

C. Natural Environment

1. Topography and Soils

a. Existing Conditions

(1) Geology

The Project Site is located within the Newark basin physiographic province. The Newark rift basin contains Triassic and Jurassic rocks deposited in a large sedimentary basin that formed during the breakup of Pangea, the giant continent that existed about 250 to 200 million years ago. The Newark basin forms the largest physiographic province (Piedmont province) in the northern half of New Jersey. The Newark basin is not confined to NJ; rather, it extends into southern New York state and southwestern Pennsylvania.

The rocks within the Newark basin consist predominantly of siltstone and shale, along with sandstone and conglomerate. Most of these rocks have a reddish color, which gives the soils in the Newark basin a reddish hue. The Newark basin also contains lava flows and intrusions, the largest and best known of which is the Palisades sill. The Newark basin is bounded to its northwest by a large fault zone, known locally as the Ramapo fault. This fault was primarily responsible for forming the Newark basin.

(2) Soils

According to the United States Department of Agriculture, Natural Resource Conservation Service, seven soil types have been identified on the project site and are shown on Table IIIC-1 and in Exhibit III.C-1, Soils Map.

**Table IIIC-1
Existing Soil Types**

Map Unit	Soil Names
CrB	Cheshire gravelly fine sandy loam, 2 to 8 percent slopes
CuB	Cheshire-Urban land complex, 2 to 8 percent slopes
Wc	Watchaug fine sandy loam
WeB	Wethersfield gravelly silt loam, 3 to 8 percent slopes
WeC	Wethersfield, gravelly silt loam, 8 to 15 percent slopes
WuB	Wethersfield-Urban land complex, 2 to 8 percent slopes
WuC	Wethersfield-Urban land complex, 8 to 15 percent slopes

Source: Natural Resource Conservation Center Web Soil Survey

A description of the soil characteristics for the map units is as follows:

CrB—Cheshire gravelly fine sandy loam, 2 to 8 percent slopes

a. Properties and qualities

Slope: 2 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat):

Moderately high to high (0.57 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

b. Typical profile

0 to 10 inches: Gravelly fine sandy loam

10 to 22 inches: Gravelly fine sandy loam

22 to 60 inches: Gravelly sandy loam

CuB—Cheshire-Urban land complex, 2 to 8 percent slopes

a. Properties and qualities

Slope: 2 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat):

Moderately high to high (0.57 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

b. Typical profile

0 to 10 inches: Gravelly fine sandy loam

10 to 22 inches: Gravelly fine sandy loam

22 to 60 inches: Gravelly sandy loam

Wc—Watchaug fine sandy loam

a. Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat):

Moderately high to high (0.20 to 1.98 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

b. Typical profile

0 to 2 inches: Moderately decomposed plant material

2 to 7 inches: Fine sandy loam

7 to 23 inches: Gravelly fine sandy loam

23 to 64 inches: Gravelly fine sandy loam

WeB—Wethersfield gravelly silt loam, 3 to 8 percent slopes

a. Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat):

Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

b. Typical profile

0 to 13 inches: Gravelly silt loam

13 to 22 inches: Gravelly loam

22 to 60 inches: Gravelly fine sandy loam

WeC—Wethersfield gravelly silt loam, 8 to 15 percent slopes

a. Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat):

Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

b. Typical profile

0 to 13 inches: Gravelly silt loam

13 to 22 inches: Gravelly loam

22 to 60 inches: Gravelly fine sandy loam

WuB—Wethersfield-Urban land complex, 2 to 8 percent slopes

a. Properties and qualities

Slope: 2 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat):

Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None
Frequency of ponding: None

b. Typical profile

0 to 13 inches: Gravelly silt loam
13 to 22 inches: Gravelly loam
22 to 60 inches: Gravelly fine sandy loam

WuC—Wethersfield-Urban land complex, 8 to 15 percent slopes

a. Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat):
Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None

b. Typical profile

0 to 13 inches: Gravelly silt loam
13 to 22 inches: Gravelly loam
22 to 60 inches: Gravelly fine sandy loam

The soils within the Project Site should not impose any impacts to the development of the project.

(3) Topography

As shown in Exhibit III.C-2, Slope Analysis, the Project Site has generally flat to moderately sloped topography. The Site has been subject to prior development for the RPC facilities. The elevation range of the portions of the development parcels are as follow:

- Northern RPC facilities between 3rd and 1st Avenues – Elevation 104 to Elevation 155
- Broadacres Golf Course between 1st Avenue on the west and the Palisades Parkway on the east - Elevation 155 to Elevation 254
- Development area west of 3rd Avenue – Elevation 80 to Elevation 105
- Southern Development Area – Elevation 110 along the southern end of Blaisdell Road to Elevation 128 along Old Orangeburg Road.

Approximately 68 acres of the northern development area contains several acres of building, walks and roads of the former RPC facilities. The balance of the northern area, approximately 65 acres, contains the Town's Broadacres Golf Course. The highpoint is located in the northeastern portion of the Site. The low

point is located at the most western portion of the site. The Site generally slopes to the west toward 3rd Avenue and Lake Tappan.

The southern portion of the Project Site, along Blaisdell Road and Old Orangeburg Road, contains the existing single family homes along Blaisdell Road.

(4) Slopes

A slope analysis of the Project Site has identified that approximately 103.72 acres contains slopes of less than 10%, 6.76 acres that contains slopes 10% to 15% and 4.17 acres contains slopes greater than 15%. The results of the slope analysis are depicted in Exhibit III.C-2. Note that the slope analysis does not include the portion of the Broadacres Golf Course that will not be realigned.

b. Anticipated Impacts

The proposed development will demolish the existing buildings and facilities and regrade the site for the proposed residential project. The development of the northern and southern portion of the site, from a grading viewpoint, are independent. The final grading for the project will be developed during the site plan approval process, which is subsequent to the rezoning and Conceptual Plan approval considered in this DGEIS. However, for the purpose of evaluating the potential impact in this DGEIS, an estimate of the possible final elevations for the development were evaluated and are described below and in Exhibit III.C-3, Conceptual Grading.

The southern development area will include 12 single family homes along Blaisdell Road and 52 multifamily units in several buildings with access from Old Orangeburg Road. The redevelopment of this portion of the site will disturb approximately 8.1 acres, plus a portion of Blaisdell Road that will be realigned and reconstructed. This area is relatively level. Grading to prepare the development sites for the single family homes, multifamily volunteer units and parking lots will not require significant earthwork.

The northern development parcel includes the residential area and the reconstruction of portions of Broadacres Golf Course. The new street system in the north-south direction will approximately follow the existing 1st and 2nd Avenue alignment and it is anticipated that the proposed roadway elevation will be similar to the existing road elevations. The project will meet the existing roadway elevations along the northern, Convent Road, and western, 3rd Avenue, boundary of the project. The new street system will have street slopes ranging from 2% to 5%. Since the project generally follows the existing contours, significant cut and fills are not anticipated. The project will balance the cut-fill volume to the extent practical to minimize export of excess material. The construction of the northern residential portion of the project will disturb approximately 64 acres. Based on the soil types on the site, rock excavation is not anticipated.

Construction of the three new golf holes and the reconstruction of two existing holes will require the disturbance of approximately 35 acres. Installation of irrigation in the balance of the golf course will result in localized disturbance to the remaining golf course. The grading of the golf course will include the fairways, tees and greens and shaping of berms and other golf course features between the fairways. The grading of the golf course can use excess material from the residential area if coordinated with the construction phasing.

c. Mitigation

A phased construction sequence schedule of the project will limit the acreage of exposed soils at any given time. To the extent possible, the Site disturbance will be kept to less than five acres at any one time. In the event the five-acre limit is exceeded, the construction sequence will require the approval of the Town of Orangetown and the New York State Department of Environmental Conservation. Limiting the exposed soils will reduce the amount of sediments in runoff water and ultimately preserve the quality of surface waters. The construction phasing method selected will be designed to combine development with responsible land management as well as protection of sensitive environments both within the Project Site and the surrounding area.

During construction of the project, the potential for soil erosion and sedimentation will be controlled through the use of temporary soil erosion and sediment control measures. These measures will be designed and installed in accordance with *New York Guidelines for Urban Erosion and Sediment Control*, October 2005 and the Stormwater Pollution Prevention Plan prepared in accordance with the New York State Department of Environmental Conservation (NYSDEC) Pollution Discharge Elimination System (SPDES) for Discharges for Construction Activities, General Permit GP0-08-0001. The proposed Soil Erosion and Sediment Control Plan will minimize the downstream erosion by controlling runoff at its source, minimizing runoff from disturbed areas and de-concentrating storm water runoff. Temporary and permanent stabilization methods will be implemented before construction begins and will be continuously modified throughout construction to provide the best methods for stormwater management and pollution prevention.

The Soil Erosion and Sediment Control Plan will provide for phasing of activities as follows:

(1) Pre-Construction Activities

- Identify all natural resources and mark and protect them as necessary, (i.e., trees, vegetation).
- Identify on-site and downstream surface water bodies, including Lake Tappan, and install controls to protect them from sedimentation.
- Establish temporary stone construction entrance pads to capture mud and debris from the tires of construction vehicles.
- Install perimeter sediment controls such as silt fences as shown on the project plans.

- Limit all earth disturbances during this phase to work necessary to install erosion and sedimentation controls.

(2) During Construction Activities

- Install runoff and drainage controls as shown on the project plans and as necessary. These controls should reduce run-off flow rates and velocities as well as divert off-site and clean run-off.
- Stabilize the conveyance system (i.e., ditches, swales, berms, etc.) by seeding, mulching, and installing rock check dams.
- Stabilize all stormwater runoff outlets as shown on the project plans and as necessary.
- Initiate stabilization measures as soon as practical in portions of the Project Site where construction activities have temporarily or permanently ceased.
- Limit soil disturbance and exposure of bare earth to a minimum.
- Stage, protect and stabilize all topsoil stockpiles in an area away from surface waters and storm drains.
- Prepare a stabilized construction entrance where construction vehicles shall enter and exit the Project Site. The construction entrances will be maintained during the life of the construction and repaired and/or cleaned periodically to ensure proper function.
- Use water trucks as needed during construction to reduce dust generated on-site. The contractor will provide dust control in compliance with applicable local and state dust control regulations.
- Install sedimentation control measures at any location where surface run-off from disturbed or graded areas may flow off-site, to prevent sedimentation from being transported.
- Perform regular inspections and maintenance as described in the following section.

(3) Other Pollutant Controls

Paints and Solvents – During construction, temporary structures such as construction trailers may be moved on-site to store items such as paints, solvents and gasoline pertinent to the continuation of construction activities. The intention of these structures is to shelter such items and reduce the potential of entering stormwater runoff due to construction activities.

Fuels - Fuel for construction equipment shall either be obtained from a licensed distributor of petroleum products or from an approved above ground storage tank on-site. Good housekeeping and preventative maintenance procedures shall be implemented to ensure fuel spills and leaks are minimized during refueling and storage.

Temporary Facilities - Temporary sanitary facilities may be located on-site for construction workers. A waste management company may be contracted to arrive on-site and provide the routine pumping and sanitization of the facility.

Solid Waste - All solid waste shall be collected and placed in containers, which will be emptied periodically by a contract trash disposal service and hauled away from the Site.

Demolition Debris - Some demolition debris will be crushed on-site to provide fill and road subbase. Contaminated material will not be reused and will be disposed offsite.

(4) Blasting

It is not anticipated that rock will be excavated for the site development. In the event rock is encountered, the rock will be removed either by mechanical means or, in the unlikely event that it is necessary, by blasting. Any blasting would be in accordance with Chapter 13 of the Town Code, Explosives, which requires a permit to be obtained from the Bureau of Fire Prevention covering the specific blasting operation. Blasting operations shall be conducted under the direct control and supervision of competent and licensed persons and in accordance with the provisions of New York State laws and regulations and the Town Code.

2. Wetlands and Waterbodies

a. Existing Conditions

Ecological Solutions, LLC conducted a natural resources survey and wetland investigation on approximately 133 acres of the Rockland Psychiatric Center (RPC) Campus. The purpose of the survey was to document existing ecological communities/habitat cover types, evaluate the site wetlands, identify species including vegetation and wildlife and determine if any threatened or endangered species or potential habitat for such species is on the property. In addition, potential impacts to these resources and mitigation for impacts was analyzed.

The Project Site contains six wetlands totaling 4.33 acres. Five wetlands (Wetlands A, B, C, D and E) are located in the northeast portion of the RPC Campus. Wetland J is located in the south central portion of the RPC Campus, near Blaisdell Road. See Exhibit III.C-4, Existing Wetlands.

Wetland Delineation

The wetland delineation was completed in accordance with the specifications of the Routine Delineation Method outlined in the *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-13*. This included a review of published data and field investigations and sampling. The wetlands in the Project Site are subject to regulation by the U.S. Army Corps of Engineers (USACE). There are no New York State Department of Environmental Conservation (NYSDEC) mapped wetlands on the Project Site.

Wetland Functional Evaluation

The assessment of wetland functions and values utilized a widely accepted method developed by the New England District, USACE. Thirteen (13) distinct wetland functions and values were assessed for the delineated wetlands on the site. This method provided an objective, descriptive quality index of each wetland rather than a subjective quantified rating of the wetland. This assessment had two major objectives: 1) objectively identify the functions and values provided by the wetlands identified on the site; and 2) provide baseline data with which the Developer could work in planning land uses, and against which the Developer could assess potential impacts of proposed development of the Project Site.

Wetlands are protected because of the functions they perform and the benefits that society reaps from those functions. Wetland functions are chemical, physical, and biological processes that wetlands naturally perform as a matter of course, such as absorption of nutrients or floodwaters, or provision of habitat for fish and wildlife. Wetland values are the benefits that society derives from wetland functions, such as flood abatement, or water quality maintenance.

The functions and values assessment conducted on the Project Site was based on the method outlined in *The Highway Methodology Workbook Supplement: Wetland Functions and Values, A Descriptive Approach* (Highway Method), by the U.S. Army Corps of Engineers New England District (November 1995). The Highway Method provides for assessment of each wetland for thirteen defined functions and values. Of these, the first eight are considered wetland functions, and the last five are considered to be wetland values. These are:

1. Groundwater Recharge/Discharge – The potential for a wetland to serve as a recharge area for an aquifer or as a surface discharge point for groundwater.
2. Floodflow Attenuation – A wetland’s ability to store and attenuate floodwaters during prolonged precipitation events, thereby reducing or preventing flood damage.
3. Fish and Shellfish Habitat – The ability of permanent or temporary water bodies to provide suitable habitat for fish or shellfish.
4. Sediment/Toxicant/Pathogen Retention – The effectiveness of the wetland in trapping sediments, toxicants or pathogens, thereby protecting water quality.
5. Nutrient Removal/Retention/Transformation – The effectiveness of the wetland at absorbing, retaining, and transforming or binding excess nutrients, thereby protecting water quality.
6. Production Export – The wetland’s ability to produce food or usable products for humans or other living organisms.
7. Sediment/Shoreline Stabilization – The wetland’s ability to prevent erosion and sedimentation by stabilizing soils along stream banks or the shorelines of water bodies.
8. Wildlife Habitat – The ability of wetlands to provide food, water, cover, or space for wildlife populations typically associated with wetlands or their adjacent areas, both resident and migratory.
9. Recreation – The value placed on a wetland by society for providing consumptive and non-consumptive as well as active or passive recreational opportunities such as canoeing/boating, fishing, hunting, bird/wildlife watching, hiking, etc.
10. Education/Scientific Value – The value placed on a wetland by society for providing subjects for scientific study or research or providing a teaching resource for schools.
11. Uniqueness/Heritage – The value placed on a wetland by society for having unique characteristics such as archaeological sites or sites of historical events, unusual aesthetic qualities, or unique plants, animals, or geologic features, etc.
12. Visual Quality/Aesthetics – The value placed on a wetland by society for having visual and/or other aesthetic qualities.
13. Threatened or Endangered Species Habitat¹ – The value placed on a wetland by society for effectively harboring or providing habitat for threatened or endangered species.

¹ The Highway Methodology Workbook Supplement suggests that species lists of observed and potential wildlife species should be included with a functions and values assessment. The species lists for this assessment are included separately in this chapter.

Each function or value in the list has a set list of qualifiers for identifying which functions and values are performed or provided by each wetland. In addition to outlining qualifying rationale for each function and value, the data forms also document information on the wetland size, distance to nearest road or other development, adjacent land uses, position in the watershed, impacts from human activity, tributaries, cover types, connectivity to other wetlands, and general condition.

All of these elements factor into the functions and values assessment. Wetland data and observations for this functions and values assessment were collected during 2007 and 2008 to observe herbaceous plant growth and hydrologic characteristics during the growing season to complete the functions and values assessment. Observations and other published data were used to assess the functions and values of the wetland.

Wetland Assessment

Wetlands A, B, and C – Wetland “A” totals 0.24 acres, Wetland “B” totals 0.06 acres, and Wetland “C” totals 0.10 acres. These wetlands are located at the northeastern corner of the Project Site and are considered one complex separated by crossings. This wetland complex receives water primarily from overland sheet flow and drains man-made drainage swales that lead to underground drainage structures.

Hydrological indicators identified within the wetlands included soil saturation, watermarks, drift lines, drainage patterns, and water stained leaves. The wetlands are shallow emergent wetlands (PEM1C) located within the Broadacres Golf Course. Each is a reed grass (*Phragmites*) dominated marsh with an understory of skunk cabbage (*Symplocarpus foetidus*) and tussock sedge (*Carex stricta*) and is seasonally inundated. This system is surrounded by the existing golf course, nearby roads and other development. Functions and values provided by the wetlands delineated on the site include sediment trapping, nutrient removal, and wildlife habitat. Of these, the most significant functions of this wetland, based on the functions and values assessment, are sediment trapping and nutrient removal.

Based on the US Supreme Court decision in Solid Waste Agency of Northern Cook County v. US Army Corps of Engineers, 531 U.S. 159 (2001), and Corps guidance following that decision, as well as the Rapanos decision relating to the scope of “waters of the United States” under Section 404 of the Clean Water Act, it is concluded that wetland areas designated “A”, “B”, and “C” are not waters of the United States under Section 404 because they are isolated, meaning there is no direct connection to any tributary of navigable water. Therefore, these wetland areas are non jurisdictional and not regulated.

Wetlands D and E – Wetland “D” totals 0.06 acres and Wetland “E” totals 0.07 acres. This small wetland complex is located at the east-central portion of the Project Site. These wetlands are considered one complex separated by a golf path crossing

and receive water primarily from overland sheet flow. Drainage swales also direct flow from this complex to underground drainage structures.

Hydrological indicators identified within the wetlands included soil saturation, watermarks, drift lines, drainage patterns, and water stained leaves. The wetlands are also shallow emergent wetlands (PEMIC) located within the golf course area. Each is a cattail dominated marsh with no overstory or understory. This system is surrounded by the existing golf course and other development. Functions and values provided by the wetlands delineated on the site include sediment trapping, nutrient removal, and wildlife habitat. Of these, the most significant functions of this wetland, based on extent of rationale in identifying functions and values, are sediment trapping and nutrient removal.

As with Wetlands A, B, and C, it is concluded that wetland areas designated D and E are not waters of the United States under Section 404 because they are isolated, meaning there is no direct connection to any tributary of navigable water. Therefore, these wetland areas are non jurisdictional and not regulated.

Wetland J – Wetland “J” totals 3.80 acres and is located on the southeast side of Blaisdell Road in the southern portion of the Project Site. The wetland is fed through ground water seepage and surface sheet flow, and drains south to an off-site drainage ditch. Hydrologic indicators observed included soil saturation, shallow root systems, drainage patterns, and water stained leaves. This wetland is an intermittently flooded, broad-leafed deciduous forested wetland basin (PF01). It is surrounded by second growth mixed hardwood forest, dominated by maples, ashes, and oaks. Functions and values of Wetland J include groundwater recharge, floodflow attenuation, sediment trapping, nutrient removal, production export, shoreline stabilization, wildlife habitat, recreation, educational/scientific resources, uniqueness/heritage, and visual quality. Of these, the most significant functions of this wetland, based on the extent of rationale in identifying functions and values, are: floodflow attenuation and wildlife habitat. Wetland J is regulated by the US Army Corps of Engineers (USACE) because it is connected to Lake Tappan, and ultimately to the Hudson River.

b. Potential Impacts

The Proposed Action will impact approximately 0.63 acres of existing wetlands in the Project Site, which includes 0.10 acres of jurisdictional wetlands. Potential wetland impacts are described in the following table and in Exhibit III.C-5, Wetlands Impacts.

**Table IIC-2
Potential Wetlands Impacts**

Wetland	Pre-Development Size (Acres)	Wetland Area Impacted by Proposed Development (Acres)	Post-Development Size (Acres)	Jurisdiction
A	0.24	0.24	0	None
B	0.06	0.06	0	None
C	0.10	0.10	0	None
D	0.06	0.06	0	None
E	0.07	0.07	0	None
J	3.80	0.10	3.70	USACE
Total	4.33	0.63	3.70	

Source: Ecological Solutions, LLC

The proposed development of the property may require a Federal Section 404 Nationwide Permit #29 for residential development activities associated with the placement of fill in jurisdictional wetlands on the site, potentially totaling 0.10 acres. A NYSDEC Section 401 Water Quality Certification is also required if a federal permit or authorization is necessary for the project.

Short-term physical impacts to regulated wetlands on the site will be avoided by the use of erosion controls throughout the property especially in critical areas adjacent to regulated wetlands.

Lake Tappan is located approximately a half mile west of the Project Site. The existing RPC Campus drains to Lake Tappan via several watercourses in the vicinity of 3rd Avenue. Currently, fertilizers used on the golf course, waterfowl droppings, and runoff from impermeable surfaces within the Project Site drains to Lake Tappan. Redevelopment activities on the Project Site will have the potential to increase erosion and sedimentation generated from the site.

c. Mitigation

During site plan approval, it may be possible to avoid any impacts to wetlands through design. During construction, appropriate soil erosion and sediment control measures will reduce any potential impacts to these regulated resources.

NYSDEC Permit Requirements

The project may require a NYSDEC Section 401 Water Quality Certification for activities that impact regulated federal wetlands.

USACE Permit Requirements

The proposed project may require a Nationwide Permit #29 and mitigation for jurisdictional wetland impacts greater than 0.10 acres. As mitigation for wetland impacts, a wetland establishment would have to be provided on the site. A wetland habitat consisting of a wooded wetland with a shrub understory, leading to an emergent wetland, to a shallow marsh to a small open pond will be developed as a progression of habitats to establish the area to provide for a varied vegetative and wildlife habitat. It is anticipated that this mitigation could be provided as part of the development of the three new golf holes.

Typical wetland mitigation plantings (shrubs) include: *Cornus stolonifera* - Red Osier Dogwood, *Viburnum dentatum* – Arrowwood, *Clethra alnifolia* - Sweet Pepperbush, *Ilex verticillata* – Winterberry, *Lindera benzoin* – Spicebush, and *Vaccinium corymbosum* - Highbush Blueberry.

Additional mitigation to replace any lost functions of the wetlands include Stormwater Quality Management Basins or Detention Ponds that will be provided on the site for nutrient removal and water quality improvement. Exhibit III.B-10 shows a conceptual landscape plan for the site, including potential mitigation wetland area and water quality basins.

The proposed redevelopment activities will require that erosion and sediment controls be utilized at the site to mitigate any potential for the flow of particles offsite. In addition, substantial stormwater management basins will treat flows prior to discharge from the site. Planted bioswales could also be utilized to remove nutrients from stormwater. Currently there are no stormwater basins utilized at the site.

3. Flora and Fauna

a. Existing Conditions

The Project Site contains several large landscaped areas known as cultural cover types as well as small pockets of distinct mixed upland forest cover type occupying the well-drained areas on the property. The canopy layer ranges from dense to sparse depending on the age class of the canopy layer on any given point on the site. The understory also ranges from very dense thicket to a more easily traveled zone where the trees are larger diameter. The forest community is young to medium aged and generally consists of trees ranging in size from 4 to 8 inches diameter at breast height (dbh), with larger specimen trees in the 12 to 24 inch dbh range in select locations. Soil moisture was evident in portions of the upland forest areas and was enough in some areas for some herpetiles to use as habitat. There are six cover types that were observed, identified, and mapped on the Project Site. Table IIIC-3 indicates the amount of cover types identified on the Project Site.

**Table IIIC-3
Cover Types on Project Site**

No.	Cover Type	Acres Identified on Project Site
1	Rich Mesophytic Forest	3.72
2	Shallow Emergent Marsh	0.53
3	Red Maple Hardwood Swamp	3.80
4	Paved Road/Path	26.33
5	Mowed Lawn with Trees	108.26
6	Urban Structure Exterior	Included in #4
Total		142.64

Source: Ecological Solutions, LLC

(1) Terrestrial System

The terrestrial system on the Project Site consists of upland habitats. These habitats have well-drained soils that are dry to mesic (never hydric), and vegetative cover that is never predominantly hydrophytic, even if the soil surface is occasionally or seasonally flooded or saturated. The forested upland subsystem includes upland communities with more than 60% canopy cover of trees; these communities occur on substrates with less than 50% rock outcrop or shallow soil over bedrock. Rich Mesophytic Forest, described below, is part of the terrestrial system.

Rich Mesophytic Forest

The Project Site contains a mixed forest that resembles the mixed mesophytic forests of the Allegheny Plateau south of New York but is less diverse. A canopy with a relatively large number of codominant trees characterizes this forest. Canopy codominants include red oak (*Quercus rubra*), red maple (*Acer rubrum*), white ash (*Fraxinus americana*), American beech (*Fagus grandifolia*), sugar maple (*Acer saccharum*), black cherry (*Prunus serotina*), and black birch (*Betula*

lenta). Less common in the canopy and subcanopy are tulip tree (*Liriodendron tulipifera*), white oak (*Quercus alba*), white pine (*Pinus strobus*), basswood (*Tilia americana*), bitternut hickory (*Carya cordiformis*), black oak (*Quercus velutina*), and eastern hop hornbeam (*Ostrya virginiana*). This forest has a well-developed shrublayer with a variety of characteristic species including musclewood (*Carpinus caroliniana*), arrow-wood (*Viburnum acerifolium*), and witch hazel (*Hamamelis virginiana*). Characteristic herbs are jack-in-the-pulpit (*Arisaema triphyllum*), early meadow rue (*Thalictrum dioicum*), round-leaf violet (*Viola rotundifolia*), spinulose wood-fern (*Dryopteris spinulosa*), garlic mustard (*Allaria officinalis*), violet (*Viola spp.*), carrion flower (*Smilax herbacea*), wood geranium (*Geranium maculatum*), wild strawberry (*Fragaria virginiana*), clover (*Trifolium spp.*), false Solomon's seal (*Smilacina racemosa*), trout lily (*Erythronium americanum*), club moss (*Lycopodium spp.*), and Christmas fern (*Polystichum crostichoides*). Bird species observed in the ground layer included brown thrasher (*Orpheus rufus*), veery (*Catharus fuscescens*), ovenbird (*Seiurus aurocapillus*), and turkey (*Meleagris gallopavo*). Herpetiles observed in the upland forest community included red-backed salamander (*Plethodon cinereus*), American toad (*Bufo americanus*), and garter snake (*Thamnophis sirtalis*).

Mammals located in the upland forest and wetland portion of the site included opossum (*Didelphis virginiana*), little brown bat (*Myotis lucifugus*), deer mouse (*Peromyscus maniculatus*), gray squirrel (*Sciurus carolinensis*), eastern chipmunk (*Tamias striatus*), woodchuck (*Marmota monax*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), red fox (*Urocyon cinereoargenteus*), and white-tailed deer (*Odocoileus virginiana*).

(2) Terrestrial Cultural

This subsystem includes communities that are either created and maintained by human activities, or are modified by human influence to such a degree that the physical conformation of the substrate, or the biological composition of the resident community is substantially different from the character of the substrate or community as it existed prior to human influence.

Paved Road/Path

The Project Site contains several paved roads and paths. There is sparse vegetation rooted in cracks in the paved surface. Several trails or paths are also contained within the forested areas on the property.

Mowed Lawn with Trees

The property contains recreational land (golf course) in which the groundcover is dominated by clipped grasses and forbs, and is shaded by approximately 30% cover of trees. Ornamental and native shrubs are present, with less than 50% cover. The groundcover is maintained by mowing. Characteristic animals include gray squirrel (*Sciurus carolinensis*), American robin (*Turdus migratorius*), mourning dove (*Zenaida macroura*), and mockingbird (*Mimus polyglottos*).

Urban structure exterior

The property contains many structures with exterior surfaces of metal, wood, or concrete (such as commercial buildings, apartment buildings, houses, bridges) as well as structural surfaces composed of inorganic materials (glass, plastics, etc.) in an urban or densely populated suburban area. Nooks and crannies provide nesting habitat for birds and insects, and roosting sites for bats. Characteristic birds include American robin (*Turdus migratorius*) and exotic birds such as rock dove (*Columba livia*) and house sparrow (*Passer domesticus*).

(3) Open Mineral Soil Wetlands

This subsystem includes wetlands with less than 50% canopy cover of trees. In this classification, a tree is defined as a woody plant usually having one principal stem or trunk, a definite crown shape, and characteristically reaching a mature height of at least 16 ft (5 m). The dominant vegetation may include shrubs or herbs. Substrates range from mineral soils or bedrock to well-decomposed organic soils (muck). Fluctuating water levels allow enough aeration of the substrate to allow plant litter to decompose, so there is little or no accumulation of peat.

Shallow Emergent Marsh

This community type occurs within the golf course area on mineral soil that is permanently saturated and seasonally flooded. Water depths ranged from 1-3 feet in each wetland delineated on the site. Cattail (*Typha latifolia*) and reed grass (*Phragmites communis*) dominate the wetlands located on the golf course. Other plants characteristic of shallow emergent marshes include blue flag iris (*Iris versicolor*), sensitive fern (*Onoclea sensibilis*), common skullcap (*Scutellaria galericulata*), and beggarticks (*Bidens* spp). Amphibians found in shallow emergent marshes include frogs such as eastern American toad (*Bufo a. americanus*), green frog (*Rana clamitans melanota*), and salamanders such as northern redback salamander (*Plethodon c. cinereus*). Birds found include red-winged blackbird (*Agelaius phoeniceus*), marsh wren (*Cistothorus palustris*), and common yellowthroat (*Geothlypis trichas*).

(4) Forested Mineral Soil Wetlands

This subsystem includes a saturated swamp designated as Wetland "J". This type of swamp typically has at least 50% canopy cover of trees. For the purposes of this classification, a tree is defined as a woody plant usually having one principal stem or trunk, a definite crown shape, and characteristically reaching a mature height of at least 16 ft.

Red Maple-Hardwood Swamp

Wetland "J" is a hardwood swamp that occurs in a poorly drained depression on inorganic soils. Red maple (*Acer rubrum*) is codominant with hardwoods including ashes (*Fraxinus pennsylvanica*, *F. nigra*, and *F. americana*), elms (*Ulmus americana* and *U. rubra*) and swamp white oak (*Quercus bicolor*). Other

trees with low percent cover include ironwood (*Carpinus carolinianus*), and white pine (*Pinus strobus*). The shrublayer is well developed and dense. Characteristic shrubs are winterberry (*Ilex verticillata*), spicebush (*Lindera benzoin*), and highbush blueberry (*Vaccinium corymbosum*). The herbaceous layer is dominated by sensitive fern (*Onoclea sensibilis*) and cinnamon fern (*Osmunda cinnemomea*). Characteristic herbs include skunk cabbage (*Symplocarpus foetidus*), white hellebore (*Veratrum viride*) and jewelweed (*Impatiens capensis*).

Additional species including migratory species located on the site during the field work include the following:

**Table IIC-4
Additional Species**

Common Name	Scientific Name
Eastern Phoebe	Sayornis phoebe
Black-capped Chickadee	Poecile atricapillus
Red-breasted Nuthatch	Sitta canadensis
White-breasted Nuthatch	Sitta carolinensis
Tufted Titmouse	Parus bicolor
Wood Thrush	Hylocichla mustelina
Red-tailed Hawk	Buteo jamaicensis
Broad-winged Hawk	Buteo platypterus
Barn Swallow	Hirundo rustica
Carolina Wren	Thryothorus ludovicianus
Common Grackle	Quiscalus quiscula
Turkey Vulture	Cathartes aura
American Robin	Turdus migratorius
Cardinal	Cardinalis cardinalis
Red Eyed Vireo	Vireo olivaceus
Yellow Warbler	Dendroica petechia
Blackburnian Warbler	Dendroica fusca
Northern Flicker	Colaptes auratus
Mourning Dove	Zenaida macroura
Downy Woodpecker	Picoides pubescens
Star-nosed Mole	Condylura cristata
Eastern Cottontail	Sylvilagus floridanus

Source: Ecological Solutions, LLC

b. Potential Impacts

The proposed redevelopment of the Project Site requires vegetation clearing. Earth moving (excavation, filling, and grading), operation of heavy machinery, construction, and alteration to existing drainage patterns, addition of impervious surfaces, changes in traffic patterns, and human activity will also occur on the Project Site. These activities have a potential to adversely impact the existing environmental elements of the site. Anticipated impacts from these activities are outlined below.

Impacts to Vegetation and Cover Types

Forested Wetland. Development activities have been planned to mostly avoid impacts to Federal wetland area, with 0.1 acres of USACE wetlands potentially impacted. See Chapter IIIC.2., Wetlands and Waterbodies.

Habitat Loss. The proposed activities on the site will require the removal of some natural vegetation in upland areas, potentially altering portions of upland cover type areas but not their distribution on the site. The upland forest area will be replaced with cultural cover types that are currently found on the property in abundance such as mowed lawn with trees. Habitat values will be dependent on landscape planting schemes and maintenance regimes of the developed lots, and on availability of protective cover for wildlife. Overall, no significant decrease in natural wildlife habitat value will result from the proposed development, and the species richness of the local wildlife community should continue with little change.

Table IIIC-5 describes the cover type impacts based on the Conceptual Plan.

**Table IIIC-5
Cover Type Impacts**

No.	Cover Type	Acres Existing on Project Site	Acres Proposed on Project Site
1	Rich Mesophytic Forest	3.72	0.10
2	Shallow Emergent Marsh	0.53	0.00
3	Red Maple Hardwood Swamp	3.80	0.10
4	Paved Road/Path	26.33	29.71
5	Mowed Lawn with Trees	108.26	112.73
6	Urban Structure Exterior	Included in #4	Included in #4
Total		142.64	142.64

Source: Ecological Solutions, LLC

Impacts to Wildlife

All Species. Direct impacts to wildlife from the proposed redevelopment will primarily be displacement. Some species found on the site are typically found in suburban settings and have already adapted to proximal human habitation. These species will remain on the site as long as availability of basic habitat features (food, water, cover, and space) remains. Some species will relocate to undeveloped portions of the RPC Campus (e.g., east and south of Lake Tappan).

Listed Species. No state or federally listed threatened or endangered species are found on the site. (See Chapter IIIC.4. below for details.)

c. Mitigation

The proposed redevelopment of the Project Site is anticipated to have the potential for minor environmental impacts that can be minimized through the implementation of

mitigation measures. These are actions taken to prevent or lower the probability of adverse effects from the redevelopment activities. Mitigation measures for the potential impacts are outlined below. Exhibit III.B-10 shows a conceptual landscape plan for the site, including water quality basins, a potential wetland mitigation area, landscape buffer areas and areas of open space.

Mitigation for Impacts to Vegetation and Cover Types

Removal of natural vegetation will be minimized as much as possible to preserve natural cover types and habitat on the site. Vegetation clearing will be minimized by establishing undisturbed, naturally vegetated buffers demarcated by orange construction fencing in the field.

Other habitat aspects of the site should be preserved where they do not interfere with the functioning of the redevelopment activities. Such elements may include existing stonewalls and standing dead trees (snags). Old stonewalls provide microhabitats for small mammals, herptiles, and invertebrates. Snags provide perching, nesting, and feeding sites for a wide variety of wildlife. These elements or parts thereof should be protected where possible. Impacts from habitat and forest fragmentation can be avoided by maintaining connecting cover corridors between natural habitat areas. Connecting corridors do not have to be entirely unbroken, as long as breaks in the natural vegetation are not excessive.

Mitigation for Wildlife Impacts

Temporary wildlife displacement during construction is a short-term impact. The redevelopment plan minimizes forest cover removal and orange construction fencing will be used between the areas to be graded and the areas that will be left undisturbed on the site.

4. Threatened/Endangered Species

As required in the GEIS scoping document, a separate analysis has been developed for potential threatened or endangered species on the Site as identified by the NYSDEC-Natural Heritage Database, and/or US Fish and Wildlife Service records. This analysis is provided because these species described below were identified within the vicinity of the Project Site. An analysis of field surveys and observations indicates that none of these species have been identified on the Project Site. See Appendix D for additional information.

a. Indiana Bats

Indiana bat hibernacula, or winter hibernation homes, such as secluded caves or mines, and hibernacula characteristics have been well documented by numerous observational studies. There are eight hibernacula currently known in New York. The hibernacula are critical to the survival of this species because so few are known

to exist. The United States Fish and Wildlife Service and NYSDEC are continually documenting habitat utilization by this species once emergence occurs.

In the spring, Indiana bats disperse from their winter homes, some going hundreds of miles. Females congregate in nursery colonies, only a handful of which have been discovered. These were located along the banks of streams or lakes in forested habitat, under the loose bark of mature shagbark hickory trees, and some dead trees that have open or hanging bark to provide shelter, and which can contain 50 to 100 females. One young is born to each female, probably late in June.

Outside of hibernation, Indiana bats are very mobile and use live trees greater than 5 inches dbh, especially those with dead wood and snags, or dead trees in a variety of habitats for roosts during the summer months. Trees 9 inches dbh or greater with exfoliating bark/crevices, southern or western exposure, and solar exposure are the most important habitat for maternal colonies during the summer months. In August or early September, Indiana bats swarm at the entrance of selected caves or mines for mating. Criteria for selecting hibernacula are not clearly understood; many apparently suitable sites are not occupied. Where this species is found, however, it can be extremely abundant, with densities of more than 300 per square foot. Bats often return to exactly the same spots within individual caves or mines every year.

A large percentage of the RPC Campus is already developed and remaining undeveloped areas are lightly wooded and contain distinct habitat types that can broadly be categorized as mixed upland forest, and shallow emergent wetland. The property has gentle to moderately steep slopes in the mixed upland forest areas. The forested portion of the property contains some trees over 9" dbh that contain tight smooth bark and lack crevices, cavities or holes that are potential Indiana Bat roosting trees. No Indiana Bat roosting or maternal colony trees/habitat were observed on the property and no hibernacula are suspected on the property.

b. Bog Turtles

The Bog Turtle habitat suitability assessment followed the protocols outlined by the United State Fish and Wildlife Service (2001)² and the Guidelines for Bog Turtle Surveys last revised on April 13, 2006³. Potential bog turtle habitat is recognized by three criteria (not all of which may occur in the same portion of a particular wetland): suitable hydrology; suitable soils; and, suitable vegetation (see Appendix D).

The "waters of the United States" including wetland area and tributary on the Project Site does not contain suitable hydrology or mucky soils substrate often associated with Bog Turtle habitat such as open, early successional habitat wet meadows or open calcareous boggy areas generally dominated by sedges (*Carex spp.*) or sphagnum

² United State Fish and Wildlife Service 2001 Bog Turtle (*Clemmys muhlenbergii*) Northern Population, Recovery Plan. Hadley, Massachusetts.

³ www.fws.gov/northeast/nyfo/es/btsurvey.pdf

moss. Like other cold-blooded or ectothermic species, it requires habitats with a good deal of solar penetration for basking and nesting.

Hydrology supporting the wetlands on the site is primarily intermittent surface water and overland flow that appears to fluctuate during each storm event. The fluctuating hydrology and lack of suitable mucky soils negates the potential for bog turtle habitat on the property.

c. Fairy Wand

Correspondence from the NYSDEC dated July 23, 2008 indicates that there is a historic record from 1857 of Fairy Wand (*Chamaelirium luteum*), a New York State threatened species, on or in the vicinity of the Project Site. This plant is indigenous to the United States, and is found growing in woodlands from Massachusetts to Michigan. It is an erect, slender herb, about 1 ½ to 2 feet high, and without branches. The stem is smooth, round, striate, and terminates in a long, slender spike of small white flowers. The lower leaves are obovate-spatulate, smooth, entire, alternate, and exstipulate. They are clustered at the base of the stem, gradually becoming smaller until the upper are reduced to scales. They are attached at an acute angle to the stem. The radical leaves are obtuse, but those on the upper part of the stem are acute; the veins are parallel, and run lengthwise along the leaf, but are not prominent. The flowers are very small, and the fertile and sterile are on different stems; the fertile stems being much more leafy than the sterile. The female flowers consist, each, of 6 small, linear, white petals, a small, globular ovary, about the size of a grain of hemp seed, with 3 linear stigmas about the length of the ovary; each one is succeeded by a dry, oblong capsule, opening by 3 valves at the apex, and containing numerous minute seeds. The sterile flowers are in spikes much longer than those of the fertile, and are from 4 to 6 inches in length. They have 6 linear petals, and the same number of stamens, which have unequal filaments about twice the length of the petals; the anthers are small and globular.

Field surveys of the property revealed no Fairy Wand specimens on the Project Site. Therefore, no impacts to this species will occur from the Proposed Action.

d. American Strawberry-bush

Correspondence from the NYSDEC dated July 23, 2008 indicates that there is a historic record from 1894 of American Strawberry-bush (*Euonymus americanus*), a New York State endangered species, on or in the vicinity of the Project Site. American strawberry-bush is a thin little shrub with narrow, opposite leaves, green stems and tiny, inconspicuous flowers that give way to peculiar crimson red fruits that look like strawberries bursting out of their red winter coats. The bush usually gets no more than 4-6 ft (1.2-1.8 m) tall, and has a loose, sprawling structure with thin, wiry, spreading branches and an open, airy form. There usually are several main upright stems arising in a stoloniferous clump. The twigs are distinctive, four-angled and green. The deciduous leaves are 2-3 in (5.1-7.6 cm) long and have fine teeth on the

margins. The springtime flowers are very inconspicuous, only about a third of an inch (0.8 cm) across, with five greenish yellow petals. The fruit is a warty red capsule about 1 in (2.5 cm) across that looks a little like a strawberry. When ripe, the capsule splits open to reveal four or five orange-red seeds framed by the persistent scarlet husks. American Strawberry-bush occurs in the shady understory of moist forests of eastern North America from New York south to Florida, and west to Oklahoma and east Texas. American Strawberry-bush prefers a well drained, humus rich soil, slightly on the acid side and does well in shady situations, tolerating even full shade, and thriving in light, dappled shade.

Field surveys of the property revealed no American Strawberry-bush specimens on the Project Site. Therefore, no impacts to this species will occur from the Proposed Action.

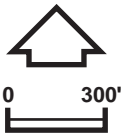
e. Featherfoil

Correspondence from the NYSDEC dated July 23, 2008 indicates that there is a record of Featherfoil (*Hottonia inflata*), a New York State threatened species, on or in the vicinity of the Project Site. Featherfoil is a short-lived aquatic herb with an entirely submerged, spongy, densely leaved, hollow stem. This unusual species is an aquatic plant with feathery basal leaves. It is a rare species of swamps, and can be found in great abundance in some years, and not at all in other years. At some point in the life cycle, this plant uproots and becomes free-floating. Field surveys of the property revealed no Featherfoil specimens on the Project Site. Therefore, no impacts to this species will occur from the Proposed Action.

f. Small Whorled Pogonia

Correspondence from the NYSDEC dated July 23, 2008 indicates that there is one historic record from 1887 of Small Whorled Pogonia (*Isotria medeoloides*), a New York State endangered and federally threatened species, on or in the vicinity of the Project Site. This is an herbaceous plant that is a perennial reaching 25cm in height (10 inches). The stem is hollow and the leaves are whorled. Leaves can reach 8cm in length (3 inches). Leaves can be as wide as 4 cm (1.6 inches). There are usually five elliptic leaves (sometimes more) in a whorl just below the flower. The leaves point down at the time of flowering. The flowers are irregular in shape and green, yellow green, or sometimes white. Blooms first appear in late spring and continue into early summer. There are three green sepals somewhat longer than the flower. The lower lip is bearded. There is usually only a single flower, sometimes two. It is found in open woods, or shaded openings among hardwoods and pine from Maine to Missouri and as far south as north Georgia in very scattered locations.

Field surveys of the property revealed no Small Whorled Pogonia specimens on the Project Site. Therefore, no impacts to this species will occur from the Proposed Action.

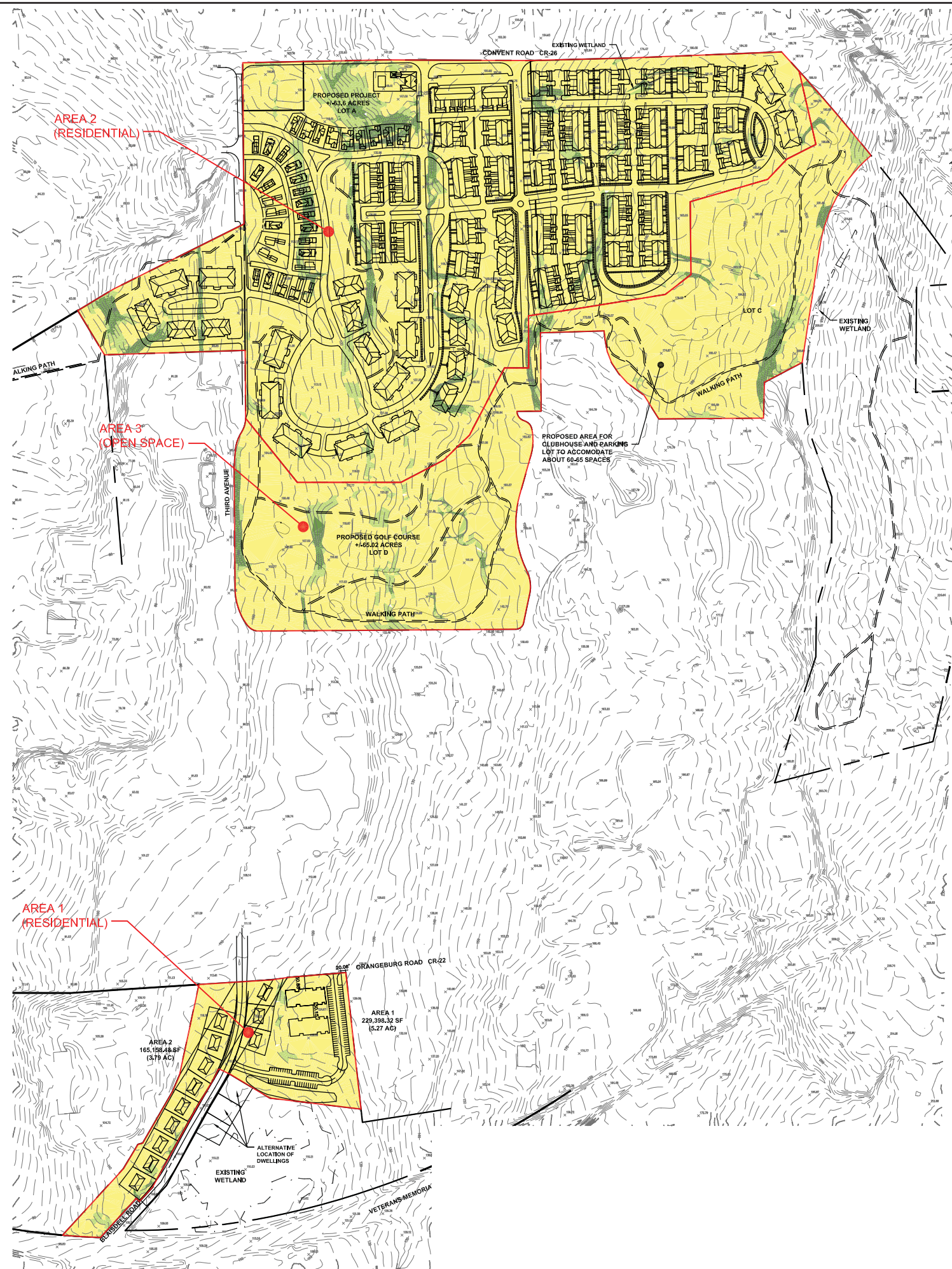


- Ad** Alden silt loam
- CeB** Charlton fine sandy loam, 2% to 8% slopes
- CrB** Cheshire gravelly fine sandy loam, 2% to 8% slopes
- CuB** Cheshire-Urban land complex, 2% to 8% slopes
- HcC** Hinckley gravelly loamy sand, 8% to 15% slopes
- ReA** Riverhead fine sandy loam, 0 to 3% slopes
- ReB** Riverhead fine sandy loam, 3% to 8% slopes
- Sa** Sloan silt loam
- Us** Udorthents, smoothed
- Uw** Udorthents, wet substratum
- Ux** Urban land
- Wa** Wallington silt loam
- Wc** Watchaug fine sandy loam
- WeB** Wethersfield gravelly silt loam, 3% to 8% slopes
- WeC** Wethersfield gravelly silt loam, 8% to 15% slopes
- WeD** Wethersfield gravelly silt loam, 15% to 25% slopes
- WuB** Wethersfield-Urban land complex, 2% to 8% slopes
- WuC** Wethersfield-Urban land complex, 8% to 15% slopes

Exhibit III.C-1
SOIL SURVEY

**FOUR SEASONS AT ORANGETOWN
ROCKLAND PSYCHIATRIC CENTER**
Town of Orangetown, New York

BASE MAP SOURCE: McLaren Engineering Group

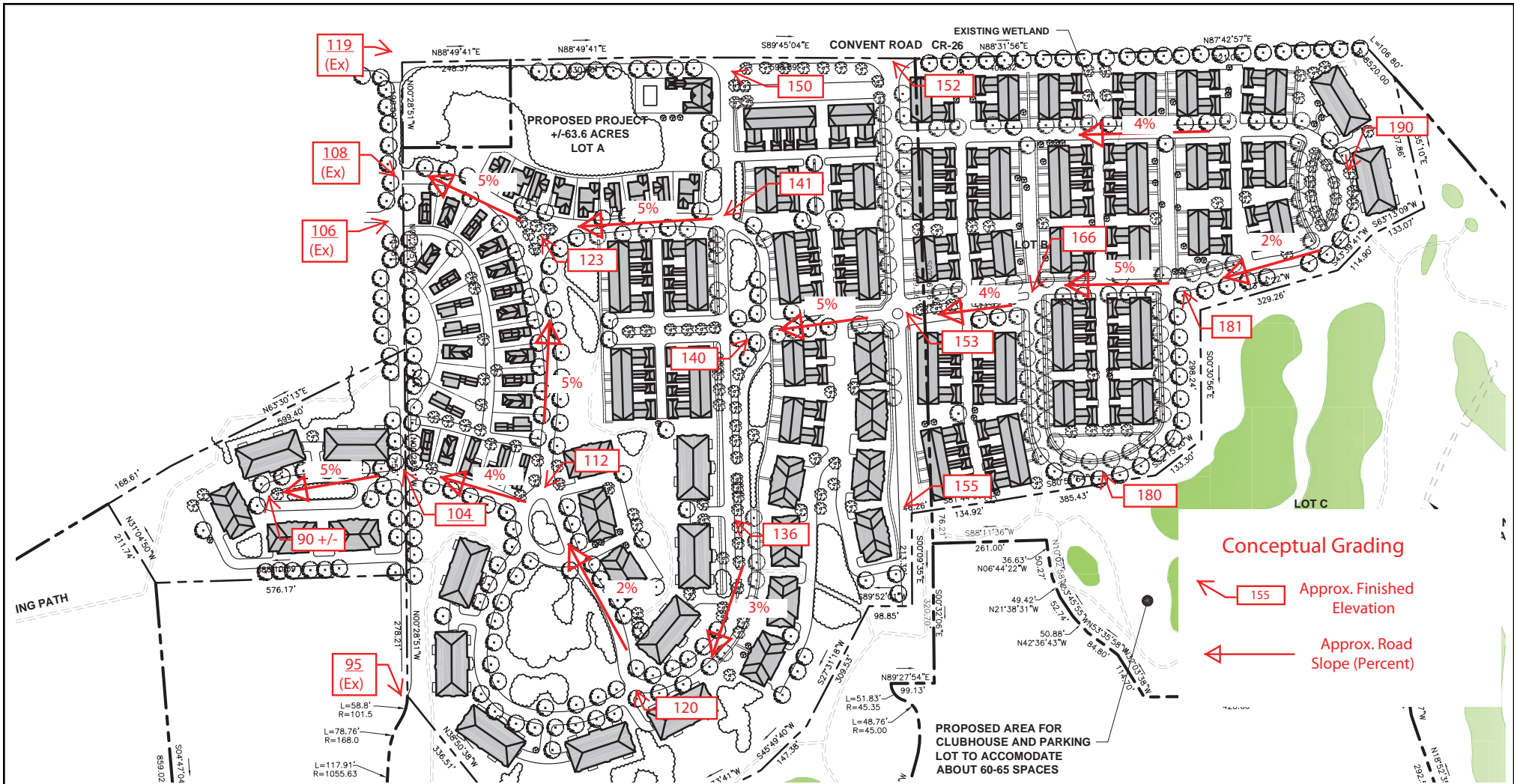


Slope Category	Area 1		Area 2		Area 3	
	Area (ac)	Percent	Area (ac)	Percent	Area (ac)	Percent
0-10%	9.13	96.3%	61.65	89.4%	32.94	91.0%
10-15%	0.30	3.2%	4.55	6.6%	1.91	5.3%
15%+	0.05	0.5%	2.78	4.0%	1.34	3.7%
		100.0%		100.0%		100.0%

- 0 - 10% Slopes
- 10% - 15% Slopes
- 15%+ Slopes

Exhibit III.C-2
SLOPE ANALYSIS

**FOUR SEASONS AT ORANGETOWN
ROCKLAND PSYCHIATRIC CENTER**
Town of Orangetown, New York



Conceptual Grading



-  **155** Approx. Finished Elevation
-  Approx. Road Slope (Percent)

Exhibit III.C-3
CONCEPTUAL GRADING

**FOUR SEASONS AT ORANGETOWN
 ROCKLAND PSYCHIATRIC CENTER**
 Town of Orangetown, New York

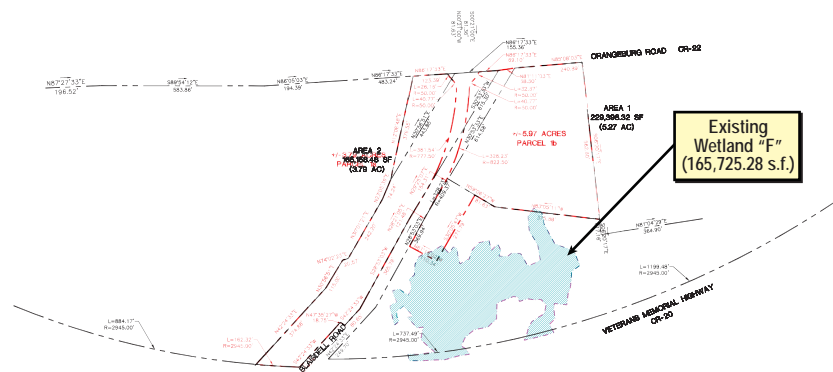
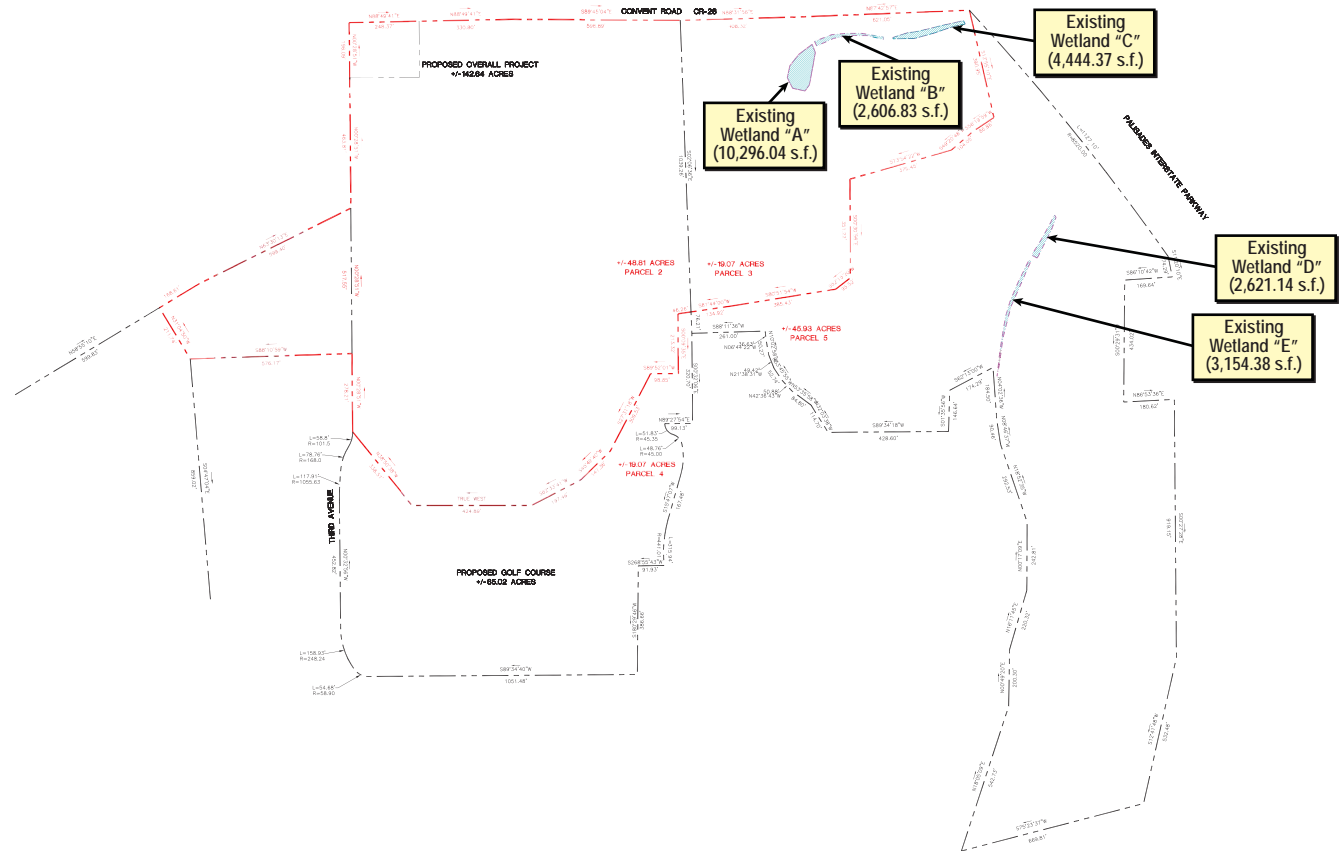
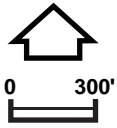
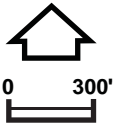


Exhibit III.C-4
EXISTING WETLANDS

**FOUR SEASONS AT ORANGETOWN
 ROCKLAND PSYCHIATRIC CENTER**
 Town of Orangetown, New York



 **Wetlands Impacted by Development Plans**

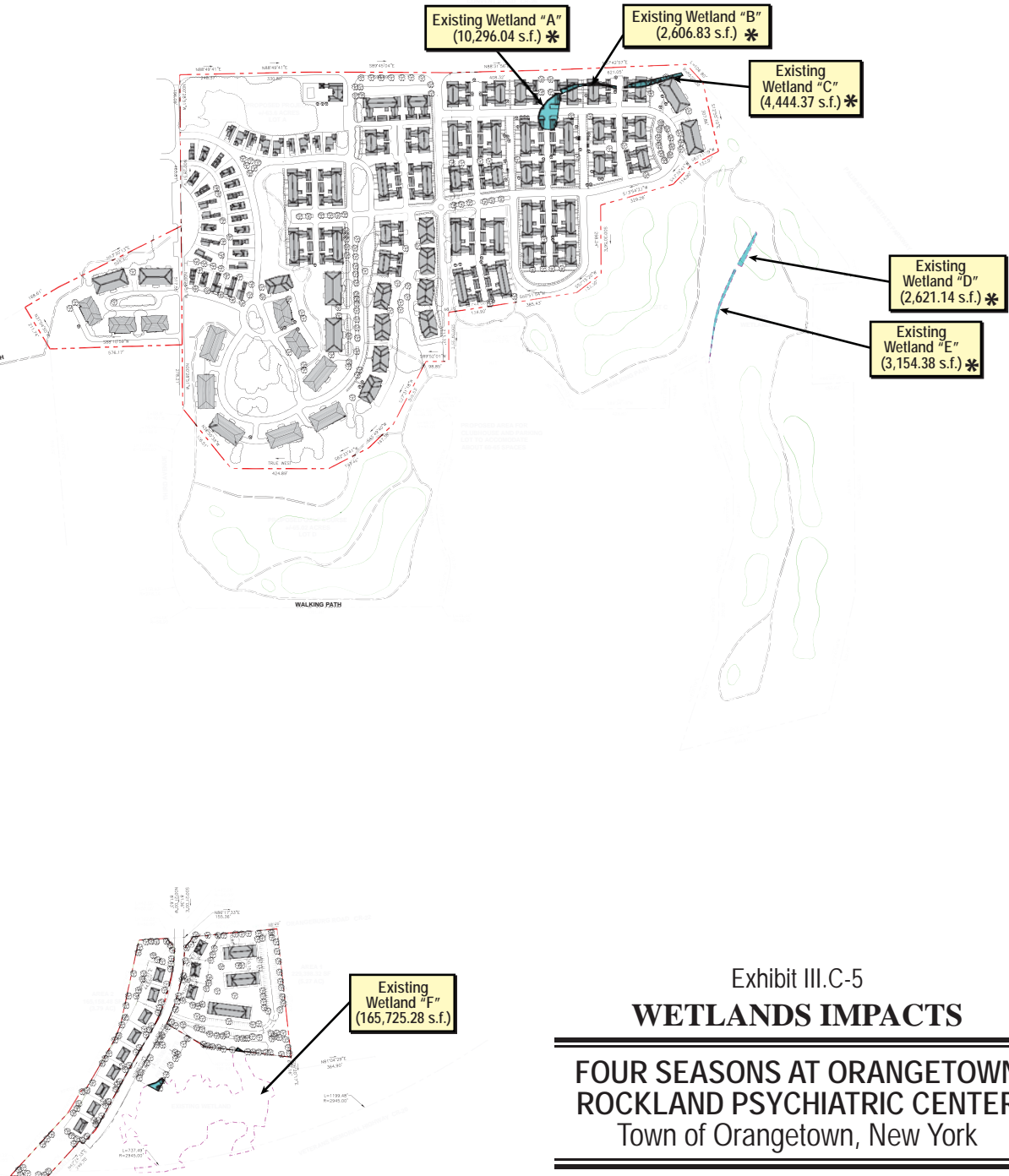


Exhibit III.C-5
WETLANDS IMPACTS

**FOUR SEASONS AT ORANGETOWN
ROCKLAND PSYCHIATRIC CENTER**
Town of Orangetown, New York

* Non-Jurisdictional Wetland

SOURCE: Ecological Solutions, LLC

Saccardi & Schiff, Inc. - Planning and Development Consultants