig encountered refusal or desired depth. The borings were located in the proposed project access road, the proposed storm water basins on the northern side of the property, and the proposed parking area on the western and central sections of the site. This investigation was performed to determine what types of soils are present on the property as well as depths to refusal or possible bedrock. The boring logs and a map of boring locations is available in Appendix D.

Deep soil borings were also completed on-site between November 2 and 8, 2004 by GeoDesigns/Engineers of Middlebury, Connecticut. This investigation shows a maximum thickness of till on-site to be approximately 90 feet (in the northern area) with the minimum thickness of till on-site to be approximately 16 feet (in the southern area). This supplemental investigation was performed to provide information integral to the siting of the Subsurface Sewage Treatment System (SSTS). A total of fifteen borings were completed by GeoDesigns/Engineers. The investigation included the installation of shallow monitoring wells and in-situ permeability tests. The complete Supplemental Hydrogeologic Evaluation Report can be viewed as an attachment at the end of this document in Appendix E.

In total, forty seven (47) borings were completed at the project site to provide a comprehensive analysis of on-site soils, bedrock and hydrogeology.

Bedrock at the surface occurs in several locations on the site, primarily in the south central section of the property.

4.1.2 Future “No Build” Conditions

The “No Build” alternative is the scenario that would occur if no development were to take place at the site. Under the “No Build” condition, the site would remain in its current undeveloped state and no improvements would occur. Therefore, no impact to the geology on the site or surrounding area would occur.

4.1.3 Future Conditions

Geology Impacts

The observed areas of bedrock outcrops on the site indicate that blasting is expected to be required for project construction. It is anticipated that blasting would be limited to areas that will have greater than four (4) feet of rock cut. Such areas are identified in Figure 4.1-1, Areas of Potential Rock Removal. As shown in the figure, areas that meet this criteria are located primarily in the south-central portion of the property. Areas with less cut may permit rock removal through mechanical means, such as chipping or hammering. The nearest residence is located approximately 75 feet from the area where rock removal is anticipated.

The total amount of material cut from the project site is estimated to be 566,500 cubic yards, which includes 119,000 cubic yards of rock. All cut material will be used on site as fill. The rock excavated for the development of the site is suitable for use as construction material and will be used on-site, eliminating the need to import or export rock. Where rock is encountered that must be broken down, mechanical means of rock removal (e.g. ripping) will be used in lieu of blasting wherever feasible. All required blasting will be carried out in accordance with the blasting mitigation plan described below and in Appendix Q.

Given the area on the site where rock removal is likely to occur, potential impacts to nearby properties are anticipated to be mitigated by following the proposed blasting procedures.

4.1.4 Mitigation Measures

Rock Removal Plan

Rock removal will be necessary primarily in the south-central portion of the site. Any blasting which may occur would be done in full conformance with all blasting regulations. The Town of Patterson requires that blasting be performed in compliance with the New York State Code (Title 12 of the New York Code of Rules and Regulations 12 NYCRR Part 39). Blasting is not anticipated for the portion of the project site in the Town of Kent. Blasting operations would be conducted under the direct control and supervision of competent and licensed persons with input and/or oversight by town representatives. The blasting contractor performing the work would be fully insured. Prior to blasting, a general blasting schedule would be developed and a blasting permit would be obtained from the Building Inspector covering the specific blasting operation.

Several mitigation measures are proposed to reduce noise to nearby residents. These mitigation measures include planning and operational measures, as well as the construction of physical noise barriers, in conjunction with the project development and construction. Further mitigation measures associated with noise are described in detail in Chapter 4.9, Section 4.9.6 of this document.

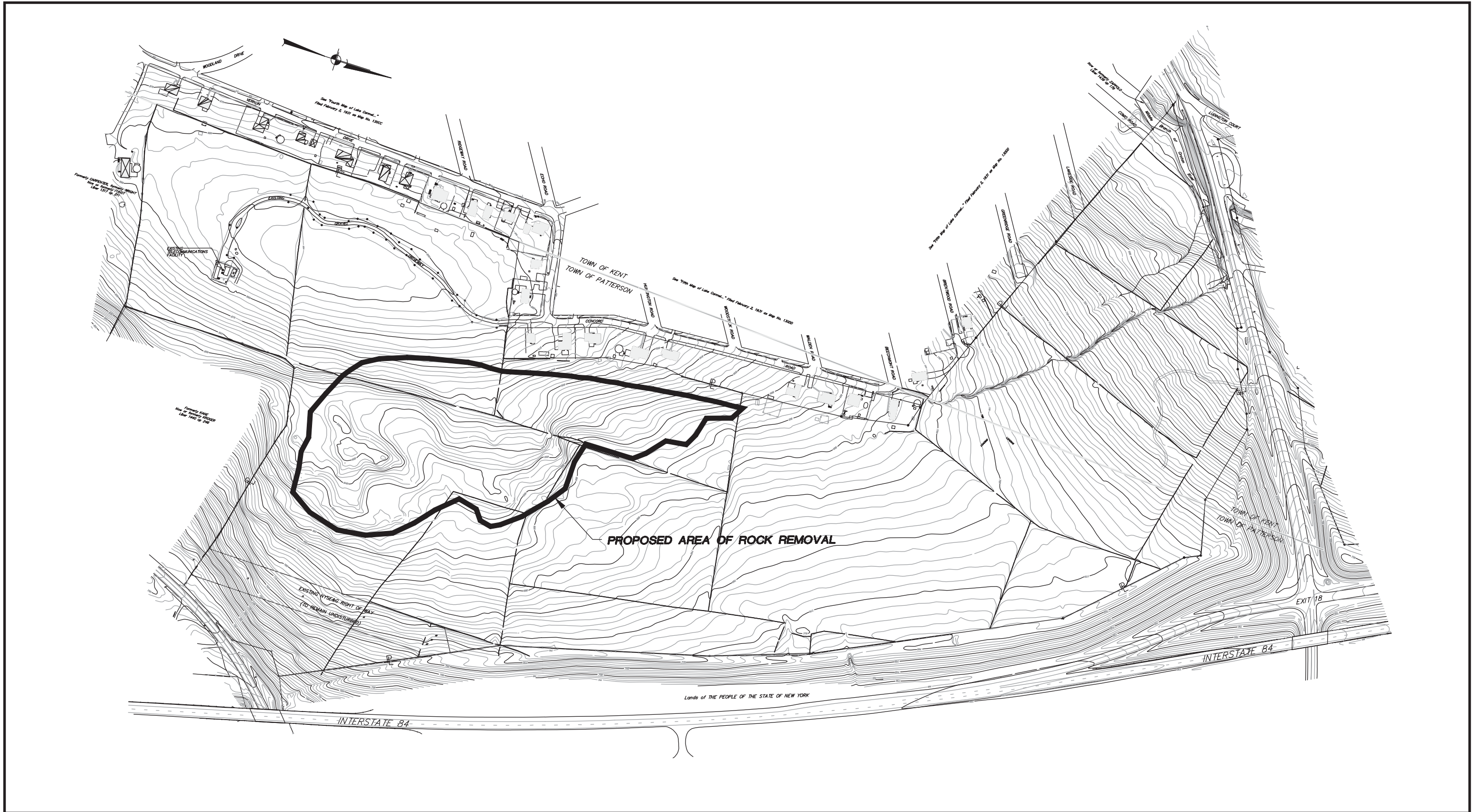


Figure 4.1-1: Areas of Potential Rock Removal
 Patterson Crossing Retail Center
 Town of Patterson and Town of Kent,
 Putnam County, New York
 Source: Insite Engineering, Surveying & Landscape Architecture, P.C.
 Scale: 1 inch = 300 feet

All structures, including residential dwellings, located within 500 feet of the blast site will be identified. Neighboring property owners and appropriate municipal representatives (Town Clerk and Police Department) would be notified of the intent to blast not more than 30 days nor less than 72 hours prior to planned blasting activities, and such persons would be notified not more than 72 hours nor less than 24 hours prior to the commencement of blasting. Notification would be accomplished through mailings and by telephone calls to the residents. The mailings documenting the blasting schedule would be sent through the US Postal Service to the appropriate officials and all residents within 500 feet of the site. Phone calls to these residents would be made within the specified time frames noted above to provide additional notification of the pending blasting. The mailed notifications will include information regarding the blasting locations and the anticipated time during which the blasting would occur. A qualified independent specialist would inspect site foundations within 500 feet of potential blasting sites before and after blasting work. The blasting contractor would be liable for any damage to off-site properties resulting from potential blasting activities.

The quantity of explosives would be limited to the amount necessary to fracture the rock without endangering persons or property. Before firing, all targeted areas would be covered with a suitable protective device to prevent escape of broken rock. Warning flags or other means would be used at a reasonable distance to give proper warning to the public at least three minutes in advance of firing. Blasting would not be conducted between the hours of 5:00 PM and 8:00 AM, nor on Sundays.

While there is potential for impacts to nearby private or local wells (no public water supply exists in this area), any documented impact to private or local wells will be remedied by the blasting contractor. The applicant has developed a Blasting Mitigation Plan (Copy included in Appendix Q) which includes provisions to monitor wells during the period of construction blasting. The well monitoring plan includes the collection of water level data on a representative number of wells within 500 feet of blasting sites, before, during and after blasting. Foundation surveys of structures within 500 feet of the blasting sites are included in this plan. Copies of all documentation concerning off-site structures, including photographic and/or video documentation, will be provided to the Towns of Patterson and Kent.

Rock Removal Procedures

As described above, rock removal is expected to be required for construction of the project. All required blasting at the site would be conducted using methods to mitigate potential impacts to neighboring properties and residences. Where blasting is required, the blasting protocol summarized below would be followed.

- All blasting will be conducted in compliance with New York State requirements (Title 12 of the New York Code of Rules and Regulations (12 NYCRR Part 39).
- All blasting will be conducted by qualified and insured blasting contractors.
- Pre-blasting inspections will be conducted of all off-site structures located within 500 feet of the excavation area, if authorized by the property owner. These inspections will include photographic or video documentation.
- The contractor will conduct test blasting and seismographic monitoring prior to carrying out blasting operations in order to determine appropriate on-site blasting techniques.
- Seismographic monitoring will continue throughout the periods of blasting at the site, and daily logs of seismographic data, explosive use and field conditions will be maintained.

Rock removal procedures required to construct the proposed project would be limited to the south-central section of the site and would occur only during the construction phase. As a result, the impacts associated with this effort would be considered short term and not significant.

4.2 Soils

4.2.1 Existing Conditions

Soils

Soils on the site were identified using the Soil Survey of Putnam and Westchester Counties (USDA, 1994) and various on-site investigations described below. A geologist and a wetland scientist walked the site several times between fall of 2004 and spring of 2005, to confirm soil and topographic conditions. In addition, a site specific soil survey was completed by the applicants consultants on January 11 and 13, 2004. Soil units were confirmed on-site through analysis of soil cores. The results of the soil survey are further described below. Soil units mapped on the project area are shown in Figure 4.2-1, Soils Map. Due to the property's varied topography, slopes and size, multiple soil types are found on the site. The soil mapping units on the site are summarized below:

- Paxton fine sandy loam (PnB, PnC, PnD). This unit consists of deep, well drained soils found on the top and sides of broad ridges. This soil comprises the greatest area on the site and occurs in areas of gentle to moderate slopes on the higher portions of the property. These soils occur in the majority of the site area. The water table can be found perched above a dense substratum at a depth of 1.5 to 2.5 feet below the ground surface in February through April. Depth to bedrock is more than 60 inches below the ground surface.
- Woodbridge loam (WdB). This unit consists of very deep, moderately well drained soils that have formed generally on gently sloping, lower parts of hillsides. Slopes are generally 3 to 8 percent. This soil is mapped in the southwestern section of the project site. The water table can be found 1.5 to 2.5 feet below the subsurface from November through May. Depth to bedrock is more than 60 inches below the ground surface.
- Chatfield-Charlton complex (CsD). This unit consists of very deep to moderately deep, well drained and excessively drained Chatfield soil and the well drained Charlton soil. It occurs on the tops and sides of hills with slopes over 15% that are underlain by highly folded bedrock. This soil is found in the southeastern section of the project site. The water table can be found more than 6 feet below the ground surface throughout the year. The depth to bedrock is more than 60 inches below the ground surface for Charlton soils and 20-40 inches below the ground surface for Chatfield soils.
- Ridgebury loam (RdB). This unit consists of gently sloping, very deep, and poorly drained and somewhat poorly drained soils. It is located on the lower parts of hillsides in the uplands and long small drainage ways. Slopes are generally 3 to 8 percent. This soils comprises of the smallest area on the site and occurs only in the northwestern border of the property. The water table can be found within 1.5 feet below the ground surface from November through May. The depth to bedrock is more than 60 inches below the ground surface.

SOILS LEGEND		
SOILS	DESCRIPTION	HYDROLOGICAL GROUP
CrC	Charlton-Chatfield complex, rolling, very rocky	B
CsD	Chatfield-Charlton complex, hilly, very rocky	B
PnB	Paxton fine sandy loam, 2% to 8% slopes	C
PnC	Paxton fine sandy loam, 8% to 15% slopes	C
PnD	Paxton fine sandy loam, 15% to 25% slopes	C
RdB	Ridgebury loam, 3% to 8% slopes	C
Ub	Udorthents, smoothed	-
Uc	Udorthents, wet substratum	-
UpC	Urban land-Paxton complex, 8% to 15% slopes	C
WdB	Woodbridge loam, 3% to 8% slopes	C

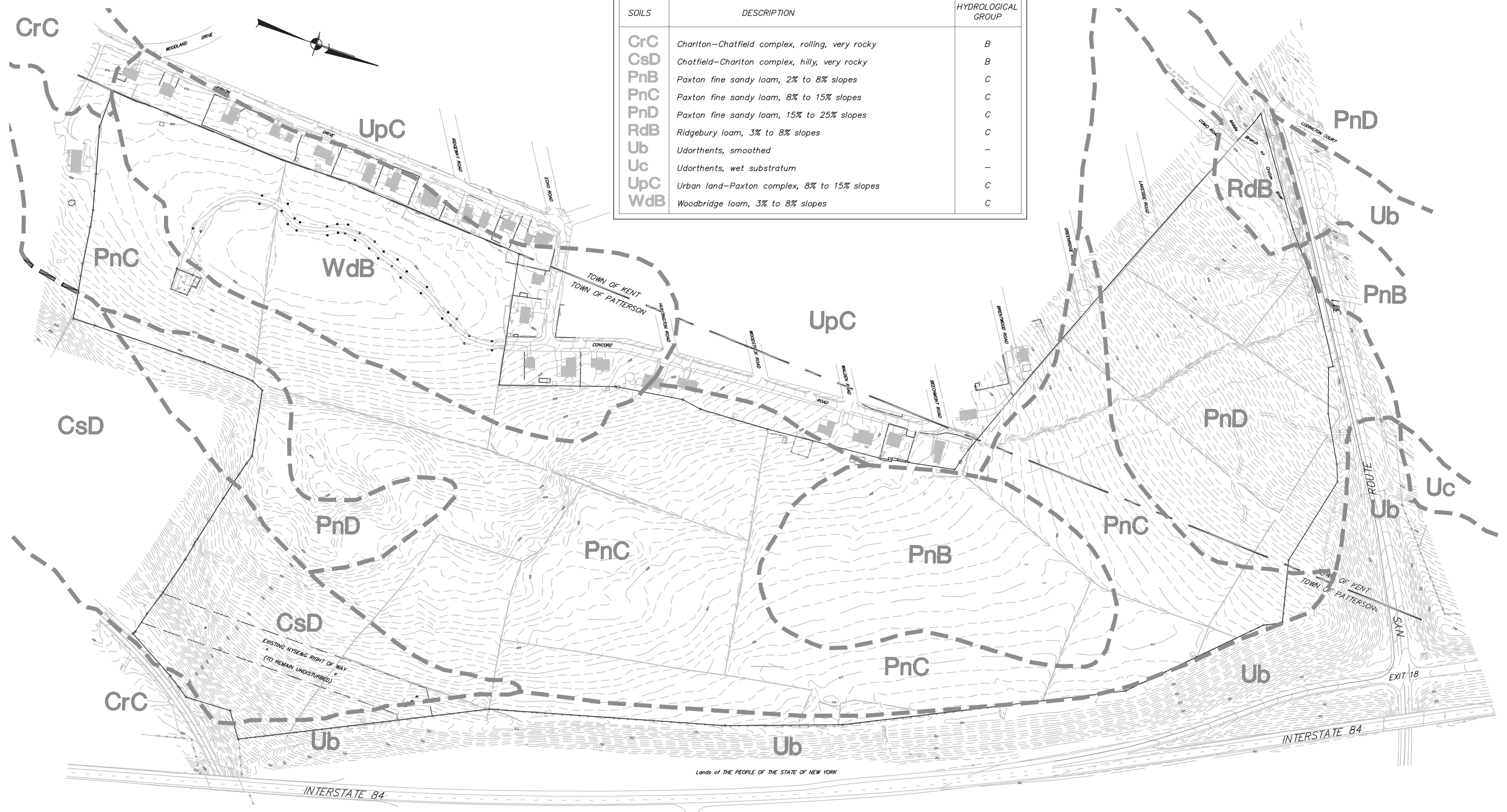


Figure 4.2-1: Soils Map
 Patterson Crossing Retail Center
 Town of Patterson and Town of Kent,
 Putnam County, New York
 Source: Insite Engineering, Surveying & Landscape Architecture, P.C
 Scale: 1 inch = 300 feet

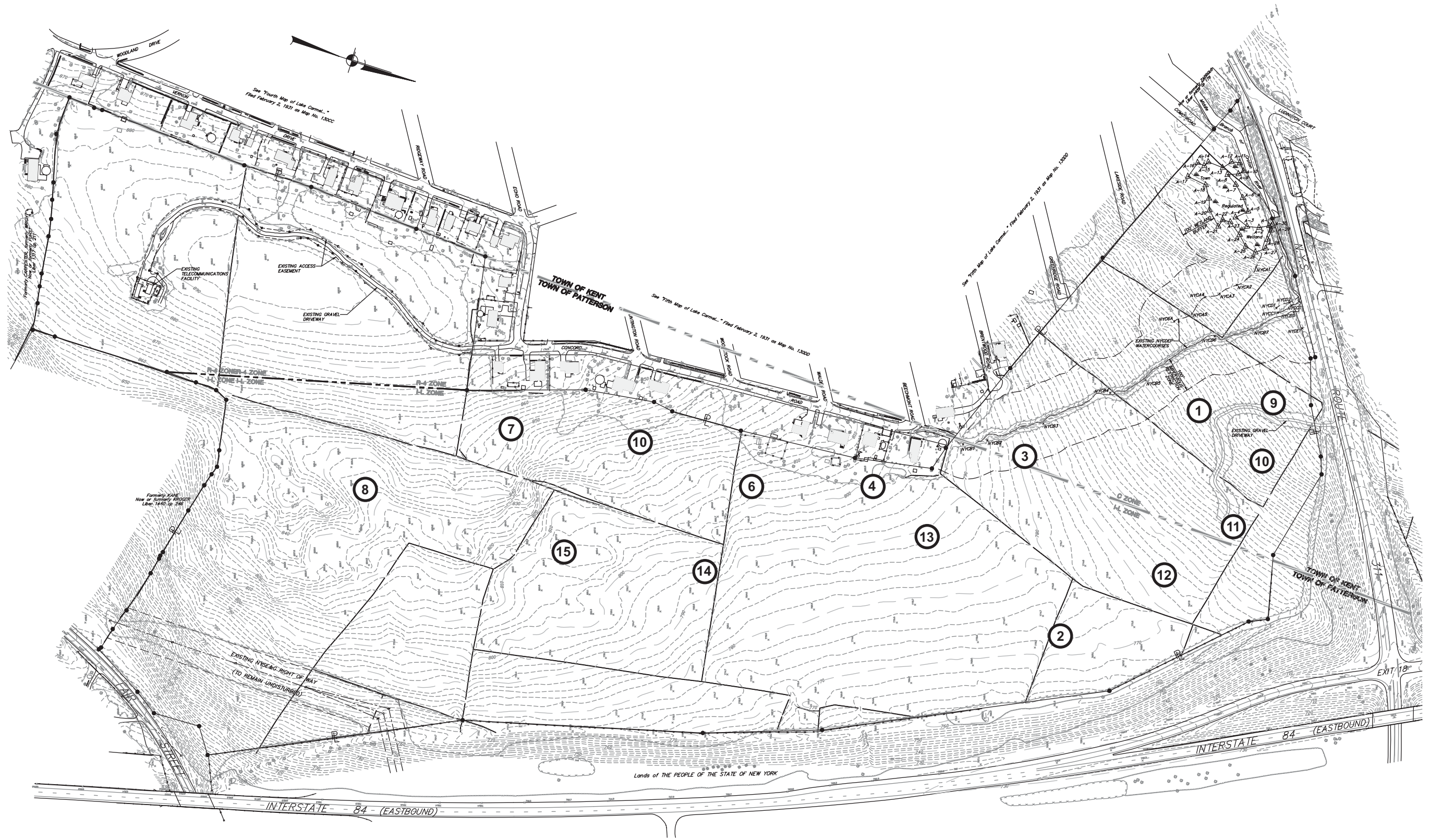
Soil Survey

Soil samples were collected at 15 locations on the Patterson Crossing Retail Center property in order to confirm soil types, sequence, depth and composition of the soil layers. Jon Dahlgren, a Geologist with Tim Miller Associates collected the 15 samples in areas where roads, buildings, and parking lots are proposed, and can be observed in Figure 4.2-2, Soil Survey Boring Locations (TMA). Five (5) soil cores were advanced in the Town of Kent and 10 in the Town of Patterson. A Munsell Soil Color chart was used to compare soil color to descriptions in the Soil Survey of Putnam and Westchester Counties, New York book. The cores were completed to a minimum depth of 14 inches or until bedrock was encountered.

In general the soil observed in the field was consistent with the descriptions in the Soil Survey of Putnam and Westchester Counties.

Soil Characteristics

Soil characteristics for individual soils mapped on the site are provided in Table 4.2-1, below. Also tabulated are the degree and kind of soil limitations that may affect typical building site development. This information has been compiled from data in the USDA Soil Survey of Putnam and Westchester Counties. Development limitations are considered *slight* where soil properties are generally favorable for the indicated use and limitations are minor and easily overcome; *moderate* if soil properties are less favorable for the indicated use and special planning, design or maintenance may be needed to overcome or minimize the limitations; and *severe* if soil properties require special design and will necessitate increased costs to construct and possibly increased maintenance.



Soil Sample Location

Figure 4.2-2: Soil Sample Locations (TMA)
 Patterson Crossing Retail Center
 Town of Patterson and Town of Kent,
 Putnam County, New York

Base Map: Insite Engineering, Surveying & Landscape Architecture, P.C
 Scale: 1 inch = 300 feet

Table 4.2-1 Soil Characteristics and Limitations						
Soil Series	Hydrologic Group ¹	Permeability (in./hr.)	Erosion Factor	Potential Limitations for:		
				K ²	Roads, Parking Lots	Buildings w/o basements
Paxton (PnB, PnC, and PnD)	C	0.6-2.0 (0-20" deep) <0.2 (20-60"deep)	0.24-0.32	Moderate to Severe: slope wetness, frost action	Moderate to Severe: slope, wetness	Moderate to Severe: slope, dense layer, wetness
Woodbridge (WdB)	C	0.6-2.0 (0-29" deep) <0.2 (29-60"deep)	0.24-0.32	Severe: frost action	Moderate: wetness	Severe: wetness
Chatfield (CsD)	B	0.6-6.0 (0-24")	0.20-0.24	Severe: slope	Severe: slope	Severe: slope, depth to rock,
Charlton (CsD)	B	0.6-6.0 (0-24")	0.24	Severe: slope	Severe: slope	Severe: slope
Ridgebury (RdB)	C	0.6-6.0 (0-26") <0.2 (26-60")	0.20-0.32	Severe: wetness, frost action	Severe: wetness	Severe: wetness
Urban land complex (UpC)	N/A	N/A	N/A	Variable	Variable	Variable
Udorthents	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³

¹ Hydrologic groups are used to estimate runoff from precipitation; they range from high infiltration (A) to low infiltration (D).
² Erosion Factor K indicates susceptibility to sheet and rill erosion (expressed in tons/acre/year). K values range from 0.05 to 0.69.
³ Properties for Udorthent soils vary considerably and are not provided in the Soil Survey.
Source: *Soil Survey of Putnam and Westchester Counties, New York, USDA SCS*

As noted in Table 4.2-1, the USDA identifies these soils as possessing potential limitations for development of roads, buildings and excavations due to their characteristics. Such limitations require planning consideration prior to development. The presence of these constraints does not mean the land cannot be developed, rather that engineering methods to compensate for soil limitations, such as erosion controls, footing drains or other drainage improvements will be required. These soils are found throughout Putnam County and erosion potential has been addressed successfully through use of standard engineering design practices and the use of Best Management Practices as described in 4.2.4 of this section.

Paxton soils, which comprise the majority of the area proposed for development, are rated with moderate to severe limitations for the construction of pavements and buildings, and for excavations for utilities, depending on the slope. To the extent possible, development is proposed for areas on the site with the least amount of slopes. A very high percentage of the slopes in the Paxton soil areas on the site are under 15 percent.

Chatfield-Charlton, Woodbridge, Ridgebury, and Urban land-Paxton complex soils are mapped on smaller, peripheral areas of the site. Chatfield-Charlton complex soils are rated with limitations due primarily to slope and wetness, while the Woodbridge and Ridgebury soils have limitations due mainly to wetness. Construction in these soils requires provisions for removal of subsurface water from excavations, foundations and subpavements to eliminate potential water and frost damage. Addressing these limitations will require

compensatory engineering methods thereby increasing construction costs. No development is proposed in areas of Ridgebury soils.

4.2.2 Future “No Build” Conditions

The “No Build” alternative is the scenario that would occur if no development were to take place at the site. Under the “No Build” condition, the site would remain in its current undeveloped state and no improvements would occur. Therefore, no man-made impact to the soil on the site or in the area surrounding the site would occur. However, the channel erosion currently occurring on the eastern portion of the site will continue to worsen if no engineering controls are implemented.

4.2.3 Future Conditions

Soils Impacts

Grading will be required for the construction of building sites, roads, storm water management basins and utilities. Grading plans and estimates have been prepared by Insite Engineering for the project site. Grading will require the disturbance of approximately 68.4 acres of the 90.5 acre site. Approximately 22.1 acres of the site will remain undisturbed following construction of the commercial development.

Detailed grading plans, which include areas of cut and fill, have been developed for the project area by the engineer (Drawings SP-3.1, SP-3.2 and SP-3.3). Copies are located at the back of this document.

Potential site development limitations presented by the different soil types on site are indicated on Table 4.2-1. Such limitations have required special planning considerations for this project. Planning factors described as limitations in the tables developed by the Soil Conservation Service reflect the difficulty and relative costs of the corrective measures that may be necessary (i.e. construction phasing, erosion control, footing drains or other drainage improvements) to develop the site as planned. The limiting characteristics of these soils can be mitigated by careful project planning, design and management.

The impacts to soils associated with the project are mostly temporary and relate to erosion potential. Soils that will be covered with impervious surfaces will be permanently stabilized. Virtually all of the disturbed area not to be covered with impervious surfaces, including the storm water management basins, will be graded, seeded and landscaped.

The majority of construction on the site will occur within soils mapped as Paxton, a soil with limitations related to slope and wetness. Paxton soils have gentle to moderate slopes. A high percentage of these soils on the site have slopes under 15% with a majority of these areas being under eight percent slope. With proper construction techniques, such soil limitations will not impact the project. Mitigation measures to limit erosion are described below.

The site specific Erosion Control Plan has been developed for the project site and is shown in Drawings SP-4.2, SP-4.3, and SP-4.4 in the back of the document. It is anticipated that the proper design and implementation of mitigation measures, along with consistent and frequent inspections, will ensure success of the project with minimal soil erosion impacts.

Total earthwork for the Patterson Crossing Retail Center site is currently estimated to involve approximately 566,500 cubic yards of cut and nearly 508,500 cubic yards of fill. The volume of material is representative of 0% compaction/expansion of material. As the final design progresses, a slight change in the elevation of the main development pad will be made to balance the earthwork. Based on the current estimate, the building pads for the Home Improvement Center, the Wholesale Warehouse, and the Electronics Store, Clothing Store and Sporting Goods Store complex, will be elevated less than one foot in order balance the earthwork on the site.

4.2.4 Mitigation Measures

Soil Erosion and Sediment Control Plan

Erosion and sedimentation will be controlled during the construction period by temporary devices in accordance with a Soil Erosion and Sediment Control Plan developed specifically for this site and this project (see Drawings SP-4.2, SP-4.3, and SP-4.4 at the rear of this document). The plan has been developed by the project engineer Insite Engineering, Surveying & Landscape Architecture, PC. The plan was developed in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (April 2005) as referenced in the Erosion and Sediment Control Guidelines in the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (Permit No. GP-02-1) to address erosion control and slope stabilization.

Devices for erosion and sediment control during construction include stabilized construction entrance, inlet protection, silt fencing, stone check dams, temporary sediment basins, and temporary soil stockpiling areas. Details for these devices are provided in Drawing No. D-2, Site Details.

Following construction, sedimentation would be prevented by established vegetation and by the storm water management and storm water quality devices specified on the drawings. Construction of the permanent storm water management systems will commence as part of the initial earthwork so that these systems will be functional at the completion of construction.

Erosion Control Sequencing

The project engineer has developed a construction phasing plan designed to sequence the required work and to minimize soil erosion during project construction. The construction sequencing/phasing plan includes 13 phases (some subdivided into two separate phases , A and B), as detailed on drawing SP-4.1 "Overall Phasing Plan", attached to this DEIS. Each phase of work will be no greater than five acres in size and will be completed with all sediment and erosion control measures installed in accordance with best management practices and prior to any clearing or grubbing. Initial work would involve the removal of the existing trees, vegetation and root systems. All topsoil will be stripped and stockpiled in appropriate locations for future use on the site. These stockpiles will be stabilized appropriately with seeding and/or geotextile fabric. All slopes greater than 3:1 will be immediately stabilized.

Erosion Control Maintenance

Maintenance of erosion control features is critical to their effectiveness and proper functioning. Regular inspections of these features are required under NYSDEC SPDES General Permit. All erosion and sediment control features will be checked for stability and operation weekly and following every rain event during which 0.5 inches of precipitation or greater falls in a 24 hour period. Sediment will be removed from sediment traps, catch basins, and from behind silt fencing, in accordance with the guidance provided in the New York Standards and Specifications for Erosion and Sediment Control to ensure the proper functioning of the devices. The maintenance activities will be conducted by the construction contractor, and will be the responsibility of the applicant until the site is fully stabilized.

Best Management Practices (BMPs)

The principle objectives of the Soil Erosion and Sediment Control Plan are the following:

- divert clean surface water before it reaches the construction area;
- control erosion at its source with temporary and permanent soil protection measures;
- capture sediment-laden runoff from areas of disturbance and filter the runoff prior to discharge; and,
- decelerate and distribute storm water runoff through use of natural vegetative buffers or structural means before discharge to off-site areas.

These objectives will be achieved by utilizing a collective approach to managing runoff, i.e. Best Management Practices (BMPs).

Divert clean runoff - Diversion of runoff from off-site or stabilized areas will be accomplished through surface swales and erosion control barriers in order to keep clean water clean.

Time grading and construction to minimize soil exposure - To the extent practical, the development will be phased to limit the area of disturbed soil exposed at any particular time. One phase of construction, for example, will remain undisturbed or temporarily stabilized until the preceding phase is substantially complete.

Retain existing vegetation wherever feasible - Construction fencing or silt fencing will be used to physically define the limits of work. Wooded and wetland areas not to be developed (regraded), will be retained in the existing condition until the developed areas are completed and stabilized. Substantial buffers of existing vegetation also will be provided along the perimeter of the site and near existing wetland areas.

Stabilize disturbed areas as soon as possible - In areas where work will not occur for periods longer than two weeks, soil stabilization by hydroseeding or mulching will be done within 48 hours after the soil has been exposed. Following completion of grading operations, level areas will be immediately seeded and mulched. Sloped areas, such as fill slopes will be treated as exposed areas and will be seeded or stabilized using an appropriate approved method such as matting..

Minimize the length and steepness of slopes - The steepness and length of project associated slopes have been designed to minimize runoff velocities and to control concentrated flow. Where concentrated (swale) flow from exposed surfaces is expected to be greater than 3 feet per second, haybale or stone check dams will be installed in the swale. The check dams will be placed so that unchecked flow lengths will not be greater than 100 feet.

Maintain low runoff velocities - To protect disturbed areas from storm water runoff, haybale diversion berms and/or soil diversion berms and channels will be installed wherever runoff is likely to traverse newly exposed soil. Immediately following the clearing and stripping of topsoil, rough grading for the temporary and permanent swales and ponds will take place. The swales will direct runoff so that it can be checked or impounded.

Trap sediment on-site and prior to reaching critical downstream areas - Silt fences, hay bale check dams, filter strips, ponds, sediment traps (in areas where no ponds are proposed), and catch basin filters will be used to either impound sediment-carrying runoff and/or to filter the runoff as it flows through an area. A stabilized construction entrance will be installed to prevent construction vehicles from tracking soil onto public roadways. All temporary erosion control devices will be installed prior to the commencement of construction. The permanent storm water management systems will be installed in conjunction with the construction.

Establish a thorough maintenance and repair program - Erosion control measures will be inspected weekly and following every rain event during which 0.5 inches of precipitation or greater falls in a 24 hour period. These features will be repaired as needed to ensure that they continue to function properly. In addition to inspections by Town representatives, the applicant will be responsible for monitoring and maintaining the soil erosion and sedimentation controls.

Assign responsibility for the maintenance program - The responsibility for the monitoring and maintenance of the Erosion Control Plan will be detailed in the project specifications or construction drawings.

Retaining Walls

Two parallel retaining walls are proposed along the eastern side of the buildings roughly parallel to the eastern site boundary and Interstate 84. Construction of these walls will allow for a substantial reduction in site disturbance by reducing embankment regrading behind the buildings proposed to house the electronics, sporting goods, clothing stores and home improvement center. The proposed retaining walls will be constructed of naturally colored modular concrete block and landscaped to provide a visually appealing view from Interstate 84.