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Phase IA Cultural Reconnaissance Survey of a Proposed Solar Center Along Jeremy Hill Road in Stonington, Connecticut

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ABSTRACT

This report presents the results of a Phase IA cultural resources assessment survey for the proposed Solar Facility in Stonington, Connecticut. The proposed solar facility encompasses approximately 20.31 acres of land within a larger approximately 63 acre parcel, including seven proposed storm basins, that will be accessed from the northeast off of Jeremy Hill Road. The current investigation consisted of: 1) preparation of an overview of the region's prehistory, history, and natural setting; 2) a literature search to identify and discuss previously recorded cultural resources in the region; 3) a review of readily available historical maps and aerial imagery depicting the project area to identify potential historical resources and/or areas of past disturbance; and 4) pedestrian survey and photo-documentation of the project area to determine their archaeological sensitivity. The pedestrian survey determined that a total of 31.06 acres consisting of the existing access road, areas in the western portion of the project parcel, and a small area in the northeastern portion of the area retained no/low archaeological sensitivity because they had been subjected to extensive disturbance in the past, contained steep slopes, or had soils that were wet in nature. No additional archaeological examination of these no/low sensitivity areas is recommended. The results of the Phase IA survey indicates that the remaining 32.12 acres of the project parcel are characterized by moderate/high archaeologically sensitive areas. It is recommended that any planned areas of construction within these 32.12 acres of land be subjected to a Phase IB cultural resources reconnaissance survey prior to construction.

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CHAPTER I
INTRODUCTION

This report presents the results of a Phase IA cultural resources assessment survey of the proposed Jeremy Hill Road Solar Project in Stonington, Connecticut (Figure 1). Vanasse Hangen Brustlin (VHB) requested that Heritage Consultants, LLC (Heritage) complete the assessment survey as part of the planning process for the proposed solar facility. The proposed solar facility encompasses approximately 20.31 acres of land within a larger approximately 63 acre parcel, including seven proposed storm basins. It will be accessed from Jeremy Hill Road in the northeastern portion of the project parcel. During the Phase IA survey, the entire 63 acre parcel was examined because project plans have not been finalized and the exact location of the array and associated infrastructure remains in flux. The project parcel is surrounded to the west by agricultural fields, and to the east by residential neighborhoods along Jeremy Hill Road. The North Stonington Bible Church and agricultural fields are situated to the north and Route 184 is located to the south of the project parcel. Heritage completed this investigation on behalf of VHB in March of 2021. All work associated with this project was performed in accordance with the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987) promulgated by the Connecticut State Historic Preservation Office (CT-SHPO).

Project Description and Methods Overview

The proposed solar project will be located to the west of Jeremy Hill Road and to the north of Route 184 in Stonington, Connecticut. The project parcel, which is located within a wooded area, is situated at elevations ranging from approximately 76 to 100 m (249 to 328 ft) NGVD. This Phase IA cultural resources assessment survey consisted of the completion of the following tasks: 1) a contextual overview of the region's prehistory, history, and natural setting (e.g., soils, ecology, hydrology, etc.); 2) a literature search to identify and discuss previously completed cultural resources surveys and previously recorded cultural resources in the region encompassing the project parcel; 3) a review of readily available historical maps and aerial imagery depicting the project parcel in order to identify potential historical resources and/or areas of past disturbance; and 4) pedestrian survey and photo-documentation of the project parcel in order to determine its archaeological sensitivity.

Project Results and Management Recommendations Overview

The review of historical maps and aerial images depicting the project parcel, files maintained by the CT-SHPO, as well as pedestrian survey of the development area, resulted in the identification of six previously recorded archaeological sites within 1.6 km (1 mi) mile of the project area. They are discussed in detail in Chapter V. No National/State Register of Historic Places properties were identified within 1.6 km (1 mi) mile of the project parcel. In addition to the cultural resources discussed above, Heritage combined data from the historical map and aerial image analysis, as well as pedestrian survey, to stratify the project parcel into zones of no/low and/or moderate/high archaeological sensitivity. The pedestrian survey determined that a total of 31.06 acres consisting of the existing access road, areas in the western portion of the project parcel, and a small area in the northeastern portion of the area retained no/low archaeological sensitivity because they had been subjected to extensive disturbance in the past, contained steep slopes, or had soils that were wet in nature. No additional archaeological examination of these no/low sensitivity areas is recommended. The remaining 32.12 acres of the project parcel are characterized by moderate/high archaeologically sensitive areas. It is recommended that any planned areas of construction within these 32.12 acres of land be subjected to a Phase IB cultural resources reconnaissance survey prior to construction.

Project Personnel

Key personnel for this project included Mr. David R. George, M.A., R.P.A, (Principal Investigator), Mr. Antonio Medina, B.A., (Field Operations Supervisor), Ms. Renée Petruzelli M.A., R.P.A., (Project Archaeologist), Mr. Cory Atkinson, M.A., (Field Supervisor), Ms. Christina Volpe (Historian), and Mr. Stephen Anderson, B.A., (GIS Specialist).

CHAPTER II
NATURAL SETTING

Introduction

This chapter provides a brief overview of the natural setting of the region containing the project parcel in Stonington, Connecticut. Previous archaeological research has documented that specific environmental factors can be associated with both prehistoric and historical period site selection. These include general ecological conditions, as well as types of fresh water sources present, degree of slopes, and soils situated within a given project area. The remainder of this chapter provides a brief overview of the ecology, hydrological resources, and soils present within the project area and the larger region in general.

Ecoregions of Connecticut

Throughout the Pleistocene and Holocene Periods, Connecticut has undergone numerous environmental changes. Variations in climate, geology, and physiography have led to the "regionalization" of Connecticut's modern environment. It is clear, for example, that the northwestern portion of the state has different natural characteristics than the coastline. Recognizing this fact, Dowhan and Craig (1976), as part of their study of the distribution of rare and endangered species in Connecticut, subdivided the state into various ecoregions. Dowhan and Craig (1976:27) defined an ecoregion as:

> "an area characterized by a distinctive pattern of landscapes and regional climate as expressed by the vegetation composition and pattern, and the presence or absence of certain indicator species and species groups. Each ecoregion has a similar interrelationship between landforms, local climate, soil profiles, and plant and animal communities. Furthermore, the pattern of development of plant communities (chronosequences and toposequences) and of soil profile is similar in similar physiographic sites. Ecoregions are thus natural divisions of land, climate, and biota."

Dowhan and Craig defined nine major ecoregions for the State of Connecticut. They are based on regional diversity in plant and animal indicator species (Dowhan and Craig 1976). Only one of the ecoregions is germane to the current investigation: Eastern Coastal ecoregion. A summary of this ecoregion is presented below. It is followed by a discussion of the hydrology and soils found in and adjacent to the project area.

<u>Eastern Coastal Ecoregion</u>

The Eastern Coastal ecoregion region is characterized by level to rolling topography that varies from sea level to 122 m (400 ft) above mean sea level; topographic relief reaches its maximum in this ecoregion where substantial rock outcrops occur (Dowhan and Craig 1976). The bedrock of the ecoregion is composed of metamorphic and igneous gneisses, schists, and granites dating from the Paleozoic Period (Bell 1985; Dowhan and Craig 1976:40). Soils in this ecoregion are developed on glacial till in the uplands, on local deposits of stratified sand, gravel, and silt in the valleys, and on coastal and tidal deposits on the shores and estuaries (Dowhan and Craig 1976).

Hydrology in the Vicinity of the Project area

The project parcel is situated within a region that contains several sources of freshwater, including Copps Brook, Assekonk Brook, Long Pond, Shunock River, Wheeler Brook, and Whitford Pond, as well as unnamed streams, ponds, and wetlands. These freshwater sources may have served as resource extraction areas for Native American and historical populations. Previously completed archaeological investigations in

Connecticut have demonstrated that streams, rivers, and wetlands were focal points for prehistoric occupations because they provided access to transportation routes, sources of freshwater, and abundant faunal and floral resources.

Soils Comprising the Project Parcel

Soil formation is the direct result of the interaction of many variables, including climate, vegetation, parent material, time, and organisms present (Gerrard 1981). Once archaeological deposits are buried within the soil, they are subject to various diagenic and taphonomic processes. Different classes of artifacts may be preferentially protected, or unaffected by these processes, whereas others may deteriorate rapidly. Cyclical wetting and drying, freezing, and thawing, and compression can accelerate chemically and mechanically the decay processes for animal bones, shells, lithics, ceramics, and plant remains. Lithic and ceramic artifacts are largely unaffected by soil pH, whereas animal bones and shells decay more quickly in acidic soils. In contrast, acidic soils enhance the preservation of charred plant remains.

A review of the soils within the project area is presented below. The study area is characterized by the presence of four major soil types: the Ridgebury, Leicester and Whitman series; Woodbridge; Sutton; and Paxton and Montauk series (Figure 2). A review of the Woodbridge, Sutton, and Paxton and Montauk soils show that they are deep to very deep well drained sandy loams and are the types of soils that are typically correlated with prehistoric and historical use and occupation. A small area in the eastern portion of the study area is characterized by Ridgebury, Leicester and Whitman soils which are very deep and moderately to poorly drained sandy loams. Descriptive profiles for each soil type are presented below; they were gathered from the National Resources Conservation Service.

<u>Woodbridge Series:</u>

The Woodbridge series consists of moderately well drained loamy soils formed in lodgment till. They are very deep to bedrock and moderately deep to a densic contact. They are nearly level to moderately steep soils on hills, drumlins, till plains, and ground moraines. Slope ranges from 0 to 25 percent. A typical profile associated with Woodbridge soils is as follows: **Ap**--0 to 18 cm; very dark grayish brown (10YR 3/2) fine sandy loam, light brownish gray (10YR 6/2) dry; moderate medium granular structure; friable; many fine and medium roots; few very dark brown (10YR 2/2) earthworm casts; 5 percent gravel; moderately acid; abrupt wavy boundary; **Bw1**--18 to 46 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; few very dark brown (10YR 2/2) earthworm casts; 10 percent gravel; moderately acid; gradual wavy boundary; **Bw2**--46 to 66 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; few very dark brown (10YR 2/2) earthworm casts; 10 percent gravel; few medium prominent strong brown (7.5YR 5/6) masses of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; gradual wavy boundary; **Bw3**--66 to 76 cm; light olive brown (2.5Y 5/4) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; 10 percent gravel; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; clear wavy boundary; **Cd1**--76 to 109 cm; light olive brown (2.5Y 5/4) gravelly fine sandy loam; weak thick plates of geogenic origin; very firm, brittle; 20 percent gravel; many medium prominent strong brown (7.5YR 5/8) masses of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; gradual wavy boundary; and **Cd2**--109 to 165 cm; light olive brown (2.5Y 5/4) gravelly fine sandy loam; weak thick plates of geogenic origin; very firm, brittle; few fine prominent very dark brown (10YR 2/2) coatings on plates; 25 percent gravel; fine prominent strong brown (7.5YR 5/8) masses of iron accumulation; moderately acid. https://soilseries.sc.egov.usda.gov/OSD_Docs/W/WOODBRIDGE.html

Sutton Series:

The Sutton series consists of very deep, moderately well drained loamy soils formed in melt-out till. They are nearly level to strongly sloping soils on hills, low ridges, and ground moraines, typically on footslopes, lower backslopes and in slight depressions. Slope ranges from 0 to 15 percent. A typical profile associated with Sutton soils is as follows: **Oe**--0 to 2 cm; black (10YR 2/1) moderately decomposed forest plant material; **A**--2 to 15 cm; very dark brown (10YR 2/2) fine sandy loam; weak medium granular structure; very friable; common fine and medium roots; 5 percent gravel; strongly acid; clear wavy boundary; **Bw1**--15 to 30 cm; brown (7.5YR 4/4) fine sandy loam; weak fine and medium subangular blocky structure; friable; common fine and medium roots; 10 percent gravel and cobbles; moderately acid; gradual wavy boundary; **Bw2**--30 to 61 cm; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; friable; few medium roots; 10 percent gravel and cobbles; common fine and medium prominent light brownish gray (2.5Y 6/2) iron depletions and yellowish red (5YR 5/6) masses of iron accumulation; moderately acid; gradual wavy boundary; **Bw3**--61 to 71 cm; yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; friable; 10 percent gravel and cobbles; common medium prominent light brownish gray (2.5Y 6/2) iron depletions and reddish brown (5YR 4/4) and strong brown (7.5YR 5/6) masses of iron accumulation; moderately acid; gradual wavy boundary; **C1**--71 to 91 cm; brown (10YR 5/3) gravelly fine sandy loam; weak thick platy structure; firm; 15 percent gravel and cobbles; common medium distinct light brownish gray (2.5Y 6/2) iron depletions and common medium prominent strong brown (7.5YR 5/6) masses of iron concentrations; moderately acid; gradual wavy boundary; and **C2**--91 to 165 cm; light olive brown (2.5Y 5/4) gravelly sandy loam; massive; friable; 25 percent gravel and cobbles; moderately acid. https://soilseries.sc.egov.usda.gov/OSD_Docs/S/SUTTON.html

Paxton and Montauk Series:

The Paxton series consists of well drained loamy soils formed in lodgment till. The soils are very deep to bedrock and moderately deep to a densic contact. They are nearly level to steep soils on hills, drumlins, till plains, and ground moraines. Slope ranges from 0 to 45 percent. A typical profile associated with Paxton soils is as follows: **Ap** -- 0 to 20 cm; dark brown (10YR 3/3) fine sandy loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; many fine roots; 5 percent gravel; strongly acid; abrupt smooth boundary; **Bw1** -- 20 to 38 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; 5 percent gravel; few earthworm casts; strongly acid; gradual wavy boundary; **Bw2** -- 38 to 66 cm; olive brown (2.5Y 4/4) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; 10 percent gravel; strongly acid; clear wavy boundary; and **Cd** -- 66 to 165 cm; olive (5Y 5/3) gravelly fine sandy loam; medium plate-like divisions; massive; very firm, brittle; 25 percent gravel; many dark coatings on plates; strongly acid.

The Montauk series consists of well drained soils formed in lodgment or flow till derived primarily from granitic materials with lesser amounts of gneiss and schist. The soils are very deep to bedrock and moderately deep to a densic contact. These soils are on upland hills and moraines. Slope ranges from 0 to 35 percent. A typical profile associated with Montauk soils is as follows: **Ap**-- 0 to 10 cm; very dark gray (10YR 3/1) loam; moderate fine granular structure; very friable; many very fine, fine, medium, and coarse roots; 2 percent gravel, 1 percent cobbles, and 1 percent stones; extremely acid (pH 4.1); clear smooth boundary; **BA**-- 10 to 34 cm; brown (10YR 4/3) loam; moderate medium and coarse subangular blocky structure; friable; many fine, medium, and coarse roots; many fine and medium pores; 4 percent gravel, 1 percent cobbles, and 1 percent stones; extremely acid (pH 4.3); clear wavy boundary; **Bw1**-- 34 to 65 cm; dark yellowish brown (10YR 4/6) loam; moderate coarse subangular blocky structure; friable; many fine, medium, and coarse roots; many fine and medium pores; 6 percent gravel, 1 percent cobbles, and 1 percent stones; extremely acid (pH 4.3); clear wavy boundary; **Bw2**-- 65 to 87 cm;

yellowish brown (10YR 5/6) sandy loam; moderate medium and coarse subangular blocky structure; friable; many very fine, fine, and coarse roots; many fine and medium pores; 5 percent gravel and 1 percent cobbles; extremely acid (pH 4.3); clear smooth boundary; **2Cd1**-- 87 to 101 cm; strong brown (7.5YR 5/6) gravelly loamy sand; moderate medium plates; firm; few fine roots; many fine pores; 10 percent gravel, 5 percent cobbles, and 1 percent stones; very strongly acid (pH 4.7); clear wavy boundary; and **2Cd2**-- 101 to 184 cm; dark yellowish brown (10YR 4/6) gravelly loamy sand; moderate medium plates; firm; many fine pores; 10 percent gravel, 5 percent cobbles, and 1 percent stones; strongly acid (pH 5.1). https://soilseries.sc.egov.usda.gov/OSD_Docs/M/MONTAUK.html

Ridgebury, Leicester and Whitman Series:

The Ridgebury series consists of very deep, somewhat poorly and poorly drained soils formed in lodgment till derived mainly from granite, gneiss and/or schist. They are commonly shallow to a densic contact. They are nearly level to gently sloping soils in depressions in uplands. They also occur in drainageways in uplands, in toeslope positions of hills, drumlins, and ground moraines, and in till plains. Slope ranges from 0 to 15 percent. A typical profile associated with Ridgebury soils is as follows: **A**--0 to 13 cm; black (N 2/0) fine sandy loam; weak medium and coarse granular structure; friable; many very fine, fine and medium tree roots; 5 percent gravel and 5 percent cobbles; very strongly acid; abrupt smooth boundary.; **Bw**--13 to 23 cm; brown (10YR 4/3) sandy loam; weak medium subangular blocky structure; friable; few fine tree roots; 5 percent gravel and 5 percent cobbles; very strongly acid; abrupt wavy boundary; **Bg**--23 to 46 cm; dark gray (10YR 4/1) gravelly sandy loam; massive; friable; 10 percent gravel and 5 percent cobbles; common fine prominent yellowish brown (10YR 5/6) and common medium distinct reddish brown (5YR 4/4) masses of iron accumulation; very strongly acid; gradual wavy boundary; and **Cd**--46 to 165 cm; gray (5Y 5/1) gravelly sandy loam; massive; firm; 10 percent gravel and 5 percent cobbles; common fine prominent reddish yellow (7.5YR 6/8) masses of iron accumulation; very strongly acid. https://soilseries.sc.egov.usda.gov/OSD_Docs/R/RIDGEBURY.html

The Leicester series consists of very deep, poorly drained soils formed in coarse-loamy till. They are nearly level or gently sloping soils in drainageways and low-lying positions on hills. Slope ranges from 0 to 8 percent. A typical profile associated with Leicester soils is as follows: **Oe**--0 to 3 cm; black (10YR 2/1) moderately decomposed plant material; **A**--3 to 18 cm; black (10YR 2/1) fine sandy loam; moderate medium granular structure; friable; common fine and medium roots; 10 percent gravel and cobbles; strongly acid; clear wavy boundary; **Bg1**--18 to 25 cm; grayish brown (2.5Y 5/2) fine sandy loam; weak medium subangular blocky structure; friable; common fine and medium roots; 10 percent gravel and cobbles; common medium prominent yellowish red (5YR 5/6) masses of iron accumulation; strongly acid; gradual wavy boundary; **Bg2**--25 to 46 cm; light brownish gray (2.5Y 6/2) fine sandy loam; weak medium subangular blocky structure; friable; few fine and medium roots; 10 percent gravel and cobbles; common fine prominent yellowish brown (10YR 5/6) masses of iron accumulation; strongly acid; gradual wavy boundary; **BC**--46 to 61 cm; pale brown (10YR 6/3) fine sandy loam; massive; friable; few fine roots; 10 percent gravel and cobbles; many medium distinct yellowish brown (10YR 5/6) and yellowish red (5YR 4/6) masses of iron accumulation; strongly acid; clear wavy boundary; **C1**--61 to 84 cm; dark yellowish brown (10YR 4/4) gravelly fine sandy loam; massive; friable; 15 percent gravel and cobbles; many medium distinct yellowish brown (10YR 5/6) masses of iron accumulation and prominent pinkish gray (7.5YR 6/2) iron depletions; strongly acid; gradual wavy boundary; and **C2**--84 to 155 cm; dark yellowish brown (10YR 4/4) gravelly fine sandy loam; massive; friable; 15 percent gravel and cobbles; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; strongly acid. https://soilseries.sc.egov.usda.gov/OSD_Docs/L/LEICESTER.html

The Whitman series consists of very deep, very poorly drained soils formed in lodgment till derived mainly from granite, gneiss, and schist. They are shallow to a densic contact. These soils are nearly level or gently sloping soils in depressions and drainageways on uplands. A typical profile associated with Whitman soils is as follows: **Ap** -- 0 to 25 cm; black (10YR 2/1) loam, dark gray (10YR 4/1) dry; weak medium granular structure; friable; 10 percent rock fragments; common medium distinct red (2.5YR 4/8) masses of iron accumulation lining pores; moderately acid; abrupt wavy boundary; **Bg** -- 25 to 46 cm; gray (5Y 5/1) fine sandy loam; massive; friable; 10 percent rock fragments, few medium distinct pale olive (5Y 6/4) and light olive brown (2.5Y 5/4) masses of iron accumulation; strongly acid; abrupt wavy boundary; **Cdg** -- 46 to 79 cm; gray (5Y 6/1) fine sandy loam; moderate medium plates; firm; 10 percent rock fragments; many medium distinct light olive brown (2.5Y 5/4) masses of iron accumulation; moderately acid; clear wavy boundary; **Cd1** -- 79 to 122 cm; olive (5Y 4/3) fine sandy loam; massive; firm; 10 percent rock fragments; few medium prominent dark reddish brown (2.5YR 3/4) masses of iron accumulation; moderately acid; gradual wavy boundary; and **Cd2** -- 122 to 165 cm; olive (5Y 5/3) fine sandy loam; massive; firm; 10 percent rock fragments; moderately acid. https://soilseries.sc.egov.usda.gov/OSD_Docs/W/WHITMAN.html

Summary

The natural setting of the area containing the project parcel is common throughout the Eastern Coastal ecoregion. The major rivers within this ecoregion are the Connecticut River, the Niantic River, and the Thames River, with numerous smaller ones. Low slopes dominate the region, and the soils range from very poorly drained to well drained sandy loams. In general however, the project region was well suited to Native American occupation throughout the prehistoric era. This portion of Stonington was also used throughout the historical era, as evidenced by the presence of numerous historical residences and agricultural fields throughout the region; thus, archaeological deposits dating from the prehistoric and historical era may be expected near or within the proposed project parcel.

CHAPTER III
PREHISTORIC SETTING

Introduction

Prior to the late 1970s and early 1980s, very few systematic archaeological surveys of large portions of the state of Connecticut had been undertaken. Rather, the prehistory of the region was studied at the site level. Sites chosen for excavation were highly visible and they were in such areas as the coastal zone, e.g., shell middens, and Connecticut River Valley. As a result, a skewed interpretation of the prehistory of Connecticut was developed. It was suggested that the upland portions of the state, i.e., the northeastern and northwestern hills ecoregions, were little used and rarely occupied by prehistoric Native Americans, while the coastal zone, i.e., the eastern and western coastal and the southeastern and southwestern hills ecoregions, were the focus of settlements and exploitation in the prehistoric era. This interpretation remained unchallenged until the 1970s and 1980s when several town-wide and regional archaeological studies were completed. These investigations led to the creation of several archaeological phases that subsequently were applied to understand the prehistory of Connecticut. The remainder of this chapter provides an overview of the prehistoric setting of the region encompassing the project area.

Paleo-Indian Period (12,000 to 10,000 Before Present [B.P.])

The earliest inhabitants of the area encompassing the State of Connecticut, who have been referred to as Paleo-Indians, arrived in the area by ca., 12,000 B.P. (Gramly and Funk 1990; Snow 1980). Due to the presence of large Pleistocene mammals at that time and the ubiquity of large fluted projectile points in archaeological deposits of this age, Paleo-Indians often have been described as big-game hunters (Ritchie and Funk 1973; Snow 1980); however, as discussed below, it is more likely that they hunted a broad spectrum of animals.

While there have been numerous surface finds of Paleo-Indian projectile points throughout the State of Connecticut, only two sites, the Templeton Site (6-LF-21) in Washington, Connecticut, and the Hidden Creek Site (72-163) in Ledyard, Connecticut, have been studied in detail and dated using the radiocarbon method (Jones 1997; Moeller 1980). The Templeton Site (6-LF-21) is in Washington, Connecticut and was occupied between 10,490 and 9,890 years ago (Moeller 1980). In addition to a single large and two small fluted points, the Templeton Site produced a stone tool assemblage consisting of gravers, drills, core fragments, scrapers, and channel flakes, which indicates that the full range of stone tool production and maintenance took place at the site (Moeller 1980). Moreover, the use of both local and non-local raw materials was documented in the recovered tool assemblage, suggesting that not only did the site's occupants spend some time in the area, but they also had access to distant stone sources, the use of which likely occurred during movement from region to region.

The only other Paleo-Indian site studied in detail in Connecticut is the Hidden Creek Site (72-163) (Jones 1997). The Hidden Creek Site is situated on the southeastern margin of the Great Cedar Swamp on the Mashantucket Pequot Reservation in Ledyard, Connecticut. While excavation of the Hidden Creek Site produced evidence of Terminal Archaic and Woodland Period components (see below) in the upper soil horizons, the lower levels of the site yielded artifacts dating from the Paleo-Indian era. Recovered Paleo-Indian artifacts included broken bifaces, side-scrapers, a fluted preform, gravers, and end-scrapers. Based on the types and number of tools present, Jones (1997:77) has hypothesized that the Hidden Creek Site represented a short-term occupation, and that separate stone tool reduction and

rejuvenation areas were present.

While archaeological evidence for Paleo-Indian occupation is scarce in Connecticut, it, combined with data from the West Athens Road and King's Road Site in the Hudson drainage and the Davis and Potts Sites in northern New York, supports the hypothesis that there was human occupation of the area not long after ca. 12,000 B.P. (Snow 1980). Further, site types currently known suggest that the Paleo-Indian settlement pattern was characterized by a high degree of mobility, with groups moving from region to region in search of seasonally abundant food resources, as well as for the procurement of high-quality raw materials from which to fashion stone tools.

Archaic Period (10,000 to 2,700 B.P.)

The Archaic Period, which succeeded the Paleo-Indian Period, began by ca., 10,000 B.P. (Ritchie and Funk 1973; Snow 1980), and it has been divided into three subperiods: Early Archaic (10,000 to 8,000 B.P.), Middle Archaic (8,000 to 6,000 B.P.), and Late Archaic (6,000 to 3,400 B.P.). These periods were devised to describe all non-farming, non-ceramic producing populations in the area. Regional archeologists recently have recognized a final "transitional" Archaic Period, the Terminal Archaic Period (3,400-2,700 B.P.), which was meant to describe those groups that existed just prior to the onset of the Woodland Period and the widespread adoption of ceramics into the toolkit (Snow 1980; McBride 1984; Pfeiffer 1984, 1990; Witthoft 1949, 1953).

Early Archaic Period (10,000 to 8,000 B.P.)

To date, very few Early Archaic sites have been identified in southern New England. As a result, researchers such as Fitting (1968) and Ritchie (1969), have suggested a lack of these sites likely is tied to cultural discontinuity between the Early Archaic and preceding Paleo-Indian Period, as well as a population decrease from earlier times. However, with continued identification of Early Archaic sites in the region, and the recognition of the problems of preservation, it is difficult to maintain the discontinuity hypothesis (Curran and Dincauze 1977; Snow 1980).

Like their Paleo-Indian predecessors, Early Archaic sites tend to be very small and produce few artifacts, most of which are not temporally diagnostic. While Early Archaic sites in other portions of the United States are represented by projectile points of the Kirk series (Ritchie and Funk 1973) and by Kanawha types (Coe 1964), sites of this age in southern New England are identified on the basis of a series of ill-defined bifurcate-based projectile points. These projectile points are identified by the presence of their characteristic bifurcated base, and they generally are made from high quality raw materials. Moreover, finds of these projectile points have rarely been in stratified contexts. Rather, they occur commonly either as surface expressions or intermixed with artifacts representative of later periods. Early Archaic occupations, such as the Dill Farm Site and Sites 6LF64 and 6LF70 in Litchfield County, are represented by camps that were relocated periodically to take advantage of seasonally available resources (McBride 1984; Pfeiffer 1986). In this sense, a foraging type of settlement pattern was employed during the Early Archaic Period.

Middle Archaic Period (8,000 to 6,000 B.P.)

By the onset of the Middle Archaic Period, essentially modern deciduous forests had developed in the region (Davis 1969). It is at this time that increased numbers and types of sites are noted in Connecticut (McBride 1984). The most well-known Middle Archaic site in New England is the Neville Site, which is in Manchester, New Hampshire and studied by Dincauze (1976). Careful analysis of the Neville Site indicated that the Middle Archaic occupation dated from between ca., 7,700 and 6,000 years ago. In fact, Dincauze (1976) obtained several radiocarbon dates from the Middle Archaic component of the

Neville Site. The dates, associated with the then-newly named Neville type projectile point, ranged from 7,740±280 and 7,015±160 B.P. (Dincauze 1976).

In addition to Neville points, Dincauze (1976) described two other projectile points styles that are attributed to the Middle Archaic Period: Stark and Merrimac projectile points. While no absolute dates were recovered from deposits that yielded Stark points, the Merrimac type dated from 5,910±180 B.P. Dincauze argued that both the Neville and later Merrimac and Stark occupations were established to take advantage of the excellent fishing that the falls situated adjacent to the site area would have afforded Native American groups. Thus, based on the available archaeological evidence, the Middle Archaic Period is characterized by continued increases in diversification of tool types and resources exploited, as well as by sophisticated changes in the settlement pattern to include different site types, including both base camps and task-specific sites (McBride 1984:96)

Late Archaic Period (6,000 to 3,700 B.P.)

The Late Archaic Period in southern New England is divided into two major cultural traditions that appear to have coexisted. They include the Laurentian and Narrow-Stemmed Traditions (Funk 1976; McBride 1984; Ritchie 1969a and b). Artifacts assigned to the Laurentian Tradition include ground stone axes, adzes, gouges, ulus (semi-lunar knives), pestles, atlatl weights, and scrapers. The diagnostic projectile point forms of this time period in southern New England include the Brewerton Eared-Notched, Brewerton Eared and Brewerton Side-Notched varieties (McBride 1984; Ritchie 1969a; Thompson 1969). In general, the stone tool assemblage of the Laurentian Tradition is characterized by flint, felsite, rhyolite, and quartzite, while quartz was largely avoided for stone tool production.

In terms of settlement and subsistence patterns, archaeological evidence in southern New England suggests that Laurentian Tradition populations consisted of groups of mobile hunter-gatherers. While a few large Laurentian Tradition occupations have been studied, sites of this age generally encompass less than 500 m^2 (5,383 ft^2). These base camps reflect frequent movements by small groups of people in search of seasonally abundant resources. The overall settlement pattern of the Laurentian Tradition was dispersed in nature, with base camps located in a wide range of microenvironments, including riverine as well as upland zones (McBride 1978, 1984:252). Finally, subsistence strategies of Laurentian Tradition focused on hunting and gathering of wild plants and animals from multiple ecozones.

The second Late Archaic tradition, known as the Narrow-Stemmed Tradition, is unlike the Laurentian Tradition, and it likely represents a different cultural adaptation. The Narrow-Stemmed tradition is recognized by the presence of quartz and quartzite narrow stemmed projectile points, triangular quartz Squibnocket projectile points, and a bipolar lithic reduction strategy (McBride 1984). Other tools found in Narrow-Stemmed Tradition artifact assemblages include choppers, adzes, pestles, antler and bone projectile points, harpoons, awls, and notched atlatl weights. Many of these tools, notably the projectile points and pestles, indicate a subsistence pattern dominated by hunting and fishing, as well the collection of a wide range of plant foods (McBride 1984; Snow 1980:228).

The Terminal Archaic Period (3,700 to 2,700 B.P.)

The Terminal Archaic Period, which lasted from ca., 3,700 to 2,700 BP, is perhaps the most interesting, yet confusing of the Archaic Periods in southern New England prehistory. Originally termed the "Transitional Archaic" by Witthoft (1953) and recognized by the introduction of technological innovations, e.g., broadspear projectile points and soapstone bowls, the Terminal Archaic has long posed problems for regional archeologists. While the Narrow-Stemmed Tradition persisted through the Terminal Archaic and into the Early Woodland Period, the Terminal Archaic is coeval with what appears

to be a different technological adaptation, the Susquehanna Tradition (McBride 1984; Ritchie 1969b). The Susquehanna Tradition is recognized in southern New England by the presence of a new stone tool industry that was based on the use of high-quality raw materials for stone tool production and a settlement pattern different from the "coeval" Narrow-Stemmed Tradition.

The Susquehanna Tradition is based on the classification of several Broadspear projectile point types and associated artifacts. There are several local sequences within the tradition, and they are based on projectile point type chronology. Temporally diagnostic projectile points of these sequences include the Snook Kill, Susquehanna Broadspear, Mansion Inn, and Orient Fishtail types (Lavin 1984; McBride 1984; Pfeiffer 1984). The initial portion of the Terminal Archaic Period (ca., 3,700-3,200 BP) is characterized by the presence of Snook Kill and Susquehanna Broadspear projectile points, while the latter Terminal Archaic (3,200-2,700 BP) is distinguished by the use of Orient Fishtail projectile points (McBride 1984:119; Ritchie 1971).

In addition, it was during the late Terminal Archaic Period that interior cord marked, grit tempered, thick walled ceramics with conoidal (pointed) bases made their initial appearance in the Native American toolkit. These are the first ceramics in the region, and they are named Vinette I (Ritchie 1969a; Snow 1980:242); this type of ceramic vessel appears with much more frequency during the ensuing Early Woodland Period. In addition, the adoption and widespread use of soapstone bowls, as well as the implementation of subterranean storage, suggests that Terminal Archaic groups were characterized by reduced mobility and longer-term use of established occupation sites (Snow 1980:250).

Finally, while settlement patterns appeared to have changed, Terminal Archaic subsistence patterns were analogous to earlier patterns. The subsistence pattern still was diffuse in nature, and it was scheduled carefully. Typical food remains recovered from sites of this period consist of fragments of white-tailed deer, beaver, turtle, fish, and various small mammals. Botanical remains recovered from the site area consisted of *Chenopodium* sp., hickory, butternut, and walnut (Pagoulatos 1988:81). Such diversity in food remains suggests at least minimal use of a wide range of microenvironments for subsistence purposes.

Woodland Period (2,700 to 350 B.P.)

Traditionally, the advent of the Woodland Period in southern New England has been associated with the introduction of pottery; however, as mentioned above, early dates associated with pottery now suggest the presence of Vinette I ceramics appeared toward the end of the preceding Terminal Archaic Period (Ritchie 1969a; McBride 1984). Like the Archaic Period, the Woodland Period has been divided into three subperiods: Early, Middle, and Late Woodland. The various subperiods are discussed below.

<u>Early Woodland Period (ca., 2,700 to 2,000 B.P.)</u>

The Early Woodland Period of the northeastern United States dates from ca., 2,700 to 2,000 B.P., and it has been thought to have been characterized by the advent of farming, the initial use of ceramic vessels, and increasingly complex burial ceremonialism (Griffin 1967; Ritchie 1969a and 1969b; Snow 1980). In the Northeast, the earliest ceramics of the Early Woodland Period are thick walled, cord marked on both the interior and exterior, and possess grit temper.

Careful archaeological investigations of Early Woodland sites in southern New England have resulted in the recovery of narrow stemmed projectile points in association with ceramic sherds and subsistence remains, including specimens of white-tailed deer, soft and hard-shell clams, and oyster shells (Lavin and Salwen: 1983; McBride 1984:296-297; Pope 1952). McBride (1984) has argued that the combination of

the subsistence remains and the recognition of multiple superimposed cultural features at various sites indicates that Early Woodland Period settlement patterns were characterized by multiple re-use of the same sites on a seasonal basis by small co-residential groups.

Middle Woodland Period (2,000 to 1,200 B.P.)

The Middle Woodland Period is marked by an increase in the number of ceramic types and forms utilized (Lizee 1994a), as well as an increase in the amount of exotic lithic raw material used in stone tool manufacture (McBride 1984). The latter suggests that regional exchange networks were established, and that they were used to supply local populations with necessary raw materials (McBride 1984; Snow 1980). The Middle Woodland Period is represented archaeologically by narrow stemmed and Jack's Reef projectile points; increased amounts of exotic raw materials in recovered lithic assemblages, including chert, argillite, jasper, and hornfels; and conoidal ceramic vessels decorated with dentate stamping. Ceramic types, indicative of the Middle Woodland Period, include Linear Dentate, Rocker Dentate, Windsor Cord Marked, Windsor Brushed, Windsor Plain, and Hollister Stamped (Lizee 1994a:200).

In terms of settlement patterns, the Middle Woodland Period is characterized by the occupation of village sites by large co-residential groups that utilized native plant and animal species for food and raw materials in tool making (George 1997). These sites were the principal place of occupation, and they were positioned close to major river valleys, tidal marshes, estuaries, and the coastline, all of which would have supplied an abundance of plant and animal resources (McBride 1984:309). In addition to villages, numerous temporary and task-specific sites were utilized in the surrounding upland areas, as well as in closer ecozones such as wetlands, estuaries, and floodplains. The use of temporary and task-specific sites to support large village populations indicates that the Middle Woodland Period was characterized by a resource acquisition strategy that can best be termed as logistical collection (McBride 1984:310).

Late Woodland Period (ca., 1,200 to 350 B.P.)

The Late Woodland Period in southern New England dates from ca., 1,200 to 350 B.P., and it is characterized by the earliest evidence for the use of corn in the lower Connecticut River Valley (Bendremer 1993; Bendremer and Dewar 1993; Bendremer et al. 1991; George 1997; McBride 1984); an increase in the frequency of exchange of non-local lithics (Feder 1984; George and Tryon 1996; McBride 1984; Lavin 1984); increased variability in ceramic form, function, surface treatment, and decoration (Lavin 1980, 1986, 1987; Lizee 1994a, 1994b); and a continuation of a trend towards larger, more permanent settlements in riverine, estuarine, and coastal ecozones (Dincauze 1974; McBride 1984; Snow 1980).

Stone tool assemblages associated with Late Woodland occupations, especially village-sized sites, are functionally variable and they reflect plant and animal resource processing and consumption on a large scale. Finished stone tools recovered from Late Woodland sites include Levanna and Madison projectile points; drills; side-, end-, and thumbnail scrapers; mortars and pestles; nutting stones; netsinkers; and celts, adzes, axes, and digging tools. These tools were used in activities ranging from hide preparation to plant processing to the manufacture of canoes, bowls, and utensils, as well as other settlement and subsistence-related items (McBride 1984; Snow 1980). Finally, ceramic assemblages recovered from Late Woodland sites are as variable as the lithic assemblages. Ceramic types identified include Windsor Fabric Impressed, Windsor Brushed, Windsor Cord Marked, Windsor Plain, Clearview Stamped, Sebonac Stamped, Selden Island, Hollister Plain, Hollister Stamped, and Shantok Cove Incised (Lavin 1980, 1988a, 1988b; Lizee 1994a; Pope 1953; Rouse 1947; Salwen and Ottesen 1972; Smith 1947). These types are

more diverse stylistically than their predecessors, with incision, shell stamping, punctation, single point, linear dentate, rocker dentate stamping, and stamp and drag impressions common (Lizee 1994a:216).

Summary of Connecticut Prehistory

In sum, the prehistory of Connecticut spans from ca., 12,000 to 350 B.P., and it is characterized by numerous changes in tool types, subsistence patterns, and land use strategies. For much of the prehistoric era, local Native American groups practiced a subsistence pattern based on a mixed economy of hunting and gathering wild plant and animal resources. It is not until the Late Woodland Period that incontrovertible evidence for the use of domesticated species is available. Further, settlement patterns throughout the prehistoric era shifted from seasonal occupations of small co-residential groups to large aggregations of people in riverine, estuarine, and coastal ecozones. In terms of the region containing the proposed project area, a variety of prehistoric site types may be expected. These range from seasonal camps utilized by Archaic populations to temporary and task-specific sites of the Woodland era.

CHAPTER IV
HISTORICAL OVERVIEW

Introduction

The proposed project parcel is located in the northeastern portion of the town of Stonington in New London County. Stonington's historical development was focused toward the coast, leaving the area containing the project parcel relatively undeveloped even to the present day. The remainder of this chapter presents an overview history of the town of Stonington augmented by details specific to the project parcel.

Contact Era and Native American History of the Town of Stonington

The town of Stonington lies within the region taken from the Pequot Tribe in 1636-1637, during a war waged against them by the alliance of the Massachusetts Bay Colony, Connecticut Colony, and the Mohegan Native Americans. At that time, the main settlements of the Pequots were located in the what is now the neighboring town of Groton. One of these settlements consisted of a fort situated on the heights "a little southeast of Fort [G]riswold," where the sachem named Sassacus resided. The other was located near the Mystic river, which is the locations at which the Pequots were attacked in an assault led by Captain John Mason in 1637 (Barber 1837:311). According to historical reports, Sassacus and his people destroyed their other fort before the alliance could attack them. They then fled the area; however, Sassacus was eventually captured and killed.

After the war, the surviving members of the Pequot tribe were divided among the victorious participants, including both the colonists and Mohegans. The colonists sold many of their prisoners into slavery in the Caribbean, while others were taken by Uncas and blended into the Mohegan Tribe. Although the colonists expected that the Pequot community would cease to exist, two groups of Pequots reconstituted themselves over time. They were granted reservation lands in what are now Ledyard and North Stonington. The Mashantucket Pequots settled on the reservation lands in Ledyard, while the Eastern Pequots occupied the North Stonington reservation. During the later twentieth century, the Mashantucket Pequot (Ledyard) group successfully took advantage of Federal laws regarding Native Americans to secure federally recognized status, which they have in turn used to establish a major casino and related commercial activity in Ledyard (Hauptman and Wherry 1990).

The Mohegan tribe of Native Americans was based in what is now the town of Montville and areas further to the north. After the war, their leader, Uncas, successfully used English ideas about monarchial sovereignty to claim much of northern New London County as his personal property. In 1659, he sold approximately nine square miles of land to English colonists, which became the town of Norwich (Crofut 1937; Guilette 1979). Over time, he and his heirs also sold or lost most of the remaining land, but the community managed to hold on to some of it. In the late twentieth century, like the Mashantucket Pequot Tribal Nation, the Mohegan community succeeded in gaining Federal recognition and also established a major casino and related commercial activity in Montville, where their reservation is also located.

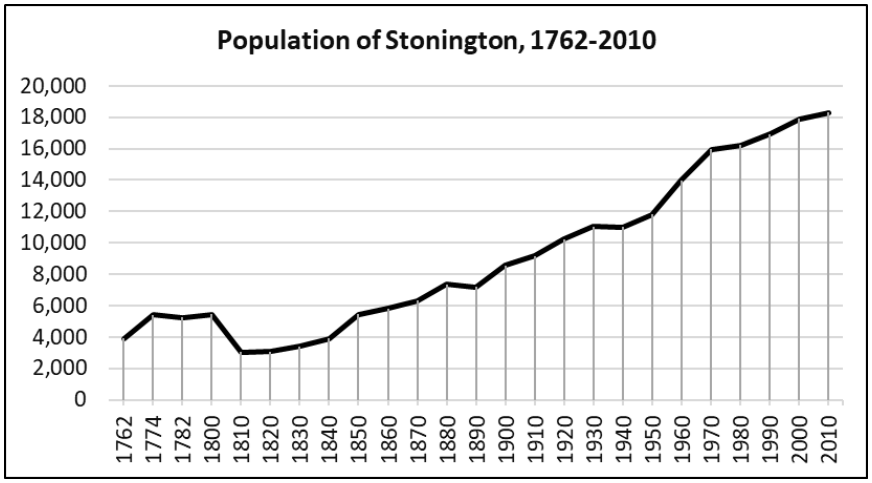
Colonial Period History of the Town of Stonington (to 1790)

As a result of the joint nature of the Pequot War, the question of which colony, Connecticut or Massachusetts, would have jurisdiction over the conquered area was a problem. This was resolved in 1658 when the coastal land was divided at the Mystic River, with Connecticut keeping the west side and

Massachusetts Bay receiving the east side. As a result, the Stonington area was part of the Massachusetts Bay Colony for several decades and known during that time as Southerton, and some of its earliest land records are recorded in the records of Suffolk County, Massachusetts. An additional complication was that in 1641, before the inter-colony agreement, Connecticut surveyed the conquered land and made several grants of land in it to individuals, including a man named William Chesebrough in 1652; that land is now the borough of Stonington (incorporated 1801). The royal Charter granted to the Connecticut Colony in 1662 extended the colony's boundary eastward to the Pawcatuck River, thus bringing the section east of the Mystic River back within Connecticut Colony's control. In 1665, the General Court of Connecticut changed the name of the colonial town to Mistick, then changed it again to Stonington in 1666 (Crofut 1937).

The historic village located at the head of Mystic began to form after 1660, and when the first Congregational meeting house was built there in 1673, it was arguably closer to the historic ferry than to any other point in the town. In 1674, a grist mill was built on the Mystic River above the falls. A fulling mill was built by James Dean Jr., in 1720 on what is now called Copps Brook, which in 1807 became the first modern textile mill in Stonington. By 1700, the "Head O' the River" hosted 12 families, three grist mills, a blacksmith shop, a sawmill, the church, three formally laid out roads, and the ferry. After 1700, numerous additional families and businesses appeared in Stonington, including grist mills on Mill Brook and Stony Brook and a short-lived turning mill (to make wooden items for the ship trade) on Red Brook.

The growing village included a school house in 1751, and in 1753, Benjamin Franklin laid out the Lower Post Road (later Route 1) through Old Mystic. The remainder of the eighteenth century witnessed the development of additional businesses: two or three tanneries, a tavern, a doctor's office, at least two hatter's shops, a store, two shipyards, and another grist mill. A 1762 census of the colony recorded 3,900 people in the town of Stonington, including 254 African Americans and 309 Native Americans; thus, the town was 85 percent of European descent in that year (Greenhalgh 1999). By 1782, Stonington was an even more substantial town, with a population of 5,245 residents that made it the sixth-largest in Connecticut (see the population chart below; Keegan 2012).



Early National and Industrializing Period History of the Town of Stonington (1790 to 1930)

As seen in the chart above, the population of Stonington in 1790 is not available, reflecting the fact that census records for this year were lost. In 1800, Stonington reported 5,437 residents; then, in the 1810 census, there were only 3,043 residents. This can be accounted for by the splitting of Stonington into

two separate towns in 1807, North Stonington and Stonington. It was at this time that the town's population dipped to a significant low point. Unlike in many other Connecticut towns, Stonington's population held steady through 1830 and then began a consistent growth trend to 5,431 residents in 1850, 8,540 residents in 1900, and 11,025 residents in 1930 (see the population chart above; Keegan 2012). This growth can best be attributed to the town's coastal location and transportation links.

In 1818, the Groton and Stonington Turnpike Company was chartered to build a turnpike along the Old Post Road between Groton Ferry and the Head of Mystic. This road became an important link in the stagecoach and mail route between New London, Providence, and Boston. It survived as an enterprise until the Shore Line Railroad opened in 1852; the turnpike company dissolved the next year. During the pre-railroad days, turnpikes were an important part of early United States efforts to promote road improvement for the benefit of travel and trade; by granting franchises to private companies, state governments did not have to spend any money, but users of the roads paid tolls to the companies (Wood 1919). Unlike the turnpike, which was further to the north, the railroads passed through lower Mystic along the shore line (Turner and Jacobus 1989). As a result, the economic benefits of rail access also shifted to the south, leaving Old Mystic to become a relatively less important part of the town's economic life.

As in other towns, many of Stonington's residents were engaged in agriculture at the beginning of the nineteenth century. According to an 1819 gazetteer of the state, the "leading agricultural interest" was dairy products; however grain crops were significant in this area (Pease and Niles 1891:165). Many other residents were engaged in fishing or in trade, with ships totaling 1,100 tons based in the town. Despite a relative lack of mill streams, the town also had three textile mills in operation as of 1819. Much of Stonington's prosperity derived from the presence of Stonington Borough, located on the coast in the southeastern corner of the town. The above-referenced gazetteer reported that Stonington had 120 "dwelling houses and stores," two churches, two elementary schools and an academy, two rope walks, and multiple wharves and warehouses. The fishing business in town included cod, mackerel, and also seals (Pease and Niles 1819:165).

By 1837, the coastal section of Stonington contained over 1,000 residents, as well as 150 houses and stores, a bank, two churches, and two academies for secondary education. Commerce in this part of town was centered around sealing and whaling (Barber 1837). The borough also benefited from the fact that the first section of railroad in Connecticut opened from Stonington to Providence in 1837, with steamboats initially providing the link from Stonington to New York City. The westward section was not built until the New Haven, New London & Stonington Railroad was created in 1856; the connection between Groton and Stonington opened in 1858, with a ferryboat crossing the Thames River between Groton and the New London end of the New Haven & New London Railroad (Turner and Jacobus 1989).

The other important settlement foci in Stonington were at Lower Mystic (located on Long Island Sound) and at "the head of Mystic," previously mentioned, where the Mystic River narrows (Barber 1837). Numerous, mostly short-lived manufacturing enterprises were developed in Stonington during the nineteenth century. These ranged from textiles to firearms to soap producers (Hurd 1882). In the 1850 Federal industrial census, the 92 firms listed in Stonington included several types of businesses that are usually found in urban areas, including tailors, milliners, bakers, coopers, and livery stables. Most of these, presumably, were in the Stonington borough area. The census marshal also included the whale fishery, which may have been an error in his part; however, that records indicates that there were 24 whaling vessels in Stonington as of 1850, as well as two vessels employed in the cod fishery. There were also four shipwrights, one boat builder, and two sailmakers listed. Beyond these, there were also

cabinet makers, lumber planing machines, a carriage maker, six textile mills, an iron foundry, and an ice-making firm, among others (United States Census 1850b).

The first ecclesiastical division in Stonington was between the south and the north societies of the Congregational Church. The latter formed the new town of North Stonington in 1807, the only change of its boundaries that Stonington has seen. In the southern part of the town, the churches were at first mainly at Long Point, now known as Stonington Borough; a Methodist Episcopal Church was organized in Old Mystic in 1824, and another in Mystic in 1835. The Old Mystic church received a minister in 1826 and finally built their own church building in 1849. Just two years later it burned down and was rebuilt, and as of 1900 was still being used after major renovations in preceding decades. In 1833, a separate Congregational church was established in the Stonington borough area, leaving the more northerly First Congregational Church to serve the villages of Mystic and Old Mystic (Wheeler 1900). The railroad had, by the time of the 1868 historical map had been extended westward to cross the whole town. The visible changes in the town are consistent with the increases in Stonington's population during the latter part of the nineteenth century, which were noted above.

Modern History of the Town of Stonington (1930 to Present)

During and after the Great Depression, Stonington's population growth stalled, but between 1950 and 1970 the town saw its period of most rapid growth, going from 11,801 residents to 15,940 residents in those two decades. Slower but steady growth continued after that, so that the town's population included 18,293 residents as of 2010 (see the population chart above; Keegan 2012). At the beginning of this period, in 1932, a state report indicate that Stonington's manufacturing operations included that of machinery, printing presses, and textiles. In addition, agriculture was still a going concern among some townspeople (Connecticut 1932).

Stonington changed a great deal during the twentieth century. One of the more important developments was the Connecticut Turnpike, which opened in 1958 after a planning process that had begun in 1944, and was later renamed Interstate 95 (Oglesby 2014). It seems very likely that the quick rise in Stonington's population between 1950 and 1970 is related to both the highway opening and the national trend toward suburban residence that had begun after World War II. As of 2005, agriculture employed only 1.8 percent of the town's workers and manufacturing employed 13.1 percent, while trade and services employed over 57 percent (CERC 2006). This is largely consistent with the economic development of Connecticut and the United States as a whole. As Stonington's population continues to grow, albeit slowly, additional residential and commercial development is possible in the vicinity of the project area.

Historical Overview of the Proposed Project Parcel

The proposed project parcel is depicted on an historical 1854 map as being in the northernmost area of Stonington, near North Stonington. The area appears to be remote with relatively few homesteads indicated on the map within the proximity to the project parcel (Figure 3:1854). The homestead depicted closest to the proposed project parcel was that of Latham Hull Jr., and according to the 1850 United States Federal Census, Mr. Hull was a 63-year-old farmer with a real estate value of $3,500. He lived on his homestead in 1850 with his wife Elizabeth P., then age 58 (Census 1850). According to one recollection, the land encompassing the project parcel and the North Stonington Bible Church to the north belonged to Latham Hull, who was known for being "a gentleman farmer and stock fancier" (Stone 1985:73). The 1868 historical map depicting the proposed project parcel indicates that a person named "W.B. Hull" occupied the property following the death of Latham Hull in 1857 (Figure 4:1868). According to the 1870 United States Federal Census, William B. Hull occupied the property nearest the project

parcel. He was a 54-year-old farmer with a real estate value of $10,000, a significant holding for the time period; he also had a personal estate valued at $7,000 (Census 1870). Living on the homestead with him was his wife Susan, age 41, and their children Theo, age 17, Anna, age 13, Lucy, age 9, and Latham ,age 4 (Census 1870).

According to the historical 1934 aerial photograph the project parcel was used for agriculture with several parcels outlined by stone walls (Figure 5:1934). The overall region appears to be used for agricultural production as was typical for this area of town. The historical 1951 aerial photograph depicts secondary reforestation throughout much of the periphery of the proposed project region. The project parcel appears on the 1951 historical aerial as still under agricultural use with a mowed path leading from the northern portion of the area to the southern portion of cleared land (Figure 6:1951). The 2019 aerial photograph indicates the proposed project area is no longer used for agricultural purposes, as the project parcel contains secondary reforestation (Figure 7:2019).

Conclusions

The documentary and historical record indicates that it is unlikely that the proposed project parcel will yield any significant historical resources such as foundations or historical period archaeological deposits. Analysis of the aerial photographs indicates that there may be the presence of stone walls, however.

CHAPTER V
PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous archaeological research completed within the vicinity of the project parcel in Stonington, Connecticut. This discussion provides the comparative data necessary for considering the results of the current Phase IA cultural resources assessment survey, and it ensures that the potential impacts to all previously recorded cultural resources located within and adjacent to the project parcel are taken into consideration. Specifically, this chapter reviews previously identified archaeological sites and National/State Register of Historic Places properties situated in the project region (Figures 8 and 9). The discussions presented below are based on information currently on file at the Connecticut State Historic Preservation Office (CT-SHPO) in Hartford, Connecticut. In addition, the electronic site files maintained by Heritage were examined during this investigation. Both the quantity and quality of the information contained in the original cultural resources survey reports and State of Connecticut archaeological site forms are reflected below.

Previously Recorded Archaeological Sites and National/State Register of Historic Places Properties/Districts in the Vicinity of the Project Parcel

A review of data currently on file at the CT-SHPO, as well as the electronic site files maintained by Heritage detected six previously identified archaeological sites situated within 1.6 km (1 mi) of the project parcel (Figures 8 and 9) and are discussed below. No National/State Register of Historic Places properties were identified within 1.6 km (1 mi) of the project area and is discussed below.

Site 102-110

Site 102-110, which is also known as the RS 1 Site, is a rockshelter located on private land to the west of Jeremy Hill Road in North Stonington in New London County, Connecticut. The site was recorded in May of 2005 by Mr. Nathan Morphew of Northeastern Archaeology Consultants (NAC) in Mansfield Center, Connecticut. The rockshelter was examined by Northeastern Archaeology Consultants in response to the Jeremy Hill Road Development Project in 2005. A total of nine fire-cracked rocks and a hearth feature with associated charcoal was recovered during the archaeological investigation. Site 102-110 could not be dated to a specific time period due to a lack of diagnostic artifacts and was not assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). The site is located approximately 914 meters (3,000 feet) to the northwest of the project parcel and will not be impacted by the proposed construction.

Site 102-111

Site 102-111, which is also known as the RS 3 Site, is a rockshelter located on private land to the west of Jeremy Hill Road in North Stonington in New London County, Connecticut. The site also was recorded in May of 2005 by Mr. Nathan Morphew of Northeastern Archaeology Consultants (NAC) in Mansfield Center, Connecticut. The rockshelter was archaeologically tested by Northeastern Archaeology Consultants in response to the Jeremy Hill Road Development Project in 2005. A total of 15 lithic flakes was recovered during the archaeological investigation. Site 102-111 could not be dated to a specific time period due to a lack of diagnostic artifacts and was not assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). The site is located approximately 914 meters (3,000 feet) to the northwest of the project parcel and will not be impacted by the proposed construction.

Site 102-112

Site 102-112, which is also known as the Stone Foundation Site, is a historical period stone foundation located on private land to the west of Jeremy Hill Road in North Stonington in New London County, Connecticut. The site was recorded in May of 2005 by Mr. Nathan Morphew of Northeastern Archaeology Consultants (NAC) in Mansfield Center, Connecticut. The site was identified by Northeastern Archaeology Consultants during survey of the Jeremy Hill Road Development Project in 2005. A single machine cut nail and 1 amber glass bottle threaded lip shard was recovered during the archaeological investigation. Site 102-112 could not be dated to a specific time period due to a lack of diagnostic artifacts. The Stone Foundation Site was not assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). The site is located approximately 500 meters (1,640 feet) to the northwest of the project parcel and will not be impacted by the proposed construction.

Site 102-18

Site 102-18, which is also known as the Brown Farm Site, is located on private land off of Route 201 in North Stonington, New London County, Connecticut. The site was recorded in October of 1991 by Kathy Hoy of the University of Connecticut. The submitted Historic Resources Inventory Form notes that the site was situated in a cornfield and had been surface collected by Mr. Louis Bayer in the 1940s. Kathy Hoy noted that "many various artifacts were found here but none which Mr. Bayer could remember specifically." Site 102-18 could not be dated to a specific time period due to a lack of diagnostic artifacts. The Brown Farm Site was not assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). The site is located approximately 700 meters (2,297 feet) to the northwest of the project parcel and will not be impacted by the proposed construction.

Site 102-36

Site 102-36, which is also known as the Rt. 184 Site, is located on private land owned by Assekonk State Management in Stonington, Connecticut. The site was recorded in July of 1991 by Kathy Hoy of the University of Connecticut. The submitted Historic Resources Inventory Form notes that the site was located on state property and had been surface collected by Mr. Louis Bayer, Mr. Fred Birbeck and others in the 1940s. K. Hoy noted that Mr. Bayer collected "quartz points" as well as a biface and a quartz scraper. In addition, Mr. Fred Birkbeck and others also found "numerous artifacts" at the site, but Mr. Bayer could not identify what artifacts were found by other people. Site 102-36 could not be dated to a specific time period due to a lack of diagnostic artifacts. The Re. 184 Site was not assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). The site is located approximately 1,000 meters (3,281 feet) to the east of the project parcel and will not be impacted by the proposed construction.

Site 137-27

Site 137-27, which is also known as the Ledges on Jeremy Hill Site, is located on private land on Jeremy Hill Road in Stonington, Connecticut. The submitted Historic Resources Inventory form does not note the person who reported the site or the date that it was officially recorded. The site form only notes that "Fred Birbeck found Indian artifacts here, however nothing is documented." No additional information as to the site type or time period is noted on the submitted site form. Site 137-27 was not assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). The Ledges on Jeremy Hill Site is located within the southern portion of the study area. Since it consists of an underground deposit of materials it was not re-identified during the pedestrian survey portion of this investigation; however, it likely still exists within the project parcel.

CHAPTER VI
METHODS

Introduction

This chapter describes the research design and field methodology used to complete the Phase IA cultural resources assessment survey of the project area in Stonington, Connecticut. The following tasks were completed during this investigation: 1) study of the region's prehistory, history, and natural setting, as presented in Chapters II through IV; 2) a literature search to identify and discuss previously recorded cultural resources in project region; 3) a review of historical maps, topographic quadrangles, and aerial imagery depicting the project parcel in order to identify potential historical resources and/or areas of past disturbance; and 4) pedestrian survey and photo-documentation of the project parcel in order to determine their archaeological sensitivity. These methods are in keeping with those required by the Connecticut State Historic Preservation Office in the document entitled: *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987).

Research Framework

The current Phase IA cultural resources assessment survey was designed to assess the archaeological sensitivity of the project parcel, as well as to visually examine the development area for any previously unidentified cultural resources during pedestrian survey. The undertaking was comprehensive in nature, and project planning considered the distribution of previously recorded cultural resources located within the project region, as well as a visual assessment of the project area. The methods used to complete this investigation were designed to provide coverage of all portions of the project parcel. The fieldwork portion of this undertaking entailed pedestrian survey, photo-documentation, and mapping (see below).

Archival Research & Literature Review

Background research for this project included a review of a variety of historical maps depicting the proposed project area; an examination of USGS 7.5' series topographic quadrangles; an examination of aerial images dating from 1934 through 2019; and a review of all archaeological sites and National and State Register of Historic Places on file with the CT-SHPO, as well as electronic cultural resources data maintained by Heritage. The intent of this review was to identify all previously recorded cultural resources situated within and immediately adjacent to the project parcel, and to provide a natural and cultural context for the project region. This information then was used to develop the archaeological context of the project parcel, and to assess its sensitivity with respect to the potential for producing intact cultural resources.

Background research materials, including historical maps, aerial imagery, and information related to previous archaeological investigations, were gathered from the CT-SHPO. Finally, electronic databases and Geographic Information System files maintained by Heritage were employed during the course of this project, and they provided valuable data related to the project region, as well as data concerning previously identified archaeological sites and National and State Register of Historic Places properties within the general vicinity of the project parcel.

Field Methodology and Data Synthesis

Heritage also performed fieldwork for the Phase IA cultural resources assessment survey of the project parcel associated with the proposed solar project in Stonington, Connecticut. This included pedestrian

survey, photo-documentation, and mapping of the area. During the completion of the pedestrian survey, representatives from Heritage photo-documented the project parcel and its current conditions.

CHAPTER VII
RESULTS OF THE INVESTIGATION & MANAGEMENT RECOMMENDATIONS

Introduction

This chapter presents the results of the Phase IA cultural resources assessment survey of the project parcel in Stonington, Connecticut. As stated in the introductory section of this report, the goals of the investigation included completion of the following tasks: 1) a contextual overview of the region's prehistory, history, and natural setting (e.g., soils, ecology, hydrology, etc.); 2) a literature search to identify and discuss previously completed cultural resources surveys and previously recorded cultural resources in the project region; 3) a review of readily available historical maps and aerial imagery depicting the project parcel in order to identify potential historical resources and/or areas of past disturbance; and 4) pedestrian survey and photo-documentation of the project parcel in order to determine their archaeological sensitivity.

Results of Phase IA survey

At the time of the survey, the project parcel was characterized by agricultural fields to the west and to the east by residential neighborhoods along Jeremy Hill Road. The North Stonington Bible Church and agricultural fields are situated to the north and Route 184 is located to the south. Access to the project area is from Jeremy Hill Road in the northeastern corner of the project parcel (Photos 1 through 10). The project parcel is situated at elevations ranging from approximately 76 to 100 m (249 to 328 ft) NGVD. As discussed in Chapter II, the predominant soil types located throughout most of the area are Woodbridge, Sutton, Paxton and Montauk soils which are very deep well drained sandy loams. A small area in the eastern portion of the study area is characterized by Ridgebury, Leicester and Whitman soils which are very deep and moderately to poorly drained sandy loams.

Overall Sensitivity of the Proposed Project Parcel

The field data associated with soils, slopes, aspect, distance to water, and previous disturbance collected during the pedestrian survey and presented above was used in conjunction with the analysis of historical maps, aerial images, and data regarding previously identified archaeological sites and National/State Register of Historic Places properties to stratify the project areas into zones of no/low and/or moderate/high archaeological sensitivity. In general, historical period archaeological sites are relatively easy to identify on the current landscape because the features associated with them tend to be relatively permanent constructions that extend above the ground surface (i.e., stone foundations, pens, wells, privies, etc.). Archaeological sites dating from the prehistoric era, on the other hand, are less often identified during pedestrian survey because they are buried, and predicting their locations relies more on the analysis and interpretation of environmental factors that would have informed Native American site choices.

With respect to the potential for identifying prehistoric archaeological sites, the project area was divided into areas of no/low and/or moderate/high archaeological potential by analyzing the landform types, slope, aspect, soils contained within them, and their distance to water. In general, areas located less than 300 m (1,000 ft) from a freshwater source and that contain slopes of less than 8 percent and well-drained soils possess a high potential for producing prehistoric archaeological deposits. Those areas located between 300 and 600 m (1,000 and 2,000 ft) from a freshwater source and well drained soils are considered moderate probability areas. This is in keeping with broadly based interpretations of

prehistoric settlement and subsistence models that are supported by decades of previous archaeological research throughout the region. It is also expected that there may be variability of prehistoric site types found in the moderate/high sensitivity zones. For example, large Woodland period village sites and Archaic period seasonal camps may be expected along large river floodplains and near stream/river confluences, while smaller temporary or task specific sites may be expected on level areas with well-drained soils that are situated more than 300 m (1,000 ft) but less than 600 m (2,000 ft) from a water source. Finally, steeply sloping areas, poorly drained soils, or areas of previous disturbance are generally deemed to retain a no/low archaeological sensitivity with respect to their potential to contain prehistoric archaeological sites.

In addition, the potential for a given area to yield evidence of historical period archaeological deposits is based not only on the above-defined landscape features but also on the presence or absence of previously identified historical period archaeological resources as identified during previous archaeological surveys, recorded on historical period maps, or captured in aerial images of the region under study. In this case, proposed project items that are situated within 100 m (328 ft) of a previously identified historical period archaeological site or a National or State Register of Historic Places district/individually listed property also may be deemed to retain a moderate/high archaeological sensitivity. In contrast, those areas situated over 100 m (328 ft) from any of the above-referenced properties would be considered to retain a no/low historical period archaeological sensitivity.

Phase IA Results and Management Recommendations

The combined review of historical maps, aerial images, land deeds, and pedestrian survey indicates that the approximately 63 acre project parcel contains low slopes and well drained soils situated in proximity to Copps Brook to the west. Soils found throughout the project parcel are mainly attributed to the Ridgebury, Leicester and Whitman series, Woodbridge, Sutton, and Paxton and Montauk series. The Woodbridge, Sutton, Paxton and Montauk soils are very deep well drained sandy loams, while the Ridgebury, Leicester and Whitman soils are very deep and moderately to poorly drained sandy loams. A review of soils in the area indicates that intact B-Horizons deposits are likely within the sandy well drained portions of the project parcel. Based on the totality of the information available, including landscape types, well-drained soil types, proximity to freshwater, it is the professional opinion of Heritage that 32.12 acres of the project parcel retain a moderate/high sensitivity for yielding archaeological deposits (Figure 10 and Photos 7 through 10). It is recommended that a Phase IB cultural resources reconnaissance survey of any planned areas of construction within the moderate/high sensitivity areas of the project parcel be conducted prior to the construction of the solar facility. Finally, pedestrian survey of the access road, the western portion of the project parcel, and an area to the northeast indicated that they been subjected to extensive disturbance, contain steep slopes, or are characterized by wet soils. These areas, which encompass 31.06 acres of land, possess no/low archaeological sensitivity. No additional archaeological examination of the access road and the other no/low sensitivity areas is recommended.

BIBLIOGRAPHY

Barber, J. W.

1837 *Connecticut Historical Collections*. 2nd edition. Storrs, Connecticut: Bibliopola Press; Hanover, New Hampshire: Distributed by the University Press of New England.

Bendremer, J.

1993 *Late Woodland Settlement and Subsistence in Eastern Connecticut*. Ph.D. Dissertation, Department of Anthropology, University of Connecticut, Storrs, Connecticut.

Bendremer, J. and R. Dewar

1993 The Advent of Maize Horticulture in New England. In *Corn and Culture in the Prehistoric New World.* Ed. by S. Johannessen and C. Hastorf. Westview Press, Boulder.

Bendremer, J., E. Kellogg, and T. Largy

1991 A Grass-Lined Storage Pit and Early Maize Horticulture in Central Connecticut. *North American Archaeologist 12(4):325-349.*

CERC

2006 Stonington, Connecticut, CERC Town Profile 2006. Accessed 10/03/2006. http://products.cerc.com/pdf/tp/stonington.pdf.

Coe, J.L.

1964 The Formative Cultures of the Carolina Piedmont. *Transactions of the American Philosophical Society*, Vol. 54, Part 5. Philadelphia, Pennsylvania.

Connecticut, State of

1932 *State Register and Manual*. Hartford, Connecticut: State of Connecticut.

Connecticut Environmental Conditions Online (CT ECO)

2019 Connecticut 2019 Orthophotography. Storrs, Connecticut: University of Connecticut, Connecticut Environmental Conditions Online. http://www.cteco.uconn.edu/data/flight2019/index.htm.

Crofut, F. S. M.

1937 *Guide to the History and the Historic Sites of Connecticut*. New Haven, Connecticut: Yale University Press.

Curran, M.L., and D.F. Dincauze

1977 Paleo-Indians and Paleo-Lakes: New Data from the Connecticut Drainage. In *Amerinds and their Paleoenvironments in Northeastern North America.* Annals of the New York Academy of Sciences 288:333-348.

Dincauze, D.F.

1974 An Introduction to Archaeology in the Greater Boston Area. *Archaeology of Eastern North America* 2(1):39-67.

1976 *The Neville Site: 8000 Years at Amoskeag.* Peabody Museum Monograph No. 4. Cambridge, Massachusetts.

Dowhan, J.J. and R.J. Craig
1976 *Rare and endangered species of Connecticut and Their Habitats*. State Geological Natural History Survey of Connecticut Department of Environmental Protection, Report of Investigations No. 6.

Fairchild Aerial Surveys
1934 Connecticut Statewide Aerial Photograph Series. Hartford, Connecticut: Connecticut State Archives.

Feder, K.
1984 *Pots, Plants, and People: The Late Woodland Period of Connecticut*. Bulletin of the Archaeological Society of Connecticut 47:99-112.

Fitting, J.E.
1968 *The Spring Creek Site*. In *Contributions to Michigan Archaeology*, pp. 1-78. Anthropological Papers No. 32. Museum of Anthropology, University of Michigan, Ann Arbor.

Funk, R.E.
1976 *Recent Contributions to Hudson Valley Prehistory.* New York State Museum Memoir 22. Albany.

George, D.
1997 A Long Row to Hoe: The Cultivation of Archaeobotany in Southern New England. *Archaeology of Eastern North America* 25:175 - 190.

George, D., and C. Tryon
1996 *Lithic and Raw Material Procurement and Use at the Late Woodland Period Cooper Site, Lyme, Connecticut.* Paper presented at the joint meeting of the Archaeological Society of Connecticut and the Massachusetts Archaeological Society, Storrs Connecticut

George, D.R., and R. Dewar
1999 Prehistoric Chenopodium in Connecticut: Wild, Weedy, Cultivated, or Domesticated? *Current Northeast Paleoethnobotany*, edited by J. Hart, New York State Museum, Albany, New York.

Gerrard, A.J.
1981 *Soils and Landforms, An Integration of Geomorphology and Pedology*. George Allen & Unwin: London.

Gramly, R. Michael, and Robert E. Funk
1990 What is Known and Not Known About the Human Occupation of the Northeastern United States Until 10,000 B. P. *Archaeology of Eastern North America* 18: 5-32.

Greenhalgh, Kathleen
1999 *A History of Old Mystic, 1600-1999*. N.p.: by the author.

Griffin, J.B.
1967 Eastern North America Archaeology: A Summary. *Science* 156(3772):175-191.

Guilette, Mary E.
1979 *American Indians in Connecticut: Past to Present*. [Hartford, Connecticut]: State of Connecticut, Department of Environmental Protection, Connecticut Indian Affairs Council.

Hauptman, Laurence M. and James D. Wherry, eds.
1990 *The Pequots in Southern New England: The Fall and Rise of an American Indian Nation*. Norman, Oklahoma: University of Oklahoma Press.

Hurd, D. Hamilton, comp.
1882 *History of New London County, Connecticut, With Biographical Sketches of Many of Its Pioneers and Prominent Men*. Philadelphia: J.W. Lewis & Co.

Jones, B.
1997 The Late Paleo-Indian Hidden Creek Site in Southeastern Connecticut. *Archaeology of Eastern North America* 25:45-80.

Keegan, Kristen Noble, comp.
2012 Historical Population Data of Connecticut. Unpublished Excel spreadsheet.

Lavin, L.
1980 Analysis of Ceramic Vessels from the Ben Hollister Site, Glastonbury, Connecticut. *Bulletin of the Archaeological Society of Connecticut* 43:3-46.

1984 Connecticut Prehistory: A Synthesis of Current Archaeological Investigations. *Archaeological Society of Connecticut Bulletin* 47:5-40.

1986 *Pottery Classification and Cultural Models in Southern New England Prehistory*. North American Archaeologist 7(1):1-12.

1987 The Windsor Ceramic Tradition in Southern New England. *North American Archaeologist* 8(1):23-40.

1988a Coastal Adaptations in Southern New England and Southern New York. *Archaeology of Eastern North America*, Vol.16:101-120.

1988b The Morgan Site, Rocky Hill, Connecticut: A Late Woodland Farming Community in the Connecticut River Valley. *Bulletin of the Archaeological Society of Connecticut* 51:7-20.

Lizee, J.
1994a *Prehistoric Ceramic Sequences and Patterning in southern New England: The Windsor Tradition*. Unpublished Ph.D. dissertation, Department of Anthropology, University of Connecticut, Storrs.

1994b *Cross-Mending Northeastern Ceramic Typologies.* Paper presented at the 1994 Annual Meeting of the Northeastern Anthropological Association, Geneseo, New York.

McBride, K.
1978 Archaic Subsistence in the Lower Connecticut River Valley: Evidence from Woodchuck Knoll. *Man in the Northeast* 15 & 16:124-131.

1984 *Prehistory of the Lower Connecticut River Valley.* Ph.D. Dissertation, Department of Anthropology, University of Connecticut, Storrs, Connecticut.

Moeller, R.
1980 *6-LF-21: A Paleo-Indian Site in Western Connecticut.* American Indian Archaeological Institute, Occasional Papers No. 2.

Oglesby, Scott
2014 I-95. *Connecticut Roads*. Accessed April 24, 2018. http://www.kurumi.com/roads/ct/i95.html.

Pagoulatos, P.
1988 Terminal Archaic Settlement and Subsistence in the Connecticut River Valley. *Man in the Northeast* 35:71-93.

Pease, John C. and John M. Niles
1819 *A Gazetteer of the States of Connecticut and Rhode-Island*. Hartford, Connecticut: William S. Marsh.

Pfeiffer, J.
1984 The Late and Terminal Archaic Periods in Connecticut Prehistory. *Bulletin of the Bulletin of the Archaeological Society of Connecticut* 47:73-88.

1986 Dill Farm Locus I: Early and Middle Archaic Components in Southern Connecticut. *Bulletin of the Archaeological Society of Connecticut* 49:19-36.

1990 The Late and Terminal Archaic Periods in Connecticut Prehistory: A Model of Continuity. In *Experiments and Observations on the Archaic of the Middle Atlantic Region.* R. Moeller, ed.

Poirier, D.
1987 *Environmental Review Primer for Connecticut's Archaeological Resources.* Connecticut Historical Commission, State Historic Preservation Office, Hartford, Connecticut.

Pope, G.
1952 Excavation at the Charles Tyler Site. *Bulletin of the Archaeological Society of Connecticut* 26:3-29.

1953 The Pottery Types of Connecticut. *Bulletin of the Archaeological Society of New Haven* 27:3-10.

Ritchie, W.A.
1969a *The Archaeology of New York State*. Garden City: Natural History Press.

1969b *The Archaeology of Martha's Vineyard: A Framework for the Prehistory of Southern New England; A study in Coastal Ecology and Adaptation*. Garden City: Natural History Press

1971 *A Typology and Nomenclature for New York State Projectile Points*. New York State Museum Bulletin Number 384, State Education Department. University of the State of New York, Albany, New York.

Ritchie, W.A., and R.E. Funk
1973 *Aboriginal Settlement Patterns in the Northeast*. New York State Museum Memoir 20. The State Education Department, Albany.

Rouse, I.
1947 Ceramic Traditions and sequences in Connecticut. *Bulletin of the Archaeological Society of Connecticut* 21:10-25.

Salwen, B., and A. Ottesen
1972 Radiocarbon Dates for a Windsor Occupation at the Shantok Cove Site. *Man in the Northeast* 3:8-19.

Smith, C.
1947 An Outline of the Archaeology of Coastal New York. *Bulletin of the Archaeological Society of Connecticut* 21:2-9.

Snow, D.
1980 *The Archaeology of New England.* Academic Press, New York.

Stone, George H.
1985 Cracker Barrell Chronicles: A Connecticut Yankee Storekeeper Views Village Life in North Stonington, Volumes 1-2. North Stonington Historical Society.

Turner, G. M. and M. W. Jacobus
1989 *Connecticut Railroads: An Illustrated History*. Hartford, Connecticut: Connecticut Historical Society.

United States Census
1850 Seventh Census of the United States. Schedule 1 – Free Inhabitants. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1870 Ninth Census of the United States, Schedule 1. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

Walling, H. F.
1854 Map of New London County, Connecticut. Philadelphia: William E. Baker.

Wheeler, Grace Denison
1903 *Old Homes in Stonington, with Additional Chapters and Graveyard Inscriptions*. Stonington, Connecticut: Grace Denison Wheeler; reprint ed. Mystic, Connecticut: The Mystic Standard, 1930.

Wheeler, Robert Anson
1900 *History of the Town of Stonington, County of New London, Connecticut, from Its First Settlement in 1649 to 1900, with a Genealogical Register of Stonington Families*. New

London, Connecticut: The Day Publishing Co.; reprint ed. Salem, Massachusetts: Higginson Book Company, n.d.

Witthoft, J.
1949 An Outline of Pennsylvania Indian History. *Pennsylvania History* 16(3):3-15.

1953 Broad Spearpoints and the Transitional Period Cultures. *Pennsylvania Archaeologist*, 23(1):4-31.

Wood, F. J.
1919 *The Turnpikes of New England and Evolution of the Same Through England, Virginia, and Maryland*. Boston: Marshall Jones Company.

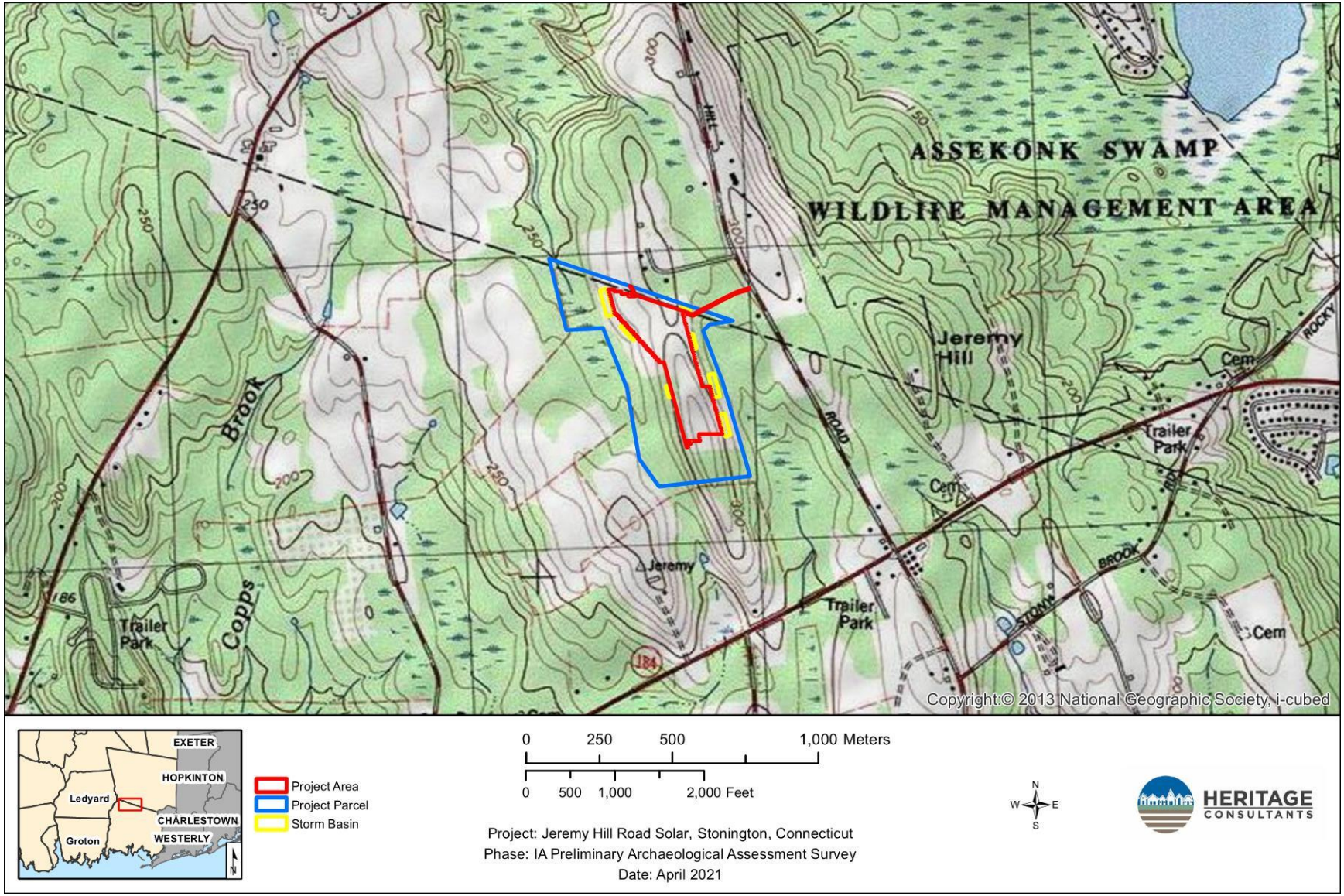


Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the project area in Stonington, Connecticut.

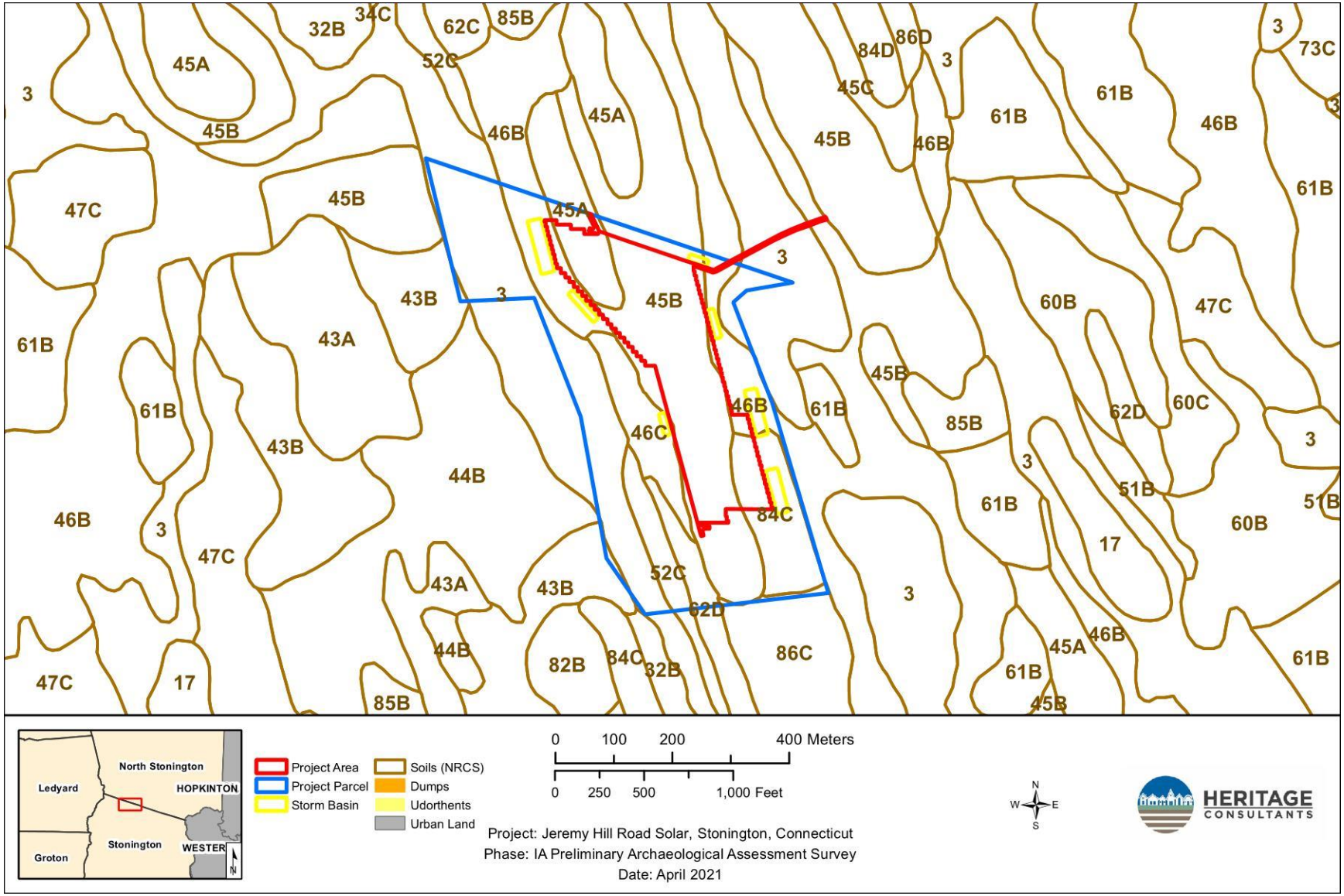


Figure 2. Map of soils located in the vicinity of the project area in Stonington, Connecticut.

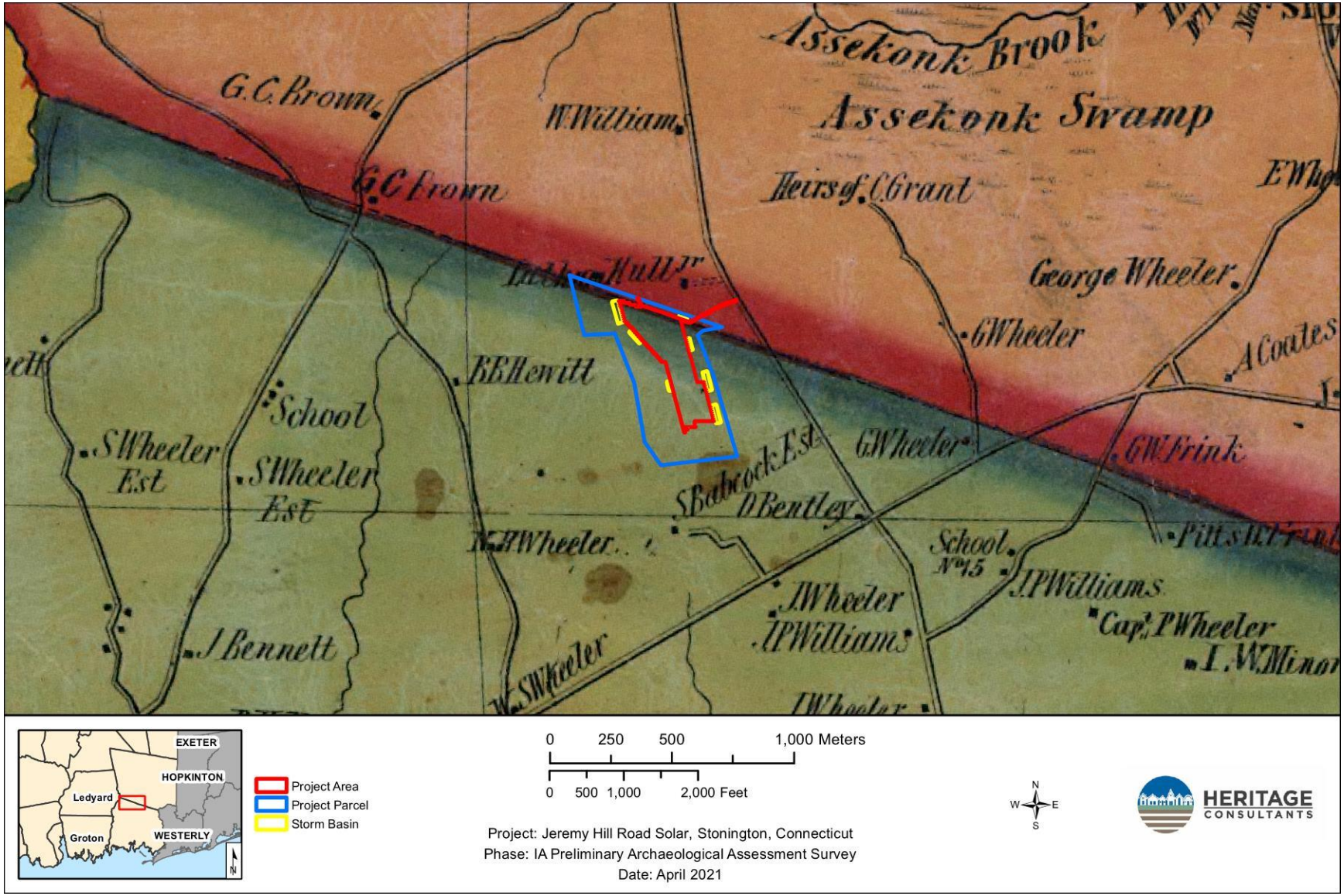


Figure 3. Excerpt from an 1854 historical map showing the location of the project area in Stonington, Connecticut.

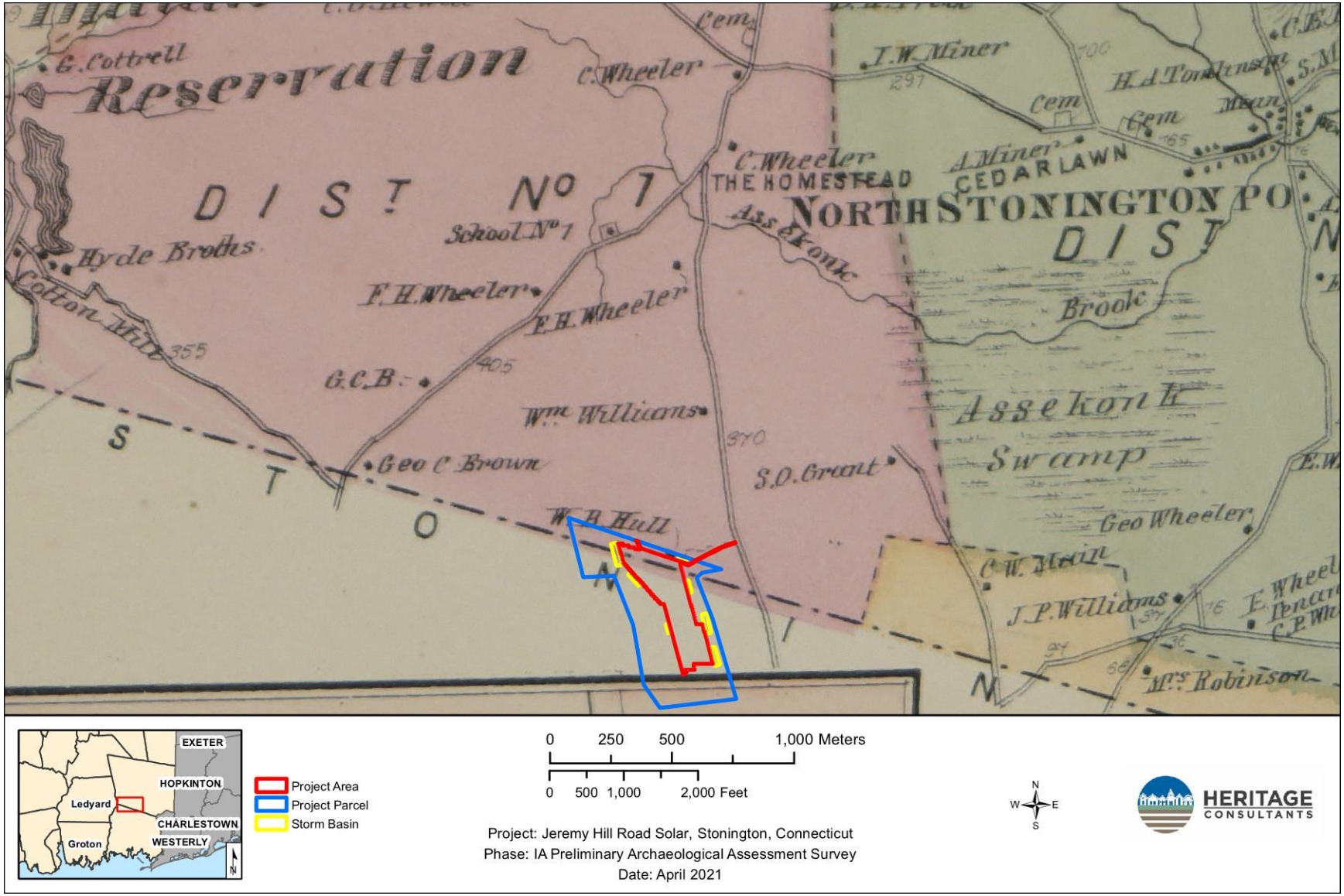


Figure 4. Excerpt from an 1868 historical map showing the location of the project area in Stonington, Connecticut.

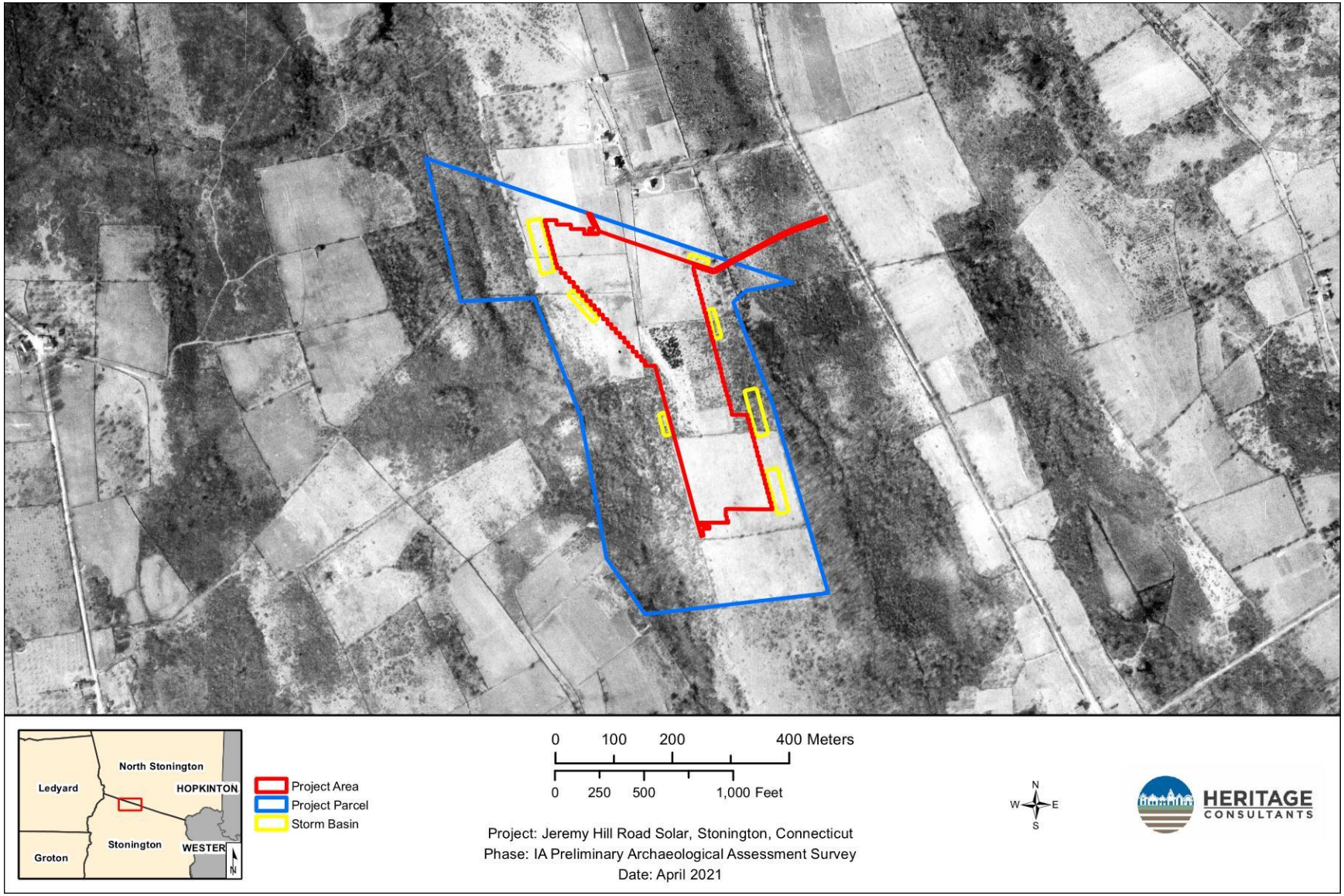


Figure 5. Excerpt from a 1934 aerial photograph showing the location of the project area in Stonington, Connecticut.

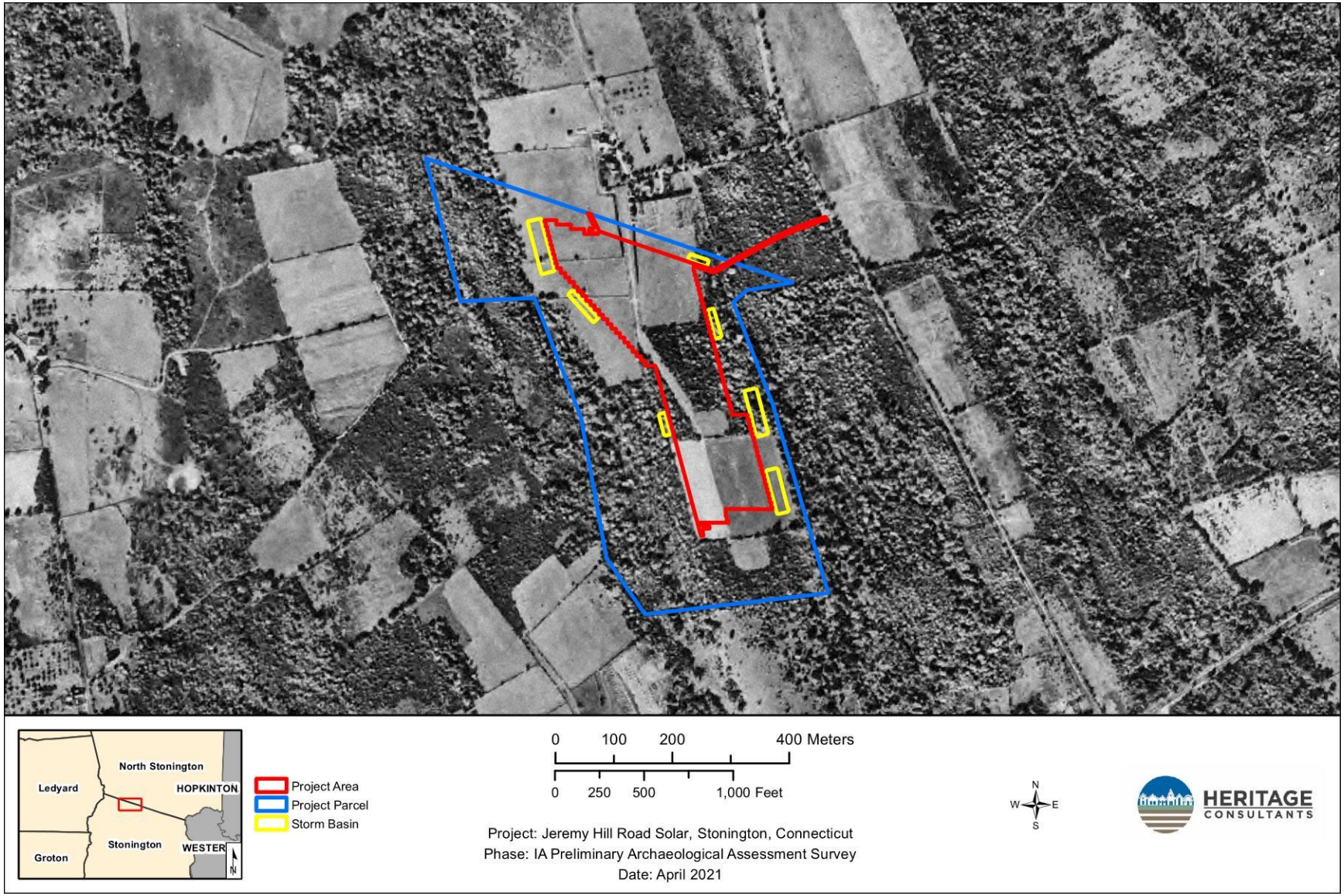


Figure 6. Excerpt from a 1951 aerial photograph showing the location of the project area in Stonington, Connecticut.

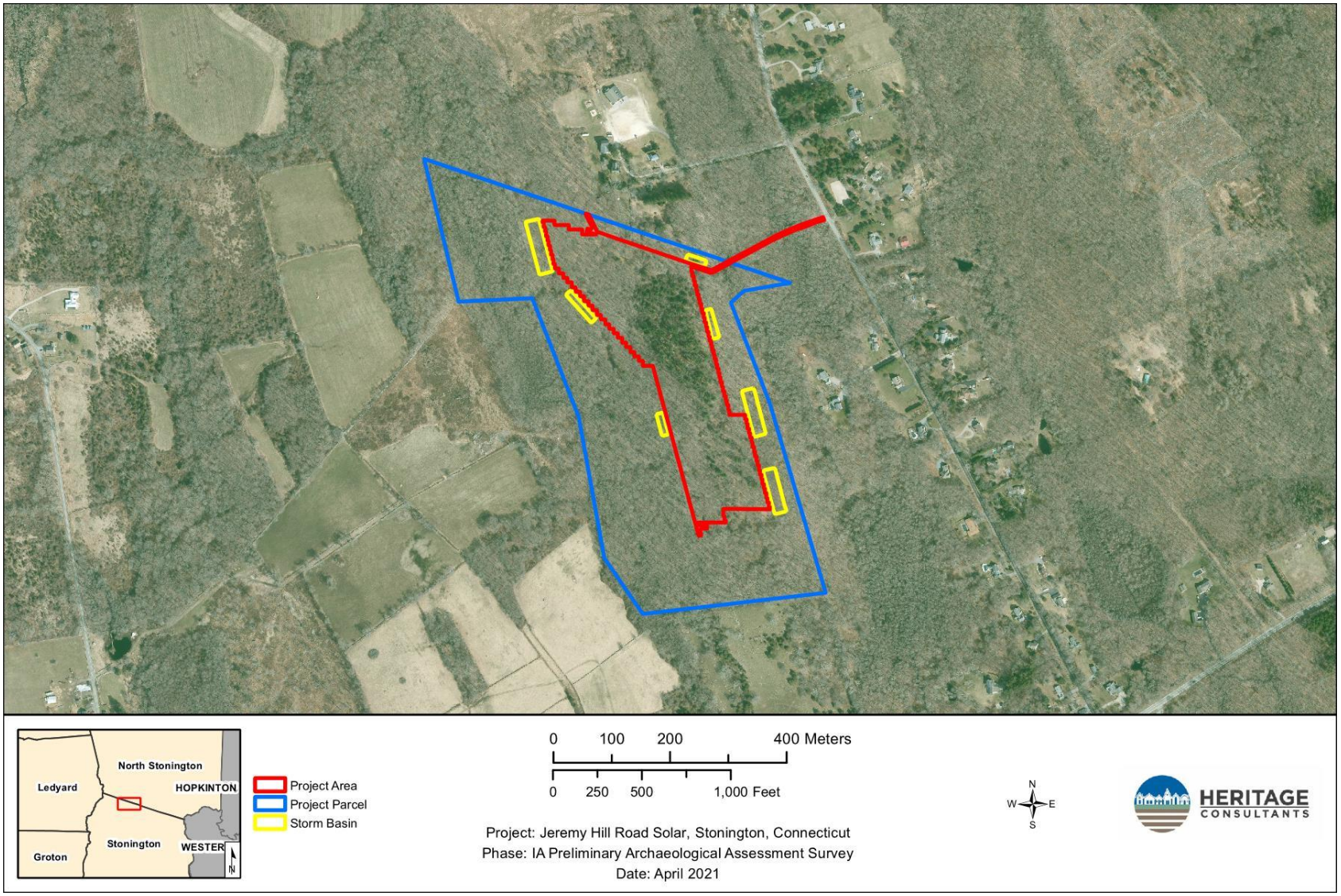


Figure 7. Excerpt from a 2019 aerial photograph showing the location of the project area in Stonington, Connecticut.

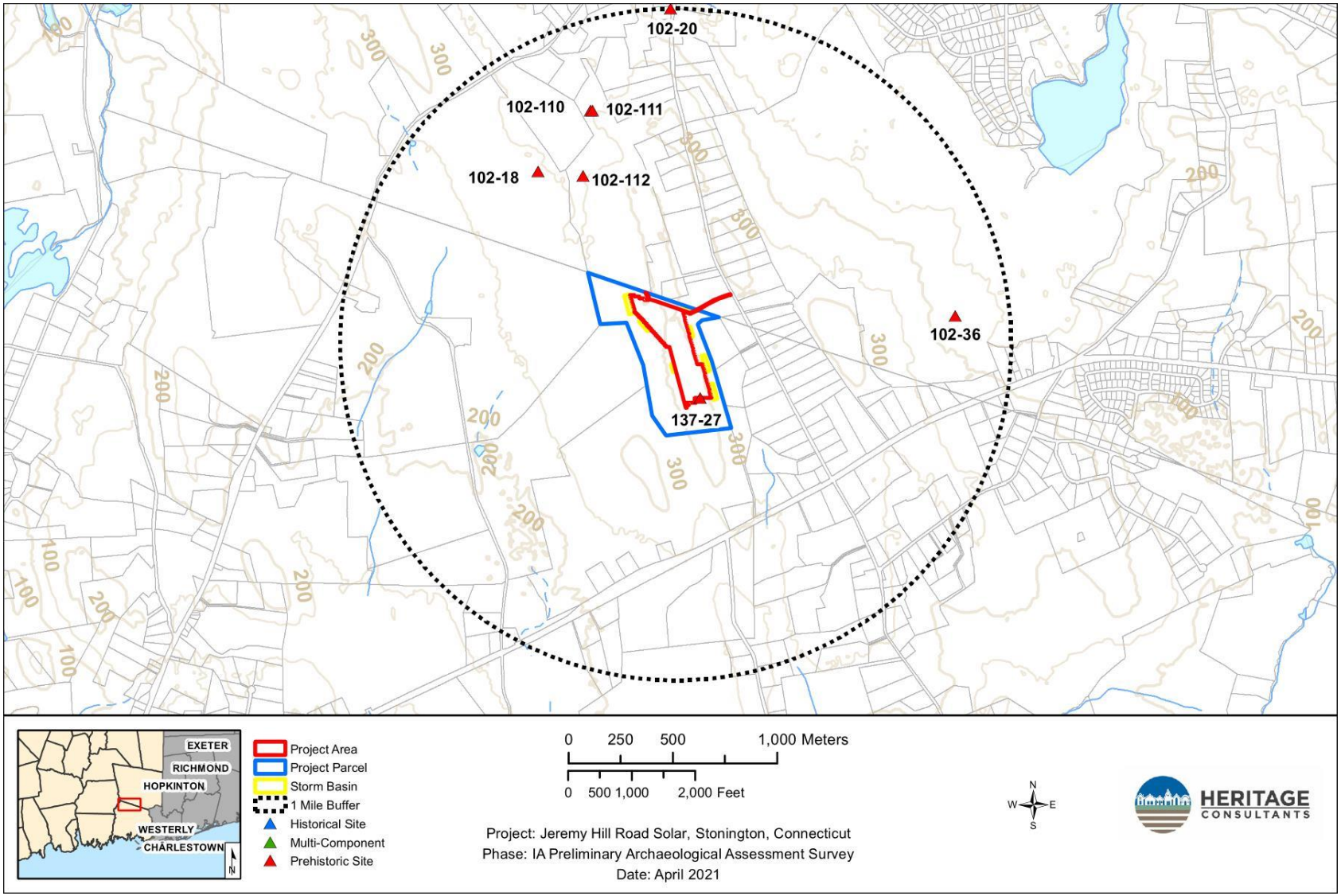


Figure 8. Digital map showing the location of previously identified archaeological sites in the vicinity of the project area in Stonington, Connecticut.

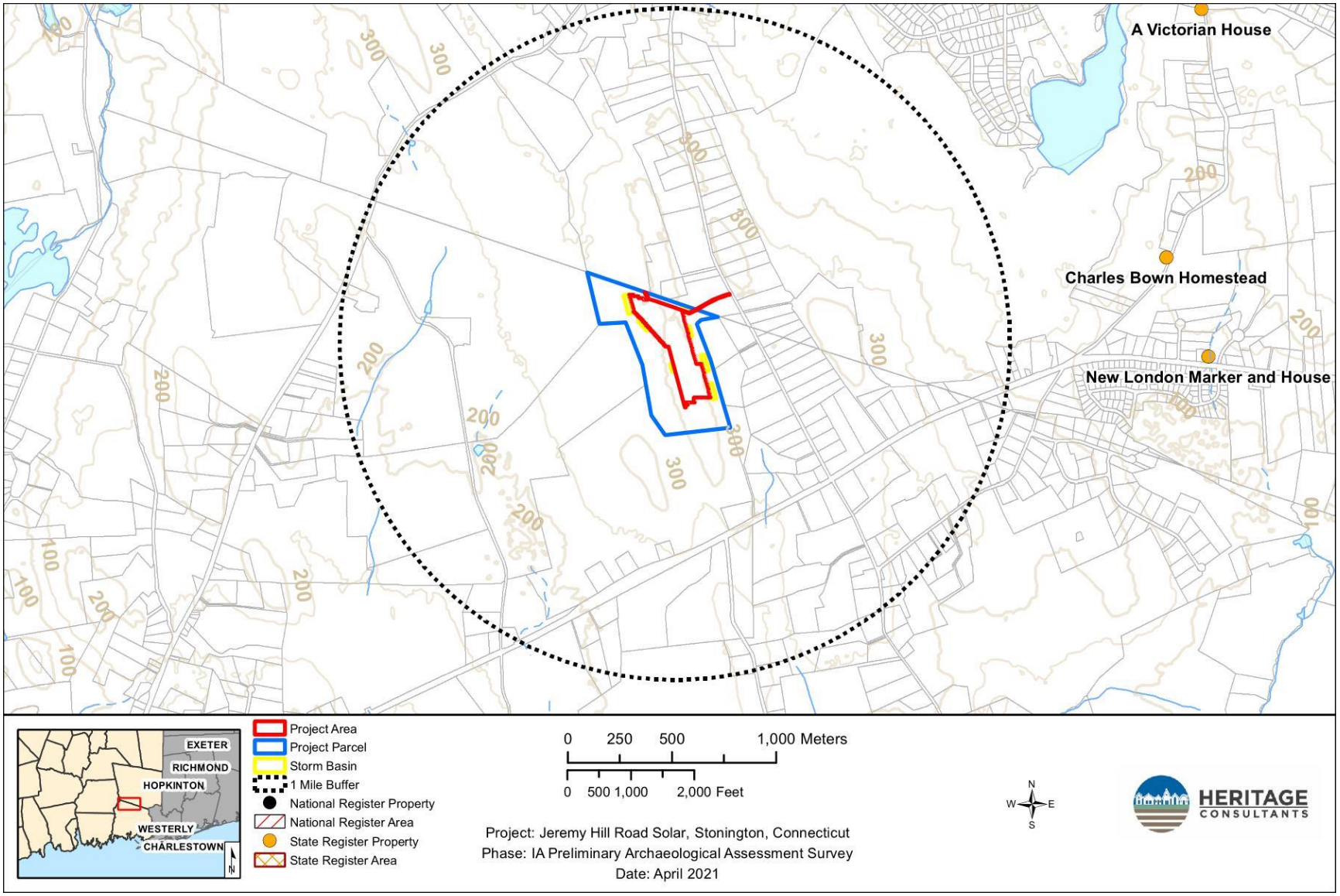


Figure 9. Digital map depicting the locations of previously identified National/State Register of Historic Places properties in the vicinity of the project area in Stonington, Connecticut.

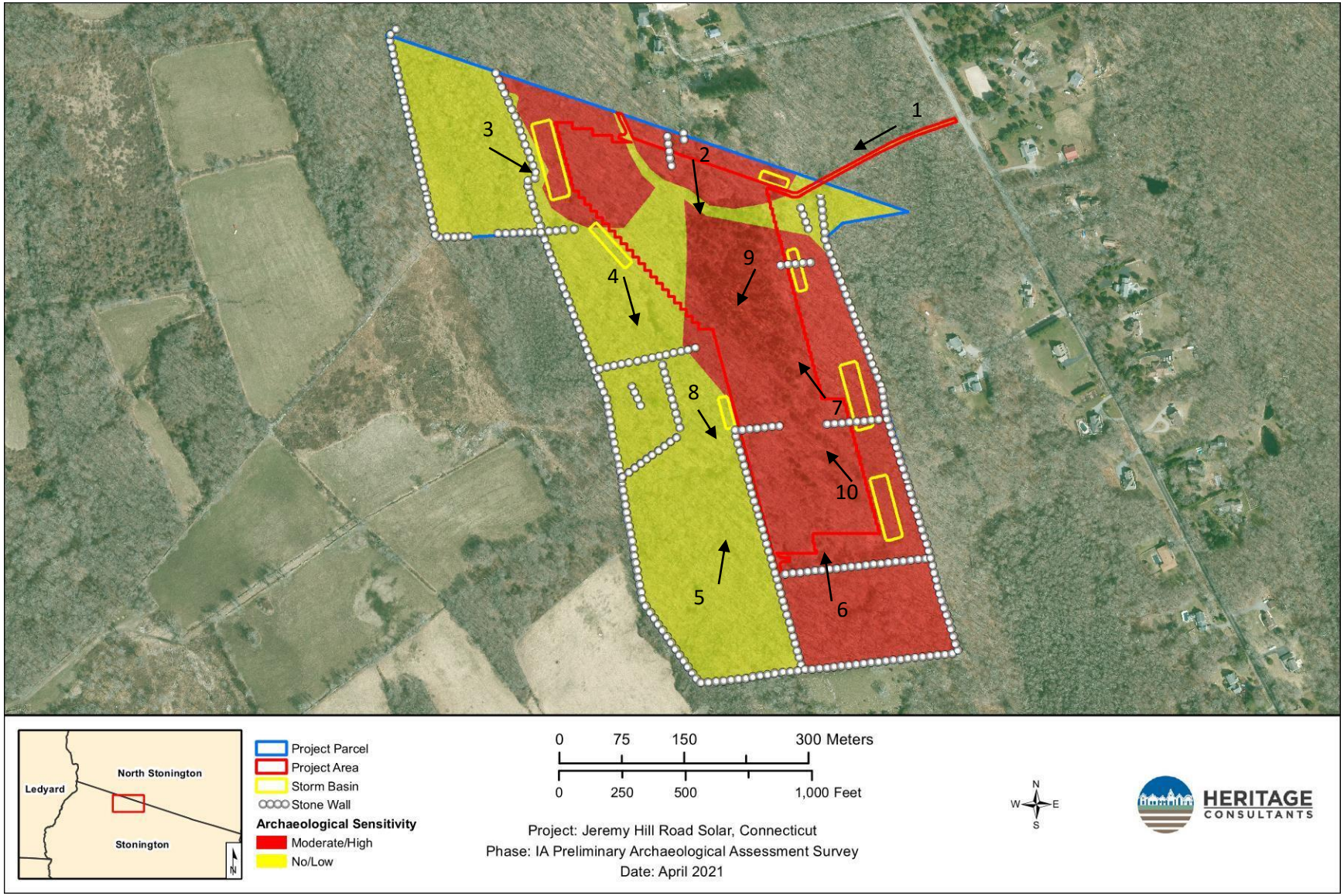


Figure 10. Aerial image showing no/low and moderate archaeologically sensitive areas and directional indicators of photos taken of the project area in Stonington, Connecticut.

Photo 1. Overview of Access Road of the project area in Stonington, Connecticut. Photo taken facing southwest.

Photo 2. Overview photo from northern boundary of the project area in Stonington, Connecticut. Photo taken facing west.

Photo 3. Overview photo from northwestern corner of the project area in Stonington, Connecticut. Photo taken facing southeast.

Photo 4. Overview photo from western boundary of the project area in Stonington, Connecticut. Photo taken facing southeast.

Photo 5. Overview photo from southwestern corner of the project area in Stonington, Connecticut. Photo taken facing north.

Photo 6. Overview photo from southeastern corner of the project area in Stonington, Connecticut. Photo taken facing north.

Photo 7. Overview photograph of the moderate sensitivity area along the eastern boundary of project area. Photo taken facing northwest.

Photo 8. Overview photograph of the moderate sensitivity area along the eastern boundary of project area. Photo taken facing southwest.

Photo 9. Overview photograph of the moderate sensitivity area from the northeastern corner of project area. Photo taken facing southwest.

Photo 10. Overview photograph of the moderate sensitivity area along the eastern boundary of project area. Photo taken facing northwest.

April 2024

Phase IB Cultural Reconnaissance Survey of the Proposed Jeremy Hill Solar Project in Stonington, Connecticut

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ABSTRACT

This report presents the results of the Phase IB Cultural Resources Reconnaissance survey of the proposed Jeremy Hill Solar Project in Stonington, Connecticut. Vanasse Hangen Brustlin, Inc., requested that Hertiage Consultants, LLC complete the survey of the proposed project area of impact prior to construction. The survey was completed in March of 2024. Background research for the survey indicated that Site 137-27, and a precontact era site from an unknown time period, was recorded near the southern limits of the project area. Pedestrian survey of the Project area revealed that it is characterized by level to low sloping topography, well drained soils, and mixed deciduous forest and fallow agricultural fields. This along with the presence of a previously identified archaeological site, Site 137-27, indicated that large portions of the Project area retained archaeological sensitivity. A total of 74 of 74 (100 percent) planned shovel tests throughout the Project area. Of the excavated shovel tests, only one yielded a single post-European Contact period artifact, a sherd of salt glazed stoneware dating from ca., 1744 to 1775. While the sherd suggests early use and occupation of the surrounding area, the lack of associated artifact concentrations, subsurface features, or above ground features resulted in the artifact being classified as an isolated find. It lacks research potential and the qualities of significance applying the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). In addition, despite careful investigation, no precontact era cultural material or evidence of Site 137-27 was identified during the Phase IB survey No additional archaeological investigation of the isolated find or the project area is recommended prior to Project construction

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CHAPTER I
INTRODUCTION

This report presents the results of a Phase IB Cultural Resources Reconnaissance survey of the proposed Jeremy Hill Solar Center (the Project) in Stonington, Connecticut (Figure 1). Vanasse Hangen Brustlin, Inc. (VHB) requested that Hertiage Consultants, LLC (Heritage) complete the Phase IB cultural resources reconnaissance survey of the proposed Project prior to development. The Phase IB survey was completed by Heritage in March of 2024. All work associated with this project was performed in accordance with the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987) promulgated by the Connecticut State Historic Preservation Office (CT-SHPO).

Project Description, Methods, & Results Overview

The proposed Project will the built on larger parcel of land encompassing approximately 30 acres of land, of which approximately 18.5 acres will be impacted by the Project. The Project area is situated at elevations ranging from 81 to 91 meters (265 to 298 feet) NGVD. It is located on the western side of Jeremy Hill Road and is bounded by agricultural land, forested areas, and residential development in all four cardinal directions. The field methods employed during the Phase IB survey consisted of pedestrian survey, mapping, photo-documentation, and subsurface testing throughout identified archaeologically sensitive portions of the Project area. The details of the field methods used, as well as the results of the Phase IB survey, are reviewed below.

Pedestrian survey of the Project area revealed that large portions of it were characterized level to low sloping topography, well drained soils, and patches of mixed deciduous forest and fallow agricultural fields. The Project area also is located proximate to Site 137-27, which is located in the vicinity of the southern portion of the Project area and has been characterized as a precontact era Native American occupation dating from an unknown time period. Due to the presence of Site 137-27, as well as perceived areas of archaeological sensitivity, a subsurface testing regime was conducted throughout large portions of the Project area. The examination of the identified moderate/high archaeologically sensitive areas was completed through the excavation of shovel test pits spaced at 30 meter (98 foot) intervals along survey transects positioned at 30 meters (98 feet) apart. All shovel tests excavated measured 50 x 50 centimeters (19.4 x 19.4 inches) in size and were excavated until glacially derived C-Horizon soils or immovable objects (boulders, large tree roots) were encountered. Each shovel test was excavated in 10 centimeters (3.9 inches) levels within natural soil horizons, and the fill from each level was screened separately. All shovel test fill was screened through 0.635 centimeters (0.25 inches) hardware cloth and examined visually for cultural material. Soil characteristics were recorded using Munsell Soil Color Charts and standard soils nomenclature. Shovel tests were backfilled after being recorded.

The Phase IB survey resulted in the excavation of 74 of 74 (100 percent) planned shovel tests throughout the Project area. Of the excavated shovel tests, one yielded a single artifact dating from the post-European Contact period. Shovel test T5-STP1 yielded a single basal sherd a blue and white salt glazed stoneware plate. The sherd was recovered from the A horizon and laboratory analysis determined that it dates from ca., 1744 to 1775. While the stoneware sherd suggests early use of the surrounding area, the lack of associated artifact concentrations, subsurface cultural features, or above ground architectural remains revealed that the artifact is an isolated find. It lacks research potential and was assessed as not eligible for listing on the National Register of Historic Places (NRHP) applying the criteria for evaluation (36 CFR 60.4 [a-d]). Thus, no additional archaeological investigation of the isolated find is recommended prior to

Project construction. Finally, despite careful investigation, no evidence of cultural or features associated with the previously identified Site 137-27 was identified during the Phase IB investigation. As a result, no further archaeological investigation of the Project area recommended prior to construction.

Project Personnel

Key personnel for this investigation included Mr. David R. George, M.A., RPA, (Principal Investigator), Ms. Brenna Pisanelli, M.A., (Senior Project Manager), Ms. Marina Nadeau, M.S., (Field Director), Ms. Nita Vitaliano, M.A., (Historian), and Mr. Sean Buckley, M.A., (GIS Specialist).

CHAPTER II
NATURAL SETTING

Introduction

This chapter provides a brief overview of the natural setting of the region containing the project region in Stonington, Connecticut. Previous archaeological research has documented that specific environmental factors can be associated with both precontact and post-European contact period site selection. These include general ecological conditions, as well as types of fresh water sources present, degree of slopes, and soils situated within a given project area. The remainder of this chapter provides a brief overview of the ecology, hydrological resources, and soils present within the project area and the larger region in general.

Ecoregions of Connecticut

Throughout the Pleistocene and Holocene Periods, Connecticut has undergone numerous environmental changes. Variations in climate, geology, and physiography have led to the "regionalization" of Connecticut's modern environment. It is clear, for example, that the northwestern portion of the state has different natural characteristics than the coastline. Recognizing this fact, Dowhan, and Craig (1976), as part of their study of the distribution of rare and endangered species in Connecticut, subdivided the state into various ecoregions. Dowhan and Craig (1976:27) defined an ecoregion as:

> an area characterized by a distinctive pattern of landscapes and regional climate as expressed by the vegetation composition and pattern, and the presence or absence of certain indicator species and species groups. Each ecoregion has a similar interrelationship between landforms, local climate, soil profiles, and plant and animal communities. Furthermore, the pattern of development of plant communities (chronosequences and toposequences) and of soil profile is similar in similar physiographic sites. Ecoregions are thus natural divisions of land, climate, and biota.

Dowhan and Craig defined nine major ecoregions for the State of Connecticut. They are based on regional diversity in plant and animal indicator species (Dowhan and Craig 1976). Only one of the ecoregions is germane to the current investigation: Eastern Coastal ecoregion. A summary of this ecoregion is presented below. It is followed by a discussion of the hydrology and soils found in and adjacent to the project area.

<u>Southeast Hills Ecoregion</u>

The Eastern Coastal ecoregion region is characterized by level to rolling topography that varies from sea level to 122 m (400 ft) above mean sea level; topographic relief reaches its maximum in this ecoregion where substantial rock outcrops occur (Dowhan and Craig 1976). The bedrock of the ecoregion is composed of metamorphic and igneous gneisses, schists, and granites dating from the Paleozoic Period (Bell 1985; Dowhan and Craig 1976:40). Soils in this ecoregion are developed on glacial till in the uplands, on local deposits of stratified sand, gravel and silt in the valleys, and on coastal and tidal deposits on the shores and estuaries (Dowhan and Craig 1976).

Hydrology in the Vicinity of the Project Area

The Project area is situated within a region that contains several sources of freshwater and major river ways, including the Long Island Sound, the Thames River, and the Shunock River. Other fresh water sources within the vicinity of the Project area consist of Assekonk Brook and Wheeler Brook as well as unnamed streams and wetlands. These freshwater sources may have served as resource extraction areas for precontact and post-European contact populations. Previously completed archaeological investigations in Connecticut have demonstrated that streams, rivers, and wetlands were focal points for

precontact occupations because they provided access to transportation routes, sources of freshwater, and abundant faunal and floral resources.

Soils Comprising the Project Area

Soil formation is the direct result of the interaction of many variables, including climate, vegetation, parent material, time, and organisms present (Gerrard 1981). Once archaeological deposits are buried within the soil, they are subject to various diagenic and taphonomic processes. Different classes of artifacts may be preferentially protected, or unaffected by these processes, whereas others may deteriorate rapidly. Cyclical wetting and drying, freezing, and thawing, and compression can accelerate chemically and mechanically the decay processes for animal bones, shells, lithics, ceramics, and plant remains. Lithic and ceramic artifacts are largely unaffected by soil pH, whereas animal bones and shells decay more quickly in acidic soils. In contrast, acidic soils enhance the preservation of charred plant remains.

The Project area is characterized by the presence of three major soil types Woodbridge, Canton and Charlton, and Paxton and Montauk soils (Figure 2). These soil types fall into the category of moderately to well drained soils. When well drained soils, remain undisturbed and on less than eight percent slope, they are generally well correlated with precontact era Native American and post-European Contact period site locations and are considered to have higher archaeological sensitivity. Below is a summary of each specific soil type identified within the Project area, they were gathered from the United States Department of Agriculture - National Resources Conservation Service.

<u>Woodbridge Soils</u>

The Woodbridge series consists of moderately well drained loamy soils formed in lodgment till. They are very deep to bedrock and moderately deep to a densic contact. They are nearly level to moderately steep soils on hills, drumlins, till plains, and ground moraines. Slope ranges from 0 to 25 percent. A typical profile associated with Woodbridge soils is as follows: **Ap**--0 to 18 cm; very dark grayish brown (10YR 3/2) fine sandy loam, light brownish gray (10YR 6/2) dry; moderate medium granular structure; friable; many fine and medium roots; few very dark brown (10YR 2/2) earthworm casts; 5 percent gravel; moderately acid; abrupt wavy boundary; **Bw1**--18 to 46 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; few very dark brown (10YR 2/2) earthworm casts; 10 percent gravel; moderately acid; gradual wavy boundary; **Bw2**--46 to 66 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; few very dark brown (10YR 2/2) earthworm casts; 10 percent gravel; few medium prominent strong brown (7.5YR 5/6) masses of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; gradual wavy boundary; **Bw3**--66 to 76 cm; light olive brown (2.5Y 5/4) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; 10 percent gravel; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; clear wavy boundary; **Cd1**--76 to 109 cm; light olive brown (2.5Y 5/4) gravelly fine sandy loam; weak thick plates of geogenic origin; very firm, brittle; 20 percent gravel; many medium prominent strong brown (7.5YR 5/8) masses of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; gradual wavy boundary and **Cd2**--109 to 165 cm; light olive brown (2.5Y 5/4) gravelly fine sandy loam; weak thick plates of geogenic origin; very firm, brittle; few fine prominent very dark brown (10YR 2/2) coatings on plates; 25 percent gravel; common fine prominent strong brown (7.5YR 5/8) masses of iron accumulation; moderately acid.

Canton and Charlton Soils

The Canton series consists of very deep, well drained soils formed in a loamy mantle underlain by sandy till. They are on nearly level to very steep moraines, hills, and ridges. Slope ranges from 0 to 45 percent. A typical profile associated with Canton soils is as follows: **Oi**--0 to 5 cm; slightly decomposed plant material; **A**--5 to 13 cm; very dark grayish brown (10YR 3/2) fine sandy loam; weak fine granular structure; friable; common fine roots; 5 percent gravel; very strongly acid (pH 4.6); abrupt smooth boundary; **Bw1**--13 to 30 cm; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; friable; common fine and medium roots; 5 percent gravel; very strongly acid (pH 4.6); clear smooth boundary; **Bw2**--30 to 41 cm; yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine and medium roots; 5 percent gravel; strongly acid (pH 5.1); clear smooth boundary; **Bw3**--41 to 56 cm; yellowish brown (10YR 5/4) gravelly fine sandy loam; weak medium subangular blocky; friable; common fine and medium roots; 15 percent gravel; strongly acid (pH 5.1); abrupt smooth boundary; and **2C**--56 to 170 cm; grayish brown (2.5Y 5/2) gravelly loamy sand; massive; friable; 25 percent gravel; moderately acid (pH 5.6).

The Charlton series consists of very deep, well drained soils formed in loamy melt-out till. They are nearly level to very steep soils on moraines, hills, and ridges. Slope ranges from 0 to 60 percent. A typical profile associated with Charlton soils is as follows: **Oe**--0 to 4 cm; black (10YR 2/1) moderately decomposed forest plant material; **A**--4 to 10 cm; dark brown (10YR 3/3) fine sandy loam; weak fine granular structure; very friable; many fine roots; 5 percent gravel; very strongly acid; abrupt smooth boundary; **Bw1**--10 to 18 cm; brown (7.5YR 4/4) fine sandy loam; weak coarse granular structure; very friable; many fine and medium roots; 5 percent gravel; very strongly acid; clear wavy boundary; **Bw2**--18 to 48 cm; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; very friable; common fine and medium roots; 10 percent gravel and cobbles; very strongly acid; clear wavy boundary; **Bw3**--48 to 69 cm; light olive brown (2.5Y 5/4) gravelly fine sandy loam; massive; very friable; few medium roots; 15 percent gravel and cobbles; very strongly acid; abrupt wavy boundary; and **C**--69 to 165 cm; grayish brown (2.5Y 5/2) gravelly fine sandy loam with thin lenses of loamy sand; massive; friable, some lenses firm; few medium roots; 25 percent gravel and cobbles; strongly acid.

Paxton and Montauk Soils

The Paxton series consists of well drained loamy soils formed in lodgment till. The soils are very deep to bedrock and moderately deep to a densic contact. They are found on nearly level to steep soils on hills, drumlins, till plains, and ground moraines. Slope associated with these soils range from 0 to 45 percent. A typical profile associated with Paxton soils is as follows: **Ap**--0 to 20 cm; dark brown (10YR 3/3) fine sandy loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; many fine roots; 5 percent gravel; strongly acid; abrupt smooth boundary; **Bw1**--20 to 38 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; 5 percent gravel; few earthworm casts; strongly acid; gradual wavy boundary; **Bw2**--38 to 66 cm; olive brown (2.5Y 4/4) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; 10 percent gravel; strongly acid; clear wavy boundary; and **Cd**--66 to 165 cm; olive (5Y 5/3) gravelly fine sandy loam; medium plate-like divisions; massive; very firm, brittle; 25 percent gravel; many dark coatings on plates; strongly acid.

The Montauk series consists of well drained soils formed in lodgment or flow till derived primarily from granitic materials with lesser amounts of gneiss and schist. The soils are very deep to bedrock and moderately deep to a densic contact. These soils are on upland hills and moraines. Slopes associated with these soils ranges from 0 to 35 percent. A typical profile associated with Montauk soils is as follows: **Ap**--0 to 10 cm; very dark gray (10YR 3/1) loam; moderate fine granular structure; very friable; many very fine,

fine, medium, and coarse roots; 2 percent gravel, 1 percent cobbles, and 1 percent stones; extremely acid (pH 4.1); clear smooth boundary; **BA**--10 to 34 cm; brown (10YR 4/3) loam; moderate medium and coarse subangular blocky structure; friable; many fine, medium, and coarse roots; many fine and medium pores; 4 percent gravel, 1 percent cobbles, and 1 percent stones; extremely acid (pH 4.3); clear wavy boundary; **Bw1**--34 to 65 cm; dark yellowish brown (10YR 4/6) loam; moderate coarse subangular blocky structure; friable; many fine, medium, and coarse roots; many fine and medium pores; 6 percent gravel, 1 percent cobbles, and 1 percent stones; extremely acid (pH 4.3); clear wavy boundary; **Bw2**--65 to 87 cm; yellowish brown (10YR 5/6) sandy loam; moderate medium and coarse subangular blocky structure; friable; many very fine, fine, and coarse roots; many fine and medium pores; 5 percent gravel and 1 percent cobbles; extremely acid (pH 4.3); clear smooth boundary; **2Cd1**--87 to 101 cm; strong brown (7.5YR 5/6) gravelly loamy sand; moderate medium plates; firm; few fine roots; many fine pores; 10 percent gravel, 5 percent cobbles, and 1 percent stones; very strongly acid (pH 4.7); clear wavy boundary; and **2Cd2**--101 to 184 cm; dark yellowish brown (10YR 4/6) gravelly loamy sand; moderate medium plates; firm; many fine pores; 10 percent gravel, 5 percent cobbles, and 1 percent stones; strongly acid (pH 5.1).

Summary

A review of mapping, geological data, ecological conditions, soils, slopes, and proximity to freshwater suggests that portions of the Project area appear to be amenable to both precontact era and post-European Contact period occupations. This includes areas of low to moderate slopes with well-drained soil located near freshwater sources. The types of Native American sites that may be contained in these areas include task specific, temporary, or seasonal base camps, which may include areas of lithic tool manufacturing, hearths, post-molds, and storage pit.

CHAPTER III
PRECONTACT ERA SETTING

Introduction

Prior to the late 1970s and early 1980s, very few systematic archaeological surveys of large portions of the State of Connecticut had been undertaken. Rather, the precontact period of the region was studied at the site level. Sites chosen for excavation were highly visible and they were in such areas as the coastal zone, e.g., shell middens, and Connecticut River Valley. As a result, a skewed interpretation of the precontact period of Connecticut was developed. It was suggested that the upland portions of the state, i.e., the northeastern and northwestern hills ecoregions, were little used and rarely occupied by precontact Native Americans, while the coastal zone, i.e., the eastern and western coastal and the southeastern and southwestern hills ecoregions, were the focus of settlements and exploitation in the precontact era. This interpretation remained unchallenged until the 1970s and 1980s when several town-wide and regional archaeological studies were completed. These investigations led to the creation of several archaeological phases that subsequently were applied to understand the precontact period of Connecticut. The remainder of this chapter provides an overview of the precontact setting of the region encompassing the project parcel.

Paleo-Indian Period (12,000 to 10,000 Before Present [B.P.])

The earliest inhabitants of the area encompassing the State of Connecticut, who have been referred to as Paleo-Indians, arrived in the area by ca., 13,000 B.P. (Gramly and Funk 1990; Snow 1980). Due to the presence of large Pleistocene mammals at that time and the ubiquity of large fluted projectile points in archaeological deposits of this age, Paleo-Indians often have been described as big-game hunters (Ritchie and Funk 1973; Snow 1980); however, as discussed below, it is more likely that they hunted a broad spectrum of animals. While there have been over 50 surface finds of Paleo-Indian projectile points throughout the State of Connecticut (Bellantoni 1995), only three sites, the Templeton Site (6-LF-21) in Washington, Connecticut, the Hidden Creek Site (72-163) in Ledyard, Connecticut, and the Brian D. Jones Site (4-10B) in Avon, Connecticut have been studied in detail and dated using the radiocarbon method (Jones 1997; Moeller 1980; Singer 2017a; Leslie et al. 2020).

The Templeton Site (6-LF-21) is in Washington, Connecticut and was occupied between 10,490 and 9,890 years ago (Moeller 1980). In addition to a single large and two small, fluted points, the Templeton Site produced a stone tool assemblage consisting of gravers, drills, core fragments, scrapers, and channel flakes, which indicates that the full range of stone tool production and maintenance took place at the site (Moeller 1980). Moreover, the use of both local and non-local raw materials was documented in the recovered tool assemblage, suggesting that not only did the site's occupants spend some time in the area, but they also had access to distant stone sources, the use of which likely occurred during movement from region to region. More recently, the site has undergone re-investigation by Singer (2017a and 2017b), who has determined that most tools and debitage are exotic and were quarried directly from the Hudson River Valley. Recent research has focused on task-specific loci at the Templeton Site, particularly the production of numerous Michaud-Neponset projectile points, as identified through remnant channel flakes.

The Hidden Creek Site (72-163) is situated on the southeastern margin of the Great Cedar Swamp on the Mashantucket Pequot Reservation in Ledyard, Connecticut (Jones 1997). While excavation of the Hidden Creek Site produced evidence of Terminal Archaic and Woodland Period components (see below) in the upper soil horizons, the lower levels of the site yielded artifacts dating from the Paleo-Indian era.

Recovered Paleo-Indian artifacts included broken bifaces, side-scrapers, a fluted preform, gravers, and end-scrapers. Based on the types and number of tools present, Jones (1997:77) has hypothesized that the Hidden Creek Site represented a short-term occupation, and that separate stone tool reduction and rejuvenation areas were present.

The Brian D. Jones Site (4-10B) was identified in a Pleistocene levee on the Farmington River in Avon, Connecticut; it was buried under 1.5 m (3.3 ft) of alluvium (Leslie et al. 2020). The Brian D. Jones Site was identified by Archaeological and Historical Services, Inc., in 2019 during a survey for the Connecticut Department of Transportation preceding a proposed bridge construction project. It is now the oldest known archaeological site in Connecticut at +12,500 years old. The site also provides a rare example of a Paleo-Indian site on a river rather than the more common upland areas or on the edges of wetlands. Ground-penetrating radar survey revealed overbank flooding and sedimentation that resulted in the creating of a stable ancient river levee with gentle, low-energy floods. Archaeological deposits on the levee were therefore protected.

Excavations at the Brian D. Jones Site revealed 44 soil anomalies, 27 of which were characterized as cultural features used as hearths and post holes, among other uses. One hearth has been dated thus far (10,520 ± 30 14C yr BP; charred Pinus; 2-sigma 12,568 to 12,410 CAL BP) (Leslie et al. 2020:4). Further radiocarbon testing will be completed in the future. Artifact concentrations surrounded these features and were separated in two stratigraphic layers represented at least two temporally discrete Paleo-Indian occupations. The recovered lithic artifacts are fashioned from Normanskill chert, Hardyston jasper, Jefferson/Mount Jasper rhyolite, chalcedony, siltstone, and quartz (Leslie 2023). They include examples of a fluted point base, preforms, channel flakes, pièces esquillées, end scrapers, side scrapers, grinding stones, bifaces, utilized flakes, gravers, and a drilled stone pendant fragment. Lithic tools numbered over 100, while toolmaking debris was in the thousands. The channel flakes represent the production of spear points used in hunting. Scrapers, perforators, and grinding stones indicate animal butchering, plant food grinding, the production of wood and bone tools, and the processing of animal skins for clothing and tents. Other collected cultural materials included charred botanicals and calcined bone. Botanicals recovered in hearth features included burned remains of cattail, pin cherry, strawberry, acorn, sumac, water lily, and dogwood (Leslie 2023). Approximately 15,000 artifacts were collected in total.

The scarcity of identified Paleo-Indian sites suggests a low population density during this period. The small size of most Paleo-Indian sites, their likely inundation by rising sea levels, and the high degree of landscape disturbance over the past 10,000 years likely contribute to poor site visibility, although the presence of two deeply alluvially buried Paleo-Indian sites in Connecticut suggests that other sites may be located along stable rivers (Leslie et al. 2021).

Archaic Period (10,000 to 2,700 B.P.)

The Archaic Period, which succeeded the Paleo-Indian Period, began by ca., 10,000 B.P. (Ritchie and Funk 1973; Snow 1980), and it has been divided into three subperiods: Early Archaic (10,000 to 8,000 B.P.), Middle Archaic (8,000 to 6,000 B.P.), and Late Archaic (6,000 to 3,400 B.P.). These periods were devised to describe all non-farming, non-ceramic producing populations in the area. Regional archeologists recently have recognized a final “transitional” Archaic Period, the Terminal Archaic Period (3,400-2,700 B.P.), which was meant to describe those groups that existed just prior to the onset of the Woodland Period and the widespread adoption of ceramics into the toolkit (Snow 1980; McBride 1984; Pfeiffer 1984, 1990; Witthoft 1949, 1953).

Early Archaic Period (10,000 to 8,000 B.P.)

To date, very few Early Archaic sites have been identified in southern New England. As a result, researchers such as Fitting (1968) and Ritchie (1969), have suggested a lack of these sites likely is tied to cultural discontinuity between the Early Archaic and preceding Paleo-Indian Period, as well as a population decrease from earlier times; however, with continued identification of Early Archaic sites in the region, and the recognition of the problems of preservation, it is difficult to maintain the discontinuity hypothesis (Curran and Dincauze 1977; Snow 1980).

Like their Paleo-Indian predecessors, Early Archaic sites tend to be very small and produce few artifacts, most of which are not temporally diagnostic. While Early Archaic sites in other portions of the United States are represented by projectile points of the Kirk series (Ritchie and Funk 1973) and by Kanawha types (Coe 1964), sites of this age in southern New England are identified on the basis of a series of ill-defined bifurcate-based projectile points. These projectile points are identified by the presence of their characteristic bifurcated base, and they generally are made from high quality raw materials. Moreover, the recovery of these projectile points has rarely been in stratified contexts. Rather, they occur commonly either as surface expressions or intermixed with artifacts representative of later periods. Early Archaic occupations, such as the Dill Farm Site and Sites 6LF64 and 6LF70 in Litchfield County, are represented by camps that were relocated periodically to take advantage of seasonally available resources (McBride 1984; Pfeiffer 1986). In this sense, a foraging type of settlement pattern was employed during the Early Archaic Period.

Another localized cultural tradition, the Gulf of Maine Archaic, which lasted from ca. 9,500 to 6,000 14C BP, is beginning to be recognized in Southern New England (Petersen and Putnam 1992). It is distinguished by its microlithic industry, which may be associated with the production of compound tools (Robinson and Peterson 1993). Assemblages from Maine (Petersen et al. 1986; Petersen 1991; Sanger et al. 1992), Massachusetts (Strauss 2017; Leslie et al. 2022), and Connecticut (Forrest 1999) reflect the selection of local, coarse-grained stones. Large choppers and hoe-like forms from southeastern Connecticut's Sandy Hill Site likely functioned as digging implements. Woodworking tools, including adzes, celts, and gull-channeled gouges recovered at the Brigham and Sharrow sites in Maine (Robinson and Petersen 1993:68) may have been used for dugout canoe manufacture. The deeply stratified Sandy Hill (Forrest 1999; Jones and Forrest 2003) and Sharrow sites (Petersen 1991), with their overlapping lenses of "black sand" floor deposits, suggest intensive site re-occupations according to an adaptation that relied, in part, on seasonally available wetland resources. Thus far, sites from this tradition have only been identified within coastal and near-coastal territories along the Gulf of Maine, in southeastern Connecticut, and in Massachusetts.

Middle Archaic Period (8,000 to 6,000 B.P.)

By the onset of the Middle Archaic Period modern deciduous forests had developed in the region (Davis 1969). Increased numbers and types of sites associated with this period are noted in Connecticut (McBride 1984). The most well-known Middle Archaic site in New England is the Neville Site in Manchester, New Hampshire studied by Dincauze (1976). Careful analysis of the Neville Site indicated that the Middle Archaic occupation dated from between 7,700 and 6,000 years ago. In fact, Dincauze obtained several radiocarbon dates from the Middle Archaic component of the Neville Site associated with the then-newly named Neville type projectile point, ranging from 7,740±280 and 7,015±160 B.P. (Dincauze 1976).

In addition to Neville points, Dincauze (1976) described two other projectile points styles that are attributed to the Middle Archaic Period: Stark and Merrimac projectile points. While no absolute dates were recovered from deposits that yielded Stark points, the Merrimac type dated from 5,910±180 B.P.

Dincauze argued that both the Neville and later Merrimac and Stark occupations were established to take advantage of the excellent fishing that the falls situated adjacent to the site area would have afforded Native American groups. Thus, based on the available archaeological evidence, the Middle Archaic Period is characterized by continued increases in diversification of tool types and resources exploited, as well as by sophisticated changes in the settlement pattern to include different site types, including both base camps and task-specific sites (McBride 1984:96).

Late Archaic Period (6,000 to 3,700 B.P.)

The Late Archaic Period in southern New England is divided into two major cultural traditions that appear to have coexisted. They include the Laurentian and Narrow-Stemmed Traditions (Funk 1976; McBride 1984; Ritchie 1969a and b). Artifacts assigned to the Laurentian Tradition include ground stone axes, adzes, gouges, ulus (semi-lunar knives), pestles, atlatl weights, and scrapers. The diagnostic projectile point forms of this time period in southern New England include the Brewerton Eared-Notched, Brewerton Eared and Brewerton Side-Notched varieties (McBride 1984; Ritchie 1969a; Thompson 1969). In general, the stone tool assemblage of the Laurentian Tradition is characterized by flint, felsite, rhyolite, and quartzite, while quartz was largely avoided for stone tool production.

In terms of settlement and subsistence patterns, archaeological evidence in southern New England suggests that Laurentian Tradition populations consisted of groups of mobile hunter-gatherers. While a few large Laurentian Tradition occupations have been studied, sites of this age generally encompass less than 500 m^2 (5,383 ft^2). These base camps reflect frequent movements by small groups of people in search of seasonally abundant resources. The overall settlement pattern of the Laurentian Tradition was dispersed in nature, with base camps located in a wide range of microenvironments, including riverine as well as upland zones (McBride 1978, 1984:252). Finally, subsistence strategies of Laurentian Tradition focused on hunting and gathering of wild plants and animals from multiple ecozones.

The second Late Archaic tradition, known as the Narrow-Stemmed Tradition, is unlike the Laurentian Tradition, and it likely represents a different cultural adaptation. The Narrow-Stemmed Tradition is recognized by the presence of quartz and quartzite narrow stemmed projectile points, triangular quartz Squibnocket projectile points, and a bipolar lithic reduction strategy (McBride 1984). Other tools found in Narrow-Stemmed Tradition artifact assemblages include choppers, adzes, pestles, antler and bone projectile points, harpoons, awls, and notched atlatl weights. Many of these tools, notably the projectile points and pestles, indicate a subsistence pattern dominated by hunting and fishing, as well the collection of a wide range of plant foods (McBride 1984; Snow 1980:228).

The Narrow-Stemmed Tradition also marks one of the most prevalent manifestations of the archaeological record in southern New England, narrow-stemmed projectile points, often untyped, or typed as Lamoka, Wading River, or Squibnocket Stemmed forms. These are generally attributed to a form of projectile technology, but some (Boudreau 2008), have suggested that these tool forms might not be related to projectile technology, and may instead relate to graver or drill functions. Boudreau (2008) also drew important connections to the forms of these narrow-stemmed points with later Woodland era forms, such as Rossville points, which are nearly identical. Others (Lavin 2013; Zoto 2019) have similarly suggested a continuation of the Narrow-Stemmed Tradition into the Woodland era, with most of this evidence originating at coastal sites in southern New England. The vast majority of Narrow-Stemmed projectile points that are associated with cultural features suitable for radiocarbon dating, particularly Lamoka style projectile points, are associated with Late Archaic date ranges (Lavin 2013).

Terminal Archaic Period (3,700 to 2,700 B.P.)

The Terminal Archaic, which lasted from ca., 3,700 to 2,700 BP, is perhaps the most interesting, yet confusing of the Archaic Periods in southern New England precontact periods. Originally termed the "Transitional Archaic" by Witthoft (1953) and recognized by the introduction of technological innovations, e.g., broadspear projectile points and soapstone bowls, the Terminal Archaic has long posed problems for regional archeologists. While the Narrow-Stemmed Tradition persisted through the Terminal Archaic and into the Early Woodland Period, the Terminal Archaic is coeval with what appears to be a different technological adaptation, the Susquehanna Tradition (McBride 1984; Ritchie 1969b). The Susquehanna Tradition is recognized in southern New England by the presence of a new stone tool industry that was based on the use of high-quality raw materials for stone tool production and a settlement pattern different from the "coeval" Narrow-Stemmed Tradition.

The Susquehanna Tradition is based on the classification of several Broadspear projectile point types and associated artifacts. There are several local sequences within the tradition, and they are based on projectile point type chronology. Temporally diagnostic projectile points of these sequences include the Snook Kill, Susquehanna Broadspear, Mansion Inn, and Orient Fishtail types (Lavin 1984; McBride 1984; Pfeiffer 1984). The initial portion of the Terminal Archaic Period (ca., 3,700-3,200 BP) is characterized by the presence of Snook Kill and Susquehanna Broadspear projectile points while the latter Terminal Archaic (3,200-2,700 BP) is distinguished by Orient Fishtail projectile points (McBride 1984:119; Ritchie 1971).

In addition, it was during the late Terminal Archaic that interior cord marked, grit tempered, thick-walled ceramics with conoidal (pointed) bases made their initial appearance in the Native American toolkit. These are the first ceramics in the region, and they are named Vinette I (Ritchie 1969a; Snow 1980:242); this type of ceramic vessel appears with much more frequency during the ensuing Early Woodland Period. In addition, the adoption and widespread use of soapstone bowls, as well as the implementation subterranean storage, suggests that Terminal Archaic groups were characterized by reduced mobility and longer-term use of established occupation sites (Snow 1980:250).

Finally, while settlement patterns appeared to have changed, Terminal Archaic subsistence patterns were analogous to earlier patterns. The subsistence pattern was still diffuse in nature, and it was scheduled carefully. Typical food remains recovered from sites of this period consist of fragments of white-tailed deer, beaver, turtle, fish, and various small mammals. Botanical remains recovered from the site area consisted of *Chenopodium* sp., hickory, butternut, and walnut (Pagoulatos 1988:81). Such diversity in food remains suggests at least minimal use of a wide range of microenvironments for subsistence purposes.

Woodland Period (2,700 to 350 B.P.)

Traditionally, the advent of the Woodland Period in southern New England has been associated with the introduction of pottery; however, as mentioned above, early dates associated with pottery now suggest the presence of Vinette I ceramics appeared toward the end of the preceding Terminal Archaic Period (Ritchie 1969a; McBride 1984). Like the Archaic Period, the Woodland Period has been divided into three subperiods: Early, Middle, and Late Woodland. The various subperiods are discussed below.

Early Woodland Period (ca., 2,700 to 2,000 B.P.)

The Early Woodland Period of the northeastern United States dates from ca., 2,700 to 2,000 B.P., and it has thought to have been characterized by the advent of farming, the initial use of ceramic vessels, and increasingly complex burial ceremonialism (Griffin 1967; Ritchie 1969a and 1969b; Snow 1980). In the Northeast, the earliest ceramics of the Early Woodland Period are thick walled, cord marked on both the interior and exterior, and possess grit temper. Archaeological investigations of Early Woodland sites in

southern New England resulted in the recovery of narrow stemmed projectile points in association with ceramic sherds and subsistence remains, including specimens of white-tailed deer, soft and hard-shell clams, and oyster shells (Lavin and Salwen: 1983; McBride 1984:296-297; Pope 1952). McBride (1984) has argued that the combination of the subsistence remains and the recognition of multiple superimposed cultural features at various sites indicate that Early Woodland Period settlement patterns were characterized by multiple re-use of the same sites on a seasonal basis by small co-residential groups.

Middle Woodland Period (2,000 to 1,200 B.P.)

The Middle Woodland Period is marked by an increase in the number of ceramic types and forms utilized (Lizee 1994a), as well as an increase in the amount of exotic lithic raw material used in stone tool manufacture (McBride 1984). The latter suggests that regional exchange networks were established, and that they were used to supply local populations with necessary raw materials (McBride 1984; Snow 1980). The Middle Woodland Period is represented archaeologically by narrow stemmed and Jack's Reef projectile points; increased amounts of exotic raw materials in recovered lithic assemblages, including chert, argillite, jasper, and hornfels; and conoidal ceramic vessels decorated with dentate stamping. Ceramic types that are indicative of the Middle Woodland Period include Linear Dentate, Rocker Dentate, Windsor Cord Marked, Windsor Brushed, Windsor Plain, and Hollister Stamped (Lizee 1994a:200).

In terms of settlement patterns, the Middle Woodland Period is characterized by the occupation of village sites by large co-residential groups that utilized native plant and animal species for food and raw materials in tool making (George 1997). These sites were the principal place of occupation, and they were positioned close to major river valleys, tidal marshes, estuaries, and the coastline, all of which would have supplied an abundance of plant and animal resources (McBride 1984:309). In addition to villages, numerous temporary and task-specific sites were utilized in the surrounding upland areas, as well as in closer ecozones such as wetlands, estuaries, and floodplains. The use of temporary and task-specific sites to support large village populations indicates that the Middle Woodland Period was characterized by a resource acquisition strategy that can best be termed as logistical collection (McBride 1984:310).

Late Woodland Period (ca., 1,200 to 350 B.P.)

The Late Woodland Period in southern New England dates from ca., 1,200 to 350 B.P., and it is characterized by the earliest evidence for the use of corn in the lower Connecticut River Valley (Bendremer 1993; Bendremer and Dewar 1993; Bendremer et al. 1991; George 1997; McBride 1984); an increase in the frequency of exchange of non-local lithics (Feder 1984; George and Tryon 1996; McBride 1984; Lavin 1984); increased variability in ceramic form, function, surface treatment, and decoration (Lavin 1980, 1986, 1987; Lizee 1994a, 1994b); and a continuation of a trend towards larger, more permanent settlements in riverine, estuarine, and coastal ecozones (Dincauze 1974; McBride 1984; Snow 1980).

Stone tool assemblages associated with Late Woodland occupations, especially village-sized sites, are functionally variable and they reflect plant and animal resource processing and consumption on a large scale. Finished stone tools recovered from Late Woodland sites include Levanna and Madison projectile points; drills; side-, end-, and thumbnail scrapers; mortars and pestles; nutting stones; netsinkers; and celts, adzes, axes, and digging tools. These tools were used in activities ranging from hide preparation to plant processing to the manufacture of canoes, bowls, and utensils, as well as other settlement and subsistence-related items (McBride 1984; Snow 1980). Finally, ceramic assemblages recovered from Late Woodland sites are as variable as the lithic assemblages. Ceramic types identified include Windsor Fabric Impressed, Windsor Brushed, Windsor Cord Marked, Windsor Plain, Clearview Stamped, Sebonac Stamped, Selden Island, Hollister Plain, Hollister Stamped, and Shantok Cove Incised (Lavin 1980, 1988a, 1988b; Lizee 1994a; Pope 1953; Rouse 1947; Salwen and Ottesen 1972; Smith 1947). These types are

more stylistically diverse than their predecessors with incision, shell stamping, punctation, single point, linear dentate, rocker dentate stamping, and stamp and drag impressions common (Lizee 1994a:216).

Summary of Connecticut Precontact Period

The precontact period of Connecticut spans from ca. 13,000 to 350 B.P., and it is characterized by numerous changes in tool types, subsistence patterns, and land use strategies. Much of this era is characterized by local Native American groups who practiced a subsistence pattern based on a mixed economy of hunting and gathering plant and animal resources. It is not until the Late Woodland Period that incontrovertible evidence for the use of domesticated species is available. Further, settlement patterns throughout the precontact period shifted from seasonal occupations of small co-residential groups to large aggregations of people in riverine, estuarine, and coastal ecozones. In terms of the region that includes the proposed Project area, a variety of precontact site types may be expected, ranging from seasonal camps utilized by Paleo-Indian and Archaic populations to temporary and task-specific sites of the Woodland era.

CHAPTER IV
POST-EUROPEAN CONTACT PERIOD OVERVIEW

Introduction

The proposed Project area is located in the northeastern portion of the town of Stonington in New London County. Stonington's historical development was focused toward the coast, leaving the area containing the project parcel relatively undeveloped even to the present day. The remainder of this chapter presents an overview history of the town of Stonington augmented by details specific to the Project parcel.

Contact Era and Native American History of the Town of Stonington

The town of Stonington lies within the region taken from the Pequot Tribe in 1636-1637, during a war waged against them by the alliance of the Massachusetts Bay Colony, Connecticut Colony, and the Mohegan Native Americans. At that time, the main settlements of the Pequots were located in the what is now the neighboring town of Groton. One of these settlements consisted of a fort situated on the heights "a little southeast of Fort [G]riswold," where the sachem named Sassacus resided. The other was located near the Mystic river, which is the locations at which the Pequots were attacked in an assault led by Captain John Mason in 1637 (Barber 1837:311). According to historical reports, Sassacus and his people destroyed their other fort before the alliance could attack them. They then fled the area; however, Sassacus was eventually captured and killed.

After the war, the surviving members of the Pequot tribe were divided among the victorious participants, including both the colonists and Mohegans. The colonists sold many of their prisoners into slavery in the Caribbean, while others were taken by Uncas and blended into the Mohegan Tribe. Although the colonists expected that the Pequot community would cease to exist, two groups of Pequots reconstituted themselves over time. They were granted reservation lands in what are now Ledyard and North Stonington. The Mashantucket Pequots settled on the reservation lands in Ledyard, while the Eastern Pequots occupied the North Stonington reservation. During the later twentieth century, the Mashantucket Pequot (Ledyard) group successfully took advantage of Federal laws regarding Native Americans to secure federally recognized status, which they have in turn used to establish a major casino and related commercial activity in Ledyard (Hauptman and Wherry 1990).

The Mohegan tribe of Native Americans was based in what is now the town of Montville and areas further to the north. After the war, their leader, Uncas, successfully used English ideas about monarchial sovereignty to claim much of northern New London County as his personal property. In 1659, he sold approximately nine square miles of land to English colonists, which became the town of Norwich (Crofut 1937; Guilette 1979). Over time, he and his heirs also sold or lost most of the remaining land, but the community managed to hold on to some of it. In the late twentieth century, like the Mashantucket Pequot Tribal Nation, the Mohegan community succeeded in gaining Federal recognition and also established a major casino and related commercial activity in Montville, where their reservation is also located.

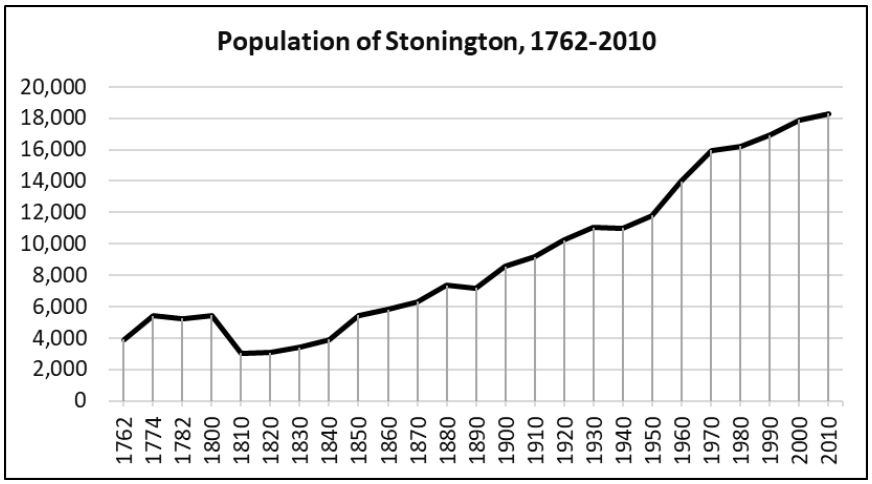
Colonial Period History of the Town of Stonington (to 1790)

As a result of the joint nature of the Pequot War, the question of which colony, Connecticut or Massachusetts, would have jurisdiction over the conquered area was a problem. This was resolved in 1658 when the coastal land was divided at the Mystic River, with Connecticut keeping the west side and Massachusetts Bay receiving the east side. As a result, the Stonington area was part of the Massachusetts Bay Colony for several decades and known during that time as Southerton, and some of its earliest land

records are recorded in the records of Suffolk County, Massachusetts. An additional complication was that in 1641, before the inter-colony agreement, Connecticut surveyed the conquered land and made several grants of land in it to individuals, including a man named William Chesebrough in 1652; that land is now the borough of Stonington (incorporated 1801). The royal Charter granted to the Connecticut Colony in 1662 extended the colony's boundary eastward to the Pawcatuck River, thus bringing the section east of the Mystic River back within Connecticut Colony's control. In 1665, the General Court of Connecticut changed the name of the colonial town to Mistick, then changed it again to Stonington in 1666 (Crofut 1937).

The historic village located at the head of Mystic began to form after 1660, and when the first Congregational meeting house was built there in 1673, it was arguably closer to the historic ferry than to any other point in the town. In 1674, a grist mill was built on the Mystic River above the falls. A fulling mill was built by James Dean Jr., in 1720 on what is now called Copps Brook, which in 1807 became the first modern textile mill in Stonington. By 1700, the "Head O' the River" hosted 12 families, three grist mills, a blacksmith shop, a sawmill, the church, three formally laid out roads, and the ferry. After 1700, numerous additional families and businesses appeared in Stonington, including grist mills on Mill Brook and Stony Brook and a short-lived turning mill (to make wooden items for the ship trade) on Red Brook.

The growing village included a school house in 1751, and in 1753, Benjamin Franklin laid out the Lower Post Road (later Route 1) through Old Mystic. The remainder of the eighteenth century witnessed the development of additional businesses: two or three tanneries, a tavern, a doctor's office, at least two hatter's shops, a store, two shipyards, and another grist mill. A 1762 census of the colony recorded 3,900 people in the town of Stonington, including 254 African Americans and 309 Native Americans; thus, the town was 85 percent of European descent in that year (Greenhalgh 1999). By 1782, Stonington was an even more substantial town, with a population of 5,245 residents that made it the sixth-largest in Connecticut (see the population chart below; Keegan 2012).



Early National and Industrializing Period History of the Town of Stonington (1790 to 1930)

As seen in the chart above, the population of Stonington in 1790 is not available, reflecting the fact that census records for this year were lost. In 1800, Stonington reported 5,437 residents; then, in the 1810 census, there were only 3,043 residents. This can be accounted for by the splitting of Stonington into two separate towns in 1807, North Stonington and Stonington. It was at this time that the town's population dipped to a significant low point. Unlike in many other Connecticut towns, Stonington's population held

steady through 1830 and then began a consistent growth trend to 5,431 residents in 1850, 8,540 residents in 1900, and 11,025 residents in 1930 (see the population chart above; Keegan 2012). This growth can best be attributed to the town's coastal location and transportation links.

In 1818, the Groton and Stonington Turnpike Company was chartered to build a turnpike along the Old Post Road between Groton Ferry and the Head of Mystic. This road became an important link in the stagecoach and mail route between New London, Providence, and Boston. It survived as an enterprise until the Shore Line Railroad opened in 1852; the turnpike company dissolved the next year. During the pre-railroad days, turnpikes were an important part of early United States efforts to promote road improvement for the benefit of travel and trade; by granting franchises to private companies, state governments did not have to spend any money, but users of the roads paid tolls to the companies (Wood 1919). Unlike the turnpike, which was further to the north, the railroads passed through lower Mystic along the shore line (Turner and Jacobus 1989). As a result, the economic benefits of rail access also shifted to the south, leaving Old Mystic to become a relatively less important part of the town's economic life.

As in other towns, many of Stonington's residents were engaged in agriculture at the beginning of the nineteenth century. According to an 1819 gazetteer of the state, the "leading agricultural interest" was dairy products; however grain crops were significant in this area (Pease and Niles 1891:165). Many other residents were engaged in fishing or in trade, with ships totaling 1,100 tons based in the town. Despite a relative lack of mill streams, the town also had three textile mills in operation as of 1819. Much of Stonington's prosperity derived from the presence of Stonington Borough, located on the coast in the southeastern corner of the town. The above-referenced gazetteer reported that Stonington had 120 "dwelling houses and stores," two churches, two elementary schools and an academy, two rope walks, and multiple wharves and warehouses. The fishing business in town included cod, mackerel, and also seals (Pease and Niles 1819:165).

By 1837, the coastal section of Stonington contained over 1,000 residents, as well as 150 houses and stores, a bank, two churches, and two academies for secondary education. Commerce in this part of town was centered around sealing and whaling (Barber 1837). The borough also benefited from the fact that the first section of railroad in Connecticut opened from Stonington to Providence in 1837, with steamboats initially providing the link from Stonington to New York City. The westward section was not built until the New Haven, New London & Stonington Railroad was created in 1856; the connection between Groton and Stonington opened in 1858, with a ferryboat crossing the Thames River between Groton and the New London end of the New Haven & New London Railroad (Turner and Jacobus 1989).

The other important settlement foci in Stonington were at Lower Mystic (located on Long Island Sound) and at "the head of Mystic," previously mentioned, where the Mystic River narrows (Barber 1837). Numerous, mostly short-lived manufacturing enterprises were developed in Stonington during the nineteenth century. These ranged from textiles to firearms to soap producers (Hurd 1882). In the 1850 Federal industrial census, the 92 firms listed in Stonington included several types of businesses that are usually found in urban areas, including tailors, milliners, bakers, coopers, and livery stables. Most of these, presumably, were in the Stonington borough area. The census marshal also included the whale fishery, which may have been an error in his part; however, that records indicates that there were 24 whaling vessels in Stonington as of 1850, as well as two vessels employed in the cod fishery. There were also four shipwrights, one boat builder, and two sailmakers listed. Beyond these, there were also cabinet makers, lumber planing machines, a carriage maker, six textile mills, an iron foundry, and an ice-making firm, among others (United States Census 1850b).

The first ecclesiastical division in Stonington was between the south and the north societies of the Congregational Church. The latter formed the new town of North Stonington in 1807, the only change of its boundaries that Stonington has seen. In the southern part of the town, the churches were at first mainly at Long Point, now known as Stonington Borough; a Methodist Episcopal Church was organized in Old Mystic in 1824, and another in Mystic in 1835. The Old Mystic church received a minister in 1826 and finally built their own church building in 1849. Just two years later it burned down and was rebuilt, and as of 1900 was still being used after major renovations in preceding decades. In 1833, a separate Congregational church was established in the Stonington borough area, leaving the more northerly First Congregational Church to serve the villages of Mystic and Old Mystic (Wheeler 1900). The railroad had, by the time of the 1868 historical map had been extended westward to cross the whole town. The visible changes in the town are consistent with the increases in Stonington's population during the latter part of the nineteenth century, which were noted above.

Modern History of the Town of Stonington (1930 to Present)

During and after the Great Depression, Stonington's population growth stalled, but between 1950 and 1970 the town saw its period of most rapid growth, going from 11,801 residents to 15,940 residents in those two decades. Slower but steady growth continued after that, so that the town's population included 18,293 residents as of 2010 (see the population chart above; Keegan 2012). At the beginning of this period, in 1932, a state report indicate that Stonington's manufacturing operations included that of machinery, printing presses, and textiles. In addition, agriculture was still a going concern among some townspeople (Connecticut 1932).

Stonington changed a great deal during the twentieth century. One of the more important developments was the Connecticut Turnpike, which opened in 1958 after a planning process that had begun in 1944, and was later renamed Interstate 95 (Oglesby 2014). It seems very likely that the quick rise in Stonington's population between 1950 and 1970 is related to both the highway opening and the national trend toward suburban residence that had begun after World War II. As of 2005, agriculture employed only 1.8 percent of the town's workers and manufacturing employed 13.1 percent, while trade and services employed over 57 percent (CERC 2006). This is largely consistent with the economic development of Connecticut and the United States as a whole. As Stonington's population continues to grow, albeit slowly, additional residential and commercial development is possible in the vicinity of the Project area.

History of the Project Area

The Jeremy Hill Solar Project is located at the border between Stonington and North Stonington in New London County, Connecticut. The nineteenth century mapping shows the rural nature of the Project area. According to the 1854 New London County map, there were no property owners noted within the boundaries of the Project area (Figure 3). There were some property owners in this part of Stonington; however, most of them were located along the established roads at the time. The closest property owner to the Project parcel was Latham Hull Jr. in North Stonington, a farmer (Figure 3; USCB 1850). The mapping from 1868 no longer notes Latham Hull Jr., likely because it only notes property owners within Stonington and not those in North Stonington (Figure 4). No property owners were listed in proximity to the Project parcel, yet an unlabeled stream was depicted along the eastern border of the project area.

Aerial photography of the Project area suggests the reforestation of the land over time, including the project area. The 1934 Fairchild Aerial Survey shows the Project parcel was primarily open agricultural fields, located to the west of Jeremy Hill Road (Figure 5). The stream and an area of wetlands can be seen to the east of the Project parcel. By 1951, the central portion of the Project area was beginning to become reforested, as was some of the land beyond the boundaries of the Project parcel (Figure 6). In 2004, the

photography suggests the entirety of the Project area was reforested, as was the landscape to the east and west of the Project area (Figure 7). There were signs of residential development along Jeremy Hill Road and to the north of the parcel as well. One area of open agricultural land remained to the southwest of the Project area. Few further changes were evident by 2019 (Figure 8).

Conclusions

The post-European Contact period investigation indicates that the proposed Jeremy Hill Solar Project has the potential to be associated with cultural resources. In the portion that was agricultural fields, there is the possibility of encountering evidence of post-European Contact period farming activities or stone walls that may be important as a component of a rural historic landscape (*sensu* McClelland et al. 1999). In addition, the presence of a stream along the eastern boundary of the parcel suggests the possibility of encountering post-European Contact period cultural resources related to riverine activities.

CHAPTER V
PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous archaeological research completed within the vicinity of the Project area in Stonington, Connecticut. This discussion provides the comparative data necessary for assessing the results of the current Phase IB cultural resources reconnaissance survey, and it ensures that the potential impacts to all previously recorded cultural resources located within and adjacent to the Project area are taken into consideration. Specifically, this chapter reviews previously identified archaeological sites and National/State Register of Historic Places properties situated in the Project region (Figures 9 and 10). The discussions presented below are based on information currently on file at the CT-SHPO in Hartford, Connecticut. In addition, the electronic site files maintained by Heritage were examined during this investigation. Both the quantity and quality of the information contained in the original cultural resources survey reports and State of Connecticut archaeological site forms are reflected below.

Previously Identified Cultural Resources Within the Vicinity of the Project Areas

A review of previously recorded cultural resources on file with the CT-SHPO revealed that there are six previously recorded archaeological site located within 1.6 km (1 mi) of the Project area (Figure 9). This review also revealed that there is are no listed NRHP or State Register of Historic Places (SHRP) properties within 1.6 km (1 mi) of the Project area (Figure 10). These resources are described below.

Site 137-27

Site 137-27 is also known as, Leges on Jermey Hill, is located along the southern boundary of the Project area. The site is classified as a precontact era Native American site from an unknown time period. The site was listed as surface collected in the 1940s by Fred Birkbeck and others. The site from was filled out in 1991 and simply states "Fred Birbeck found [Native American] artifacts here, however nothing is documented." The temporal affiliation of the artifacts or the type of assemblage present within the site remains unknown. It is unclear if this site was assessed applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). Due to the site being located proximate to the Project area, survey of the southern limits of the Project area are warranted.

Site 102-36

Site 102-36, which is also known as the Rt. 184 Site, is located in North Stonington, Connecticut (Figure 9). It was classified as a precontact era Native American site from an unknown time period. It was surface collected in the 1940s by Louis Bayer, Fred Birbeck along with others. The site form was submitted in 1991 by K. Hoy in affiliation with the University of Connecticut. The form states that numerus artifacts were collected from the site, but beyond quartz points, a biface, and a scraper the artifact types could not be identified. The artifacts, which were held by Louis Bayer, were last seen in photos. Site 102-36 has not been assessed applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). The site is located well way from the Project area; it will not be impacted by the proposed construction.

Site 102-18

Site 102-18, which is also referred to as the Brown Farm Site, is located on along a dirt road off Route 201 in North Stonington, Connecticut (Figure 9). The site was classified as a precontact era Native American site associated with an unknown time period. It was surface collected in the 1940s by Louis Bayer. The site form was submitted in 1991 by K. Hoy of the University of Connecticut. The site form states that

"various artifacts were found here but none which Mr. Bayer could remember specifically." Site 102-18 has not been assessed applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). The site is located well way from the Project area; it will not be impacted by the proposed construction.

Site 102-111

Site 102-111, which is also known as the RS 3 Site, is located on private land to the west of Jeremy Hill Road in North Stonington, Connecticut (Figure 9). The site was identified in 2005 during a Phase IB survey conducted by Northeastern Archaeology Consultants. The artifact assemblage recovered from the site included 15 lithic flakes that originated from undisturbed stratified soils. As a result, the site was classified as a precontact era Native American occupation dating from an unknown time period. Site 102-111 has not been assessed applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). The site is located well way from the Project area; it will not be impacted by the proposed construction.

Site 102-110

Site 102-110, which is also known as Site RS 1, is located on private land to the west of Jermey Hill Road in North Stonington, Connecticut (Figure 9). It was identified by Northeastern Archaeology Consultants in 2005 during a Phase IB survey. It was classified as a precontact era Native American occupation dating from an unknown time period; it consisted of an intact hearth feature with charcoal and fire cracked rock recovered. Site 102-110 has not been assessed applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). The site is located well way from the Project area; it will not be impacted by the proposed construction.

Site 102-112

Site 102-112, also referred to as the Stone Foundation Site, is located west of Jeremy Hill Road in Stonington, Connecticut (Figure 9). The site was classified as a post-European Contact period site from an unknown time period. The site was defined by a stone foundation, with the recovered artifacts consisting of a single cut nail, 1 amber threaded bottle lip. The site was documented and tested during a Phase IB survey in 2005 conducted by Northeastern Archaeology Consul. Site 102-112 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). It is located approximately well way from the Project area; it will not be impacted by the proposed construction.

CHAPTER VI
METHODS

Introduction

This chapter describes the research design and field methods used to complete the Phase IB cultural survey of the archaeologically sensitive area within the Project area in Stonington, Connecticut. In addition, the location and point-of-contact for the Project at which all cultural material, drawings, maps, photographs, and field notes generated during survey will be curated is provided below.

Research Design

The current Phase IB cultural resources reconnaissance survey was designed to identify all precontact er Native American and post-European Contact period cultural resources located within the identified moderate/high archaeologically sensitive areas in the Project area. Fieldwork for the survey was comprehensive in nature and project planning considered the distribution of previously recorded archaeological sites located near the Project area, as well as an assessment of the natural qualities of the proposed Project area. The methods used to complete this investigation were designed to provide complete coverage of all archaeologically sensitive portions of the Project area. This undertaking entailed pedestrian survey, systematic subsurface testing, detailed mapping, and photo-documentation.

Field Methods

Following the completion of all desktop background research, the identified moderate/high archaeologically sensitive areas were subjected to a Phase IB cultural resources reconnaissance survey utilizing pedestrian survey, photo-documentation, GPS recordation, and systematic shovel testing. The field strategy was designed such that the entirety of the archaeologically sensitivity areas were. The pedestrian survey portion of this investigation included visual reconnaissance of all of the archaeologically sensitive areas, as well as photo-documentation.

The subsurface examination was completed through the excavation of shovel tests at 30 meter (98 foot) intervals along survey transects positioned 30 meters (98 feet) apart throughout the archaeologically sensitive areas. Each shovel test measured 50 x 50 centimeters (19.7 x 19.7 inches) in size, and each was excavated until glacially derived C-Horizon or immovable object (e.g., boulders, large tree roots) were encountered. Each shovel test was excavated in 10 centimeters (3.9 inches) arbitrary levels within natural strata, and the fill from each level was screened separately. All shovel test fill was screened through 0.635-centimeter (0.25 inch) hardware cloth. Soil characteristics were recorded in the field using Munsell Soil Color Charts and standard soils nomenclature. Each shovel test was backfilled after it was fully documented.

Curation

Following the completion and acceptance of the Final Report of Investigations, all cultural material, drawings, maps, photographs, and field notes will be curated with:

Dr. Sarah Sportman
Office of Connecticut State Archaeology
Box U-1023
University of Connecticut
Storrs, Connecticut 06269

CHAPTER VII
RESULTS OF THE INVESTIGATION & MANAGEMENT RECOMMENDATIONS

Introduction

This chapter presents the results of the Phase IB cultural resources reconnaissance survey of moderate/high archaeological sensitivity areas associated with the proposed Project along Jermey Hill Road in Stonington, Connecticut (Figure 11 and Photos 1 through 4). As discussed in Chapters I and IV, the Phase IB survey included pedestrian survey, augmented by systematic shovel testing and photo-documentation throughout the limits of the moderate/high archaeological sensitivity portions of the Project area (Figure 11). The results of the Phase IB survey effort is presented below.

Results of Phase IB Cultural Resources Reconnaissance Survey

As stated earlier, the proposed Project area encompasses approximately 18.5 acres of land situated at elevations ranging from 81 to 91 meters (265 to 298 feet) NGVD. It is bounded by agricultural land, forested areas, and residential development in all four cardinal directions. The survey area is located on the western side of Jeremy Hill Road in Stonington, Connecticut. Pedestrian survey of the Project area revealed that large portions of it were characterized level to low sloping topography, well-drained soil, and mixed deciduous forest and fallow agricultural fields. This along with the presence of a previously identified archaeological site described in Chapter V, Site 137-27, indicated that large portions of the Project area retained moderate/high archaeological sensitivity and subsurface testing was required.

During the Phase IB subsurface testing, 74 of 74 (100 percent) planned shovel tests were excavated throughout the archaeological sensitive portions of the Project area. They were spaced at 30 meters (98 foot) intervals along parallel transects located 30 meters (98 feet) apart (Figure 11). A typical shovel test excavated within the Project area exhibited three soil horizons in profile and reached a depth of 55 centimeters below surface (cmbs) (21 inches below surface [inbs]). The first soil horizon was classified as an Ap-Horizon (plowzone) that consisted of a deposit of brown (10YR 4/3) sandy loam that extended from 0 to 20 cmbs (7.8 inbs). The underlying B-Horizon subsoil reached from 20 to 34 cmbs (7.8 to 13 inbs) and was characterized as a layer of yellowish brown (10YR 5/6) sandy clay loam. Finally, the glacially derived C-Horizon was defined by light olive brown (2.5Y 5/4) sandy clay loam and extended from 34 cmbs to the base of the test pit at 55 cmbs (13 to 21 inbs).

Of the 74 excavated shovel tests, only one) yielded cultural material. Shovel test T5-STP1 produced a single base sherd of blue and white salt glazed stoneware plate with scratch decoration. The stoneware sherd was recovered from the disturbed Ap-Horizon (plowzone) and laboratory analysis indicated that it dated from ca., 1744 to 1775. While the stoneware sherd suggests early use of the area, the lack of affiliated associated artifact concentrations, subsurface cultural features, or above ground architectural features suggested that the stoneware sherd was an isolated find. As a result, it lacks research potential and was assessed as not eligible for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological investigation of the isolated find is recommended prior to Project construction.

Finally, despite careful testing, no evidence of cultural material or features associated the previously identified Site 137-27 was identified during the Phase IB investigation of the Project area. The site was documented as a precontact era site from an unknown time period. Nor was any other precontact era Native American cultural material recovered from any other portions of the Project area during the Phase

IB subsurface testing effort. As a result, no additional archaeological investigation in the vicinity of Site 137-27 or the remainder of the Project area is recommended prior to construction.

BIBLIOGRAPHY

AdvanceCT and CTData Collaborative

2023a Stonington, Connecticut, CERC Town Profile 2023. https://s3-us-west-2.amazonaws.com/cerc-pdfs/2023/Stonington.pdf, accessed March 1, 2024.

AdvanceCT and CTData Collaborative

2023b North Stonington, Connecticut, CERC Town Profile 2023. https://s3-us-west-2.amazonaws.com/cerc-pdfs/2023/North-Stonington.pdf, accessed March 1, 2024.

Allyn, Charles

1882 *The Battle of Groton Heights: A Collection of Narratives, Official Reports, Records, Etc of the Storming of Fort Griswold.* H.O. Houghton and Company, Cambridge, MA.

Avery, John

1901 *History of the Town of Ledyard, 1650-1900*. Noyes & Davis, Norwich, CT.

Barber, John Warner

1836 *Connecticut Historical Collections*. Hamlen, New Haven, CT.

Barry, Ann P.

1985 *Connecticut Towns and their Establishment*. Connecticut State Library, Hartford, CT.

Beers, F. W.

1868 *Atlas of New London County, Connecticut*. F. W. Beers, A. D. Ellis & G. G. Soule, New York, NY.

Bellantoni, Nicholas

1995 Distribution of Paleoindian Cultural Material in Connecticut. Paper presented at the Archaeological Society of Connecticut Annual Spring Meeting.

Bendremer, Jeffrey C.

1993 *Late Woodland Settlement and Subsistence in Eastern Connecticut*. Ph.D. Dissertation, Department of Anthropology, University of Connecticut, Storrs, CT.

Bendremer, Jeffrey C. and Robert E. Dewar

1993 The Advent of Maize Horticulture in New England. In *Corn and Culture in the Prehistoric New World.* Ed. by Sissel Johannessen and Christine A. Hastorf. Westview Press, Boulder, CO.

Bendremer, Jeffrey C., Elizabeth A. Kellogg and Tonya B. Largy

1991 A Grass-Lined Storage Pit and Early Maize Horticulture in Central Connecticut. *North American Archaeologist* 12(4):325-349.

Boudreau, Jeff

2008 Rethinking Small Stemmed Points. *Bulletin of the Massachusetts Archaeology Society* 69 (1): 12 – 18.

2016 *A New England Typology of native American Projectile Points: Expanded Edition*. Alpha Graphics.

Brickner, Roger K.
2020 Timeline of Events from "The Long Island Express: Tracking the Hurricane of 1938." National Weather Service. https://www.weather.gov/okx/1938HurricaneHistory, accessed May 10, 2023.

Calabretta, Fred
2013 "They came here as fisherman…" *Connecticut Explored*. Fall:38-43.

Caulkins, Frances Manwaring
1852 *History of New London, Connecticut: From the first survey of the coast in 1612, to 1852.* Press of Case, Tiffany & Co., Hartford, CT.

Cave, Alfred A.
1996 *The Pequot War*. University of Massachusetts Press, Amherst, MA.

Coe, Joffre Lanning
1964 The Formative Cultures of the Carolina Piedmont. *Transactions of the American Philosophical Society*, Vol. 54, Part 5. Philadelphia, PA.

Connecticut Department of Transportation (CT DOT)
2004 Connecticut Statewide Aerial Photograph Series. CT DOT, Newington, CT.

Connecticut Environmental Conditions Online (CT ECO)
2019 *Connecticut 2019 Orthophotography.* University of Connecticut, Connecticut Environmental Conditions Online, Storrs, Connecticut. http://www.cteco.uconn.edu/data/flight2019/, accessed June 15, 2022.

Connecticuthistory.org
2013 "North Stonington: Shunock River and Local Ambitions Powered a 19th-century Mill Town." https://connecticuthistory.org/north-stonington-shunock-river-and-local-ambitions-powered-a-19th-century-mill-town/, accessed March 9, 2024.

Connecticut, State of
1932 *State Register and Manual*. State of Connecticut, Hartford, CT.

2023 *State Register and Manual*. State of Connecticut, Hartford, CT.

2024a "Population of Connecticut Towns 1756-1820," Office of the Secretary of the State Denise W. Merrill. https://portal.ct.gov/SOTS/Register-Manual/Section-VII/Population-1756-1820, accessed March 1, 2024.

2024b "Population of Connecticut Towns 1830-1890," Office of the Secretary of the State Denise W. Merrill. https://portal.ct.gov/SOTS/Register-Manual/Section-VII/Population-1830---1890, accessed March 1, 2024.

2024c "Population of Connecticut Towns 1900-1960," Office of the Secretary of the State Denise W. Merrill. https://portal.ct.gov/SOTS/Register-Manual/Section-VII/Population-1900-1960, accessed March 1, 2024.

2024d "Population of Connecticut Towns 1970-2010," Office of the Secretary of the State Denise W. Merrill. https://portal.ct.gov/SOTS/Register-Manual/Section-VII/Population-1970-2010, accessed March 1, 2024.

Crofut, Florence

1937 *Guide to the History and Historic Sites of Connecticut*, vol. 1. Yale University Press, New Haven, CT.

Curran, Mary Lou and Dena F. Dincauze

1977 Paleo-Indians and Paleo-Lakes: New Data from the Connecticut Drainage. In *Amerinds and their Paleoenvironments in Northeastern North America.* Annals of the New York Academy of Sciences 288:333-348.

Davis, Margaret B.

1969 Climatic changes in southern Connecticut recorded by Pollen deposition at Rogers Lake. *Ecology* 50:409-422.

De Forest, John W.

1852 *History of the Indians of Connecticut from the Earliest Known Period to 1850*. Wm. Jas. Hamersley, Hartford, CT.

DeLuca, Richard

2011 *Post Roads & Iron Horses: Transportation in Connecticut from Colonial Times to the Age of Steam.* Wesleyan University Press, Middletown, CT.

Dincauze, Dena F.

1974 An Introduction to Archaeology in the Greater Boston Area. *Archaeology of Eastern North America* 2(1):39-67.

1976 *The Neville Site: 8000 Years at Amoskeag.* Peabody Museum Monograph No. 4. Cambridge, MA.

Dowhan, Joseph J., and James Craig

1976 *Rare and Endangered Species of Connecticut and Their Habitats*. State Geological Natural History Survey of Connecticut Department of Environmental Protection, Report of Investigations No. 6.

Fairchild Aerial Surveys

1934 Connecticut Statewide Aerial Photograph Series. Connecticut State Archives, Hartford, CT.

Feder, Kenneth

1984 Pots, Plants, and People: The Late Woodland Period of Connecticut. *Bulletin of the Archaeological Society of Connecticut* 47:99-112.

Fitting, James E.
1968 The Spring Creek Site. In *Contributions to Michigan Archaeology*, pp. 1-78. Anthropological Papers No. 32. Museum of Anthropology, University of Michigan, Ann Arbor, MI.

Forrest, Dan T.
1999 Beyond presence and absence: Establishing diversity in Connecticut's Early Holocene archaeological record. *Bulletin of the Archaeological Society of Connecticut*, 62:79-99.

Funk, R.E.
1976 *Recent Contributions to Hudson Valley Prehistory.* New York State Museum Memoir 22. Albany, NY.

George, David
1997 A Long Row to Hoe: The Cultivation of Archaeobotany in Southern New England. *Archaeology of Eastern North America* 25:175 – 190.

George, David and Christian Tryon
1996 *Lithic and Raw Material Procurement and Use at the Late Woodland Period Cooper Site, Lyme, Connecticut*. Paper presented at the joint meeting of the Archaeological Society of Connecticut and the Massachusetts Archaeological Society, Storrs, CT.

Goddard, Ives
1978 *Handbook of North American Indians,* V. 17, Languages. Smithsonian Institution, Washington, D.C.

Greenhalgh, Kathleen
1999 *A History of Old Mystic, 1600-1999*. N.p.: by the author.

Griffin, James B.
1967 Eastern North America Archaeology: A Summary. *Science* 156(3772):175-191.

Hauptman, Laurence M. and James D. Wherry (editors)
1990 *The Pequots in Southern New England: The Fall and Rise of an American Indian Nation*. University of Oklahoma Press, Norman, OK.

Herzan, John
1997 *Eastern Coastal Slope: Historical and Architectural Overview and Management Guide*. Historic Preservation in Connecticut, Volume V. Connecticut Historical Commission, Hartford, CT.

Hines, Blaikie
2002 *Civil War: Volunteer Sons of Connecticut.* American Patriot Press, Thomaston, ME.

Hoadly, Charles J.
1887 *The Public Records of the Colony of Connecticut,* Volume 14. Case, Lockwood & Brainard Company, Hartford, CT.

Hurd, D. Hamilton
1882 *History of New London County, Connecticut, With Biographical Sketches of Many of Its Pioneers and Prominent Men.* J.W. Lewis & Co., Philadelphia, PA.

Jacobs, Jaap
2009 *The Colony of New Netherland: A Dutch Settlement in Seventeenth-Century America.* Cornell University Press, Cornell, NY.

Jones, Brian D.
1997 The Late Paleo-Indian Hidden Creek Site in Southeastern Connecticut. *Archaeology of Eastern North America* 25:45-80.

Jones, Brian D., and Dan T. Forrest
2003 Life in a Postglacial Landscape: Settlement-Subsistence Change During the Pleistocene-Holocene Transition in Southern New England. In *Geoarchaeology of Landscapes in the Glaciated Northeast*, edited by David L. Cremeens and John P. Hart, pp. 75-89. New York State Museum Bulletin 497. University of the State of New York, The State Education Department, Albany, NY.

Lavin, Lucianne
1980 Analysis of Ceramic Vessels from the Ben Hollister Site, Glastonbury, Connecticut. *Bulletin of the Archaeological Society of Connecticut* 43:3-46.

1984 Connecticut Prehistory: A Synthesis of Current Archaeological Investigations. *Archaeological Society of Connecticut Bulletin* 47:5-40.

1986 *Pottery Classification and Cultural Models in Southern New England Prehistory*. North American Archaeologist 7(1):1-12.

1987 The Windsor Ceramic Tradition in Southern New England. *North American Archaeologist* 8(1):23-40.

1988a Coastal Adaptations in Southern New England and Southern New York. *Archaeology of Eastern North America*, Vol.16:101-120.

1988b The Morgan Site, Ricky Hill, Connecticut: A Late Woodland Farming Community in the Connecticut River Valley. *Bulletin of the Archaeological Society of Connecticut* 51:7-20.

2013 *Connecticut's Indigenous Peoples: What Archaeology, History, and Oral Traditions Teach Us About Their Communities and Cultures*. Yale University Press, New Haven, CT.

Lavin, Lucianne, and Bert Salwen
1983 The Fastener Site: A New Look at the Archaic -Woodland Transition in the Lower Housatonic Valley. *Bulletin of the Archaeological Society of Connecticut* 46:15-43.

Lavin, Lucianne and Lyent W. Russell
1984 Connecticut Prehistory: A Synthesis of Current Investigations. *Bulletin of the Archaeological Society of Connecticut* 47:5-40.

1985 Excavations of the Burwell-Karako Site: New Data on Cultural Sequences and Artifacts Typologies in Southern New England. *Bulletin of the Archaeological Society of Connecticut* 48: 45-87.

Leslie, David E., Sarah P. Sportman, and Brian D. Jones
2020 The Brian D. Jones Site (4-10B): A Multi-Component Paleoindian Site in Southern New England. *PaleoAmerica* 6(2):199-203.

Leslie, David E., Zachary L.F. Singer, William B. Ouimet, and Peter A. Leach
2021 Deeply Buried Pleistocene Landscapes and the Search for Paleoindian Sites in the Northeast. *Bulletin of the Archaeological Society of Connecticut*, 83:87-101.

Leslie, David E., Zachary L.F. Singer, G. Logan Miller, Katharine R. Reinhart, and Brian D. Jones
2022 Gulf of Maine Archaic Tradition Occupations at the Edgewoods Apartment Site, Plainville, Massachusetts. *Archaeology of Eastern North America*, 50:1-29.

Lizee, Jonathan.
1994a *Prehistoric Ceramic Sequences and Patterning in southern New England: The Windsor Tradition*. Unpublished Ph.D. dissertation, Department of Anthropology, University of Connecticut, Storrs, CT.

1994b *Cross-Mending Northeastern Ceramic Typologies.* Paper presented at the 1994 Annual Meeting of the Northeastern Anthropological Association, Geneseo, NY.

Marshall, Benjamin Tinkham (Editor)
1922 *A Modern History of New London County Connecticut, Vol. I.* Lewis Historical Publishing Company, NY.

McBride, Kevin
1978 Archaic Subsistence in the Lower Connecticut River Valley: Evidence from Woodchuck Knoll. *Man in the Northeast* 15 & 16:124-131.

1984 *Prehistory of the Lower Connecticut River Valley*. Ph.D. Dissertation, Department of Anthropology, University of Connecticut, Storrs, CT.

2013 War and Trade in Eastern New Netherland. In *A Beautiful and Fruitful Place.* M. Lacy, editor pp. 271-141. University of Massachusetts Press, Amherst, MA.

Moeller, Roger
1980 *6-LF-21: A Paleo-Indian Site in Western Connecticut.* American Indian Archaeological Institute, Occasional Papers No. 2.

Niven, John
1965 *Connecticut for the Union: The Role of the State in the Civil War.* Yale University Press, New Haven, CT.

Normen, Elizabeth J. (Editor)
2013 *African American Connecticut Explored*. Wesleyan University Press, Middletown, CT.

North Stonington, Town of
2013 Plan of Conservation and Development 2013. Electronic document. https://www.northstoningtonct.gov/sites/g/files/vyhlif4806/f/uploads/2013pocd_chapter01.pdf, accessed March 15, 2024.

2024 "North Stonington Town History." https://www.northstoningtonct.gov/home/pages/north-stonington-town-history, accessed March 15, 2024.

Oberg, Michael Leroy
2006 *Uncas: First of the Mohegans*. Cornell University Press, Ithaca, NY.

Oglesby, Scott
2014 I-95. *Connecticut Roads*. http://www.kurumi.com/roads/ct/i95.html, accessed March 4, 2024.

Pagoulatos, Peter.
1988 Terminal Archaic Settlement and Subsistence in the Connecticut River Valley. *Man in the Northeast* 35:71-93.

Petersen, James B.
1991 *Archaeological Testing at the Sharrow Site: A Deeply Stratified Early to Late Holocene Cultural Sequence in Central Maine.* Occasional Publications in Maine Archaeology 8. Maine Historic Preservation Commission and Maine Archaeological Society, Augusta, ME.

Petersen, James B., and David E. Putnam
1992 Early Holocene Occupation in the Central Gulf of Maine Region. In *Early Holocene Occupation in Northern New England*, edited by Brian S. Robinson, James B. Petersen and Ann K. Robinson, pp. 13-62. Occasional Papers in Maine Archaeology 9. Maine Historic Preservation Commission, Augusta, ME.

Pfeiffer, John
1984 The Late and Terminal Archaic Periods in Connecticut Prehistory. *Bulletin of the Bulletin of the Archaeological Society of Connecticut* 47:73-88.

1986 Dill Farm Locus I: Early and Middle Archaic Components in Southern Connecticut. *Bulletin of the Archaeological Society of Connecticut* 49:19-36.

1990 The Late and Terminal Archaic Periods in Connecticut Prehistory: A Model of Continuity. In *Experiments and Observations on the Archaic of the Middle Atlantic Region.* R. Moeller, ed.

Poirier, David A.
1987 Environmental Review Primer for Connecticut's Archaeological Resources. Connecticut Historical Commission, State Historic Preservation Office, Hartford, CT.

Pope, Gustavus D.
1952 Excavation at the Charles Tyler Site. *Bulletin of the Archaeological Society of Connecticut* 26:3-29.

1953 The Pottery Types of Connecticut. *Bulletin of the Archaeological Society of New Haven* 27:3-10.

Public Archaeology Survey Team
2023 The Brian D. Jones Site (4-10B). Connecticut State Register of Historic Places Nomination Form.

Ritchie, W.A.
1969a *The Archaeology of New York State*. Natural History Press, Garden City, NJ.

1969b *The Archaeology of Martha's Vineyard: A Framework for the Prehistory of Southern New England; A study in Coastal Ecology and Adaptation*. Natural History Press, Garden City, NJ.

1971 *A Typology and Nomenclature for New York State Projectile Points*. New York State Museum Bulletin Number 384, State Education Department. University of the State of New York, Albany, NY.

Ritchie, W.A., and R.E. Funk
1973 *Aboriginal Settlement Patterns in the Northeast*. New York State Museum Memoir 20. The State Education Department, Albany, NY.

Robinson, Brian S. and James B. Petersen
1993 Perceptions of Marginality: The Case of the Early Holocene in Northern New England. *Northeast Anthropology* 46:61-75.

Rouse, Irving
1947 Ceramic Traditions and sequences in Connecticut. *Bulletin of the Archaeological Society of Connecticut* 21:10-25.

Salwen, Bert and Ann Ottesen
1972 Radiocarbon Dates for a Windsor Occupation at the Shantok Cove Site. *Man in the Northeast* 3:8-19.

Sanger, David, William Raymond Belcher, and Douglas C. Kellog
1992 Early Holocene Occupation at the Blackman Stream Site, Central Maine. In *Early Holocene occupation in Northern New England*, edited by Brian S. Robinson, James B. Peterson, and Ann S. Robinson, pp. 149-162. Occasional Papers in Main Archaeology 9, Maine Historic Preservation Commission, Augusta, ME.

Singer, Zachary
2017a The Paleoindian Occupation of Southern New England: Evaluating Sub-Regional Variation in Paleoindian Lifeways in the New England-Maritimes Region. Unpublished Doctoral Dissertation, University of Connecticut.

2017b Sub-Regional Patterning of Paleoindian Sites with Michaud-Neponset Points in New England and the Canadian Maritimes. *PaleoAmerica* 3(4): 337-350.

Smith, Carlyle
1947 An Outline of the Archaeology of Coastal New York. *Bulletin of the Archaeological Society of Connecticut* 21:2-9.

Snow, D.
1980 *The Archaeology of New England.* Academic Press, New York, NY.

Spaid, Elizabeth Levitan
1991 "Looks Beyond Defense Industries" in *The Christian Science Monitor.* Boston, MA

Spiess, Matthias
1934 *Connecticut Circa 1625: Its Indian Trails Villages and Sachemdoms*. The Connecticut Society of the Colonial Dames of America, Inc., [N.p.].

Stonington, Town of
2015 Plan of Conservation & Development. Electronic document, https://www.stonington-ct.gov/sites/g/files/vyhlif3851/f/file/file/2015_pocd_final_version.pdf, accessed March 4, 2024.

Strauss, Alan E.
2017 Evidence of Early Holocene Prehistoric Activity: A Case for the Gulf of Maine Archaic Tradition in Central Massachusetts. *Archaeology of Eastern North America* 45:109-132.

Thompson, David H.
1969 The Binette Site, Naugatuck Connecticut. *Eastern States Archaeological Federation Bulletin* 26- 27.

Trumbull, J. Hammond, ed.
1886 *The Memorial History of Hartford County, Connecticut, 1633-1884*. 2 vols. Edward L. Osgood, Boston, MA.

Turner, Gregg M. and Melancthon W. Jacobus
1986 *Connecticut Railroads: An Illustrated History*. The Connecticut Historical Society, Hartford, CT.

United States Census Bureau (US Census)
1850a Seventh Census of the United States. Schedule 1 – Free Inhabitants. HeritageQuest Online. ProQuest LLC, Ann Arbor, MI.

1850b Seventh Census of the United States. Ancestry.com, https://www.ancestry.com/discoveryui-content/view/18306850:8054?tid=&pid=&queryId=182fe61a-8877-4a9b-9ada-56dfca9682e5&_phsrc=yje242&_phstart=successSource, accessed March 20, 2024.

United States Geological Survey (USGS).
1951 Aerial Photograph Series for Connecticut. USGS, Reston, VA.

Van Dusen, Albert E.
1961 *Connecticut*. Random House, NY.

Walling, H. F.
1854 *Map of New London County, Connecticut*. William E. Baker, Philadelphia, PA.

Wheeler, Robert Anson
1900 *History of the Town of Stonington, County of New London, Connecticut, from Its First Settlement in 1649 to 1900, with a Genealogical Register of Stonington Families*. New London, Connecticut: The Day Publishing Co.; reprint ed. Salem, Massachusetts: Higginson Book Company, n.d.

Winslow, C. E. A. and J. F. Rogers
1920 Statistics of the 1918 Epidemic of Influenza in Connecticut: With a Consideration of the Factors Which Influenced the Prevalence of this Disease in Various Communities. *The Journal of Infectious Diseases* 26(3):185-216.

Witthoft, John
1949 An Outline of Pennsylvania Indian History. *Pennsylvania History* 16(3):3-15.

1953 Broad Spearpoints and the Transitional Period Cultures. *Pennsylvania Archaeologist*, 23(1):4-31.

Wood, F. J.
1919 *The Turnpikes of New England and Evolution of the Same Through England, Virginia, and Maryland*. Marshall Jones Company, Boston, MA.

Zoto, Daniel M.
2019 *Continuity and Variability in Lithic Use During the Woodland Period in Coastal Southern New England: The View from the Laurel Beach II Site.* Master's Thesis, University of Connecticut. Storrs, CT.

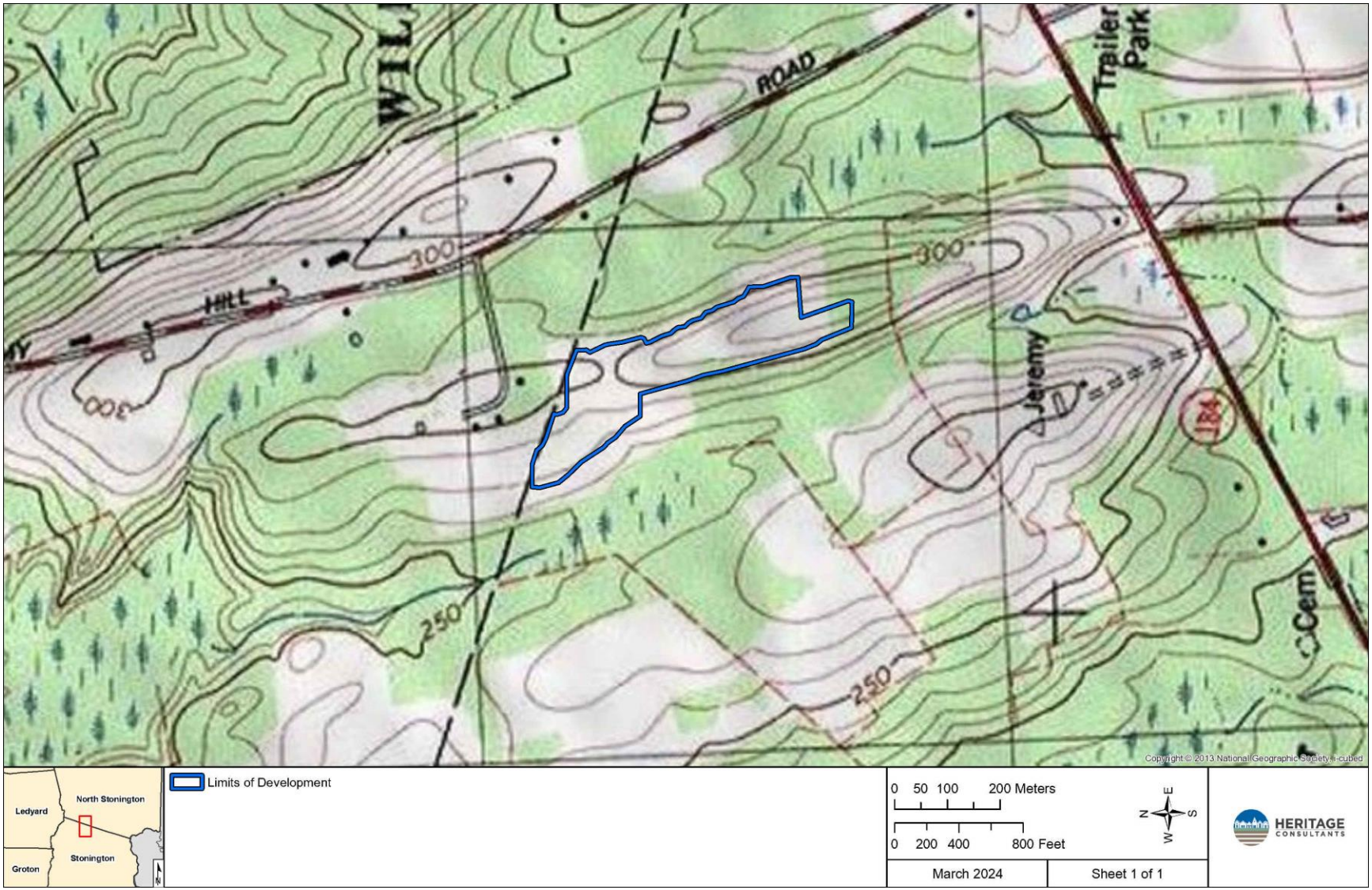


Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the Project area in Stonington, Connecticut.

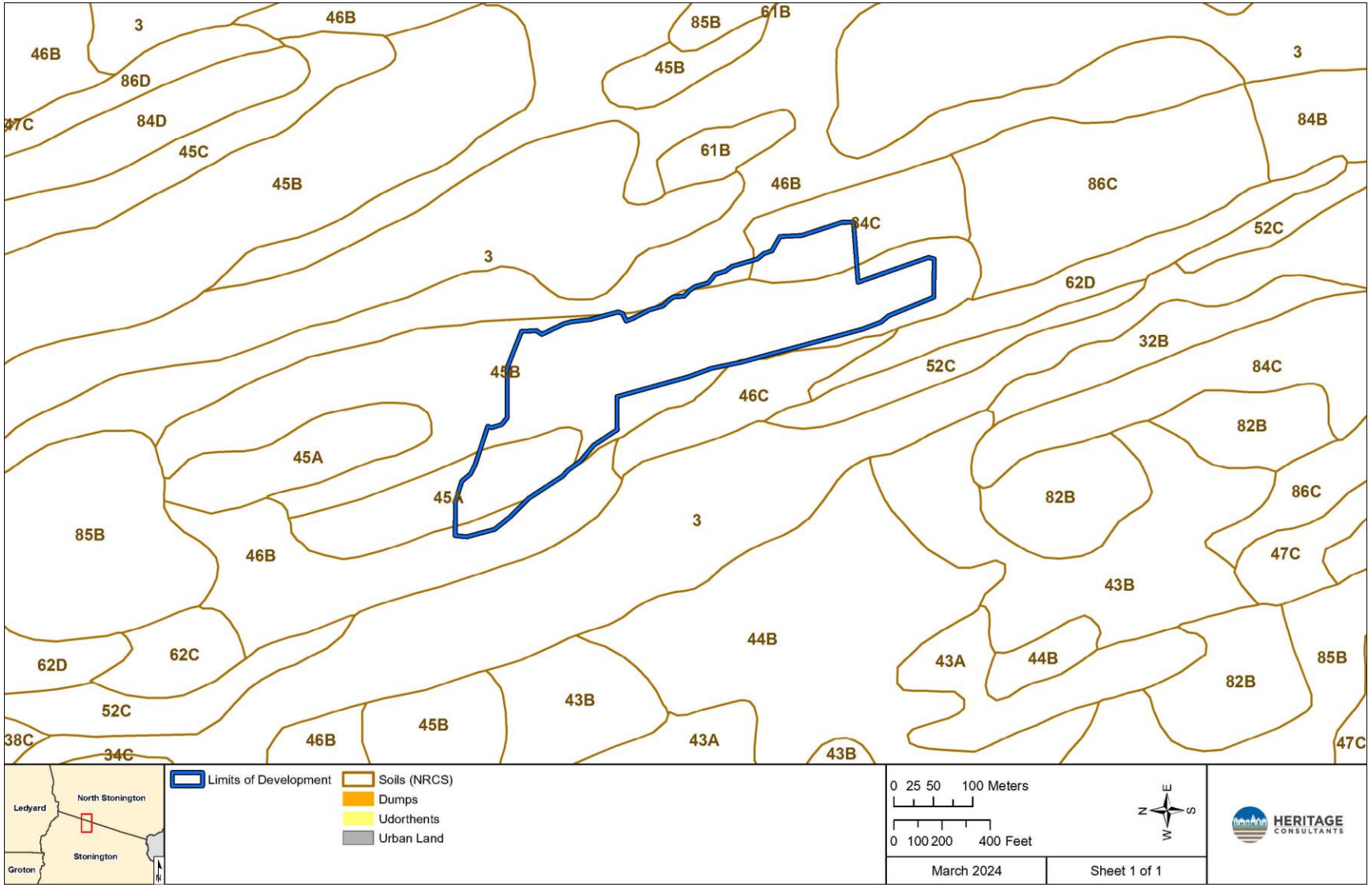


Figure 2. Digital map depicting the soil types present in the vicinity of the Project area in Stonington, Connecticut.

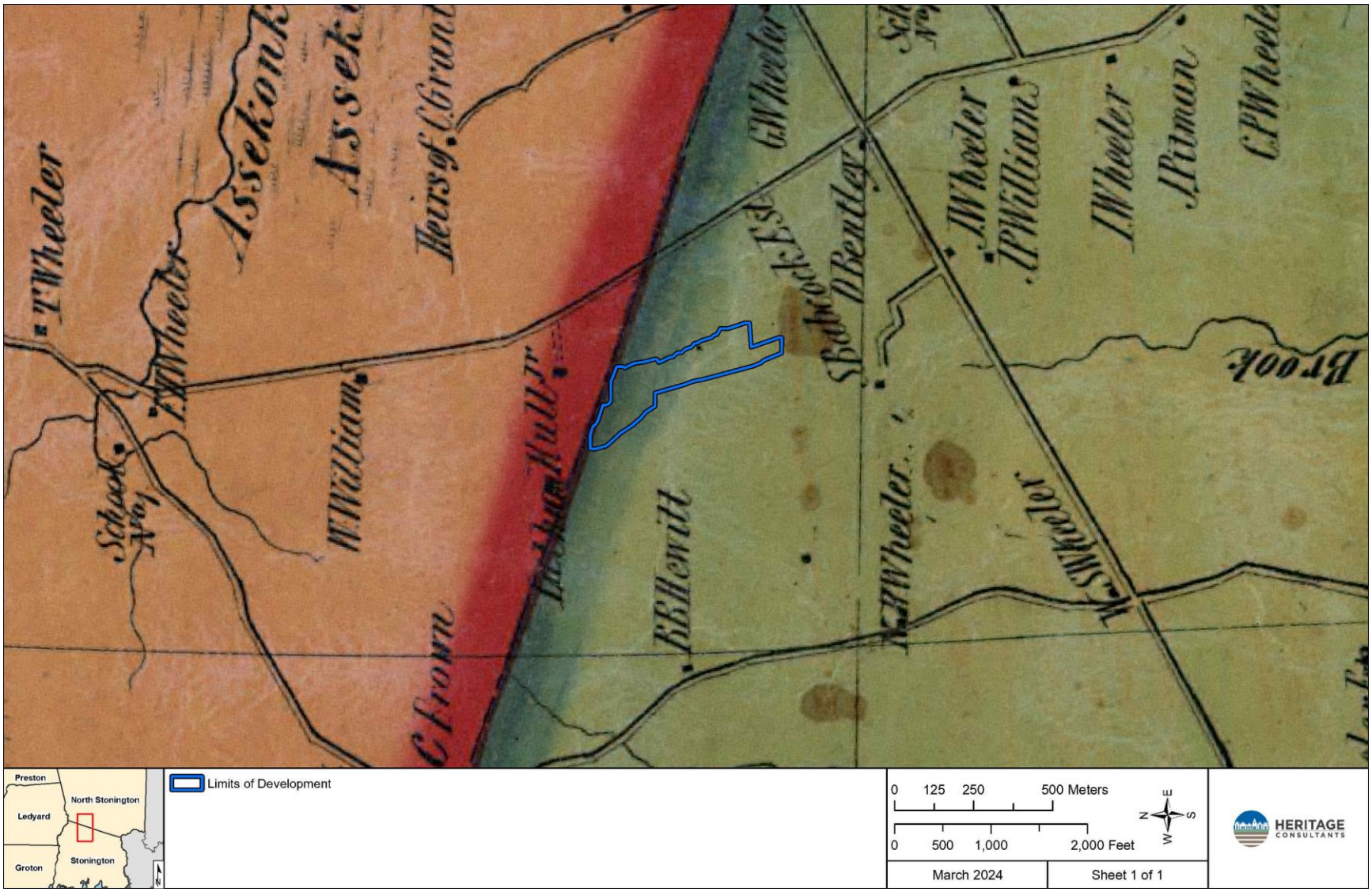


Figure 3. Excerpt from an 1854 historical map showing the Project area in Stonington, Connecticut.

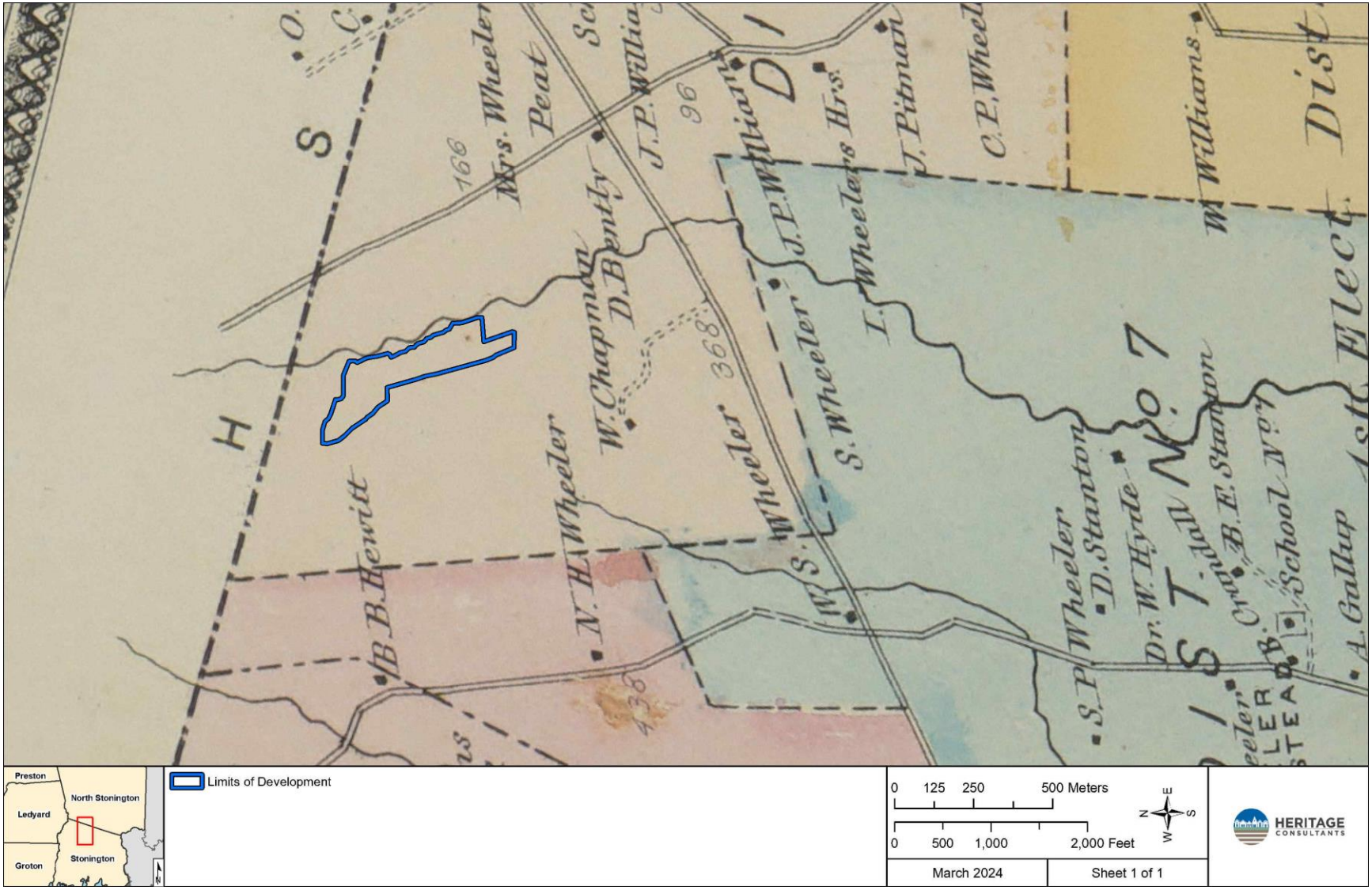


Figure 4. Excerpt from an 1868 historical map of the Project area in Stonington, Connecticut.

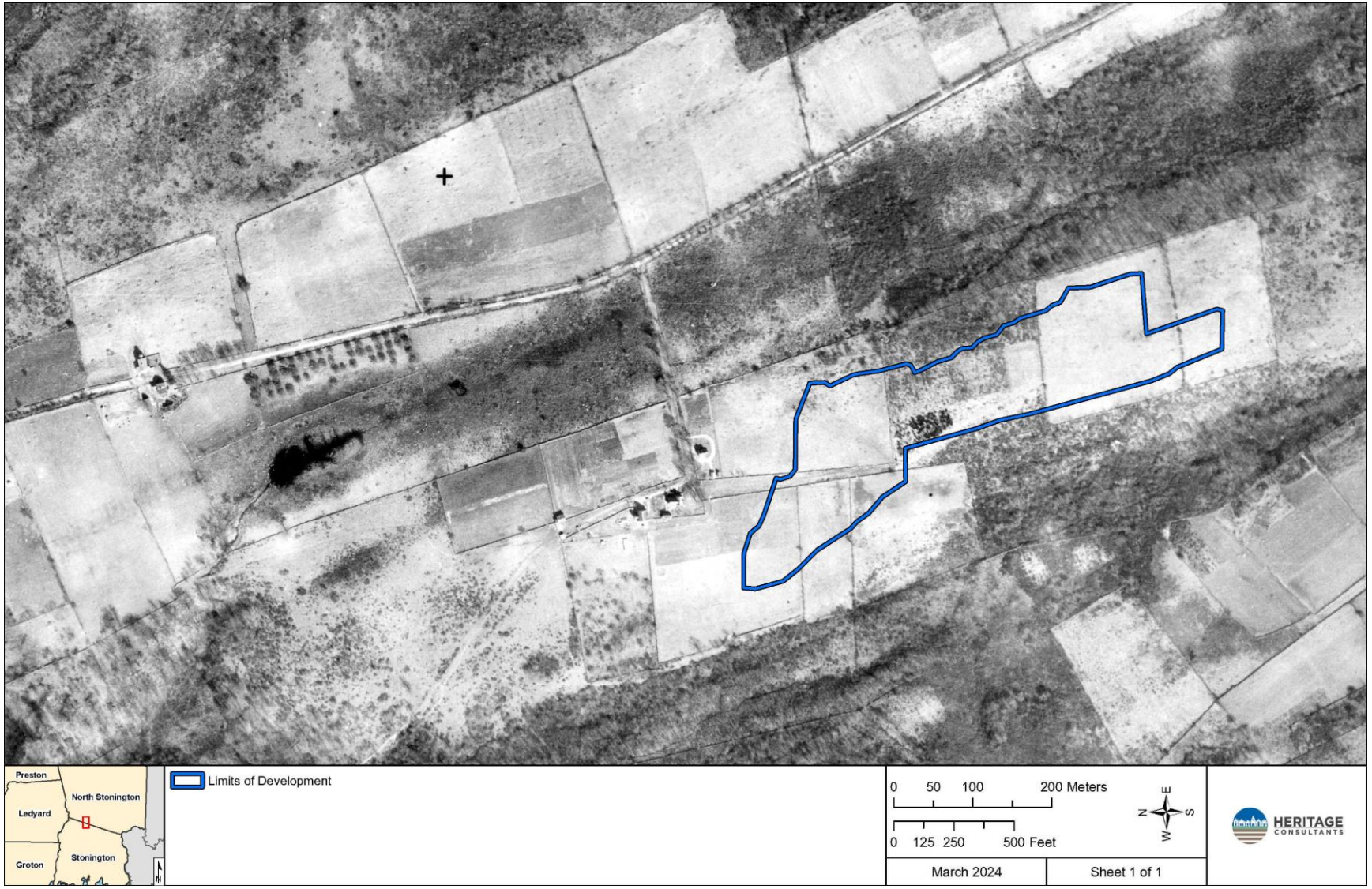


Figure 5. Excerpt from a 1934 aerial photograph showing the location of the project parcel in Stonington, Connecticut.

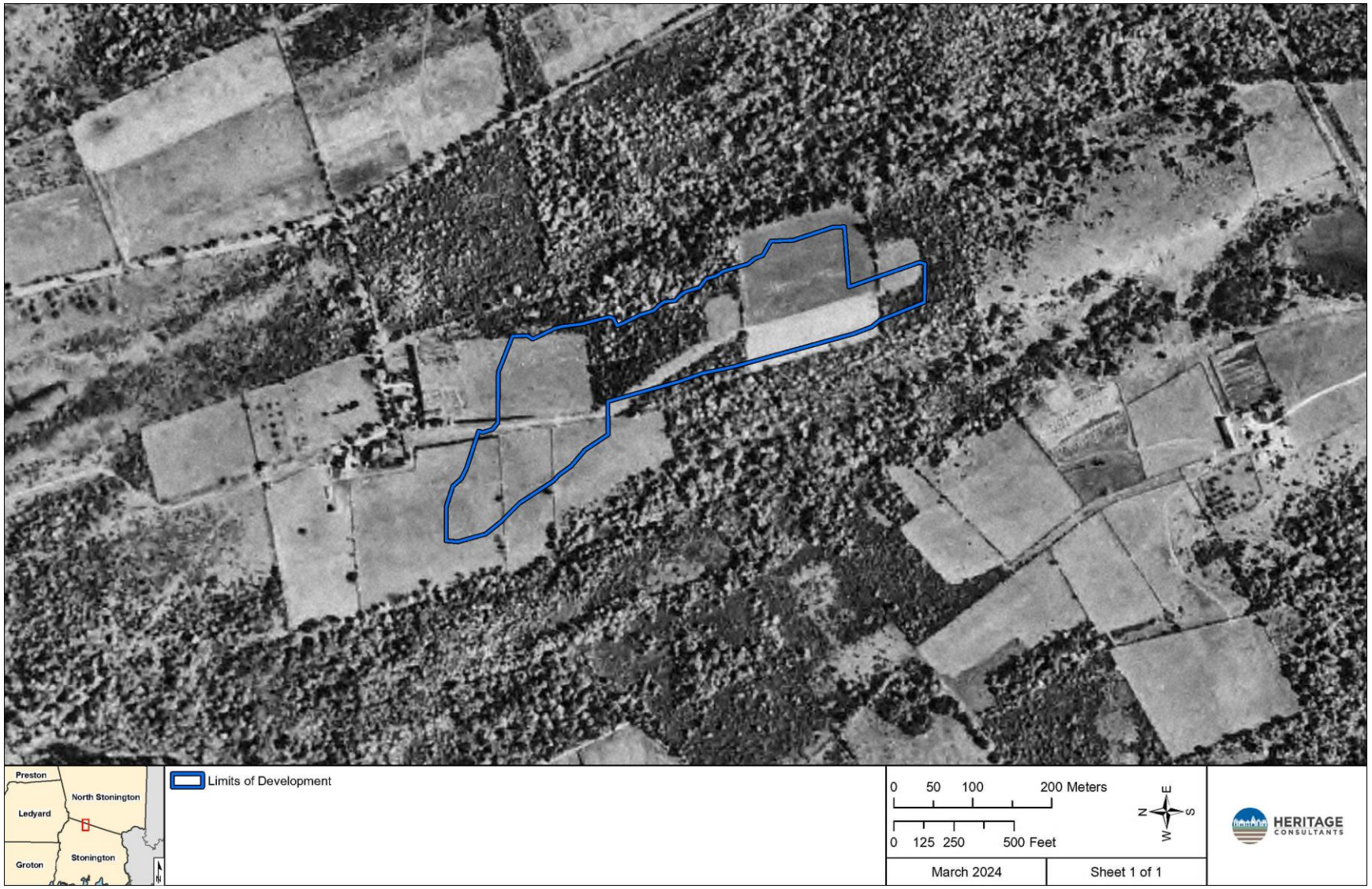


Figure 6. Excerpt from a 1951 aerial photograph showing the location of the project parcel in Stonington, Connecticut.

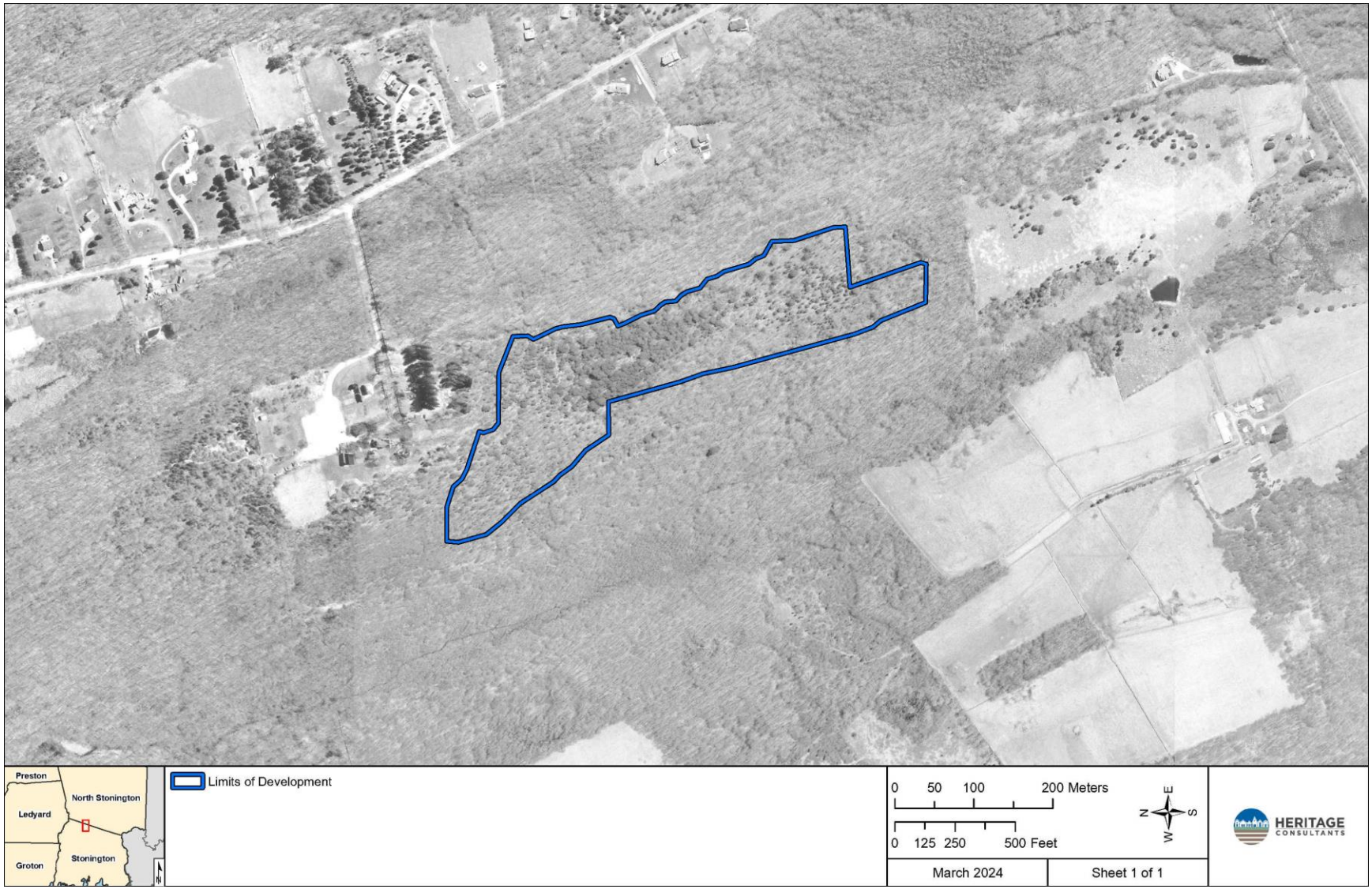


Figure 7. Excerpt from a 2004 aerial photograph showing the location of the project parcel in Stonington, Connecticut.

Figure 8. Excerpt from a 2019 aerial photograph showing the location of the project parcel in Stonington, Connecticut.

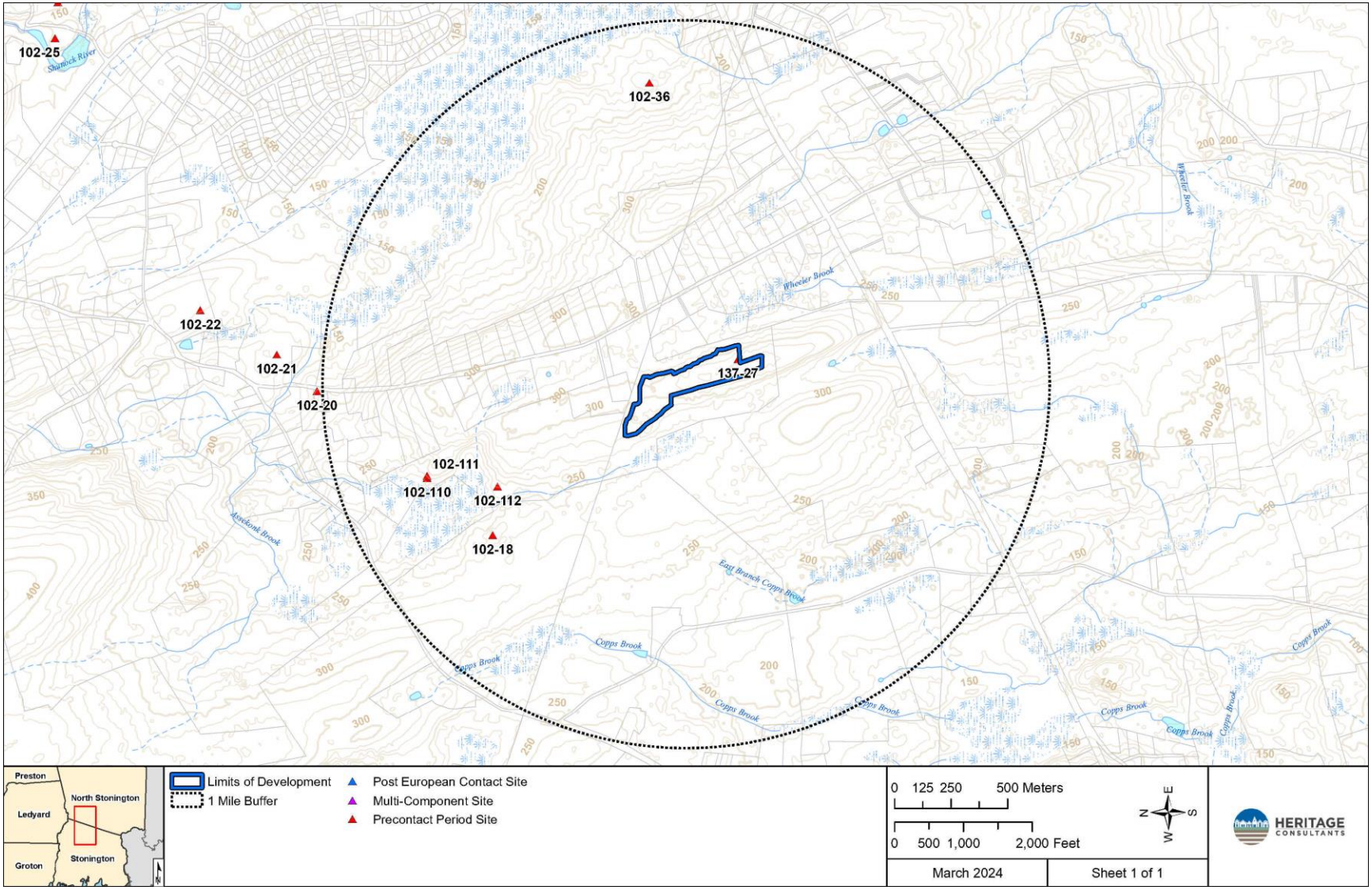


Figure 9. Digital map showing the location of previously identified archaeological sites within 1.6 km (1 mile) of the Project area in Stonington, Connecticut.

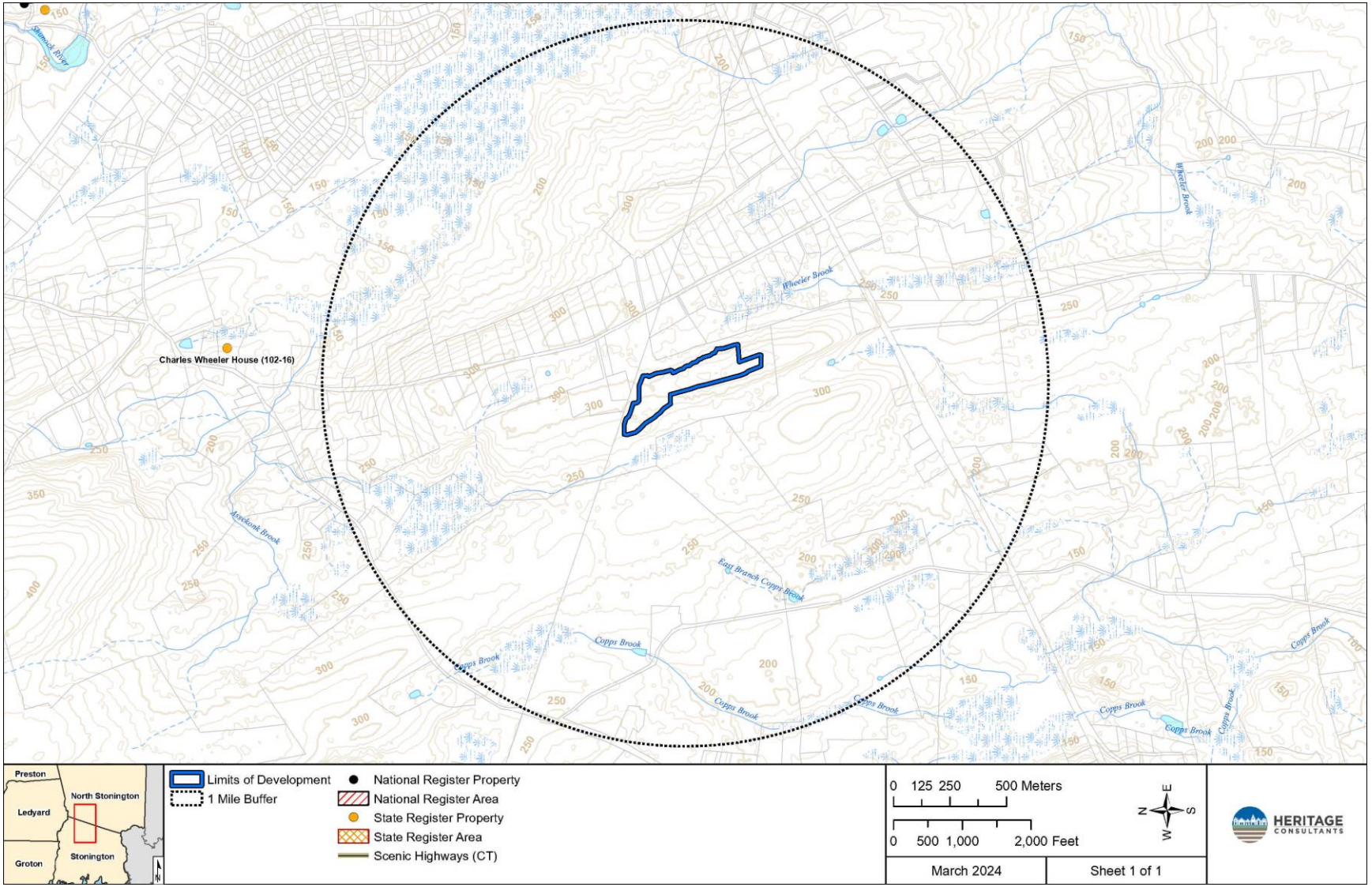


Figure 10. Digital map depicting the locations of the previously identified National Register of Historic Places and State Register of Historic Places properties in the vicinity of the Project area in Stonington, Connecticut.

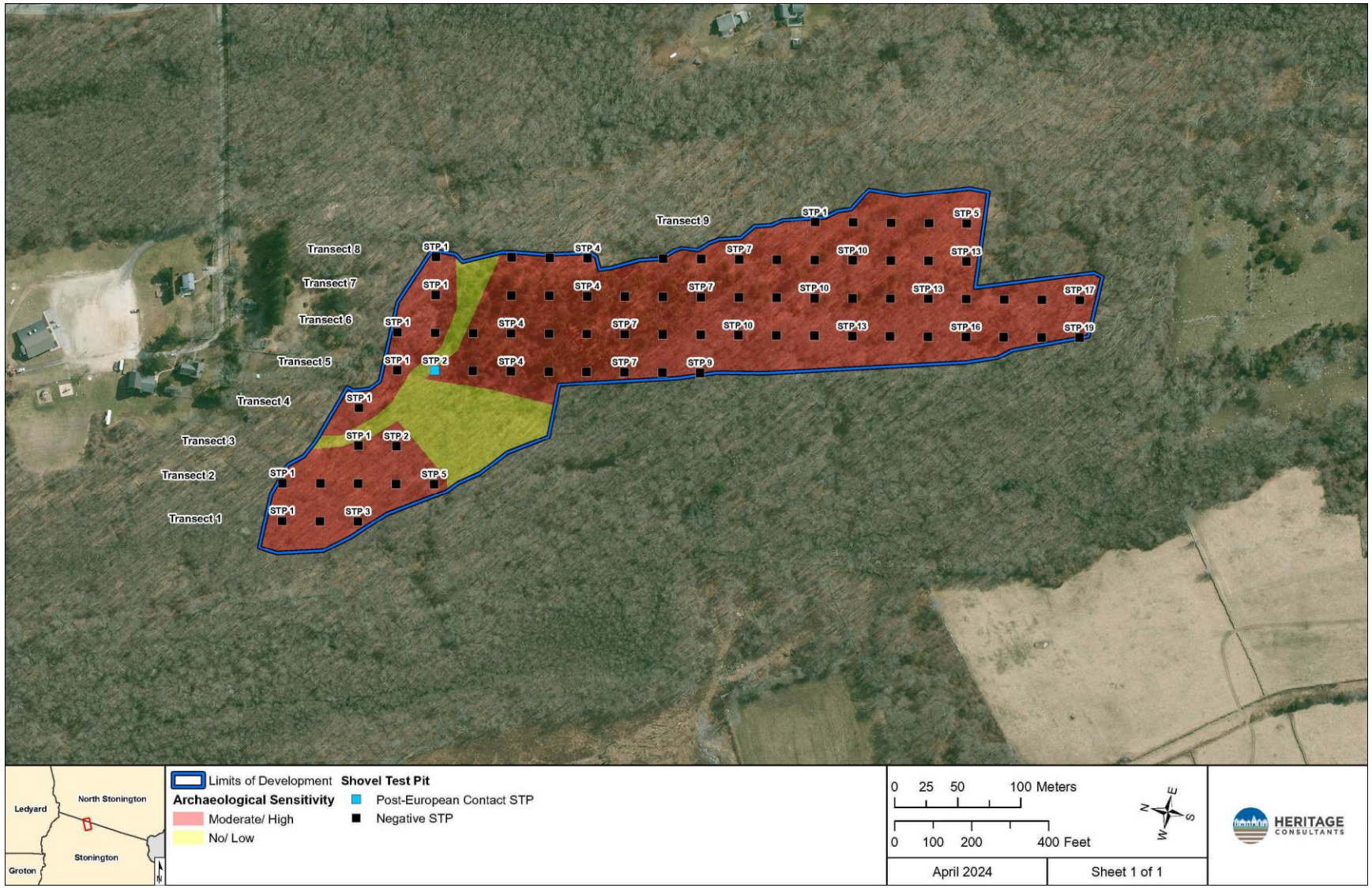


Figure 11. Excerpt of an aerial photograph showing the location of Phase IB Shovel Testing effort and results across the Project Area conducted by Heritage in Stonington, Connecticut.

Photo 1. Overview of Project area showing low slopes facing north.

Photo 2. Overview of Project area showing low to moderate slopes facing east.

Photo 3. Overview of Project area showing low slope facing south

Photo 6. Photo of salt glazed stoneware sherd recovered from shovel test T5-STP1.

State Historic Preservation Office
Department of Economic and Community Development

CONNECTICUT

April 10, 2024

Mr. David George
Heritage Consultants, LLC
830 Berlin Turnpike
Berlin, CT 06037
(sent only via email to dgeorge@heritage-consultants.com)

Subject: Archaeological Reconnaissance Survey
Jeremy Hill Solar
Stonington, Connecticut

Dear Mr. George:

The State Historic Preservation Office (SHPO) has reviewed the technical report titled *Phase IB Cultural Reconnaissance Survey of the Proposed Jeremy Hill Solar Project in Stonington, Connecticut* prepared by Heritage Consultants, LLC (Heritage), dated April 2024. The submitted technical report appears to meet the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources*. The project will require a stormwater discharge permit issued by the Connecticut Department of Energy and Environmental Protection through the authority of the Environmental Protection Agency; therefore, it is subject to review by this office pursuant to Section 106 of the National Historic Preservation Act, as amended.

A cultural resources assessment of the Area of Potential Effect (APE) was completed by Heritage and included comprehensive background research that examined historic maps and aerial imagery as well as previously identified cultural resources located in proximity to the APE. The review failed to identify any properties listed on the National Register of Historic Places (NRHP) in the vicinity of the APE. However, six previously recorded archaeological sites were located within one mile of the project area, including one (Site 137-27) positioned along the southern boundary of the APE.

A subsequent cultural resources reconnaissance survey was completed by Heritage in March of 2024. During survey, 74 planned shovel tests were excavated at 30-meter intervals along transects placed 30 meters apart throughout three portions of the APE determined to retain archaeological sensitivity. The effort resulted in the recovery of a single piece of salt glazed stoneware. No evidence of the presence of Site 137-27 was identified within the APE. Heritage determined that the identified archaeological deposits lacked research potential and were not eligible for listing on the NRHP. Based on the information submitted to this office, it is the opinion of SHPO that no historic properties will be affected by the proposed solar facility and no additional archaeological investigation is warranted. This comment is conditional upon the submission of two bound copies of the final report; one will be kept for use in the office and the other will be transferred to the Thomas J. Dodd Research Center at the University of Connecticut (Storrs) for permanent archiving and public accessibility.

State Historic Preservation Office
Department of Economic and Community Development

CONNECTICUT

This office appreciates the opportunity to review and comment upon this project. Do not hesitate to contact Cory Atkinson, Staff Archaeologist and Environmental Reviewer, for additional information at (860) 500-2458 or cory.atkinson@ct.gov.

Sincerely,

Jonathan Kinney
State Historic Preservation Officer

450 Columbus Boulevard, Suite 5
Hartford, CT 06103
860-500-2300