

Appendix J-1

**PHASE IA ARCHAEOLOGICAL INVESTIGATION OF THE AREA OF POTENTIAL
EFFECT FOR
THE JEHOVAH'S WITNESSES WORLD HEADQUARTERS PROJECT
TOWN OF WARWICK, ORANGE COUNTY, NEW YORK**

Prepared for:

**Watchtower Bible and Tract Society of New York, Inc.
Brooklyn, New York City**

Prepared by:

Eugene J. Boesch Ph.D, R.P.A.

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MANAGEMENT SUMMARY

OPRHP Project Review Number: None

Involved State, Federal, and Local Agencies:
Phase of Survey:

IA

Location Information

Location: Town of Warwick
Minor Civil Division:
County: Orange County

Survey Area: Jehovah's Witnesses World Headquarters Project

Acreage: Project Area: 253 acres
Area of Potential Effect: approximately 30 acres

USGS 7.5 Minute Quadrangle Map: Greenwood Lake, New York-New Jersey

Archaeological Survey Overview

Number & Interval of Shovel Tests: NA

Results of Archaeological Survey:

Number and name of prehistoric sites identified: None/Portions of the Property Sensitive
Number and name of historic sites identified: None/Portions of the Property Sensitive

Results of Architectural Survey

Number of buildings/structures/cemeteries within project area: 0
Number of buildings/structures/cemeteries adjacent project area: 0
Number of previously determined NR listed or eligible buildings/
structures/cemeteries/districts within project area: 0
Number of identified eligible buildings/structures/cemeteries/
districts adjacent project area: 0

Report Author: Eugene J. Boesch Ph.D., R.P.A..

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1.0 INTRODUCTION

This report presents the results of a Phase IA archaeological investigation of the slightly more than 30 acre Area of Potential Effect (APE) for the Jehovah's Witnesses World Headquarters project located along Long Meadow Road in the Town of Warwick, Orange County, New York (Figures 1-4). The legal address for the property is 1 Kings Drive, Tuxedo Park, New York 10987. It is identified on Orange County tax maps as parcels 85-1-2.22, 85-1-2.3, 85-1-4.1, 85-1-5.1, 85-1-5.2, and 85-1-6.8.

The project's APE is part of an approximately 253 acre project area (referred to in this report as the Warwick property) owned by the Watchtower Bible and Tract Society of New York, Inc. The Society is the representative organization for the body of Christians known as Jehovah's Witnesses, and is a domestic-not-for profit corporation. The Warwick property will become the site of the world headquarters for the Society. The property is divided into two parcels (east and west) separated by Long Meadow Road with the project's APE situated within the property's western parcel. The eastern parcel will not be impacted by the current project. The study was requested by the Watchtower Bible and Tract Society of New York, Inc. The property was acquired by the Society on July 17, 2009 and is a privately owned parcel within Sterling Forest State Park.

The Warwick property and its APE are located just south and southeast of Sterling Forest Lake (also known as Blue Lake), a man-made lake, about a mile north of the intersection of Long Meadow Road and Sterling Mine Road. The southernmost part of the lake also is included within the project area (Figure 2). The New York - New Jersey State border is located about a quarter mile south of the project property. The border between the Towns of Warwick and Tuxedo is located about two and a quarter miles to the east of the Warwick property.

The Phase IA archaeological study has been conducted and this document prepared in accordance with the United States Secretary of the Interior's guidelines for archaeological surveys and the guidelines and standards currently adopted by the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP; New York Archaeological Council 1994, 2000; New York State Office of Parks, Recreation and Historic Preservation 2005). The objectives of the study are to determine the sensitivity of the Warwick property's APE for the presence of Pre-Contact period and Historic period archaeological resources and to recommend any necessary further investigations.

1.1 Description of the Proposed Jehovah's Witnesses World Headquarters Project's Area of Potential Effect

The project property consists of approximately 11.3 acres of meadow/brushland; 195.4 acres of forest; 2.9 acres of wetland; 33.8 acres of surface water (Sterling Forest Lake); 8.8 acres of structures, paved roads and parking areas, and other paved surfaces; and 4.8 acres of landscaped areas. The APE consists of approximately 30 acres of developed and undeveloped land. The property's western parcel is situated along portions of the former bottom land and western margin of a small valley containing a creek that formerly served as an outlet for Little Cedar Pond (Photographs 1 – 6), located northwest of the project area. The creek now serves as the outlet for Sterling Forest Lake and is an intermittent tributary of Ringwood Brook (Photograph 5). The outlet creek was dammed in 1956, flooding the portion of the valley located north and northwest of the project area, forming Sterling Forest Lake, which the project's APE now overlooks (Photographs 1 and 6). The creek flows away from the lake passing beyond Long Meadow Road into the project area's eastern parcel (Figures 1 and 2). Wetlands border the creek within the project area, including the APE (Photographs 6 and 7). A number of intermittent streams also extend through the project's western

parcel, emptying into the lake's outlet creek or Ringwood Brook. As indicated above, before the creek was dammed, it served as the outlet for Little Cedar Pond, located northwest of the project area. That pond's outlet stream now empties into Sterling Forest Lake.

The eastern parcel of the project area (located outside of the APE) consists of valley bottomland for Ringwood Brook and its valley. The bottomland is covered by forest and wetlands. The land rises to the east and is forested and brush covered.

The terrain within the Warwick property increases in elevation as one moves west/northwest (Photographs 7, 8, and 14). The slope is more gradual in the eastern portions of the property but increases quickly in the western part. Elevations within the parcel range between approximately 600 and 840 feet above mean sea level (Figure 2). The APE is situated primarily on relatively level to gently sloping terraces situated along both sides of Sterling Forest Brook.

Most of the Warwick property, including most of the APE, is wooded with areas of scrub vegetation (Photographs 7 and 8). Some development occurred on the parcel during the 1950's, with Sterling Forest Lake created in 1956. The International Nickel Company (INC) owned the property between 1960 and 1987, constructing a headquarters office and research and development facility within a large portion of the current APE between 1962 and 1964 (Figure 2; Photographs 9-13). The INC facility includes a large number of office and research related buildings, maintenance structures, above and below ground water tanks, paved parking and access roads, and below and above ground utilities. Portions of the facility grounds also were landscaped. The research and development at the INC facility was related to metal plating processes. Production did not occur there. From 1987 to 1991, the facility remained unoccupied. In 1991, King's College acquired the site with the intention of converting it into a college campus (The Saratoga Associates 1993). That use of the site never came to fruition. The King's College project area was approximately 168 acres in size whereas the current project is about 253 acres in size with about 30 acres constituting the project's APE.

In addition to the former INC facility, a high tension power line and its right-of-way extends through the current project's APE (Figures 1 and 2 and Photograph 13).

1.2 Proposed Project Impacts

Ground disturbance in the approximately 30 acre APE will generally occur within the existing developed portion of the Warwick property, formerly occupied by INC, and immediately adjoining, undeveloped, areas (Figure 2). Ground disturbance will result from demolition of the existing site buildings and construction of a religious administrative campus comprised of approximately 13 buildings between one and five stories in size. The buildings will include an approximately 195,000 square foot three to four story office building containing approximately 475 offices and a 1,100 seat Auditorium ; four five-story residential structures containing 500 efficiency sized apartments totaling approximately 400,000 square feet in size; an approximately 137,000 square foot three to four story service building including kitchen, laundry, and support functions; a two story 100,000 square foot maintenance shop; and additional smaller buildings including a vehicle repair shop, heating/cooling/generator house, and a recreation building. Surface and sub-surface parking facilities will accommodate close to 900 vehicles. Storm water retention basins also will be constructed. New road construction, installation of utilities, and landscaping also will occur within the APE as part of construction activities (Figures 2-4).

1.3 Previous Archaeological Investigations within the Project Vicinity

One cultural resource investigation that included the current Warwick property and APE was identified for this Phase IA investigation. That study was undertaken as part of an environmental assessment of the property for the earlier, unrelated King's College project mentioned in Chapter 1.1. The study apparently found no archaeological sites or other cultural resources within the APE for the King's College project, which includes the APE for the current Jehovah's Witnesses World Headquarters project. That study also determined that the Kings College project area was not archaeologically sensitive. While the actual report for the prior investigation could not be located at NYSOPRHP, its results are reflected in a 1988 letter from that agency to Mr. Robert G. Torgersen, Landscape Architect for the project. The 1988 letter states that (Gillespie 1988):

The project area has been comprehensively surveyed by a qualified professional and reviewed by this office. To the best of our knowledge, the project area contains no buildings, objects, or districts which are eligible for or included in the National or State Registers of Historic Places.

The letter also indicated that there are no previously reported archaeological sites within or adjacent to the King's College property or immediately adjacent to it based on the NYSOPRHP sensitivity model (Gillespie 1988; The Saratoga Associates 1993).

The archaeological report, however, did identify resources associated with Historic period iron mining in a portion of the King's College property that was located outside of that project's APE (and outside of the current project's APE). According to the 1993 EIS:

The location of the [King's College] site in the lower portion of the Town of Warwick has a long history of iron mining operations. There are remains of several smelting furnaces and associated historic structures in the lower portion of the Sterling Forest. In addition, there are remains of two 1800's open pit mines for iron ore on the property. These abandoned mines are located adjacent to the New Jersey border on a portion of the [King's College] project site that will remain undeveloped. [The area also will remain undeveloped as part of the current Jehovah's Witnesses World headquarters project.] Both are narrow, open pits about 20 feet in width by 60 to 150 feet in length and about 25 feet in depth. There are no apparent mine shafts or other subterranean mines on the site (The Saratoga Associates 1993)

The 1993 EIS also states that:

Native Americans were present in southern New York as early as 10,000 B.C. Prehistoric sites in the Highlands environmental zone, of which Sterling Forest is a part, are generally small sites utilized for seasonal harvesting of wild plant foods and temporary hunting camps. There are three recorded prehistoric archaeological sites in the Sterling Forest holdings [none of which are within a mile of the current project area] but none are known to exist on the [King's College] project site itself.

A subsequent 1999 review of the King's College project by NYSOPRHP indicated that it was that agency's opinion that the King's College project will have no impact upon cultural resources in or eligible for inclusion in the State and National Registers of Historic Places (Pierpont 1999).

No other cultural resource investigations were identified in the collections and files of the New York State Office of Historic Preservation or the New Jersey State Historic Preservation Office as having been conducted within one mile of the Jehovah's Witnesses World Headquarters property.

1.4 Properties Listed on the New York State and National Registers of Historic Places in the Project Vicinity

No properties listed, or now considered eligible for listing, on the New York State or National Registers of Historic Places are located within the project property or on parcels immediately adjacent to it (Shaver 1993; NYSOPRHP 2010a, 2010b). Such properties also are not located within at least one mile of the project area, including lands within the State of New Jersey (Shaver 1993; NYSOPRHP 2010a, 2010b; New Jersey State Office of Historic Preservation 2010).

1.5 Methodology

This Phase IA archaeological investigation involved documentary research on the Euro-American history and Native American culture history of the proposed Area of Potential Effect for the Jehovah's Witnesses World Headquarters project property and its vicinity. Research for the study was conducted at the following repositories:

New York State Office of Parks, Recreation and Historic Preservation,
New York City Public Library, Local History, Map, and General Research Divisions,
New Jersey State Historic Preservation Office,
New Jersey State Museum,
Orange County Historical Society,
Sterling Forest State Park Visitors Center, and
Town of Warwick Public Library.

In addition, the following people were contacted in person or by telephone:

Mr. Douglas Mackey, New York State Office of Parks, Recreation and Historic Preservation,
Mr. Edward Lenik, professional archaeologist knowledgeable about the local Historic period iron mines and related industries,
Dr. Michael Raber, Professional Archaeologist knowledgeable about blast furnaces and iron forges,
Mr. Michael Gregg, New Jersey State Office of Historic Preservation,
Mr. Gregg Lattanzi, New Jersey State Museum,
Ms. Karen Flynn, New Jersey state Museum, and
Mr. Robert May, Purchasing, The Watchtower Bible and Tract Society of New York, Inc.

The pedestrian reconnaissance was conducted on May 26th and June 4th, 2010.

Based on the documentary research and pedestrian reconnaissance, the archaeological sensitivity of the project area was assessed. Assessment of Pre-Contact period sensitivity was based on the location of known archaeological sites reported in the literature as well as a consideration of the present and former topographic and

physiographic characteristics of the project property. Assessment of Historic period sensitivity was based on an analysis of eighteenth to twentieth century maps as well as a review of secondary sources. Appendix A to this report indicates the locations of the photographic views included in this document as Photographs 1 – 15.

2.0 ENVIRONMENTAL SETTING OF THE PROPOSED JEHOVAH'S WITNESSES WORLD HEADQUARTERS PROJECT AREA

The proposed Jehovah's Witnesses World Headquarters project area and APE are part of the rugged, hilly uplands within the Hudson Highlands in southeastern Orange County. They are situated within the bottom land and western margin of a small valley containing a creek, which is a tributary of Ringwood Brook. The creek was dammed in the nineteenth century, flooding the portion of the valley located north and northwest of the project area, forming Sterling Forest Lake (also known as Blue Lake), which the current project area now overlooks. The creek flows away from the lake passing into the project area's eastern parcel, located east of Long Meadow Road (Figures 1 and 2). Wetlands border the creek. The terrain within the project area increases in elevation as one moves west/northwest. The slope is more gradual in the eastern portions of the property but increases quickly in the western part. Elevation within the parcel ranges between approximately 600 and 700 feet above mean sea level (Figure 2). The APE is situated primarily on relatively level to gently to moderately sloping terraces situated along both sides of the outlet brook.

2.1 Geology

Specifically, the project area is part of the Highland Zone of the Ridge and Valley physiographic province (Rogers, Isachsen, Mock, and Nyahay 1990; Isachsen, Landing, Lauber, Rickard, and Rogers 1991; Van Diver 1985). The province is part of a large expanse of ridge and valley systems extending from Lake Champlain on the north, southward through the Hudson Valley corridor to the Hudson Highlands and southwestward through a corridor formed by the Wallkill and Delaware Valleys. The elevation of the province in the project area vicinity is generally between 485 and 843 feet above mean sea level (United States Geological Survey 1969; see Figure 1).

In the project vicinity, the Ridge and Valley province is characterized by northward trending ridges and lowlands. Bedrock in the area consists of Middle Proterozoic aged (1.3 -1.0 billion years ago) interlayered hornblende, granitic gneiss, and amphibolite (Isachsen, Landing, Lauber, Rickard, and Rogers 1991).

2.2 Surface Geology

The Ridge and Valley province section, and Orange County in general, was greatly affected by the Wisconsin glaciation. Glacial events left a complex sequence of unconsolidated till, outwash, and lacustrine deposits over much of the region's bedrock. The depth of these deposits range from a few feet to over 300 feet. The till consists of a heterogeneous mixture of poorly sorted rock materials deposited directly by the glaciers and may have a high sand or clay content (Callander 1984:3). Outwash sands and gravels are stratified sediments deposited in the major river valleys and their tributaries by glacial meltwaters. Lacustrine deposits are stratified sediments consisting primarily of silts and clays that were laid down in glacial lakes. These deposits are not distinct in their distribution, rather there is usually a gradual horizontal and vertical transition from one to the other. In addition to these deposits, glaciofluvial events created kames, kame terraces, outwash plains, scoured rock surfaces, and eskers throughout the Orange County area (Fenneman 1938). Surface evidence of glaciation is common in the Warwick area. Within the project vicinity glacial erratics and glacial striations on bedrock are common.

The National Resources Conservation Services soil survey (formerly United States Soil Conservation Service; see Chapter 2.3 and Table 1), indicates that glacial till and outwash derived soils are present in the project vicinity (Olsson 1981: 19-20, 22, 30-32).

2.3 Project Area Soils

Four soil associations have been mapped for the project area (see Appendix A; Olsson 1981: 19-20, 22, 30-32; Appendix A). These are two varieties of Swartswood and Mardin very stony soils (SXC and SXD), two varieties of Hollis soils (HLC and HLD), one variety of Erie soils (ESB), and one variety of Udorthents soils (Uh). All belong to the Arnot-Swartswood-Hollis classification series of soils. The group of soils is dominantly sloping, somewhat excessively drained to moderately well drained, medium textured soils that are shallow and deep over sandstone or gneiss and schist on uplands (Olsson 1981).

Swartswood and Mardin very stony soil, sloping (SXC) is a well drained to moderately well drained soil that formed in glacial till deposits on hill crests, hilltops, and ridges in upland settings. It is found on slopes that range between three to 15 percent. Boulders and rocks are common on the surface and in the topsoil. Soil permeability is very slow to moderate. The sub-soil begins between three and six inches below the surface (Olsson 1981:63).

Swartswood and Mardin very stony soil, moderately steep (SXD) is a well drained to moderately well drained soil that formed in glacial till deposits on hillsides and ridges in upland settings. It is found on slopes that range between 15 to 35 percent. Soil permeability is slow to moderate. Boulders and rocks are common on the surface and in the topsoil. The sub-soil begins between two and six inches below the surface (Olsson 1981:64).

Table 1
Sterling Forest Lake Development Project Area Soils

Soil Association Name	Texture, Inclusions	Slope %	Drainage	Depth to Sub-soil
Swartswood and Mardin very stony soils (SXC)	Gravelly Loam to Gravelly Silt Loam to Gravelly Fine Sandy Loam	3-15	Well Drained and Moderately Well Drained	3 to 6 inches
Swartswood and Mardin very stony soils (SXD)	Gravelly Loam to Gravelly Silt Loam to Gravelly Fine Sandy Loam	15-35	Well Drained and Moderately Well Drained	2 to 6 inches
Hollis soils, sloping (HLC)	Loam to Fine Sandy Loam to Sandy Loam; Commonly with Gravel	3-15	Well Drained and Somewhat Excessively Well Drained	8 to 10 inches
Hollis soils, moderately steep (HLD)	Loam to Fine Sandy Loam, to Sandy Loam	15-35	Well Drained and Somewhat Excessively Drained	5 to 8 inches
Erie soils (ESB)	Gravelly Silt Loam to Gravelly Loam, to Gravelly Fine Sandy Loam	3-8	Somewhat Poorly Drained	4 to 6 inches
Udorthents soils (Uh)	Gravelly Loamy Sand to Silty Clay Loam	Level to Sloping	Excessively Drained to Moderately Well Drained	Sub-soil Depth Variable Since the Soil Reflects Cut and Fill Areas

Hollis soil, sloping (HLC) is a well drained to somewhat excessively drained, sloping and gently sloping soil formed in glacial till deposits that developed on hillcrests, hilltops, valley sides, and ridges of mountainous uplands. It is found on slopes that range between three and 15 percent. Soil permeability is slow to moderate. The sub-soil begins between eight and 10 inches below the surface while bedrock is present at a depth of 10 to 20 inches (Olsson 1981:33-34).

Hollis soil, moderately steep (HLD) is a shallow, well drained to somewhat excessively drained, moderately steep and steep soil that forms in glacial till deposits on hillsides, valley sides, and ridges of mountainous uplands. It is found on slopes that range between 15 and 35 percent. Soil permeability is moderate to moderately rapid. The sub-soil begins between five and eight inches below the surface while bedrock is present at a depth of 10 to 20 inches (Olsson 1981: 33).

Erie extremely stony soil, gently sloping (ESB) is a deep, somewhat poorly drained, gently sloping soil that forms in glacial till on lower hillsides, foot slopes, hilltops, and along shallow drainageways in upland settings. A fragipan is usually present. The soil is found on slopes that range between three and eight percent. Soil permeability is very slow to moderate. Boulders and rocks are common on the surface and in the topsoil. The sub-soil begins between four and six inches below the surface (Olsson 1981:30-31).

Udorthents, smoothed (UH) soils formed in manmade cut and fill areas usually are associated with construction or developed sites. They consist of excavated soils and rocks that have been used to fill locations or stockpiled for later use. The soil is excessively drained to moderately well drained. Depth to sub-soil varies locally based on the extent of filling while the depth to bedrock is usually greater than five feet (Olsson 1981:66).

2.4 Flora and Fauna

The predominant pre-contact period habitats present within the Ridge and Valley province were upland forests and freshwater marshes (Shelford 1974). Both habitats are still present in the current project vicinity.

Freshwater marshes are present along the edges of lakes, ponds, rivers, and wherever depressions of land are kept flooded on a regular basis by high water tables (Robichaud and Buell 1973:105). In pre-Contact period freshwater marsh environments, the plant community was typically dominated by reed grass, cat-tail and/or wild rice (the latter made practically extinct in the Orange County area due to the effects of pollution). All of these would have been important economic plants for Native American groups. Other plants that would have been common in pre-Contact period freshwater marshes were low-growing, grass-like sedges, bulrushes, arrow-arum, blue flag, spike rush, bur reed, water dock, marsh fern, orange touch-me-not, and swamp milkweed (Robichaud and Buell 1973:125-127; Merritt and Kinsey 1958:29).

The remaining portions of the province in pre-Contact period Orange County are characterized as upland forest because the most abundant or dominant type of vegetation present were tall growing, deciduous, broadleaf trees (Robichaud and Buell 1973:106). The forests are specifically described as Oak-Chestnut Forests composed primarily of mixed oaks (white, red, and black) with some chestnut trees also present on drier slopes (Robichaud and Buell 1983:106). Beech, several varieties of hickory, sugar maple, white ash, pine, and black cherry also would have been numerous (Shelford 1974). All of these species were probably present within the project area or its immediate vicinity during the Native American and early Historic periods. Chestnut, oak, and hickory trees potentially could have been exploited by Native American groups for subsistence purposes while some of the other varieties had other economic uses (e.g. medicinal, dwelling construction, craft manufacture, household needs, firewood, etc.).

Pre-Contact period faunal species usually present within local marshes and meadows included various invertebrates, migratory water fowl, and other birds, muskrat, small rodents, rabbit, raccoon, otter, skunk, opossum, and white-tailed deer (Shelford 1974; Gosner 1978; Roberts 1979).

Pre-Contact period faunal species present within the upland forests included game birds, small mammals, white-tailed deer, bear, and during at least a portion of the prehistoric period, elk (Shelford 1974). In the Ridge and

Valley province's freshwater streams, marshes, and lakes were found mussels, fish, certain amphibians and reptiles, migratory fowl, and semi-aquatic mammals (Shelford 1974). Anadromous fish species also would have been present seasonally within the project vicinity via the Hudson, Delaware, and Wallkill Rivers and their tributaries.

3.0 DOCUMENTARY RESEARCH - NATIVE AMERICAN PERIOD

The Native American and Native American - European Contact period cultural history of the Warwick region is provided in Chapters 3.1 and 3.2. This is followed by descriptions of Native American sites previously identified in the project vicinity (Chapter 3.3). Analysis of the Pre-Contact period Native American archaeological sensitivity of the Jehovah's Witnesses World Headquarters project's APE is provided in Chapter 5.1.

3.1 Background Culture History: Pre-Contact Period

The Pre-Contact period culture history of the Orange County region, which includes the Jehovah's Witnesses Warwick property, encompasses the PaleoIndian, Archaic, Transitional, and Woodland periods. The PaleoIndian period (10,000-8,000 B.C.) represents the earliest occupation of the southeastern New York region. The Archaic (8,000-1,700 B.C.) refers to a time prior to the introduction of horticulture and pottery manufacture and is divided into Early, Middle, and Late periods. The Transitional period (1,700-1,000 B.C.) witnessed a gradual change in Archaic lifestyles with the development of "Woodland" period traits. The Woodland period (1,000 B.C.-1,600 A.D.), which is characterized by the use of pottery and reliance on horticulture, is also divided into Early, Middle, and Late periods.

The PaleoIndian period corresponds with the end of the Wisconsin glaciation. Sea levels were lower during this period and the subsequent Early to Middle Archaic period due to sea water being trapped in the remaining glacial ice. Local forests consisted primarily of spruce and fir with small amounts of oak and other deciduous species (Snow 1980). Many faunal species now extinct or no longer native to the area were present. These included mammoth, mastodont, horse, caribou, giant beaver, sloth, elk, moose, deer, and peccary (Snow 1980). Within the mid-Hudson Valley region, over 40 complete or partial mastodont skeletons have been revealed over the last three centuries with the first being found in 1705 (Drumm 1963). More mastodont specimens have been recovered from the Orange County region than from anywhere else in the northeast. This has been attributed to the existence of numerous bog/marsh-like environments in the area ca. 10,000 years ago, which preserved the carcass of any unfortunate creature that became trapped (Hartnagel 1922).

Little is known about cultural activities during the PaleoIndian period although it is generally accepted that the region was first inhabited by humans at approximately 10,000 B.P. (Funk 1976; Ritchie 1980). Small nomadic bands of hunters and gatherers subsisted probably on the animal species mentioned previously as well as small game, certain riverine resources, and a variety of plants. Population density, however, was very sparse. A variety of functionally diverse site types, however, have been identified based upon intersite variability of artifact assemblages and environmental setting. These include base camps, quarry workshops, rockshelter habitations, open air hunting camps, kill and butchering sites, and other temporary camps (Funk 1972; Gardner 1974; Moeller 1980; Gramley 1982).

A small number of PaleoIndian sites have been recorded in the mid-Hudson valley area. At least one, the Dutchess Quarry Cave site, is located in Orange County, on the northwest rim of Mount Lookout near Florida, approximately 14 miles northwest of the current project area (Funk 1976:206).

Most evidence of PaleoIndian activity, however, comes from scattered surface finds of Clovis Fluted points, a diagnostic PaleoIndian artifact (Funk 1976:205). One fluted point was recovered as an isolated surface find (NYSOPRHP site number A071-18-0042) from a formerly plowed field in the Warwick Valley on the site of what

is now Warwick Airport, located about 11 miles from the current project area.

Information from known PaleoIndian sites in the New York - New Jersey - Pennsylvania region suggests that raised, well-drained areas near streams or wetlands were the areas preferred for occupation. Portions of the project vicinity during the late glacial and early Holocene periods would probably have fit such a topographic and physiographic description. Rock shelters, areas near lithic sources, and lower river terraces also were subject to PaleoIndian occupation and use (Werner 1964; Funk 1976; Moeller 1980; Ritchie 1980; Marshall 1982; LaPorta 2000).

During the Archaic period (10,000-3,000 B.P.), the environment changed from spruce to pine dominated forests to an increasingly deciduous forest which achieved an essentially modern character by 3,000 B.P. (Salwen 1975). While Archaic cultures have been traditionally thought of as reflecting a forest-based adaptation, more recent research has produced a picture of an increasingly varied subsistence pattern based on the seasonal exploitation of various faunal and floral resources (Ritchie and Funk 1973; Funk 1976; Kraft 1986; Starbuck and Bolian 1980). During this period, the project property probably was a forested and wetland covered tract. Archaic hunters and gatherers were still nomadic and organized into small bands which occupied localities along the Hudson River and its tributaries, during the warmer months and interior regions during the colder months (Ritchie 1980). In the project region, the range of reported site types associated with the Archaic period is limited to rockshelters and campsites such as the Graycourt Rockshelter, Sheep Shelter Rockshelter, and White Rabbit Rockshelter (Funk 1976; Ritchie 1980).

Population growth throughout the period resulted in an increase in both site density and the number of functional site types represented in the archaeological record. Site types recognized for this period include spring fishing camps along major streams, fall open air hunting camps, rockshelter habitations, subsistence related processing stations, mortuary sites, quarry and workshop sites, and semi-permanent villages (Dincause 1976; Barber 1980; Ritchie 1980; Snow 1980). Ritchie states that most Archaic sites are small and multi-component, lacking traces of substantial dwellings, fortifications, storage pits, and graves (Ritchie 1980:32 and 35). Evidence of house patterns attributable to the Late Archaic period, however, has been reported from the Howard site in Old Lyme, Connecticut near Long Island Sound (Pfieffer 1983).

Most information concerning the Archaic period comes from Late Archaic sites since evidence for Early and Middle Archaic sites in the region is almost as scarce as for PaleoIndian sites.

Sites dating to the Transitional period (or Terminal Archaic; 3,500 - 3,000 B.P.) are most frequently found near major streams but a limited number of interior campsites, probably representing winter habitations, also are known (Funk 1976; Ritchie 1980; Vargo and Vargo 1983). Early Transitional period site locations tend to be located in interior areas, well removed from the Hudson River. However, late in the period, groups apparently did use higher ground near that waterway as evidenced by a larger number of sites found in such settings (Funk 1976:266). New and radically different broadbladed projectile point types appeared during this period as did the use, during the latter half, of steatite (soapstone) vessels.

In the project region the range of reported site types associated with this period is limited to interior rock shelters and small temporary campsites located near Hudson River confluences (Funk 1976). Transitional period components have been found at the Sheep Shelter Rockshelter, Quarry Glen Rockshelter, Greycourt Rockshelter, Doodletown Rockshelter, Shagabak site, the Sylvan Lake Rockshelter, the Nicoll Farm site, the Rural Cemetery site, Dunderberg site, and the Lotus Point site (Funk 1976).

During the Early Woodland period (3,000 – 2,000 B.P.), the use of fired clay ceramic vessels gradually replaced the reliance on steatite vessels. Subsistence practices included a continuation of the hunting, gathering, and fishing of the Archaic but were supplemented by an increase in shellfish collecting. It has been suggested that this indicates a trend towards more sedentary lifestyles (see Funk 1976; Snow 1980).

Early Woodland sites in the Hudson Valley region are rare. Such sites are usually located along the Hudson River or its major tributaries (Funk 1976) although some (see below) have been identified in adjacent interior areas east and west of the Hudson River (Funk 1972, 1976:116-123, 277-278).

Human populations during the Middle Woodland period (A.D. 1- A.D. 900) gradually adopted a more sedentary lifestyle. Although it is generally felt that subsistence was essentially based on hunting and gathering supplemented by fishing, there has been speculation that domestication of various plants occurred during this period (Ritchie and Funk 1973; Snow 1980). Most Middle Woodland sites are located along the Hudson River or its major tributaries although smaller inland sites also are known (Funk 1976; Ritchie 1980). Middle Woodland components have been found at the Bear Mountain Railroad Station Rockshelter, Shagabak site, the Sylvan Lake Rockshelter, and the Rocky Point site (Funk 1976).

By Late Woodland times (A.D. 900 - A.D. 1600) horticulture was the primary subsistence base and permanent villages existed. Use was still made, however, of temporary and special purpose campsites (Ritchie 1980; Snow 1980). Most Late Woodland sites are located along the Hudson River or its major tributaries although smaller inland sites also have been recognized (Funk 1976).

Late Woodland period cultures in the Orange County area are little known. Owasco or Owasco-like groups apparently inhabited the region during the early portion of the period although no large villages have been identified. The latter portion of the Late Woodland period in the region saw the advent of groups with characteristics both similar and divergent to proto-Iroquois cultures of central and western New York State suggesting that the “linguistic and political divisions of the Contact period” have some time depth (Funk 1976:300-302). These groups are referred to as belonging to the Oak Hill or Chance phases.

Late Woodland cultures are defined on the basis of ceramic typologies developed by Ritchie (1980), MacNeish (1952), Lenig (1965) and Tuck (1968). In the project vicinity, Late Woodland components have been identified at the Greycourt Rockshelter, Suffern Rockshelter, Quarry Glen Rockshelter, Doodletown Rockshelter, White Rabbit Rockshelter, Dunderberg site, Nicoll Farm site, Shagabak site, the South Cruger Island site, the Hurley site, the Rural Cemetery site, and the O’Rourke Burial site (Funk 1976).

3.2 Background Culture History: Native American - European Contact Period

The documentary history of the Warwick vicinity, which includes the project area, begins with the information recorded by early settlers concerning the Native American groups who occupied the area when Europeans first arrived in the early seventeenth century. This era is generally referred to as the Contact period (A.D. 1600 - ca. 1750), the time of the first large scale contacts between Native Americans and European colonists (see Salwen 1978).

By the latter part of the Late Woodland period, Native American cultures began to resemble those of groups that were encountered by seventeenth century Europeans. At this time Native Americans of the mid-Hudson Valley region (including the project area) were part of the widespread Algonquian cultural and linguistic stock.

Specifically, they were a group of Munsee (Minsi) speakers who migrated into southeastern New York and southwestern Connecticut during Late Woodland times (Ruttenber 1872; Bolton 1975; Swanton 1952; Goddard 1978a; 1978b; Salwen 1978; Salomon 1982). The Munsee speakers were a linguistic sub-group of the Lenape and referred to by the English as Delaware. The English appellation derived from the river named in 1610 by Captain Samuel Argall of the *pinnace Discovery* in honor of Thomas West, Lord de la Warr, the second Governor of Virginia (Weslager 1967; Salomon 1982:15). The Unami and the Unalachtigo were the other two sub-groups of the Lenape.

Originally the name Lenape (and Delaware) was applied only to the Unami-speaking bands. By the mid-eighteenth century, it had become associated with the Munsee, Unami, and Unalachtigo speaking bands which had migrated away from their traditional homelands and merged.

The Lenape consisted of autonomous, loosely related bands or lineages living in small family groups or hamlets (Kraft 1975:61). They never formed a politically united tribe. The origin of the name "Lenape" is unclear. Goddard (1978b:236) states that the name translates roughly as "real people." Salomon (1982:14) agrees in a general sense stating that the name means "the real men" or "common people." "Lenapehoking" (The Land of the Lenape) was reportedly the aboriginal name for the territory that they occupied (Kraft 1984:1).

The Munsee composed a relatively large, loosely related group who shared the same totemic symbol, the wolf (Ruttenber 1872:47). Their settlements included camps along the major rivers with larger villages located at the river mouths (Salomon 1982; Kraft 1986). Small hunting, gathering, and agricultural sites were located in the interior. Despite references to such sites by early European explorers and settlers, few Contact period sites have been identified in the region.

Robert Juet, an officer on the "Half Moon", provides an account in his journal of some of the Contact period Hudson Valley Native Americans who may have been Munsee. In his entries for September 4th and 5th, 1609 he states (Juet 1859:28):

This day the people of the country came aboard of us, seeming very glad of our coming, and brought greene tobacco, and gave us of it for knives and beads. They goe in deere skins loose, well dressed. They have yellow copper. They desire cloathes, and are very civill. They have great store of maize or Indian wheate whereof they make good bread. The country is full of great and tall oakes.

This day [September 5, 1609] many of the people came aboard, some in mantles of feathers, and some in skinnes of divers sorts of good furies. Some woman also came to us with hempe. They had red copper tabacco pipes, and other things of copper they did wear about their necks. At night they went on land againe, so wee rode very quite, but durst not trust them.

The crew of the Half Moon distrusted the aboriginals since the previous day one of their members, John Coleman, was killed and two others wounded by Native Americans while exploring the Hudson River in a small boat (Ruttenber 1872:9). The exact circumstances of this violent confrontation are not fully recorded but it supposedly occurred off shore in the vicinity of the area now referred to as Coleman's Point, New Jersey.

The political, linguistic, and social relationships that existed among the various bands of Munsee speakers will probably never be fully understood for a number of reasons. This is particularly true for the bands inhabiting the relatively unexplored and unknown areas west of the Hudson River (Goddard 1978b: 213-215). The Native groups themselves had no fixed boundaries and "ownership" of particular areas may have overlapped with use rights shared. Euro-American colonists also frequently misunderstood and misrecorded Native American associations with particular areas. Finally, early pressure on some Native American groups by colonial expansion probably resulted in frequent shifts of villages and territories. In general, however, Munsee speakers were composed of five autonomous, loosely related sub-groups living in small familial groups or hamlets who, as mentioned above, shared the same totemic symbol, the wolf (Kraft 1975:61; Ruttenber 1872:50; Salomon 1982:14). Hunter (1959:15) suggests that the Munsee bands may have been joined in a loose confederacy.

Also elusive is knowledge of the exact territories that the various Munsee bands inhabited. The area they traditionally occupied extended south of the Catskill Mountains to a line drawn from the headwaters of the Lehigh, Delaware, and Susquehanna Rivers in Pennsylvania through the Delaware water gap area, to the Raritan River in New Jersey, and eastward to approximately the current New York - Connecticut State border and the New York City - Nassau County border (Goddard 1978a:214).

A deed dated May 5th, 1683, calls the land on the west side of the Hudson River in the vicinity of Poughkeepsie "Minissingh" (O'Callaghan 1846:571) while Beauchamp (1900) indicates that the territory of the Munsee extended from the Catskill Mountains to the head waters of the Delaware River and east to the Hudson River. Elsewhere, Ruttenber (1872:96 and 1875:50) states that:

...inhabiting the Delaware and its tributaries were the Minsis proper of whom a clan more generally known as the Minnisinks inhabit the south-western parts of the present counties of Orange and Ulster, and north-western New Jersey.

The Munsee word "minnisinck" reportedly translates as "the place where stones are gathered" (Reynolds 1929:22).

In the Hudson River watershed of present day Orange and Ulster Counties, the Munsis were known as the Esopus. Their population during the early Contact period was been estimated to have been about 300 individuals. In the Orange County region, they traditionally were divided into smaller political and dialectic groups or bands (Goddard 1978b; Salomon 1982). Little is known about these divisions. Five main groups or chieftaincies, however, are recorded: the Waoranecks, the Warranawonkongs, the Mamekotings, the Wawarsinks, and the Katskills. The Munsee group traditionally situated in western Orange and Ulster Counties were the Minnisink. At what point their territory ended and that associated with the Esopus groups began is unknown.

The most likely Esopus group that inhabited the project vicinity was the Waoranecks (Ruttenber 1875; Hodge 1910:910; Bolton 1975:56). In 1625, De Laet (1609) placed them to the west of Fisher's (originally Vischer's) Reach, that part of the Hudson River which extends north from West Point to the mouth of Wappinger's Creek on the east side of the Hudson River:

This reach (The Fisher's) extends [south] to another narrow pass, where, on the West side of the [Hudson] river there is a point of land (West Point) that juts out covered with sand, opposite a bend in the river, on which another nation of savages, the Waoranecks, have their abode.

Ruttenber (1875:28) also states that “At Fisher’s Hook are [the Native American groups] Pachany, Warenocker (i.e. Waoranecks), and Warrawannankonckx.”

For Bolton (1975:56), the “Waoranec” are part of the Unami Delaware who inhabited the Hudson Highlands south to Poplopen Creek at Fort Montgomery. Swanton also considered them one of the 16 Unami Delaware bands. The Waoraneck also have been erroneously located on the east side of the Hudson River (Jameson 1909:294-295). Possibly the most accurate Contact period location information for the Waoraneck is given in treaties detailing a land purchase by New York’s Governor Dongan in 1684 or 1685 (Ruttenber 1872:93-94). The purchase extended west of the Hudson River from the Danskammer (present-day Newburgh) to Stony Point located southeast of the project area. The western boundary of this purchase is less distinct but Ruttenber (1872:93) feels that it corresponds with the natural watershed of the Hudson River. Reportedly dwelling in this purchase were the “Murderer’s Kill Indians” (Ruttenber 1872:93-96). The waterway named “Murderer’s Kill” during the Contact period is now referred to as Moodna Creek. It forms from the confluence of the Otter Kill and Cromline Creek (a.k.a. Greycourt Creek) in Blooming Grove and circuitously flows towards the Hudson River, emptying into that river just north of Cornwall-on-Hudson. That confluence is approximately five miles north of Fisher’s Hook, so it is reasonable to assume that De Laet’s Waoranecks of 1625 are the “Murderer’s Kill Indians” of 1685 (see Ruttenber 1972:94).

Ruttenber provides further evidence for this supposition. He writes that the name Waoranecks (Ruttenber 1872:94):

...disappears from the early records almost simultaneously with the appearance of the latter (Murderer’s Kill Indians), and with the general classification of “Esopus Indians” while the territory assigned to them had no other known occupants, rich though it was in all of the elements of favorite hunting grounds. The Waoranecks participated in the Esopus wars, if not in the wars at Fort Amsterdam, and at the Dans-kammer celebrated those frightful orgies called kinte-kaying, regarded by the Dutch as devil worship.

The Dutch first observed the kinte-kay dance in the area around Newburgh during their early voyages up the Hudson River (De Vries 1853). There on a high, level piece of land, which they named the Dans-kammer, or dance-chamber, they watched, reportedly in horror, as Native Americans participated in this ritual. De Vries reported that the kinte-kay was danced on the eve of war or hunting and fishing expeditions.

All this information indicates that the Waoranecks were the Native American group that inhabited the central and eastern portion of Orange County with the Minnisinks located in western Orange County and northwestern New Jersey. Since the notion of “ownership” in a Euro-American sense did not exist among local, early Contact period Native Americans, it is reasonable to assume that boundaries were overlapping, vague, dual, and/or shifting. It is possible, if not probable, that both Waoraneck and Minnisink groups, and likely also the Warranawonkongs, claimed at least partial rights at various times to the current project vicinity.

Problems and conflicts during the seventeenth century between the Indians of the Hudson Valley area and the Dutch resulted in the deaths of large numbers of Native Americans (Hodge 1910; Washburn 1978). The introduction of European diseases such as smallpox further devastated the local Native American populations. By 1724, Native Americans remained in residence only in the western portion of Orange County. In that year, they started to move west and by 1740 nearly all were gone (Roberts 1970:8). By 1766, the Esopus reportedly had

deeded away all of their lands in the mid-Hudson Valley. In 1774, the entire Native American population on both sides of the mid-Hudson River Valley numbered around 300 people (Pelletreau 1886: 8). By 1910, only 914 Delaware and 71 Munsee were recorded by the United States Census as living in the United States (Swanton 1952:55).

3.3 Native American Sites in the Project Vicinity

The Orange County region has long been recognized by both professional and avocational archaeologists as rich in evidence of Native American occupations (Parker 1922; Funk 1976: 173-183). Rockshelters, raised ground/knolls/hills/terraces near water courses, and ridge tops appear to be particularly sensitive localities for such sites.

No information on previously recorded Native American sites were identified within the site files of the NYSOPRHP, the New York State Museum, New Jersey State Historic Preservation Office, or New Jersey State Museum as being located within one mile of the Jehovah's Witnesses World Headquarters project area. Three archaeological sites, however, were located in New York State within four miles of the Jehovah's Witnesses Warwick property. No sites were identified within that distance in New Jersey in the site files of the New Jersey State Museum or the New Jersey State Historic Preservation Office.

The nearest previously identified archaeological site to the Warwick property is a rock shelter site located about three miles to the north. Information in the sites files of the NYSOPRHP indicate that the site is located about 2,100 feet west of Sterling Lake Road within 50 feet of a brook. The site has been assigned the NYSOPRHP site number A07118.000016 (also assigned the number OR-WA-07-R) by the New York State Archaeological Association whose members excavated the site in 1979. No other information on the rock shelter was available in the NYSOPRHP site files.

Another site, located within a woodland setting about three and a half miles north of the current project area, is a camp site located on moderately sloping ground at an elevation of 732 feet above mean sea level within 250 feet of a fresh water source. It is referred to as the Sterling Forest Community Prehistoric Site number 11 and has been assigned the NYSOPRHP site number A07118.0000190. A chert projectile point tip and a chert lithic scatter were associated with the site. No other information on the site was available in the NYSOPRHP site files.

The third site, located within a woodland setting about three and a quarter miles north of the current project area, is a camp site located on moderately sloping ground at an elevation of 737 feet above mean sea level within 250 feet of a fresh water source. It is referred to as the Sterling Forest Community Prehistoric Site number 12 and has been assigned the NYSOPRHP site number A07118.0000191. One utilized chert flake apparently is the only artifact recovered from the site. No other information on the site was available in the NYSOPRHP site files.

Although no previously recorded sites have been identified within one mile of the project area, two large areas of archaeological sensitivity have been identified by NYSOPRHP within that distance of the property (NYSOPRHP 2010b). One is located in the vicinity of Sterling Lake, about 2,524 feet north of the current project area. The second sensitive area is located in the vicinity of Eagle Valley, about 4,264 feet south of the current project area. Such NYSHPO identified locations of sensitivity usually indicates that known sites are located somewhere within the area and that the topographical and physiological characteristics of the location are similar to the settings of known Pre-Contact period sites.

4.0 DOCUMENTARY RESEARCH - HISTORIC PERIOD

4.1 History of the Warwick Area

4.1.1 Early European Settlement of the Orange County Area

On September 30, 1609, Robert Juet, first mate on Henry Hudson's ship the Half Moon, while anchored in what was to become Newburgh Bay, provided the first written description of Orange County stating that the area was "...a very pleasant place to build a Town on" (Juet 1859:35). During the seventeenth century, other explorers, and later settlers, merchants, and others during their travels on the Hudson River sailed passed the wooded shores that became Orange County. They must have stopped at times for brief periods but these landings are unknown. Other unknown traders following the Delaware River entered the western parts of the county. By 1650 extensive copper and iron ore deposits had been discovered in the Delaware Water Gap region. A road, known as the Old Mine Road (present day U.S. Route 209), was soon carved from the wilderness connecting the Delaware Water Gap with Kingston on the Hudson River over which ore was transported (Hine 1908). This road crossed the western end of what is now Orange County approximately 25 miles northwest of the project area. For the first fifty-five years or more after the Dutch founding of New Netherlands in 1626, such transient encounters were the only European contacts with the Orange County wilderness.

Settlement of Orange County throughout the seventeenth century was slow due to the mountainous nature of much of the area restricting travel to seasonal movements along the Hudson River, the presence of unfriendly, if not hostile, Native American groups, lack of roads, and the remoteness of the region from other settled areas. The first settlement within the original bounds of Orange County occurred before 1666 when Balthazer and Jacob de Hart purchased from local Native Americans land around Haverstraw (Ruttenber 1875:19-20; Eager 1846). During the last quarter of the century, small settlements developed within what is now the Rockland/Orange County region as English, Scotch, and Irish immigrants arrived. (A dispute quickly ensued in the area as to the location of the boundary between New York and New Jersey. This question smoldered for many years resulting in armed conflict in 1730. It was finally settled legally in 1773 and the modern New York - New Jersey border was established.)

Increasing settlements throughout New York Province required the establishment of new administrative units. On November 1st, 1683, by an act of the inaugural session of the New York's General Assembly, the colony's original counties came into existence. Orange County was one of the original counties. The others were New York, Westchester, Ulster, Albany, Dutchess, Richmond, Kings, Queens, and Suffolk Counties (Flick 1934:332).

By this Act, Orange County was:

...to begin from the limits or bounds of East and West Jersey, on the west side of Hudson's River; along the said river to the Murderer's Creek, or bounds of the County of Ulster; and westward into the woods as far as the Delaware River (Ruttenber 1875:22).

The county originally covered the southern part of present-day Orange County and all of Rockland County. The northern bounds were the north boundaries of the current Towns of Cornwall, Goshen, and Wawayanda. The population, along with that of Dutchess County, was too small to warrant a separate local government so administrative and legal affairs were placed under the care of officials in New York County. Dutchess County was placed under the jurisdiction of Ulster County (Booth 1971:16). Present-day Orange County took form in

1798 when the New York State Legislature joined southern Ulster County to Orange County, also creating Rockland County from lands south of the Ramapo Mountains (Ruttenber 1875:27).

Orange County was named in honor of the Dutch Prince of Orange who was the son-in-law of James II and who subsequently became King William II. Others feel it derived from the Dutch reconquest of New Netherlands in 1673 when Manhattan was renamed New Orange (Talman 1962:11-16).

The first permanent Euro-American occupation of any duration within the bounds of present-day Orange County occurred in 1684. In that year, Patrick MacGregorie, acting as representative for himself and twenty-six others, purchased from local Native American four thousand acres in the vicinity of Plum Point on Murderer's Creek (Ruttenber 1875:20-21). Title to this purchase, however, was never secured by patent. This was unfortunate since all or part of these lands also was resold by the Natives to others, including the English Governor of the Province, Thomas Dongan. In 1694, three years after MacGregorie's death, Governor Dongan conveyed his title to the land by patent to John Evans, who dispossessed MacGregorie's heirs and the other settlers. They were subsequently granted leases to their homes and lands they had settled, thus preserving possession and continuity of settlement (Ruttenber 1875:13). The Evans Patent was annulled by the Provincial Assembly on May 12, 1699 and the territory conveyed in small tracts by patents issued between 1701 and 1775.

After MacGregorie, other immigrants came to Orange County resulting in the need for the formation of local political administrative units. The first such political unit in the county was organized in 1686 as the Precinct of Orange. The precinct was comprised of lands that are now part of Rockland County. By the late 1680's, Scotch Presbyterians were settled in the area of Plum Point. By the 1690's, Dutch and French Huguenots were in the Minisink and Deer Park areas with the Huguenots also settling around the Wallkill River in Ulster County. Even with this increase in settlement, Orange County was sparsely populated. As of 1693, the county had only 20 settled families and the 1698 census ordered by Governor Bellomont, records only 29 men, 31 women, 141 children, and 19 African-Americans (Stickney 1867:20; Burdke 1932:65).

These settlements were agricultural in nature and confined to the eastern and western portions of the county. The central part of the county was not settled until the early eighteenth century.

4.1.2 Early to Mid-Eighteenth Century

Orange County at the opening of the eighteenth century was a sparsely settled wilderness. Governor Bellomont in a letter to the Lords of Trade in London in 1701 wrote that "the country west of the highlands was a dense wilderness there being but one house in all that section on Captain Evan's grant along the Hudson River" (Stickney 1867:18-19). Even so, two years previously Orange County was granted one seat in the New York Provincial Assembly and, in 1703, a county government, fully separate from New York County, began functioning. With organized government, the early eighteenth century witnessed an increase in the demand for patent lands for speculation. Three of these, the Cheesecock, Minisink, and Wawayanda Patents, include most of original Orange County. The Cheesecock Patent, granted on December 30, 1702, encompassed most of present-day Rockland County and eastern Orange County. The Minisink Patent, granted on August 28, 1704, included present-day western Orange County, southern Sullivan County, and southwestern Ulster County (Moffat 1928:8-9).

The third of these patents, the Wawayanda Patent, included the present project area. The patent, which was granted on April 29, 1703, consisted of 150,000 acres of land situated between the Hudson Highlands on the east and the Minisink Patent on the west, the Orange -Ulster Counties border on the north and the New York - New

Jersey border on the south. The land was purchased from local Native Americans by Haverstraw residents John Bridges and 11 others (Hendrick Tenyck, Derick Vanburgh, John Chotwell, Christopher Denn, Lancaster Symns, Daniel Herran, Philip Rockeby, John Meredith, Benjamin Aske, Peter Matthews, and Christen Christianse) in a deed dated March 5, 1703 (Headley 1908; Roberts 1970:22). The Native American signers most likely were Waoranecks and Warranawonkongs, and are recorded on the deed as Rapingonick, Wawastawaw, Moghopuck, Comelawan, Nanawitt, Ariwimack, Rumbout, Clauss, Chouckhass, Chingapaw, Oshasquemonus, and Quliapaw (Roberts 1970:22). After acquiring formal approval from the English Governor Cornbury, John Bridges and his associates applied for and received title to the Wawayanda Patent (also known in period conveyances as “The Patent to John Bridges and Company”) on April 29, 1703 (Ruttenber 1875:26). The limits of the Patent were undefined except in general terms so that for many years difficulties existed as to titles resulting in litigation. This was true, generally for the Cheesecock and Minisink Patents as well. The Wawayanda Patent was described as consisting of (Roberts 1970:22):

...certain tracts or parcels of vacant lands...bounded eastward on the high hills of the highlands and the patented lands of Captain John Evans, on the north by the division line of the Counties of Orange and Ulster; on the westward, by the high hills to the eastward of the Minisink; and on the south by the division line of the provinces of New York and New Jersey.

Included within these bounds are the present day towns of Warwick (including the project area), Minisink, Chester, Wawayanda, Greenville, Hamptonburgh, Goshen, and part of Blooming Grove.

Sometime between 1710 and 1720, the first local administrative unit was established within what is now Orange County. (The previously mention Orange Precinct was confined to a portion of what is now Rockland County.) Named the Goshen Precinct, its lands reached across the patents extending:

...on the north by the old county line extending from Plum Point, on the Hudson, to the Delaware River in the vicinity of the present hamlet of Sparrowbush; on the east by the Hudson River; on the southwest by the boundary line between New York and New Jersey (Headley 1908: 528).

Little is known of the early occupational history of the Wawayanda Patent but it probably was unoccupied by EuroAmericans prior to 1712. (As of 1702 the total population of Orange county, including what is now Rockland County, was only 268 individuals - Pommars 1988:4). In 1712, in person or by proxy, four of the patentees settled their lands. The sequence of actual occupation is open to question but tradition states that the first settler was Sarah Wells, the 16 year old foster daughter and proxy to Christopher Denn, a carpenter from Staten Island. Denn, unable to leave Staten Island immediately, sent Sarah, in the company of local Orange County Native Americans, to take possessions of his Wawayanda Patent lands. Traveling from New York to New Windsor by boat and then by foot to the Otterkill River, Wells arrived in the vicinity of the present-day Town of Hamptonburgh, located approximately 15 miles north of the current project area, in 1712. With the help of her Native American guardians, she undertook the construction of a dwelling. Her father, perhaps feeling guilty for sending his daughter off into the wilderness and anxiety for her safety, arrived soon afterwards.

Soon after the arrival of the Denny, various sub-divisions of the Wawayanda Patent occurred. By 1719, the Precinct of Goshen was established which at the time included the present-day Town of Warwick, including the current project area. Settlements within the precinct were established as of 1714 at Goshen, Warwick, and Graycourt (Ruttenber 1875:523; Coleman 1909). The first settler in the Warwick area was Lawrence Decker who acquired 100 acres, at a cost of 50 pounds, in 1719. His farm was located north of the current Village of Warwick on what was to become the Welling farm. The former location of the farm is approximately 15 miles northwest of the current project area. Other settlers must have arrived soon to the Warwick village area since it was known by that name as early as 1719 (Ruttenber and Clark 1881:576).

By 1721, only 15 people were reported as living within the Precinct of Orange and at least some of those were probably squatters. The precinct apparently remained sparsely settled over the next decade. By 1731, only 1,969 people resided in Orange County, most of who were located along the Hudson and Delaware Rivers leaving the interior areas almost destitute of settlers (Freeland 1898:19). This is illustrated by the fact that as late as 1745 only seven or eight families were settled within what is now the Town of Warwick (Ruttenber and Clark 1881:565). Ruttenber and Clark (1881:565) locate these homesteads in the northern and northeastern portions of the town, away from the current project area. By 1760, approximately 30 families had settled in the current Town of Warwick (Ruttenber and Clark 1881:565).

During the French and Indian War (1756-1763), western Orange County suffered repeated attacks by Native Americans and their French allies. As a result, a series of defensive blockhouses were constructed in 1757 on the Minisink frontier. Although most of the raids were confined to the western Minisink region, at least one raid occurred as far east as the Town of Goshen (Strickney 1867:70). None, however, are recorded for the Warwick area nor were any large, long term military encampments established there during the conflict. However, due to such raids (Ruttenber 1875:53; see also Ruttenber and Clark 1881:599):

An extent of country, on the west side of the Walkkill, of 15 miles in length and seven or eight in breadth, which was well and thickly settled, was abandoned by the inhabitants who, for their safety, removed their families to the east side of the river...

In 1764, the Precinct of Goshen was divided with the separation line roughly corresponding to the western border of the present-day Town of Monroe. Lands west of the line, including the project area, retained the Goshen Precinct name while lands to the east became parts of the Precincts of Cheescock and Cornwall (or New Cornwall; Freeland 1898:33; Headley 1908:528). After the separation, the Precinct of Goshen included the present-day towns of Warwick (including the project area), Goshen, Wawayanda, Minisink, Greenville, and the south part of Deerpark.

By 1771, the population of Orange County had grown in size to 10,093 individuals centered primarily in settlements near the Hudson and Delaware Rivers (Green 1886:332; Moffat 1928: 65).

The primary occupation within Orange County during the eighteenth century was agricultural although limited shipping and fishing industries slowly developed along the Hudson River shoreline. Another activity of importance to the county during the eighteenth (and nineteenth to early twentieth centuries) was the iron industry. Iron mines were operating in the southern and western portions of the county by the early eighteenth century and the first iron furnace was opened in 1737 (Booth 1971:47). During the early to mid-eighteenth century period,

the project area probably remained an undeveloped, rugged, wooded and wetland covered tract although portions of it may have served as a wood lot particularly during the latter portion of this period

4.1.3 Revolutionary War Years

During the American Revolution, Orange County witnessed much bitter conflict. Although primarily in American control for much of the war, British and Loyalist forces frequently raided the county (Green 1886:76-127). Forces loyal to both sides and to neither also ranged almost unchallenged across much of that area raiding, burning, and killing. Violence and conflict were frequent with family members and friends many times pitted against one another. A number of blockhouses were again constructed in the western portion of Orange County as protection against Native American and Loyalist attacks.

The most notorious raid began on July 20, 1779 when Joseph Bryant and 60 Native Americans and 27 Loyalist troops attacked the settlement of Minisink, approximately 20 miles northwest of the project area. Next day one hundred and twenty Goshen volunteers and New Jersey militia under the command of Colonel John Hathorn responding to the attack caught up with the withdrawing raiders. In the ensuing Battle of Minisink, between 40 and 90 members of the American force were killed. The Native Americans and Loyalists lost three killed and ten wounded in the fight (Ruttenber 1875:89-91; Graymont 1972:199-202).

Although no military encampments are recorded for the Warwick vicinity, Continental forces and New York State militia were quartered in various parts of Orange County during the Revolution. Large encampments were located in Newburgh, New Windsor, West Point, and other posts in the Hudson Highlands. The county reportedly was a center for the manufacture of gunpowder and armaments for the American army (Headley 1908).

The portion of the 1779 Sauthier map that includes Orange County does not indicate the presence as of that year of any structures in what is now the project vicinity. During this period, the project area probably still remained an undeveloped, rugged, wooded and wetland covered tract although portions of it may have served as a wood lot.

4.1.4 Post-Revolutionary War Years

Orange County was sub-divided by an Act of the New York State Legislature on March 7th, 1788. By the statute, the term "Town" replaced the term "Precinct." By the same Act, the Town of Warwick (including the current project area) and Minnisink were created from the Town of Goshen (Pommars 1988:2).

Present-day Orange County took form in 1798 when the New York State Legislature joined southern Ulster County to Orange County and created Rockland County from territory south of the Ramapo Mountains (Ruttenber 1875:27). During this period, Orange County, including the project vicinity, retained its rural and agricultural nature producing mainly wheat, particularly in the regions river valleys. A shift to dairy farming began in the county beginning around 1790. The portion of the county that includes the current project area also saw the rise of iron mining and processing industries during this period (see Chapter 4.2).

4.1.5 Nineteenth to Early Twentieth Centuries

With the coming of the nineteenth century, Warwick and the rest of Orange County underwent a series of changes while retaining a rural nature. Early in the century, attempts were made to drain the so-called “drowned lands” of the Wallkill River now called the “Black Dirt” (Pommare 1988:15). These were extremely wet but fertile lands that bordered the Wallkill River beginning in New Jersey and extending north to the vicinity of Pellets Island. A nineteenth century description of these lands states that “In the spring of the year of 1827, the freshet upon the ‘drowned lands’ was unusually high. The geese and ducks were holding high carnival on its wide extended surface and amid its submerged swamps” (Stickney 1867:208). Attempts were made throughout the nineteenth and early twentieth century to drain these lands.

By the first third of the century, dairy farming had replaced crop (primarily wheat) agriculture. Most farmers were no longer practicing subsistence farming but were raising a cash crop. With dairy farming predominating, and with poor transportation placing limitations on the amount of time available to move perishable dairy products to markets in New York and elsewhere, milk and cream were made into butter. Orange County butter was renowned and became known nationwide as “Goshen Butter”, the standard for butter procurement for the United States Navy (Pommare 1988:42).

By 1871 the New York and Erie Railroad reached the Warwick area (Ruttenber 1875:123) and by 1875 the Warwick Valley Railroad had been constructed (Ruttenber and Clark 1881:577). With the railroad's arrival, dairy farmers no longer needed to convert their crop to butter but could ship to market fresh milk and cream. Sheep farming and silk production were other agricultural pursuits that were briefly tried by a number of farmers during the early part of the century but for various reasons they did not flourish or last.

Transportation by road improved in Orange County even before the arrival of the railroad. Between 1800 and 1828, twenty-eight turnpikes were constructed in the county and in the 1850's four plank roads were built (Booth 1971:33).

The transportation and communications improvements had, by the late nineteenth century, enabled a number of industries to develop in Orange County. New manufacturers and processors included brick works, engine factories, glass factories, planing mills, creameries, gas companies, and iron foundries. The last of these played a crucial development within the Sterling Forest portion of Orange County. The eighteenth and nineteenth century history of the Sterling Forest area, including the current project vicinity, soon was dominated by iron ore production and processing (Ransom 1966; Lenik 1996). That history is briefly discussed below (see Chapter 4.2).

4.2 Project Area Occupational History

In order to investigate the history of Euro-American land use within the project area, maps showing the pertinent section of the Town of Warwick in Orange County were consulted. It was determined that on the maps analysed, the project area was located along the outlet stream of Little Cedar Pond just west of the intersection of its confluence with Ringwood Brook. The outlet stream reportedly was dammed in 1956 to form what is now Sterling Forest Lake (a.k.a. Blue Lake). The outlet from that lake still joins Ringwood Creek in the project's east parcel. A small pond, referred to as Sterling Pond, is shown on the maps east and north of the nineteenth century road that roughly corresponds with the route of modern-day Long Meadow Road. That pond borders the northern edge of the eastern parcel of the current project area. By the mid-nineteenth century, the area around the

pond was referred to as the Sterling Works. Billy White Mountain is located northeast of the current project area. It is indicated on some of the Historic period maps reviewed and served as another location marker for this analysis.

The maps reviewed for this investigation are the 1850 Sidney map, 1859 French, Wood, and Beers map, 1875 Beers map, 1893 United States Geological Survey map, 1903 Lathrop map, and 1908 and 1925 United States Geological Survey maps.

Nine or ten of the structures, including a blast furnace and store, associated with the Sterling Works seen on the Historic period maps were located within the current project's APE. Seven other Sterling Works structures, including a forge, were located within the project's eastern parcel but their former locations will not be impacted by the current development project. Other structures and a section of roadway associated with the Sterling Works that are depicted on the maps were inundated beneath the waters of Sterling Forest Lake.

Prior to the late eighteen-early nineteenth century period, the project area likely remained wooded although portions may have served as pasture and/or a wood lot. It is likely that by the nineteenth century, the area was a wood lot with most of the forest cut to serve the local iron industry. Early in the iron industry's development, wood charcoal derived from the region's timber was the primary fuel used to process iron ore into useable iron (Lewis 1976:13). Ore was directly mixed with charcoal, the carbon content serving to reduce the oxygen part of the iron-oxide ore and thus distilling the iron directly from the rock (Chard 1986:1). The iron processing facilities required a large amount of charcoal to effectively operate. Two hundred bushels of charcoal were required to produce a ton of pig iron. This equated annually to 150 acres of timber for an average facility to produce 1,000 tons of iron. Crews of wood-cutters felled trees and charcoal makers (colliers) were required to pay constant attention to the slow burning of covered wood stacks which could take over a week to finish before becoming charcoal (Farrell 1996:50). Most charcoal kilns were constructed close to iron making facilities. As forests were felled around furnaces locally produced charcoal became more difficult to acquire. This resulted in charcoal being transported to furnaces from greater distances, increasing production costs. Diminishing forests eventually resulted in the increased use of coal which began to dominate as the fuel for the iron industry after the mid-nineteenth century and the construction of railroad lines which could bring that fuel to the furnaces (Temin 1964:71-72). The shift in fuel also required a change in the technology to produce iron, particularly the use of hot blast furnaces and blowing engines. The steam engines used to power the facilities reduced the earlier reliance on hydrological power for hearth bellows to pump air into furnaces (Walwer and Walwer 2001).

Peter and Isaiah Townsend, co-founders along with others, of the noted Sterling Company (incorporated in 1814 under the direction of Peter Townsend II), which operated many iron mines, furnaces, and related industries in the Sterling Forest area during the early to mid nineteenth century, began to develop the Sterling Works community by the late 1840's. In 1847-1848, the Townsends constructed a blast furnace just below the outlet of Sterling Pond. The new furnace had an inside height of 48 feet and was 13 feet wide across the bosh. The furnace first was fueled by charcoal, which would have resulted in the deforestation of the surrounding area if that had not already occurred by this time. It was converted to anthracite coal in 1865-1866. At its peak during the 1850's and 1860's, the furnace was producing at least 2,250 tons of iron from the magnetic ores furnished by mines located near Sterling Lake, located north of the project area. A small community developed around Sterling Pond soon after construction of the furnace consisting of a forge, Methodist-Episcopal Church, a school house, small homes for workers, a store, offices, workshops, and other buildings associated with the iron works (Ransom 1966 192-193). Charcoal bottoms and collier huts for making charcoal also likely were nearby to serve the furnace and forge, at least prior to the introduction of coal during the 1860's. The Sterling Mountain Railroad, a 7.6 mile line devoted to the iron industry extending between Ramapo and Sterling Lake, opened in

1865 (Ransom 1966:200). The line ran east of Sterling Pond with a portion of it extending through the project area's east parcel. At least one mine also was located just east of the project area as of 1865 (Ransom 1966:Frontpiece).

The Sterling Works community was typical of the so called "iron plantations" that were organized to run furnaces and forges during the early to mid-nineteenth century in the Sterling Forest area. Such communities typically included a headquarters building, forge and/or furnace, and a range of supporting institutions such as worker housing, schools, churches, cemeteries, charcoal-making facilities, stores, and other shops. Pasturage and agricultural fields also frequently were located nearby to supply food to the plantations. As was the case with the Sterling Works, they typically were located along major roads or rail lines which provided access to the furnaces and their products and facilitated the transport of ore, coal, and other materials (Temin 1964:39-44; Lewis 1976: 31-33). By the 1860's, the Sterling Company, including the Sterling Works community, owned 23,000 acres and 12 operating mines in the Sterling Forest area. The Sterling Iron and Railway Company took over operations of the company in 1864 (Ransom 1966:172; Walwer and Walwer 2001). Iron continued to be made in the region until the early twentieth century.

In 1955, the remains of the furnace built in 1847-1848 near the outlet of Sterling Pond were demolished by a contractor possibly as part of the preparation for the creation of Sterling Forest Lake. The stones subsequently were dumped along the spillway for that lake (Ransom 1966:209).

The 1850 Sidney map (Figure 5) indicates a number of structures associated with the Sterling Works. The four structures shown on the map just south of Sterling Pond fronting onto the west side of the mid-nineteenth century road apparently were within the northern portion of the current APE between what are now Sterling Forest Lake and Long Meadow Road. One of the four structures is described on the map as a furnace and another is described as a store. The other two structures are not identified as to function on the 1850 map. The furnace likely is the blast furnace constructed by the Townsend brothers between 1847 and 1848. A walk-over of the area did not identify any structural remains associated with the buildings (Photograph 14). As indicated above, the furnace remains reportedly were demolished and removed in 1955.

The 1850 map also indicates a structure, possibly a residence, just north of the outlet for what is now Sterling Forest Lake, fronting onto the west side of the mid-nineteenth century road. The former location of the structure likely was located within the current APE, north of the current entrance road for the Jehovah's Witnesses World Headquarters property. A small, dilapidated wooden bridge currently spans the outlet stream just south of the likely former location of the structure. No trace of the building was noted during the walk-over of the project area conducted for this investigation.

Four or five structures, likely a residence and some outbuildings, are shown on the 1850 map as located south of the confluence of Ringwood Creek and the current Sterling Forest Lake outlet, east of the nineteenth century road. At least some of these structures likely were situated within the southeastern most corner of the current APE. It is possible that the eastern most of these buildings is located near Ringwood Creek in the project's eastern parcel. No traces of the structures, however, were noted during the walk-over of the project area conducted for this investigation.

The 1850 map indicates that a forge was located as of that year east of the lower part of Sterling Pond. The former location of the forge was in the northernmost portion of the project's eastern parcel. Another structure was located west of a second nineteenth century road, south of the forge. The former location of the structure

likely was within the east central part of the project's eastern parcel. The former locations of the forge and the possible residence within the project's east parcel will not be impacted by the current project.

The same structures that are shown on the 1850 Sidney map, which are located within the current project's APE, also are shown on the 1859 French, Wood and Beers map (Figure 6). These include:

- 1) the four structures south of Sterling Pond and west of the mid-nineteenth century road. The location is within the northern most portion of the APE between what are now Sterling Forest Lake and Long Meadow Road. The 1859 map indicates that one of the four structures was a store and another was a shop as of that year. One of the other two structures was the blast furnace which was still standing in 1955.
- 2) A possible residence located just north of the outlet of what is now Sterling Forest Lake, fronting onto the west side of the mid-nineteenth century road. The former location of the structure within the APE is north of the current entrance for the Warwick property.
- 3) Three of the five structures shown on the 1850 map as located south of the confluence of Ringwood Creek and the current Sterling Forest outlet. As indicated for the 1850 map, at least some of these structures likely were situated within the southeastern most corner of the current APE. It is possible that the eastern most of these buildings was located near Ringwood Creek in the project's eastern parcel.

Seven other structures associated with the Sterling Works shown on the 1859 map were located within what is now the eastern parcel of the current project area. One of these was the residence of William Sharp, a second was a blast furnace (shown as a forge on the 1850 map), and a third is identified as a Methodist-Episcopal Church (M.E. Ch.). The other structures are not identified on the 1859 map as to function although they likely were residences. None of these former building locations will be impacted by the current project.

The Sterling Works community, including what is now the current project area, are indicated on the 1859 map as owned by "Abeel Noble and Others" as of that year. Sterling Forest Lake now occupies the southern portion of the stream that flows from Little Cedar Pond. This is the stream shown south of the shop and store. The portion of the stream near the road now serves as the outlet for Sterling Forest Lake and joins Ringwood Creek in the project's east parcel.

By 1875, according to the Beers map of that year (Figure 7), only the blast furnace remained standing south of Sterling Pond and west of the mid to late nineteenth century road through the Sterling Works community. The other structures shown in that area on the 1850 and 1859 maps were no longer present as of 1875. The location is now the northern most portion of the APE. The structures shown north of the furnace and west of Sterling Pond are located outside of the current project area. The locations of the structures shown on the 1875 map west of the furnace are now inundated beneath Sterling Forest Lake. The location of the building north of the stream on the east side of the mid to late nineteenth century road is likely now within the southeast portion of the APE. This likely is the structure that is shown west of that road on the 1850 and 1859 maps. The other structures shown on the 1875 map as located southeast of Sterling Pond, including the M.E. Church (Methodist-Episcopal Church), are within the current project's eastern parcel. Their former locations will not be impacted by the current project. The 1875 map also indicates that the Sterling Mountain Railroad had been constructed as of that year. A portion of it extended through what is now the project's eastern parcel.

The Sterling Works community, including what is now the current project area, are indicated on the 1875 map as still owned by “Abeel Noble and Others” as of that year. Sterling Forest Lake now occupies the southern portion of the stream that flows from Little Cedar Pond. This is the stream shown south of the furnace. The portion of the stream near the road now serves as the outlet for Sterling Forest Lake.

Structures are not shown within the Sterling Pond area, or generally within other areas, on the 1893 United States Geological Survey map (Figure 8). The map indicates that by that year, the community was referred to as Sterling Furnace. Little Cedar Pond and the outlet stream, which was dammed in 1956 to form Sterling Forest Lake, are shown. The Sterling Mountain Railroad line also is shown on the 1893 map.

The more detailed 1903 Lathrop map (Figure 9) indicates three structures in the area south of Sterling Pond, west of the old road, and north of the Little Cedar Pond outlet stream within the community of Sterling Furnace. These buildings may include those shown on the 1850 and 1859 maps. The buildings shown on the 1903 map east and southeast of Sterling Pond, including the M.E. Church, were located within the current project’s eastern parcel. Their former locations will not be impacted by the current project. The locations of the structures shown west of the pond are north of the current project area. Little Cedar Pond and the outlet stream, which was dammed in 1956 to form Sterling Forest Lake, are shown as is the Sterling Mountain Railroad.

No structures are shown on the 1910 or 1925 United States Geological Survey maps (Figure 8), which show the same topographic conditions as are shown on the 1893 United States Geological Survey map.

The 1930 Dolph and Stewart property ownership map indicates the Sterling Furnace community as a railroad stop on the Sterling Mountain Railroad line but does not generally indicate houses. The map incorrectly shows Sterling Pond south of the old roadways when in reality it is situated on the east side of the road. The 1930 map also incorrectly shows that Little Cedar Pond’s outlet stream empties into Sterling Pond. No individual owners are shown on the 1930 property map within the Sterling Pond area. However, the map generally does show individual owners in other locations, suggesting that the Sterling Furnace area was owned by a single entity as of that year.

5.0 ASSESSMENT OF THE ARCHAEOLOGICAL SENSITIVITY OF THE PROJECT'S AREA OF POTENTIAL EFFECT AND RECOMMENDATIONS

5.1 Native American Period Sensitivity

Pre-Contact period sites have not been recorded within the proposed Jehovah's Witnesses World Headquarters project property or its immediate vicinity. Occupations that have been recorded in the region are generally restricted to rockshelter sites, lithic procurement sites, and campsites. The latter are generally located on raised ground overlooking some of the areas rivers and wetlands. Such areas of high ground overlooking watercourses traditionally have been considered sensitive for the presence of Native American sites.

The current and former environmental setting of most of the current project area is similar to that of known Pre-Contact period camp sites. Specifically, these are the property's terrace-like locations and other relatively level, raised areas overlooking the valley that now contains Sterling Forest Lake, its outlet stream, and adjoining wetlands. Such locations within the current APE, where undisturbed, are considered to be sensitive for the presence of Pre-Contact period archaeological resources. Sterling Forest Lake was created in 1956 when the stream that ran through the valley was dammed inundating the area. The stream was the outlet for Little Cedar Pond, located northwest of the project area.

Portions of the APE immediately south of Sterling Forest Lake, however, have been disturbed as a result of the construction of the International Nickel Company facility during the early 1960's. Numerous multi-story buildings associated with the facility are present there. Their location constitutes the developed portion of the APE. The amount of construction that has occurred there would have disturbed or destroyed any Pre-Contact period sites that may have been present.

No caves or rockshelters or out crops of chert, quartz, quartzite, or other useable lithics were identified during the pedestrian reconnaissance of the project area.

The portion of the APE that is sensitive for the presence of Pre-Contact period archaeological resources is indicated on Figure 11.

5.2 Historic Period Sensitivity

Portions of the current APE fronting onto Long Meadow Road or its vicinity within the project's western parcel are considered to be sensitive for Historic period archaeological resources associated with the mid to late nineteenth century Sterling Works. The Sterling Works was an iron producing community established in 1847-1848 by the Sterling Company. The Works included a furnace and forge, a number of support structures (Church, store, shop etc.), worker residences, and associated outbuildings. Many of the community's structures were located east of Long Meadow Road and will not be impacted by the proposed development project. Some of the associated structures, however, formerly were located within the current project's APE fronting onto what is now Long Meadow Road or its vicinity. These include:

- 1) A blast furnace formerly located in the northern most portion of the APE. Although the furnace was demolished in 1955, sub-surface evidence for it or the activities that occurred there may remain;

- 2) Three other structures located near the furnace in the northern most portion of the APE. Two of the structures were identified on mid-nineteenth century maps as a store and a shop;
- 3) A possible residence located just north of the outlet of what is now Sterling Forest Lake. The former location of the structure within the APE is north of the current entrance to the project area.
- 4) Three mid-nineteenth century structures, likely a residence and outbuildings, situated within the southeastern most corner of the current APE, near what is now Long Meadow Road.

The former vicinities of these structures appear to be relatively undisturbed and it is possible that sub-surface features, deposits or other stratigraphic evidence for them, or the activities that occurred within and around them, may remain.

Remains of former charcoal making bottoms and colliers huts also may be located within the APE or other portions of the project area.

The portion of the APE that is sensitive for the presence of Historic period archaeological resources is indicated on Figure 11.

Seven other structures associated with the Sterling Works shown on the 1859 map were located within what is now the eastern parcel of the current project area. One of these was the residence of William Sharp, a second was a forge, and a third is identified on the map as a Methodist-Episcopal Church. The other structures located there likely were residences. None of these former building locations will be impacted by the current project.

5.3 Recommendations

It is recommended that Phase IB-level archaeological testing be undertaken in the archaeologically sensitive portion of the APE for the Jehovah's Witnesses World Headquarters project. Such testing will determine whether any possibly significant archaeological resources are present there. Specifically, areas of relatively level ground are considered to be archaeologically sensitive for the presence of Pre-Contact period archaeological resources while locations fronting onto Long Meadow Road or its vicinity are sensitive for mid to late-nineteenth century archaeological resources associated with the iron producing Sterling Works/Sterling Furnace community. Upon completion of a final site development plan for the proposed project by staff of the Jehovah's Witnesses organization, a Phase IB-level investigation work plan should be developed detailing the scope of the recommended testing within the APE and submitted to NYSOPRHP for that agency's review.

Although the developed portion of the current APE for the project formerly would have been sensitive for the presence of Pre-Contact period sites, the area has been disturbed by construction of the former International Nickel Company facility. Accordingly, Phase IB-level archaeological testing of that part of the current APE is not warranted.

The portion of the current project area located east of Long Meadow Road will not be disturbed as a result of the proposed development project. However, if future as yet unplanned construction activities occur within that parcel, it is recommended that Phase IB-level testing be conducted there prior to that work.

FIGURES

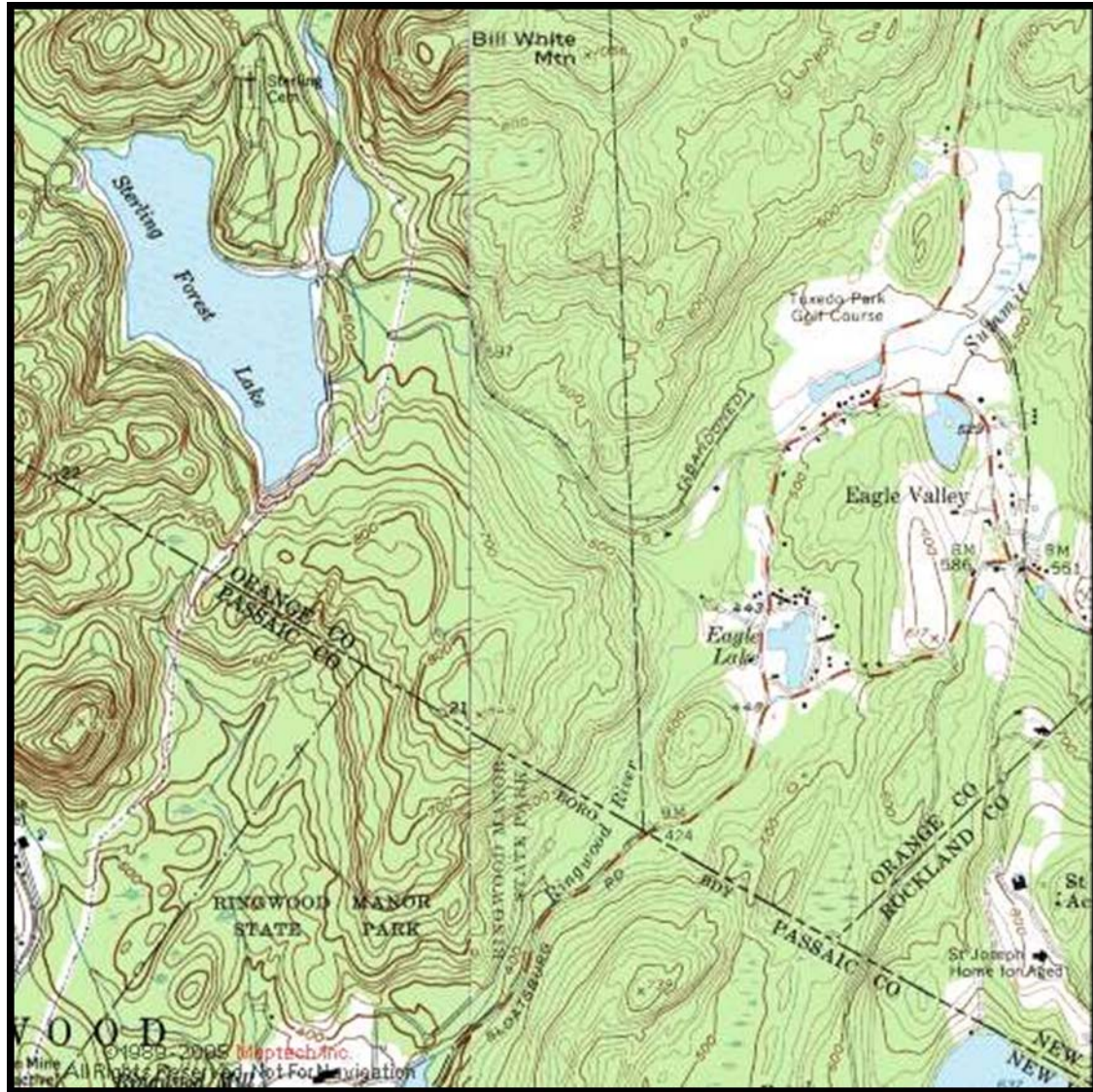


Figure 1

Jehovah's Witnesses World Headquarters Project Area Region

Base Map Source: United States Geological Survey 1969

Scale: 1:24,000

Arrows indicate location of the project area.

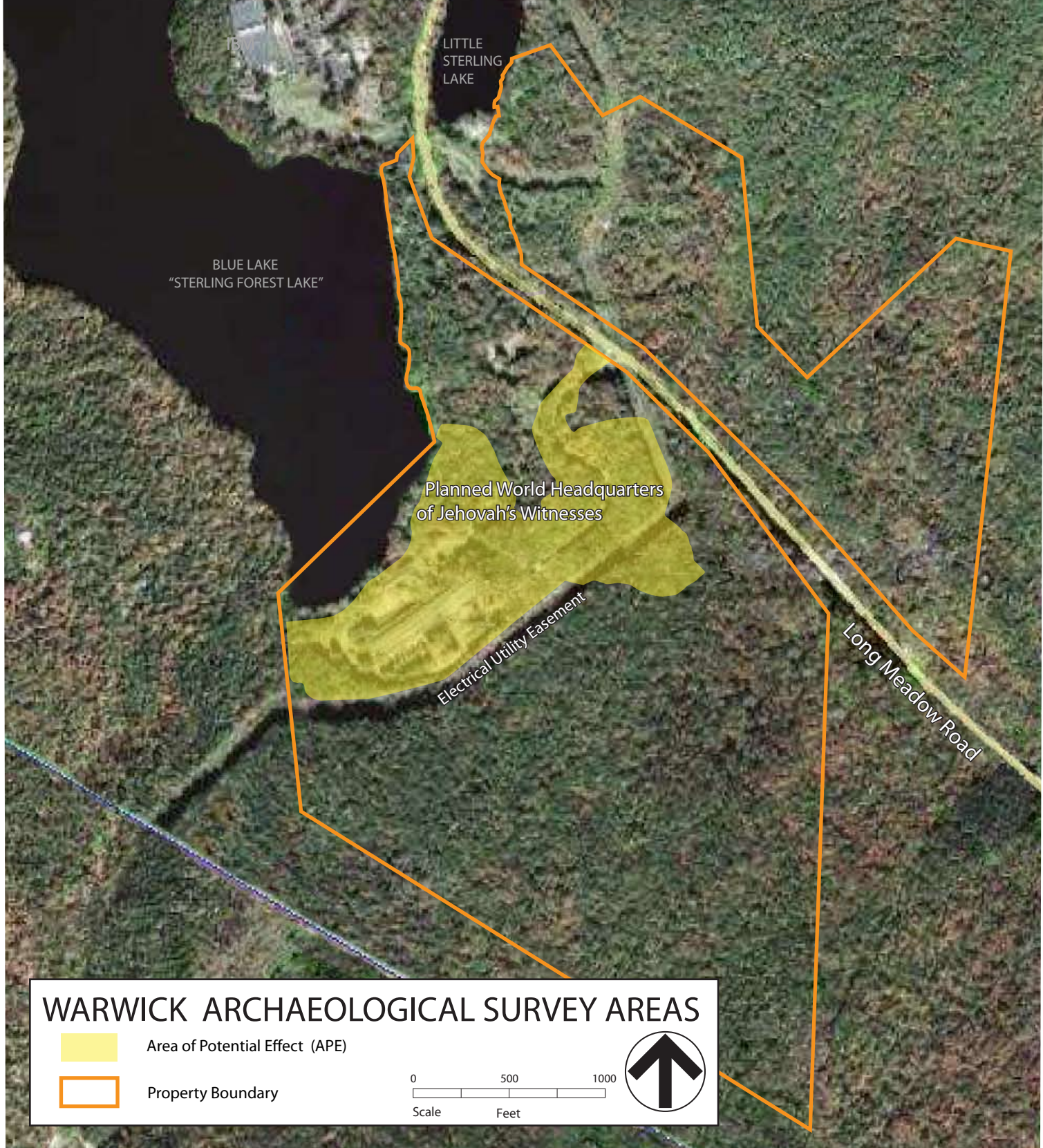


Figure 2

Aerial View of Jehovah's Witnesses World Headquarters Project Area

Source: Watchtower Bible and Tract Society of New York, Inc. 2010a

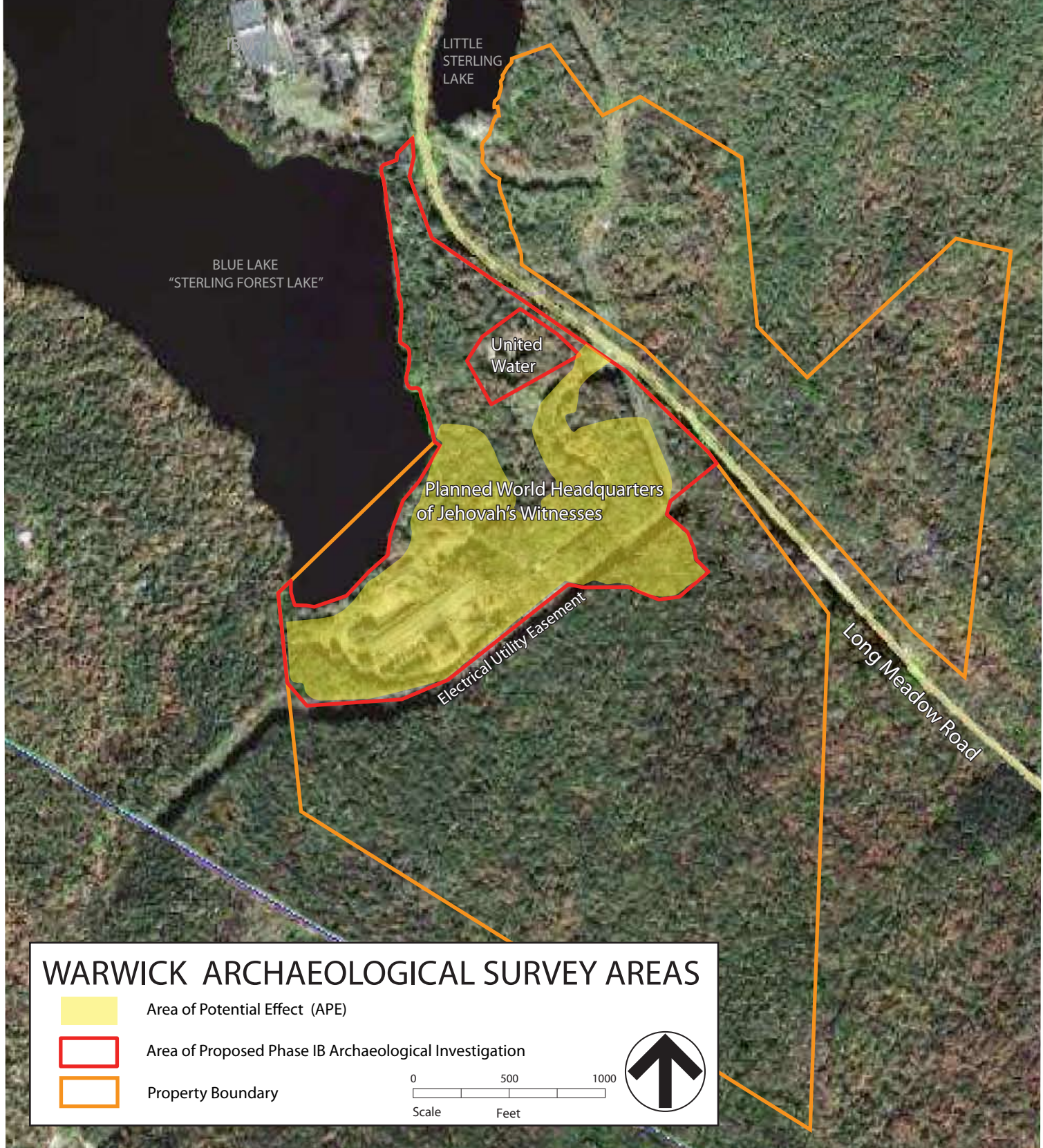
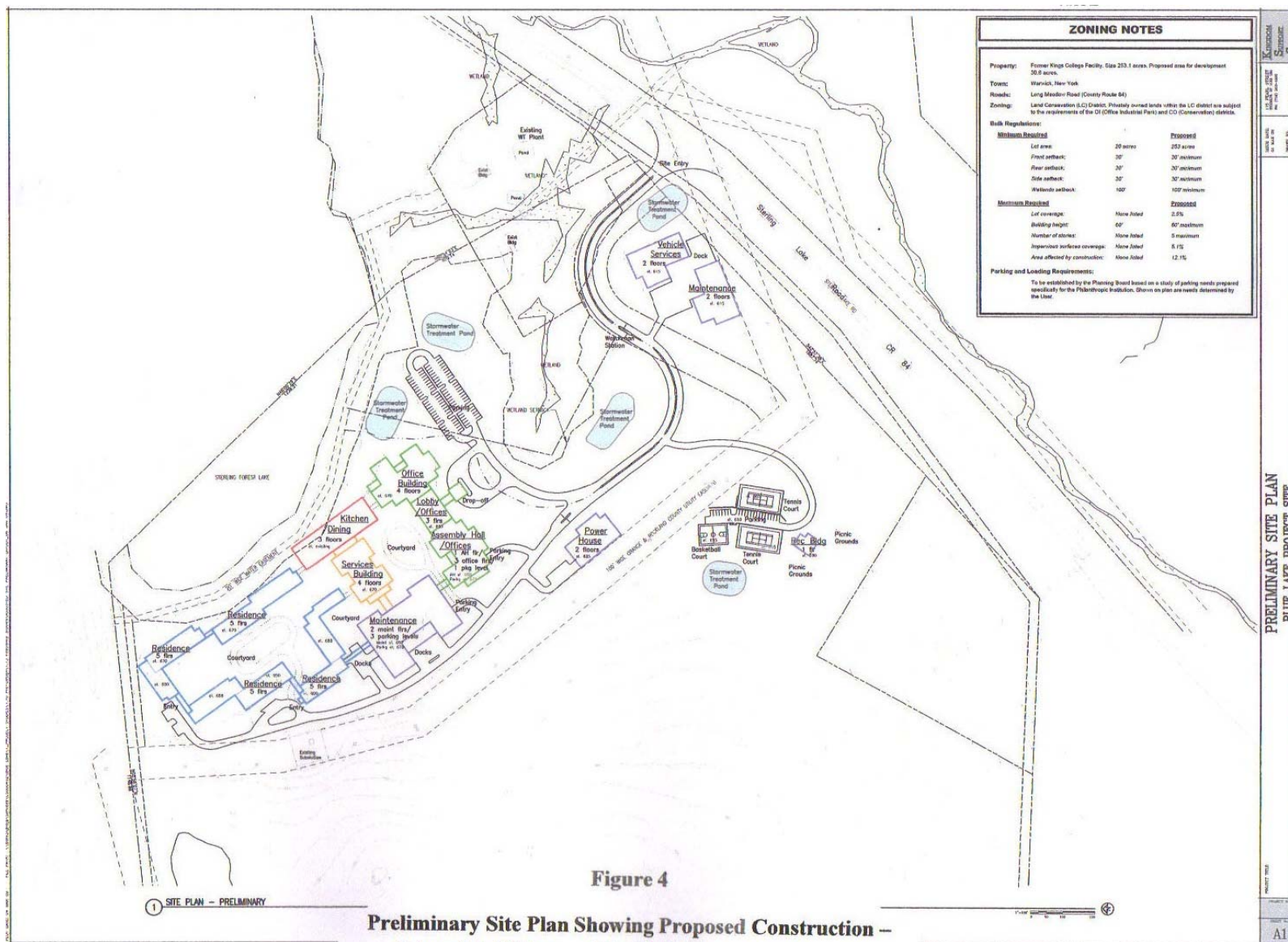


Figure 3

Jehovah's Witnesses World Headquarters Project Area Showing the Area of Potential Effect

Source: Watchtower Bible and Tract Society of New York, Inc. 2010b



Source: Watchtower Bible and Tract Society of New York, Inc. 2010c

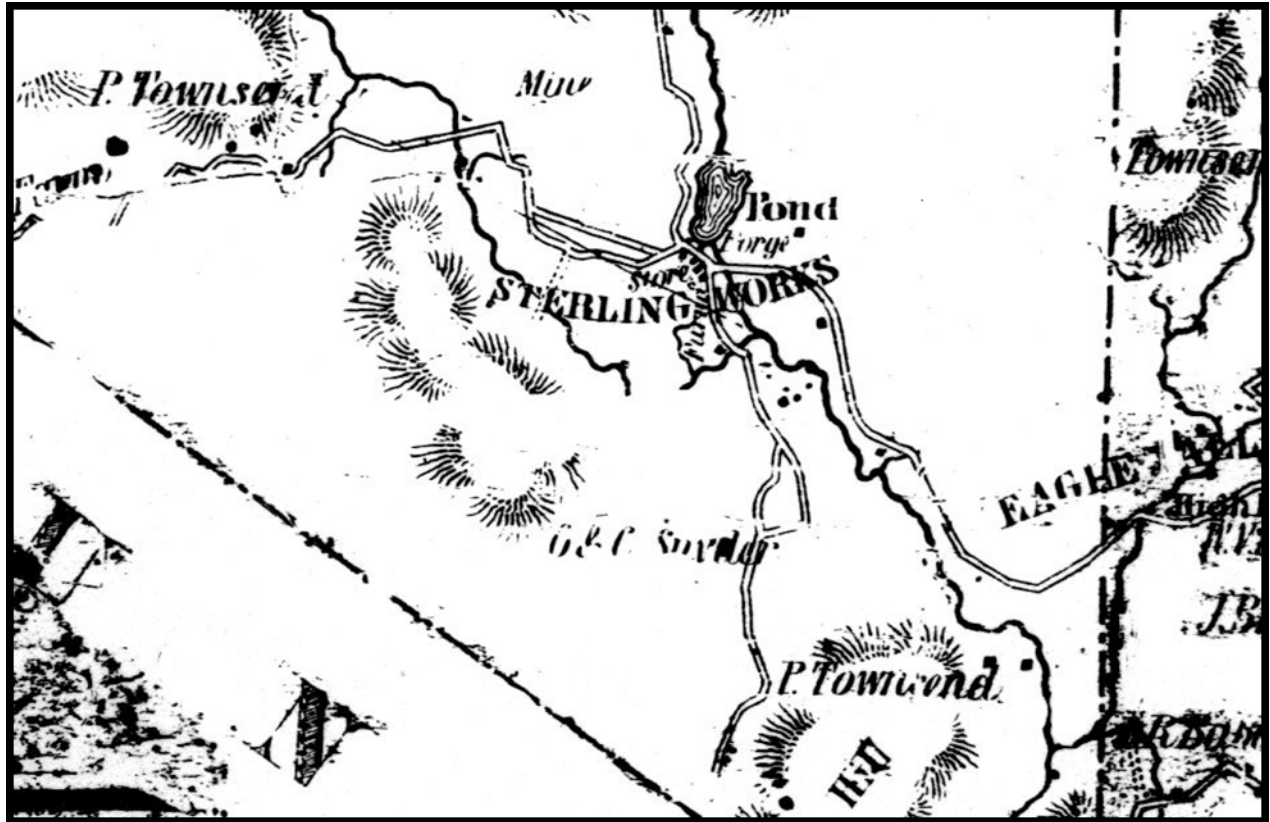


Figure 5

1850 Sidney Map

Scale of Original: 1 inch = 1 mile

Arrows indicate the current project area.

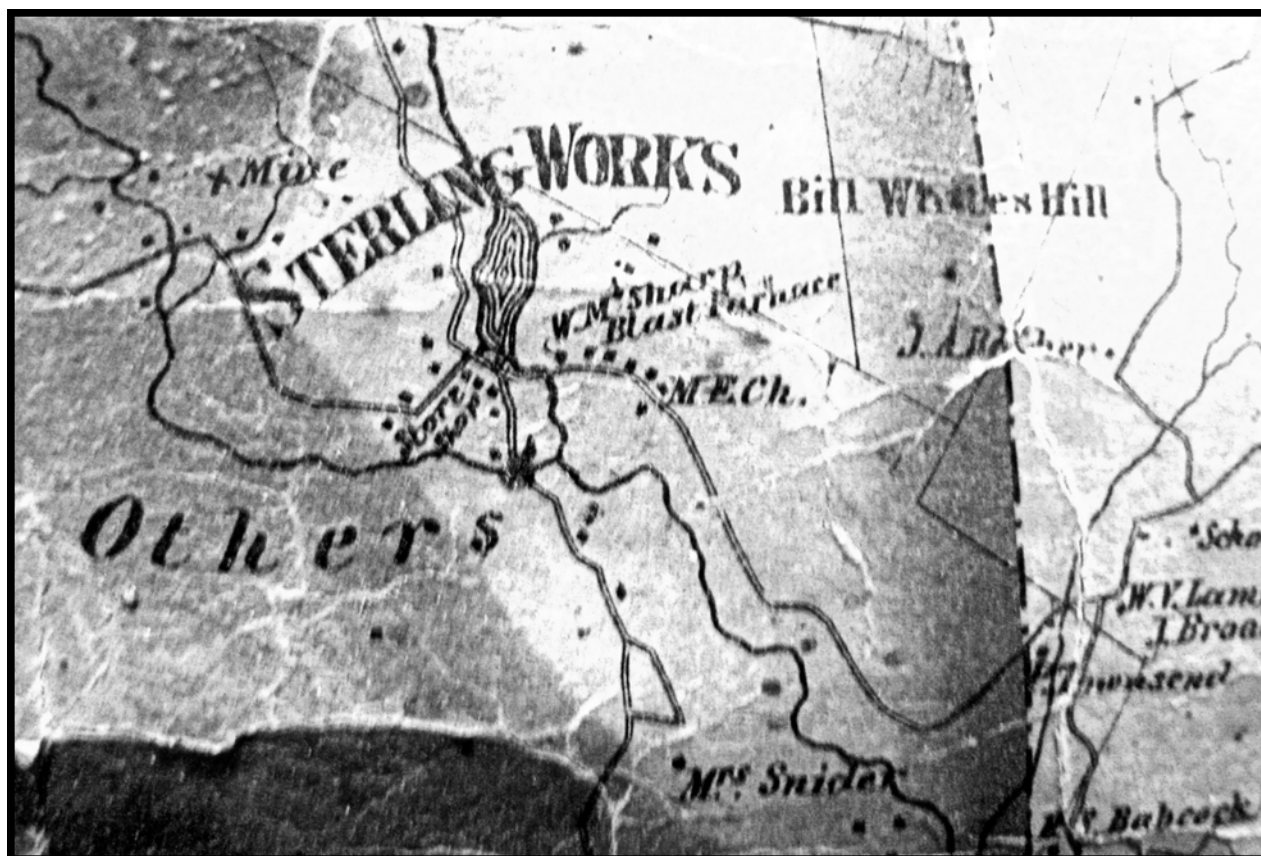


Figure 6

1859 French, Wood, and Beer Map
Scale of Original: 1.25 inches = 1 mile

Arrows indicate the current project area.

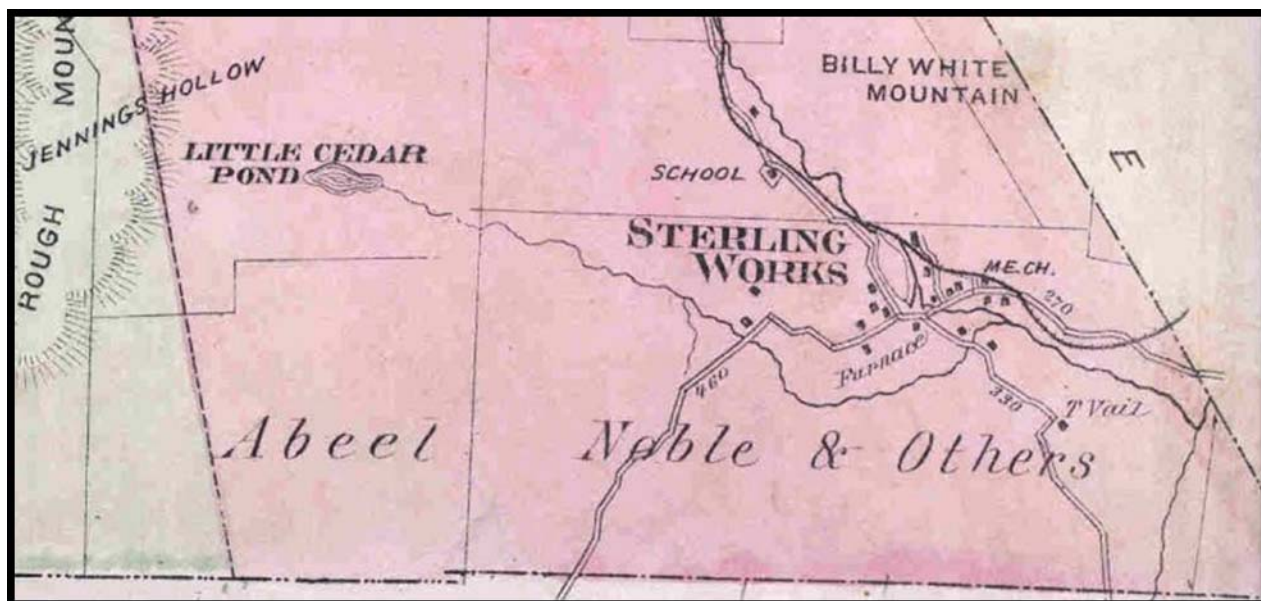


Figure 7

1875 Beers Map

Scale of Original: 1 inch = 3,531 feet

Arrows indicate the current project area.

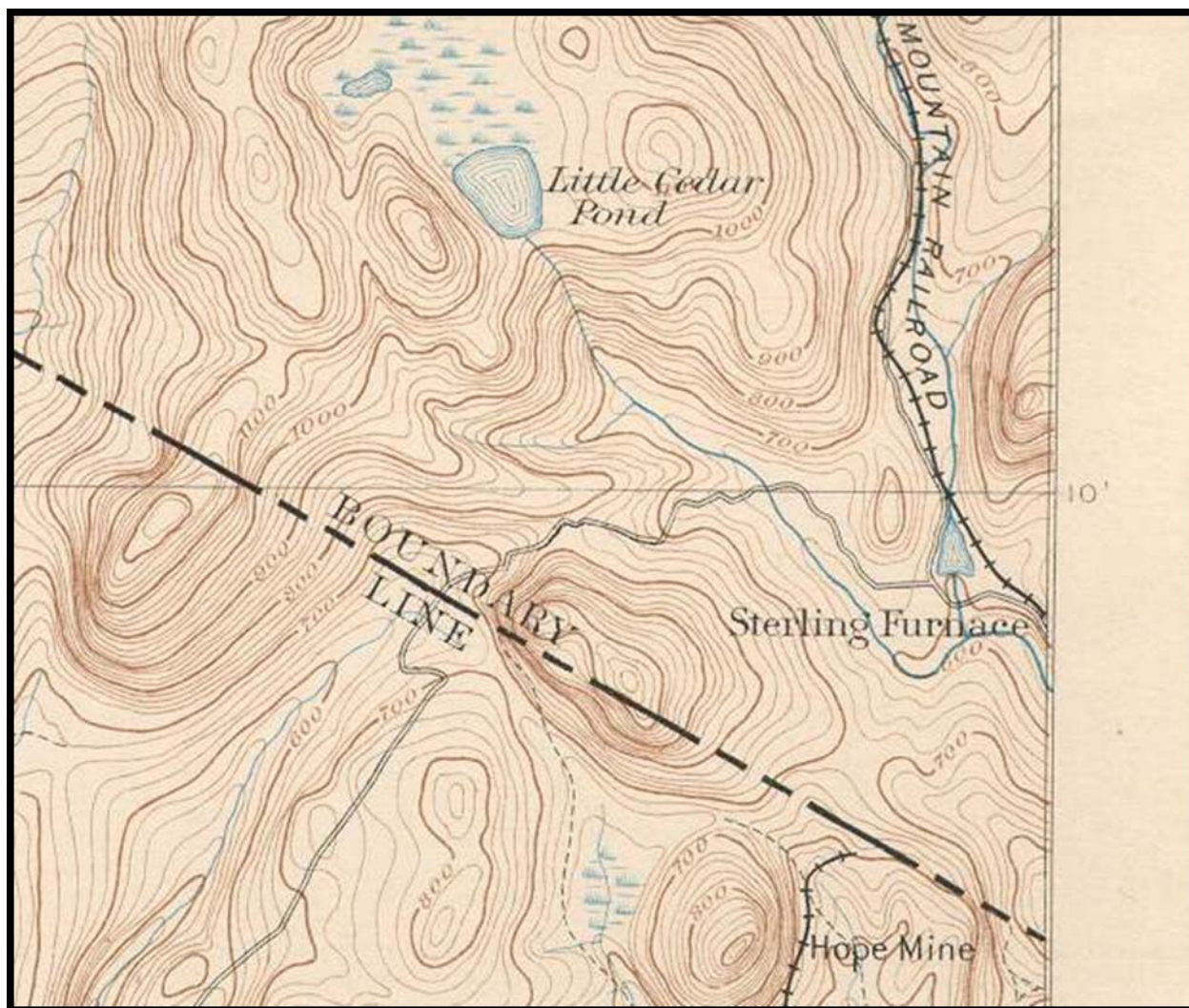


Figure 8

**1893/1910/1925 United States Geological Survey Map
Scale of Original: 1:62,500**

Arrows indicate the current project area.

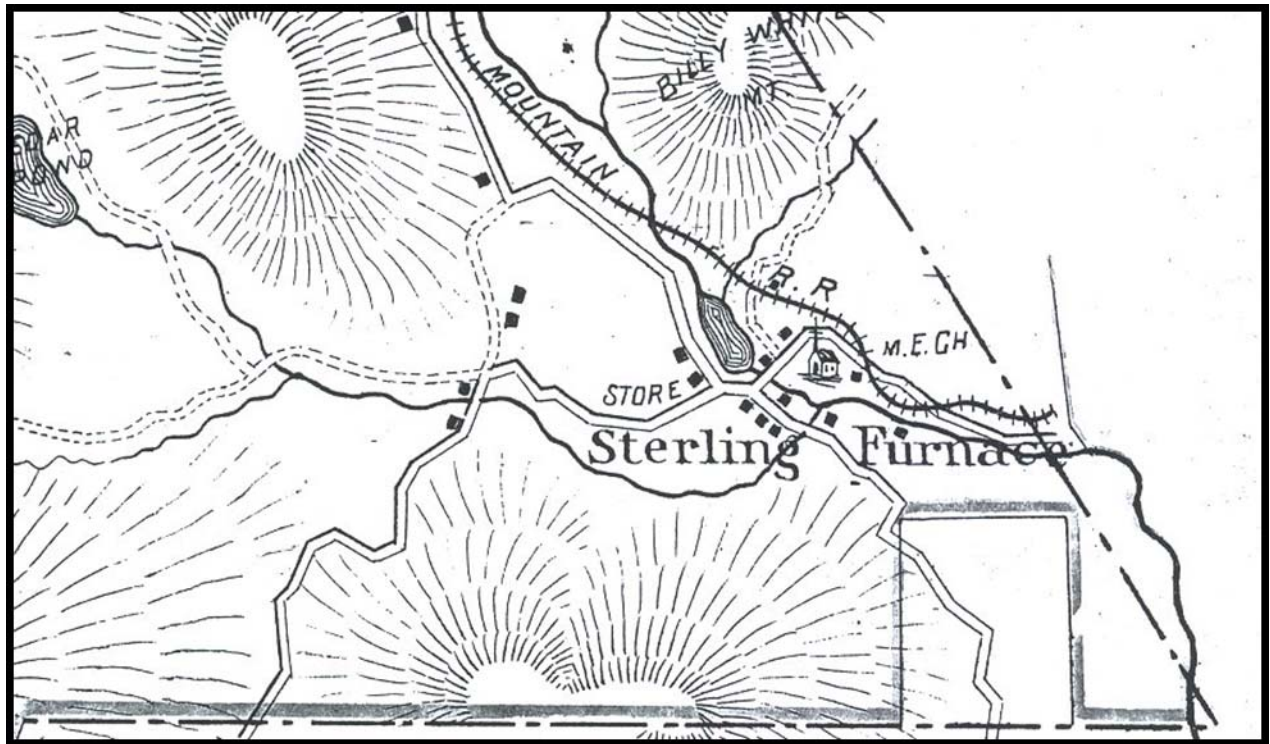


Figure 9

1903 Lathrop Map

Scale of Original: 1 inch = 400 feet

Arrows indicate the current project area.

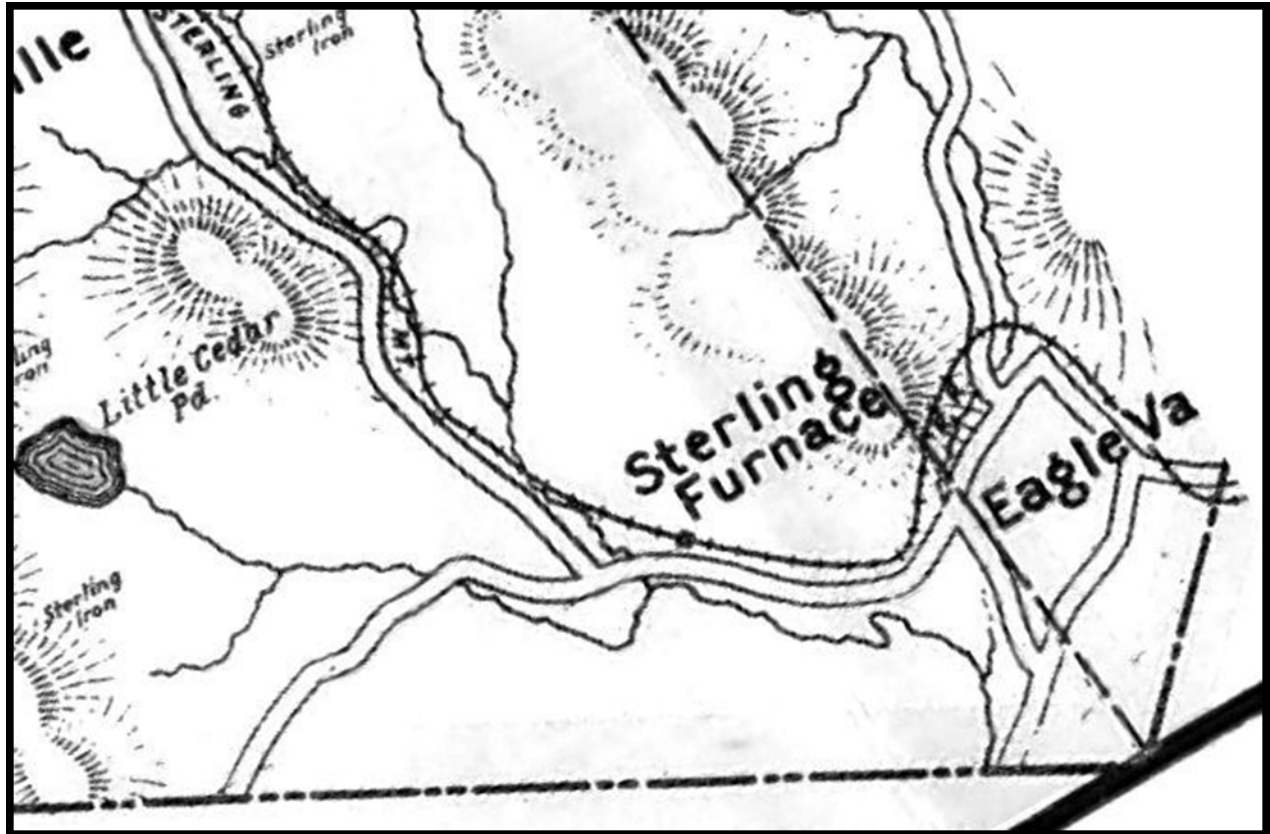


Figure 10

**1930 Dolph and Stewart Map
Scale of Original: 1 inch = 5,000 feet**

Arrows indicate the current project area.

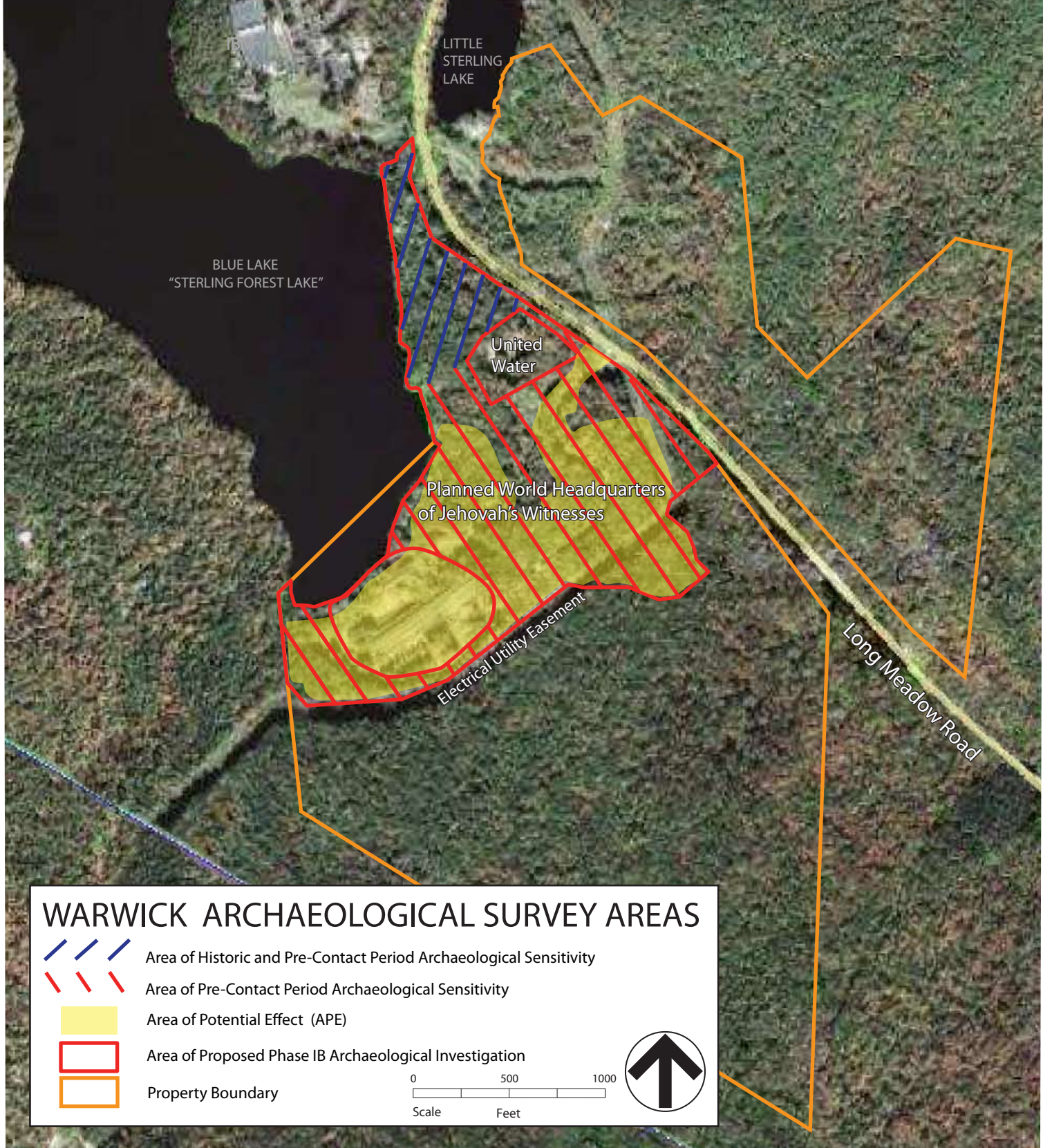


Figure 11

Archaeologically Sensitive Portion of the Jehovah's Witnesses World Headquarters
Project Area of Potential Effect

PHOTOGRAPHS



Photograph 1

**Sterling Forest Lake from the Northeastern Portion of the Area of Potential Effect –
View is to the North**



Photograph 2

**Wetlands and Woodland Bordering Outlet Stream – Southeastern Portion of the Area of
Potential Effect; View is to the North**



Photograph 3

Dirt Access Road Lake Through Woodland Bordering Sterling Forest Lake in Center of the Area of Potential Effect - View is to the Northeast



Photograph 4

Woodland in Northwestern Portion of the Area of Potential Effect – View is to the South



Photograph 5

Outlet Stream in Northeastern Portion of the Area of Potential Effect – View is to the North



Photograph 6

Existing Earthen Berm for Sterling Forest Lake within the Area of Potential Effect – View is to the North



Photograph 7

Southwestern Portion of the Area of Potential Effect – View is to the Northeast



Photograph 8

**Relatively Level Ground in Southeastern Portion of the Area of Potential Effect – View is
to the Northeast**



Photograph 9

**Northern Portion of the Existing Site Facility (Former United Nickel Company Facility)
within the Area of Potential Effect – View is to the West**



Photograph 10

**Western Portion of the Existing Site Facility (Former United Nickel Company Facility)
within the Area of Potential Effect – View is to the East**



Photograph 11

Eastern Portion of Existing Site Facility (Former United Nickel Company) within the Area of Potential Effect – View is to the West



Photograph 12

**Western Portion of the Existing Access Road within the Area of Potential Effect –
View is to the Northeast**



Photograph 13

**Access Road Leading to Power Line Right-of-Way – Southern Portion of the Area of
Potential Effect; View is to the Southwest**

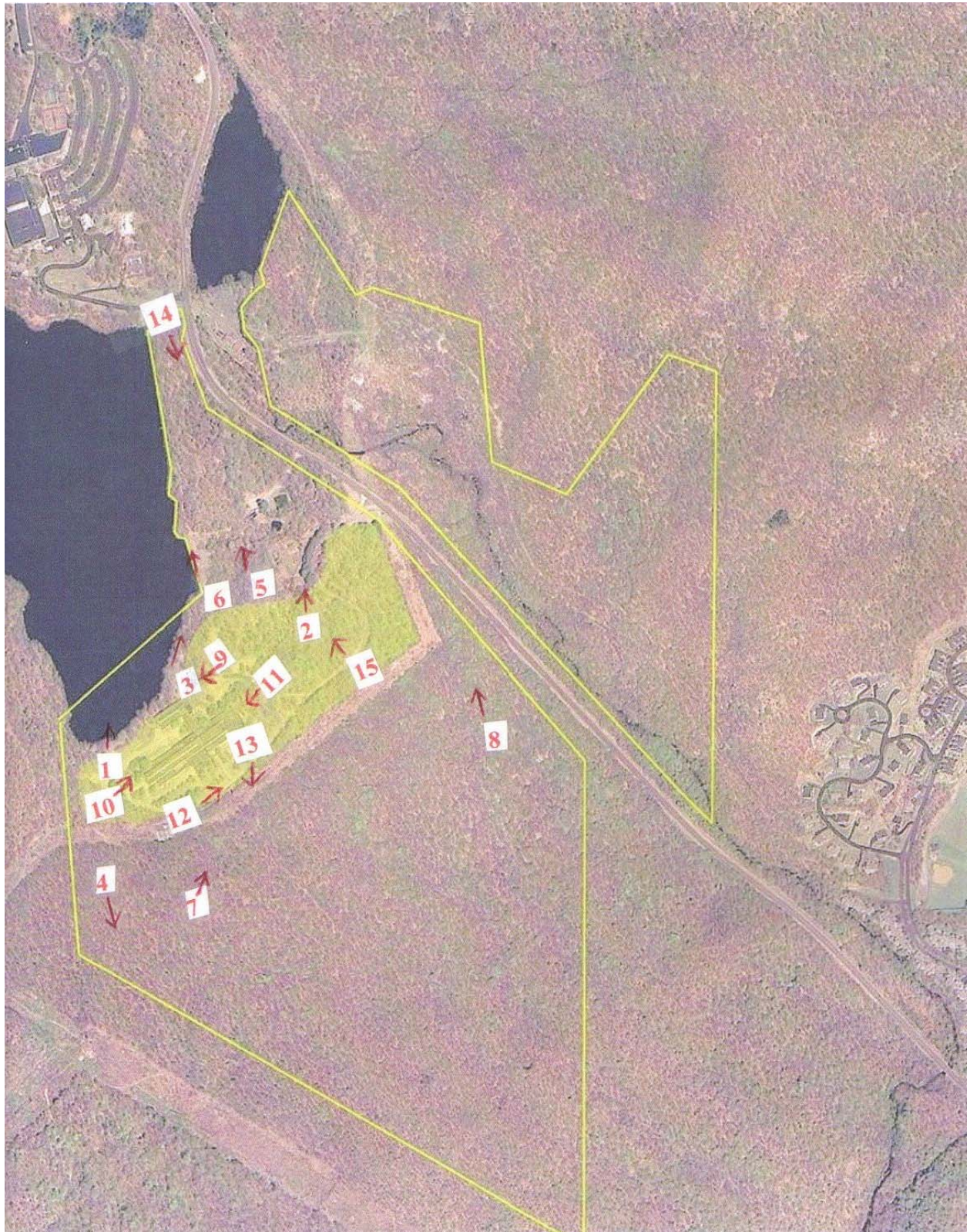


Photograph 14

**Northern Portion of the Area of Potential Effect in the Former Vicinity of Nineteenth
Century Structures – View is to the North**

APPENDIX A

LOCATIONS OF PHOTOGRAPHIC VIEWS INCLUDED IN THIS REPORT AS PHOTOGRAPHS 1-15



Appendix J-2



New York State Office of Parks, Recreation and Historic Preservation

The Governor Nelson A. Rockefeller Empire State Plaza
Agency Building 1, Albany, New York 12238

518-474-0456

February 9, 1988

Mr. Robert G. Torgersen
Landscape Architect
3 Main Drive
Nanuet, N.Y. 10954

Dear Mr. Torgersen:

Re: Information Request
Blue Lark
Warwick, Orange County

The Field Services Bureau of the New York State Office of Parks, Recreation and Historic Preservation/State Historic Preservation Officer has received your request for information on properties or sites which are included in or may be eligible for inclusion in the National and State Registers of Historic Places.

Based upon the information which you provided and a file search conducted by our staff, we have been able to determine that:

- ☒ The project area has been comprehensively surveyed by a qualified professional and reviewed by this office. To the best of our knowledge, the project area contains no buildings, objects, or districts which are eligible for or included in the National or State Registers of Historic Places.
- ☐ To our knowledge, the project area has not been professionally surveyed for historic resources. We recommend that any buildings or structures proximal to or within this area should be documented and evaluated for potential importance. Any information we do have on file from sources other than a comprehensive survey are noted on the following page.
- ☐ The project area has been comprehensively surveyed by a qualified professional and reviewed by this office. The results of this survey are described on the following page.
- ☐ No architectural information requested.

☐ The following resources have been reported to our office and are located in or in the vicinity of the project area which you identified:

☐ I. National/State Register of Historic Places listed or eligible properties:

☐ II. Properties included in Statewide Inventory:

☐ III. Archaeology

☐ With regard to archeology, it is the opinion of this office that your project lies in an area that is archaeologically sensitive. This determination is based upon our office's archaeological sensitivity model. Archaeologically sensitive areas are determined by proximity to known archaeological sites, as well as the area's likelihood of producing other archaeological materials. It is our opinion that unless substantial ground disturbance can be documented, an archaeological survey should be undertaken to determine the nature and extent of archaeological resources in your project area. If you wish to submit evidence regarding ground disturbance, it should include statements concerning the nature and date of the disturbances as well as a map indicating the locations and depths of such activities. Photographs of recent construction activities keyed to a map are very useful in this regard. Once we have had an opportunity to review the additional information provided as the evidence regarding prior disturbance or as a result of the archaeological survey, we will be able to complete our review of this project and issue our final comments.

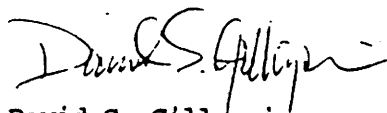
☒ At the present time, there are no previously reported archaeological resources in your project area or immediately adjacent to it. This finding is based upon our office's archaeological sensitivity model. Archaeologically sensitive areas are determined by proximity to known archaeological sites, as well as the area's likelihood of producing other archaeological materials.

☐ Regarding your request for site file information, the following archaeological resources are located within or proximal to the project area:

☐ Additional Comments:

Should you have any further questions, please contact our Project Review staff at (518) 474-3176.

Sincerely,



David S. Gillespie
Director
Field Services Bureau

DSG:VJD:sm
#2a (10/86)