



**Phase 1A Archaeological Survey**

**Proposed Watchtower Educational Center Amended Site Plan**

**Town of Patterson, Putnam County, New York**

**Prepared for:**

The Watchtower Bible and Tract Society of New York, Inc.  
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Brooklyn, NY 11201-2483

**Prepared by:**

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**May 2010**



## **Management Summary**

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**SHPO Project Review Number:** N/A

**Involved Agencies:**

- Town of Patterson (Zoning Board of Appeals; Planning Board)
- Putnam County (Planning Board; Department of Health)
- New York City Department of Environmental Protection
- New York State Department of Environmental Conservation

**Phase of Survey:** Phase 1A Archaeological Study

**Location Information**

**Location:** Route 22, Town of Patterson, New York

**County:** Putnam

**USGS 7.5 Minute Quadrangle Map:** Pawling and Brewster Quadrangles

**Archaeological Survey Overview:** N/S

**Report Author:** Molly R. McDonald, RPA

**Date of Report:** May 2010



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**A. PROJECT OVERVIEW**

AKRF, Inc. has been retained by the Watchtower Bible and Tract Society of New York, Inc., (applicant) to perform environmental services in connection with their proposed site plan amendment to the applicant's Watchtower Educational Center (WEC) in the Town of Patterson (Putnam County, New York) (**Figure 1**). This survey was conducted to determine the potential for archaeological resources to be disturbed by proposed construction. The total area of the parcel on which development is proposed, including the Patterson Inn Parcel, (collectively referred to in this report as the "project site parcel") is approximately 374.5 acres (1.52 square kilometers). It is located on the east side of NYS Route 22 at Watchtower Drive, located approximately one-half mile north of Haviland Hollow Road (CR #68) and approximately 1.5 miles south of Route 311. The Watchtower Educational Center (WEC) also includes parcels on the west side of Route 22 (collectively called the "WEC properties"); however, no project-related construction would occur on the west side of Route 22.

The applicant proposes to construct two new residence buildings, a maintenance/office building, and an addition to the Audio/Video Building and other features as described in Chapter 2, "Project Description". This would increase the building coverage at the site by approximately 186,000 square feet (17,300 square meters). The maximum height of the proposed buildings is 76 feet (23 meters). Access to the new buildings will be from the existing drive from NYS Route 22. The proposed site plan amendment for the facility will create sufficient residential space for approximately 500 additional persons.

Other proposed site improvements include a loop road that would connect the proposed residences, the Audio/Video Building, and the new Maintenance/North Office Building to the existing driveway. The existing Main Lobby would be expanded to allow for a larger gathering area for tours and better ingress and egress to other parts of the building. The existing visitor and bus parking area would be expanded to allow for additional parking and address pedestrian safety. The existing concrete Batch Plant would be demolished, and a single-story structure that would serve as a recycling facility would be constructed in its place. Other site improvements include new sidewalks, temporary parking, and passenger pick up/drop off areas. A stormwater management system would also be constructed to address Town, NYCDEP and NYSDEC regulations regarding stormwater runoff. This system would include a conveyance system to collect the stormwater runoff throughout the new development areas as well as two stormwater treatment basins that are proposed on-site.

**B. RESEARCH GOALS AND METHODOLOGY**

The present survey has been completed to satisfy the requirements of the State Environmental Quality Review Act (SEQRA) (6 NYCRR 617.7(d)) and it follows the requirements of the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) and the guidelines of the New York Archaeological Council (NYAC).

The study synthesizes and updates information presented in previous archaeological studies conducted on the WEC properties in 1988-9 by Historical Perspectives, Inc. (HPI):

- *Patterson Education Center: Archaeological Assessment of the Temporary Office Trailer Site* (HPI October 12, 1988);
- *Stage 1 Study of Archaeological Potential, Watchtower Educational Center, Patterson, Putnam County, New York* (HPI November 1988);
- *Patterson Farm Project: Patterson, Putnam County: Watchtower Bible and Tract Society of New York, Inc.: Stage 2 Archaeological Investigations Field Report* (HPI November 14, 1988); and
- *Watchtower Educational Center: Archaeological Survey: Stage 2* (HPI January 1989).

Because much documentation and analysis were previously completed as part of the HPI studies, the present report adheres to a Condensed Report Format, as set forth in ORPHP guidelines (OPRHP 2005: 23), and as requested by Cynthia Blakemore of OPRHP (Cynthia Blakemore, pers. comm. 2008). This study summarizes the history of the WEC properties and the results of the previous archaeological investigations. In addition, it documents previous cultural resource investigations which have taken place in the vicinity of the WEC properties, and the current conditions of the properties, with a focus on ground disturbance that occurred on the site after the HPI archaeological surveys of the site were completed. Historical information relating to the Revolutionary War period that was not included in the previous archaeological studies has also been included here at the suggestion of the Patterson Historical Society.

The three primary tasks conducted for this survey were: synthesis of previous archaeological investigations, documentary and cartographic research, and a reconnaissance walkover survey. Background research for this study involved analysis of various primary and secondary resources, including historic maps and atlases, historic photographs, newspaper articles, and published and unpublished local histories. Information was accessed at several repositories, including the Main Research Branch of the New York Public Library (including the Local History and Map Divisions), and the local history division of the Patterson Public Library, among others. Attempts were made to contact individuals knowledgeable about the Patterson area's history. File searches were completed at OPRHP and the New York State Museum (NYSM).

The walkover survey was conducted to document historic and modern impacts to the WEC properties' ground surfaces, the area's natural resources and topographical features. Conditions were documented with a series of photographs.

### **C. AREA OF POTENTIAL EFFECT**

As described above, the WEC properties include parcels on both sides of Route 22; however, the 374.5-acre project site parcel is limited to the east side of Route 22 (see **Figure 2**). An area of potential effect (APE) for archaeology has also been delineated, which takes into account all proposed and potential project activities that could result in ground disturbance (see Figure 2). These activities include building construction, road widening, parking lot expansion, landscaping and creation of water features, utility construction, construction staging, soil piling, and all other components of the proposed project that have the potential to physically impact the ground. The archaeological APE consists of four non-contiguous segments. The largest segment, referred to here as "Segment 1," has an irregular boundary encompassing much of the southwestern part of the unforested portion of the parcel on east side of Route 22, including the current orchard area and the loop road. Within this area, new structures, road improvements, and grading are proposed. Another segment of APE, referred to here as "Segment 2," is in the northern portion of the project site parcel in an area known as the "north pasture." This area is being considered as a possible excess soil deposition area. "Segment 3" of the APE is also located in the northern portion of the project site parcel, east of Segment 2, in the current WEC recreation area. Currently occupied by tennis courts and parking, this area would be used for rock crushing and gravel storage. Lastly, an eastern segment of APE, "Segment 4," also known as the existing "excess soil deposition area," is located in the largely wooded area east of the developed portions of the parcel. This area would potentially be used as an excess soil deposition area.

**A. GEOLOGY, TOPOGRAPHY, AND HYDROLOGY**

The geologic formations found throughout Putnam County consist primarily of the Hudson Highlands province, a northeast extension of the Reading Prong and the New Jersey Highlands. The Hudson Highlands are comprised of a Precambrian complex of gneisses, migmatite, granite, and granodiorite. Metamorphic rock predominates in this area. According to the *Geologic Map of New York-Lower Hudson* produced by the New York State Education Department (1970), the WEC properties are underlain by Stockbridge Marble and Manhattan formation schist/gneiss.

The topography of Putnam County was shaped by glacial movements that began approximately 300,000 years ago. Glacial reformation of topography smoothed out the ground surface and often deepened valleys that were oriented in the direction of glacial advance. Glacial till, deposited as ground moraine directly from the bottom of glacial ice, is the dominant overburden material in the County. The properties are covered with kame deposits and glacial till, according to the *Surficial Geologic Map of New York-Lower Hudson* produced by the New York State Education Department (1989).

Patterson is located in the portion of the Appalachians where two mountain ranges meet: the Hudson Highlands (to the west) and the Taconic Mountains (to the north). The area is characterized by relatively low mountains with wide sweeping valleys. The eastern portion of the WEC properties is located on the west slope of Cranberry Mountain. The highest point of Cranberry Mountain, located at the eastern edge of the study area, is 1,232 feet (376 meters) above sea level. Cornwall Hill, which is located west of the study area, reaches its peak at 827 feet (252 meters) above sea level. Much of the project site parcel is characterized by slopes of 15-25 percent or greater (see **Figure 3**).

The Great Swamp, a large wetland covering thousands of acres in Putnam County, is located in the valley between Cranberry Mountain and Cornwall Hill just west of the project site parcel. Pine Island, an approximately 30-acre 200-foot-high outcrop in the Great Swamp, is located a short distance west of the WEC properties. The East Branch of the Croton River, oriented approximately northwest-southeast in the vicinity, runs through the Great Swamp, draining it and brooks and tributaries that intersect it in the area, ultimately emptying into the Hudson River at Croton Point. All of the Croton River tributaries in the WEC properties vicinity are oriented approximately northeast-southwest. Mountain Brook runs through the center of the WEC properties, on both sides of Route 22, and provides primary drainage to the properties. An unnamed creek runs along the south edge of the properties. A number of other tributaries are located in the immediate vicinity of the properties: Stephens Brook, on the east side of the Croton River north of the properties and south of Patterson Hamlet, following the general course of Birch Hill Road; Muddy Brook, on the west side of the Croton River, immediately south of Stephens Brook and west of the WEC properties; and Haviland Hollow Brook, which runs along the south side of Haviland Hollow Road, east of Route 22 and the Croton River.

**B. WATCHTOWER EDUCATIONAL CENTER PROPERTIES SOILS**

The U.S. Department of Agriculture (USDA) identifies major classifications of soils that have similar characteristics, such as texture and drainage, as distinct series. Each soil series differs in slope, drainage, and other characteristics that may affect soil use. On the basis of these differences, soil series are further divided into phases. Different soil phases exhibit variable water storage, erosion potential, and other characteristics that are significant from a development perspective.

The WEC properties contain nine different soil series as mapped by the USDA, and each of the soils represented on the properties is common to Putnam County. In order of prevalence, the most predominant soil types within the project site are Stockbridge (Sb), Charlton loam (Ch), Charlton-Chatfield complex (Cr), Chatfield-Charlton complex (Cs), and Sutton (Su). These soils are described in detail below. **Figure 4** depicts the distribution of soil types across

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the properties as documented by the USDA Soil Conservation Service in the *Soil Survey of Putnam and Westchester Counties, New York* (1994). The soil types are further defined in **Table 1**, below.

**Table 1  
Project Area Soils**

<b>Symbol</b>	<b>Depth to Bedrock</b>	<b>Soil Series (Taxonomic Name)</b>	<b>Drainage Characteristics</b>
ChD	More than 60 inches	Charlton loam, 15 to 25 percent slopes	Very deep and moderately steep, well drained soil found on hillsides. Permeability is moderate or moderately rapid throughout the profile. Erosion hazard is severe, surface runoff rapid, and water capacity moderate.
ChE	More than 60 inches	Charlton loam, 25 to 35 percent	Steep, very deep, and well drained soil found on hillsides. Permeability is moderate or moderately rapid throughout the profile. Erosion hazard is very severe, surface runoff very rapid, and water capacity moderate.
CrC	More than 60 inches	Charlton-Chatfield complex, 2 to 15 percent slopes, rolling, very rocky	Very deep and moderately deep, well drained and somewhat excessively drained Chatfield soil and well drained Charlton soil found on hilltops and hillsides that are underlain by highly folded bedrock. Generally 50 percent Charlton soil, 30 percent Chatfield soil, and 20 percent other soils and rock outcrop. Rock outcrop covers 2 to 10 percent of the surface.
CsD	24 inches, fractured granitic bedrock	Chatfield-Charlton complex, hilly, very rocky	Very deep and moderately deep, well drained and somewhat excessively drained Chatfield and the well drained Charlton soil found on hilltops and hillsides that are underlain by highly folded bedrock. Slopes range from 15 to 35 percent. Generally 45 percent Chatfield soil, 35 percent Charlton soil, and 20 percent other soils and rock outcrop. Permeability is moderate or moderately rapid. Erosion hazard is severe, surface runoff rapid, and water capacity low (Chatfield) to moderate (Charlton).
SbB	More than 60 inches	Stockbridge silt loam, 2 to 8 percent	Very deep, gently sloping, and well drained soil found on the top of broad ridges and hills. Permeability is moderate in the surface layer and in the upper part of the subsoil and slow or moderately slow in the lower part of the subsoil and in the stratum. Erosion hazard is slight, surface runoff slow, and water capacity is high.
SbC	More than 60 inches	Stockbridge silt loam, 8 to 15 percent	Very deep, strongly sloping, and well drained soil found on the sides of broad ridges and hills. Permeability is moderate in the surface layer and in the upper part of the subsoil and low or moderately slow in the lower part of the subsoil and in the substratum. Erosion hazard is moderate, surface runoff medium, and water capacity high.
SbD	More than 60 inches	Stockbridge silt loam, 15 to 25 percent	Very deep, moderately steep, and well drained soil found on the sides of ridges and hills. Permeability is moderate in the surface layer and in the upper part of the subsoil and slow or moderately slow in the lower part of the subsoil and in the substratum. Erosion hazard is severe, surface runoff rapid, and water capacity high.
SgC	More than 60 inches	Stockbridge-Rock outcrop complex, rolling	Very deep, well drained Stockbridge soil and areas of limestone Rock outcrop found in on landscapes where limestone bedrock is dominant. Slopes range from 5 to 15 percent. Permeability is moderate in the surface layer and in the upper part of the subsoil and slow or moderately low in the lower part of the subsoil and in the substratum.
SuB	More than 60 inches	Sutton loam, 3 to 8 percent slopes	Gently sloping, very deep, and moderately well drained soil found on concave foot slopes and along drainageways in the uplands. Permeability is moderate or moderately rapid throughout the profile. Erosion hazard is moderate, surface runoff medium, and water capacity high.

**Source:** Soil Survey of Putnam and Westchester Counties, New York, U.S.D.A. Soil Conservation Service

## C. SITE WALKOVER

A site walkover was conducted by an archaeologist in the summer of 2008. The WEC properties are located on the west slope of Cranberry Mountain and are bisected by Route 22.

The project site parcel, located on the east side of Route 22, is generally characterized by relatively steep upward sloping topography, covered by large open fields, an orchard, roads and plantings, parking lots, and clusters of buildings (see **Photos 1 and 2**). The eastern portion of the project site parcel is wooded and higher in elevation than the western portion. The structures that make up the WEC complex are principally clustered toward the western and central portions of the project site parcel. The buildings range from one to five stories (plus basements and cellars) in height; most were constructed contemporaneously in the late 1980s and early 1990s and are relatively uniform in design, with rectangular and round-arch windows, peaked roofs, and large chimneys. They are typically clad in painted precast concrete, have peaked roofs, chimneys, ribbon windows, and central round-arch windows.

The main driveway to the site, Watchtower Drive, runs northeast from the southern end of the properties on the east side of Route 22, and terminates to the east in a large loop road (see **Photos 2 and 3**). A high concentration of structures are encompassed within this loop, including a Main Lobby Building, Office Building, Maintenance Building, Auditorium, School Building, residence buildings, and a parking lot (see **Photos 4 and 5**). A short roadway diverges from the south side of the base of Watchtower Drive, leading southeast to a facility used to accommodate overnight WEC guests, known as the Patterson Inn. Another roadway diverges from the north side of Watchtower Drive, and runs in an approximately north-south orientation. Towards the northern end of this roadway, on the east side, there is a concrete Batch Plant and recycling facility (see **Photo 6**). Beyond this facility to the north, the roadway becomes an additional loop road, which connects to the first. Contained within the southwestern portion of this northern loop is a Wastewater Treatment Facility (see **Photo 7**). Along the eastern edge of the northern loop road there are three additional buildings: an Audio/Video Building, a Water Softening Facility, and a Powerhouse (see **Photo 8**). Most of the remaining area within the northern loop road is occupied by a large orchard on a steep slope (see **Photos 9 and 10**). Just northwest of the northern loop road there is a large ‘reservoir,’ including an earthen dam and concrete spillway (see **Photo 11**). The area east of the northern and southern loop roads is forested, with two exceptions. A recreation area (“segment 3” of the APE) is located northeast of the reservoir, accessed via a short winding road. This area contains tennis and basketball courts, a gravel parking lot, and three small pavilions. Also, a small water storage tank is located east of the Audio/Video Building, accessed via a short east-west road linking to the northern loop road and a long north-south road linking to the southern loop road. In the forested area immediately south of the recreation area (outside the archaeological APE) there is a small granite marker bearing the words “EIGHT REVOLUTIONARY SOLDIERS,” discussed in greater detail below (see **Photo 12**). One building that pre-dates the construction of the WEC facility stands on the east side of Route 22 on the WEC properties (but outside of the archaeological APE). This is a former farmhouse, which based on its architectural characteristics appears to date to the late 19th century (see **Photo 13**).

The WEC properties on the west side of Route 22 are west of the project site parcel and the archaeological APE and would not be directly impacted by the proposed project. They are generally characterized by fields with more moderate slopes, and bounded by the Great Swamp and Croton River on the west (see **Photos 13 and 14**). The majority of the structures currently standing on the WEC properties on the west side of Route 22, pre-date the development of the WEC facility. These include (from north to south):

- An early 19th century former farmhouse (the Mabie House), now a residence, located at the northern edge of the parcel along Route 22;
- Several barns and outbuildings dating between the late 19th century and the mid-20th century;
- Two early 20th century residences;
- An early 19th century former farmhouse (the Judge Stone House), located approximately centrally on the WEC properties along the west side of Route 22;
- A mid-20th century residence, located immediately north of the south edge of the properties’ boundary.

These structures are located on the WEC properties; however, all are far removed from the archaeological APE and none would be directly impacted as part of this project.

A number of small ponds are located on the properties; these have all been either created or significantly modified by human effort. Stephens Brook runs along the northern edge of the WEC properties on the west side of Route 22. Mountain Brook runs northeast-southwest- through the WEC properties on both sides of the road (see **Photo 15**). A small unnamed brook runs along the south edge of the properties.

The north pasture, located in the northwestern portion of the project site parcel and comprising segment 2 of the APE, is an open field currently used for cattle grazing. It is located on a rise and has gently sloping topography (see **Photo 16**).

The areas east of the developed portions of the properties are forested and are characterized by relatively steeply sloping topography (10-25 percent slopes). A water storage facility accessed by a north-south-oriented roadway is located approximately 400 feet east of segment 1 of the archaeological APE. Segment 2 of the APE is located in a forested area, a portion of which includes an unpaved roadway and composting area (see **Photo 17**).

## **A. DOCUMENTED NATIVE AMERICAN ACTIVITY IN WATCHTOWER EDUCATIONAL CENTER VICINITY**

Around the time of European contact, Putnam County was inhabited by a group of Native Americans tribes known collectively as the Wappinger Confederacy (Patterson Historical Society 2007). After the Europeans began to settle in the area in the early 17th century, the native population was quickly diminished as a result of land sales, violence with both Europeans and other Native American tribes, and disease. Several precontact period archaeological sites have been identified in Patterson; these are described in greater detail in Chapter 4. In general, Native American sites in the area are located at high elevations in areas with well-drained soils and sources of fresh water. Areas near watercourses and wetlands were also commonly used by Native Americans for habitation or camping sites. The WEC properties area is identified by SHPO and the New York State museum (NYSM) as potentially sensitive for precontact period archaeological resources based on its natural topographical setting.

## **B. HISTORIC SUMMARY OF THE WATCHTOWER EDUCATIONAL CENTER VICINITY<sup>1</sup>**

### Pre-Revolutionary Period

Towards the end of the 17th century, the increasing European population rapidly displaced the Native American population in the Dutch colony of New Amsterdam and the English colony of New York. Westchester and Putnam counties were originally included within larger tracts which were purchased from the Native Americans before being officially chartered as Manors by the British crown. The manor system as it existed in the Americas was not a feudal system, as it was in England, but instead a way for the British to grant land in such a way that it promoted “the growth and development of their new possession under their own laws and customs” (DeLancey 1886: 90). Tenants leased their farms for life-long periods, and in some instances, were eventually able to buy their property from their landlord (Hansen 1950).

All of modern Putnam County was included within land patented to Adolph Phillipse, a New York merchant, in 1693 (Hansen 1950). This patent did not include land known as the “Oblong,” an approximately 2-mile wide stretch of land that stretched from the area where the Connecticut border juts westward into New York State to a point near New York’s border with Vermont. The states of New York and Connecticut fought over possession of the Oblong until the early 18th century. This boundary was lined with stone markers every two miles (Pelletreau 1886).

In 1683, a little less than twenty years after the English had assumed control of New Amsterdam from the Dutch, the New York General Assembly divided the acquired territory into 12 counties. However, Putnam County at that time was included within “Dutchess” (now Dutchess) County (Putnam would not become a separate County until 1812). Dutchess County was further subdivided into precincts in 1719 and again in 1772. The WEC properties are located within the northeast precinct, now known as the town of Patterson. The first settlers in the area arrived before 1705 and the area’s population began to increase significantly by the middle of the 18th century. Most early eighteenth century settlers of the area included in the patent were legally the tenants of the Philipse family, who leased portions of their patents to farmers in order to facilitate the growth and development of the colony on behalf of the British crown.

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<sup>1</sup> Unless otherwise indicated, this summary has been abstracted from the *Stage 1 Study of Archaeological Potential; Watchtower Educational Center; Patterson, Putnam County, New York* prepared by Historical Perspectives, Inc. (HPI) for the Watchtower Bible & Tract Society of New York, Inc, 1988.

In 1731, the Oblong was formally ceded to the State of New York, which divided the Oblong into 500 acre farms (Blake 1849). This brought about significant growth in the area, as these lots were more attractive to settlers, especially those from outside New York, as they could be purchased rather than leased from a landlord, such as the properties within the Philipse patent (Pelletreau 1887).

#### Revolutionary War Period

In the late 1700s, most of the area that now comprises the WEC properties was rented by the Philipse family to Thomas Menzies, whose house was located on the east side of the road now known as Route 22. The location of the house is shown on the ca. 1785 Erskine *Horseback Reconnaissance of Putnam County*, and appears to have been located within the project site parcel, but outside of the archaeological APE, north of what is now called Mountain Brook.

The Revolutionary War had a significant impact on Putnam County. During the course of the war, large tracts of land owned by individuals who remained loyal to the British crown, such as the Phillipse family and the Robinson family (related to the Phillipse family by marriage), were either confiscated or temporarily appropriated. The Robinson family owned a great deal of land in the area during the late 18th century. A farm belonging to Beverly Robinson, Junior, a Tory and an officer in the British army, is said to have been taken over by the Continental army for use as a center for reserve army horses. Both George Washington and Benedict Arnold are said to have requisitioned horses from this horse pool (Hillery 1956). The location of this farm is not clear, and has been alternately identified as having been in Haviland Hollow, southeast of the WEC properties (Blake 1849) or as being “at the south end of Birch Hill” (Hillery 1956). Birch Hill is the current location of Thunder Ridge Ski Area, immediately north of the project site.

In 1778, General Washington led the Continental forces to victory over the British at the Battle of Monmouth in New Jersey. He assembled his forces at White Plains, and then moved 17,000 troops into the region that is now Putnam County and northern Westchester County. One of the locations in which these troops were stationed appears to have been along what is now Route 22, on the south side of Birch Hill. General Anthony Wayne, the leader of these troops, is said to have had his headquarters in the Robinson House (Hillery 1956). No historic maps depicting the location of the Robinson House have been found. The house does not appear to have been labeled on the 1780 Erskine map. Twentieth century local historian H.E. Hillery speculates that the Beverly House may have been located on land later owned by Judge Stone; the Judge Stone property is located within what is now the WEC properties. It is possible that the house was located within the WEC properties, however, no conclusive evidence has been found.

A portion of the troops appear to have been encamped on the Thomas Menzies property. A 1779 letter from Thomas Menzies, a Tory, to General Nathaniel Green, indicates that troops were encamped on Thomas Menzies’ property (most of which is now included in the WEC properties). The letter requests the General for compensation for damage done to the Menzies’ property while the troops were stationed there. It states: “While the troops lay at this place it was my lot to have Genl. Wayne’s division, a Brigade Commanded by Colo’l Clark and Nixon’s Brigade, Encamp’d on my farm, and the damage I have thereby sustain’d is Very great.” Menzies goes on to describe that “Upwards of thirty thousand Rails” of his fence were burned and “all the Valuable timber” on his farm was destroyed (as quoted in Showman 1983: 168-9). Based on this information, it is considered likely that Continental troops were encamped within what are now the WEC properties. The specific location of these troops, and whether they were encamped within the APE, is not known.

An article appeared in the Putnam County Courier in 1927 entitled “D.A.R. Hear Historical Sketch of Putnam County.” This article, based on information collected by the Daughters of the American Revolution (DAR) organization, included the following observation regarding Revolutionary War encampment in the vicinity: “At the time Burgoyne was trying to force a way down the Hudson in 1777, Washington moved three brigades into what is now Patterson. They encamped on a plateau of land owned by R.F. Haviland and were to reinforce Gates, had he been forced to retreat and to check the enemy. Mr. Haviland dug up one of the old bake ovens used by the army at that time and there were a number of mounds marking the graves of soldiers” (Putnam County Courier 1927: 10). The location of R. F. Haviland’s land has not been determined. Haviland is a very common surname in the immediate vicinity, particularly dominating the area near Haviland Hollow Road, a short distance south of the WEC properties. Individuals with the surname Haviland also occupied portions of the project site during the 19th century

(as discussed in the next section) and it is possible that the Haviland property referred to in this article was located within the WEC properties. A stone marker engraved with the phrase “Eight Revolutionary Soldiers” stands within the project site parcel just outside of the Recreation area portion of the archaeological APE (see **Photo 12**). It is believed that this marker was placed within the property in the early 20th century. According to local historian, H.E. Hillery, writing in 1956, “While the Army was encamped here, a disease, possibly flu, struck. Hundreds were ill. A hundred were hospitalized in the old meeting house on Quaker Hill [east of the WEC properties]. Some died and were buried nearby. Others encamped without proper medical care were stricken. Just south of the Game Park’s picnic ground, eight soldiers, probably Pennsylvanians, are buried. Local veterans recently erected a marker over these graves” (Hillery 1956). The Game Park was a recreational area in the 20th century, which was located immediately north of the WEC properties, on Birch Hill. As stated above, the marker that references the burials is currently located near the WEC recreational area. It is not known, however, how the burial location was identified by the veterans group or with what level of accuracy the veterans group believed they had identified the burial location.

After the war was over, the land confiscated from Loyalists was sold off, most often to the tenants already inhabiting the property (Pelletreau 1886). The sale of the confiscated land allowed the settlement of the area to intensify. The area to the west of modern Route 22 was occupied by a large tract of marshland, known as the “Great Swamp,” through which the East Branch of the Croton River runs, and therefore most settlements in the area in the 18th century were located to the east of the road.

#### Nineteenth Century

At the end of the 18th century, what are now the WEC properties were divided into three farms (identified in HPI’s 1988 archaeological assessment as Parcels A, B, and C and also referred to elsewhere as the North, Middle, and South Farms) extending between the East Branch of the Croton River and the former boundary of the Oblong, which itself had been divided into farms.

O’Conner’s 1854 map of Putnam County is one of the first to depict the location in detail (see **Figure 5**). Several estates, each featuring multiple structures, were located within the WEC properties at that time. All of the structures associated with those estates were situated along the Patten Road, now known as Route 22. To the west of the road in the northern portion of what are now the WEC properties was the estate of S. Mabie, probably Sylvester Mabie, who was at one time the Patterson town supervisor. The Mabie House still stands in its original location on the WEC properties, a four-bay Federal-style dwelling with a rear ell. To the south of this estate on the west side of the Patten Road was the property of J. Mabie, likely Joshua Mabie, who purchased land in the area in 1823. The O’Conner map depicts two structures on the west side of the Patten Road belonging to J. Mabie. South of the S. Mabie property (and north of the J. Mabie property) on the east side of the Patten Road were two structures belonging to J.G. Haight. The location of the former Haight structures is approximately 500 feet west of the archaeological APE. A small front-gable structure currently stands on the rough location of the Haight structures, however, this appears to date to the late 19th century (see **Photo 13**). To the south of the J. Mabie and Haight estates was the property of Judge F. Stone. Stone’s family purchased land on both the east and west sides of the Patten Road at the end of the 18th century. The O’Conner map depicts one structure belonging to Stone on the west side of the Patten Road, and two structures on the eastern side, immediately north of Mountain Brook. The former Judge Stone House on the west side of Route 22 still stands in its original location; it is a three-bay Federal-style structure with a full-width front porch and a rear ell. The Judge Stone structures on the east side of Route 22 no longer exist, but would have been located within or immediately adjacent to segment 1 of the archaeological APE. To the south of Stone’s property was the estate of Benjamin Haviland. The O’Conner map depicts several structures belonging to Benjamin Haviland on the west side of the Patten Road. No other structures are depicted within the project site parcel on the east side of Route 22.

An atlas published by Ellis Beers and Company in 1868 depicts fewer structures within the estates which were formerly located within the WEC properties (see **Figure 6**). S. Mabie continued to own the property on the western side of Route 22 in the northern portion of the WEC properties and he had added to his real estate holdings by purchasing the former J. Haight property on the opposite side of the road. The 1868 atlas reflects Benjamin’s Haviland’s 1855 purchase of the former Judge Stone estate. The structures formerly depicted as part of Stone’s

estate to the east of the road were no longer depicted in 1868. However, it is possible that if those structures were outbuildings or farm-related structures rather than residences, they may not have been recorded by the cartographer.

The chain of ownership of these estates is not consistently clear during the late 19th and early 20th centuries. The northern Haviland property, formerly that of Judge Stone, was owned by Benjamin Haviland until 1882, at which time it was conveyed to his grandchildren, who were members of the Taylor family. They retained ownership until 1941 and by 1944, the land was purchased by the Mendel family. The Mendel family also purchased the former S. Mabie and the southern Haviland properties in the same year. In 1984, the land was sold to the present owner.

## A. PREVIOUS ARCHAEOLOGICAL SURVEYS AND IDENTIFIED ARCHAEOLOGICAL SITES IN WATCHTOWER EDUCATIONAL CENTER VICINITY

A review of the files of OPRHP and NYSM and cultural resource surveys of projects in the immediate vicinity showed that multiple cultural resources surveys have been conducted within one mile of the WEC properties (see **Table 2**). Eleven precontact period archaeological sites were identified, two of which were determined State and National Register-eligible (see **Table 3** and **Figure 7**). One of these precontact period sites also possessed a historic period component.

**Table 2**  
**Previously Conducted Cultural Resources Investigations**

Project Name	Location	Findings	Date	Reference
Cornwall Hill Estates Cultural Resources Investigation (Phase 1 & Phase 2 Data Recovery)	Cornwall Hill Road, Patterson	Precontact period quarry identified: no impacts anticipated. Two Late Archaic camps or lithic processing stations identified.	Sept. 1993; July 1996.	City/Scape for James Cassia (see Site #A07903.000113)
A Cultural Resources Survey Report of PIN 8751.93 BIN 3-34549-0 Doansbury Road over Haviland Hollow Brook	Doansbury Road at Haviland Hollow Brook, Patterson	Foundations of Haviland Hollow "Store," and 1915 bridge abutments were identified, but found to lack significance.	February 1985	Dana R. Vaillancourt, New York State Museum (NYSM), for NYSDOT
Rosebud Property (Phase 1 and 2)	Cornwall Hill Road, Patterson	Nine potentially significant precontact period sites identified; one historic period site determined not significant	December 1987	Stuart J. Fiedel and Geary Zern, Cultural Resource Surveys, Inc.
Rosebud Property (Preliminary Case Report; Phase 2 & 3)	Cornwall Hill Road, Patterson	Further investigations of precontact period sites identified two S/NR-eligible precontact period sites (Rosebud Sites #1&2): temporary camps	June 1988; October 1993	Louis Berger & Associates, Inc.
Cultural Resources Reconnaissance Survey Report of Route 311: Cross Road to Route 22	Route 311 from Route 292 to Route 22	Historic-period materials associated with properties along Route 311 were encountered, but no significant sites were identified	March 1997	Christina B. Rieth and Mark LoRusso, NYSM for NYSDOT
Stage 1 Archaeological Reconnaissance Survey, Front Street Sewer Project, Town of Patterson, Putnam County, New York	Townsend Street at South Street, Patterson	No significant archaeological resources encountered	October 2000	Ernest A. Wiegand, for Hudson Highlands Environmental Consulting

**Watchtower Educational Center Amended Site Plan – Phase 1A Archaeological Documentary Study**

The Muddy Brook Rockshelter (NYSM #5949) was identified by Kurt Tompkins and Laurie DeMaria in 1975-6. It consisted of a small rock shelter near Muddy Brook and associated Archaic and Woodland period artifacts, including projectile points, pottery, and mammal bones.

In 1985, the NYSM conducted an archaeological investigation in association with the New York State Department of Transportation (NYSDOT)’s replacement of a 1915 bridge (BIN 3-34549-0) carrying Doansburg Road over Haviland Hollow Brook, approximately one-half mile south of the WEC properties. Archaeological field investigations in this .28-acre area identified multiple historic period features, including foundation remains of a 19th century store and concrete abutments associated with the 1915 bridge. These features were not determined to be significant and no further testing was carried out in the location (Vaillancourt 1985).

**Table 3  
Previously Identified Archaeological Sites in Vicinity of the WEC Properties**

Site Name	Site #	Approx. Distance from APE	Period	Site Type
Muddy Brook Rockshelter	NYSM #5949	0.9 mi	Archaic; Woodland	Rockshelter
Rosebud Site #1	OPRHP# A079.03.0025	0.9 mi	Late Archaic, Early Woodland, Middle Woodland, Late Woodland	Camp/settlement
Rosebud Site #2	OPRHP# A079.03.0026	0.9 mi	Middle and Late Woodland	Camp/settlement
Rosebud Site #3	OPRHP# A079.03.0027	0.9 mi	Unassigned	Camp
Rosebud Site #4	OPRHP# A079.03.0028	0.9 mi	1320 +/-60 BP	Camp
Rosebud Site #5	OPRHP# A079.03.0029	0.9 mi	Late Archaic	Camp
Rosebud Site #6	OPRHP# A079.03.0030	0.9 mi	Unassigned	Camp
Rosebud Site #7	OPRHP# A079.03.0031	0.9 mi	Possible Middle Archaic	Camp
Hayt Mansion/Rosebud Site #8	OPRHP# A079.03.0032	0.9 mi	19th Century Historic-Period Component/ Unassigned Precontact Component	Farmstead remains/ Camp
Rosebud Site #10	OPRHP# A079.03.0034	0.9 mi	Late Archaic	Camp
Cornwall Hill Estates	OPRHP# A079.03.00113	0.8 mi	Unassigned	Two lithic reduction/camp areas associated with quarry
<b>Notes:</b> See Figure 6 for site locations.				
<b>Sources:</b> Site files of NYSOPRHP and NYSM				

The Rosebud Property, formerly known as the Hayt farmstead, an 81-acre tract located in the western portion of Patterson Hamlet, yielded substantial archaeological data through Phase I and II studies conducted by Cultural Resource Surveys, Inc. (CRS) in 1987-8, and Phase II and III studies conducted by Louis Berger & Associates (LBA), between 1988 and 1993. Field testing by CRS resulted in the identification of nine precontact period archaeological sites, which were further investigated by LBA. Two State/National Register-eligible precontact period sites (Rosebud Sites #1 and #2) were identified which contained hearths and other features below the plow zone, as well as lithic and pottery scatters. The sites possessed Late Archaic and Early and Late Woodland period components, and appeared to represent short-term camp sites. The Hayt Mansion/Rosebud Site #8 included a historic-period component consisting of 19th century remains associated with the historic farmstead that occupied the site (Fiedel & Zern, 1987a & b; LBA 1988; 1993).

Phase IB and II investigations were undertaken by City/Scape in association with the development of the Cornwall Hill Estates along Cornwall Hill Road in 1993. The 66-acre location was located on a series of alluvial benches in close proximity to the Great Swamp and Muddy Brook. The investigations identified a precontact period quartz and quartzite quarry and two associated lithic reduction stations, which likely also served as camp sites. The lithic

reduction station sites were documented through data recovery prior to destruction, while the quarry was not impacted (City/Scape, September 1993).

A number of non-professional finds have also been reported in the vicinity of the WEC properties. In the late 19th century, a 24-foot dugout canoe was recovered from the Great Swamp, near Pine Island. The canoe, which was donated to the Putnam County Historical Society in 1985, was carbon dated to ca. 1620. It represents additional evidence that the Great Swamp was used as a foraging location by the Native American inhabitants of the area.

A Native American cemetery of unknown age was reported along Haviland Hollow Road (southeast of the WEC properties); and stone tools and other precontact period artifacts were recovered from a 20-acre farm along the Croton River in the town of Patterson (HPI November 1988: 13).

## **B. PREVIOUS ARCHAEOLOGICAL INVESTIGATION OF WATCHTOWER EDUCATIONAL CENTER**

As described above, in 1988-1989, Phase I and II archaeological investigations of large portions of the WEC properties were conducted by HPI. These studies were conducted just prior to the construction of the majority of the complex facilities and were prompted by the previously proposed installation of water and sludge lines which required permits from the NYSDEC. The sludge lines were never approved or installed. The study area for these previous investigations encompassed approximately 85 acres on the east and west sides of Route 22. Transects were tested throughout the former study area. These transects, and the loci of archaeological sensitivity identified through testing, are illustrated on Figure 2.

### **PHASE I INVESTIGATIONS**

The Phase I archaeological documentary study concluded that based on local history, previously identified archaeological sites in the area, and topography and physical conditions, the WEC properties were considered to possess high sensitivity for precontact period archaeological resources. Portions of three historic-period farms were located on the WEC properties; however, historic-period remains associated with these farmsteads were not expected due to the relatively long distance between the farmstead structures and the area of potential effect. Locations considered to have diminished sensitivity due to recent ground disturbance were limited to locations adjacent to the HPI study area, such as the apple orchard, which had been disturbed by the installation of sprinklers and agricultural grading. The study also notes that much of the WEC properties experienced some amount of previous ground disturbance historically due to agricultural plowing and logging (HPI November 1988: 6). Phase I field testing was deemed necessary in order to determine the presence or absence of archaeological remains in the study area.

Phase I field testing was undertaken by HPI in September and October 1988. The following field testing was conducted as part of this study:

- A total of 21 transects were plowed and disked, and walked over and reviewed for cultural materials. Transects were placed every 50 meters, throughout the study area, wherever practicable. Each was approximately 12 feet (3.7 meters) wide, and ranged in length depending on topography. Each transect was walked over, and all observed cultural materials were recovered. Transects containing cultural materials were widened by plow to an area of 10 meters by 10 meters in the vicinity of the find spots and were flagged for further investigation.
- A total of 321 shovel test pits (STPs) were excavated within the study area. These STPs (also referred to as 'test units,' in the Phase I), measured 50 x 50 centimeters (cm), and were excavated to an average depth of 60 cm. Soils were screened, soil levels were recorded, and artifacts were bagged and processed. STPs were placed along transects 10-20 meters apart depending on established sensitivity. In areas where transects could not be plowed for logistical reasons, such as the sludge and water line locations, STPs were placed either judgmentally or systematically, depending on location.

Based on these field investigations, some large areas were considered to contain no archaeological resources, other areas were determined to contain isolated finds with no further research value, and other areas (designated as Loci 1, 2, and 3) were determined sensitive for precontact period archaeological resources.

A number of Find Spots were identified based on cultural material encountered along plowed transects. These Find Spots were located along five separate transects in the large area tested on the east side of Route 22. These five transects yielded a total of 11 precontact period artifacts, consisting of projectile points and flakes of quartz, quartzite, and chert. In all cases except those discussed in greater detail below, additional plowing in find spots yielded no further cultural material, and therefore, the artifacts encountered were considered isolated remains. It was determined that these locations most likely “do not represent intact potentially significant depositions. The information that can be acquired from such depositions is minimal as there is no contextual information, and little content” (HPI November 1988: 22). Therefore, proposed construction in these areas was determined to have no impact on archaeological resources.

Eight isolated incidents of prehistoric artifacts were encountered during the excavation of shovel test pits. These generally consisted of quartz, chert, or slate flakes. Additional investigation in these areas, either through excavation of units, arrays, or plowed transects revealed extensive disturbance or sterile soils. These isolated finds were considered to have no further research potential. The one exception was where the first two isolated finds were encountered, along two of the most northeastern transects tested, which were located on a level terrace at the top of a rise. A unit along one of these transects yielded one projectile point or drill tip and four dark grey chert flakes, all within the plow zone. An array of four units excavated five meters from the original unit in each of the cardinal directions encountered no further cultural materials. However, a unit in a parallel transect yielded three grey chert flakes. An array excavated around this unit was sterile. It was discovered that this location was outside of the APE for the project, and therefore, no further testing was conducted; however, it was concluded that “If future construction is proposed for this location, this occurrence should be considered” (HPI November 1988: 20).

Three areas of greater prehistoric lithic concentration were also identified during Phase I testing, and were designated as Loci 1, 2, and 3. These loci are described below.

#### *LOCUS 1*

Locus 1 was identified during 10-meter-interval shovel testing along the route of a proposed sludge line, which was projected to run on a roughly east-west orientation across the study area from the Watchtower Educational Center on the east side of Route 22, to a sludge lagoon on the west side of Route 22. On the east side of Route 22, testing along an initial sludge line alignment yielded no cultural materials. However, when an updated alignment was tested, prehistoric artifacts were encountered in a relatively high density along the western portion of the transect (on the east side of Route 22) and associated arrays. The artifacts, which primarily consisted of chert flakes were recovered almost exclusively from within the plow zone. No further testing was undertaken on the east side of Route 22 because the area of proposed impact was so narrow in that location that only minimal potential damage was expected as a result of the sludge line construction.

#### *LOCUS 2*

On the west side of Route 22 along the previously proposed and not approved sludge line route, a roughly 1,000-foot-long east-west-oriented transect was tested. The eastern portion of this transect was almost completely sterile, however, at the transect’s western terminus, in the location of the previously proposed and not approved sludge lagoon, a large number of additional artifacts was encountered. Six units in this area each produced one to three cultural lithics, and arrays excavated around these units yielded additional lithic materials. Four short north-south-oriented transects were excavated at the west end of the transect. These transects consisted of roughly seven units each, and between one and two units in each transect yielded lithic artifacts within the plow zone. One unit in this area contained a chert flake within the plow zone, and under it, a soil stain with charcoal flecks was encountered, and was considered a possible feature. Arrays were excavated around finds along these transects, some of which yielded additional cultural material. It was determined that although most of the prehistoric artifacts in this area were recovered from within the plow zone, “the lithic scatter represented in this area is rather diverse and extensive. Given the proximity to the Great Swamp, it is likely that this area was utilized somewhat extensively prehistorically and has therefore been designated as Locus 2” (HPI November 1988: 23).

#### *LOCUS 3*

A north-south-oriented transect at the south edge of the WEC properties, roughly 180 meters east of Route 22, bordered a small intermittent stream. Initial testing yielded five find spots along this transect that contained between

one and two lithic artifacts per find spot, ranging from flakes to points and blades. Due to the high number of lithics recovered, the location was designated as Locus 3. In order to further investigate this area, a plow was used to widen the transect by 10 meters on the east side, as well as 10 meters on the west side in the vicinity of FS-7. Additional widening to the west was not possible due to the proximity of the stream bed. Six new find spots were established based on this additional testing, yielding a total of eight flakes. The horizontal and vertical distribution of Locus 3 remained undetermined at the end of the Phase I field survey (HPI November 1988: 24).

Additional testing, in the form of a Phase II investigation, was recommended at each of the three loci identified during the Phase I study.

## PHASE II INVESTIGATIONS

Phase II field investigations were undertaken by HPI during October and November 1988, at each of the loci identified above. In addition, a fourth locus of prehistoric and historic period sensitivity was identified as part of the Phase II testing. The results of this testing are summarized below.

### *LOCUS 1*

Locus 1 centered on an updated sludge line alignment (previously proposed and not approved) along which prehistoric artifacts were encountered during Phase I. The original sludge line alignment (previously proposed) had been tested and produced no cultural materials. Approximately 24 additional STPs were excavated during Phase II testing in order to determine the site boundaries; these yielded an additional 40 flakes. The site boundaries of Locus 1 were drawn to be approximately 120 meters north and south, and approximately 50 meters east and west.

The applicant opted to revert to the original sludge line alignment (previously proposed) in order to avoid the highest density lithic area. Four 1 by 1 meter units were excavated along the path of the original sludge line alignment, producing additional flakes and a Late Archaic Brewerton side-notched projectile point. Construction of the sludge line along the original alignment was determined to have no adverse impact on cultural resources because the line would be installed in a lower-density lithic scatter area that had been studied intensively; furthermore, all lithics recovered in this area were from within the plow zone and were therefore of limited data value. The Phase II concluded, however, that "If construction in the future will disturb any area known to be within the boundaries of the prehistoric site, it is recommended that further investigations be conducted in the form of additional meter units" (HPI January 1989: 11).

### *LOCUS 2*

Additional testing was undertaken in the sludge lagoon area (previously proposed) on the west side of Route 22. The soil stain encountered below the plow zone was further investigated. It was found to extend from approximately 15 to 45 centimeters below ground surface. With the exception of charcoal, no cultural features were associated with it. It was concluded that the feature was most likely the result of a pit that had been filled in with sediments from the nearby Great Swamp. Additional test pits were excavated within Locus 2 in the vicinity of previous finds along the sludge line and sludge lagoon area. A substantial amount of 20th century ceramics was encountered. The previous owners, who had inhabited the property for 40 years, verified that the location had been utilized as a dump. Additional prehistoric artifacts were recovered in relatively low concentrations from other portions of Locus 2. Only one of these artifacts, a chert flake, was found below the plow zone, along Transect DD. Therefore, Locus 2 was not considered to represent a significant undisturbed site. The proposed installation of a sludge line and lagoon was determined not to have an adverse impact on cultural resources, and it was concluded that "further investigations would probably not be more conclusive" (HPI January 1989: 12).

### *LOCUS 3*

Locus 3, located along an intermittent stream on the south edge of the study area on the east side of Route 22, had yielded prehistoric artifacts along a plowed transect during the Phase I survey. To further investigate this area, five 50x50 centimeter units were excavated along this transect in 20 meter intervals, and eight 50x50 centimeter units were excavated along two parallel transects immediately to the east. A total of three quartz flakes were encountered in the five units along the transect. The eight units to the east were sterile. While testing in Locus 3, a historic feature was encountered, consisting of a stone wall bordering the stream. This wall appeared to have been part of a former

bridge or dam. Map research did not indicate that a larger structure occupied the site. It was concluded that the wall was likely associated with 19th or 20th century farming and water control activities, and lacked further research potential. Furthermore, it was determined that the prehistoric artifacts were low-density deposits likely associated with a short-term Late Archaic-period campsite. It was concluded of Locus 3 that “Further testing would probably not produce additional significant information, and therefore is not warranted” (HPI 1989: 12).

#### *LOCUS 4*

Locus 4 was identified during the Phase II field investigation while testing the boundaries of Locus 1 along the updated sludge line alignment on the east side of Route 22. Immediately southwest of Locus 1, a wall or foundation and numerous historic-period artifacts were encountered. The feature was encountered in a location shown on the 1854 O’Connor map of the area as containing structures (likely agricultural buildings) associated with a farmstead owned by the Stone family for roughly 60 years during the 19th century; a house associated with the farmstead still stands on the west side of Route 22. Chert flakes and a projectile point were also found within Locus 4. Further testing in this locus was not undertaken because the location was no longer in the area of proposed impact due to the applicant’s reversion to the original proposed sludge line alignment to the south. It was concluded that “any other construction that may occur at this locus in the future would necessitate further investigations of this potentially significant historic feature” (HPI 1989: 13)

### **SUMMARY OF CONCLUSIONS OF PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS**

Phase I and Phase II investigations of the study area resulted in the identification of four loci of prehistoric and historic period artifact concentrations. Locus 1 (which contained prehistoric artifacts) and Locus 4 (which contained a historic-period feature and both historic and prehistoric artifacts) were avoided by the project due to the realignment of a previously proposed, not approved sludge line. These loci were considered potentially significant, and further archaeological testing was recommended in these areas if construction was planned within them in the future.

Locus 2 (in the previously proposed, not approved sludge lagoon area on the west side of Route 22) and Locus 3 (which was located in the southeastern portion of the properties) contained both historic and precontact period deposits, but were determined to lack additional research value. No further testing was recommended in the areas of Loci 2 and 3.

The only additional area for which the previous archaeological studies identified further archaeological potential was along two transects in the far northeastern corner of the study area, where several prehistoric artifacts were encountered during Phase I testing. The location was determined to be outside of the study area during the Phase I stage, and therefore the boundaries of the potential site and the significance of the deposits was not evaluated.

With the exception of Loci 1 and 4, and the finds encountered along the northeastern transects, all other areas tested during the Phase I and II archaeological studies were determined to warrant no further archaeological study.

It should be noted that the previous archaeological investigations did not identify archaeological sites associated with Revolutionary War encampments or activities that may have occurred in or near the APE.

### **C. EXISTING SUBSURFACE DISTURBANCE**

As described, the previous archaeological studies performed in the 1980s noted that a certain amount of disturbance had occurred across the majority of the WEC properties due to plowing and logging activities that historically occurred on the site. The Phase I also noted that the orchard area, which was already developed at that time, had experienced substantial disturbance as a result of grading and installation of irrigation lines. Due to its location outside of the APE for that project, however, the orchard area was not examined in detail.

With the exception of the orchard, the WEC facility in Patterson had not yet been constructed at the time of the writing of the Phase I and II archaeological reports. Therefore, since the time of those studies, substantial new ground disturbance has occurred on the properties, which would likely have disturbed any archaeological resources that may have been present in many locations. Construction activities that have taken place since the previous

archaeological studies include extensive grading and landscaping, construction of buildings, installation of utilities, creation of temporary storage areas, and other developments associated with the construction of the WEC facility.

This section examines the estimated horizontal and vertical extent of ground disturbance that has occurred in the archaeological APE, focusing on construction activities following the previous archaeological studies in the 1980s.

## **APE SEGMENT 1**

### *GRADING AND IRRIGATION SYSTEM IN THE ORCHARD AREA*

The orchard area, a portion of which would be developed as part of the proposed project, was created just prior to the development of the rest of the facility, ca. 1985-6.

The 1988 Phase I report noted that “subsurface disturbance... includes the installation of sprinklers in an apple orchard” (HPI November 1988: 6). This irrigation system consists of several water lines passing through the orchard, installed at a depth greater than 4 feet (1.2 meters) below ground surface, and a network of smaller distribution lines, located at least one foot (.3 meters) below ground surface. The ground surface would also have been disturbed to a depth of several feet to plant the orchard trees.

More significantly, however, extensive disturbance occurred throughout the orchard area during the creation of the orchard by extensive cutting, filling, and grading. In particular, substantial amounts of soil from the eastern (highest elevation) portion of the orchard were removed and redeposited on the steeply sloped lower-elevation western portion of the orchard area (Richard Eldred, P.E. Watchtower Bible and Tract Society of New York, Inc., pers. comm., July 2008).

A comparison made of two-foot-contour topographic maps of the orchard area from 1976 (before the orchard’s construction) and 2005, respectively (see **Figure 8**) confirms this information. The 1976 map shows that the highest point of the area prior to orchard construction was located roughly 200 feet (61 meters) northwest of the present audio/video building. This peak rose relatively sharply from 714 to 740 feet (218 to 226 meters) above datum within a 300-foot (91-meter) diameter. The current topography reflects substantial cutting in this area, ranging from 6 to 10 feet (1.8 to 3 meters) lower than it was in 1976. Most of the rest of the current orchard area appears to have experienced substantial filling since 1976. In the southern and the western portions of the orchard, the comparison shows a rise in grade from 6 to 16 feet (1.8 to 4.9 meters) from 1976 to 2005. The north-central portion of the orchard area also shows a rise ranging from 2 to 10 feet (.6 to 3 meters) and a marked change in contour shape.

In summary, personal communications, utility information, and topographic map comparisons all suggest that during the construction of the orchard, the entire area was subject to substantial disturbance. The east-central portion of the orchard area has experienced substantial cutting, being 6 to 10 feet (1.8 to 3 meters) lower than its 1970s elevation. The remainder of the orchard experienced substantial filling. The western orchard is a steeply sloping area, both historically and currently characterized by slopes of more than 15 percent.

### *BUILDING, ROAD, AND PARKING LOT CONSTRUCTION*

As described in detail in Chapter 1, section C, “Site Walkover,” a large number of buildings, all of which were constructed in or after the late 1980s, are currently standing in and adjacent to the archaeological APE for this project. Building plans and sections, photographs taken in the 1980s and 1990s, and comparisons of pre- and post-development topographic maps, confirm that most of the archaeological APE was subject to substantial disturbance during the construction of the buildings, roads, parking lots, and landscape features that now make up the WEC facility.

Aerial photographs taken over the course of the construction in 1989-92 show that the clearing, excavation, and grading that occurred on the site during this construction period was extensive and wide-spread (see **Figures 9 and 10**). The photographs suggest that the entire area contained within the south loop road was substantially excavated and disturbed by building construction with the single exception of the wooded rise located immediately east of the main parking lot. In the southern extremity of the south loop road, a small pond was constructed by substantially excavating the location, which was not formerly a wetland (compare Figure 9, Photo 2, to Figure 10, Photo 3). The entire Patterson Inn area, including at least a 100-foot buffer around the building, appears to have experienced substantial excavation during the construction of that facility. Furthermore, the aerial photographs show that the

areas flanking Watchtower Drive were substantially excavated and regraded to create the present slopes. In particular, what are now open grassy areas north and south of Watchtower Drive between the loop road on the east and the two spur roads on the west were cleared, regraded, occupied by temporary structures and construction trailers from ca. 1989-1992, as shown in Figures 9 and 10.

The location of the three structures located immediately east of the orchard, the Audio/Video Building, the Water Softening Facility, and the Powerhouse, would also have been substantially disturbed during the construction of these buildings. Of the three buildings, only the Powerhouse was constructed in the initial phase of construction, however, the aerial photographs show that a large area including the present locations of the other two structures was excavated and regraded. As shown on plans and sections of these structures provided by the applicant, each of the three buildings has either a full or partial basement extending at least 10 feet (3 meters) below ground surface, and a tunnel that extends at least 12 feet (3.7 meters) below ground surface connects the power house and the water softening facility.

#### *UTILITY INSTALLATION*

Utility lines, including water, sewer, stormwater, electric, gas, and lighting lines are located at varying depths, ranging between roughly one and 6 feet (.3 and 1.8 meters) below ground surface throughout the APE. The highest density of underground utility lines is in the areas developed with structures, and in the vicinity of processing buildings such as the Wastewater Treatment Facility and the Water Softening Facility. A sanitary sewer runs along the outer circumference of the northern loop road.

Mountain Brook is located within the APE near the northwestern edge of segment 1. A north-south-oriented power line crosses Mountain Brook just east of Route 22, and a water line crosses the brook roughly 50 feet northeast of the power line.

#### **APE SEGMENT 2: NORTH PASTURE**

The north pasture is currently an open field used for cattle grazing. The area is under consideration as a possible deposition area for excess soils. The north pasture would have been plowed agricultural land prior to the acquisition of the properties by Watchtower. The WEC “reservoir,” constructed in the early 1990s, is located immediately east of the north pasture, and it is possible that some disturbance may have occurred within the north pasture area during the construction of this large-scale water feature. However, with the exception of presumed plowing and possible reservoir construction-related activities, no previous ground disturbance within the area is known.

#### **APE SEGMENT 3: RECREATION AREA**

The recreation area segment of the APE is currently occupied by tennis courts, basketball courts, a gravel-paved parking area, a single-story structure, and two gazebos, as well as a lawn. Tall metal light standards are placed at intervals throughout the area. As indicated in the “Existing Slopes Analysis,” the entire recreation area was extensively regraded to create the current facility. Current slopes within the recreation area are at 0 percent, while the areas immediately surrounding the recreation area have slopes of roughly 25 percent. It is evident that extensive cutting and filling was carried out in order to create the almost perfectly level elevation that currently characterizes the recreation area.

#### **APE SEGMENT 4: EXISTING EXCESS SOIL DEPOSITION AREA**

The existing excess soil deposition area, under consideration as a possible excess soil deposition area, is located in the wooded eastern portion of the project site parcel, with slopes ranging from 10 to 15 percent. A dirt roadway and a cleared area currently being used as a composting area are located in the northern portion of segment 4. Several feet of fill (soil and concrete rubble) was placed in the cleared area in recent years (Mark Coles, Kingdom Support Services, pers. comm). A stone wall (likely associated with the historic period agricultural use of the property) and dirt path oriented roughly north-south are located along the west edge of segment 4. No other ground-disturbing activities are known to have occurred in this location in the recent past.

**A. INTRODUCTION**

This chapter assesses the archaeological sensitivity of the APE based on documentary and cartographic research, and a review of archaeological investigations previously conducted on the WEC properties and recommends archaeological testing strategies for archaeologically sensitive areas that could be impacted by the proposed project. In general, precontact period archaeological sensitivity was identified in portions of the APE that have not been subject to either recent ground disturbance or previous archaeological testing. The project site is considered sensitive for archaeological resources relating to Revolutionary War-period encampments and other activities, except in areas with documented ground disturbance that would appear to have destroyed any such resources. The project site is considered sensitive for historic-period resources relating to late 18th and 19th century domestic habitation in the vicinity of map-documented historic structures, except where substantial recent ground disturbance has occurred.

It was determined that many portions of archaeological APE possess low sensitivity for prehistoric and historic period archaeological resources due in large part to extensive recent ground disturbance. Four portions of the APE, however, do possess potential for precontact and/or historic period archaeological resources. As project planning progresses, if it is determined that these areas would be directly impacted by project-related construction, an archaeological field testing program would be required to determine the presence or absence of archaeological resources. In addition to the archaeological field testing, an Unanticipated Discoveries Plan for Archaeological Resources will be prepared and implemented in consultation with NYSOPRHP prior to the commencement of project-related construction. This Unanticipated Discoveries Plan will present a protocol for the proper treatment of any archaeological resources or human remains that may be unexpectedly encountered during project construction.

**B. APE SEGMENT 1****ORCHARD AND NORTH LOOP ROAD AREA**

As part of the proposed project, new buildings and a new pond would be constructed in the area contained within and immediately adjacent to the north loop road area, including the orchard and the existing Audio/Video Building, Water Softening Facility, and Powerhouse. While this area was not field tested as part of the previous archaeological investigations on the properties, it would have possessed a lower likelihood of hosting precontact period settlement due to its steep slopes of 15 percent and greater. Furthermore, as described in Chapter 4, section C, "Existing Subsurface Disturbance," the entire area now occupied by the orchard has experienced substantial ground disturbance due to utility and irrigation system installation and regrading for the creation of the orchard and the construction of buildings. The cutting and filling activities documented in this area would almost certainly have disturbed any precontact period archaeological resources that may have existed in this area. Any Revolutionary War period archaeological resources that may have existed within this portion of the APE associated with encampment of troops would also likely have been disturbed by the extensive earth-moving activities. No map-documented historic structures have been identified in this area; therefore, it is not considered sensitive for historic-period archaeological resources relating to late 18th and early 19th century domestic habitation in the area.

The eastern portion of this area is considered additionally disturbed by the construction of the Audio/Video Building, Water Softening Facility, and Powerhouse. The now partly wooded location immediately north of the Audio/Video Building, where an addition to the Audio/Video Building is proposed, was disturbed by grading and construction of the Audio/Video Building. Furthermore, a comparison of 1976 and 2005 (pre- and post-development) topographic maps shows that the grade has been raised in this area by roughly 8 to 15 feet (2.4 to 4.6 meters) (see Figure 8). Therefore, it is unlikely that any precontact period deposits would remain intact in this area. The location is also considered to have low potential for historic period archaeological resources due to the long distance (more than 1,000 feet [305 meters]) between this area and the nearest map documented historic structure. It

is considered very unlikely that resources associated with Revolutionary War period encampments would remain intact in this area. No further archaeological investigation is recommended for this area.

### **APE SOUTH OF ORCHARD**

The entire APE south of the orchard area was the subject of previous archaeological field testing with the exception of a small area immediately south of the concrete Batch Plant and recycling facility.

The portion of the area that was previously tested resulted in no significant finds and no recommendations for further archaeological research. As described in Chapter 4, the area has subsequently been extensively disturbed through the construction of the loop road, the structures contained within it, the Patterson Inn complex, the construction of roads and parking lots, and the extensive grading and landscaping of the site. Therefore, this portion of the WEC properties is considered to have low potential for containing intact archaeological resources.

A small area immediately south of the concrete Batch Plant and recycling facility was not part of the 1988-9 archaeological APE and was not field tested at that time. However, this location underwent extensive disturbance in association with the construction of the concrete Batch Plant and recycling facility. The location was also the site of temporary roadways and a temporary construction trailer complex during the construction of the facility in 1989-92, as documented on aerial photographs from that period (see Figure 9, Photo 2; and Figure 10). Therefore, any archaeological resources that may have existed in this area would likely have been disturbed as part of these construction activities. No further archaeological investigation appears to be warranted in this area.

### **MOUNTAIN BROOK AREA**

The Mountain Brook portion of APE segment 1 includes portions of Loci 1 and 4, areas identified as archaeologically sensitive during the previous Phase I and II archaeological investigations of the properties. As discussed in detail in Chapter 4, Locus 1 was identified as containing precontact period archaeological resources and Locus 4 as containing both precontact period archaeological resources and historic-period archaeological resources (relating to domestic and agricultural activities). A historic period stone feature and concentration of historic period artifacts encountered in Locus 4 were believed to relate to former structures in that location which belonged to Judge Stone in the mid-19th century. The previous archaeological studies recommended that if future construction were undertaken in the vicinity of these loci, additional archaeological field testing should be conducted to determine the significance of the deposits. Archaeological resources relating to Revolutionary War period activities were not identified during previous archaeological field investigations in the location; however, Revolutionary War period resources could exist in the vicinity outside of the previously tested locations.

While project plans are not yet finalized with respect to proposed construction in the vicinity of Mountain Brook, in the northwestern portion of the APE segment 1, the construction of a bridge spanning Mountain Brook is under consideration if the north pasture area (APE segment 2) is chosen as a deposition area for excess soils. Under this possible scenario, a temporary construction entrance to the WEC would be built roughly 780 feet north of Watchtower Drive (a temporary construction entrance in the same location was constructed during the original construction of the WEC and was subsequently revegetated). If this were to occur, it is possible that a (permanent) bridge would be built over Mountain Brook, immediately southwest of Locus 4, connecting the temporary construction entrance with an existing roadway north of Mountain Brook and connecting to the north pasture.

With the exception of grading along Route 22 and the construction of the earlier temporary construction entrance, little ground-disturbance appears to have occurred in the immediate vicinity of Mountain Brook subsequent to the previous archaeological investigations. Therefore, the area is considered to possess *moderate to high* archaeological sensitivity for prehistoric and historic period archaeological resources. As design progresses, if any project-related construction is planned in the immediate vicinity of Mountain Brook, archaeological field testing (Phase 1B testing) would be required prior to excavation to determine the presence or absence of archaeological resources. Field testing would consist of the manual excavation of 50-centimeter (20-inch) diameter STPs at intervals of 7.5 meters (25 feet) or less within the area to be impacted. If artifacts are encountered in an STP, a minimum of 8 radial tests at 1 meter (3.3 feet) and 3 meter (10 feet) intervals would be excavated. If potentially significant archaeological deposits are encountered, additional testing may be required to determine their significance. Testing would be undertaken under the supervision of a Registered Professional Archaeologist and in accordance with NYAC and NYSOPRHP guidelines.

### **C. APE SEGMENT 2: NORTH PASTURE**

As noted above, the north pasture is being considered as a possible deposition area for excess soils and materials excavated during construction. If the north pasture area is used for this purpose, the soil would be scarified to a depth of roughly 1 foot below ground surface, a temporary sediment basin would be constructed in the southwestern portion of the area (requiring deeper excavation), and large quantities of excavation materials would be deposited in this area. Segment 2 is believed to have experienced little previous ground disturbance with the exception of agricultural plowing. Therefore, due to its moderate inclined topography and well-drained conditions, its location in proximity to the Great Swamp, and proximity to other known precontact-period archaeological sites, the location is considered *moderately sensitive* for precontact period archaeological resources. The location is also considered *moderately sensitive* for historic period archaeological resources relating to Revolutionary War period activities. The area is unlikely to contain resources relating to the late 18th and 19th century domestic habitation of the area.

If segment 2 of the APE is selected as a location for the deposition of soils, project-related construction is expected to consist of minimal excavation (within 1 foot below ground surface) and the deposition of substantial quantities of soil which would be piled within this area.

If such project-related construction is to occur in this area, archaeological field testing prior to excavation would be required. It is recommended that testing begin by plowing transects throughout the North Pasture APE. Plowed areas would be a minimum of 3.3 meters (10 feet) in width and would be spaced 15 meters (50 feet) or less apart, in accordance with NYSOPRHP guidelines. Transects would be walked by an archaeologist when freshly plowed. A metal detector survey would be conducted to assist in locating deposits that may relate to the Revolutionary War period sensitivity of the area. Limited shovel testing would be undertaken to assess the soil stratigraphy, and STPs would also be excavated in find spot locations identified during plowing and locations identified through metal detector survey. This Phase 1B field investigation would be undertaken under the supervision of a Registered Professional Archaeologist and in accordance with NYAC and NYSOPRHP standards.

### **D. APE SEGMENT 3: RECREATION AREA**

The existing recreation area consists of an extensively regraded area occupied by tennis and basketball courts, a parking area, and several small structures. With the proposed project, this area would be used as a rock crushing and gravel storage area. In general, the proposed work in this area would be limited to the flat developed portions of the recreation area and would not require subsurface excavation. Therefore, no impacts to archaeological resources would occur in the majority of this portion of the APE, and no archaeological testing is recommended. However, at the south edge of APE segment 3, excavation up to 4 feet below ground surface may occur for the construction of a temporary sediment trap. The recreation area is in relatively close proximity to a granite marker inscribed with the words "Eight Revolutionary Soldiers" (see Photo 12). Due to the possibility that Revolutionary War period burials could be located in the vicinity of the Recreation Area, archaeological monitoring by a Registered Professional Archaeologist would be required during excavation. The archaeologist would be present to monitor all excavation in this area until final depth of excavation or until sterile soils are reached. If human remains or potentially significant archaeological resources are encountered, excavation would stop immediately and the site would be protected while consultation is undertaken with NYSOPRHP and any other applicable agencies.

### **E. APE SEGMENT 4: EXISTING EXCESS SOIL DEPOSITION AREA**

As discussed above, the existing excess soil deposition area in the far eastern portion of the project site parcel is under consideration as a possible location for deposition of excess soils. Known previous ground disturbance in this wooded area is limited to the creation of dirt paths and the deposition of several feet of fill (soil and concrete rubble) in the portion of the area that is currently cleared. Based on the proximity of known precontact period sites, and the location of the area on a rise overlooking the Great Swamp, segment 4 possesses *moderate sensitivity* for precontact period archaeological resources. The location is also considered *moderately sensitive* for historic period archaeological resources relating to Revolutionary War period activities. The area is unlikely to contain resources relating to the late 18th and 19th century domestic habitation of the area.

If segment 4 of the APE is selected as a location for the deposition of soils, project-related construction is expected to consist of de-vegetation of the area, minimal excavation (within 1 foot below ground surface) across the area, the construction of a temporary sediment trap at the south edge of the area which may require excavation up to 4 feet below ground surface, and the deposition of substantial quantities of soil within this area. If ground disturbance, including grading or soil deposition, would occur in this area as part of the proposed project, archaeological field testing is recommended for segment 4. As part of this testing program, a thorough site walkover should be undertaken by an archaeologist in order to determine the presence or absence of above-ground features such as rock shelters or quarries. The walkover should be followed by a field testing program consisting of the excavation of STPs to determine the presence or absence of subsurface precontact period deposits. Shovel test pits would be approximately 50 centimeters (20 inches) in diameter and would be excavated at intervals of 15 meters (50 feet) or less throughout the area that would be impacted. If artifacts are encountered in an STP, a minimum of 8 radial tests at 1 meter (3.3 feet) and 3 meter (10 feet) intervals would be excavated. If potentially significant archaeological deposits are encountered, additional testing may be required to determine their significance. Testing would be undertaken under the supervision of a Registered Professional Archaeologist and in accordance with NYAC and NYSOPRHP guidelines.

## **F. SUMMARY**

This Phase IA archaeological survey has determined that most of the archaeological APE for the WEC Amended Site Plan project has experienced extensive modern disturbance and therefore lacks archaeological sensitivity. However, four portions of the archaeological APE that may be impacted by the proposed project do appear to retain archaeological sensitivity. These areas include the following:

- APE segment 1: flanking Mountain Brook in northwestern portion of segment 1 only;
- APE segment 2: the north pasture;
- APE segment 3: the recreation area (southern edge in proposed temporary sediment trap location only); and,
- APE segment 4: the existing excess soil deposition area.

If refined project plans indicate that project-related construction would occur in this area or any of the areas listed above, archaeological field testing or monitoring (as appropriate) would be required prior to construction to determine the presence or absence of archaeological resources in these areas. Archaeological testing or monitoring is not considered necessary for any other portions of the archaeological APE. However, an Unanticipated Discoveries Plan for Archaeological Resources will be prepared and implemented in consultation with NYSOPRHP prior to the commencement of project-related construction. This Unanticipated Discoveries Plan will present a protocol for the proper treatment of any archaeological resources or human remains that may be encountered during construction.

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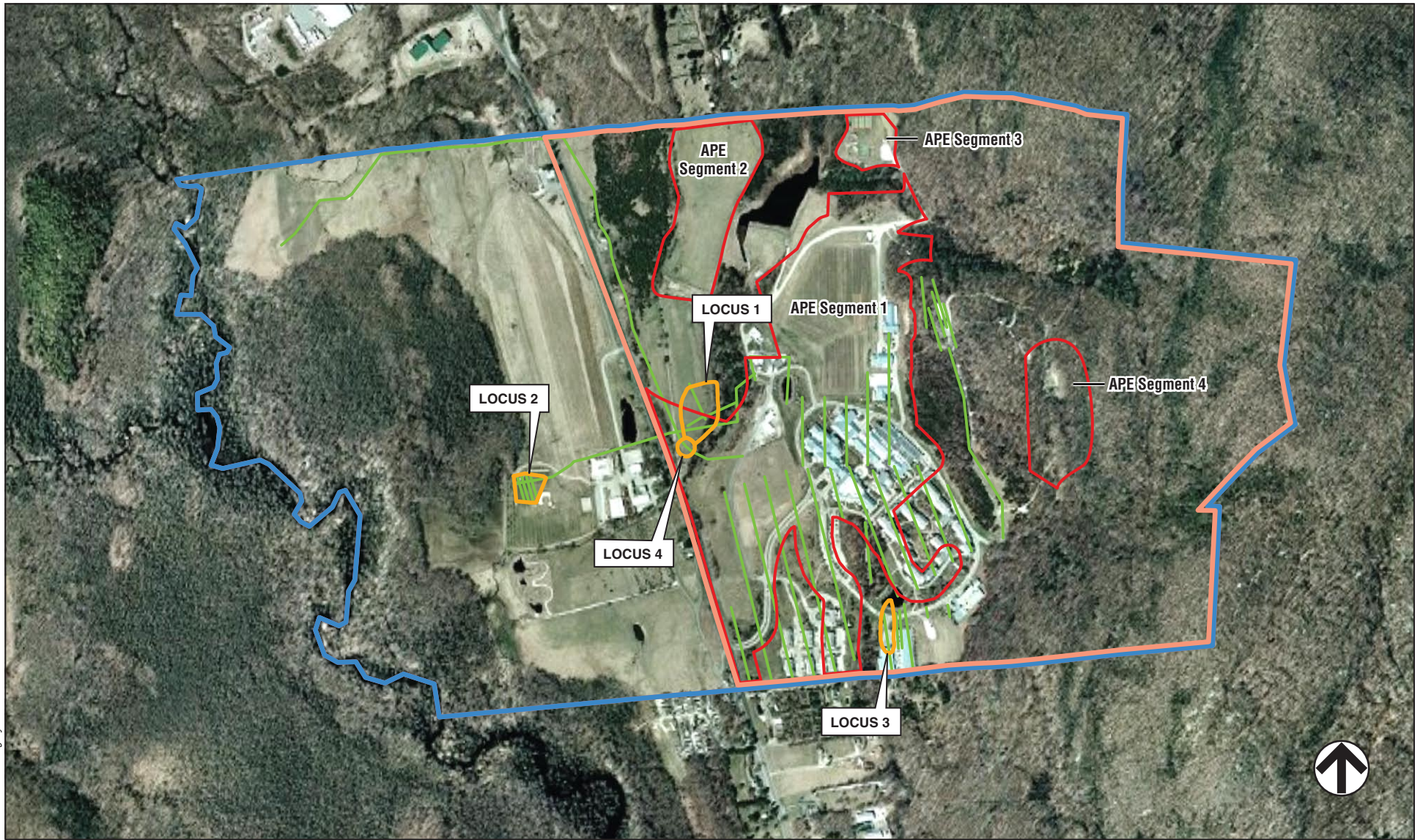
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# Figures









- Project Site Parcel
- WEC Properties
- Archeological APE
- Previously Tested Transects
- Loci of Archaeological Sensitivity

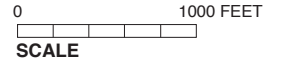


Figure 2  
Archaeological APE and Previously Tested Areas



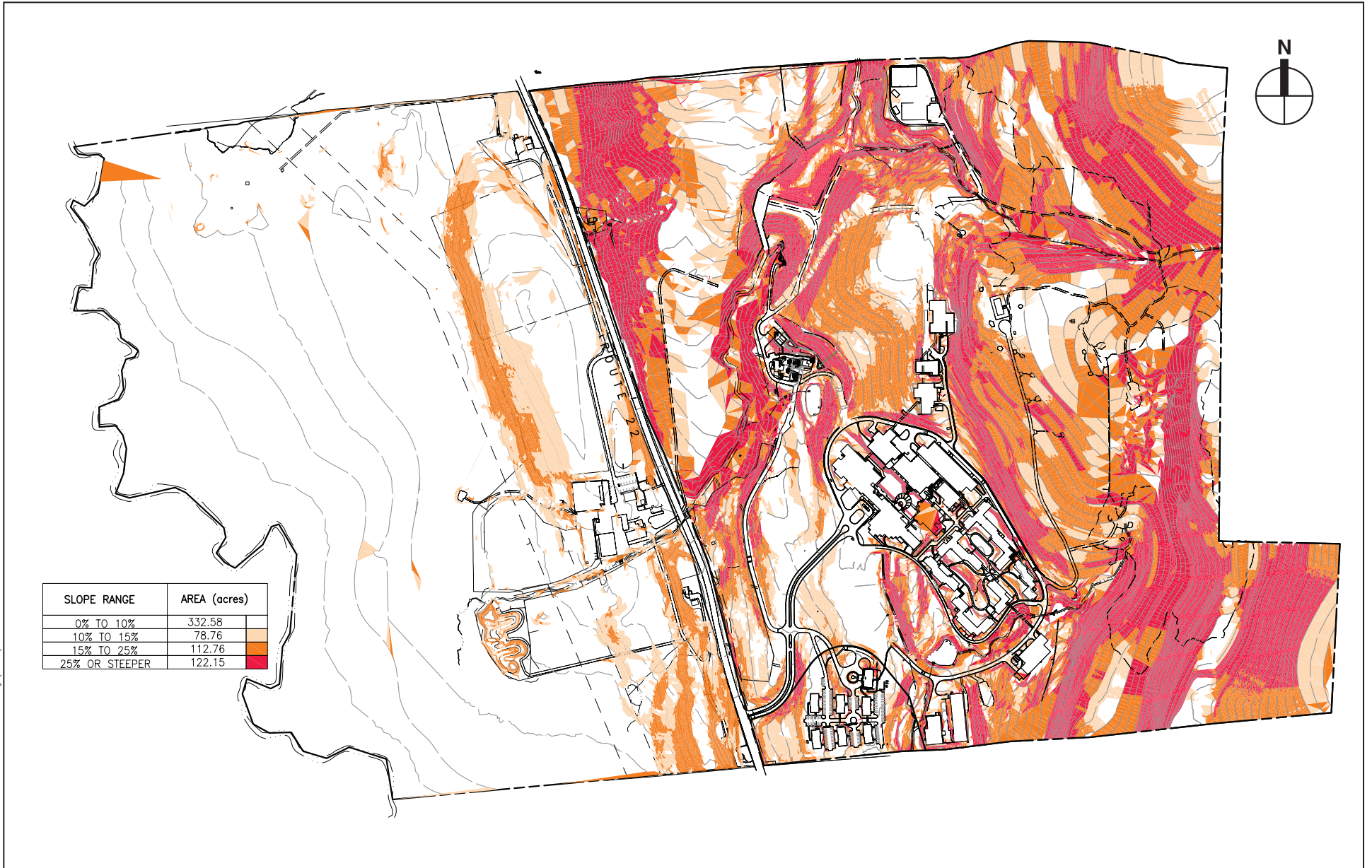


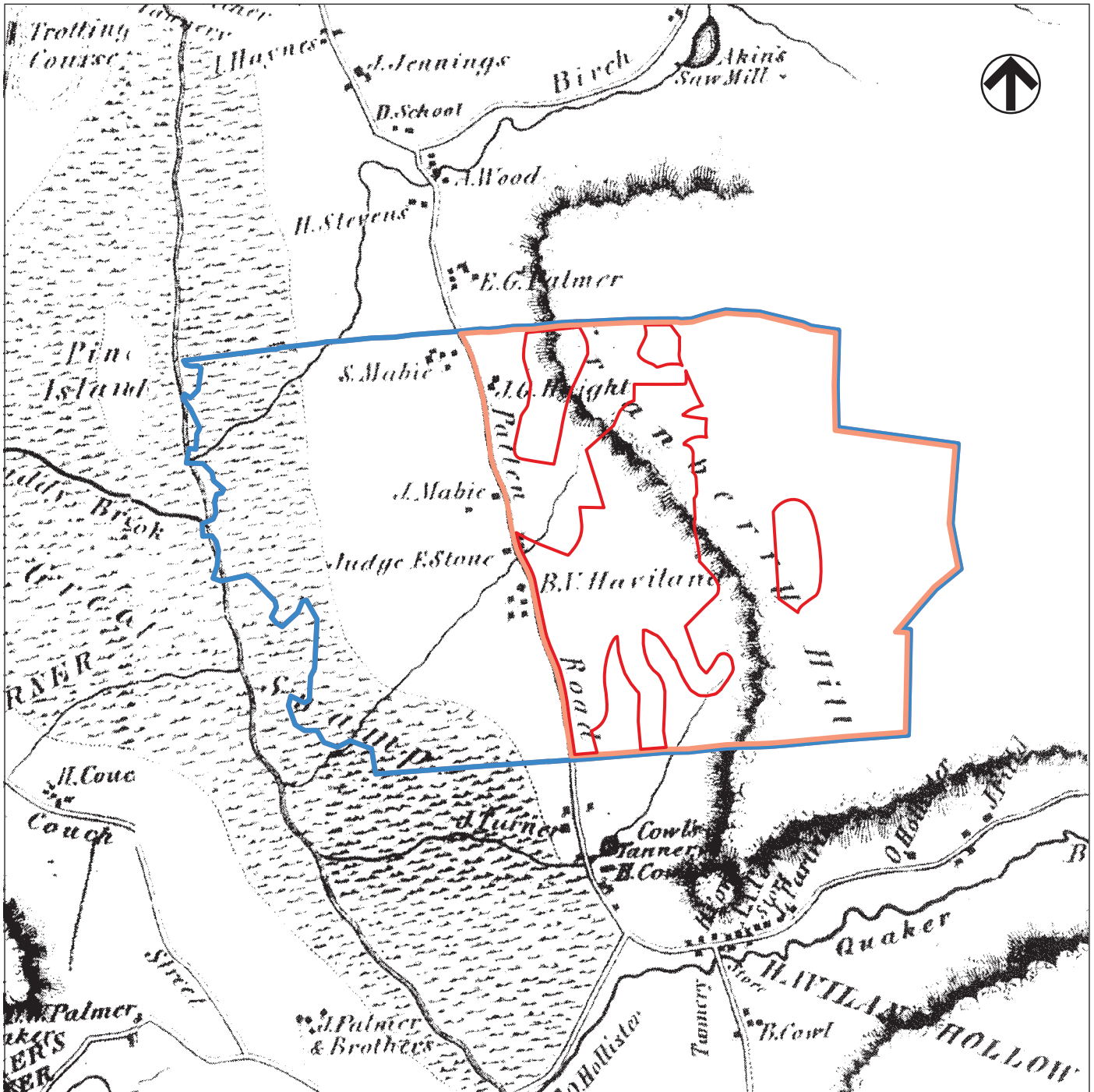
Figure 3  
Existing Slopes Analysis



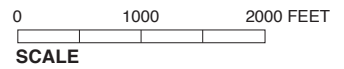




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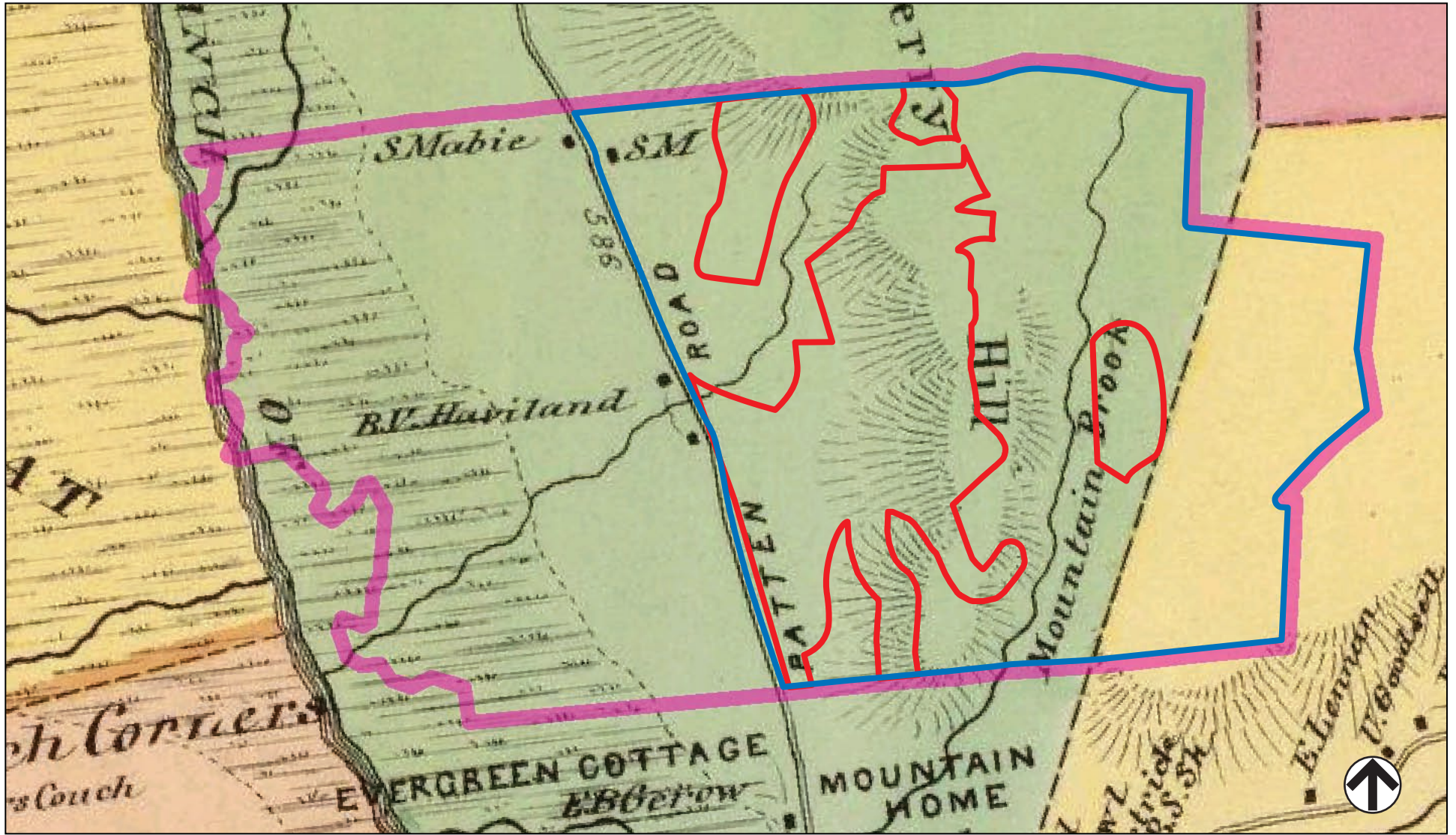
Base Map: 1854 O'Conner Map



- Project Site Parcel
- WEC Properties
- Archeological APE

Figure 5  
1854 O'Conner Map





Base Map: 1868 Beers Map

-  Project Site Parcel
-  WEC Properties
-  Archaeological APE

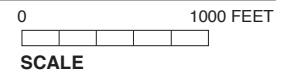
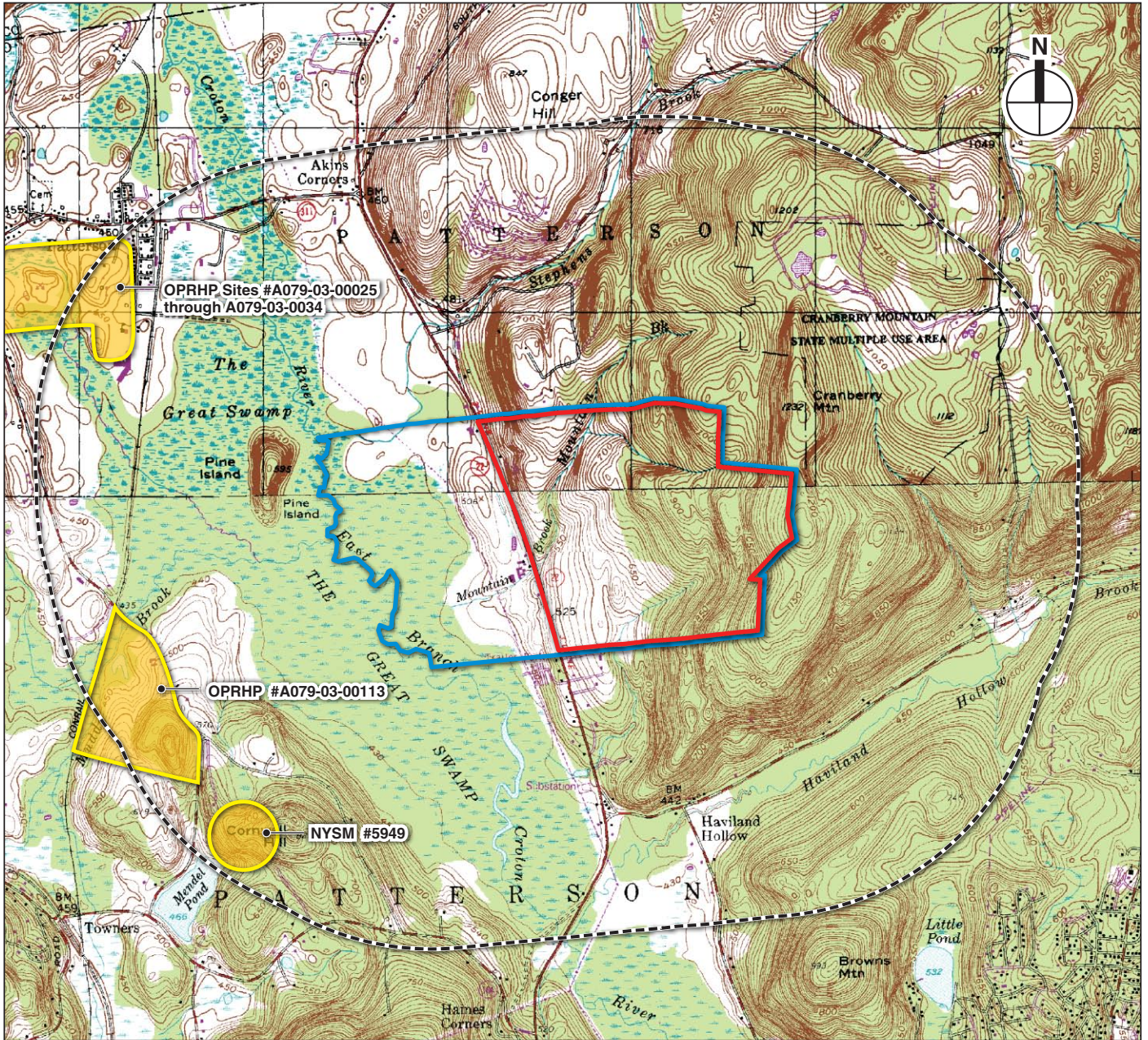


Figure 6  
1868 Beers Map



12.17.09



- Project Site Parcel
- WEC Properties
- One-Mile Perimeter
- Previously Identified Archaeological Site (Approximate Location)

NOTE: See Table 3 for Reference

Figure 7  
Previously Identified Archaeological Sites  
in the Vicinity of WEC Properties



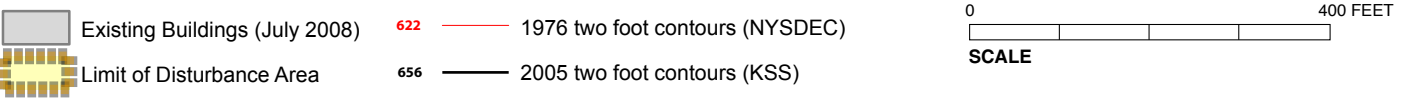
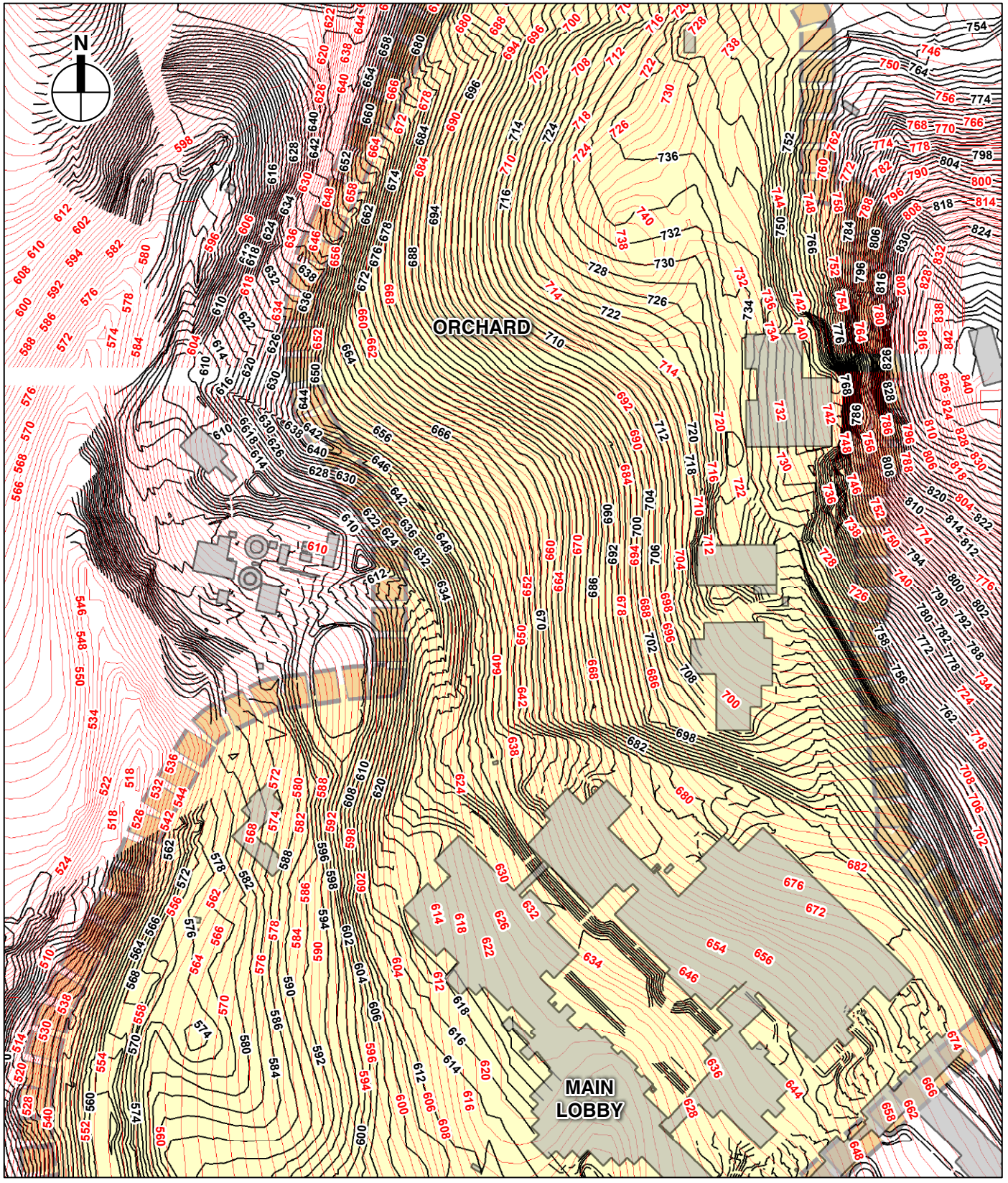


Figure 8  
Soil Level Changes (1976-2005) in the Orchard Area





1  
An ca. 1989 view of the Watchtower property looking northwest from the southeastern portion of the parcel. Route 22 is visible on the left; the loop road is visible in the center. The facility buildings have not yet been constructed, however, grading and excavation have begun. Temporary trailers are visible in the northern portions of the parcel. The orchard is already in place



This aerial shot taken about October 1st, shows overall project development.

2  
An October 1990 view of the Watchtower facility, looking south from the northeastern portion of the parcel. Route 22 is visible on the right. Several facility buildings have been constructed, and additional grading and landscaping has occurred. Temporary office trailers are located in the several locations

Figure 9  
Photographs of the WEC Properties  
During Construction





A view looking northeast towards the Watchtower facility from the east side of Route 22, immediately south of the property. This September 1992 view shows the facility near completion

3



A close-up of the area in which the residences, Dining Room, General Services Building, and Recreation Facility are under construction. Temporary office trailers, the water treatment facility, the orchard, and the Audio/Video Building are visible beyond this area

4

Figure 10  
Photographs of the WEC Properties  
During Construction







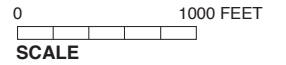
# Photographs



SOURCE: Aerial Imagery Source: 2008 i-cubed



-  Project Site Parcel
-  WEC Properties
-  Archeological APE
-  Photograph View Direction and Reference Number







From Route 22, just north of Watchtower Drive, a view looking northeast towards the Watchtower facility. Note the relatively steeply sloping topography. The orchard is visible in the background (center); some of the facility buildings are visible in the background on the right

1



Looking northeast from Route 22 just south of Watchtower Drive. The southern portion of the Watchtower facility is shown, including one of the buildings associated with the Patterson Inn, an accommodation for guests of the Watchtower Education Center

2





Looking west from a point on the south end of the main loop road in the facility, this view shows the extensive landscaping that characterizes much of the site, including berms, roads and paths, and a man-made pond (right) **3**



From the northeastern terminus of Watchtower Drive, a view looking north towards the entrance of the Main Lobby, contained within the loop road **4**





A short distance south of the Main Lobby, a view of a large parking lot contained within the southwestern portion of the loop road **5**



Looking northeast towards the concrete batch and recycling facility, from the northern portion of the road that diverges from the north side of Watchtower Drive. The orchard can be seen in the distance (left), as can several buildings within the northern portion of the south loop road (right) **6**





From the southwestern portion of the northern loop road, a view looking northwest towards the wastewater treatment facility. A small man-made pond is located just out of view at the bottom of the steep slope visible on the left. The western edge of the orchard is visible above the steep grassy slope pictured on the right

7



Looking south along the eastern portion of the northern loop road. The audio-video building, the water softening facility, and the power house, are visible in the distance. The eastern edge of the orchard is pictured on the right

8





A view of the west side of the orchard from the west side of the northern loop road, illustrating the extensive grading and landscaping in this area

9



The south edge of the orchard, looking north from the junction of the north and south loop roads. This view shows the steep slope on which the orchard is situated. The wastewater treatment plant is visible on the left. Beyond it, on the far left, Pine Island, within the Great Swamp can be discerned as small rise of pines

10





The 'Reservoir,' a large containment of water which includes a dam and spillway, located in the northern portion of the property, as seen from the northern portion of the north loop road

11



Located in the woods near the recreation area in the northeastern portion of the property (outside of the archaeological APE), a marker referring to eight Revolutionary soldiers. Little is known about the origins of this marker

12





A view looking southeast from the north end of a north-south-oriented roadway along the eastern edge of the WEC Properties on the west side of Route 22. A late 19th century dwelling, formerly part of the Mabie farm, is pictured on the left, on the east side of Route 22. This building is outside of the archaeological APE **13**



The southern portion of the WEC Properties on the west side of Route 22, (outside of the archaeological APE) looking northwest from the north-south-oriented roadway within the facility, just west of Route 22. Note the more level topography that characterizes much of the west side of Route 22 in this area. The Great Swamp and the East Branch of the Croton River are located just beyond the tree line **14**





Mountain Brook, in the northwestern portion of APE Segment 1 15



A view of the North Pasture (APE Segment 2), looking southeast. 16





A view within the excess soil deposition area (APE Segment 4) 17

