

JUNE 2019

PHASE IA CULTURAL RESOURCES ASSESSMENT SURVEY OF THE  
PROPOSED LANTERN HILL ROAD SOLAR CENTER IN  
MYSTIC, CONNECTICUT

PREPARED FOR:



180 JOHNSON STREET  
MIDDLETOWN, CONNECTICUT 06457

PREPARED BY:



P.O. Box 310249  
NEWINGTON, CONNECTICUT 06131

## ABSTRACT

This report presents the results of a Phase IA cultural resources assessment survey for the proposed Lantern Hill Road Solar Center, which is located at 229 Lantern Hill Road in Mystic, Connecticut. The project parcel associated with this solar center encompasses approximately 35.3 acres of land. 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 vicinity of the project parcel; 3) a review of readily available historic maps and aerial imagery depicting the project parcel to identify potential historic resources and/or areas of past disturbance; 4) pedestrian survey and photo-documentation of the solar center area to determine its archaeological sensitivity; and 5) preparation of the current Phase IA cultural resources assessment survey report. The results of the survey indicate that entirety of the project area retain moderate/high sensitivity for intact archaeological deposits.

# TABLE OF CONTENTS

CHAPTER I: INTRODUCTION .....	1
Project Description and Methods Overview .....	1
Project Results and Management Recommendations Overview.....	1
Project Personnel .....	1
Organization of the Report.....	2
CHAPTER II: NATURAL SETTING.....	3
Introduction.....	3
Ecoregions of Connecticut.....	3
Eastern Coastal Ecoregion .....	3
Hydrology in the Vicinity of the Project area .....	3
Soils Comprising the Project Area .....	4
Ninigret/Tisbury Soils (21A) .....	4
Hinckley Soils (38C) .....	4
Sudbury Soils (23A).....	5
Hero Soils (22B).....	5
Summary.....	5
CHAPTER III: PREHISTORIC SETTING .....	7
Introduction.....	7
Paleo-Indian Period (12,000 to 10,000 Before Present [B.P.].....	7
Archaic Period (10,000 to 2,700 B.P.).....	8
Early Archaic Period (10,000 to 8,000 B.P.) .....	8
Middle Archaic Period (8,000 to 6,000 B.P.).....	8
Late Archaic Period (6,000 to 3,700 B.P.) .....	9
The Terminal Archaic Period (3,700 to 2,700 B.P.) .....	9
Woodland Period (2,700 to 350 B.P.).....	10
Early Woodland Period (ca., 2,700 to 2,000 B.P.).....	10
Middle Woodland Period (2,000 to 1,200 B.P.).....	11
Late Woodland Period (ca., 1,200 to 350 B.P.).....	11
Summary of Connecticut Prehistory .....	12
CHAPTER IV: HISTORIC OVERVIEW .....	13
Contact Era and Native American History of the Town of Stonington.....	13
Colonial Period History of the Town of Stonington (to 1790).....	14
Early National and Industrializing Period History of the Town of Stonington (1790 to 1930).....	15
Modern History of the Town of Stonington (1930 to Present).....	17
Conclusions.....	19
CHAPTER V: PREVIOUS INVESTIGATIONS.....	20
Introduction.....	20
Previously Recorded Archaeological Sites, National/State Register of Historic Places Properties/District, and Inventoried Historic Standing Structure in the Vicinity of the Project area..	20

Summary and Interpretations .....	22
CHAPTER VI: METHODS.....	23
Introduction.....	23
Research Framework.....	23
Archival Research & Literature Review .....	23
Field Methodology and Data Synthesis.....	24
CHAPTER VII: RESULTS OF THE INVESTIGATION & MANAGEMENT RECOMMENDATIONS .....	25
INTRODUCTION.....	25
RESULTS OF PHASE IA SURVEY.....	25
OVERALL SENSITIVITY OF THE PROPOSED PROJECT AREA.....	25
BIBLIOGRAPHY .....	27

## LIST OF FIGURES

- Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the project area in Mystic, Connecticut.
- Figure 2. Map of soils located in the vicinity of the project area in Mystic, Connecticut.
- Figure 3. Excerpt from an 1833 historic map showing the location of the project area in Mystic, Connecticut.
- Figure 4. Excerpt from an 1854 historic map showing the location of the project area in Mystic, Connecticut.
- Figure 5, Sheet 1. Excerpt from an 1869 historic map showing the location of the project area in Mystic, Connecticut.
- Figure 5, Sheet 2. Excerpt from an 1868 historic map showing the location of the project area in Mystic, Connecticut.
- Figure 6. Excerpt from a 1934 aerial photograph showing the location of the project area in Mystic, Connecticut.
- Figure 7. Excerpt from a 1941 aerial photograph showing the location of the project area in Mystic, Connecticut.
- Figure 8. Excerpt from a 1951 aerial photograph showing the location of the project area in Mystic, Connecticut.
- Figure 9. Digital map showing parcel lines and the project area in Mystic, Connecticut.
- Figure 10. Excerpt from a 1957 aerial photograph showing the location of the project area in Mystic, Connecticut.
- Figure 11. Excerpt from a 1965 aerial photograph showing the location of the project area in Mystic, Connecticut.
- Figure 12. Excerpt from a 2016 aerial photograph showing the location of the project area in Mystic, Connecticut.
- Figure 13. Digital map showing the location of previously identified archaeological sites in the vicinity of the project area in Mystic, Connecticut.
- Figure 14. Digital map depicting the locations of previously identified National/State Register of Historic Places properties and inventoried Historic Standing Structures in the vicinity of the project area in Mystic, Connecticut.

- Figure 15. Overview photo of the central portion of project area facing northeast. Note the area is planted with corn.
- Figure 16. Overview photo of the central portion of the project area facing west. Note the area is planted with corn.
- Figure 17. Overview photo facing south from northernmost portion of project area. Note that corn is not planted in this area.
- Figure 18. Overview photo facing east from westernmost portion of the project area. Note that corn is not planted in this area.
- Figure 19. View from Lantern Hill Road looking north towards project area access road.
- Figure 20. View from water treatment facility looking south along access road towards Lantern Hill Road.
- Figure 21. View north of water treatment facility located just north of the project area.
- Figure 22. Looking upstream at Whitford Brook which runs along much of the north and west edge of the project area.

# CHAPTER I

## INTRODUCTION

This report presents the results of a Phase IA cultural resources assessment survey for the proposed Lantern Hill Road Solar Center in the Village of Mystic in Stonington, Connecticut (Figure 1). Vanasse Hangen Brustlin, Inc., (VHB) requested that Heritage Consultants, LLC (Heritage) complete the assessment survey as part of the planning process for the proposed solar center that will occupy approximately 35.3 acres of land at 229 Lantern Hill Road. The proposed development area is hereafter referred to as the project area. The project area is bordered by forest, except for having agricultural fields and residential development to the south. Heritage completed this investigation on behalf of VHB in June of 2019. 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 project will include the installation of a proposed solar center, which will include solar panel on racking, buried electrical lines, inverters, transformers, an access road leaving to the facility, and fencing around the project parcel. 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 area; 3) a review of readily available historic maps and aerial imagery depicting the project area in order to identify potential historic resources and/or areas of past disturbance; 4) pedestrian survey and photo-documentation of the project area in order to determine their archaeological sensitivity; and 5) preparation of the current Phase IA cultural resources assessment survey report.

### **Project Results and Management Recommendations Overview**

The review of historic maps and aerial images of the project area, files maintained by the CT-SHPO, as well as pedestrian survey of the development area, resulted in the identification of seven previously identified archaeological sites in the vicinity of the project area (Sites 72-17, 72-133, 72-138, 72-140, 137-29, 137-30, and 137-31). All seven sites are prehistoric occupation where lithic artifacts were recovered, and their presence demonstrates archaeological resources exist in the region containing the project area. The seven prehistoric sites are discussed further in Chapter V of this document. In addition to the cultural resources discussed above, Heritage combined data from the historic map and aerial image analysis, and the pedestrian survey to stratify the project area into zones of no/low and/or moderate/high archaeological sensitivity. Upon completion of the above-referenced analysis and pedestrian survey, it was determined that entirety of the project area retained a moderate/high potential to yield intact archeological deposits.

### **Project Personnel**

Key personnel for this project included Mr. David R. George, M.A., R.P.A, who served as Principal Investigator for this effort; he was assisted by Mr. Antonio Medina, B.A., (Field Director) and Ms. Jessica Jay, B.A., (Field Archaeologist), who completed the field work portion of the project and who assisted with

report preparation. Dr. Kristen Keegan completed this historic background research of the project and contributed to the final report, while Mr. Stephen Anderson completed all GIS tasks associated with the project. Finally, Ms. Elizabeth Correia assisted in compiling the current report and the associated figures.

### **Organization of the Report**

The natural setting of the region encompassing the project area is presented in Chapter II; it includes a brief overview of the geology, hydrology, and soils, of the project region. The prehistory of the project region is outlined briefly in Chapter III. The history of the region encompassing the project region and project area is chronicled in Chapter IV, while a discussion of previous archaeological investigations in the vicinity of the project area is presented in Chapter V. The methods used to complete this investigation are discussed in Chapter VI. Finally, the results of this investigation and management recommendations for the project area and the identified cultural resources are presented in Chapter VII.

## CHAPTER II

# NATURAL SETTING

### Introduction

This chapter provides a brief overview of the natural setting of the region containing the project area. Previous archaeological research has documented that a few specific environmental factors can be associated with both prehistoric and historic period site selection. These include general ecological conditions, as well as types of fresh water sources and soils present. The remainder of this section provides a brief overview of the ecology, hydrological resources, and soils present within the project area, access roads, 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 very 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 brief 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.

#### Eastern Coastal Ecoregion

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 to several sources of freshwater, including the Mystic River, Whitford 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 historic

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 Area**

Soil formation is the direct result of the interaction of a number of variables, including climate, vegetation, parent material, time, and organisms present (Gerrard 1981). Once archaeological deposits are buried within the soil, they are subject to a number of diagenic 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 such as those that are present in within the current project area. In contrast, acidic soils enhance the preservation of charred plant remains.

A review of the soils within the project area is presented below. The project area is characterized by the presence of four major soil types which are Ninigret/Tisbury, Hinckley, Sudbury, and Hero (Figure 2). A review of these soils shows that they consist of well drained gravelly, sandy loams; they are the types of soils that are typically correlated with prehistoric and historic use and occupation. Descriptive profiles for each soil type are presented below; they were gathered from the National Resources Conservation Service.

#### Ninigret/Tisbury Soils (21A)

A typical profile associated with Ninigret/Tisbury soils is as follows: **Ap** -- 0 to 8 inches; very dark grayish brown (10YR 3/2) fine sandy loam; pale brown (10YR 6/3) dry; weak medium granular structure; very friable; many fine roots; strongly acid; abrupt smooth boundary. (6 to 12 inches thick). **Bw1** -- 8 to 16 inches; yellowish brown (10YR 5/6) fine sandy loam; weak coarse granular structure; very friable; few fine roots; strongly acid; clear wavy boundary. **Bw2** -- 16 to 26 inches; yellowish brown (10YR 5/4) fine sandy loam; very weak coarse granular structure; very friable; very few fine roots; common medium distinct light brownish gray (10YR 6/2) and brownish yellow (10YR 6/6) redoximorphic features; strongly acid; clear wavy boundary. (Combined thickness of the Bw horizon is 11 to 32 inches). **2C** -- 26 to 65 inches; pale brown (10YR 6/3) loamy sand and few lenses of loamy fine sand; single grain; loose; many medium distinct light olive gray (5Y 6/2) and many prominent yellowish brown (10YR 5/8) redoximorphic features; strongly acid.

#### Hinckley Soils (38C)

A typical profile associated with Hinckley soils is as follows: **Oe** -- 0 to 3 cm; moderately decomposed plant material derived from red pine needles and twigs. (0 to 5 cm thick). **Ap** -- 3 to 20 cm; very dark grayish brown (10YR 3/2) loamy sand; weak fine and medium granular structure; very friable; many fine and medium roots; 5 percent fine gravel; very strongly acid; abrupt smooth boundary. (3 to 25 cm thick). **Bw1** -- 20 to 28 cm; strong brown (7.5YR 5/6) gravelly loamy sand; weak fine and medium granular structure; very friable; common fine and medium roots; 20 percent gravel; very strongly acid; clear smooth boundary. **Bw2** -- 28 to 41 cm; yellowish brown (10YR 5/4) gravelly loamy sand; weak fine and medium granular structure; very friable; common fine and medium roots; 25 percent gravel; very strongly acid; clear irregular boundary. (Combined thickness of the Bw horizon is 8 to 41 cm). **BC** -- 41 to 48 cm; yellowish brown (10YR 5/4) very gravelly sand; single grain; loose; common fine and medium roots; 40 percent gravel; strongly acid; clear smooth boundary. (0 to 13 cm thick). **C** -- 48 to 165 cm; light olive brown (2.5Y 5/4) extremely gravelly sand consisting of stratified sand, gravel and cobbles; single

grain; loose; common fine and medium roots in the upper 20 cm and very few below; 60 percent gravel and cobbles; moderately acid.

#### Sudbury Soils (23A)

A typical profile associated with Sudbury soils is as follows: **Ap** -- 0 to 13 inches (0 to 33 centimeters); very dark grayish brown (10YR 3/2) fine sandy loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; very friable; many fine roots; 5 percent gravel; moderately acid; abrupt smooth boundary. (6 to 14 inches, 15 to 36 centimeters thick). **Bw** -- 13 to 19 inches (33 to 48 centimeters); yellowish brown (10YR 5/6) sandy loam; weak medium granular structure; very friable; common grass roots; 10 percent fine gravel; few fine and medium prominent dark reddish gray (5YR 4/2) areas of iron depletion in the lower 3 inches (8 centimeters); moderately acid; abrupt wavy boundary. (2 to 20 inches, 5 to 51 centimeters thick). **2CB** -- 19 to 26 inches (48 to 66 centimeters); yellowish brown (10YR 5/4) gravelly coarse sand; single grain; loose; few fine roots; yellowish red (5YR 4/8) coatings on some sand grains; 20 percent gravel; many fine prominent dark reddish brown (2.5YR 3/4) and common coarse prominent reddish yellow (5YR 6/8) masses of iron accumulations; moderately acid; abrupt wavy boundary. (0 to 10 inches, 0 to 25 centimeters thick). **2C** -- 26 to 65 inches (66 to 165 centimeters); light olive brown (2.5Y 5/4) very gravelly coarse sand; single grain; loose; many sand grains coated with strong brown (7.5YR 5/6) and some sand grains slightly cemented, and many pebbles and cobbles coated with black (5YR 2/1); few fine roots; strata of sand and gravel consisting of about 50 percent gravel and some cobbles; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation; moderately acid.

#### Hero Soils (22B)

A typical profile associated with Hero soils is as follows: **Ap** -- 0 to 9 inches; very dark grayish brown (10YR 3/2) gravelly loam; pale brown (10YR 6/3) dry; weak medium granular structure; very friable; many very fine and fine roots; 15 percent gravel; slightly acid; clear smooth boundary. (6 to 10 inches thick). **Bw1** -- 9 to 18 inches; olive brown (2.5Y 4/4) gravelly silt loam; weak medium subangular blocky structure; friable; few fine and very fine roots; 20 percent gravel; neutral; gradual wavy boundary. **Bw2** -- 18 to 24 inches; olive brown (2.5Y 4/4) gravelly silt loam; weak medium subangular blocky structure; friable; 25 percent gravel; few medium and fine distinct grayish brown (2.5Y 5/2) and olive gray (5Y 5/2) iron depletions and few medium and fine distinct brown (7.5YR 4/4) masses of iron accumulation; neutral; clear wavy boundary. (Combined thickness of the Bw horizons with less than 50 percent fine and coarser sand is 12 to 34 inches). **Bw3** -- 24 to 27 inches; dark grayish brown (2.5Y 4/2) gravelly sandy loam; massive; very friable; 30 percent gravel; slight effervescence; common fine and medium distinct dark yellowish brown (10YR 4/4) masses of iron accumulation and grayish brown (2.5Y 5/2) iron depletions; slightly alkaline; clear smooth boundary. (0 to 5 inches thick) **2C** -- 27 to 60 inches; grayish brown (2.5Y 5/2) and dark grayish brown (2.5Y 4/2) extremely gravelly sand; few thin lenses of gravelly sandy loam; single grain; loose; 50 percent gravel and 10 percent cobbles; few strong brown (7.5YR 5/6) and gray (N 6/ ) weathered limestone pebbles; few fine and medium distinct light olive brown (2.5Y 5/6) masses of iron accumulation; slight effervescence; slightly alkaline.

#### **Summary**

The natural setting of the area containing the proposed Lantern Hill Road Solar Center is common throughout the Eastern Coastal ecoregion. Streams and rivers of this area empty into the Mystic River, which in turn drains into the Long Island Sound. Further, the landscape in general is dominated by sandy loamy soil types with some gravel intermixed. In addition, low slopes dominate the region. Thus, in general, the project region was well suited to Native American occupation throughout the prehistoric era. As a result, archaeological sites have been documented in the larger project region, and additional

prehistoric cultural deposits may be expected within the undisturbed portions of the proposed project area. This portion of Mystic was also used throughout the historic era, as evidenced by the presence of numerous historic residences and agricultural fields throughout the region; thus, archaeological deposits dating from the last 350 years or so may also be expected near or within the proposed project area.

## 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 located 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 located 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 graters, 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, graters, 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 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 recognized 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, an area 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

located 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<sup>2</sup> (5,383 ft<sup>2</sup>). 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, 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 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.

#### 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.

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 includes 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 the majority 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

### HISTORIC OVERVIEW

As discussed in Chapter I of this report, the project area is situated within a 35.3 acre parcel of land in the northwestern part of the town of Stonington in New London County. The town's historical development has tended to be focused toward the coast, leaving this region relatively undeveloped even into the early twenty-first century. The remainder of this chapter provides a historical overview of the project region, as well as some data relevant specifically 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 Native Americans between 1636 and 1637 during the war waged against them by an 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 what is now the neighboring town of Groton: one fort was located on the heights "a little southeast of Fort [G]riswold," where the sachem Sassacus resided, and the other was positioned near the Mystic river. The latter is where 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 the other fort and fled after this incident; he was eventually captured and killed by the English.

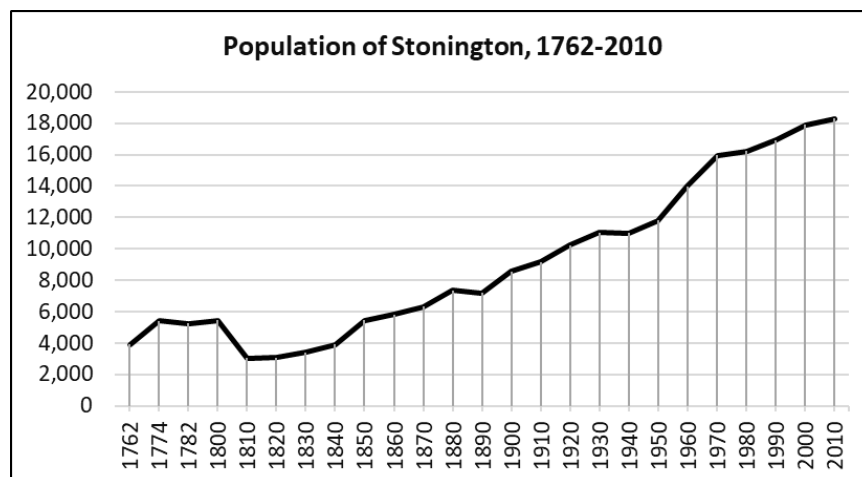
The surviving members of the Pequot tribe were divided amongst the Massachusetts Bay Colony, Connecticut Colony, and the Mohegans. The colonists sold many of their prisoners into slavery in the Caribbean. Although the colonists expected the Pequot community to cease to exist, after some years the two groups reconstituted themselves. Eventually Connecticut granted them reservation lands in what are now the towns of Ledyard and North Stonington. They became known as the Mashantucket and Eastern Pequot. During the later twentieth century, the Mashantucket Pequot group in Ledyard successfully took advantage of federal laws regarding Native Americans to secure federally recognized status and established 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 north. After the war their leader, Uncas, successfully used English ideas about monarchical sovereignty to claim much of northern New London County as his personal property. In 1659, he sold approximately nine square miles of this land to English colonists. This area became the town of Norwich and its daughter towns (Crofut 1937; Guilette 1979). Although over time he and his heirs also sold or lost most of the remaining land, the community managed to hold on to some of it. In the late twentieth century, like the Mashantucket Pequots, 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. Southern New London County and the Stonington area, however, were divided between the colonial governments after the war. Despite these outcomes of the Pequot War, it is likely that small groups of Native Americans continued to use parts of the territory for some time afterward, because colonial occupation of the entirety of the area land took decades, leaving tracts open for use by Native Americans.

### 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 party would have jurisdiction over the conquered area was a problem. The Connecticut and Massachusetts colonies resolved their claims in 1658 by dividing the coastal land at the Mystic River, with Connecticut keeping the west side and Massachusetts Bay reserving the east side. Thus, Stonington was part of the Massachusetts Bay Colony for several decades. It was first known as Southerton and some of its earliest land records are recorded in the records of Suffolk County, Massachusetts. An additional complication to the ownership question of the area 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 one to William Chesebrough in 1652 that is now the borough of Stonington (incorporated 1801). The royal Charter granted to Connecticut in 1662 extended the colony’s boundary eastward to the Pawcatuck River, thus bringing the section to the east of the Mystic River back within Connecticut’s control. In 1665, the General Court of Connecticut changed the name of the colonial town from Southerton to Mistick, then in 1666 changed it again, to Stonington (Crofut 1937).

The village at the head of Mystic, which is located 2.4 km (1.5 mi) to the south of the project parcel, began to form after 1660. When the first Congregational meeting house was built there in 1673, it was arguably closer to the 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” contained 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 built a schoolhouse in 1751. In 1753, Benjamin Franklin laid out the Lower Post Road (later Route 1) through Old Mystic. Colonists settled on Long Point beginning in 1752, and by 1774 the population there was so large that 83 residents of the village there signed a petition asking the legislature for permission to hold a lottery to fund the building of their own Congregational meeting house. This did not happen until after 1786, however, because of the outbreak of the Revolutionary War. The remainder of the eighteenth century saw the development of more 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 state found 3,900 people in the town, including 254 African Americans and 309 Native Americans; thus, the town was of 85 percent 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)**

Unfortunately, since the records have been lost, the population data for 1790 census is not available. However, in 1800, Stonington reported 5,437 residents, while 10 years later there were only 3,043 residents. This can be accounted for by the separation of North Stonington in 1807. That was the lowest the town's population has ever been. 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 1853 when the turnpike company dissolved. During the pre-railroad days, turnpikes were an important part of early U.S. 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, and users of the roads paid tolls to the companies (Wood 1919). Unlike the turnpike, which was further north, the railroad passed through town close to the shore (Turner and Jacobus 1989). As a result, the economic benefits of transportation access also shifted southward, leaving Old Mystic to become a relatively less important part of the town's economic life.

As in other towns, at the beginning of the nineteenth century many of Stonington's residents were engaged in agriculture. According to an 1819 gazetteer of the state, the "leading agricultural interest" was dairy products, and grain crops were also cultivated. 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. Much of Stonington's prosperity derived from the presence of Stonington Borough, located on the coast in the southeastern corner of the town. The gazetteer reported that it 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, this long peninsula contained over 1,000 residents and 150 houses and stores, along with a bank, two churches, and two academies for secondary education. Commerce there 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 the town were at Lower Mystic (located on Long Island Sound) and at "the head of Mystic," previously mentioned (and also known as Old Mystic), where the Mystic River narrows (Barber 1837).

Numerous short-lived manufacturing enterprises were developed in Stonington during the nineteenth century, ranging from textiles to firearms to soap (Hurd 1882). In the 1850 federal industrial census, the 92 firms listed included several types of business that are usually found in urban areas, specifically tailors, milliners, bakers, coopers, and livery stables. Most of these, presumably, were on Long Point. The census marshal also included the whale fishery, which may have been an error in his part, but tells us that there were 24 whaling vessels in Stonington, as well as two involved in the cod fishery. There were also four shipwrights, one boat builder, and two sailmakers. 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 of which formed the new town of North Stonington in 1807, the only change of its boundaries and area 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. 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 Borough, leaving the more northerly First Congregational Church to serve the villages of Mystic and Old Mystic (Wheeler 1900).

As noted above, the project parcel is situated in the northwestern part of the town and to the north of Old Mystic. More specifically, it lies between Lantern Hill Road (to the east) and Whitford Brook (to the west); the brook is also the boundary between Stonington and the neighboring town of Ledyard. A road called Shewsville Road in Ledyard passes just within 152 m (500 ft) of the western end of the project parcel. A map of New London County published in 1833 indicates that the project parcel had no nearby cultural features – not even Lantern Hill Road. Shewsville Road was depicted much further to the west than it should have been. In fact, the cartographer used this location to draw in the “T” in the word “county.” To south, the map shows the village of Head of Mystick, and to the north, near the boundary of with North Stonington, there were a cotton textile mill and a grist mill. Across the town as a whole, the map showed the three village clusters already mentioned above, although it called Mystic by the name Portersville. In addition, it included Pawcatuck, a population center that spread across the eastern border of Stonington into Westerly, Rhode Island. The map also showed the course of the then-new railroad, going from Stonington Borough to Pawcatuck (Figure 3; Lester 1833).

In 1854, a county map placed Shewsville Road in approximately the correct place, with a building labeled with the name J.S. Avery on the west side of it. There were no cultural features depicted near the project parcel on the Stonington side of the border in this map. As of 1854, most of the town contained scattered houses, like the vicinity of the project parcel, while the villages at Old Mystic (labeled Mystic), Mystic (labeled Mystic Bridge), Pawcatuck, and Stonington Borough had been joined by Greenmanville and Wicketequock. The railroad system had not yet been added to the 1854 map (Figure 4; Walling 1854). The last nineteenth-century map, which dates from 1868, does show Lantern Hill Road. The road segment nearest the project parcel had one building on the west side of the road. It was labeled with the name S. Wheeler; the other buildings were on the east side of the road and were labeled with the names Mrs. Briggs and C. Whiting. All of these buildings, however, were over 152 m (500 ft) from the project parcel. A little further to the south, there was apparently a peat factory. On the Ledyard side of the Whitford Brook, the building on the west side of Shewsville road had been relabeled as belonging to the heirs of J. Avery. Across the town of Stonington as a whole, the western and central coastal areas had a higher density of buildings than the more northerly regions. The railroad had, by that time, been extended westward to cross the whole town (Figure 5; Sheets 1 and 2; Beers 1868). 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.

Although there is no certain connection between the project parcel and the nearby buildings, aside from their proximity, a brief examination of their known occupants can illuminate the economic activities in and general status of the project region. To the northeast of the project parcel there is a nineteenth-

century cemetery. The persons known to be buried there include members of three Hempstead families (headed by Robert, Richard, and Samuel) and the Ashor Brown family (specifically his widow, Mary (ca. 1758-1848). The burials mostly date between 1819 and 1848, with one outlier from 1880 – the latter being Lucy Briggs, widow of Richard Hempstead (see the discussion below) (Wheeler 1903:314-315). The Hempsteads were a numerous family in town, and Richard Hempstead’s “modest and unassuming” gambrel-roofed house on the road to Lantern Hill was still standing, and in the hands of Philetus Brown, at the end of the nineteenth century (Wheeler 1903:54). This house corresponds to the “Mrs. Briggs” house on the 1868 map, which is located approximately 152 m (500 ft) from the project parcel (Stonington n.d.: MBL #144-1-3). Moving further forward in time, the 1850 and 1860 federal census returns do not appear to show any records for a J.S. Avery in Ledyard, nor do they show a J. Avery who appears to be in the correct location in the census (United States Census 1850a, 1860). The heirs of J. Avery also could not be identified in the 1870 census. The 1870 census does, however, show project parcel neighbor Charles Whiting who was a farmer with a substantial amount of real estate valued at \$5,000; he lived with his son and daughter-in-law, their four children, and a hired hand. The census reported that Lucy Briggs (presumed to be Mrs. Briggs), who was 77 years old at the time, was living in the household of Israel and Abby Dewey (who owned \$3,000 in real estate) and their five children. The only Wheeler family near these was Thomas A. and Ellen J. Wheeler, the only members of their household. They owned \$1,500 in real estate. All three of these families were farmers, as were most of their neighbors; in addition, they, and almost everyone in the area, were born in Connecticut (United States Census 1870). This information confirms the expected rural nature of the project parcel vicinity and suggests that it had good agricultural potential. At the same time, the area had not yet attracted immigrant farmers or servants.

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

During and after the Great Depression, Stonington’s population growth stalled, declining very slightly to 11,002 residents in 1940 and then rising to 11,801 residents in 1950. For the next two decades, however, the town witnessed a period of rapid growth, reaching 15,940 residents as of 1970. Slower but steady growth continued after that, so that Stonington’s population included 18,293 residents as of 2010 (see the population chart above; Keegan 2012). At the beginning of this period, a 1932 state report described Stonington as possessing manufacturing operations that included machinery, printing presses, and textiles, and that agriculture was still a going concern (Connecticut 1932). Along with its population growth, 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; it was later renamed Interstate 95 (Oglesby 2014). The quick rise in Stonington’s population between 1950 and 1970 is related to both this highway opening and to 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. In the early twenty-first century, as Stonington’s population continued to grow, albeit slowly, additional residential and commercial development was possible in the vicinity of the project area.

The 1934 aerial photograph in Figure 6 (Fairchild 1934) shows that the project parcel contained cleared agricultural fields, divided by walls or fences and crossed by farm roads. Much of the area to the south was also farmed, while immediately to the north there was an area of forest or marsh. There were three houses along Lantern Hill road near the project parcel at this time; however, they do not correspond well with the 1868 map’s information. The two to the north of the project parcel were both on the east side of the road, except for one barn. These may or may not be the same as the S. Wheeler and Mrs.

Briggs places noted on the 1868 map. The third, located on the north side of Lantern Hill Road where it turns toward the west – and around which the project area describes a rectangle – does not appear to correspond to the 1868 map information at all. In addition to the house, there was an apparent barn to the east and north, and possibly a second building closer to the road. Further to the south was a scattering of buildings that might or might not correspond to the C. Whiting places shown on the map. To the west, in Ledyard, the Avery farmstead appears in the location indicated by the historic maps, flanked by agricultural fields and wooded areas. The photograph indicates that this farmstead, and most of Shewsville Road, were more than 152 m (500 ft) from the project area (Figure 6; Fairchild 1934).

Subsequently, a 1941 aerial photograph showed little or no change within and in the immediate vicinity of the project parcel (Figure 7; USGS 1941). The 1951 aerial photograph, however, shows that the building or buildings in the eastern end of the area had been removed, while trees obscured the western end of the parcel (Figure 8; USDA 1951). In both of the later images, the only notable change in the vicinity of the project parcel was the reforestation of some fields.

The group of buildings located on the north side of the road and within 152 m (500 ft) of the project parcel, required further investigation since it was possible that they were built between 1868 and 1934. The Town of Stonington's GIS parcel data indicates that the cutout in the parcel consists of two parcels; it also shows a third, narrow parcel immediately to their left. The associated records state that the house that is furthest to the west of the three (MLB #169-1-3) was built in 1954, the middle one (MLB #169-1-2) was built in 1924, and the one furthest to the east (MLB #169-1-1) was built in 1954 (Figure 9; Stonington n.d.). The physical appearance of the buildings is consistent with these dates. This information indicates that the cluster of buildings visible in the 1934 aerial photograph includes the 1924 house, and also other structures that either predated it or were associated with it. A cursory title search of parcel MLB #169-1-3 revealed that it was separated from a section of the project parcel in 1968, and that the same section of the project parcel in turn was separated from a larger area in 1953 (Stonington Land Records, Volume 165, Page 114 and Volume 96, Page 324). This is consistent with the construction of the present house; however, at the time of the sale and as the 1934 aerial photograph indicates, there were already buildings on this parcel, some of which had been razed by 1951.

Prior to the 1953 transaction, the project parcel (including MLB #169-1-3) had not been sold since 1928, when Florence B. Brown of Ledyard transferred it to Clifford A. Stimpson of Ledyard, noting that it contained 30 acres (12 ha) of land but mentioned no buildings. The deed also excepted from the transaction a piece containing 0.5 acres (0.2 ha) near the piece's southeasterly corner, "intended as a garden plot and not herewith conveyed," which Florence had acquired as the widow and sole heir of Philetus A. Brown (Stonington Land Records, Volume 67, Page 517). Exactly which piece of land contained the garden plot is not known. As noted above, Philetus Brown was a late nineteenth-century owner of the Richard Hempstead house, which was located across the road from the project area and on a different parcel. Prior deeds going back to 1895 also do not mention any buildings on the property, with the last one examined stating that it contained 40 acres (16 ha) of land (Stonington Land Records, Volume 35, Page 331).

The title history of the middle parcel (MLB #169-1-2), which contained the house built in 1924, was less clear. As a small, oddly-shaped piece, its history dates to 1957 (Stonington Land Records, Volume 113, Page 543). Prior to that, it appears to have been part of a 16 acre (6.5 ha) parcel that may have been primarily on the southern side of Lantern Hill Road; this area can also be traced back to Clifford Stimpson (received it in 1940) and Florence B. Brown (presumed to have received it from the estate of Philetus A. Brown in 1928) (Stonington Land Records, Volume 78, Page 17 and Volume 68, Page 177).

The 1940 deed does not mention a house, while the 1928 certificate of descent mentions only a one-acre parcel with one-story house on it. The house on parcel MLB #169-1-2 is one story and built with a partly cinder block foundation. The fact that this parcel belonged to Florence B. Stimpson between at least 1928 and 1940, however, clarifies one aspect of the 1934 and 1941 aerial photographs – the reasons the grouping across parcels MLB #169-1-2 and MLB #169-1-3 looks like a farmstead may be because, being the property of one owner from about 1928, it may have been one. The records indicate that Florence and Philetus Brown owned a substantial amount of land in the area, and could easily have owned more than one house.

The 1957 aerial photograph does not appear to show the new house, which suggests that the 1954 date in the town's records was an estimate. In the vicinity of the project parcel, reforestation had continued to advance on the east side of Lantern Hill Road by 1957, while the project parcel itself and the fields to its south were still actively in use (Figure 10; USGS 1957). In the 1965 aerial photograph, however, all three houses on the north side of the road are clearly visible. In addition, construction of the housing development across the road had begun by that time. The project parcel was still a cleared agricultural field, as was the area to its south; reforestation seems to have paused in the general vicinity (Figure 11; CT DEP 1965). Subsequent aerial photographs from 1970, 1974, 1986, and 1996 show the completion of the early housing development and the addition of some new houses in the area. The construction of the water company buildings to the north of the project parcel, and the access road to it that crosses the project parcel, also were built during this period. The project parcel itself, however, remained an agricultural field, as did the area immediately to its south (USGS 1970; CT DEP 1974; CT DEP 1986). As of 2016, the project parcel was still a field at the north end of a group of fields. This appears to have been the largest surviving group of fields in the area; most others had returned to forest or become housing, or both (Figure 12; Capitol Region 2016).

### **Conclusions**

The documentary record indicates that it is unlikely that the proposed solar power development will impact any significant historical resources in this area. The project parcel is an agricultural field and has undoubtedly been one since the colonial era. Both the extant and removed buildings located immediately to the south of the project area appear to date to no earlier than approximately 1924, with the later buildings dating to the 1950s and after. Both the nineteenth-century cemetery to the northeast of the project parcel, and the colonial house across the road to the east and north, are not close enough to be of concern relative to project impacts.

## CHAPTER V

### PREVIOUS INVESTIGATIONS

#### **Introduction**

This chapter presents an overview of previous archaeological research completed within the vicinity of the project area in Mystic, Connecticut. This discussion provides the comparative data necessary for assessing 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 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 13 and 14). The discussions presented below are based on information currently on file at the Connecticut State Historic Preservation Office in Hartford, Connecticut. In addition, the electronic site files maintained by Heritage also were examined during the course of 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, National/State Register of Historic Places Properties/District, and Inventoried Historic Standing Structure in the Vicinity of the Project area**

A review of data currently on file at the Connecticut State Historic Preservation Office, as well as the electronic site files maintained by Heritage identified seven archaeological sites are situated within 1.6 km (1 mi) of the project area (Figure 13). This review also revealed that one historic property listed on the State Register of Historic Places as well as one National Register Area situated within 1.6 km (1 mi) of the project area (Figure 14). The seven previously identified archaeological sites, the State Register property, and the National Register area are described below.

#### Site 72-17

Site 72-17 has been named the Forsberg Shelter and it consists of a rockshelter located approximately 800 meters (0.50 miles) to the north of the intersection of Shewville Road and Whitford Road in Ledyard, Connecticut (Figure 13). This site lies approximately 1.6 kilometers (0.99 miles) to the north of the project area in an open space area. The Forsberg Shelter was recorded by the Connecticut Archaeological Society (CAS) in April 1979. CAS determined that the rockshelter dated from the Woodland Period based on the recovery of 50 projectile points, pottery sherds, shell, and bone from the site area. Excavations were completed in 1970 by John Senulis from the University of Rhode Island. At the time of excavation, the site measured 5 x 10 meters (16.40 x 3.28 feet) in size. Since that time, the site has been destroyed and has not been assessed applying the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). This site will not be impacted by the proposed solar center.

#### Site 72-133

Site 72-133 is located approximately 381 meters (1,250 feet) to the northwest of the project area, off of Shewville Road in Ledyard, Connecticut (Figure 13). It was recorded by Kathryn C. Hoy of the University of Connecticut in 1991 as the Campbell Site. Numerous projectile points and stone tools were surface collected from this site by Louis Bayer, a retired game warden and local artifact collector; however, not

enough information was documented to determine the use or age of the Campbell Site. The site covers approximately 2.02 hectares (5 acres) of an open field, once used as a cornfield, and had good integrity as of 1991. The Campbell Site has not been assessed applying the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). This site will not be impacted by the proposed solar center.

#### Site 72-138

Site 72-138, also known as the Storey Farm Site, is located in an open field situated off of Whitford Road in Ledyard, Connecticut; it is located within 213 meters (700 feet) of Site 72-17 (Figure 13). Artifacts from this site were surface collected by the owners of the Storey Farm, none of which are described in detail on the site form. The age of the Storey Farm Site also was not determined, but it was listed as having good integrity when it was recorded by Kathryn Hoy on May 20, 1991. The site size is approximately 3.24 hectares (8 acres) and its National Register of Historic Places eligibility has not been assessed. This site will not be impacted by the proposed solar center.

#### Site 72-140

Site 72-140 consists of a camp site located off of Shewville Road in Ledyard, Connecticut; it is situated approximately 381 meters (1,250 feet) to the southwest of the project area (Figure 13). The site covers approximately 4.05 hectares (10 acres) of land in an open field, but now has the Gallup Hill Extension Road cutting through its center. Mr. Louis Bayer collected numerous quartz projectile points from the surface of this site along with chips and flakes, indicating stone tool manufacture took place there. Kathryn Hoy recorded Site 72-140 as the Shewville Camp Site in 1991 but did not determine its age or National Register of Historic Places eligibility. This site will not be impacted by the proposed solar center.

#### Site 137-29

Site 137-29 was recorded as “Formerly Panciera Farm” by Kathryn Hoy in 1991. Lithic artifacts, mostly made of quartzite, were found here by Mr. Louis Bayer in the 1940s. Not much information was recorded on the site form, as the site was difficult to reach in 1991. The site area contains two hectares (five acres) of woods situated on private property that is located off of Route 184; it was once used as the Panciera Farm and later destroyed by fire. Site 137-29 has not been assessed applying the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). The site is located approximately 1,075 meters (3,527 feet) to the south of the project area in Stonington, Connecticut (Figure 13). This site will not be impacted by the proposed solar center.

#### Site 137-30

Site 137-30, also referred to as the Lantern Hill Road Field Site, is located approximately 645 meters (2,116 feet) to the south of the project area and within a field situated opposite from 217 Lantern Hill Road, Stonington, Connecticut (Figure 13). The site was recorded by Kathryn Hoy in 1991 after she learned about it from Mr. Louis Bayer, who collected artifacts from the surface of Site 137-30 in the 1940s. Artifacts recovered from the site area included Levanna, Squibnocket, Brewerton, and Vosburg projectile points, a stone gouge, scrapers, and bifaces. These finds indicated multi-component occupation dating from the Late Archaic to Contact Period. Altogether, Site 137-30 is approximately 35 acres and had good integrity in 1991. However, it was not assessed applying the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). This site will not be impacted by the proposed solar center.

### Site 137-31

Site 137-31 was recorded as the Lantern Hill Road Site by Kathryn Hoy in 1991. It also was identified during surface collection of the area by Mr. Louis Bayer. This site is located within open field in Stonington and approximately 430 meters (1,411 feet) to the north of the project area; it covers approximately 3.24 hectares (8 acres) of land (Figure 13). Mr. Bayer recovered various quartzite and quartz artifacts here in the 1940s; however, they were not documented and no further information about Site 137-31 could be determined. Furthermore, it has not been assessed applying the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). This site will not be impacted by the proposed solar center. This house will not be impacted by the proposed solar center.

### Gallup House

The Lieutenant Benadam Gallup House is a State Register of Historic Places building located at 241 Gallup Hill Road; it is situated approximately 990 meters (3,248 feet) to the northwest of the project area in Ledyard, Connecticut (Figure 14). It is a two-story Colonial dwelling built ca., 1730. The front elevation of this building has a five-bay façade, and the entire exterior is clad in wood shingles. The Gallup House has a dry laid rubble foundation and a post and beam framing system. Its gable roof is covered in asphalt shingles. There is a lean-to addition to the rear of the residence. All of these features are well-preserved from the eighteenth century. The Gallup House is also significant for its association with the Gallup family, particularly its builder Lt. Benadam Gallup, who was the first settler of North Groton. This house is the oldest surviving Gallup family, as was occupied by the Gallups until 1807. Benadam Gallup's son, Thomas Prentice, lived here while serving at Fort Griswold at the time of the Battle of Groton Heights. The house remains in good condition and it has integrity of setting, being surrounded by pastures that are divided by stone walls as well as two barns and a wellhouse. This house will not be impacted by the proposed solar center.

### William Noyes Farmstead

The William Noyes Farmstead was listed on the National Register of Historic Places on April 25, 1992 by Jan Cunningham, a National Register consultant. The farmstead is located at 340 Gallup Hill Road, Ledyard, Connecticut and approximately 571 meters (1,875 feet) to the southwest of the project area (Figure 14). It consists of a two-story farmhouse that combines vernacular Colonial and Federal style features. In addition, there are two barns on the property with extensive fields to the east bordered by stone walls. These fields are no longer a part of the property but add to its rural character. The main dwelling stands on a granite foundation, is sheathed with planking and clapboards, and topped with a gable roof. There is also a shed-roofed ell on the north side. The main door, with its narrow pilasters, overlight, and high entablature with dentils is characteristic of the Federal style. The house was built by William Noyes ca., 1735 and it remained in the family until 1783. The property was used as a farm well into the twentieth century, at which time it was known as the "Littlefield Church Farm." Therefore, it is representative of vernacular Federal style architecture and early Connecticut family farms and was listed under Criteria A and C. This house will not be impacted by the proposed solar center.

### **Summary and Interpretations**

The review of previously identified cultural resources in the vicinity of the proposed project area indicates that the larger project region contains prehistoric Native American deposits, as well as historic cultural resources. Archaeological sites occupied within the study region likely date from the prehistoric era (ca., 12,500 to 350 B.P). This suggests that additional archaeological sites may be situated within the project area. There are no historic resources in the vicinity of the project area that will be impacted by the proposed solar center.

# 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 Mystic, 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 historic maps, topographic quadrangles, and aerial imagery depicting the project area in order to identify potential historic resources and/or areas of past disturbance; and 4) pedestrian survey and photo-documentation of the project area 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 identify assess the archaeological sensitivity of the project area, 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 area. 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 historic maps depicting the proposed project area; an examination of USGS 7.5' series topographic quadrangles; an examination aerial images dating from 1934 through 2016; 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 area, 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 area, and to assess its sensitivity with respect to the potential for producing intact cultural resources.

Background research materials, including historic 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 area.

**Field Methodology and Data Synthesis**

Heritage also performed fieldwork for the Phase IA cultural resources assessment survey of the project area associated with the solar project in Mystic, Connecticut. This included pedestrian survey, photo-documentation, and mapping of the area containing the proposed solar center and access road. During the completion of the pedestrian survey, representatives from Heritage photo-documented all potential areas of impact using digital media.

**Field Methodology and Data Synthesis**

Heritage also performed fieldwork for the Phase IA cultural resources assessment survey of the project area associated with the solar project in Mystic, Connecticut. This included pedestrian survey, photo-documentation, and mapping of the areas containing the proposed development area. During the completion of the pedestrian survey, representatives from Heritage photo-documented all potential areas of impact using digital media.

## 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 area in Mystic, 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 historic maps and aerial imagery depicting the project area in order to identify potential historic resources and/or areas of past disturbance; 4) pedestrian survey and photo-documentation of the project items in order to determine their archaeological sensitivity; and 5) preparation of the current Phase IA cultural resources assessment survey report.

### Results of Phase IA survey

Heritage personnel conducted pedestrian survey of the project area on June 26, 2019. The project area consisted of flat open agricultural field that was bound to the north and west by Whitford Brook and to the east by Lantern Hill Road. The central portion of the project area was planted with corn at the time of survey (Figures 16 and 17). The north, east and west portions of the field were not planted at the time of survey and were used as hay fields (Figures 18 and 19). A paved access road along the eastern end of the project area extended north-to-south inside the project area and its connects Lantern Hill Road to a water treatment facility located just outside of the project area to the north (Figures 20 and 21). Elevations throughout the area ranged from approximately 12.2 m (40 ft) NGVD in the west to 16.8 m (55 ft) NGVD in the east. The predominant soil type located noted throughout the project area is Ninigret/Tisbury sandy loam, which is found on slopes of 0 to 5 percent, is well-drained, and is generally correlated with prehistoric site location. Whitford Brook is a mid-sized stream that drains from Whitford Pond to the north and borders much of the north and west edges of the property (Figure 22).

### Overall Sensitivity of the Proposed Project area

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 historic maps, aerial images, and data regarding previously identified archaeological sites and National and State Register of Historic Places properties, and inventoried historic standing structure to stratify the project items into zones of no/low and/or moderate/high archaeological sensitivity. In general, historic 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 historic period archaeological deposits is based not only the above-defined landscape features but also on the presence or absence of previously identified historic period archaeological resources as identified during previous archaeological surveys, recorded on historic 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 historic period archaeological site, a National or State Register of Historic Places district/individually listed property, or an area that contains known historic period buildings 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 historic period archaeological sensitivity.

The combined review of historic maps, aerial images, land deeds, and pedestrian survey indicates that the project area contains low slopes and well drained soils within an approximately 35.3 ac area situated in close proximity to Whitford Brook, several small ponds, and the Mystic River. Soils found throughout the project area are attributed to the Ninigret and Tisbury series, which consists of sandy loam that generally extends to ca., 165 cm (65 in) below surface. In addition, other than its use as agricultural land, this area has been relatively undisturbed over the years. Based on the landscape type, proximity to freshwater, and the presence of well-drained sandy loamy soils, the entirety project area appears to retain a moderate/high sensitivity for yielding archaeological deposits. Thus, Phase IB cultural resources reconnaissance survey of the project area is recommended prior to construction of the proposed solar center.

## BIBLIOGRAPHY

Army Corps of Engineers

- 1913 *Stonington*. Topographic Quadrangle Map Series. Washington, DC: U.S. Army Corps of Engineers.

Barber, J. W.

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

Beers, Frederick W.

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

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.

Capitol Region Council of Governments

- 2016 Statewide Aerial Photograph Series. Connecticut Department of Energy and Environmental Protection, Connecticut Environmental Conditions Online. <http://www.cteco.uconn.edu/>.

CERC

- 2006 *Stonington, Connecticut, CERC Town Profile 2006*. Accessed 10/03/2006. <http://products.cerc.com/pdf/tp/stonington.pdf>. Coe, J.L.

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: The State.

Connecticut Department of Environmental Protection (CT DEP)

- 1986 *Connecticut Statewide Aerial Photograph Series*. Hartford, Connecticut: Connecticut State Archives.

- Crofut, Florence S. Marcy  
 1937 *Guide to the History and the Historic Sites of Connecticut*. New Haven, CT: Yale University Press.
- Curren, 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.
- Davis, M.  
 1969 Climatic changes in southern Connecticut recorded by Pollen deposition at Rogers Lake. *Ecology* 50: 409-422.
- De Forest, J. W.  
 1852 *History of the Indians of Connecticut from the Earliest Known Period to 1850*. Wm. Jas. Hamersley, Hartford, Connecticut.
- 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.

Guillette, 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.

Haynes, William

- 1949 *Stonington Chronology, 1649-1949: Being a Year-by-Year Record of the American Way of Life in a Connecticut Town*. Reprint edition. Salem, Massachusetts: Higginson Book Company.

Herzan, John

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

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

Lester, William Jr.

1833 *Map of New London and Windham Counties in Conn. from Actual Survey*. New Haven, Connecticut: Daggett & Ely, Engr.

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.

1983 *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.
- Rhode Island Census  
 1865 *Rhode Island State Census*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.
- Rhode Island Geographic Information System (RIGIS)  
 1939 *Digital Aerial Photographs*. Rhode Island Geographic Information System Data Distribution System. Kingston, Rhode Island: Environmental Data Center, University of Rhode Island. <http://www.edc.uri.edu/rigis>.  
 1962 *Digital Aerial Photographs*. Rhode Island Geographic Information System Data Distribution System. Kingston, Rhode Island: Environmental Data Center, University of Rhode Island. <http://www.edc.uri.edu/rigis>.
- 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.
- Rossano, G. L.  
 1997 *Northwest Highlands: Historical and Architectural Overview and Management Guide*. Hartford, Connecticut: Connecticut Historical Commission, State Historic Preservation Office.
- 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.
- Shelford, V.E.  
 1963 *The Ecology of North America*. University of Illinois Press.
- 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.  
 1986 *Cracker Barrel Chronicle: A Connecticut Yankee Storekeeper Views Village Life in North Stonington*. Volume II. Compiled in 1948. North Stonington, Connecticut: North Stonington Historical Society.
- Stonington, Town of  
 n.d. *Town of Stonington, Connecticut Geographic & Property Information Application*. Accessed June 13, 2019. [http://gis.stonington-ct.gov/ags\\_map/](http://gis.stonington-ct.gov/ags_map/).
- Turner, G. M., and M. W. Jacobus  
 1989 *Connecticut Railroads: An Illustrated History*. Hartford, Connecticut: Connecticut Historical Society.
- United States Census  
 1850a *Seventh Census of the United States. Schedule 1 – Free Inhabitants*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

- 1850b *Seventh Census of the United States. Schedule 5 – Products of Industry.* Washington, DC: Bureau of the Census.
- 1860 *Eighth Census of the United States, Schedule 1.* HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.
- 1870a *Ninth Census of the United States. Schedule 1 - Inhabitants.* HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.
- 1870b *Ninth Census of the United States. Schedule 3 – Productions of Agriculture.* HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

United States Department of Agriculture (USDA)

- 1951 *Agricultural Stabilization and Conservation Service Aerial Photography for Connecticut.* Washington, DC: Collections of the National Archives and Records Administration.

United States Geological Survey (USGS)

- 1970 *Aerial photograph Series for Connecticut.* Reston, Virginia: USGS.
- 1990 *Aerial photograph Series for Connecticut.* Reston, Virginia: USGS.

Walling, H. F.

- 1854 *Map of New London County, Connecticut.* Philadelphia: William E. Baker.

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.

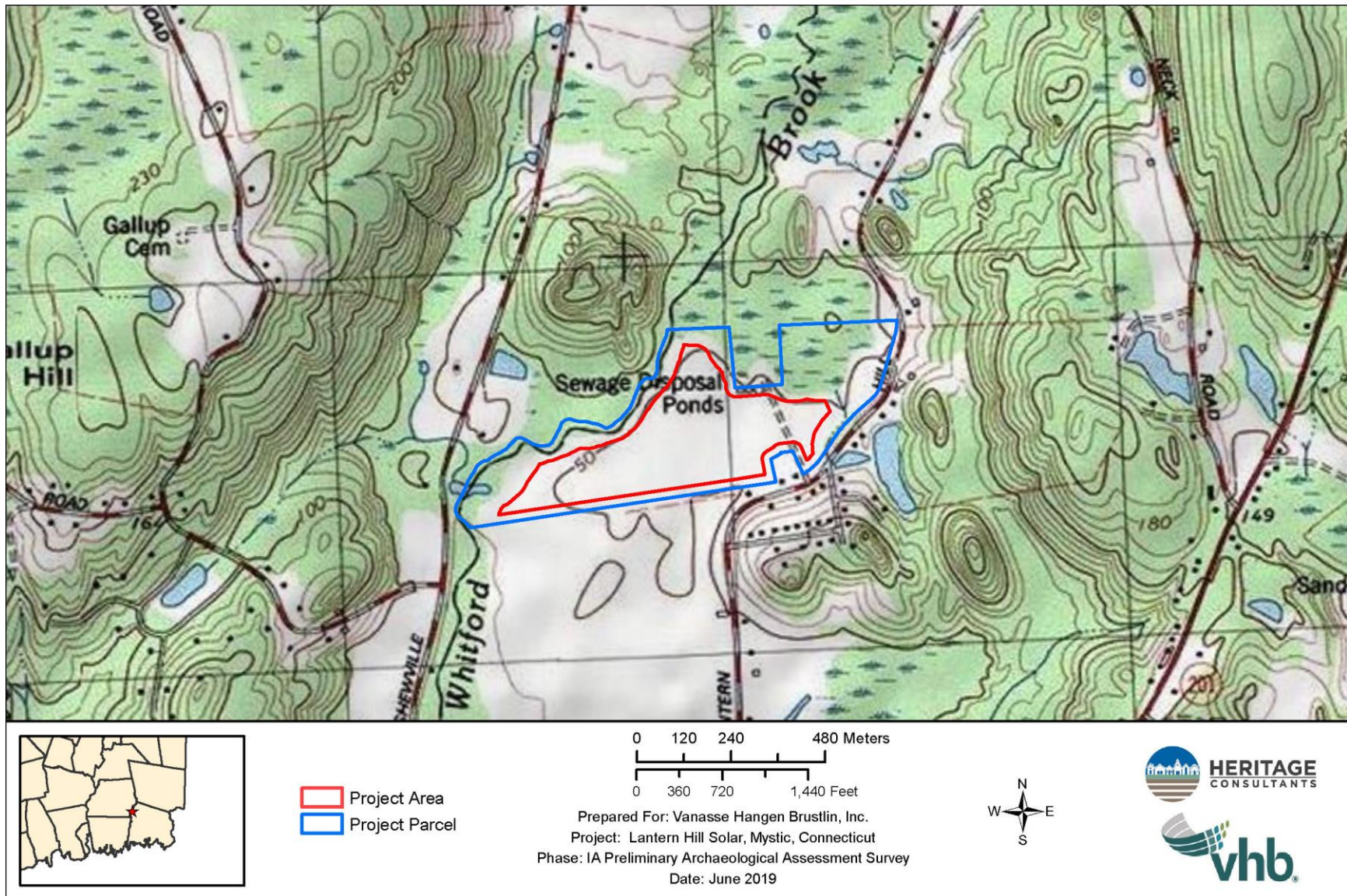


Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the project area in Mystic, Connecticut.

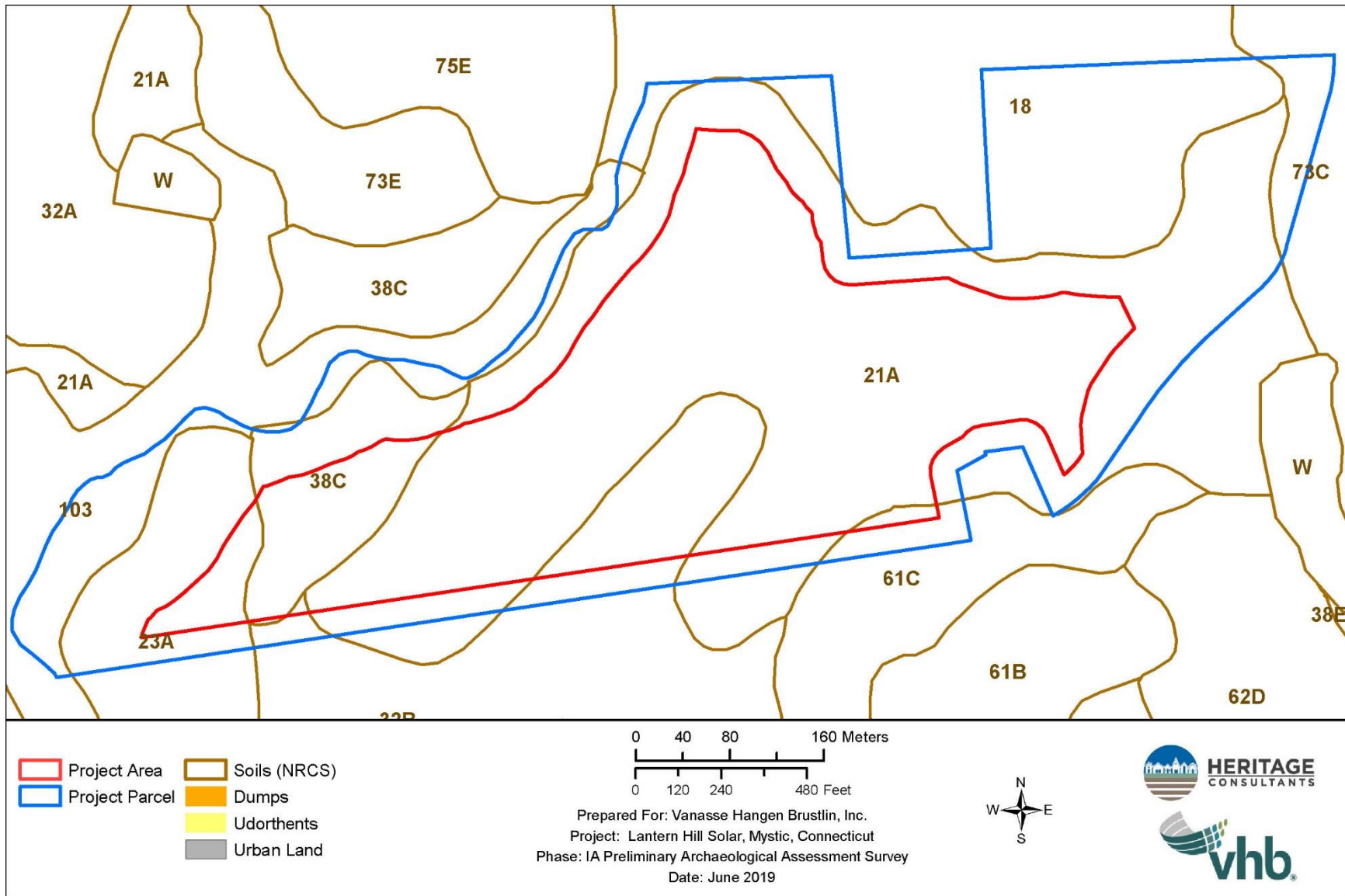


Figure 2. Map of soils located in the vicinity of the project area in Mystic, Connecticut.

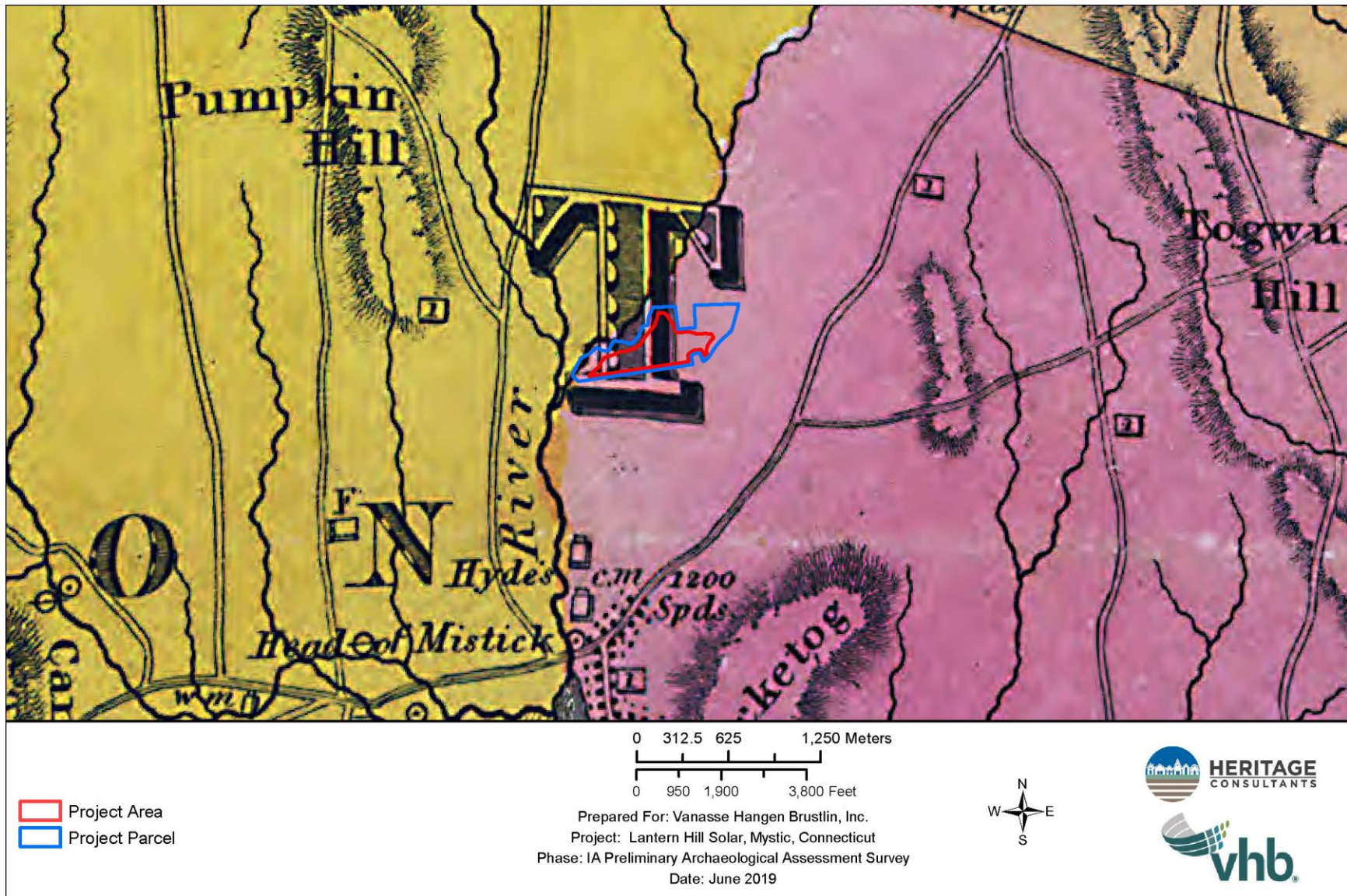


Figure 3. Excerpt from an 1833 historic map showing the location of the project area in Mystic, Connecticut.

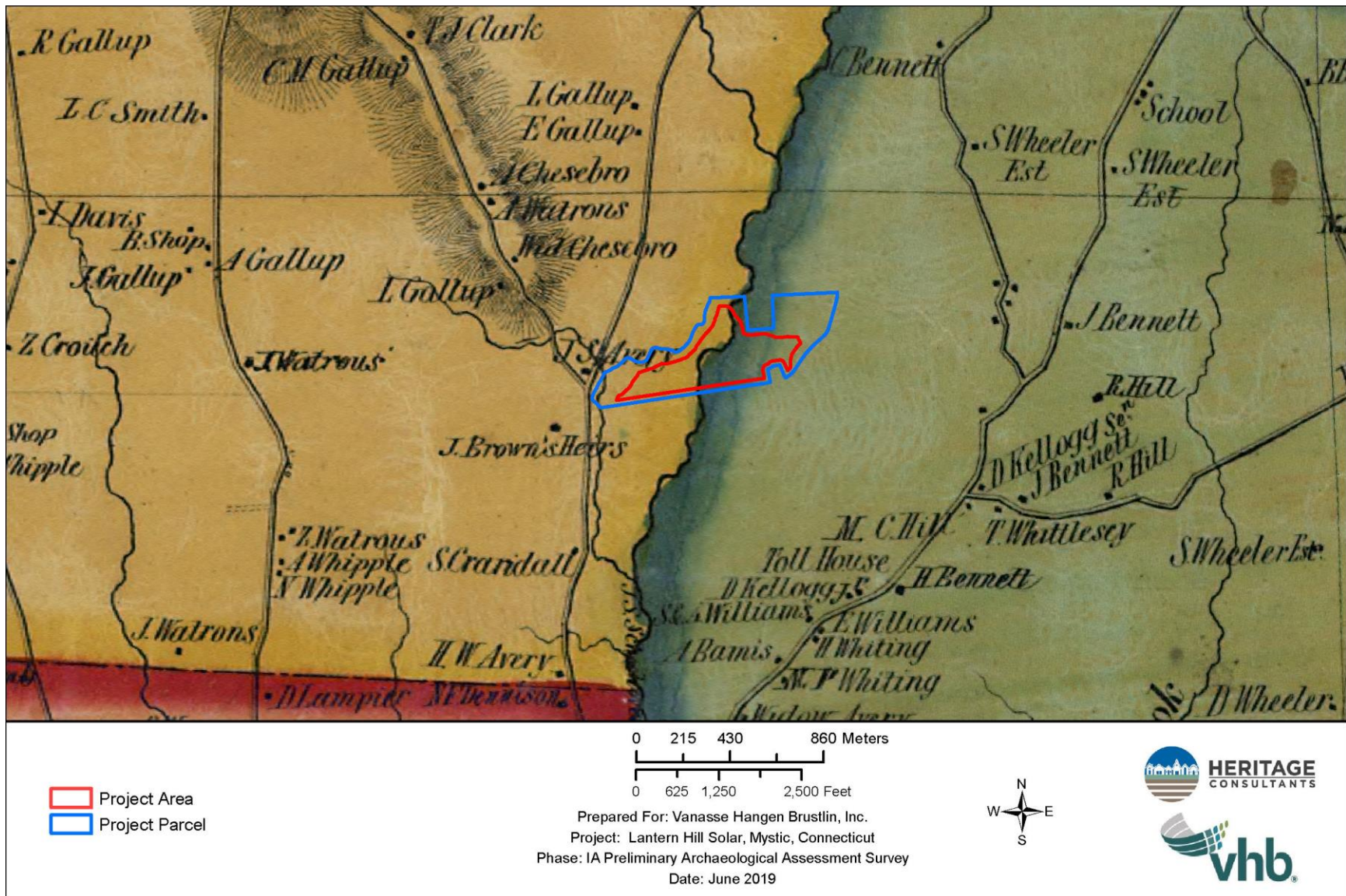


Figure 4. Excerpt from an 1854 historic map showing the location of the project area in Mystic, Connecticut.

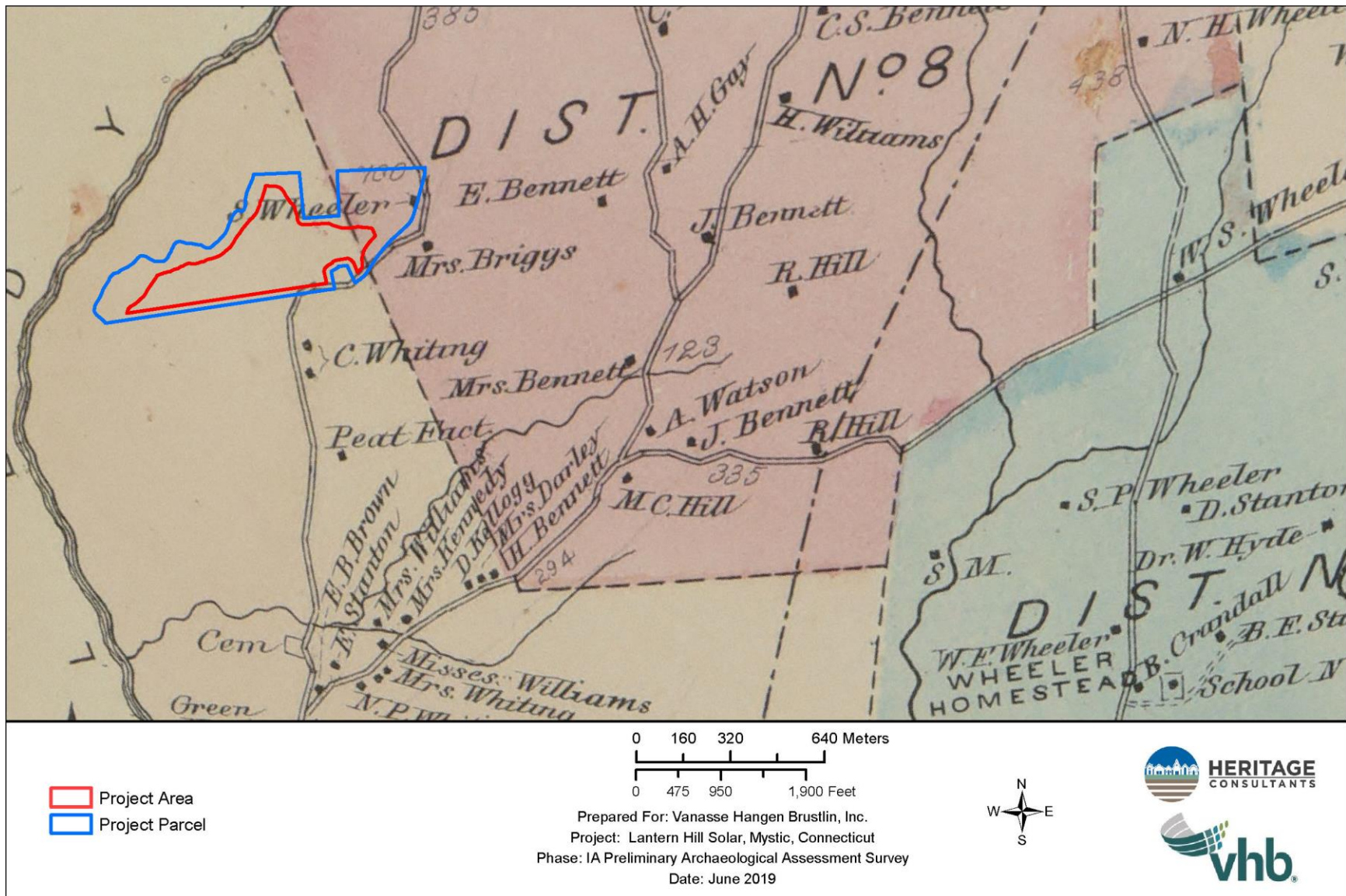


Figure 5, Sheet 1. Excerpt from an 1868 historic map showing the location of the project area in Mystic, Connecticut.

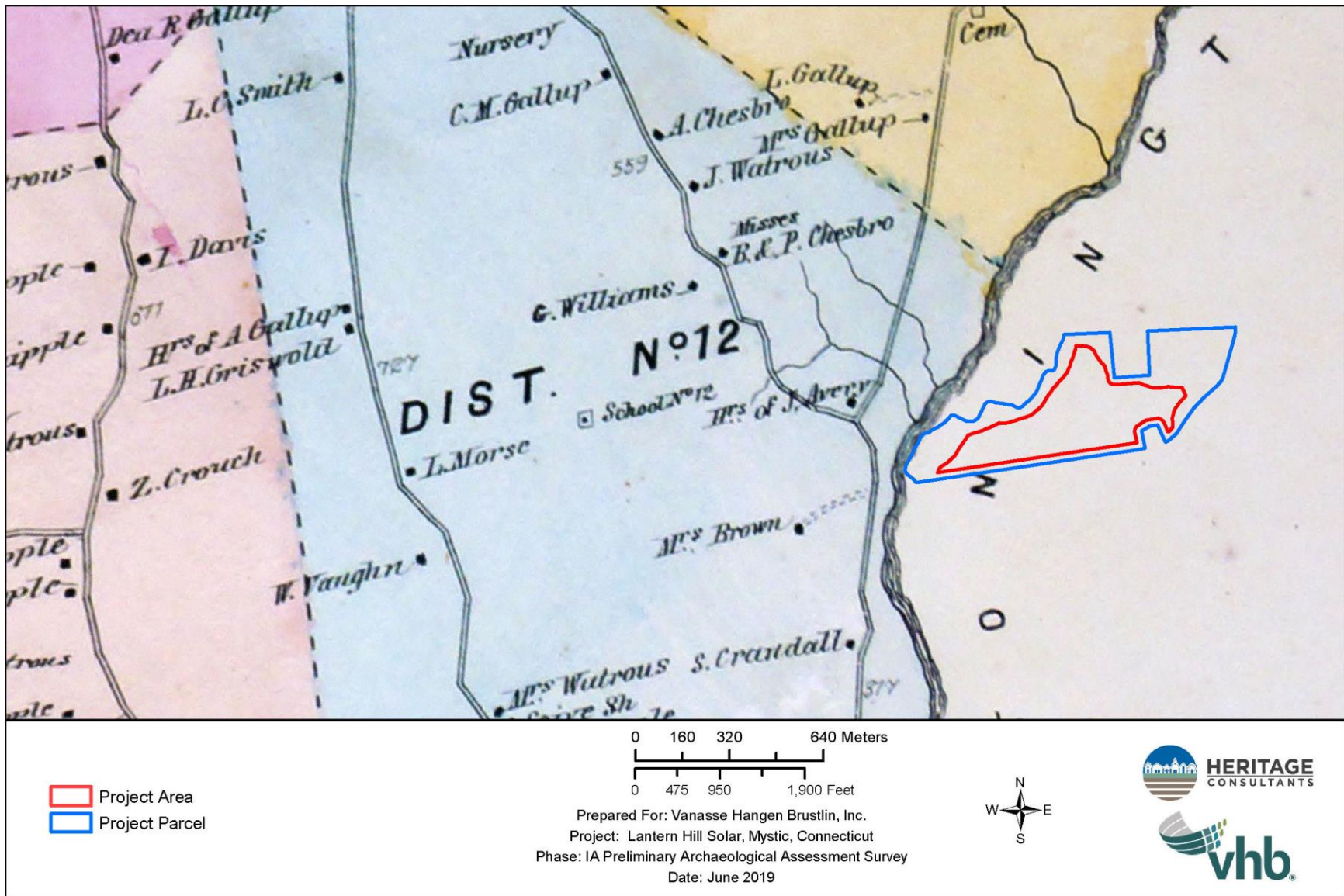


Figure 5, Sheet 2. Excerpt from an 1868 historic map showing the location of the project area in Mystic, Connecticut.

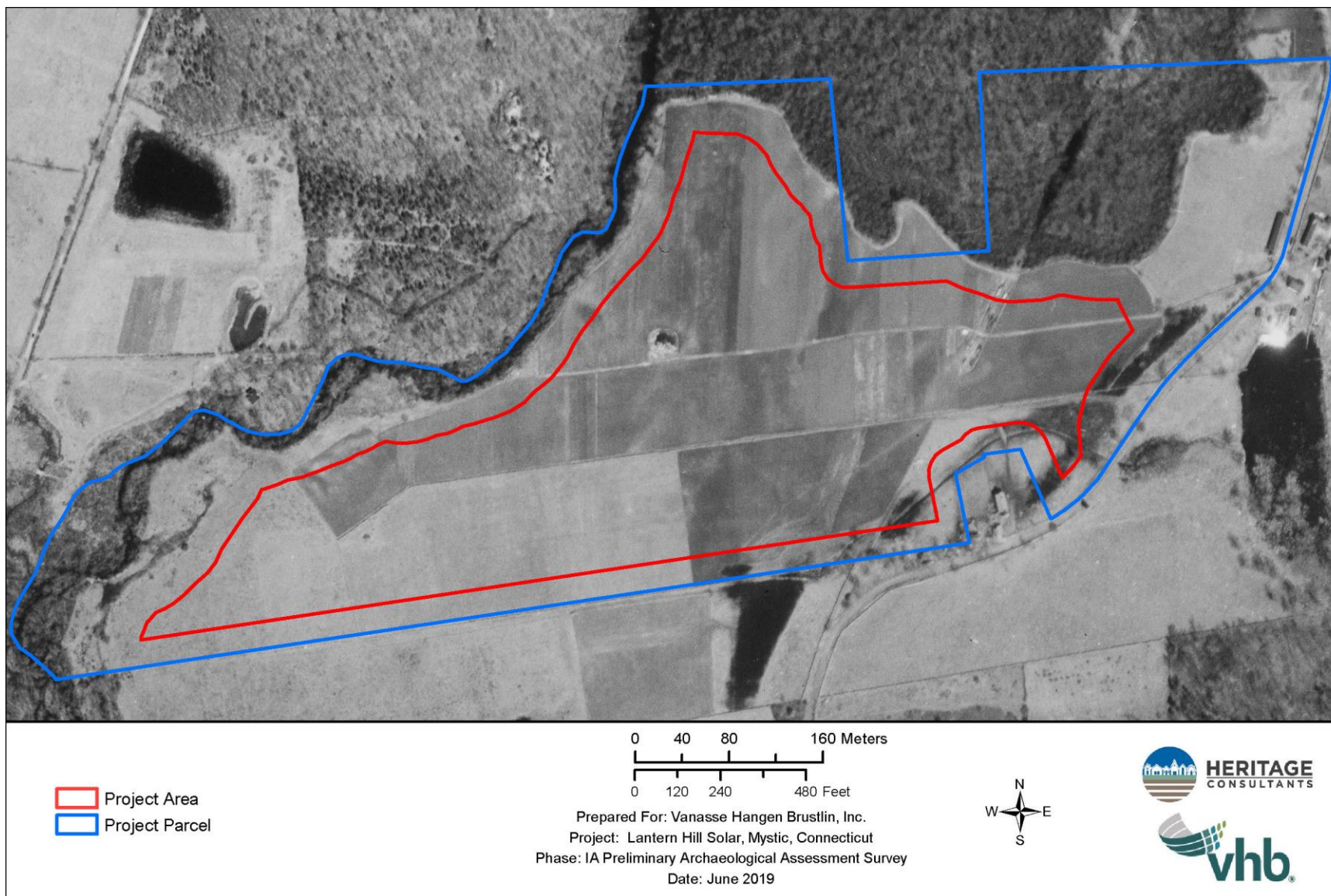


Figure 6. Excerpt from a 1934 aerial photograph showing the location of the project area in Mystic, Connecticut.

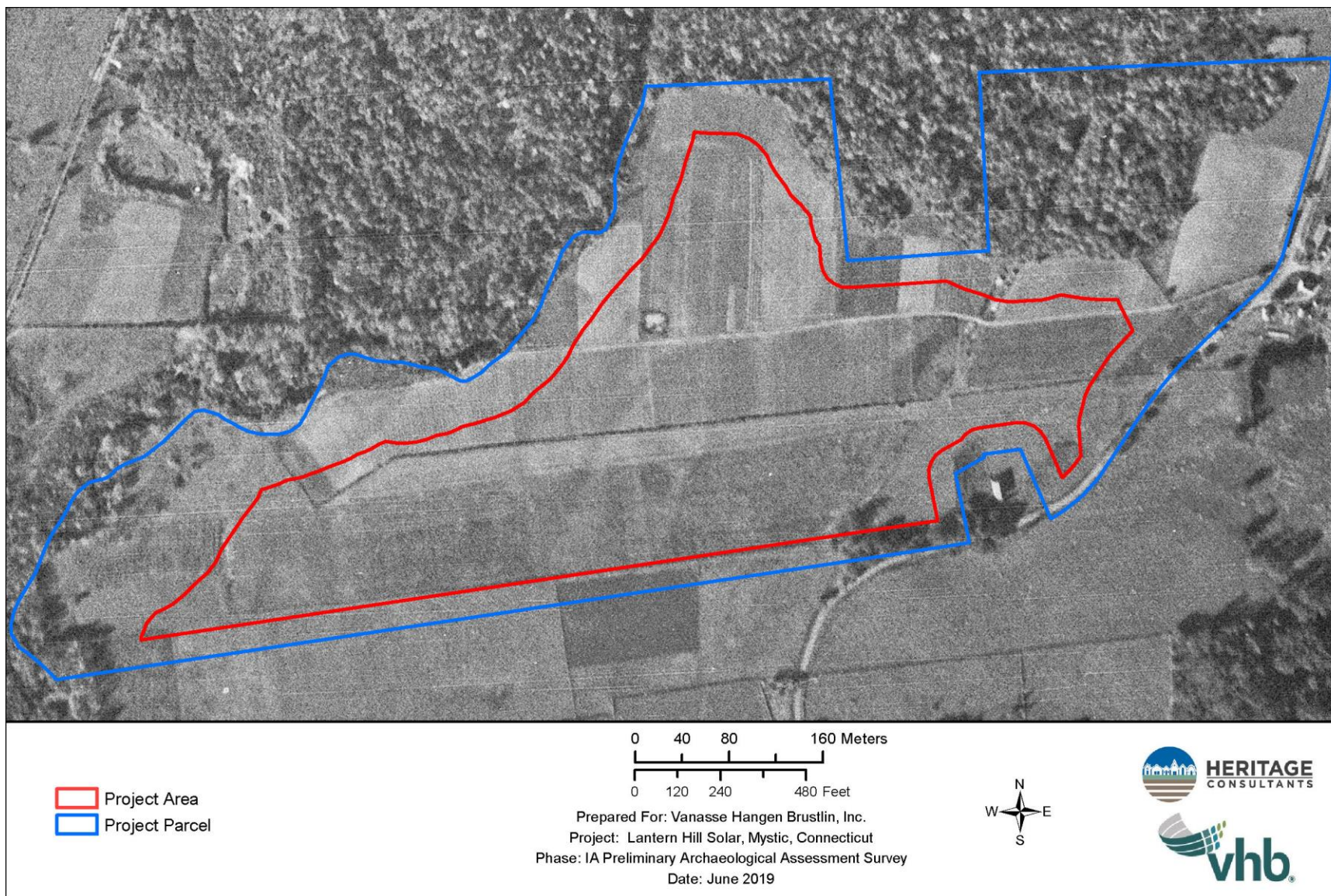


Figure 7. Excerpt from a 1941 aerial photograph showing the location of the project area in Mystic, Connecticut.

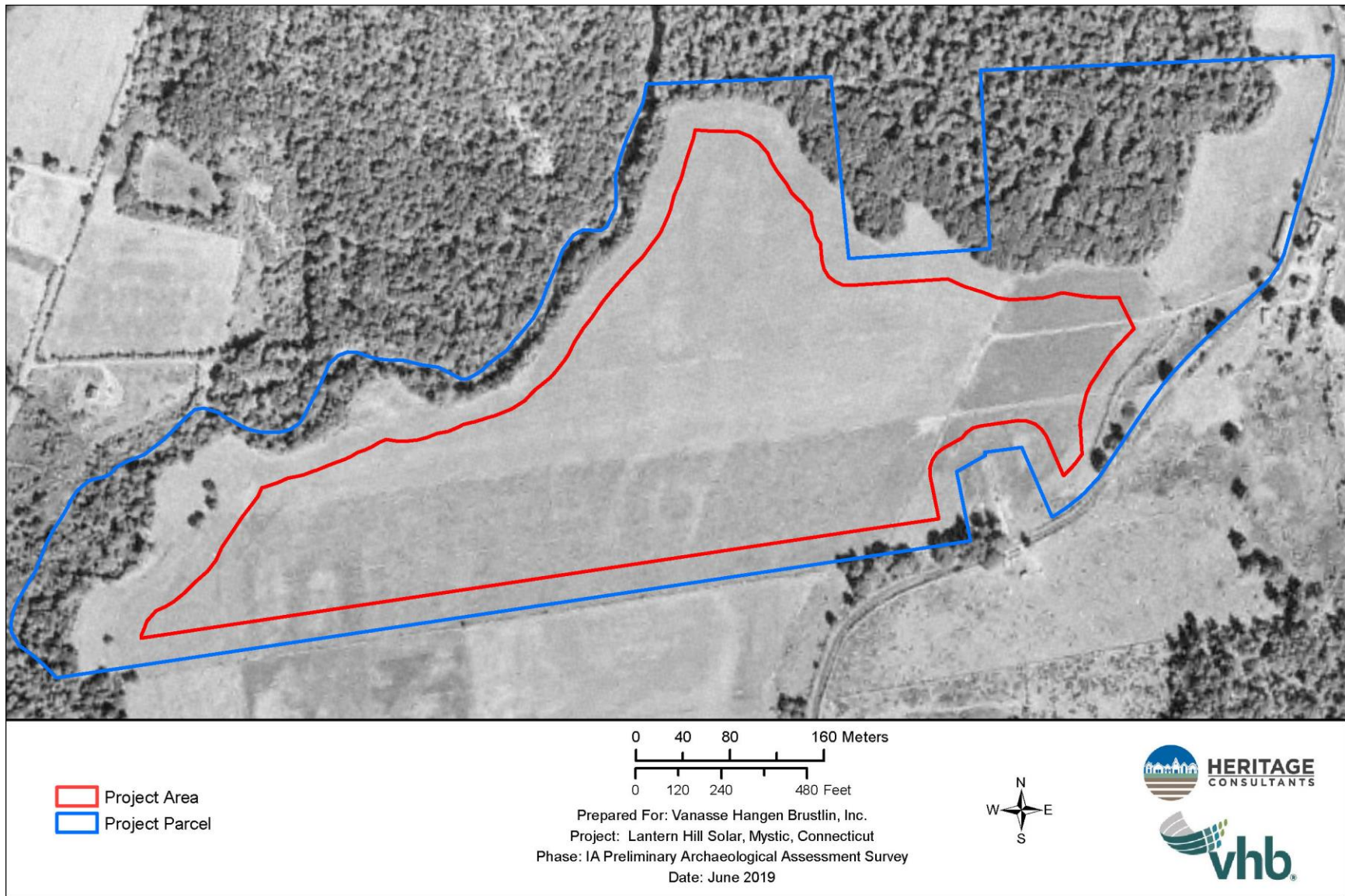


Figure 8. Excerpt from a 1951 aerial photograph showing the location of the project area in Mystic, Connecticut.

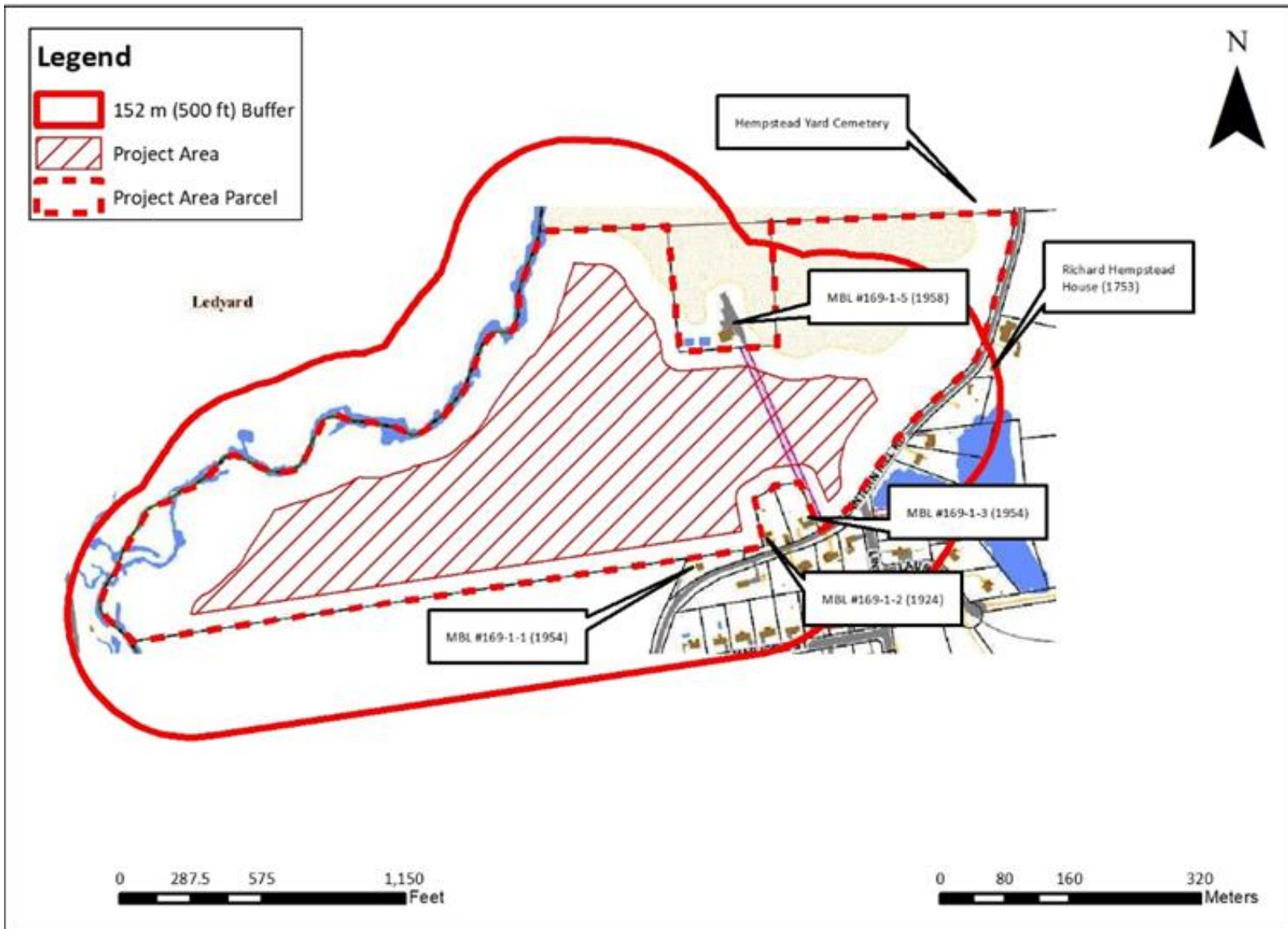


Figure 9. Digital map parcel lines and the project area in Mystic, Connecticut.

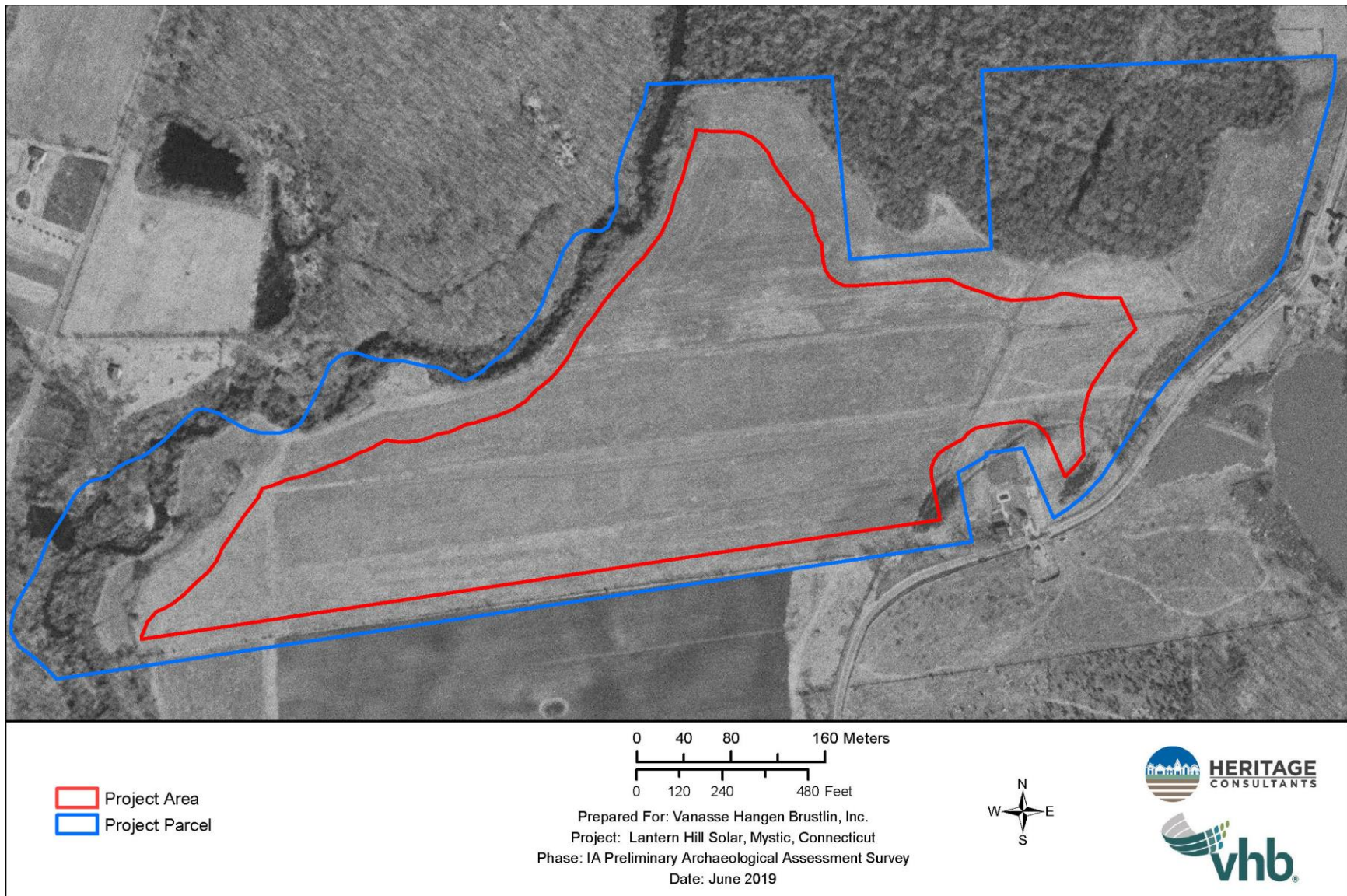


Figure 10. Excerpt from a 1957 aerial photograph showing the location of the project area in Mystic, Connecticut.

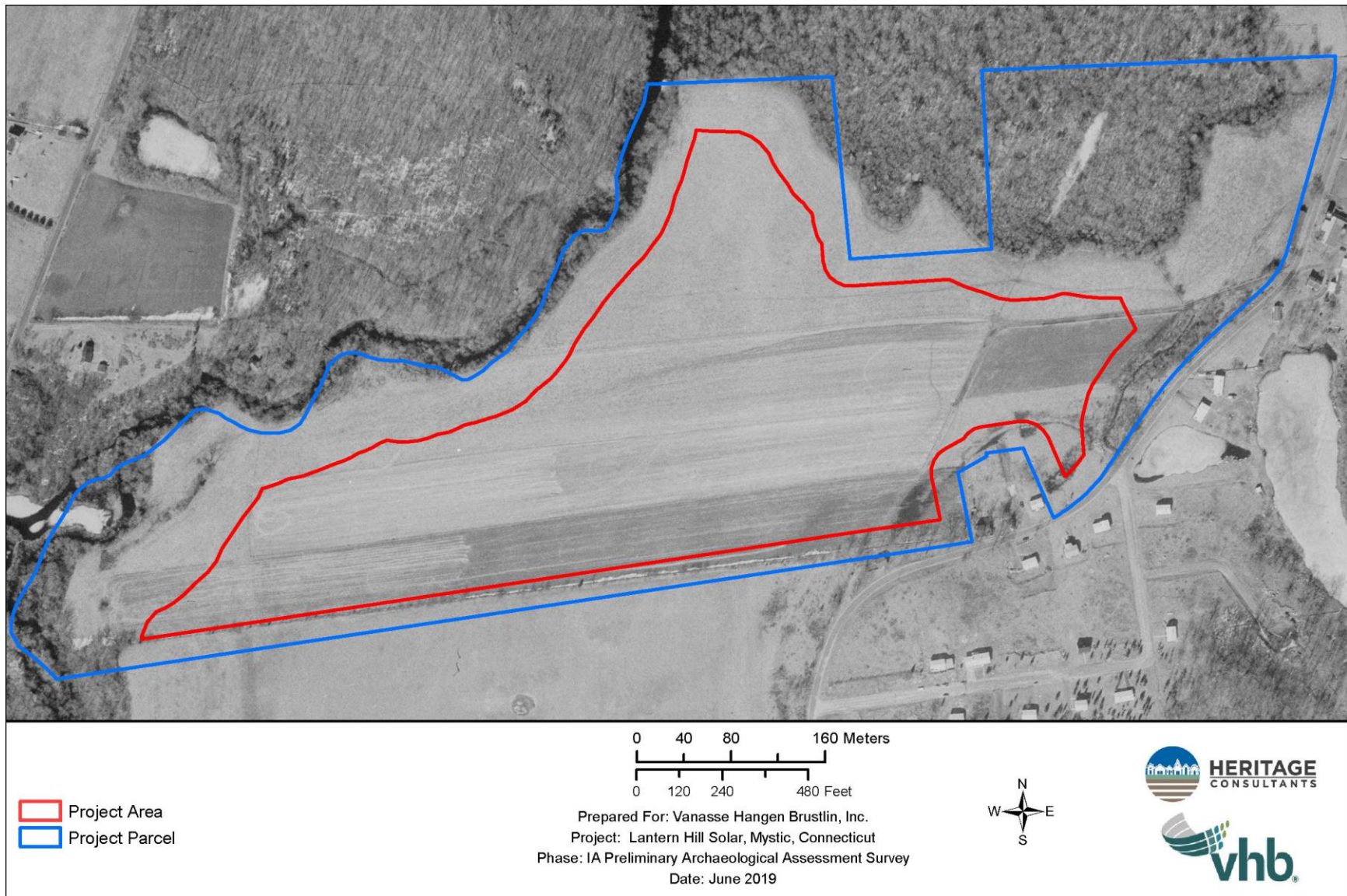


Figure 11. Excerpt from a 1965 aerial photograph showing the location of the project area in Mystic, Connecticut.

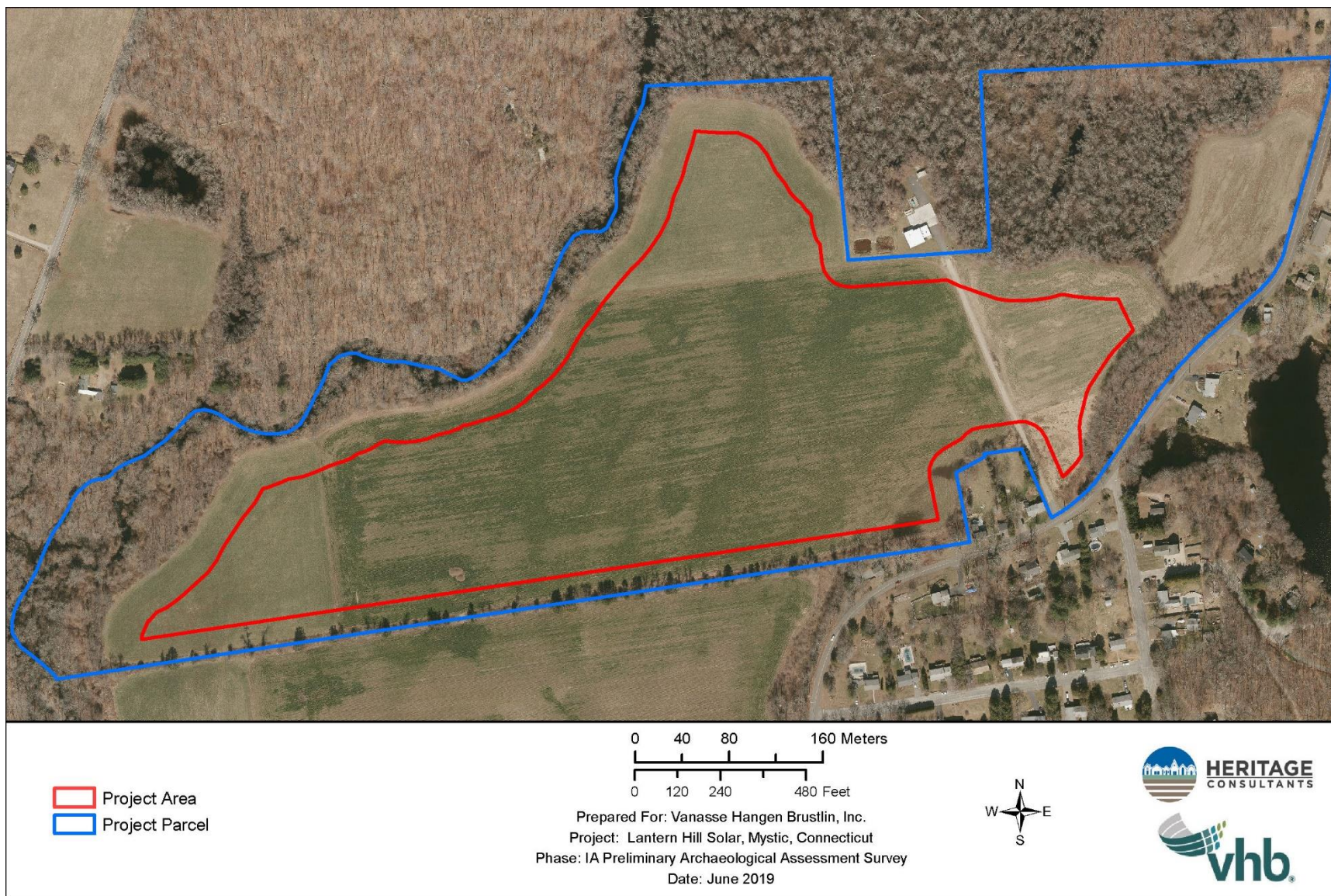


Figure 12. Excerpt from a 2016 aerial photograph showing the location of the project area in Mystic, Connecticut.

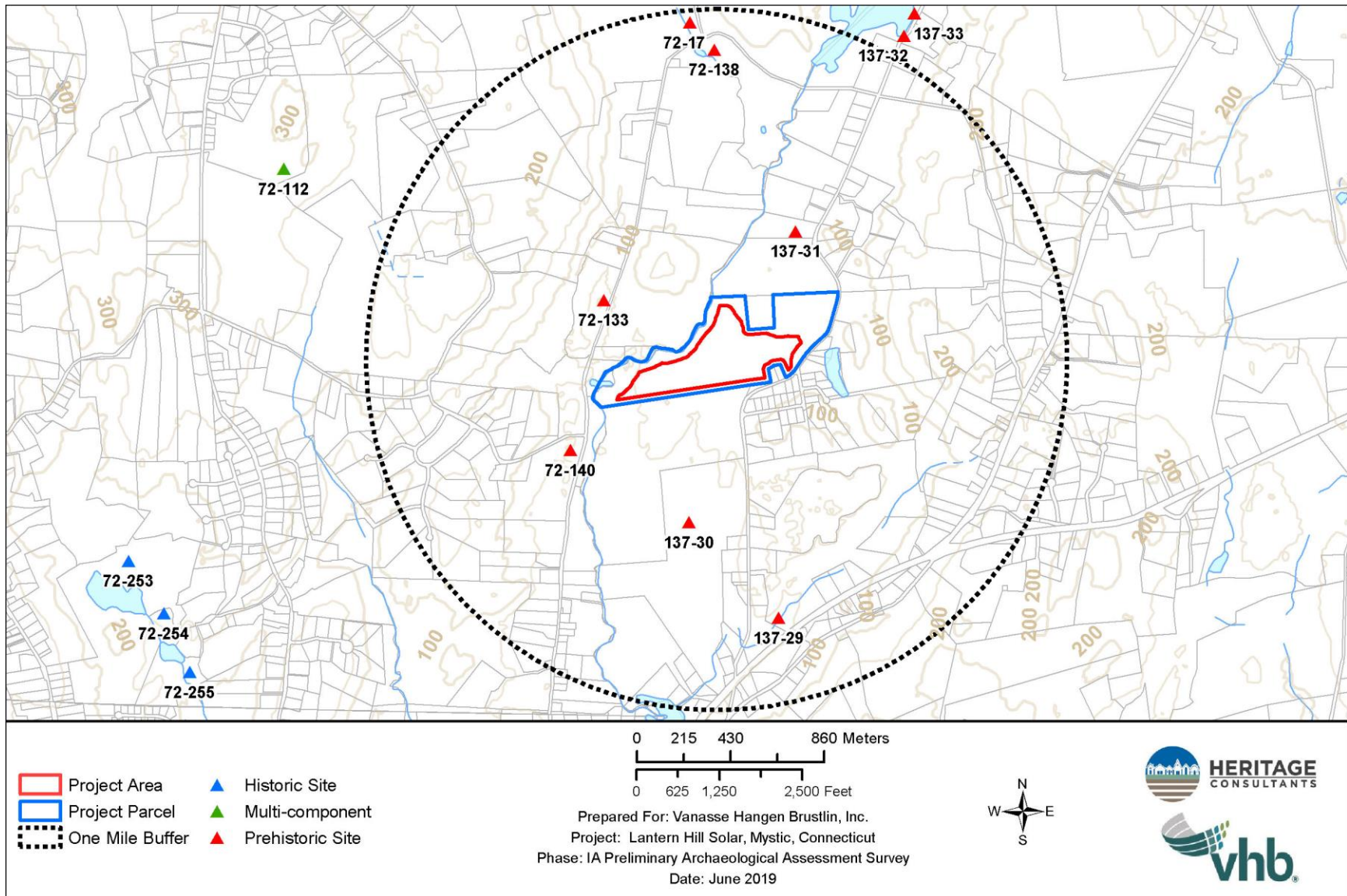


Figure 13. Digital map showing the location of previously identified archaeological sites in the vicinity of the project area in Mystic, Connecticut.

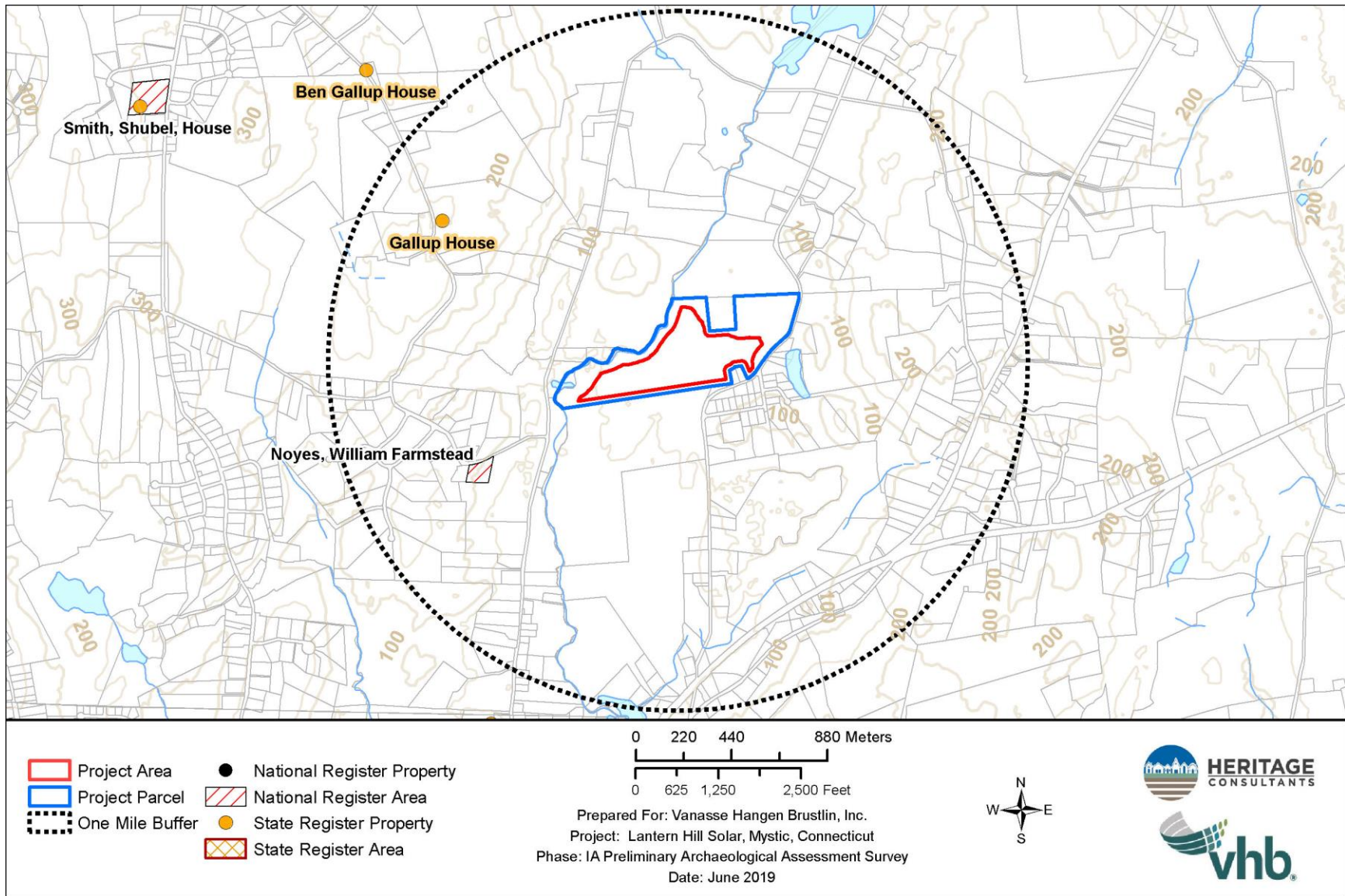


Figure 14. Digital map depicting the locations of previously identified National/State Register of Historic Places properties and inventoried Historic Standing Structures in the vicinity of the project area in Mystic, Connecticut.



Figure 15. Overview photo of the central portion of project area facing northeast. Note the area is planted with corn.



Figure 16. Overview photo of the central portion of the project area facing west. Note the area is planted with corn.



Figure 17. Overview photo facing south from northernmost portion of project area. Note that corn is not planted in this area.



Figure 18. Overview photo facing east from westernmost portion of the project area. Note that corn is not planted in this area.



Figure 19. View from Lantern Hill Road looking north towards project area access road.



Figure 20. View from water treatment facility looking south along access road towards Lantern Hill Road.



Figure 21. View north of water treatment facility located just north of the project area.

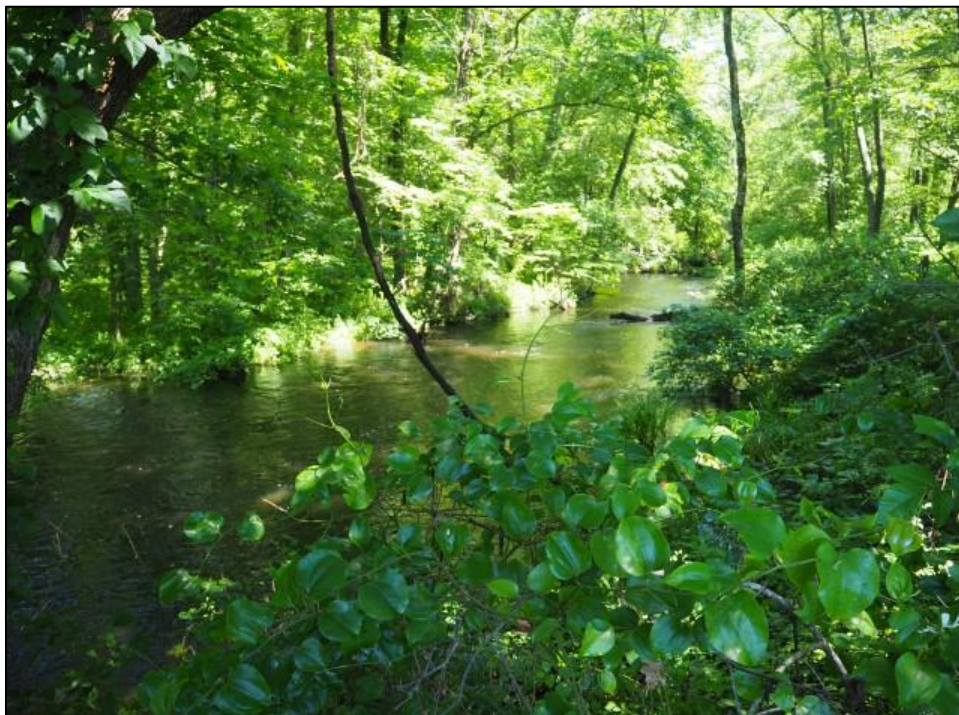


Figure 22. Looking upstream at Whitford Brook which runs along much of the north and west edge of the project area.

SEPTEMBER 2024

PHASE IB CULTURAL RECONNAISSANCE SURVEY AND PHASE II  
NATIONAL REGISTER TESTING AT LANTERN HILL SOLAR CENTER  
IN STONINGTON, CONNECTICUT

PREPARED FOR:



VANASSE HANGEN BRUSTLIN, INC.  
100 GREAT MEADOW ROAD, #200  
WETHERSFIELD, CONNECTICUT 06109



830 BERLIN TURNPIKE  
BERLIN, CONNECTICUT 06037

## ABSTRACT

This report presents the results of the Phase IB Cultural Resources Reconnaissance survey and subsequent Phase II National Register of Historic Places testing and evaluation of the proposed Lantern Hill Road Solar Center in Stonington, Connecticut. The Phase IB cultural reconnaissance survey was completed in March of 2024 and consisted of pedestrian survey and shovel testing. The pedestrian survey resulted in the identification of 24 surface finds across the project area. The surface finds consisted of five precontact era lithic flakes and 19 post-European Contact period artifacts, including 12 ceramics sherds and seven glass shards. A wildcat metal detector survey conducted within the northeastern portion of the project area resulted in the recovery of an additional 11 iron artifacts.

The Phase IB subsurface testing resulted the excavation of 145 of 148 (98 percent) planned shovel tests across the moderate/high archaeologically sensitive area. The three planned but unexcavated shovel test pits fell within areas where the ground surface was covered by standing water. In addition to the planned shovel tests, 26 delineation pits were excavated to explore identified precontact archaeological deposits. The Phase IB shovel testing resulted in the recovery of 62 post-European Contact period artifacts and a 12 precontact era artifacts.

Laboratory analysis of the post-European Contact period materials recovered from the pedestrian, metal detecting, and shovel testing indicated that they dated from eighteenth through twentieth centuries. Due to the lack of density and association with above or below ground features, the post-European contact era cultural material was classified as unassociated field scatter. As a result, it lacked the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of the post-European Contact period component is recommended.

The Phase IB survey also resulted in the identification of three precontact era loci (Locus 1 through 3) and two isolated finds (ISO 1 and 2). These areas produced artifacts from the surface, plowzone, and B-subsoil Horizons. The precontact era assemblage consisted of quartz and quartzite lithic debitage. Laboratory analysis of the precontact era assemblage identified multiple reduction types indicative of lithic tool production and maintenance. As a result, a Phase II National Register of Historic Places testing and evaluation of Locus 1 through 3 and Isolate 1 and 2 was conducted to determine their boundaries, chronology, and function, as well as their research potential and eligibility for listing on the National Register of Historic Places based on the criteria for evaluation (36 CFR 60.4 [a-d]).

Phase II testing and evaluation in July of 2024. The field effort consisted of the excavation of 175 Phase II delineation shovel tests to infill the grid previously established during the Phase IB survey. In addition, four 1 x 1 meter (3.3 x 3.3 foot) excavation units (EU-1 through EU-4), were excavated to explore artifact deposits, possible cultural features, and the stratigraphic integrity of the loci and isolated find locations. Isolated finds 1 and 2 were determined to lack research potential and significance applying the criteria of evaluation (36 CFR 60.4 [a-d]). As a result, no additional examination of them is recommended prior to project construction.

Locus 1 was investigated through the excavation of 14 Phase II shovel tests, which resulted in the recovery of a single quartz biface reduction flake. Due to the lack of substantial artifact deposits and associated cultural features, Locus 1 was assessed as lacking the qualities of significance as defined by the National

Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional examination of Locus 1 is recommended prior to Project construction.

Locus 2 was investigated through the excavation of 122 Phase II shovel tests and three 1 x 1 meter (3.3 x 3.3 foot) excavation units. This resulted in the recovery of 128 artifacts and three cultural features (Feature 1, 3, and 4). Features 1 and 3 were associated with the precontact era, whereas Feature 4 was a post-European Contact period post, likely associated with past farming practices. A total of 111 precontact era artifacts were recovered from Locus 2. The assemblage consisted of lithic debitage, cores, and flaked tools. The lithic artifacts were recovered from various soil horizons. The excavation of Feature 1 and 3 resulted in the recovery of 1,335 ecofacts. Analysis of Locus 2 determined that the site was a seasonal camp where occupants likely utilized the resources associated with the Whitford Brook and engaged in lithic tool production and maintenance using both local and non-local materials. The size, artifact assemblage, and deposition of Locus 2 suggests that it contains research potential and significance under Criterion D of the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). The Project sponsor proposes to preserve Locus 2 in place through avoidance measures during project construction. As a result, no impact to Locus 2 will result from construction. No additional archaeological examination is required unless project plans change to include all or portions of Locus 2.

Finally Locus 3 was investigated through the excavation of 21 Phase II shovel tests and a single 1 x 1 meter (3.3 x 3.3 foot) excavation unit. This resulted in the recovery of 11 artifacts and the identification of a single cultural feature (Feature 2). In addition to the lithic artifacts recovered from Locus 3, the excavation of Feature 2 resulted in the collection of 839 ecofacts consisting largely of charcoal. Careful excavation of Feature 2 showed that it had been impacted in the past and was no longer a “sealed context.” The artifact assemblage and deposition of Locus 3 suggests that it is an ephemeral lithic scatter that has been disturbed by plowing, largely destroying its depositional integrity. The lack of dense artifact deposits, diagnostic artifacts, and disturbance indicates Locus 3 lacks research potential and the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional examination of Locus 3 is recommended prior to Project construction.

# TABLE OF CONTENTS

<b>CHAPTER I: INTRODUCTION .....</b>	<b>1</b>
Summary of Project Methods.....	1
Summary of Phase IB Results .....	2
Summary of Phase II Results .....	2
Project Personnel.....	4
<b>CHAPTER II: NATURAL SETTING.....</b>	<b>5</b>
Introduction .....	5
Ecoregions of Connecticut .....	5
Eastern Coastal Ecoregion .....	5
Hydrology in the Vicinity of the Project Area .....	5
Soils Comprising the Project Area .....	6
Ninigret/Tisbury Soils (21A).....	6
Hinckley Soils (38C) .....	6
Sudbury Soils (23A) .....	6
Haven and Enfield Soils (32B) .....	7
Charlton-Chatfield Soils (61C) .....	7
Summary .....	8
<b>CHAPTER III: PRECONTACT ERA SETTING .....</b>	<b>9</b>
Introduction.....	9
Paleo-Indian Period (12,000 to 10,000 Before Present [B.P.].....	9
Archaic Period (10,000 to 2,700 B.P.).....	10
Early Archaic Period (10,000 to 8,000 B.P.) .....	11
Middle Archaic Period (8,000 to 6,000 B.P.).....	11
Late Archaic Period (6,000 to 3,700 B.P.) .....	12
The Terminal Archaic Period (3,700 to 2,700 B.P.).....	13
Woodland Period (2,700 to 350 B.P.) .....	13
Early Woodland Period (ca., 2,700 to 2,000 B.P.) .....	13
Middle Woodland Period (2,000 to 1,200 B.P.).....	14
Late Woodland Period (ca., 1,200 to 350 B.P.).....	14
Summary of Connecticut Precontact Period .....	15
<b>CHAPTER IV: POST EUROPEAN CONTACT PERIOD OVERVIEW .....</b>	<b>16</b>
Introduction.....	16
New London County.....	16
Woodland Period to Seventeenth Century.....	16
Seventeenth Century through Eighteenth Century.....	17
Nineteenth Century through the Twenty-first Century.....	18
History of the Project Area .....	20
Conclusions.....	20
<b>CHAPTER V: PREVIOUS INVESTIGATIONS .....</b>	<b>21</b>
Introduction.....	21

Previously Recorded Archaeological Sites and National/State Register of Historic Places	
Properties/Districts in the Vicinity of the Project Area .....	21
Site 72-17.....	21
Site 72-133.....	21
Site 72-138.....	22
Site 72-140.....	22
Site 137-29.....	22
Site 137-30.....	22
Site 137-31.....	22
Site 137-62.....	23
Smith House.....	23
Gallup House.....	23
William Noyes Farmstead.....	23
Summary and Interpretations.....	23
<b>CHAPTER VI: METHODS.....</b>	<b>25</b>
Introduction.....	25
Research Design .....	25
Field Methods .....	25
Metal Detection Survey Methods.....	25
Phase IB Survey Methods.....	25
Phase II Intensive Survey.....	26
Laboratory Analysis.....	27
Post-European Contact Period Cultural Material Analysis .....	27
Precontact Era Cultural Material Analysis.....	27
Curation .....	27
<b>CHAPTER VII: RESULTS OF PHASE IB CULTURAL RESOURCE RECONNAISSANCE SURVEY .....</b>	<b>28</b>
Introduction.....	28
Results of the Phase IB Cultural Reconnaissance Survey .....	28
Pedestrian Survey Result.....	28
Metal Detecting Survey.....	29
Phase IB Shovel Testing.....	29
Isolated Find 1 (ISO 1).....	31
Isolated Find 2 (ISO 2).....	31
Locus 1 .....	31
Locus 2 .....	32
Locus 3 .....	33
Phase IB Summary and Recommendations .....	33
<b>CHAPTER VIII: RESULTS OF THE PHASE II NRHP TESTING AND EVALUATION.....</b>	<b>34</b>
Introduction.....	34
Results of the Phase II NRHP Testing and Evaluation.....	34
Feature 1 .....	38
Feature 3 .....	39
Excavation Unit 4 .....	40
Feature 2 .....	42

<b>CHAPTER VII: INTERPRETATION OF SITES AND MANAGEMENT RECOMMENDATIONS.....</b>	<b>44</b>
Interpretations for Locus 2 .....	44
Management Recommendations .....	45
<b>BIBLIOGRAPHY .....</b>	<b>46</b>

## LIST OF FIGURES

- 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 client's limit of disturbance for the solar Facility 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 historic map showing the location of the project area in Stonington, Connecticut.
- Figure 6. Excerpt from a 1970 historic map showing the location of the project area in Stonington, Connecticut.
- Figure 7. Excerpt from a 2004 aerial photograph showing the location of the project area in Stonington, Connecticut.
- Figure 8. Excerpt from a 2019 aerial photograph showing the location of the project area in Stonington, Connecticut.
- Figure 9. Digital map depicting the locations of the previously identified archaeological sites in the vicinity of the project parcel in Stonington, Connecticut.
- Figure 10. Digital map depicting the locations of previously identified National/State Register of Historic Places properties and inventoried Historic Standing Structures in the vicinity of the project area in Stonington, Connecticut.
- Figure 11. Excerpt of a 2019 aerial photograph showing the location of pedestrian survey surface finds across the Project Area in Stonington, Connecticut.
- Figure 12. Excerpt of a 2019 aerial photograph showing the location of metal detecting results from the Project Area in Stonington, Connecticut.
- Figure 13. Excerpt of a 2019 aerial photograph showing the location of Phase IB Shovel Testing results across the Project Area in Stonington, Connecticut.
- Figure 14. Excerpt of a 2019 aerial photograph showing the location of identified isolated finds and loci within the Project Area in Stonington, Connecticut.

- Figure 15; Sheets 1-3. Excerpt of a 2019 aerial photograph showing the location of Phase IB Testing effort across the Project Area in Stonington, Connecticut.
- Figure 16. Digital Drawing of Phase IB shovel test Transect 5 STP1 profile.
- Figure 17. Excerpt of a 2019 aerial photograph showing the location of Phase II Testing effort across the Project Area in Stonington, Connecticut.
- Figure 18. Digital Profile Phase II. Shovel test 90 located within Locus 2.
- Figure 19. Excerpt of a 2019 aerial photograph showing the location of Phase II Testing effort for Isolated Find 1 (ISO 1), in Stonington, Connecticut.
- Figure 20. Excerpt of a 2019 aerial photograph showing the location of Phase II Testing effort for Isolated Find 2 (ISO 2), in Stonington, Connecticut.
- Figure 21. Excerpt of a 2019 aerial photograph showing the location of Phase II Testing effort for Locus 1, in Stonington, Connecticut.
- Figure 22. Excerpt of a 2019 aerial photograph showing the location of Phase II Testing effort for Locus 2, in Stonington, Connecticut.
- Figure 23. Digital map of Feature 1 in planview identified within Phase II shovel test 9.
- Figure 24. Digital map of Feature 4 in profile identified within the eastern wall of Phase II shovel test 23.
- Figure 25. Digital profiles of Excavation Unit, EU-1 east wall profile.
- Figure 26. Digital profiles of Excavation Unit, EU-1 north wall profile.
- Figure 27. Digital planview of Feature 1 located within EU-1.
- Figure 28. Digital drawing of the eastern profile of Feature 1 located within EU-1.
- Figure 29. Digital planview of Feature 3 located within EU-1.
- Figure 30. Digital drawing of the northern profile of Feature 3 located within EU-1.
- Figure 31. Digital drawing of the western wall profiles of EU-3.
- Figure 32. Digital drawing of the western and eastern wall profiles of EU-4.
- Figure 33. Excerpt of a 2019 aerial photograph showing the location of Phase II Testing effort for Locus 3, in Stonington, Connecticut.
- Figure 34. Digital planview drawing of Feature 2 identified within Phase II shovel test 22.

- Figure 35. Digital drawing of the eastern wall profiles of EU-2.
- Figure 36. Digital planview of Feature 2 within EU-2.
- Figure 37. Digital drawing of the northeastern profile of Feature 2 within EU-2.

## LIST OF PHOTOS

- Photo 1. Overview photo from western boundary of Project Area in Mystic, Connecticut. Photo taken facing east.
- Photo 2. Overview photo from southern boundary of Project Area in Mystic, Connecticut. Photo taken facing north.
- Photo 3. Overview photo from southern boundary of Project Area in Mystic, Connecticut. Photo taken facing west.
- Photo 4. Overview photo from southeast corner of Project Area in Mystic, Connecticut. Photo taken facing east.
- Photo 5. Soil profile of Transect 5, STP 1. Photo taken facing east.
- Photo 6. Post-European Contact period artifacts recovered during Phase IB excavation, clockwise from top left: green glazed creamware, stencil printed Japanese porcelain, sprig molded salt glazed stoneware, copper alloy 1-piece button, mouth-blown bottle base, solarized bottle finish.
- Photo 7. Overview photo from northern boundary of Project Area with crew excavating an array around a culturally positive STP. Photo taken facing south.
- Photo 8. Precontact lithic artifacts recovered from ISO 1, left to right: quartz biface reduction flake, quartzite biface retouch flake. (Side A).
- Photo 9. Precontact lithic artifacts recovered from ISO 1, left to right: quartz biface reduction flake, quartzite biface retouch flake. (Side B).
- Photo 10. Precontact lithic artifact recovered from ISO 2: quartz primary reduction flake fragment. (Side A).
- Photo 11. Precontact lithic artifact recovered from ISO 2: quartz primary reduction flake fragment. (Side B).
- Photo 12. Precontact lithic artifacts recovered from Locus 1, left to right: quartz biface reduction flake, quartz medial flake fragment, quartz biface retouch flake. (Side A).
- Photo 13. Precontact lithic artifacts recovered from Locus 1, left to right: quartz biface reduction flake, quartz medial flake fragment, quartz biface retouch flake. (Side B).
- Photo 14. Precontact lithic artifacts recovered from Locus 2, left to right: quartz primary reduction debris, quartz distal flake fragment, quartz distal flake fragment, quartz biface retouch flake. (Side A).

- Photo 15. Precontact lithic artifacts recovered from Locus 2, left to right: quartz primary reduction debris, quartz distal flake fragment, quartz distal flake fragment, quartz biface retouch flake. (Side B).
- Photo 16. Precontact lithic artifacts recovered from Locus 3, left to right: quartz distal flake fragment with cortex, quartz distal flake fragment. (Side A).
- Photo 17. Precontact lithic artifacts recovered from Locus 3, left to right: quartz distal flake fragment with cortex, quartz distal flake fragment. (Side B).
- Photo 18. Post-European Contact period artifacts recovered from ISO 2, left to right: ironstone rim sherd, large avian vertebral bone (possibly turkey.)
- Photo 19. Precontact lithic artifact recovered from Locus 1: quartz biface retouch flake. (Side A).
- Photo 20. Precontact lithic artifact recovered from Locus 1: quartz biface retouch flake. (Side B).
- Photo 21. Post-European Contact period artifacts recovered from Locus 2, clockwise from top left: lead glazed redware base, undecorated whiteware, copper alloy and green paste gem jewelry fragment, solarized bottle fragment, textured colorless window glass.
- Photo 22. Precontact lithic artifacts recovered from Locus 2, clockwise from top left: quartz biface fragment, quartz biface fragment, quartz projectile point fragment, quartzite stemmed projectile point base, quartz core fragment, indeterminate metamorphic core fragment. (Side A).
- Photo 23. Precontact lithic artifacts recovered from Locus 2, clockwise from top left: quartz biface fragment, quartz biface fragment, quartz projectile point fragment, quartzite stemmed projectile point base, quartz core fragment, indeterminate metamorphic core fragment. (Side B).
- Photo 24. EU-1 north wall soil profile, 0-110 cmbd.
- Photo 25. EU-1 east wall soil profile, 0-110 cmbd.
- Photo 26. Feature 1 bisection within EU-1. Plan view at 40 cmbd.
- Photo 27. Feature 1 bisection within EU-1. East wall soil profile, 24-80 cmbd.
- Photo 28. Feature 3 bisection within EU-1. Plan view at 100 cmbd.
- Photo 29. Feature 3 bisection within EU-1. North wall soil profile, 70-110 cmbd.
- Photo 30. EU-3 west wall soil profile, 0-60 cmbd.
- Photo 31. EU-3 south wall soil profile, 0-60 cmbd.
- Photo 32. EU-4 west wall soil profile, 0-60 cmbd.

- Photo 33. EU-4 south wall soil profile, 0-60 cmbd.
- Photo 34. Post-European Contact period artifacts recovered from Locus 3, left to right: milk glass canning jar liner, transfer printed whiteware, avian carpometacarpus bone.
- Photo 35. Precontact lithic artifacts recovered from Locus 3, left to right: quartzite angular debris, four quartz flake fragments. (Side A).
- Photo 36. Precontact lithic artifacts recovered from Locus 3, left to right: quartzite angular debris, four quartz flake fragments. (Side B).
- Photo 37. EU-2 north wall soil profile, 0-90 cmbd.
- Photo 38. EU-2 east wall soil profile, 0-90 cmbd.
- Photo 39. Feature 2 within STP 22, plan view at 35 cmbs.
- Photo 40. EU-2 Feature 2 bisection, northeast wall soil profile, 0-80 cmbd.

# CHAPTER I

## INTRODUCTION

This report presents the results of the Phase IB Cultural Resources Reconnaissance Survey and subsequent Phase II National Register of Historic Places Testing and Evaluation of the proposed Lantern Hill Road Solar Center (the Project) at 229 Lantern Hill Road in Stonington, Connecticut (Figure 1). A previously conducted Phase IA cultural assessment survey indicated that all of the 32.6 acre Project area retained moderate/high archaeological sensitivity. Vanasse Hangen Brustlin, Inc., (VHB) requested that Heritage Consultants, LLC (Heritage) complete the Phase IB survey and Phase II investigation of archaeological deposits prior to Project development. The Phase IB survey was completed by Heritage in March of 2024 whereas the subsequent Phase II work was completed in July 2024. All work associated 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).

The proposed Project will be built on a parcel of land encompassing 32.6 acres of land located in Stonington, Connecticut. The Project plans call for the construction of solar arrays, buried electrical lines, inverters, transformers, an access road, fencing around the parcel, and other related infrastructure (Figure 2). The Project area is situated at elevations ranging from approximately 15 to 17 meters (49.2 to 55.8 feet) NGVD. The Project parcel is bound to the north and west by Whitford Brook, and Lantern Hill Road to the east, with agricultural land to the south. Soils found throughout the area are generally well drained types.

### **Summary of Project Methods**

The Phase IB cultural resources reconnaissance survey consisted of pedestrian survey and systematic shovel testing of the Project area at 30 m (98.4 ft) intervals. Each shovel test measured 50 x 50 centimeters (19.7 x 19.7 inches) in size, and each was excavated to the glacially derived C-Horizon soils, until immovable objects (e.g., tree roots, boulders, etc.), or groundwater were encountered. Each shovel test was excavated in 10 centimeter (3.9 inch) arbitrary levels within natural soil horizons, and the fill from each level was screened separately. All shovel test fill was screened through 0.635 centimeter (0.25 inch) hardware cloth and examined visually for cultural material. Soil characteristics were recorded using Munsell Soil Color Charts and standard soils nomenclature. Each shovel test was backfilled after it was recorded.

The Phase II testing and evaluation effort was designed to delineate the vertical and horizontal boundaries of the identified cultural deposits, recover a larger sample of artifacts from the area, identify and describe any cultural features that may have been present, and provide a final determination regarding the National Register of Historic Places (NRHP) eligibility of identified cultural deposits. The Phase II work consisted of additional shovel testing and the excavation four excavation units (EU-1 through EU-4) measuring 1 x 1 meter (3.3 x 3.3 feet) in size. The Phase II shovel testing was conducted at 5 meter (16.4 foot) intervals. Excavation units were placed in locations that contained possible features identified during shovel testing or that contained higher densities of archaeological materials. Each unit was excavated in arbitrary 10 cm (3.9 in) levels within natural soil horizons using flat bladed shovels and trowels. All excavated soil matrix was screened through a 0.63 cm (0.25 in) hardware mesh cloth, whereas any soil anomalies or identified features were screened through a 0.3175 cm (0.125 in) hardware mesh cloth to identify and recover any cultural materials. All cultural features identified within units were mapped in plan, photographed, and profiled prior and throughout excavation. Finally, stratigraphic profiles for at least two

walls of each unit were prepared, and all four walls were photographed. After all unit recordation was complete, the excavation unit was backfilled to the initial ground surface.

### **Summary of Phase IB Results**

The Phase IB cultural reconnaissance survey was initiated in March of 2024 and consisted of pedestrian survey, subsurface shovel testing, and limited metal detection. The pedestrian survey resulted in the identification of 24 surface finds across the Project area. The surface finds consisted of 5 precontact era lithic debitage flakes and 19 post-European Contact period artifacts, including 12 ceramics sherds and 7 glass shards. Metal detecting was completed within the northeastern portion of the Project area where a higher number of post-European Contact period artifacts were noted. This resulted in the recovery of 11 iron artifacts.

The Phase IB subsurface testing resulted in the excavation of 145 of 148 (98 percent) planned shovel tests across the Project area. The three planned but unexcavated shovel test pits fell within areas where the ground surface was covered by standing water. In addition to the planned survey shovel tests, 26 delineation pits were excavated to further explore identified precontact archaeological deposits. Of the excavated shovel tests 32 yielded additional post-European contact period cultural material, 8 produced precontact era artifacts, and 2 contained artifacts dating from both the precontact area and post-European Contact period.

The Phase IB shovel testing resulted in the recovery of 62 post-European Contact period artifacts and 12 precontact era artifacts. The post-European Contact period artifact assemblage consisted of ceramic sherds (n=26), glass shards (n=22), metal objects (n=6), pieces of coal (n=7) and a single faunal specimen. The precontact era assemblage recovered during the subsurface regime consisted of quartz and quartzite debitage. Laboratory analysis of the post-European Contact period materials suggested that they have a general date range of the eighteenth through twentieth centuries. The post-European Contact period assemblage cannot be associated with a specific use event, population, or time period. In addition, due to the lack of density and association with above or below ground features, the cultural materials were classified as unassociated field scatter. As a result, the post-European Contact cultural material lacked the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). As a result, no additional archaeological examination of this cultural component is recommended.

The Phase IB survey also resulted in the identification of three precontact era loci (Locus 1 through 3) and two isolated finds (ISO 1 and 2). A total of 17 precontact era artifacts were recovered from the project area during the pedestrian survey and shovel testing regime. These deposits were recovered from the surface, plowzone, and B-subsoil Horizons. The precontact era assemblage consisted of quartz and quartzite lithic debitage. Laboratory analysis of the precontact era assemblage identified multiple reduction types indicative of lithic tool production and maintenance. As a result, Phase II NRHP testing and evaluation of the identified precontact era resources (Locus 1 through 3 and Isolate 1 and 2) was conducted to determine their boundaries, chronology, and function, as well as their eligibility for listing on the NRHP applying on the criteria for evaluation (36 CFR 60.4 [a-d]).

### **Summary of Phase II Results**

Phase II testing and evaluation of Loci 1 through 3 and Isolate 1 and 2 was completed in July of 2024. The field effort included the excavation of 175 Phase II delineation shovel tests to infill the grid previously established during the Phase IB survey. In addition, four 1 x 1 meter (3.3 x 3.3 foot) excavation units (EU-1 through EU-4), were excavated to explore artifact deposits, possible cultural features, and the stratigraphic integrity of the loci and isolated find locations.

Isolated finds 1 and 2 were investigated through the excavation of eight shovel tests between them. Despite careful excavation, no additional precontact era cultural material was identified, confirming that the deposits were isolated in nature and therefore lacked research potential. Isolated 1 and 2 were assessed as not significant applying the NRHP criteria of evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of them is recommended prior construction.

Locus 1 was investigated through the excavation of 14 Phase II shovel tests, which resulted in the recovery of a single quartz biface reduction flake. The Phase II investigation of Locus 1 revealed that it measured approximately 15 x 15 meters (49.2 x 49.2 feet) in size. The artifact assemblage from the Locus suggests that it is a likely ephemeral scatter. Due to the lack of substantial artifact deposits and associated cultural features, the precontact artifact assemblage within the Locus 1 area was assessed as lacking the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). As a result, no additional archaeological investigation of Locus 1 is recommended prior to construction.

Locus 2 was investigated through the excavation of 122 Phase II shovel tests and three 1 x 1 meter (3.3 x 3.3 foot) excavation units. This effort resulted in the recovery of 128 artifacts, as well as the identification of three cultural features (Feature 1, 3, and 4), which included two precontact era hearths, and a post-European Contact period post, likely associated with past farming practices, respectively. Of the recovered artifacts, 14 dated from the post-European Contact period and the remaining 103 artifacts were classified as precontact era lithic objects. The assemblage of precontact era artifacts recovered from Locus 1 consisted of lithic debitage (n=97), flaked tools (n=4), and cores (n=2). The debitage was represented by multiple reduction types, including flake fragments, biface retouch flakes, biface reduction flakes, primary reduction flakes, primary reduction debris, biface thinning flakes, and angular debris. The flaked tools consisted of 2 untyped quartz bifaces, an indeterminate stemmed quartzite projectile point, as well as 1 Narrow Stemmed quartz projectile point. A total of five lithic raw materials were represented within the Locus 2 lithic assemblage, including quartz, quartzite, chert, argillite, and metamorphic rock. The lithic artifacts were recovered from various soil horizons across the site area, including both intact and plowed soils. The excavation of Feature 1 and Feature 3 resulted in the recovery of 1,335 ecofacts, most of which was charcoal. Locus 2 was interpreted as a seasonal camp where occupants were likely utilized the resources associated with the Whitford Brook and engaged in lithic tool production and maintenance using both local and non-local materials. The size, artifact assemblage recovered during the Phase IB survey, and depositional environment of Locus 2 suggests that it was potentially significant applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). Phase II NRHP testing and evaluation of Locus 2 was recommended, the results of which are discussed below.

The Phase II NRHP testing and evaluation of Locus 2 resulted in the excavation of 122 delineation shovel tests and three 1 x 1 meter (3.3 x 3.3 foot) excavation units. This resulted in the recovery of 118 artifacts and 1,332 botanical remains, most of which was charcoal from Features 1 and 2 (hearths). Locus 2 extends approximately 66 m (216 ft) in an east-west direction by 100 m (328 ft) in a northeast-southwestern direction within the Project area. The Phase II testing of the site resulted in the recovery of 103 precontact era Native American lithic artifacts from across the site area, as well as 1,332 botanical remains from the excavation of Feature 1 and 3, of which was charcoal. The precontact era assemblage of the site included multiple examples of lithic reduction types, flaked tools, and cores. A total of five lithic raw materials were identified including quartz, chert, quartzite, argillite, and indeterminate metamorphic. The presence of both locally sourced and non-local raw materials, as well as various reduction strategies and formal and informal tools, indicates that the activities that occurred within the site included lithic tool production and maintenance from primary reduction through late-stage tools. The recovery of a quartzite narrow stem projectile point suggests that occupation of the site may be related to occupation of the site the anytime

between the Late Archaic through Woodland periods, since this projectile point type is not a reliable time marker.

The proximity of the site to Whitford Brook combined with the artifact assemblage and the presence of two possible hearth features (Features 1 and 2) underlying each other, suggests that the site was likely a Late Archaic to Woodland period seasonal camp that was re-occupied over time. Despite being subjected to previous disturbances due to agricultural plowing, the site exhibited depositional integrity. The presence of multiple lithic types, tools, and intact cultural features suggests that Locus 2 retains research potential and therefore is eligible under criterion D of the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). The Project sponsor proposes to preserve Locus 2 in place through avoidance measures during Project construction. No additional archaeological examination of Locus 2 is recommended unless Project plans are changed to include all or parts of Locus 2.

Finally, Locus 3 was investigated through the excavation of 21 Phase II shovel tests and a single 1 x 1 meter (3.3 x 3.3 foot) excavation unit. The Phase II investigation of Locus 3 revealed that it measured approximately 13 x 26 m (42.6 x 85.3 ft) in size and resulted in the recovery of 11 artifacts and the identification of a single cultural feature (Feature 2 [Feature 1 was found to be non-cultural in origin]). The artifact assemblage consisted of three post-European Contact period artifacts and seven precontact era lithics. The lithics included 6 quartz flake fragments and a single fragment of quartzite angular debris recovered from the Ap-Horizon(plowzone) (n=4), the Ap/B interface (n=2), and the B-subsoil horizon (n=1). In addition to the lithic, the excavation of Feature 2 resulted in the collection of 839 ecofacts, most of which was charcoal. Close inspection of Feature 2 revealed that it had been impacted in the past and was disturbed. The artifact assemblage and depositional qualities of Locus 3 suggests that it is an ephemeral lithic scatter that has been disturbed due to plowing. The lack of dense deposits and diagnostic artifacts, as well as the disturbance to Feature 2, indicated that the archaeological deposits associated with Locus 3 lack integrity, research potential and the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). As a result, no additional archaeological investigation of Locus 3 is recommended prior to Project construction.

### **Project Personnel**

Key personnel for this investigation included David R. George, M.A., RPA, (Principal Investigator), Brenna Pisanelli, M.A. (Senior Project Manager), Sam Spitzschuh, B.A., (Project Archaeologist), Christopher Brouillette, B.A, (Field Director), Nita Vitaliano, M.A. (Historian), and Tevin Jourdain, 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 area. 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: North-Central Lowlands 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.

#### Eastern Coastal Ecoregion

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, including the Stonington River, Whitford 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 historic 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 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 five major soil types which are Ninigret/Tisbury, Hinckley, Sudbury, Haven and Enfield, and Canton-Chalton. A review of these soils shows that they consist of well drained gravelly, sandy loams; they are the types of soils that are typically correlated with prehistoric and historic use and occupation. Descriptive profiles for each soil type are presented below; they were gathered from the National Resources Conservation Service.

#### Ninigret/Tisbury Soils (21A)

A typical profile associated with Ninigret/Tisbury soils is as follows: **Ap** -- 0 to 8 inches; very dark grayish brown (10YR 3/2) fine sandy loam; pale brown (10YR 6/3) dry; weak medium granular structure; very friable; many fine roots; strongly acid; abrupt smooth boundary; **Bw1** -- 8 to 16 inches; yellowish brown (10YR 5/6) fine sandy loam; weak coarse granular structure; very friable; few fine roots; strongly acid; clear wavy boundary; **Bw2** -- 16 to 26 inches; yellowish brown (10YR 5/4) fine sandy loam; very weak coarse granular structure; very friable; very few fine roots; common medium distinct light brownish gray (10YR 6/2) and brownish yellow (10YR 6/6) redoximorphic features; strongly acid; clear wavy boundary; and **2C** - 26 to 65 inches; pale brown (10YR 6/3) loamy sand and few lenses of loamy fine sand; single grain; loose; many medium distinct light olive gray (5Y 6/2) and many prominent yellowish brown (10YR 5/8) redoximorphic features; strongly acid.

#### Hinckley Soils (38C)

A typical profile associated with Hinckley soils is as follows: **Oe** -- 0 to 3 cm; moderately decomposed plant material derived from red pine needles and twigs; **Ap** -- 3 to 20 cm; very dark grayish brown (10YR 3/2) loamy sand; weak fine and medium granular structure; very friable; many fine and medium roots; 5 percent fine gravel; very strongly acid; abrupt smooth boundary; **Bw1** -- 20 to 28 cm; strong brown (7.5YR 5/6) gravelly loamy sand; weak fine and medium granular structure; very friable; common fine and medium roots; 20 percent gravel; very strongly acid; clear smooth boundary; **Bw2** -- 28 to 41 cm; yellowish brown (10YR 5/4) gravelly loamy sand; weak fine and medium granular structure; very friable; common fine and medium roots; 25 percent gravel; very strongly acid; clear irregular boundary; **BC** -- 41 to 48 cm; yellowish brown (10YR 5/4) very gravelly sand; single grain; loose; common fine and medium roots; 40 percent gravel; strongly acid; clear smooth boundary; and **C** -- 48 to 165 cm; light olive brown (2.5Y 5/4) extremely gravelly sand consisting of stratified sand, gravel and cobbles; single grain; loose; common fine and medium roots in the upper 20 cm and very few below; 60 percent gravel and cobbles; moderately acid.

#### Sudbury Soils (23A)

A typical profile associated with Sudbury soils is as follows: **Ap** -- 0 to 13 inches (0 to 33 centimeters); very dark grayish brown (10YR 3/2) fine sandy loam, light brownish gray (10YR 6/2) dry; moderate fine granular structure; very friable; many fine roots; 5 percent gravel; moderately acid; abrupt smooth boundary; **Bw** - 13 to 19 inches (33 to 48 centimeters); yellowish brown (10YR 5/6) sandy loam; weak medium granular

structure; very friable; common grass roots; 10 percent fine gravel; few fine and medium prominent dark reddish gray (5YR 4/2) areas of iron depletion in the lower 3 inches (8 centimeters); moderately acid; abrupt wavy boundary; **2CB** -- 19 to 26 inches (48 to 66 centimeters); yellowish brown (10YR 5/4) gravelly coarse sand; single grain; loose; few fine roots; yellowish red (5YR 4/8) coatings on some sand grains; 20 percent gravel; many fine prominent dark reddish brown (2.5YR 3/4) and common coarse prominent reddish yellow (5YR 6/8) masses of iron accumulations; moderately acid; abrupt wavy boundary; and **2C** - 26 to 65 inches (66 to 165 centimeters); light olive brown (2.5Y 5/4) very gravelly coarse sand; single grain; loose; many sand grains coated with strong brown (7.5YR 5/6) and some sand grains slightly cemented, and many pebbles and cobbles coated with black (5YR 2/1); few fine roots; strata of sand and gravel consisting of about 50 percent gravel and some cobbles; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation; moderately acid.

#### Haven and Enfield Soils (32B)

The Haven series consists of very deep, well drained soils formed in loamy over sandy and gravelly outwash. They are nearly level through moderately sloping soils on outwash plains, valley trains, terraces, and water-sorted moraine deposits. Saturated hydraulic conductivity is moderately high or high in the mineral solum and very high in the substratum. Slope ranges from 0 through 15 percent. A typical profile associated with Haven soils is as follows: **Oi**--0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material derived from loose pine needles, leaves and twigs. **Oa**--2 to 3 inches (5 to 8 centimeters); black (5YR 2/1) highly decomposed plant material; **A**--3 to 6 inches (8 to 15 centimeters); dark grayish brown (10YR 4/2) loam; weak fine and medium granular structure; friable; many fine and coarse roots; very strongly acid; abrupt smooth boundary; **Bw1**--6 to 13 inches (15 to 33 centimeters); brown (7.5YR 4/4) loam; weak fine and medium subangular blocky structure; friable; common fine roots; many fine pores; very strongly acid; clear wavy boundary; **Bw2**--13 to 22 inches (33 to 56 centimeters); strong brown (7.5YR 5/6) loam; weak fine and medium subangular blocky structure; friable; common fine roots; many fine pores; 5 percent fine gravel; very strongly acid; gradual wavy boundary; **BC**--22 to 31 inches (56 to 79 centimeters); yellowish brown (10YR 5/6) gravelly loam; weak medium and fine subangular blocky structure; friable; few fine roots; common fine pores; 20 percent fine gravel; very strongly acid; clear wavy boundary; and **2C**--31 to 65 inches (79 to 165 centimeters); yellowish brown (10YR 5/4) to brownish yellow (10YR 6/6) stratified gravelly sand; single grained; loose; 30 percent fine gravel; very strongly acid.

The Enfield series consists of very deep, well drained loamy soils formed in a silty mantle overlying glacial outwash. They are nearly level to sloping soils on outwash plains and terraces. Slope ranges from 0 to 15 percent. A typical profile associated with Enfield soils is as follows: **Ap**--0 to 7 inches; dark grayish brown (10YR 4/2) silt loam; moderate fine granular structure; friable; many very fine and fine roots; 5 percent fine gravel; strongly acid; abrupt smooth boundary; **Bw1**--7 to 16 inches; strong brown (7.5YR 5/6) silt loam; weak medium subangular blocky structure; friable; common very fine and many fine roots; 5 percent fine gravel; strongly acid; clear wavy boundary; **Bw2**--16 to 25 inches; light olive brown (2.5Y 5/4) silt loam; weak medium subangular blocky structure; friable, few very fine and common fine roots; 5 percent fine gravel; strongly acid; abrupt wavy boundary; and **2C**--25 to 60 inches; brown (10YR 5/3) very gravelly sand; single grain; loose; stratified; 45 percent gravel and 5 percent cobbles; strongly acid.

#### Charlton-Chatfield Soils (61C)

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.

The Chatfield series consists of well drained soils formed in loamy melt-out till. They are moderately deep to bedrock. They are nearly level to very steep soils on bedrock-controlled hills and ridges. Slope ranges from 0 to 70 percent. A typical profile associated with Chatfield soils is as follows: **Oi**--0 to 3 cm, slightly decomposed leaf, needle, and twig litter; extremely acid, pH 4.2; **A**--3 to 5 cm, very dark gray (10YR 3/1) fine sandy loam, gray (10YR 5/1), dry; weak fine subangular blocky structure; friable; many fine and medium roots throughout; 5 percent mixed gravel and cobbles; very strongly acid, pH 4.5; abrupt smooth boundary; **Bw1**--5 to 33 cm, strong brown (7.5YR 5/6) gravelly fine sandy loam; weak fine subangular blocky structure; friable; common fine roots throughout and common medium roots throughout; 15 percent mixed gravel and cobbles; very strongly acid, pH 4.5; abrupt wavy boundary; **Bw2**--33 to 76 cm, strong brown (7.5YR 5/6) gravelly fine sandy loam; moderate medium subangular blocky structure; friable; few fine roots throughout; 20 percent mixed rock fragments; very strongly acid, pH 4.5; abrupt irregular boundary; and **2R**--76 cm; fractured slightly-weathered schist bedrock.

### 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 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 pits. This portion of Stonington was also used throughout the post-European Contact period, as evidenced by the presence of numerous historic residences and agricultural fields throughout the region; thus, archaeological deposits dating from the last 350 years or so may also be expected near or within the proposed Project area.

## 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 graters, 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, graters, 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 ( $10,520 \pm 30$  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, graters, 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). In addition, pieces of ochre were recovered during the excavations; these, in combination with the drilled pendant fragment, are the earliest evidence of personal adornment and artistic expression identified in Connecticut (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 $\pm$ 280 and 7,015 $\pm$ 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<sup>2</sup> (5,383 ft<sup>2</sup>). 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).

### The 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 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 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 is located in Stonington, Connecticut. This chapter provides a brief overview of New London County and Stonington, as well as details regarding the Project area. Most Connecticut towns, including Stonington, originated as Native American settlements and later became English colonial villages. Through the nineteenth and twentieth centuries Stonington functioned as an agricultural hub with manufacturing centers powered by local waterways. The proximity of Stonington to the cities of New London and Norwich as well as the Long Island shoreline, Mystic, Poquonnock, and Thames Rivers allowed townspeople to engage in both substantial agricultural and maritime activities. In the twenty-first century, the Town of Stonington, Connecticut has largely become a tourist destination with the village of Mystic, yet retains aspects of its rural character.

#### New London County

New London was one of the four original counties established in 1666 following the merger of Connecticut Colony and New Haven Colony. Located in the southeastern corner of Connecticut, New London County is bounded to the south by Long Island Sound, to the east by the State of Rhode Island, to the north by Windham County, Tolland, and Hartford Counties, and to the west by Middlesex and Tolland Counties. Its landscape includes rich farmland, significant freshwater rivers, and an extended shoreline on Long Island Sound. Important waterways associated with New London County include the Connecticut, Thames, Shetucket, Quinebaug, Yantic, Pawcatuck, Mystic, Poquonnock, and Niantic Rivers (Hurd 1882). The shoreline also has many smaller rivers, harbors, islands, and inlets. The county's three largest cities are located on the Thames River; New London on the western shore near the mouth, Groton on the eastern shore near the mouth, and Norwich at the river's head. Other important population centers are located at Mystic, Stonington Borough, Waterford, and Niantic (Connecticut 2023).

#### Woodland Period to Seventeenth Century

During the Woodland Period of northeastern North American history (ca., 3000 to 500 years ago) the Indigenous peoples who resided between the mouth of the Connecticut River Valley and east towards the Pawcatuck River were part of the greater Algonquian culture of northeastern North America (Lavin 2013). They spoke local variations of Southern New England Algonquian (SNEA) languages and resided in extended kinship groups on lands they maintained for a variety of horticultural and resource extraction purposes (Goddard 1978). Native people in the region practiced subsistence activities including hunting, fowling, and fishing, along with the cultivation of various crops, the most important of which were maize, squash, and beans. They supplemented these foods seasonally by collecting shellfish, fruits, and plants during warmer periods, and gathering nuts, roots, and tubers during colder times (Lavin 2013). In addition, these communities came together in large groups to conduct hunt deer in the fall and winter. Indigenous peoples lived with their immediate or extended families in large settlements often concentrated along rivers and/or wetlands. Some villages were fortified by wooden palisades. Their habitations, known as a *weetu* or *wigwam*, were generally constructed of a tree sapling frame and covered in reed matting during warm months and tree bark throughout the winter. These varied in size from a small, individual dwelling to an expansive "long house" which could accommodate several families.

Native communities commonly traded among both their immediate neighbors and often maintained long-distance networks as well (Lavin 2013). At the time of the arrival of Europeans some of the prominent Native nations, within the present-day bounds of New London County, included the Pequot, Mohegan, and Western Niantic people (De Forest 1852; Lavin 2013). All three communities were closely connected through kinship, culture, language, and trade. The Native people who resided at present-day Stonington were Pequot and maintained several large villages in the area including those at Poquetanuck Cove and Mashantucket (Hauptman and Wherry 1990). The Pequot homeland was on the east side of the Pequot (Thames) River to the Pawcatuck River and north towards Pachaug in the present-day towns of Groton, Stonington, North Stonington, Ledyard, Preston, Griswold, and Voluntown (De Forest 1852; Hauptman and Wherry 1990; Lavin 2013).

### **Seventeenth Century through Eighteenth Century**

As Native communities maintained oral tradition rather than a written record, most surviving information of the indigenous people of present-day New London County was recorded by European observers (Lavin 2013). The earliest Europeans known to have entered Long Island Sound and the Connecticut River along present-day New London County were the Dutch ca., 1614. During that voyage Captain Adrian Block created a figurative map of the region which depicted the shoreline including the Pawcatuck, Mystic, Pequot (Thames), and Connecticut Rivers. Block's 1614 map identified Native nations in the region and placed both the Pequot and Mohegan homelands on the landscape. The Dutch established trade relationships with Native people of the area and by the early 1620s they entered an agreement with the Pequot of present-day southeastern Connecticut in which the Pequot would provide wampum and furs for European goods. By 1624 the Dutch West India Company formally established the colony of New Netherland centered around Manhattan and the Hudson River, but its eastern bounds extended as far as Cape Cod, which included present-day New London County (Jacobs 2009). Through their relationship with the Dutch, the Pequot had steady access to a variety of valuable European trade goods they could distribute to tributaries and/or trade with other groups in the region. The Pequot extended their dominance over the Connecticut shoreline, eastern Long Island, and the lower Connecticut River Valley bringing all the Native nations in those areas into a tributary relationship under their leadership (Hauptman and Wherry 2009; McBride 2013). The Nehantic and Mohegan were closely tied to the Pequot through kinship networks, trade, and political alliances during this period.

In 1633, the Pequot allowed the Dutch to build a fortified trading post, the *Huys de Hoop*, on the Connecticut River at the site of present-day Hartford to further cement both parties' domination over the flow of wampum, fur, and trade goods. To break from the Pequot, several Connecticut River sachems invited the English to the valley who settled Windsor in 1633, Wethersfield in 1634, and both Hartford and Saybrook by 1635 (Van Dusen 1961). Increased European interaction resulted in exposure to diseases and epidemics indigenous people had never encountered and to which they had no natural immunity. Illnesses such as smallpox, measles, tuberculosis, and cholera devastated Native communities. In 1633, an epidemic spread through the region impacting the Pequot and most of their neighbors. Tensions between Native and European groups laying claim to the Connecticut River resulted in the death of several English traders between 1634 and 1636 which they blamed on the Pequot. In retaliation English forces from Massachusetts Bay destroyed Pequot and Nehantic villages on the Pequot (Thames) River in August of 1636 which began the Pequot War. The Pequot laid siege to Saybrook Fort at the mouth of the Connecticut River during the winter of 1636-1637 and attacked Wethersfield in April of 1637 further upriver. Connecticut Colony declared war on the Pequot and were joined by Native warriors from the Connecticut River and Mohegans under the Sachem Uncas (Oberg 2006). In May 1637 English allied forces destroyed the fortified Pequot village at Mistick in present-day Groton and pursued Pequot refugees west towards present-day Fairfield. After the war the Connecticut English claimed Pequot lands as conquered lands for their growing colony. The Hartford

Treaty of 1638 established the English as the dominant power in the region and divided Pequot survivors between the Mohegan and Narragansett (Cave 1996). After the war the Connecticut English claimed Pequot lands as conquered lands for their growing colony. The Hartford Treaty of 1638 established the English as the dominant power in the region and divided Pequot survivors between the Mohegan and Narragansett.

In January of 1639, the Connecticut River towns adopted the “fundamental orders” which outlined the framework for Connecticut Colony (Trumbull 1886). In the aftermath of the Pequot War, the question of which colony would have jurisdiction over the conquered area was a problem. It was resolved in 1658 by dividing the land between the two colonies at the Mystic River, with the Connecticut Colony keeping the west side and Massachusetts Bay Colony the east side; the latter section would become the Town of Stonington. Before that resolution, the conquered land had been surveyed by Connecticut in 1641, and several grants of land to individuals were made in the future Stonington, including one to William Chesebrough in 1652 that is now the Borough of Stonington (incorporated 1801). The royal charter granted to Connecticut in 1662 extended the colony’s boundary eastward to the Pawcatuck River, bringing the section east of the Mystic River back within that colony’s control. Prior to that charter, the area between the Mystic River and the Pawcatuck River was known as Southerton, a town of the Massachusetts Bay Colony. In 1665, the General Court of Connecticut changed its name to Mistick, and in 1666 changed it again, to Stonington (Crofut 1937).

The village of Mystic began to form after 1660 when Robert Burrows was appointed by the General Court to operate a ferry across the Mystic River. He and his family joined three other families that had moved into the area in the 1650s. The first Congregational meetinghouse was built in 1673 near the ferry and in 1674 a grist mill was built on the Mystic River above the falls. The Stonington North Ecclesiastical Society was established in 1720, but debate over the location of its meeting delayed the opening until 1723. The first Baptist church was organized in 1743, and a second in 1765; in 1746 a Separatist Congregational church was established (Crofut 1937). By 1761, a census of the state recorded 3,900 people in the town, including 254 African Americans and 309 Native Americans (Greenhalgh 1999; Wheeler 1900). Stonington continued to grow; by 1774, it was a substantial town with a population of 5,431 that made it the sixth largest in Connecticut. Additionally, while slavery was prevalent at the time amongst wealthier families in New London County, the population record notes 456 “blacks” in Stonington, but the number of enslaved individuals was not recorded (Hoadly 1887). During the Revolutionary War many Stonington men served in the colonial militias and the Continental Army. In 1775, the British Navy attacked the area now known as North Stonington (then referred to as Long Point), due to its wharves and shops, but the citizens fought off the attack (Wheeler 1900). After the Revolution, New London County recovered from wartime economic disruptions thanks to its robust agricultural production. In 1784, the State passed a gradual manumission law, but slavery was not fully abolished until 1848, and on January 9, 1788, Connecticut ratified the U.S. Constitution to become the fifth state (Normen 2013; Van Dusen 1961).

### **Nineteenth Century through the Twenty-first Century**

At the beginning of the nineteenth century, the majority of the towns in New London County were a relatively small size, including Stonington which had a population of 5,437 people in 1800 (Connecticut 2024a; Table 1). In 1807, Stonington was split into the two separate towns of Stonington and North Stonington. Following the War of 1812, Stonington became an important whaling town with ships leaving the Mystic River and Thames River for seals in Antarctica or whales in the Pacific (Caulkins 1852; Marshall 1922). 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 shoreline (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. Much of the economy of Stonington continued to center on shipbuilding, whaling, sealing and guano (Niven 1965).

Other important settlements 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 1836). 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 indicate 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 1850c).

During the Civil War (1861-1865), 368 men from Stonington served in the Union army (Hines 2002). Additionally, the Union Navy purchased old whaling ships from Stonington and other New London County towns to be improved and retrofitted for use during the war to blockade Southern harbors. Following the war, Stonington continued to increase in population, in part due to increased immigration to town by Portuguese, Azoreans, Cape Verdeans, and other came to Stonington to work in the fishing industry (Table 1; Calabretta 2013).

During and after the Great Depression, starting in 1930, Stonington's population growth stalled (Table 1). 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). 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 the twentieth century progressed, political changes impacted New London County towns. The fall of communism in eastern Europe beginning in 1989 signaled the end of the Cold War and with it, major cuts in defense spending. In 1989, 25 percent of New London County's labor force worked in the defense industry and over the next decade thousands of people lost their jobs (Spaid 1991). Defense spending and the economy of New London towns, including Stonington, has stabilized in recent years (Stonington 2015). By 2021, top industries in Stonington included local government and accommodations and food services. Key employers in town included Davis Standard, Mystic Seaport, and the Sea Research Foundation at Mystic Aquarium (AdvanceCT and CTData Collaborative 2023). The town's 2015 Plan of Conservation and Development outlines the goal to achieve "sustainable development" in Stonington by strengthening

existing villages within town while promoting low impact commercial and residential development (Stonington 2015:2).

Table 1: Population of Stonington, Connecticut 1840-2021 (Connecticut 2024a-d; AdvanceCT and CTData Collaborative 2023)

Town	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900
Stonington,	-	5,437	3,043	3,056	3,401	3,898	5,431	5,827	6,313	7,355	7,184	8,540
New London	<b>1910</b>	<b>1920</b>	<b>1930</b>	<b>1940</b>	<b>1950</b>	<b>1960</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>	<b>2021</b>
County	9,154	10,236	11,025	11,002	11,801	13,969	15,940	16,220	16,919	17,906	18,545	15,413

### History of the Project Area

The Project area is located in western Stonington along the Whiting Brook. The nineteenth century mapping shows the movement of the Whiting Brook over time and the position of the Project area. According to the 1854 New London County map, the Whiting Brook was located to the east of the Project area (Figure 3). The closest property owner in proximity to the proposed Project area was J.S. Avery. To the north of the Project area property owners included members of the “Chesebro” family, likely descendants of the original Chesebrough settlers. The 1868 F.W. Beers *Atlas of New London County* does not note any property owners in the area, yet it does depict Whiting Brook, labeled as a “River” bisecting the Project area (Figure 4).

Aerial photography of the Project area suggests little change over time. The 1934 Fairchild Aerial Survey shows the Project area was comprised of open agricultural fields (Figure 5). The northern boundary of the parcel was the Whiting Brook, as well as wooded lands. The greater landscape in the area consisted of additional agricultural fields and wooded parcels. By 1970, the Project area remained open agricultural land; however, to the southeast of the Project area new single-family homes were present (Figure 6). In 2004, the photography suggests areas of wetlands in the southeastern portion of the limit of development (Figure 7 This was no longer the case in the 2019 aerial image, which demonstrates that the Project area was still an open, agricultural field (Figure 8).

### Conclusions

The post-European Contact period investigation indicates that the proposed Project area 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 that may be important as a component of a rural historic landscape (*sensu* McClelland et al. 1999). Finally, the presence of Whitford Brook along the northern border of the Project area suggests the potential for the discovery of 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 Recorded Archaeological Sites and National/State Register of Historic Places Properties/Districts in the Vicinity of the Project Area**

A review of data currently on file at the CT-SHPO, as well as the electronic files maintained by Heritage identified seven archaeological sites situated within 1.6 kilometer (1 mile) of the Project area (Figure 9). In addition, one property listed on the State Register of Historic Places (SRHP) as well as one NRHP district were identified within 1.6 kilometer (1 mile) of the Project area (Figure 10). A discussion of all cultural resources identified in the search area is provided below.

#### Site 72-17

Site 72-17 has been named the Forsberg Shelter and it consists of a rockshelter located approximately 800 meters (0.50 miles) to the north of the intersection of Shewville Road and Whitford Road in Ledyard, Connecticut (Figure 9). This site lies approximately 1.6 kilometers (0.99 miles) to the north of the Project area in an open space area. The Forsberg Shelter was recorded by the Connecticut Archaeological Society (CAS) in April of 1979. CAS determined that the rockshelter dated from the Woodland Period based on the recovery of 50 projectile points, Native American pottery sherds, shell, and bone from the site area. Excavations were completed in 1970 by John Senulis from the University of Rhode Island. At the time of excavation, the site measured 5 x 10 meters (16.40 x 3.28 feet) in size. Since that time, the site has been destroyed and has not been assessed applying the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No impacts will occur to this resource as a result of Project construction.

#### Site 72-133

Site 72-133 is located approximately 381 meters (1,250 feet) to the northwest of the Project area and off of Shewville Road in Ledyard, Connecticut (Figure 9). It was recorded by Kathryn C. Hoy of the University of Connecticut in 1991 as the Campbell Site. Numerous projectile points and stone tools were surface collected from this site by Louis Bayer, a retired game warden and local artifact collector; however, not enough information was documented to determine the use or age of the Campbell Site. The site covers approximately 2.02 hectares (5 acres) of an open field, once used as a cornfield, and had good integrity as of 1991. The Campbell Site has not been assessed applying the qualities of significance as defined by the NHRP criteria for evaluation (36 CFR 60.4 [a-d]). No impacts will occur to this resource as a result of Project construction.

#### Site 72-138

Site 72-138, also known as the Storey Farm Site, is located in an open field situated off Whitford Road in Ledyard, Connecticut; it is located within 213 meters (700 feet) of Site 72-17 (Figure 9). Artifacts from this site were surface collected by the owners of the Storey Farm, none of which are described in detail on the site form. The age of the Storey Farm Site also was not determined, but it was listed as having good integrity when it was recorded by Kathryn Hoy on May 20, 1991. The site size is approximately 3.24 hectares (8 acres) and its NRHP eligibility has not been assessed. No impacts will occur to this resource as a result of Project construction.

#### Site 72-140

Site 72-140 consists of a camp site located off of Shewville Road in Ledyard, Connecticut; it is situated approximately 381 meters (1,250 feet) to the southwest of the Project area (Figure 9). The site covers approximately 4.05 hectares (10 acres) of land in an open field, but now has the Gallup Hill Extension Road cutting through its center. Mr. Louis Bayer collected numerous quartz projectile points from the surface of this site along with unspecified flakes, indicating stone tool manufacture took place there. Kathryn Hoy recorded Site 72-140 as the Shewville Camp Site in 1991 but did not determine its age or NRHP eligibility. No impacts will occur to this resource as a result of Project construction.

#### Site 137-29

Site 137-29 was recorded as the “Formerly Panciera Farm Site” by Kathryn Hoy in 1991. Lithic artifacts, mostly made of quartzite, were found there by Mr. Louis Bayer in the 1940s. Not much information was recorded on the site form, as the site was difficult to reach in 1991. The site area contains two hectares (five acres) of forested situated on private property that is located off of Route 184; it was once used as the Panciera Farm and later destroyed by fire. Site 137-29 has not been assessed applying the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). The site is located approximately 1,075 meters (3,527 feet) to the south of the Project area in Stonington, Connecticut (Figure 9). No impacts will occur to this resource as a result of Project construction.

#### Site 137-30

Site 137-30, which is also referred to as the Lantern Hill Road Field Site, is located approximately 645 meters (2,116 feet) to the south of the Project area and within a field situated opposite from 217 Lantern Hill Road in Stonington, Connecticut (Figure 9). The site was recorded by Kathryn Hoy in 1991 after she learned about it from Mr. Louis Bayer, who collected artifacts from the surface of Site 137-30 in the 1940s. Artifacts recovered from the site area included Levanna, Squibnocket, Brewerton, and Vosburg projectile points, a stone gouge, scrapers, and bifaces. These finds indicated multi-component occupation dating from the Late Archaic to Contact Period. Altogether, Site 137-30 is approximately 35 acres and had good integrity in 1991. However, it was not assessed applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No impacts will occur to this resource as a result of Project construction.

#### Site 137-31

Site 137-31 was recorded as the Lantern Hill Road Site by Kathryn Hoy in 1991. It also was identified during surface collection of the area by Mr. Louis Bayer. This site is located within an open field in Stonington and approximately 430 meters (1,411 feet) to the north of the Project area; it covers approximately 3.24 hectares (8 acres) of land (Figure 9). Mr. Bayer recovered various quartzite and quartz artifacts here in the 1940s; however, they were not documented and no further information about Site 137-31 could be determined. Furthermore, it has not been assessed applying the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No impacts will occur to this resource as a result of Project construction.

### Site 137-62

Site 137-62, which is also known as Locus AR-8434-1, was identified by Heritage in 2022 during a Phase IB survey. The site consisted of lithic debitage and calcined bone fragments from intact soil horizons. A variety of lithic materials were recovered across the site. The site was found to retain intact precontact era deposits and therefore was assessed as potentially eligible for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No impacts will occur to this resource as a result of Project construction.

### Smith House

The Samuel Smith House, which is also known locally as the Hurlbut House, is located at 82 plants Dam Road in East Lyme, Connecticut. The State Register form has no details regarding the structure, its architectural style, or its historical narrative. No impacts to the Samuel Smith House will occur as a result of Project construction.

### Gallup House

The Lieutenant Benadam Gallup House is a SRHP building located at 241 Gallup Hill Road; it is situated approximately 990 meters (3,248 feet) to the northwest of the Project area in Ledyard, Connecticut (Figure 10). It is a two-story Colonial dwelling that was built ca., 1730. The front elevation of this building has a five-bay façade, and the entire exterior is clad in wood shingles. The Gallup House has a dry laid rubble foundation and a post and beam framing system. Its gable roof is covered in asphalt shingles. There is a lean-to addition to the rear of the residence. All of these features are well-preserved from the eighteenth century. The Gallup House is also considered significant for its association with the Gallup family, particularly its builder Lt. Benadam Gallup, who was the first settler of North Groton. This house is the oldest surviving Gallup family, as was occupied by the Gallups until 1807. Benadam Gallup's son, Thomas Prentice, lived there while serving at Fort Griswold at the time of the Battle of Groton Heights. The house remains in good condition and has integrity of setting, being surrounded by pastures that are divided by stone walls as well as two barns and a wellhouse. No impacts to this resource will occur as a result of Project construction.

### William Noyes Farmstead

The William Noyes Farmstead was listed on the NRHP on April 25, 1992 by Jan Cunningham, a National Register consultant. The farmstead is located at 340 Gallup Hill Road, Ledyard, Connecticut and approximately 571 meters (1,875 feet) to the southwest of the Project area (Figure 10). It consists of a two-story farmhouse that combines vernacular Colonial and Federal style features. In addition, there are two barns on the property with extensive fields to the east bordered by stonewalls. These fields are no longer a part of the property but add to its rural character. The main dwelling stands on a granite foundation, is sheathed with planking and clapboards, and topped with a gable roof. There is also a shed-roofed ell on the north side. The main door, with its narrow pilasters, overlight, and high entablature with dentils is characteristic of the Federal style. The house was built by William Noyes ca., 1735 and it remained in the family until 1783. The property was used as a farm well into the twentieth century, at which time it was known as the "Littlefield Church Farm." Therefore, it is representative of vernacular Federal style architecture and early Connecticut family farms and was listed under Criteria A and C. No impacts will occur to this resource as a result of Project construction.

### **Summary and Interpretations**

The review of previously identified cultural resources in the vicinity of the proposed Project area indicates that the larger project region contains precontact era Native American cultural deposits, as well as above-ground post-European Contact period resources. Archaeological sites occupied within the study region likely date from the precontact era (ca., 12,500 to 350 B.P). This suggests that additional archaeological

sites may be situated within the Project area. There are no post-European Contact period archaeological sites in the vicinity of the project area that will be impacted by the Project area.

# CHAPTER VI

## METHODS

### **Introduction**

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

### **Research Design**

The cultural resources investigations were designed to identify all precontact era and post-European Contact period cultural resources located within the work area associated with the Project. Fieldwork for the Project was comprehensive in nature and project planning utilized the information gathered during the background research portion of the undertaking. The methods used to complete this investigation were designed to provide complete and thorough coverage of all portions of the Project area. This undertaking entailed pedestrian survey, metal detecting, systematic subsurface testing, detailed mapping, and photo-documentation.

### **Field Methods**

The following sections present overview discussions of the methods used to complete the Phase IB Cultural Resources Reconnaissance Survey, and the Phase II NRHP Testing and Evaluation effort.

#### Metal Detection Survey Methods

A limited metal detection survey was conducted within the northeastern portion of the Project area due to the presence of post-European Contact period materials. This effort was completed utilizing a Mine lab GOX 900 metal detector model. The wildcat metal detection survey was completed within the northeastern portion of the Project area. Each positive metal detector “hit” was examined, with the depth, soil association, and type of artifact recorded. Finally, the location of each findspot was documented using a GPS Emlid Reach RS2+ unit capable of submeter accuracy and entered into the Project GIS for preparation of plan views of identified items across the Project area.

#### Phase IB Survey Methods

The Phase IB cultural resources reconnaissance survey included pedestrian survey, photo-documentation, GPS recordation, and systematic shovel testing. The subsurface examination was completed through the excavation of shovel tests at 30 meter (98.4 feet) intervals along survey transects spaced 30 meter (98.4 feet) apart. In addition, radial test pits were excavated around shovel tests that yielded precontact era cultural material at 5 meter (16.4 feet) intervals in each cardinal direction. During survey, 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), or one-meter depths were encountered. Each shovel test was excavated in 10 centimeter (3.9 inch) 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 in) hardware cloth. Soil characteristics were recorded in the field using Munsell Soil Color Charts and standard soils nomenclature. Shovel tests which contained pre-European contact era artifacts were photographed in profile. Each shovel test was backfilled after it was fully documented.

### Phase II Intensive Survey

The Phase II NRHP testing and evaluation was designed to delineate the vertical and horizontal boundaries of Loci 1 through 3 and Isolated find locations 1 and 2; recover a larger sample of artifacts from the areas; identify and describe an cultural features that may have been present; and provide a final determination regarding the NRHP eligibility of the loci and isolated find locations. Fieldwork for the Project was comprehensive in nature and planning utilized the information gathered during the background research portion of the Project and previously completed Phase IA Cultural Resources Assessment Survey. The methods used to complete this investigation were designed to provide complete and thorough coverage of Loci 1 through 3 and Isolated find locations 1 and 2 as they extend throughout the APE. This included pedestrian survey, systematic subsurface examination through close intervals shovel testing and unit excavations, detailed mapping, and photo-documentation. The field methods are described in more detail below.

### *Phase II Shovel Testing*

The Phase II shovel testing was designed to expand upon the initial Phase IB survey conducted by Heritage personnel in effort to establish the horizontal and vertical boundaries of Loci 1 through 3 and Isolated find locations 1 and 2 as they exist within the Project APE, as well as to assess each area's content, research potential, and eligibility for listing the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). Initially shovel tests were placed 5 meters (16.4 feet) and 10 meters (32.8 feet) away from positive Phase IB shovel tests in the four cardinal directions. In order to define the horizontal boundaries of the loci and isolated find locations shovel tests were excavated in each cardinal direction within the APE until two consecutive negative shovel tests were excavated in each direction or until the edge of the APE was reached. Each shovel test measured 50 x 50 cm (19.7 x 19.7 in) in size, and each was excavated to 1 meter (3.3 feet) below surface, until the C-Horizon was clearly defined, or until large, buried objects (e.g., boulders) prevented further excavation.

Each shovel test was excavated in 10 cm (3.9 in) arbitrary levels within natural soil horizons, and the soil from each level was screened separately. All shovel test fill was screened through 0.635 cm (0.25 in) hardware cloth and examined visually for cultural material. Soil characteristics were recorded in the field using Munsell Soil Color Charts and standard soils nomenclature. Each shovel test was backfilled to the ground surface after it was recorded. After completion of the shovel testing, those areas that produced artifact concentrations and/or possible evidence of cultural features (i.e., fire-cracked rock or soil discolorations) were noted, and they were scheduled for additional examination through the excavation of test units (see below).

### *Unit Excavation*

The Phase II NRHP testing and evaluation effort also included the excavation of four excavation units (EU-1 through EU-4) measuring 1 x 1 meter (3.3 x 3.3 feet) in size. They were placed in locations that contained perceivable densities of archaeological materials. Each unit was excavated in arbitrary 10 cm (3.9 in) levels within natural soil horizons using flat bladed shovels and trowels. All excavated soil matrix was screened through a 0.63 cm (0.25 in) hardware cloth, whereas any soil anomalies or identified features were screened through a 0.3175 cm (0.125 in) hardware mesh cloth to identify and recover any cultural materials. All cultural features identified within units were mapped in plan, photographed, and profiled prior and throughout excavation. Finally, stratigraphic profiles for at least two walls of each unit were prepared, and the same two walls were photographed. After all unit recordation was complete, the excavation unit was backfilled to the initial ground surface.

## **Laboratory Analysis**

Laboratory analysis of cultural material recovered during subsurface testing of the Project area, which consisted of precontact era and post-European Contact period cultural material, followed established archeological protocols. To begin the laboratory analysis process, field specimen bag proveniences were first crosschecked against the field notes and the specimen inventories for accuracy and completeness. Following this quality-control process, all recovered material was washed by hand, air-dried, and sorted into basic material categories. The nature and structure of the laboratory analysis was determined by the goals of the project. The artifact analysis consisted of making and recording a series of observations for each recovered specimen. The observations were chosen to provide the most significant information about each specimen. A database was employed to store, organize, and manipulate the data generated by the analytical process. This database was designed specifically for the analysis of the recovered artifacts. The analytical protocols applied to the recovered artifacts are discussed in detail below.

### Post-European Contact Period Cultural Material Analysis

The analysis of the post-European Contact period cultural material recovered during the Phase II Intensive Archaeological Survey was organized by class, functional group type, and subtype. The first level, class, represented the material category, e.g., ceramic, glass, metal. The second level, functional group, e.g., architecture, kitchen, or personal was based on standard classifications. The third and fourth levels, type and subtype, described the temporally and/or functionally diagnostic artifact attributes. The identification of artifacts was aided by consulting standard reference works.

### Precontact Era Cultural Material Analysis

The lithic analysis protocol used during completion of the Phase II Intensive Archaeological Survey effort was a “technological” or “functional” one designed to identify precontact reduction trajectories and lithic industries. The protocol, therefore, focused on recording technological characteristics of the recovered lithic artifacts. The lithic artifact database was organized by lithic material group, type, and subtype. The first level described the raw material type of the artifact. Lithic materials were identified utilizing recognized geological descriptions and terminology and were placed into distinct categories based on three factors: texture, color, and translucence.

The second analysis level, type, was used to define the general class (e.g., unmodified flake, core, or perform) of lithic artifact, while the last level, subtype, was employed to specify placement within the reduction sequence (e.g., primary, secondary, and tertiary). These levels followed classifications outlined by such authors as Callahan (1979) and Crabtree (1972), among others.

## **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  
(860) 486-5248  
Sarah.sportman@uconn.edu

# CHAPTER VII

## RESULTS OF PHASE IB CULTURAL RESOURCE RECONNAISSANCE SURVEY

### Introduction

This chapter presents the results of Phase IB cultural resource reconnaissance survey of the Lantern Hill Solar Center in Stonington, Connecticut (Figures 1 and 2). All fieldwork for this survey 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). As stated in Chapter VI, the goal of the Phase IB survey was to examine the Project area for the possible presence of archaeological deposits through a program of pedestrian survey, mapping, photo-documentation and shovel testing. The results of the Phase IB survey are presented below.

### Results of the Phase IB Cultural Reconnaissance Survey

As noted earlier in this report, the Project area consists of 32.6 acres of land in Stonington, Connecticut. It is situated at elevations ranging from approximately 15 to 17 meters (49.2 to 55.8 feet) NGVD, and is bound to the north and west by Whitford Brook, and Lantern Hill Road to the east, with agricultural land to the south. The Project area is defined by level topography characterized by fallow agricultural fields (Photos 1 through 4). The Phase IB cultural reconnaissance survey was initiated in March of 2024. The results of the Phase IB investigation are discussed in detail below.

### Pedestrian Survey Result

The pedestrian survey of the Project area resulted in the identification of 25 surface finds across the (Figure 11). They consisted of 6 precontact era lithic flakes and 19 post-European Contact period artifacts (Table 2). The post-European Contact period assemblage collected from the surface included ceramic sherds (n=12) and glass shards (n=7). The ceramic artifacts consisted of whiteware sherds (n=4), ironstone sherds (n=2), porcelain sherds (n=3), and stoneware sherds (n=3). The glass included clear, aqua, olive, and milk glass shards. These included curved glass, flat glass, tumbler glass, and indeterminate bottle glass shards. Of the glass collected from surface finds, only one manufacturing technique was identified, turn-molded; the rest of the assemblage was classified as indeterminate manufacture. Laboratory analysis of the post-European Contact period artifacts revealed that they have a general date range of mid eighteenth century through the twentieth century.

Table 2. Surface Finds collected during the Phase IB survey across the Project area.

Area	Soil Horizon	Period	Artifact Class	Artifact Type	Description	Total
Project Area	Surface	Post-European Contact	Ceramic	Whiteware	Undecorated	1
					Blue transfer print	2
					Molded	1
				Ironstone	Molded	1
					Undecorated	1
				Porcelain	Blue stenciled Japanese	1
					Undecorated	1
					Molded	1
				Stoneware	Albany Slip	2
					Spring Molded	1
			Glass		Curved milk glass	1

Area	Soil Horizon	Period	Artifact Class	Artifact Type	Description	Total		
				Indeterminate manufacture	Colorless flat glass	1		
					Colorless tumbler glass	1		
					Aqua indeterminate bottle	1		
					Olive indeterminate bottle	1		
				Turn-molded	Colorless curved glass	1		
		<b>Post-European Contact Period Total</b>						<b>19</b>
		Precontact	Lithic Debitage		Quartz	Biface retouch flake	2	
						Angular debris	1	
						Primary reduction debris	1	
						Biface reduction flake	1	
						Flake	1	
<b>Precontact total</b>						<b>6</b>		
<b>Surface total</b>						<b>25</b>		

The precontact era artifacts collected during the pedestrian survey consisted of quartz debitage, with examples of angular debris, biface reduction flakes, biface retouch flakes, primary debris, and flake fragments. These artifacts indicate that lithic tool maintenance and production occurred within the Project area.

#### Metal Detecting Survey

Due to the number of post-European artifacts recovered from the Project area, a limited wildcat metal detector survey was conducted. This was completed within the northeastern portion of the Project area, and resulted in the recovery of 11 iron artifacts (Table 3; Figure 12). The artifacts included brackets, machine and wire cut nails, pieces of wire, bolts, and a hammer. The artifact assemblage recovered during the metal detecting is indicative of general agricultural use and occupation of the Project area throughout the twentieth century.

Table 3. Post-European Contact material recovered during Metal Detecting

Find Spot	Soil	Material	Description	Total
MD 1	Ap	Iron	Bracket	1
MD 2	Ap	Iron	Wire	1
MD 3	Ap	Iron	Wire Nail	2
MD 4	Ap	Iron	Indeterminate	1
MD 5	Ap	Iron	Indeterminate	1
MD 6	Ap	Iron	Bracket	1
MD 7	Ap	Iron	Bolt	1
MD 8	Ap	Iron	Indeterminate Nail	1
MD 9	Ap	Iron	Hammer	1
MD 10	Ap	Iron	Machine-cut Nail	1
<b>Total</b>				<b>11</b>

#### Phase IB Shovel Testing

The subsequent Phase IB subsurface testing resulted in the excavation of 145 of 148 (98 percent) planned shovel tests across the Project area. The three planned but unexcavated shovel test pits fell within areas where the ground surface was covered by standing water. In addition to the planned survey shovel tests, 26 delineation pits were excavated to preliminarily explore identified precontact era archaeological deposits (Figure 13). A typical shovel test excavated within the Project area exhibited up to four soil horizons in profile and extended to an average depth between 60 and 80 centimeters below surface (cmbs) (23.6 to 31.4 inches below surface [inbs]). Those that were terminated prior to extending into the glacially derived C-Horizon were terminated due to large rock and/or root impasses, or the presence of

the water table. The uppermost soil horizon was characterized by an Ap-Horizon (plowzone) that extended from the ground surface to approximately cmbs (9.1 inbs); it consisted of a layer of dark brown (10YR 3/3) silt loam. The underlying B1-Horizon (upper subsoil) was described as a deposit of dark brown (7.5YR 3/4) silt loam that ranged in depth from 23 to 42 cmbs (9.1 to 16.5 inbs). The subsequent a B2-Horizon was described as a layer of dark yellowish brown (10YR 4/4) loamy fine to medium sand mixed with gravel and cobbles; it was observed from 42 to 68 cmbs (16.5 to 26.8 inbs). Finally, the glacially derived C-Horizon was identified as a layer of dark olive brown (2.5Y 3/3) coarse sand mixed with gravel and cobbles that extended from 68 to 78 cmbs (26.8 to 30.7 inbs). This soil profile is exemplified within the eastern profile of Transect 5, STP 1 as seen in Photo 5 and Figure 16.

A total of 62 post-European Contact period artifacts were recovered from 34 shovel tests excavated across the Project area during the Phase IB subsurface testing (Figure 15; Sheets 1-3). The artifact assemblage consisted of ceramic sherds (n=26), glass shards (n=22), metal objects (n=6), pieces of coal (n=7), and a single proximal fragment of a bird humerus bone (Table 4; Photo 6). The ceramic assemblage was represented by whiteware (n=18), creamware (n=2), yellowware (n=1), and salt-glazed stoneware (n=1) sherds, as well as pieces of brick (n=3). The ceramic sherds were largely classified as originating from unidentified vessels (n=16), with the remaining representing flat vessels (n=4), a vessel handle, and a single hollow vessel. In addition, a single kaolin 5/64 pipe stem was recovered during the survey. The whiteware was determined to have a date range of 1820+, the yellowware 1830 through 1940, the creamware between 1762 and 1820, and the stoneware ranging between 1750 through 1920.

Table 4. Post-European Contact period artifacts recovered during the Phase IB subsurface testing.

Area	Soil Horizon	Artifact Class	Artifact Type	Description	Total		
Project Area	Ap	Ceramic	Whiteware	Undecorated	16		
				Blue transfer print	2		
			Yellowware	Undecorated	1		
			Creamware	Undecorated	1		
				Green-glazed	1		
			Stoneware	Slat-glaze	1		
			Brick	-	3		
		Kaolin	Smoking pipe stem	1			
		Glass	Indeterminate manufacture	Colorless curved glass	6		
				Colorless flat glass	5		
				Aqua flat glass	2		
				Olive indeterminate bottle	1		
				Solarized indeterminate bottle	2		
				Colorless lamp shade	1		
			Indeterminate	Aqua	1		
				Colorless	1		
			Pressed	Colorless curved glass	1		
			Mouth-blown	Aqua indeterminate bottle	1		
		Contact-molded	Colorless curved glass	1			
		Metal	Iron	Machine-cut nails	5		
			Copper alloy	1-piece button	1		
		Mineral	Coal	Fragment	7		
		Fauna	Bird	Humerus bone	1		
		<b>Ap Total</b>					<b>62</b>
		<b>Project Area Total</b>					<b>62</b>

The glass assemblage consisted of curved glass (n=8), flat glass (n=7), unidentified bottle glass (n=4), unidentified glass (n=2) shards as well as a single fragment of lamp shade glass. The shards included

examples of clear (n=15), aqua (n=4), solarized (n=2), and olive (n=1) glass. Laboratory analysis of the glass objected resulted in the identification of three manufacturing techniques within the assemblage including, contact-molded (n=1), pressed (n=1), and mouth-blown (n=1). The remaining 19 shards were classified as of an unidentified manufacture. Finally, the metal artifacts consisted of 5 iron machine-cut nails and a single copper alloy one-piece button.

As seen in Table 4, the post-European Contact period artifacts were entirely (100 percent) recovered from the Ap-Horizon (plowzone). This deposition of post-European Contact period artifacts suggests a general level of disturbance across the Project area. Further, it suggests that the artifacts have been displaced from their original context and were likely deposited and redeposited during events of plowing, rather than related to a specific event, use, or occupation of the Project area. Laboratory analysis and assessment of the post-European Contact period artifact assemblage suggests that it has a general date range of eighteenth through twentieth centuries. In addition, analysis of the ceramic assemblage recovered during the pedestrian survey and the subsurface testing (n=38) found that the mean ceramic date of the artifacts was 1893. Due to the lack of substantial artifact numbers and density, as well as the general loss of depositional integrity, the post-European Contact period artifact assemblage was characterized as unrelated field scatter that could not be tied to a specific use or occupation. It was determined to lack research potential and qualities of significance applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of the pertaining to the post-European Contact period deposits is recommended prior to Project construction.

#### Isolated Find 1 (ISO 1)

Isolated Find 1 (ISO 1) was located within the northwestern portion of the Project area and was identified within Shovel Test Pit (STP) 4 along Survey Transect 7 (Figure 15; Sheet 2; Photo 7). Excavation of this shovel test resulted in the collection of a single quartz biface reduction flake and one quartz biface retouch flake (Photo 8 and 9). Both artifacts were recovered from a mixed context at the interface of the Ap-Horizon (plowzone) and B-subsoil horizon at a depth of 20-30 cmbs (7.8 to 11.8 inbs). A total of four delineation tests pits were excavated in each cardinal direction around the findspot at 5 meter (16.4 foot) intervals in order to more closely investigate the area. Despite careful excavation, no additional cultural material was recovered from the delineation test pits. Nevertheless, and due to its presence in the vicinity of Loci 1 through 3, larger areas of artifact deposition, ISO 1 was advanced as a candidate for Phase II NRHP testing and evaluation, the results of which are presented in the next chapter.

#### Isolated Find 2 (ISO 2)

Isolated Find 2 (ISO 2) was located within the northeastern portion of the Project area and was identified with the excavation of STP 5 and Survey Transect 4 (Figure 15; Sheet 1). Excavation of this shovel test resulted in the collection of a single quartz primary reduction flake; it was recovered from the Ap-Horizon (plowzone) at a depth of 0 to 10 cmbs (0 to 3.9 inbs) (Photo 10 and 11). As a result, four delineation tests pits were excavated in each cardinal direction of the findspot at 5 meter (16.4 foot) intervals in order to further investigate the precontact era deposit. Despite careful excavation, no additional cultural material was recovered from the delineation test pits. Nevertheless, and due to its presence in the vicinity of Loci 1 through 3, larger areas of artifact deposition, ISO 1 was advanced as a candidate for Phase II NRHP testing and evaluation, the results of which are presented in the next chapter.

#### Locus 1

Locus 1 was identified within the central portion of the Project area (Figure 15; Sheet 2). It measured approximately 15 meters (49.2 feet) in a north-south direction by 5 meters (16.4 feet) in an east-west direction. The soil stratigraphy within Locus 1 was consistent with the typical soil profile identified across

the Project area. Locus 1 was initially identified through the excavation of STP 9 along Survey Transect 7, which produced 1 iron machine-cut nail and a single quartz flake fragment. As a result, delineation test pits were excavated in each cardinal direction of the findspot in order to further investigate the precontact era deposit. A total of four delineation pits were placed at 5 meter (16.4 foot) interval, and a one at a 10 meter (32 foot) interval to the south. Of the excavated delineation STP, two yielded additional cultural material (D20 and D21), with only a single delineation pit (D20) containing precontact era materials. STP D21 contained a single shard of blue transfer printed whiteware and STP D20 yielded one quartz flake fragment.

The two post-European Contact period artifacts recovered from Locus 1 originated from the Ap-Horizon (plowzone) and were consistent with field scatter dispersed throughout the Project area. Therefore, the machine-cut nail and whiteware sherd were determined to represent portions of the field scatter recovered discussed above. The two precontact era quartz flakes collected during delineation of Locus 1 were recovered from Ap-Horizon (plowzone) soils at a depth of 0 to 10 cmbs (0 to 3.9 inbs). Laboratory analysis of them indicated that the represented distal flake fragments with cobble cortex present on one of them (Photo 12 and 13). The lithic artifacts were indicative of primary stage lithic tool production and maintenance as well as the exploitation of local raw materials. While the deposition of the artifacts suggest they have been displaced from their original soil matrix the presence of intact soils suggested the potential presence of additional intact precontact era archaeological deposits within Locus 1. As a result, Locus 1 was assessed potentially eligible for listing on the NRHP applying the criteria of evaluation (36 CFR 60.4 [a-d]). As a result, Heritage recommended that Locus 1 subjected to a Phase II NRHP testing and evaluation to establish its horizontal and vertical boundaries within the Project area and determine the significance prior to Project construction.

Locus 2

Locus 2 was identified along the northwestern boundary of the Project area and adjacent to a tree line that separated the agricultural field from Whitford Brook (Figure 15; Sheet1). It measured approximately 40 meters (131 feet) in an east-west direction by 10 meters (32 feet) in a north-south direction. The soil stratigraphy within Locus 2 was consistent with the typical soil profile identified across the Project area. Locus 2 was identified through the excavation of STP 1 and STP 2 along Survey Transect 5. A total of eight delineation STPs were excavated in cardinal directions around and between the two positive shovel tests (Figure 15; Sheet 1). The shovel testing resulted in the recovery of four precontact era lithic artifacts. The artifact assemblage consisted of lithic debitage represented by 3 quartz flake distal fragments recovered from the Ap-Horizon (plowzone) and a single quartz biface retouch flake recovered from the B-Horizon (Photo 14 and 15. In addition, three of the precontact era surface finds (SF6, SF7, SF8) discussed above fell within the boundary of Locus 2, as seen in Table 5 below.

Table 5. Precontact era material recovered from Locus 2 during Phase IB investigation.

Locus	Soil Horizon	Artifact Class	Artifact Type	Description	Total
Locus 2	Surface	Lithic Debitage	Quartz	Biface retouch flake	2
				Primary reduction debris	1
	<b>Surface Total</b>				<b>3</b>
	Ap	Lithic Debitage	Quartz	Flake fragment	3
	<b>Ap Total</b>				<b>3</b>
	B	Lithic	Quartz	Biface retouch flake	1
<b>B Total</b>				<b>1</b>	
<b>Locus 2 Total</b>					<b>7</b>

The deposition of the precontact assemblage of Locus 2 suggests that while disturbances have occurred across the Locus as a result of plowing, intact subsoils and archaeological deposits are present. Further, the artifact assemblage suggests that lithic tool maintenance and/or production occurred within the site and included the exploitation of local raw materials likely originating from Whitford Brook. As a result, Locus 2 was assessed as potentially eligible for listing on the National Register of Historic Places applying the criteria of evaluation (36 CFR 60.4 [a-d]). As a result, Heritage recommended that Locus 2 subjected to a Phase II NRHP testing and evaluation to establish the horizontal and vertical boundaries of the site within the Project area and to determine its NRHP significance prior to Project construction.

### Locus 3

Locus 3 was identified within the northeastern portion of the Project area (Figure 15; Sheet 1). It measured approximately 10 meters (32 feet) in a north-south direction by 21 meters (68.9 feet) in an east-west direction. Locus 3 was initially identified through the excavation of STP 4 along Survey Transect 2. This STP yielded a single quartz biface reduction flake from the Ap-Horizon (plowzone). As a result, delineation test pits were excavated in the cardinal directions around the findspot in order to further investigate the precontact era deposit. A total of four delineation pits were placed at 5 meter (16.4 foot) intervals, and a one was located 10 meters (32 feet) to the east of STP 4 along Survey Transect 2. A total of two delineation test pits (D6 and D9) yielded precontact era cultural material. This 1 quartz biface retouch flake and a single medial flake fragment from the Ap-Horizon (plowzone) (Photo 15 and 16).

The lithic artifact assemblage recovered from Locus 3 is indicative of lithic tool maintenance and/or production as well as the exploitation of local raw materials. While the deposition of the artifacts suggests they have been displaced from their original soil matrix, the presence of intact soils in the area suggested the potential presence of intact precontact era archaeological deposits within the Locus 3 area. As a result, Locus 3 was assessed potentially eligible for listing on the National Register of Historic Places applying the criteria of evaluation (36 CFR 60.4 [a-d]. As a result, Heritage recommended that Locus 3 subjected to a Phase II NRHP testing and evaluation to establish the horizontal and vertical boundaries of the site within the Project area and to determine its NRHP significance prior to Project construction.

### **Phase IB Summary and Recommendations**

Heritage conducted a Phase IB survey of the Project area associated with the proposed Lantern Hill Solar Center. The Phase IB survey included pedestrian survey, metal detection, and a subsurface shovel testing regime. The Phase IB survey resulted in the identification of three precontact era loci (Locus 1 through 3) and two isolated finds (ISO 1 and 2). A total of 17 precontact era artifacts were recovered from the project area during the Phase IB pedestrian survey and shovel testing regime. These deposits were recovered from the surface, plowzone, and intact B-Horizons. The precontact era assemblage consisted of quartz and quartzite lithic debitage. Laboratory analysis of the precontact era assemblage identified multiple reduction types indicative of lithic tool production and maintenance. As a result, Phase II NRHP testing and evaluation of the identified precontact era resources (Locus 1 through 3 and Isolate 1 and 2) was recommended determine their boundaries, chronology, and function, as well as to evaluate their research potential and eligibility for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). The results of the Phase II investigation are presented in the following chapter.

## CHAPTER VIII

# RESULTS OF THE PHASE II NRHP TESTING AND EVALUATION

### Introduction

The results of the previously completed Phase IB cultural reconnaissance survey suggested that Isolated Find locations 1 and 2, as well as Loci 1 through 3, may have retained archaeological deposits. The Phase II NRHP testing and evaluation of the areas mentioned above was designed to: 1) define the vertical and horizontal boundaries of the loci and isolated find locations within the Project area/area of potential effect; 2) determine and document whether intact subsurface cultural deposits and features existed within them; 3) identify and describe the loci and isolated find locations in terms of age, cultural affiliations, and occupation type; and 5) assess the overall research potential of the loci and isolated find locations applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). In order to accomplish these goals, close interval shovel testing and unit excavations were conducted.

### Results of the Phase II NRHP Testing and Evaluation

The Phase II investigation consisted of additional shovel testing and unit excavation, which was completed in July of 2024. The field effort consisted of the excavation of 175 Phase II shovel tests that were placed to infill the grid previously established during Phase IB survey discussed above. In addition, four 1 x 1 meter (3.3 x 3.3 foot) excavation units, EU-1 through EU-4, were excavated to explore artifact deposits, possible cultural features, and the stratigraphic integrity of the archaeological deposits identified during the Phase IB survey (Figure 17).

A typical Phase II shovel test exhibited three soil horizons in profile reached an average depth of 60 cmbs (23 inbs). Shovel tests that did not reach this depth were impeded by the presence of dense deposits of rocks and roots or encountered the glacially derived C-Horizon. The uppermost layer of a typical Phase II shovel test consisted of an Ap-Horizon (plowzone) that ranged from 0 to 14 cmbs (0 to 6 inbs) and was defined as a deposit of a layer of very dark grayish brown (10YR 3/2) silty loam. The underlying B-Horizon (subsoil) was described as a deposit of yellowish brown (10YR 5/4) silty loam that reached from 14 to 41 cmbs (6 to 16 inbs). Finally, the glacially derived C-Horizon consisted of a layer of olive brown (2.5Y 4/4) coarse sand mixed with gravel and cobble inclusions; it was observed between 41 and 58 cmbs (16 to 23 inbs). This stratigraphy is exemplified in the digital rendition of the profile of STP 90 in Locus 2 (Figure 18). The results of the Phase II NRHP testing and evaluation for each previously identified resource are presented below.

#### *Isolated Find 1*

Isolated Find 1 (ISO 1) was further investigated through the placement of eight Phase II delineation shovel tests in each cardinal direction at 10 and 15 meter (32.8 and 49.2 foot) intervals around the initial findspot, which was within STP 4 along Survey Transect 7 (Figure 19). Despite careful excavation, all eight Phase II shovel tests failed to produce any additional cultural material or evidence of cultural features. As a result, the archaeological deposits associated with ISO 1 identified during Phase IB (i.e., a single quartz biface reduction flake and 1 quartz biface retouch flake), were determined to retain little, if any, research potential. Therefore, ISO 1 was assessed as not eligible for listing in the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of ISO 1 is recommended prior to Project construction.

### *Isolated Find 2*

Isolated Find 2 (ISO 2) was also investigated during the Phase II survey. This location was further tested through the placement of eight shovel tests the cardinal directions at 10 and 15 meter (32.8 and 49.2 foot) intervals from the initial findspot, which was within STP 5 along Survey Transect 4 (Figure 20). Excavation of the delineation STPs resulted in the recovery of two post-European Contact period artifacts. They consisted of a single undecorated ironstone rim sherd and 1 possible modern turkey vertebra (Photo 18). Both were recovered from the Ap-Horizon (plowzone) and are consistent with the unassociated field scatter recovered across the Project area. Despite careful excavations, no additional precontact era cultural material was recovered from the ISO 2 area. As a result, the single quartz primary reduction flake collected from ISO 2 identified during Phase IB was determined to lack and the qualities of significance applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of ISO 2 is recommended prior to Project construction.

### *Locus 1*

The Phase II investigation of Locus 1 included the excavation of 14 delineation test pits to further explore the archaeological deposits previously identified during the Phase IB cultural resources reconnaissance survey (Figure 21). The stratigraphy observed within Locus 1 was also consistent with the typical soil profile discussed above, indicating that intact soils were resident in the area beneath the Ap-Horizon (plowzone). Excavation of the Phase II delineation test pits throughout the Locus 1 area resulted in the recovery of a single quartz biface reduction flake (Photo 19 and 20). The Phase II investigation of Locus 1 revealed that it measured approximately 15 x 15 meters (49.2 x 49.2 feet) in size. The artifact assemblage from the Locus, which includes the quartz biface reduction flake, as well as the 2 quartz flakes collected during the Phase IB survey, suggests that it is a likely ephemeral lithic scatter resulting from stone tool production or maintenance. Due to the lack of substantial artifact deposits and associated cultural features, the precontact era artifact assemblage associated with Locus 1 lack research potential and the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of the Locus 1 area is recommended prior to Project construction.

### *Locus 2*

The Phase II investigation of Locus 2 included the excavation of 122 delineation shovel tests and three 1 x 1 meter (3.3 x 3.3 foot) excavation units. Of the 122 shovel tests, 51 (41 percent) yielded cultural materials dating from the precontact era artifacts, six contained materials dating from the post-European Contact period, three yielded cultural material relating to both periods. The stratigraphy observed within Locus 2 was consistent with the typical soil profile discussed above; that is the area contained intact subsoil deposits beneath and Ap-Horizon (plowzone) that has resulted from centuries of agricultural usage. The Phase II delineation testing resulted in the recovery of 110 artifacts from. Of these, 14 were associated with post-European Contact period usage of the Project area. The remaining 97 dated from the precontact era. Both artifact assemblages are discussed below.

The post-European Contact period artifacts recovered during the Phase II shovel testing of Locus 2 were recovered from eight shovel tests (Table 6). The assemblage consisted of ceramic sherds (n=6), glass shards (n=4), metal items (n=2), and composite materials (n=2) (Table 5; Photo 21). The ceramic objects included 4 plain whiteware body sherds, 1 lead glazed redware hollow vessel base, and a single piece of brick. The glass artifacts were represented by 1 unidentified manufacture clear curved glass fragment and 3 contact-molded glass shards that consisted of a solarized ground bottle finish, 1 clear curved glass shard, and a single colorless ribbed window glass shard. Finally, the metal and composite artifacts included 2 unidentified iron nails and 2 pieces of copper jewelry. The jewelry fragments refit, making a square with a circular light green paste gem with holes at each corner of the square; its function is unknown.

Table 6. Post-European Contact Period artifacts recovered during Phase II shovel testing of Locus 2.

Locus	Soil Horizon	Artifact Class	Artifact Type	Description	Total	
2	Ap	Ceramic	Whiteware	Undecorated indeterminate vessel	3	
				Undecorated hollow vessel	1	
			Redware	Lead glaze base	1	
			Brick	-	1	
		Glass	Contact-molded	Colorless ribbed window glass	1	
				Solarized indeterminate bottle finish	1	
				Colorless curved glass finish	1	
	Metal	Iron	Indeterminate nail	1		
	<b>Ap Total</b>					<b>10</b>
	Ap/B Interface	Glass	Indeterminate manufacture	Colorless curved glass	1	
		Metal	Iron	Indeterminate nail	1	
Composite		Copper	Jewelry fragment	2		
<b>Ap/B Total</b>					<b>4</b>	
<b>Locus 2 Total</b>					<b>14</b>	

As seen in Table 6, the majority of the post-European Contact period materials were collected from the Ap-Horizon (plowzone), with the remaining recovered from mixed soil contexts. The artifact types and their deposition are consistent with the unassociated field scatter recovered across the Project area during the Phase IB survey. These artifacts indicate limited use or occupation of the area during the late eighteenth through twentieth centuries. However, based on the nature, distribution, and lack of density of these artifacts, as well as the lack of association with any cultural features, the post-European Contact component of Locus 2 was assessed as not eligible for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]).

The majority of the precontact era cultural material recovered as a result of the Phase II shovel testing throughout Locus 2 was classified as lithic debitage. A total of 96 precontact era artifacts were recovered 50 positive shovel tests across the Locus 2 area. They consisted of lithic debitage (n=91), flaked tools (n=3), and cores (n=2) (Table 7; Photo 22 and 23). The lithic debitage was represented by multiple reduction types that included flake fragments (n=43), biface retouch flakes (n= 27) biface reduction flake (n=11), primary reduction flakes (n=6), biface thinning flakes (n=2), angular debris (n=1), and primary reduction debris (n=1). The flaked tools recovered during the shovel testing included 1 quartz biface fragment, 1 complete quartz projectile point and a single quartzite projectile point base. Laboratory analysis of the quartz projectile point suggested that it is a Narrow Stemmed type, with cobble cortex present. The projectile point had been heavily retouched. The base of the project point base was classified as indeterminate unidentified with one missing shoulder. Unfortunately, the assemblage of flaked tools did not retain enough diagnostic qualities to be placed within a specific typology or time period.

Table 7. Precontact era artifacts recovered during the Phase II shovel testing of Locus 2.

Locus	Soil Horizon	Artifact Class	Artifact Material	Description	Total
Locus 2	Ap	Lithic debitage	Chert	Flake	3
				Biface thinning flake	2
				Biface retouch flake	4
			Quartzite	Flake	1
				Biface retouch flake	1
			Quartz	Angular debris	1
				Biface reduction flake	8
				Biface retouch flake	21
				Flake	34
				Primary reduction debris	1

	Flaked tool	Quartz	Primary reduction flake	5	
			Biface	1	
		Indeterminate stemmed projectile point	1		
		Quartzite	Indeterminate Narrow Stemmed projectile point	1	
	Core	Indeterminate metamorphic	Core fragment		1
			<b>Ap Total</b>		
	Ap/B	Lithic debitage	Quartz	Flake	2
		Biface reduction flake		1	
	Core	Quartz	Core spilt fragment	1	
			Chert	Biface reduction flake	1
	B	Lithic debitage	Quartz	Flake	3
				Biface reduction flake	1
				Biface retouch flake	1
				Primary reduction flake	1
	<b>B Total</b>				<b>7</b>
<b>Locus 2 Total</b>				<b>96</b>	

While the majority of the lithic assemblage was represented by locally sourced quartz, which comprised 85 percent (n=82) of the artifacts, examples of chert (n=10; 10 percent), quartzite (n=3; 3 percent), and indeterminate metaphoric rock (n=1; 1 percent) were also present in the assemblage, suggesting that the occupants of Locus 2 had access to regional exchanged networks. Finally, as seen in Table 7, the majority of the artifacts (n=85) were recovered from the Ap-Horizon (plowzone), with seven originating from the B-horizon and three from mixed soil context.

In addition to the cultural material recovered during the Phase II shovel testing, two potential cultural features were identified during the testing and evaluation effort. Feature 1 was identified within Phase II STP at 38 cmbs (14.9 inbs). It retained an amorphous shape that extended beyond the eastern wall of the STP and measured approximately 30 centimeters (11.8 inches) to the north-south by 48 centimeters (18.8 inches) to the east-west. It contained a deposit of brown (10YR 4/3) silty loam mixed with charcoal flecking and some faunal specimens (Figure 23). As a result, excavation of the STP was terminated and Feature 1 was covered with plastic and backfilled to be preserved in place until further investigation (see Unit 1 discussion below). Prior to the identification of Feature 1, 1 quartz flake was recovered from the Ap-Horizon (plowzone) indicating that Feature 1 may be associated with the precontact era occupation/use of the land.

Finally, Feature 4 was identified within the wall of Phase II delineation STP 23 (Figure 24). Excavation of the shovel test exposed its northern and eastern profile. Feature 4 consisted of a column shaped stain of very dark brown (10YR 3/2) silty loam mottled with dark yellowish brown (10YR 4/4) silty loam. The feature extended from 30 cmbs (11.8 inbs) to 67 cmbs (26.3 inbs), from the B-Horizon into the C-Horizon. It measured approximately 30 centimeters (11.8 inches) in width. No artifacts were recovered from the STP and no charcoal was present within the feature profile or STP soils. Feature 4 appeared to represent a post-European Contact period fence post or associated with the agricultural use of the land. Therefore, no further investigation of Feature 4 was conducted.

The precontact era artifact deposition and the identification of one potential precontact era cultural feature (Feature 1) suggested that despite previous disturbances from deep agricultural plowing, intact cultural deposits remained present within Locus 2. The results of the Phase II shovel testing determined the northern, eastern, and southeastern boundaries of Locus 2 as it extends within the Project area. Locus 2 measures approximately 66 meters in an east-west direction by 100 meters in a northeast-southwestern

direction. However, the occupation likely extends to the northwest outside of the Project area. On the basis of the shovel testing results, three excavation units (EU-1, EU-3 and EU-4) were placed within Locus 2 to further explore the temporal association, artifact deposition patterns, and density in order to make an informed assessment regarding its eligibility for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). The results of the unit excavations are presented below.

#### Excavation Unit 1

Excavation Unit (EU-1) was located within the southeastern quadrant of Locus 2 and measured 1 x 1 meters (3.3 x 3.3 feet) in size. It was placed over Phase II delineation STP 9, which yielded 1 quartz flake and contained two cultural features (Features 1 and 3). The unit was oriented on a grid north-south and east-west axis, with the datum placed at the northwestern corner at the ground surface level. EU-1 was situated on level topography characterized by fallow agricultural fields. The unit was opened to further investigate the nature of Feature 1 as well as the artifact density, assemblage, and deposition of Locus 2 and to inform the assessment of significance and eligibility of the site for listing on the NRHP.

EU-1 was excavated to a depth of 110 cmbd (43.3 inbd) and exhibited three soil horizons in profile. The uppermost horizon was characterized by Ap-Horizon (plowzone) that extended from 0 to 24 cmbd (0 to 10 inbd). It consisted of a deposit of very dark gray brown (10YR 3/2) silty loam. The subsequent B-Horizon, reached from 20 to 99 cmbd (8 to 39 inbd) and was defined by a layer of yellowish brown (10YR 5/4) silty loam. Finally, the glacially derived C-Horizon was encountered at 78 cmbd and extended to the base of the unit at 110 cmbd (31 to 43.3 inbd); it consisted of a deposit of light olive brown (2.5Y 5/3) coarse sand mixed with gravel and cobble inclusions. EU-1 was terminated at 110 cmbd (43.3 inbd) as it had penetrated into the glacially derived C-Horizon, as well as having multiple culturally sterile levels. This profile is exemplified in Figures 25 and 26 in the north and east wall profiles of EU-1 (Photo 24 and 25).

Despite thorough and careful excavation, only two artifacts were recovered from the excavation of EU-1. The artifacts consisted of a single quartz biface retouch flake and 1 quartz primary reduction flake. They were collected from the Ap-Horizon (plowzone) and Feature 1 fill soils, respectively. While the excavation of EU-1 did not yield a high density of artifacts, the debitage suggested that the site was utilized for lithic tool production and maintenance. The excavation of EU-1 resulted in the identification of two features, Feature 1 and Feature 3, which are discussed below.

#### *Feature 1*

Feature 1 was initially identified within Phase II delineation STP 9 at 38 cmbs (14.9 inbs). It was centrally located within the unit and defined by an amorphous shape that extended approximately 100 centimeters (39.3 inches) in an east-west direction by 60 centimeters (23.6 inches) in a north-south direction (Figure 27; Photo 26). It was identified at the Ap-Horizon (plowzone)/B-Horizon interface at 20 cmbd (7.8 inbd) and extended in depth for 50 centimeters, terminating at 68 cmbd (26.7 inbd). Feature 1 was characterized by a deposit of dark yellowish brown (10YR 4/4) silty loam with charcoal flecking. It was bisected along a north-south axis using the eastern wall of STP 9. The western half of the feature was excavated to expose the eastern profile. After the eastern profile was exposed, mapped, and photographed, the eastern portion of the feature was excavated and screened through 0.317 centimeters (0.125 inch) hardware cloth. Feature 1 had a basin shape in profile, with a secondary circular profile located 40 centimeters (15.7 inches) to the south at 45 to 65 cmbd (17.7 to 25.5 inbd) (Figure 28; Photo 27). This profile suggested the amorphous shape and deposit of Feature 1, and indicated that it may have been effected by bioturbation, which pulled feature soils in different directions and created secondary deposits. A profile of Feature 1 was also visible within the eastern wall of EU-1 once excavation was completed. A total of six soil samples were collected from the western and eastern half of Feature 1 for floatation. A single fragment of quartz

primary reduction debris was recovered during the excavation of Feature 1 at a depth of 40 to 50 cmbd (15.7 to 19.6 inbd).

Processing of the floatation of the soil samples collected from Feature 1 resulted in the recovery of 1,033 botanical remains. These consisted of pieces charcoal (n=995), seeds (n=31), and seven light fraction samples to be curated from future analysis. Based on the shape and contents of Feature 1, it may have been hearth feature that has been impacted by bioturbation and deep agricultural plowing. The age of the Feature 1 has not been determined; however samples for radiocarbon <sup>14</sup>C analysis have been collected so that a date may be procured in the future.

### *Feature 3*

Feature 3 was identified within the northwestern corner of EU-1. Feature 3 was found partially below Feature 1 and was defined by a semi-circular shape that extended for approximately 60 centimeters (23.6 inches) in an east-west direction by 50 centimeters (19.6 inches) to the north-south. It extended into both the western and northern wall of EU-1 (Figure 29; Photo 28). It extended for a depth of 32 centimeters and terminated at 91 cmbd (35.8 inbd). Feature 3 was characterized by a deposit of brown (10YR 4/4) silty loam. It was bisected along an east-west axis and half of the feature was removed to expose the northern profile (Figure 30; Photo 29). After the northern profile was exposed, it was mapped, photographed, then excavated and screened through 0.317 centimeters (0.125 inch) hardware cloth. Feature 3 was basin shape in profile. A total of four soil samples were collected from the northern and southern half of Feature 3 for floatation. No artifacts were recovered from Feature 3.

Processing of the floatation of the soil samples collected from Feature 3 resulted in the recovery of 299 botanical remains. These consisted of charcoal (n=290), seeds (n=6), and three light fraction samples to be curated from future analysis. Based on the shape and contents of Feature 3, it may have been a hearth feature from an earlier occupation than that represented by Feature 1. The age of the Feature 3 has not been determined; however samples for radiocarbon <sup>14</sup>C analysis have been collected so that a date may be procured in the future.

### Excavation Unit 3

Excavation Unit 3 (EU-3) was located within the northwestern portion of Locus 2 and it measured 1 x 1 meter (3.3 x 3.3 feet) in size (Figure 22). It was placed on level topography characterized by fallow agricultural fields between three Phase II delineation STPs (STP 51, 91, and 90), each of which produced a single chert flake. The unit was situated on a grid north-south and east-west axis, with the datum placed at the southwest corner at the ground surface level. EU-3 was opened to further explore the precontact era artifact density, assemblage, and deposition of Locus 2 and to inform the assessment of significance and eligibility of Locus 2 for listing on the NRHP.

EU-3 was excavated to a maximum depth of 60 cmbd (23.6 inbd) and contained three soil horizons in profile. The first soil horizon encountered was the Ap-Horizon (plowzone) which ranged from 0 to 19 cmbd (0 to 8 inbd) and was described as a deposit of very dark grayish brown (10YR 3/2) silty loam. Underlying the Ap-Horizon was the B-Horizon, which extended from 14 to 50 cmbd (6 to 20 inbd) and consisted of a deposit of yellowish brown (10YR 5/4) silty loam. Finally, the glacially derived C-Horizon was encountered at 33 cmbs and extended to the base of the unit at 60 cmbd (12.5 to 23.6 inbd); it was characterized as a layer of olive yellow (2.5Y 6/6) coarse sand mixed with gravel and cobble inclusions. EU-3 was terminated at 60 cmbd (23.6 inbd) due to being within the glacially derived C-Horizon, as well as having multiple culturally sterile levels. This profile is exemplified in Figure 30 in the west and east wall profiles of EU-3 (Photo 30 and 31).

Despite careful excavation, only two artifacts were recovered during the excavation of EU-3. The artifacts consisted of 1 argillite distal flake fragment and a single fragment of unidentified calcined bone, both of which originated from the Ap-Horizon (plowzone). This indicates that they have likely been displaced from their original soil matrix and re-deposited as a result of agricultural plowing. While the excavation of EU-3 did not yield a high density of artifacts, the debitage suggested that the site was utilized for lithic tool production and maintenance, and that nearby hearths used for cooking were likely present. No cultural features were identified during the excavation of EU-3.

#### Excavation Unit 4

Excavation Unit (EU-4) was located within the western portion of Locus 2 and it measured 1 x 1 meter (3.3 x 3.3 feet) in size (Figure 22). The unit was placed 30 centimeters (11.6 inches) to the north of Phase II delineation STP 71, which contained 2 quartz biface reduction flakes, 1 quartz biface retouch flake, a quartz flake fragment, and 1 quartz Narrow Stemmed projectile point. The unit was situated on a grid north-south and east-west axis, with the datum placed at the southwest corner at the ground surface level. It was defined by level topography characterized by fallow agricultural fields. EU-4 was opened to further explore the precontact era artifact density, assemblage, and deposition of the Locus 2 area and to inform the assessment of significance and eligibility of the occupation for listing on the NRHP.

EU-4 was excavated to a maximum depth of 60 cmbd (23.6 inbd) and exhibited three soil horizons in profile. The uppermost horizon was the Ap-Horizon (plowzone), which extended from 3 centimeters above datum (1.1 inch) to 33 cmbd (12.9 inbd). The Ap-Horizon (plowzone) was characterized by a deposit of very dark brown (10YR 3/2) silty loam. The subsequent B-Horizon consisted of a layer of yellowish brown (10YR 5/4) silty loam that reached from 25 to 51 cmbd (9.8 to 20 inbd). Finally, the glacially derived C-Horizon was encountered at 42 cmbd and extended to the base of the unit at 60 cmbd (16.5 to 23.6 inbd); it was defined by light olive brown (2.5Y 5/4) coarse sand with gravel and cobble inclusions. EU-4 was terminated at 60 cmbd (23.6 inbd) due to being within the glacially derived C-Horizon, as well as having multiple culturally sterile levels prior. This profile of this unit is exemplified in Figure 32 in the west and south wall profiles of EU-4 (Photo 32 and 33).

Despite careful excavation, only four artifacts were recovered from the excavation of EU-4. The artifacts consisted of 2 quartz flakes, 1 quartz biface reduction flake, and a single quartz biface fragment. All four artifacts were recovered from the Ap-Horizon (plowzone), which indicated that they have likely been displaced from their original soil matrix and re-deposited as a result of agricultural plowing. While the excavation of EU-4 did not yield a high density of artifacts, the debitage suggested that the area was utilized for lithic tool production and maintenance. No cultural features were identified during the excavation of EU-4.

#### *Summary of Phase II results Locus 2*

The Phase II NRHP testing and evaluation of Locus 2 included the excavation of 122 delineation shovel tests and three 1 x 1 meter (3.3 x 3.3 foot) excavation units. This resulted in the recovery of 118 artifacts and 1,332 botanical remains. It was determined that Locus extends approximately 66 meters in an east-west direction by 100 meters in a northeast-southwestern direction within the Project area. The Phase II testing of the area resulted in the recovery of 103 precontact era Native American lithic artifacts from across the site area, as well as 1,332 botanical remains (mostly charcoal) from the excavation of Feature 1 and 3. The precontact era assemblage of the site included multiple examples of lithic reduction types, flaked tools, and cores. A total of five lithic raw materials were identified, including quartz, chert, quartzite, argillite, and indeterminate metamorphic. The presence of both locally sourced and non-local raw materials, as well as various reduction strategies, and formal and informal tools indicates that the activities that occurred within the site included lithic tool production and maintenance from primary reduction

through late-stage tool manufacture. The recovery of a quartzite narrow stem projectile point suggests that occupation of the site may have been at any time between Late Archaic through Woodland periods, as Narrow Stemmed projectile points are not very specific as to time period.

The proximity of Locus 2 to the Whitford Brook combined with the artifact assemblage and the presence of two possible hearth features, suggests that the site was likely a Late Archaic to Woodland period seasonal camp that was re-occupied over time. Despite being subjected to previous disturbances due to deep agricultural plowing, the site exhibited depositional integrity. The presence of intact cultural features suggests that Locus 2 retains research potential and therefore is eligible for listing on the NRHP under criterion D of the criteria for evaluation (36 CFR 60.4 [a-d]). The Project sponsor proposes to preserve Locus 2 in place through avoidance measures during Project construction. As a result, no impact to Locus 2 will result from Project construction and therefore does not require additional archaeological investigation unless Project plans change such that all or portions of Locus 2 fall within the proposal solar facility.

Finally, 14 post-European Contact period artifacts were recovered from Locus 2 during the Phase II NRHP testing and evaluation. They have a general date range of mid nineteenth century through twentieth centuries. These artifacts are indicative of the agricultural use of the landscape and are consistent with unassociated field scatter recovered the remainder of the Project area. They are not eligible for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]).

### *Locus 3*

The Phase II investigation of Locus 3 included the excavation of 21 Phase II shovel tests and a single 1 x 1 meter (3.3 x 3.3 foot) excavation unit (Figure 33). Of the 21 delineation shovel tests, six yielded cultural materials dating from the precontact and post-European Contact periods, and a single shovel test contained a potential cultural feature (Feature 2). The stratigraphy observed within Locus 3 was consistent with the typical soil profile discussed above, evidencing partially intact soils with a deep Ap-Horizon (plowzone).

A total of six artifacts were recovered during the Phase II shovel testing. The cultural material consisted of three post-European Contact period artifacts and three precontact era lithic artifacts. The post-European Contact period artifacts consisted of 1 black transfer printed whiteware sherd, 1 bird carpometacarpus bone, and a single contact-molded milk glass jar liner fragment (Photo 34). Laboratory analysis suggests that they have a general date range of nineteenth through twentieth centuries. All of the post-European Contact period materials were recovered from the Ap-Horizon (plowzone). The artifact types and their deposition are consistent with the unassociated field scatter recovered across the remainder of the Project area during the Phase IB survey. These artifacts indicate limited use or occupation of the area during the late eighteenth through twentieth centuries. However, based on the nature, distribution, and lack of density of these artifacts, as well as the lack of association with any cultural features, the post-European Contact component of Locus 3 was assessed as not eligible for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]).

The precontact cultural material recovered during the Phase II shovel testing effort consisted of 2 quartz distal flake fragments and 1 quartzite angular debris fragment (Photo 35 through 36). These artifacts were recovered from the Ap-Horizon (plowzone) and the Ap-Horizon/B-Horizon interface. In addition, a single potential cultural feature (Feature 2) was identified within STP 22 at 35 cmbs (Figure 34). The feature extended into the north wall of the shovel test and consisted of a deposit of dark yellow (10YR 3/4) silty

loam. As a result, excavation of STP 22 was halted and the feature covered prior to being backfilled in order to preserve it in place until it could be further investigated during the Phase II work (see below).

After the completion of the Phase II shovel testing resulted, a single excavation unit was excavated within Locus 3 to further explore the potential cultural feature (Feature 2), as well as associated artifacts. This unit also was excavated in order to make an informed assessment regarding the eligibility of Locus 3 for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). The results of the unit excavation are presented below.

### Excavation Unit 2

Excavation Unit 2 (EU-2) was located within the western portion of Locus 3 and it measured 1 x 1 meter (3.3 x 3.3 feet) in size (Figure 33). It was placed over Phase II delineation STP 22, which contained a potential cultural feature, Feature 2. The unit was oriented on a grid north-south and east-west axis, with the datum established at the northwestern corner at the ground surface level. EU-2 was situated on level topography characterized by fallow agricultural fields. The unit was opened to further investigate the nature of Feature 2, as well as the artifact density and assemblage Locus 3.

EU-2 was excavated to a maximum depth of 90 cmbd (35 inbd) and exhibited three soil horizons in profile. The uppermost horizon was defined by the Ap-Horizon (plowzone), which extended from 0 to 36 cmbd (0 to 10 inbd) and consisted of a deposit of very dark grayish brown (10YR 3/2) silty loam. The subsequent B-Horizon reached from 21 to 78 cmbd (8 to 31 inbd) and was characterized by a layer of dark yellowish brown (10YR 3/4) silty loam. Finally, the glacially derived C-Horizon was encountered at 61 cmbd and extended to the base of the unit at 90 cmbd (24 to 35 inbd); it was defined as a deposit of light olive brown (2.5Y 5/4) coarse sand mixed with gravel and cobble inclusions. Evidence of disturbance was observed within EU-2. The north wall profile photo and mapping show several examples of redeposited C-Horizon soil interrupting the B-Horizon. EU-2 was terminated at 90 cmbd (35 inbd) due to being within the glacially derived C-Horizon, as well as having multiple culturally sterile levels prior. This profile is exemplified in Figure 35 in the north and east wall profiles of EU-2 (Photo 37 and 38).

Despite thorough and careful excavation, only two artifacts were recovered from the excavation of EU-2. They consists of 2 two quartz flake fragments that were collected from the Ap-Horizon (plowzone)/B-Horizon interface and the B-Horizon. The latter suggested that intact soil matrices may have remained within the area. While the excavation of EU-2 did not yield a high density of artifacts, the debitage suggested that the site was utilized for lithic tool production and maintenance. The excavation of EU-1 also resulted in the identification of a cultural feature, Feature 2, which is discussed below.

### Feature 2

Feature 2 was initially identified within Phase II delineation STP 22 at 35 cmbd (13.7 inbd). The feature was centrally located within the unit and defined by an amorphous shape that extended diagonally across the entire unit in a northwest-southeast direction in plan (Figure 36; Photo 39). It was identified within at Ap-Horizon (plowzone)/B-Horizon interface at 35 cmbd (13.7 inbd) and extended in depth for 40 centimeters (15.7 inches), terminating at 73 cmbd (28.7 inbd). Feature 2 was characterized by a deposit of dark brown (10YR 3/3) silty loam mixed with charcoal flecking throughout. It was bisected along a northwest-southeast axis line. The southwestern portion of the feature was excavated to expose the northeastern profile (Figure 37; Photo 40). After the profile was exposed, it was mapped and photographed, and the northeastern portion of the feature was excavated and screened through 0.317 centimeters (0.125 inch) hardware cloth. Feature 2 was roughly basin shape in profile. However, the presence of C Horizon soils in the unit walls to

the north and west indicated that it had been disturbed. A total of five soil samples were collected from Feature 2. No artifacts were recovered during the excavation of the feature.

Processing of the floatation of the soil samples collected from Feature 2 resulted in the recovery of 838 botanical remains. These consisted of charcoal fragments (n=817), seeds (n=15), and six samples of light fraction material to be curated for future research. Based on the shape and contents of Feature 1, it may have been hearth or pit feature, but it has been impacted by landform manipulation. The age of the Feature 2 has not been determined; however samples for radiocarbon <sup>14</sup>C analysis have been collected so that a date may be procured in the future.

### *Summary Phase II Results of Locus 3*

The Phase II NRHP testing and evaluation of Locus 3 resulted in the excavation of 21 delineation shovel tests and one 1 x 1 meter (3.3 x 3.3 foot) excavation unit. The resulted in the recovery of eight artifacts and 838 botanical remains. This ephemeral artifact scatter, which has been referred to as Locus 3, extends for approximately 13 meters (42.6 feet) in a north-south direction by 26 meters (85.3 feet) in an east-west direction within the Project area. The Phase II testing of the area resulted in the recovery of five precontact era artifacts consisting of lithic debitage. A total of two lithic raw materials, quartz and quartzite, were present. The precontact artifact assemblage indicates that limited stone tool production and maintenance activities occurred within the locus during an undetermined precontact period.

The proximity of the site to the Whitford Brook and Locus 2, suggests that Locus 3 is likely an ephemeral scatter associated with a small seasonal encampment. The locus has been subjected to previous disturbances due to deep agricultural plowing and contains little depositional integrity. Further, the lack of diagnostic artifacts and high density of artifacts suggests that the precontact era component of Locus 3 does not retain research potential. As a result, Locus 3 was assessed as not eligible for listing on the NRHP applying the criteria of evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of the locus area is recommended prior to Project construction.

Finally, three post-European Contact period artifacts were recovered from Locus 3 during the Phase II effort. They have a general date range of mid nineteenth century through twentieth century. The post-European Contact period artifacts are indicative of the agricultural use of the landscape and are consistent with unassociated field scatter recovered across the remainder of the Project area. As a result, these deposits were deemed ineligible for listing in the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]).

## **CHAPTER VII**

### **INTERPRETATION OF SITES AND MANAGEMENT RECOMMENDATIONS**

The Phase IB cultural reconnaissance survey initiated by Heritage in March of 2024 resulted in the identification of two precontact era isolated findspots (ISO 1 and 2) and three precontact era Loci (Locus 1 through 3) within the Project area. The subsequent Phase II NRHP testing and evaluation conducted by Heritage resulted in the spatial and vertical delineation of the two findspots and three loci. Despite careful investigation of Isolated Find 1 and 2, as well as Locus 1 and 3, they were determined to lack research potential, dense deposits, and/or depositional integrity. As a result, these resources were assessed as not eligible for listing on the NRHP applying criteria for evaluation (36 CFR 60.4 [a-d]). Therefore, no further archaeological investigation of them is recommended. In contrast, the Phase II NRHP testing and evaluation of Locus 2 revealed that it retained research potential and therefore is eligible for listing under criterion D of the NRHP of criteria for evaluation (36 CFR 60.4 [a-d]). Site interpretation and further management recommendations for Locus 2 are presented below.

#### **Interpretations for Locus 2**

Locus 2 is located along the northeastern boundary of the Project area and approximately 20 meters (65 feet) to the east of Whitford Brook. The Site extends approximately 100 meters in a northeast-southwestern by 66 meters in an east-west direction within the Project area. At the time of the Phase IB and Phase II work, it was characterized by level topography and fallow agricultural fields. The upper limits of Locus 2 has been subjected to previous disturbance by plowing. The Phase IB and II testing effort of Locus 2 resulted in the recovery of 129 artifacts, which consists of 17 post-European Contact period artifacts and 112 precontact era lithic artifacts. A total of 1,332 botanical remains, mostly consisting of charcoal, were also recovered.

Laboratory analysis of the post-European Contact period artifacts suggested a general date range of mid nineteenth through twentieth century. They consisted of ceramic sherds, glass shards, metal objects, and composite materials. The majority of the post-European Contact period artifacts were recovered from the Ap-Horizon (plowzone), with the remainder originating from the Ap/B-Horizon interface. The post-European Contact period artifacts are associated with past agricultural use of the landscape. The represent typical field scatter and are not eligible for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional examination of this component of Locus 2 is recommended prior to construction.

The precontact era component of Locus 2 is indicative of occupation and use during the Late Archaic through the Woodland periods. The recovered artifacts consisted of lithic debitage, flaked tools, cores, and examples of calcined bone. The deposition of the artifacts varied across the site with the majority originating from the Ap-Horizon, the remainder were recovered from the B-Horizon, mixed soil contexts, feature fill, or from the surface. Despite disturbance of the area by plowing, intact cultural deposits remain present within the Locus 2 area.

The precontact era assemblage of Locus 2 recovered during Phase IB and Phase II testing exemplified various stages and types of lithic tool production, use, and maintenance, and discard. A total of five lithic raw material types were identified among the precontact era artifact assemblage. Locally sourced quartz was the dominant material recovered from Locus 2, representing 96 (86 percent) of the artifacts. In

addition, chert, quartzite, argillite, and indeterminate metamorphic materials were also present within the assemblage. This variety of local and non-local material suggests that whereas local raw material was the most often used material, exotic materials, some of them likely originating from the Hudson River valley and Boston Basin, suggests some reliance on formal trade networks or extra regional ranging patterns.

Laboratory analyses of the lithic debitage recovered from Locus 2 also revealed that multiple types of reduction and tool production occurred on site. The most prominent debitage type on the site was flake fragments (n=50), with biface retouch flakes (n=31) and biface reduction flakes (n=12) being the second and third highest frequencies. The assemblage of debitage also included examples of primary reduction flakes (n=6), primary reduction debris (n=2), biface thinning flakes (n=2), cores (n=2), and angular debris (n=1). Taken together, the analyses of debitage recovered at the site indicates that bifacial and unifacial reduction and production of tools (reduction flakes), as well as the maintenance and reuse of these tools (micro and retouch flakes), were common activities on site.

A total of four lithic flaked tools were collected from Locus 2. They consisted of 2 quartz bifaces, 1 quartzite projectile point base, and 1 quartz projectile point. Laboratory analysis of the quartz projectile point suggested that it is a Narrow Stemmed type, with cobble cortex present. The projectile point has been heavily worked and was asymmetrical in nature. The quartzite projectile point base was classified as an unidentified stemmed point with a missing shoulder. The assemblage of flaked tools did not retain enough diagnostic qualities to be placed within a specific typology. While it could not be placed into a specific typology, the Narrow Stemmed projectile point is indicative of occupations associated with the Late Archaic through Woodland periods.

In addition to the cultural materials recovered during Phase IB and Phase II testing, two cultural features were identified within EU-1. Feature 1 and Feature 3 were stacked remnant hearth features. Feature 1 was partially underlaid by Feature 3, indicating separate occupations or re-occupation of the site. Excavation of the two features resulted in the recovery of 1,332 botanical remains. The botanical remains largely consisted of charcoal, though seeds were present in very minor amounts. Light fraction materials recovered from the floatation process of soil samples have also been curated for future investigations. The data recovered from Locus 2 suggests that it was likely a seasonal camp, where people were able to take advantage of the natural resources associated with the Whitford Brook, as well as produce, maintain, and use tools during the Late Archaic through Woodland periods.

### **Management Recommendations**

As mentioned above, the precontact era component of Locus 2 suggests that it is eligible for listing on the NRHP under Criterion D of the criteria for evaluation (36 CFR 60.4 [a-d]). In order to avoid any impacts to the area, the Project sponsor has re-configured the Project plans in order to avoid Locus 2 in its entirety. In addition, fencing will be installed with a buffered perimeter around Locus 2 in order to protect the archaeological deposits contained there. It is the professional opinion of Heritage that no additional archaeological examination is recommended prior to construction unless plans change and the sola will impact all or portions of Locus 2.

## BIBLIOGRAPHY

AdvanceCT and CTData Collaborative

- 2023 Stonington, Connecticut, CERC Town Profile 2023. <https://s3-us-west-2.amazonaws.com/cerc-pdfs/2023/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*. B. L. Hamlen, New Haven, CT.

Barry, Ann P.

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

Beers, F. W.

- 1874 *County Atlas of Litchfield, Connecticut*. F. W. Beers & Co., 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.

Calabretta, Fred

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

Cave, Alfred A.

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

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.

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.

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.

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*. Middletown 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.
- Griffin, James B.  
1967 Eastern North America Archaeology: A Summary. *Science* 156(3772):175-191.
- Hauptman, Laurence M. and James D. Wherry  
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. Cromeens 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.
- Keystone Aerial Surveys, Inc.  
1970 Connecticut Statewide Aerial Photograph Series. Connecticut State Archives, Hartford, CT.
- 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.

Museum of Connecticut History

2024 Underground Railroad Sites on the Connecticut Freedom Trail. <https://museumofcthistory.org/underground-railroad-sites-on-the-connecticut-freedom-trail/>, accessed May 23, 2024.

Niven, John

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

Normen, Elizabeth J., ed.

2013 *African American Connecticut Explored*. Wesleyan University Press, Middletown, CT.

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 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 Aerial Surveys, Inc.

- 1951 Connecticut Statewide Aerial Photograph Series. Connecticut State Archives, Hartford, CT.

- 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.
- Rossano, Geoffrey L.  
 1996 *Western Uplands: Historical and Architectural Overview and Management Guide. Historic Preservation in Connecticut, Vol. IV.* Connecticut Historical Commission, State Historic Preservation Office, Hartford, CT.
- 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.].
- 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.

Stonington, Town of

- 2015 Plan of Conservation & Development. Electronic document, [https://www.stonington-ct.gov/sites/g/files/vyhlf3851/f/file/file/2015\\_pocd\\_final\\_version.pdf](https://www.stonington-ct.gov/sites/g/files/vyhlf3851/f/file/file/2015_pocd_final_version.pdf), accessed March 4, 2024.

Thompson, David H.

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

Turner, Gregg M. and Melancthon W. Jacobus

- 1989 *Connecticut Railroads...and Illustrated History*. The Connecticut Historical Society, Hartford, CT.

United States Census Bureau (US Census)

- 1850 Seventh Census of the United States. Schedule 1 – Free Inhabitants. HeritageQuest Online. ProQuest LLC, Ann Arbor, MI.
- 2012 *Connecticut: 2010, Summary Population and Housing Characteristics*. U.S. Government Printing Office. Washington, DC.

Van Dusen, Albert E.

- 1961 *Connecticut*. Random House, New York, 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.

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.

APPENDIX A:

FIGURES

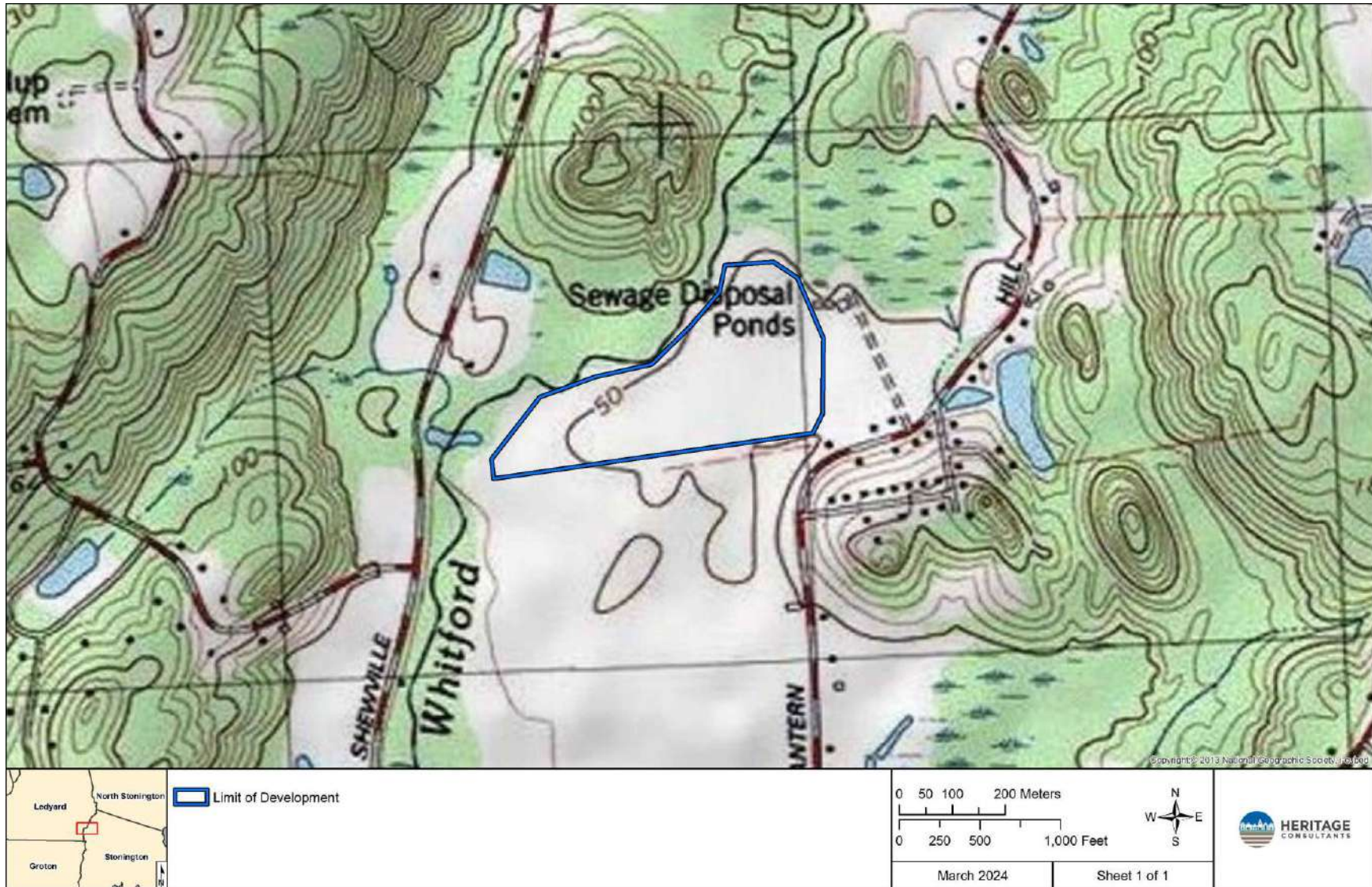


Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the project area in Stonington, Connecticut.



Figure 2. Aeri image depicting the client's limit of disturbance for the solar Facility in Stonington, Connecticut.

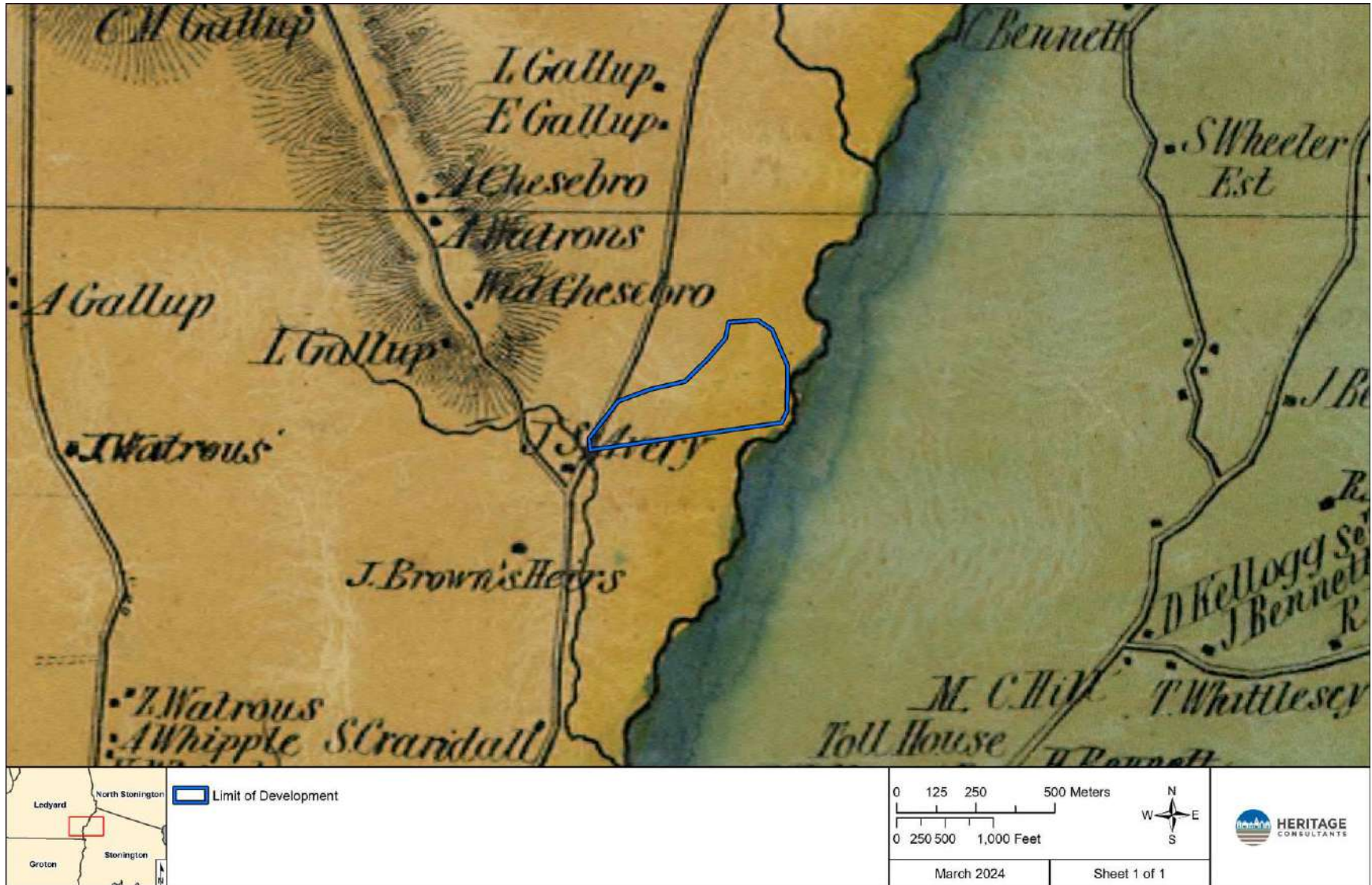


Figure 3. Excerpt from an 1854 historical map showing the location of the project area in Stonington, Connecticut.

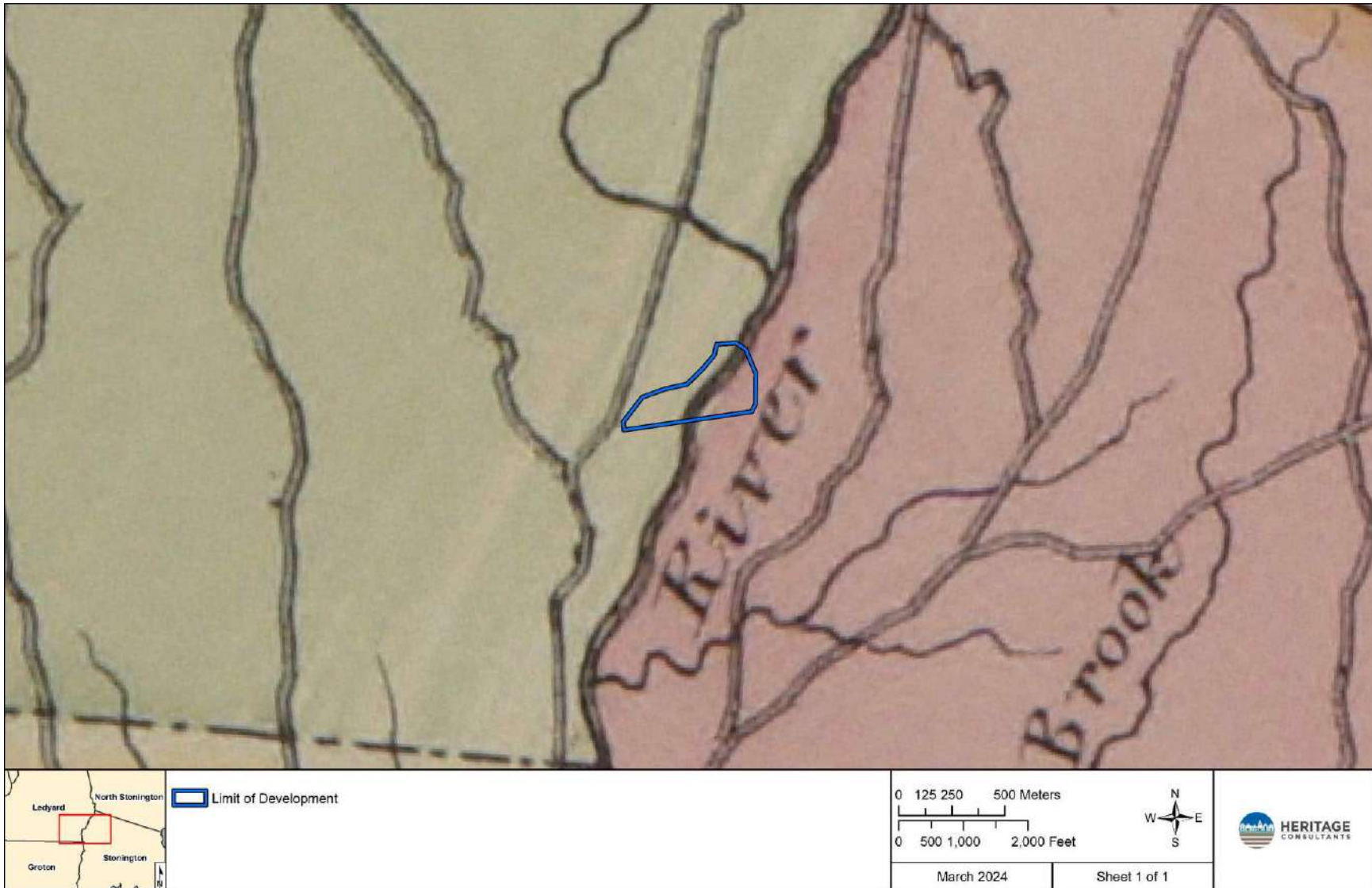


Figure 4. Excerpt from an 1868 historical map showing the location of the project area in Stonington, Connecticut.

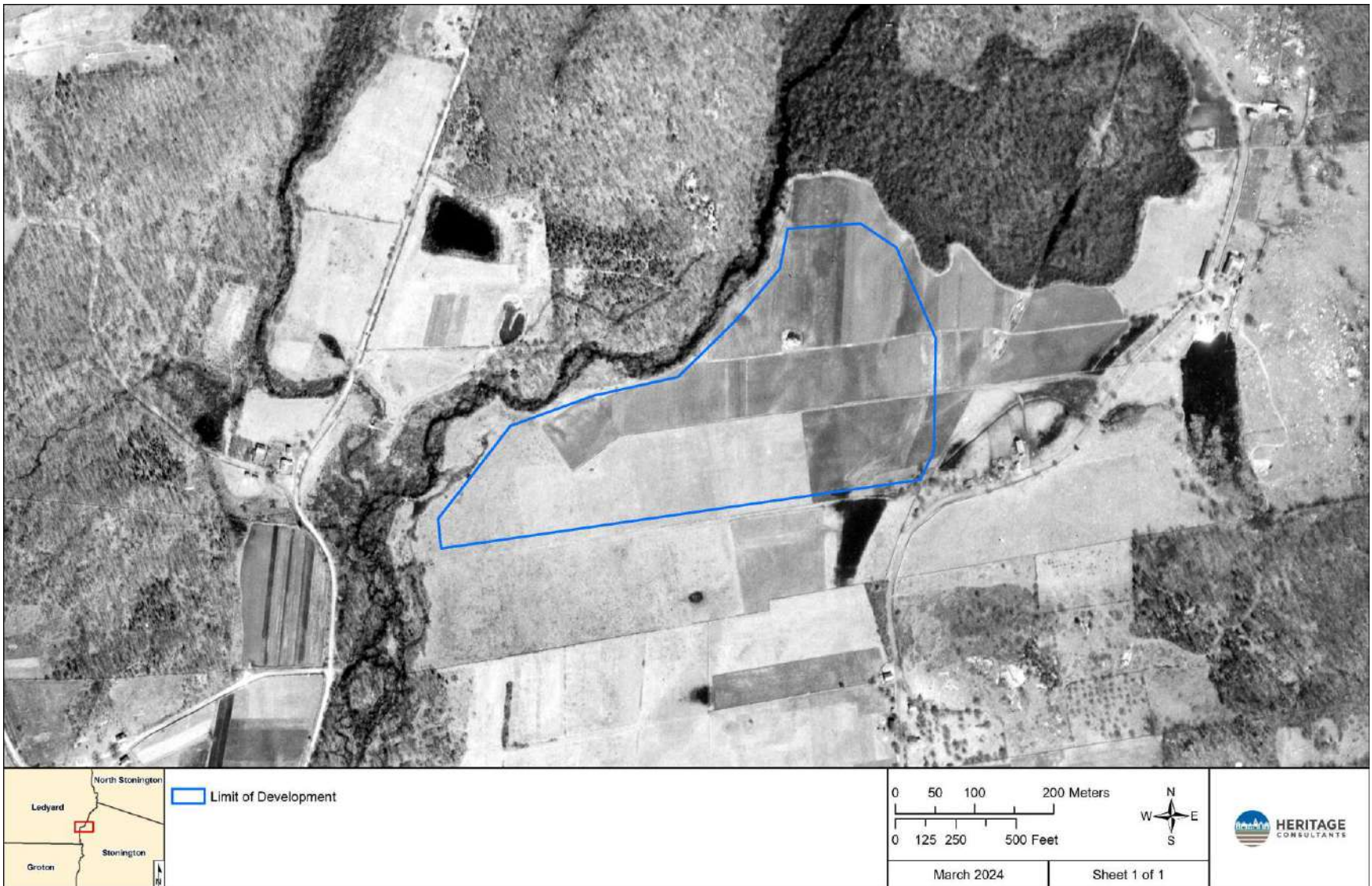


Figure 5. Excerpt from a 1934 historic map showing the location of the project area in Stonington, Connecticut.



Figure 6. Excerpt from a 1970 historic map showing the location of the project area in Stonington, Connecticut.

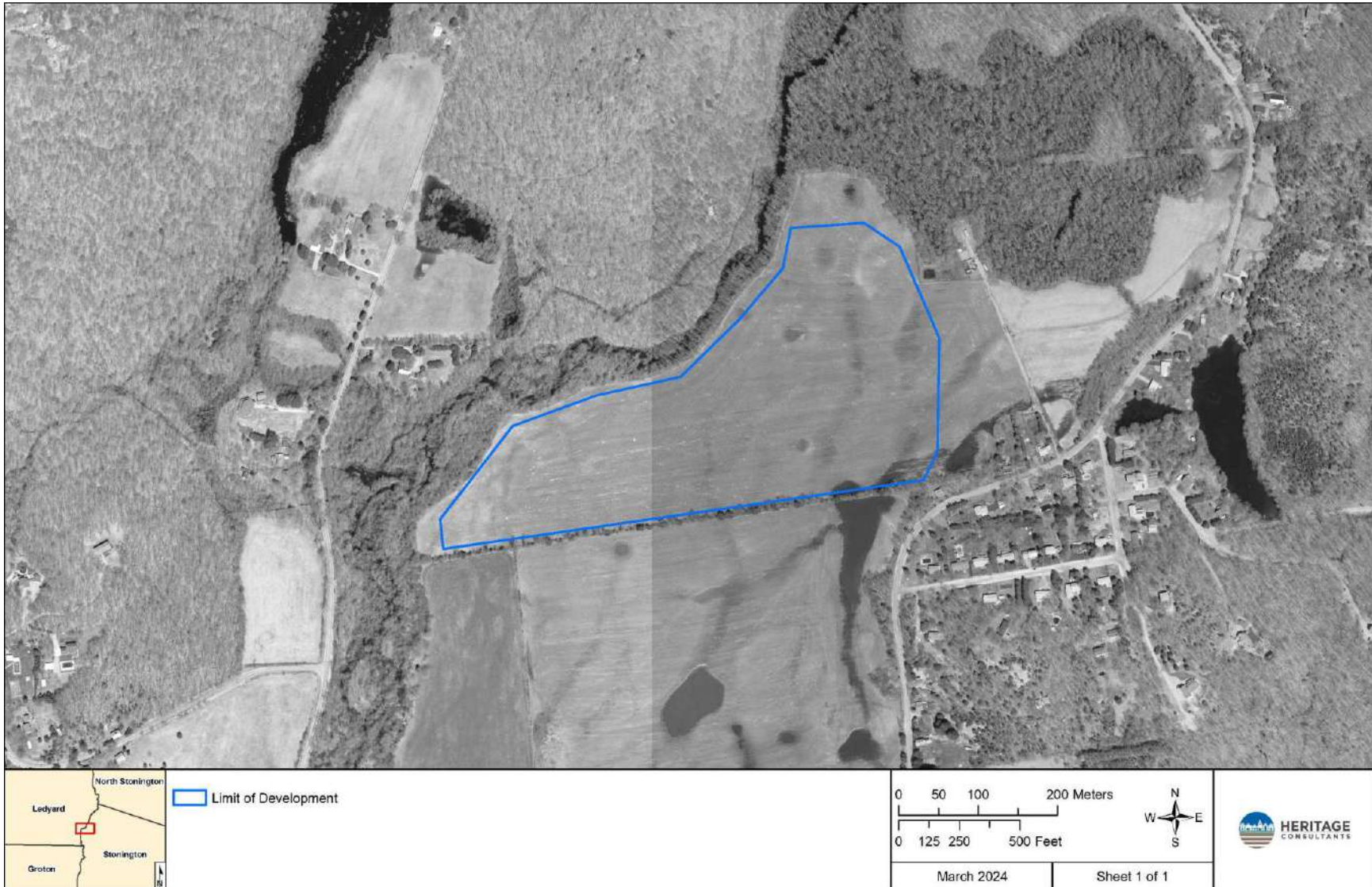


Figure 7. Excerpt from a 2004 aerial photograph showing the location of the project area in Stonington, Connecticut.



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

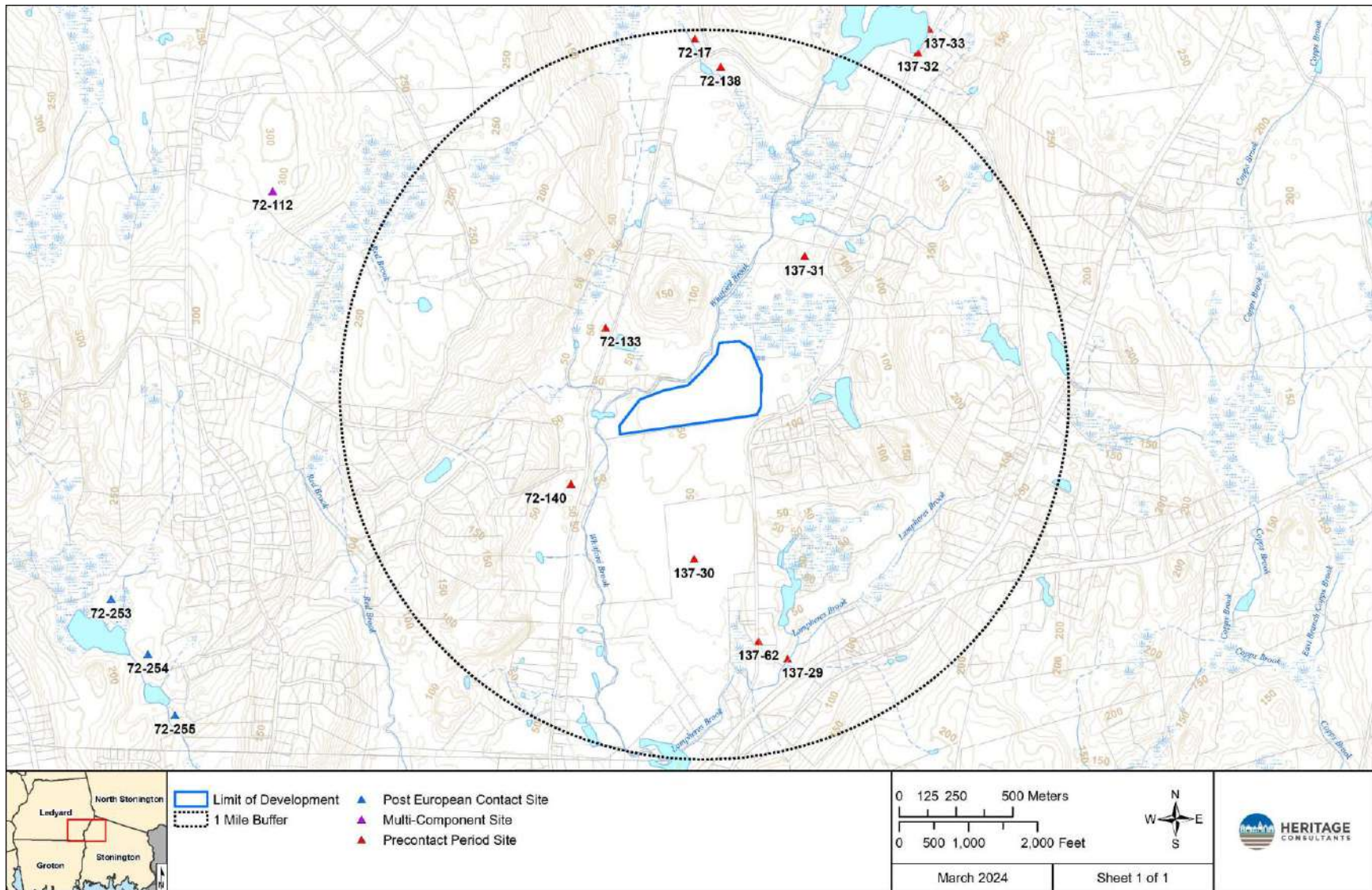


Figure 9. Digital map depicting the locations of the previously identified archaeological sites in the vicinity of the project parcel in Stonington, Connecticut.

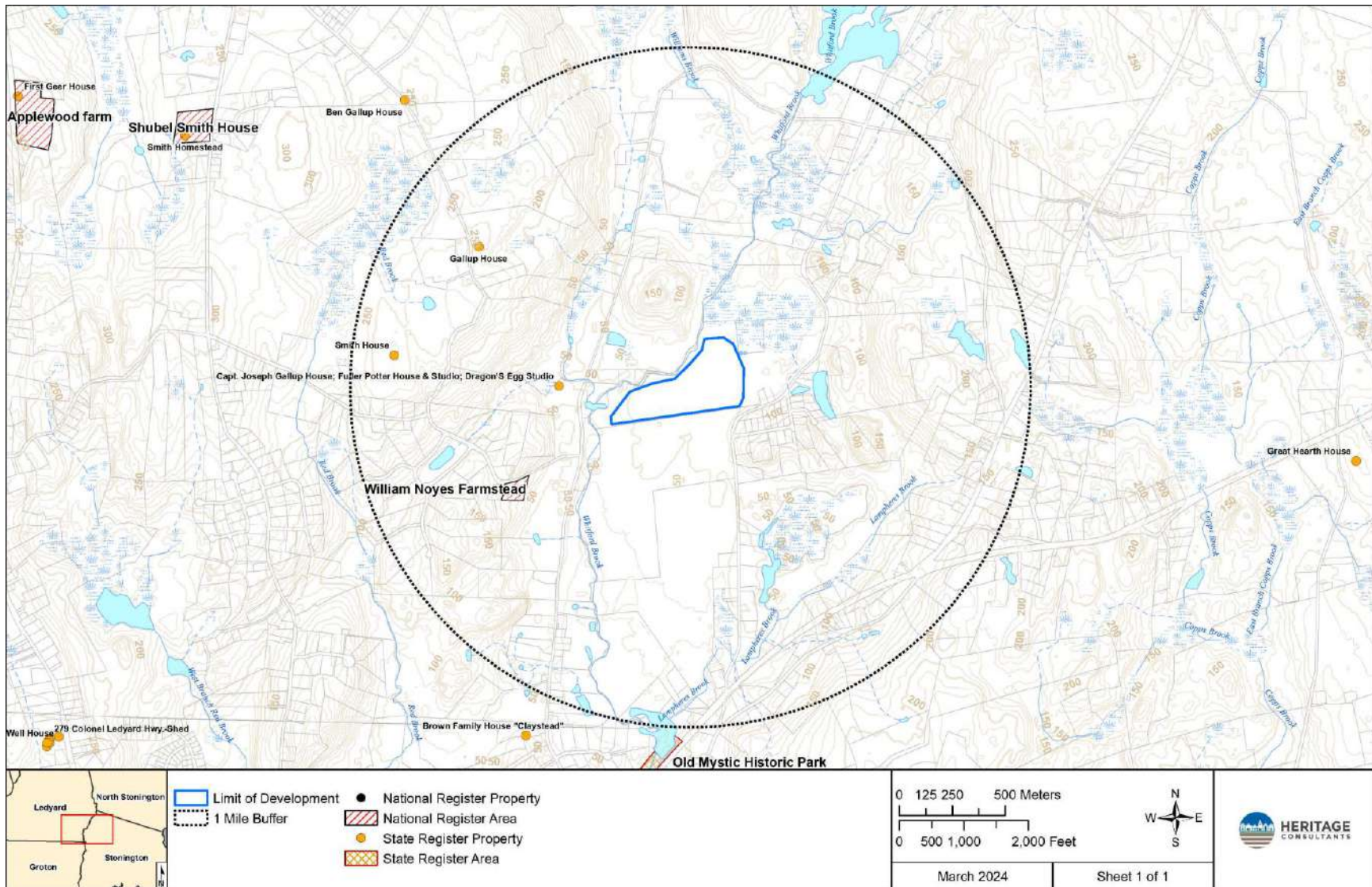


Figure 10. Digital map depicting the locations of previously identified National/State Register of Historic Places properties and inventoried Historic Standing Structures in the vicinity of the project area in Stonington, Connecticut.

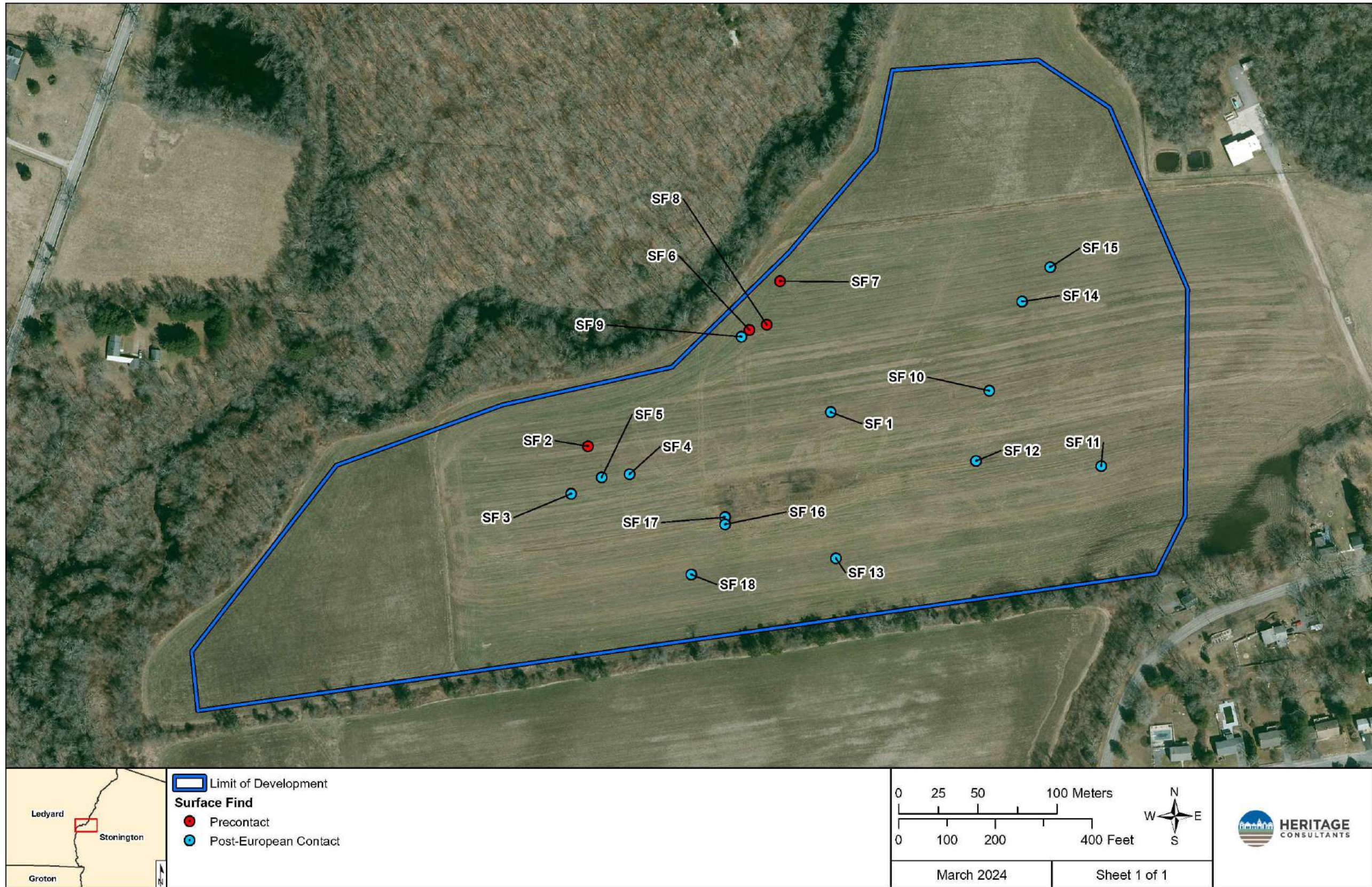


Figure 11. Excerpt of a 2019 aerial photograph showing the location of pedestrian survey surface finds across the Project Area in Stonington, Connecticut.

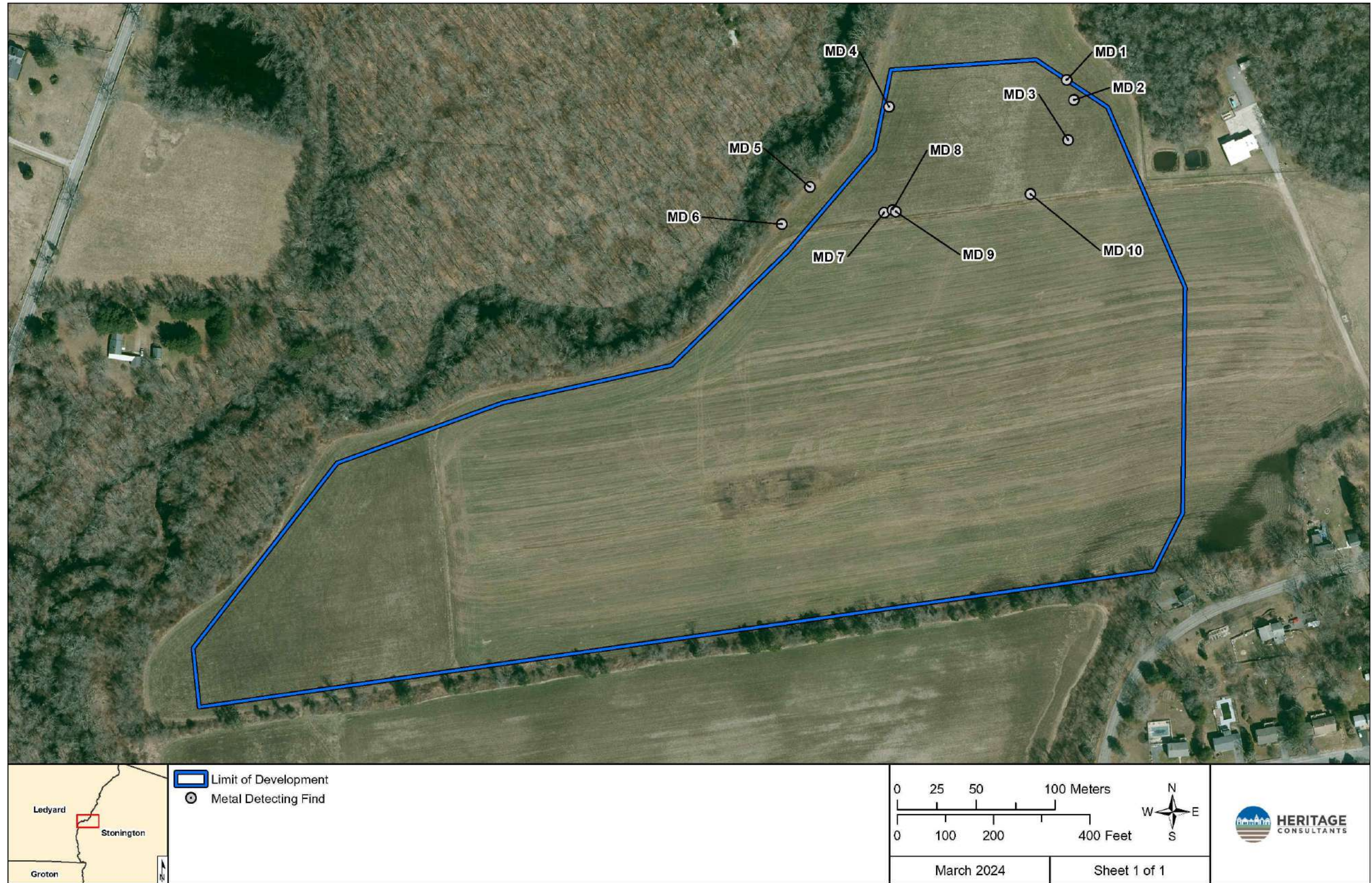


Figure 12. Excerpt of a 2019 aerial photograph showing the location of metal detecting results from the Project Area in Stonington, Connecticut.

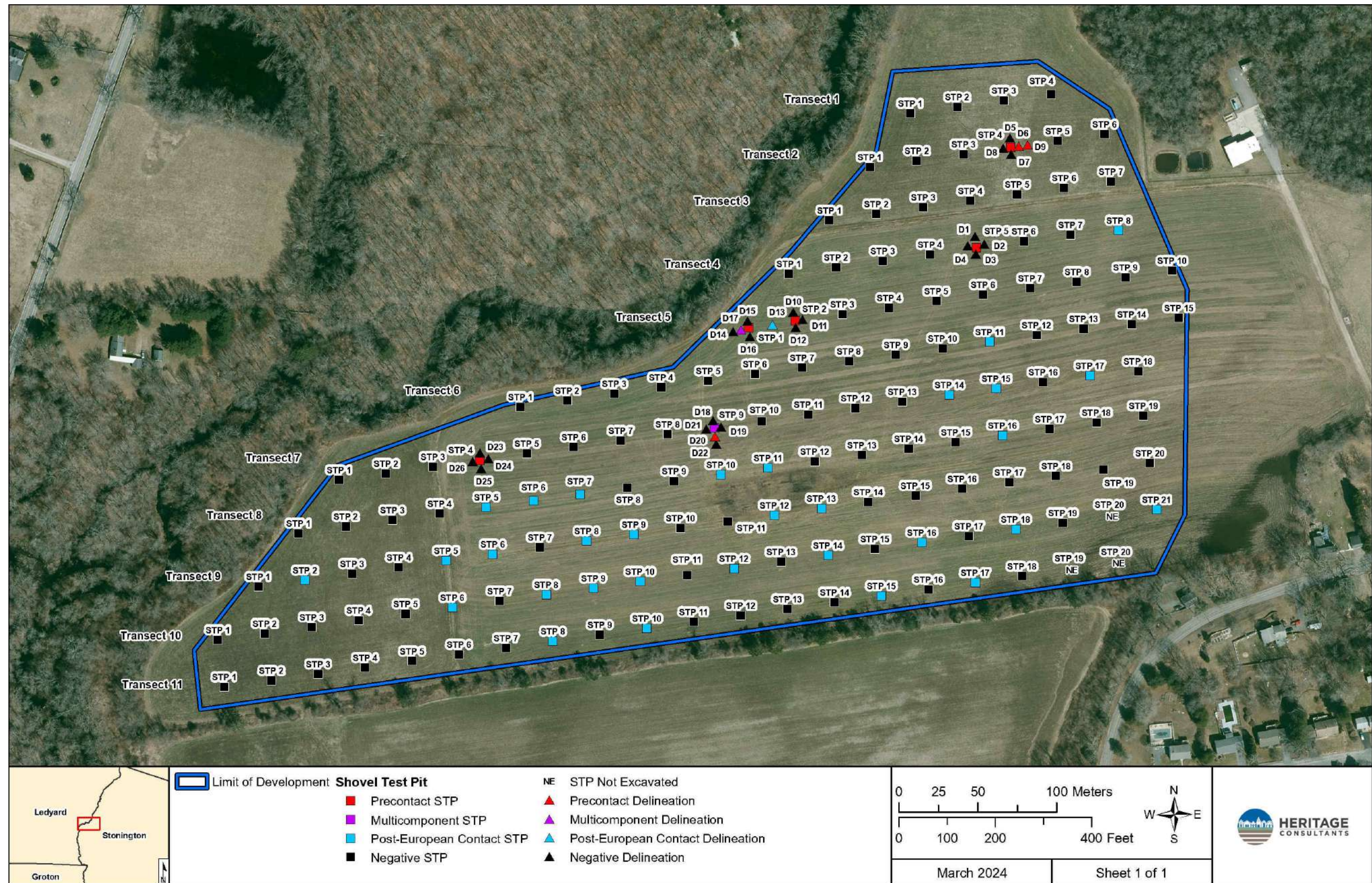


Figure 13. Excerpt of a 2019 aerial photograph showing the location of Phase IB Shovel Testing results across the Project Area in Stonington, Connecticut.

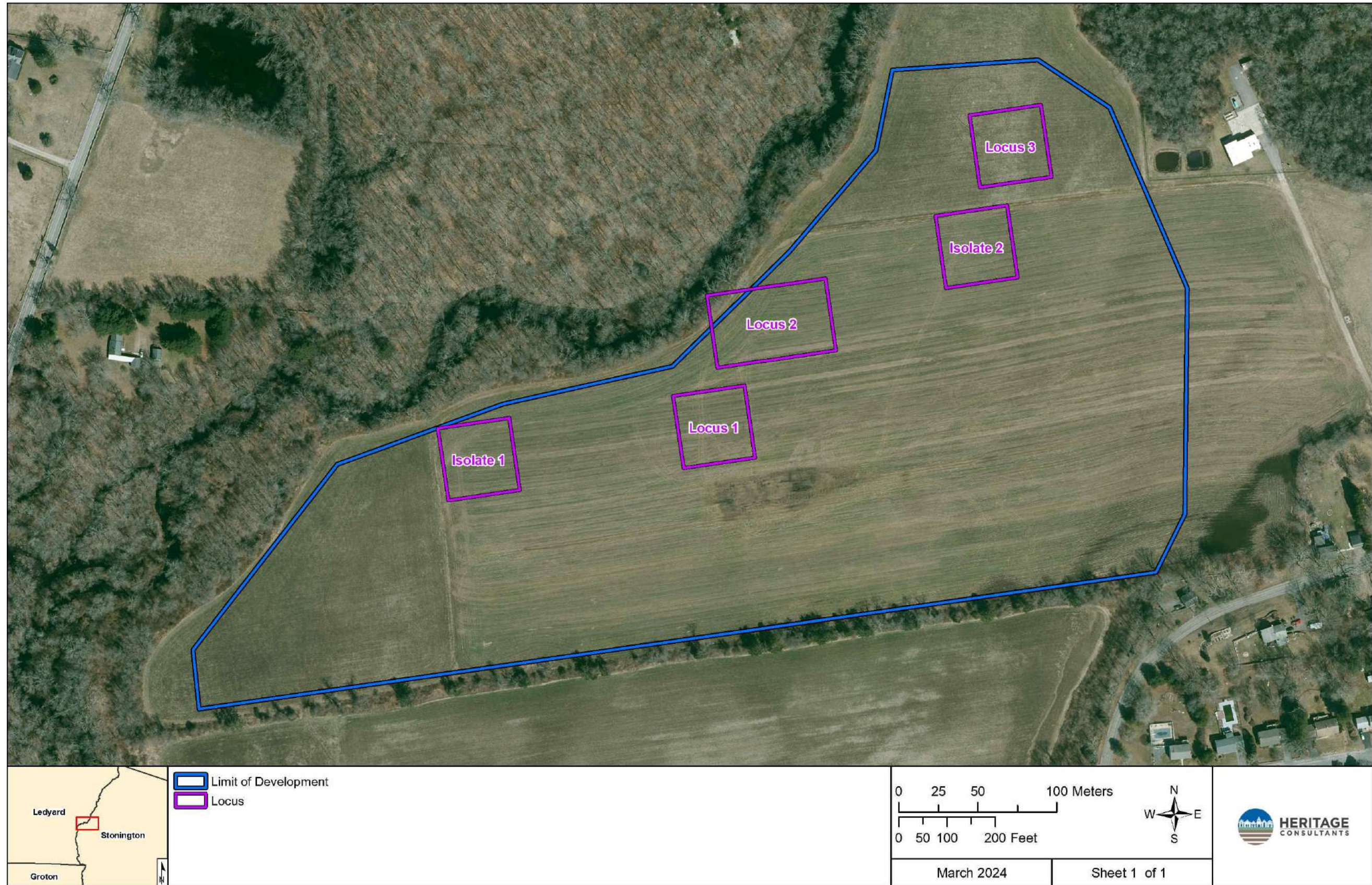


Figure 14. Excerpt of a 2019 aerial photograph showing the location of identified isolated finds and loci within the Project Area in Stonington, Connecticut.

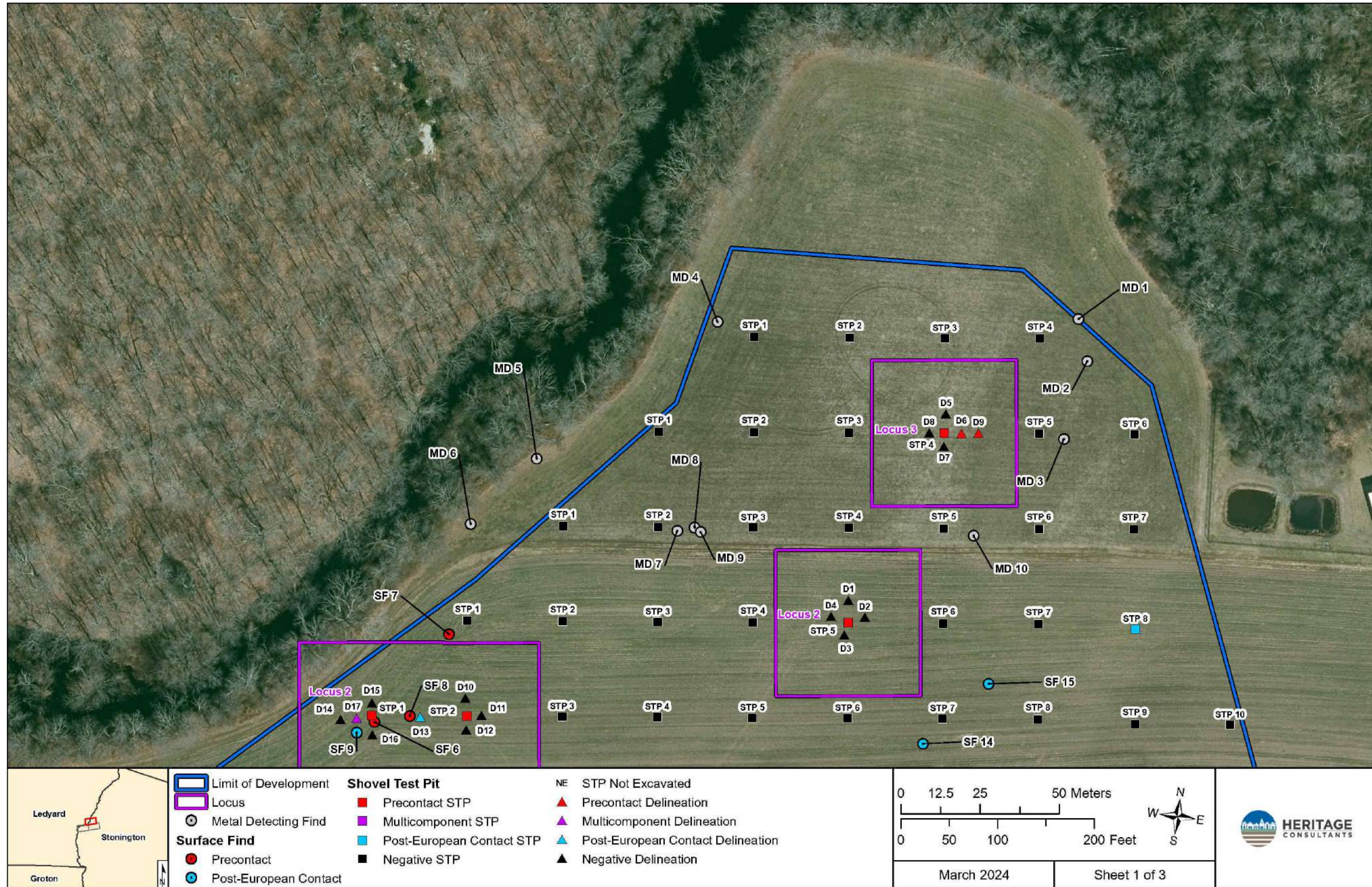


Figure 15; Sheet 1. Excerpt of a 2019 aerial photograph showing the location of Phase IB Testing effort across the Project Area in Stonington, Connecticut.

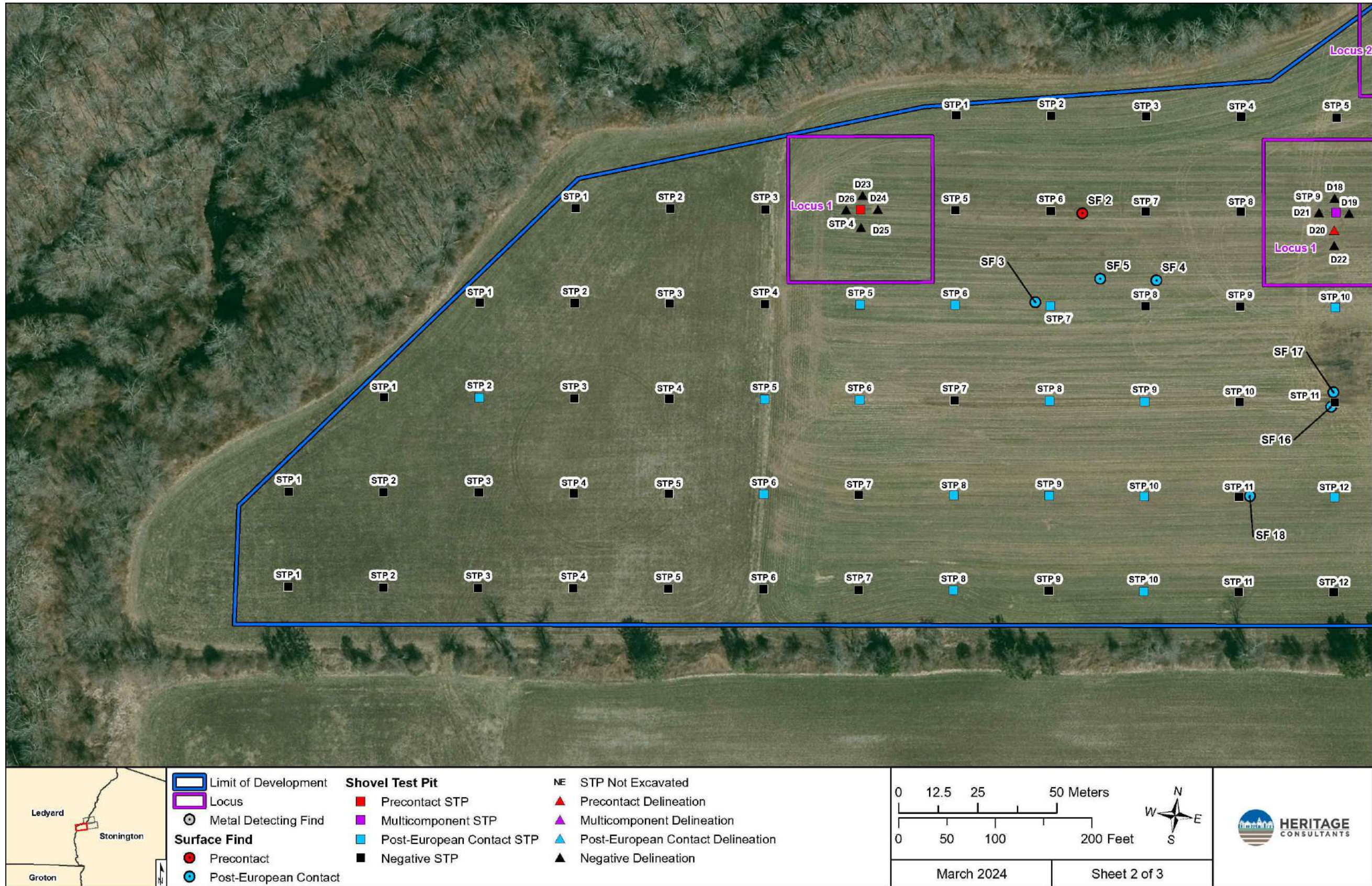


Figure 15; Sheet 2. Excerpt of a 2019 aerial photograph showing the location of Phase IB Testing effort across the Project Area in Stonington, Connecticut.

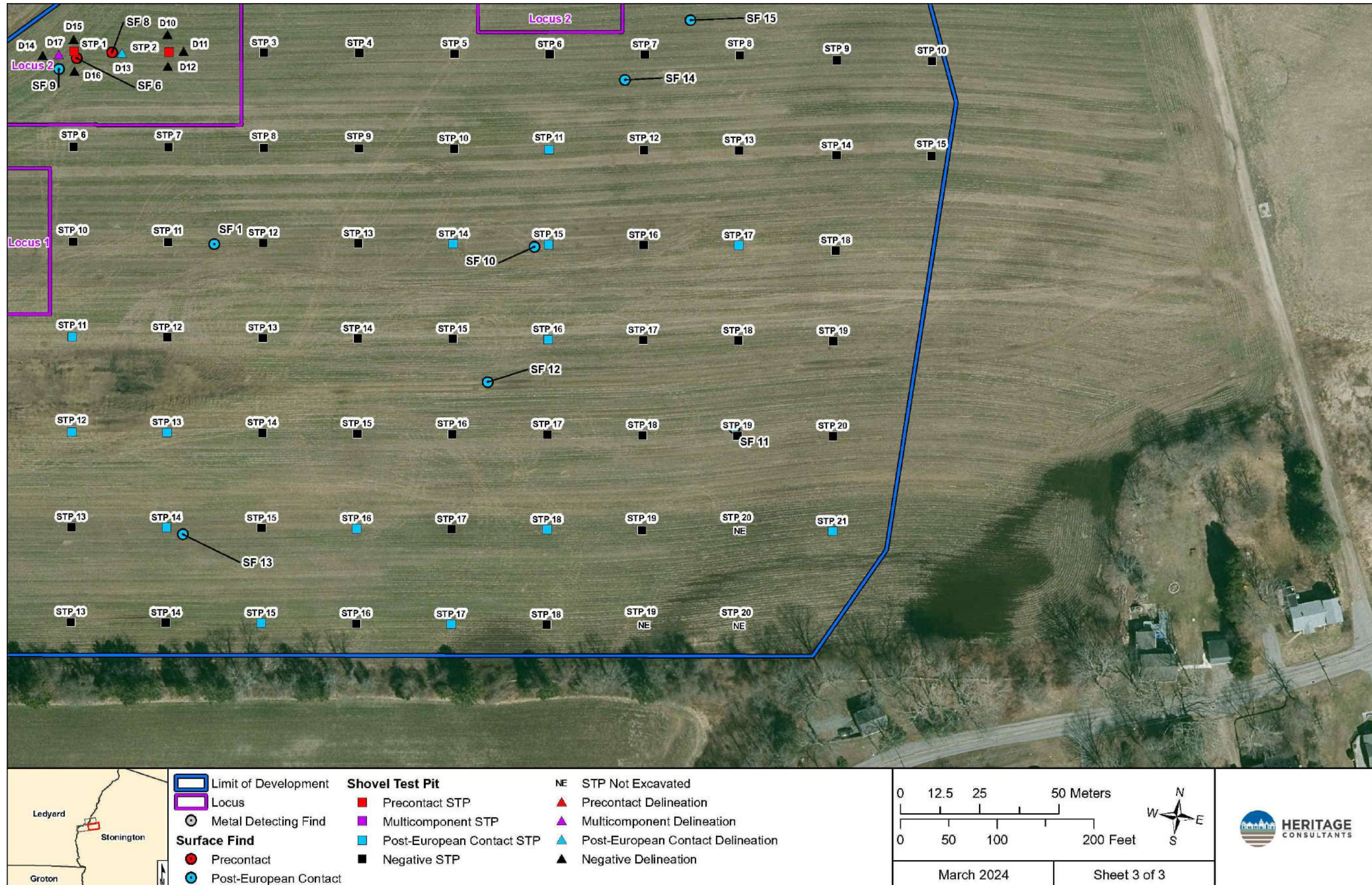


Figure 15; Sheet 3. Excerpt of a 2019 aerial photograph showing the location of Phase IB Testing effort across the Project Area in Stonington, Connecticut.

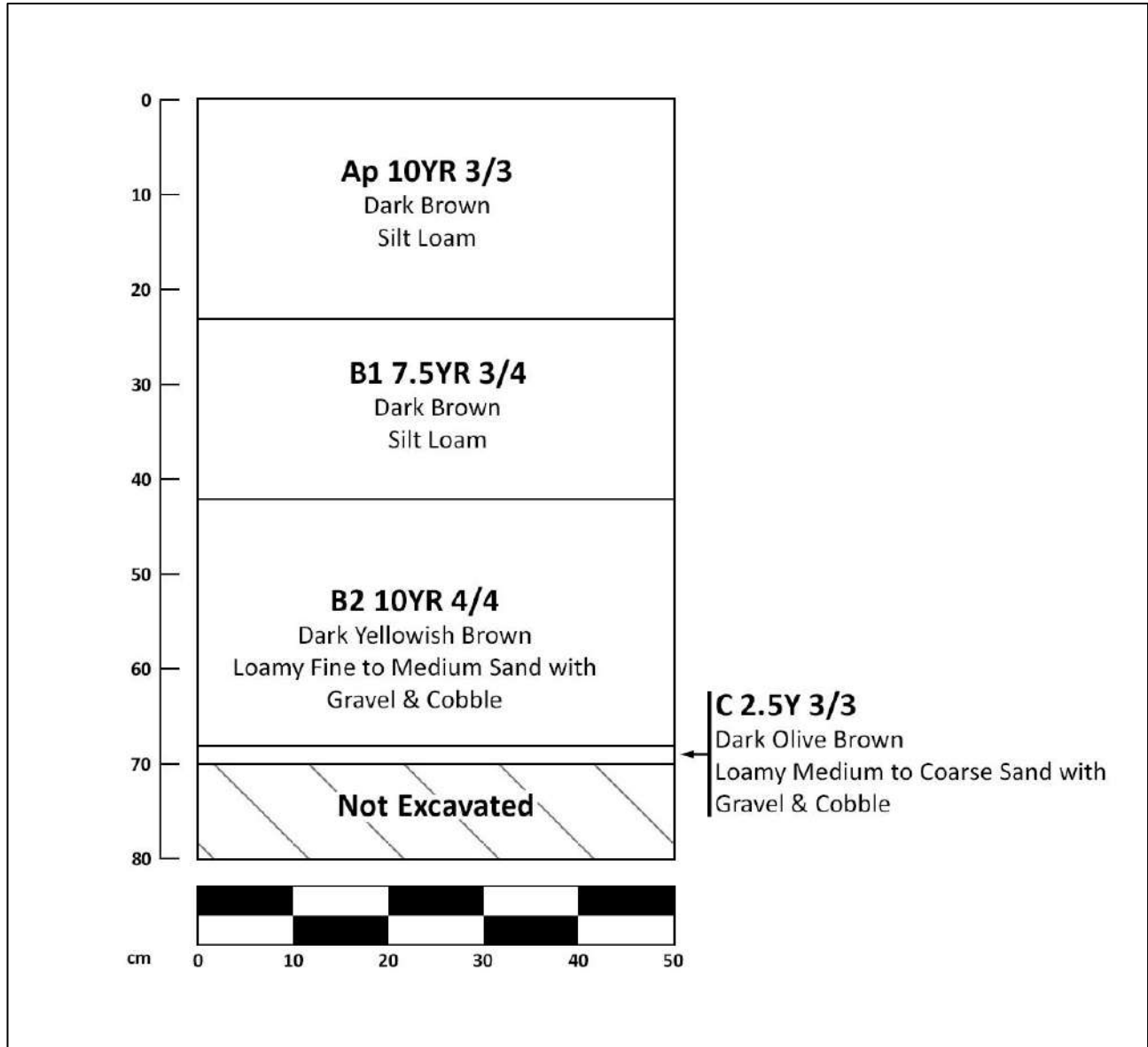


Figure 16. Digital Drawing of Phase IB shovel test Transect 5 STP1 profile.

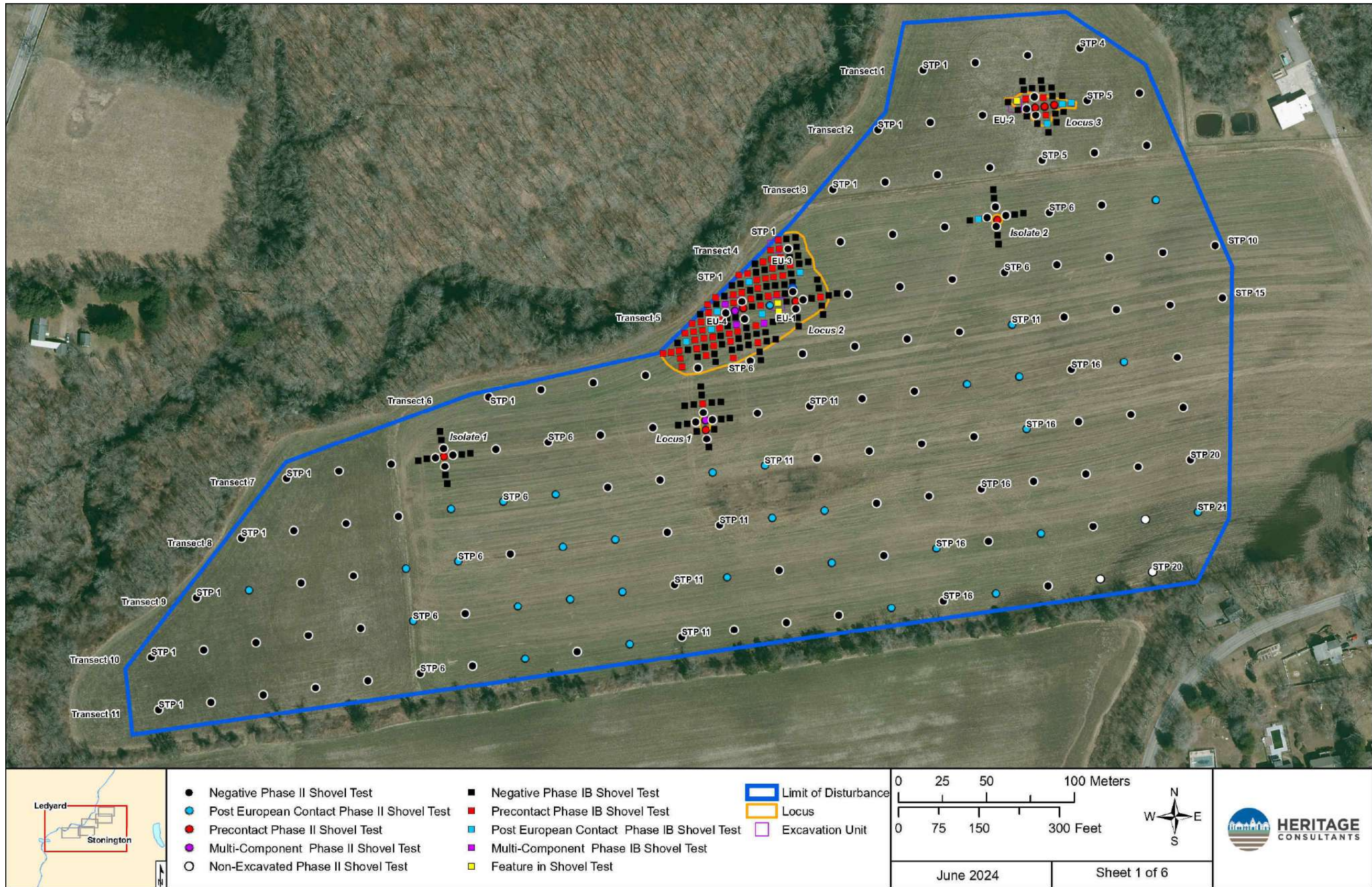


Figure 17. Excerpt of a 2019 aerial photograph showing the location of Phase II Testing effort across the Project Area in Stonington, Connecticut.

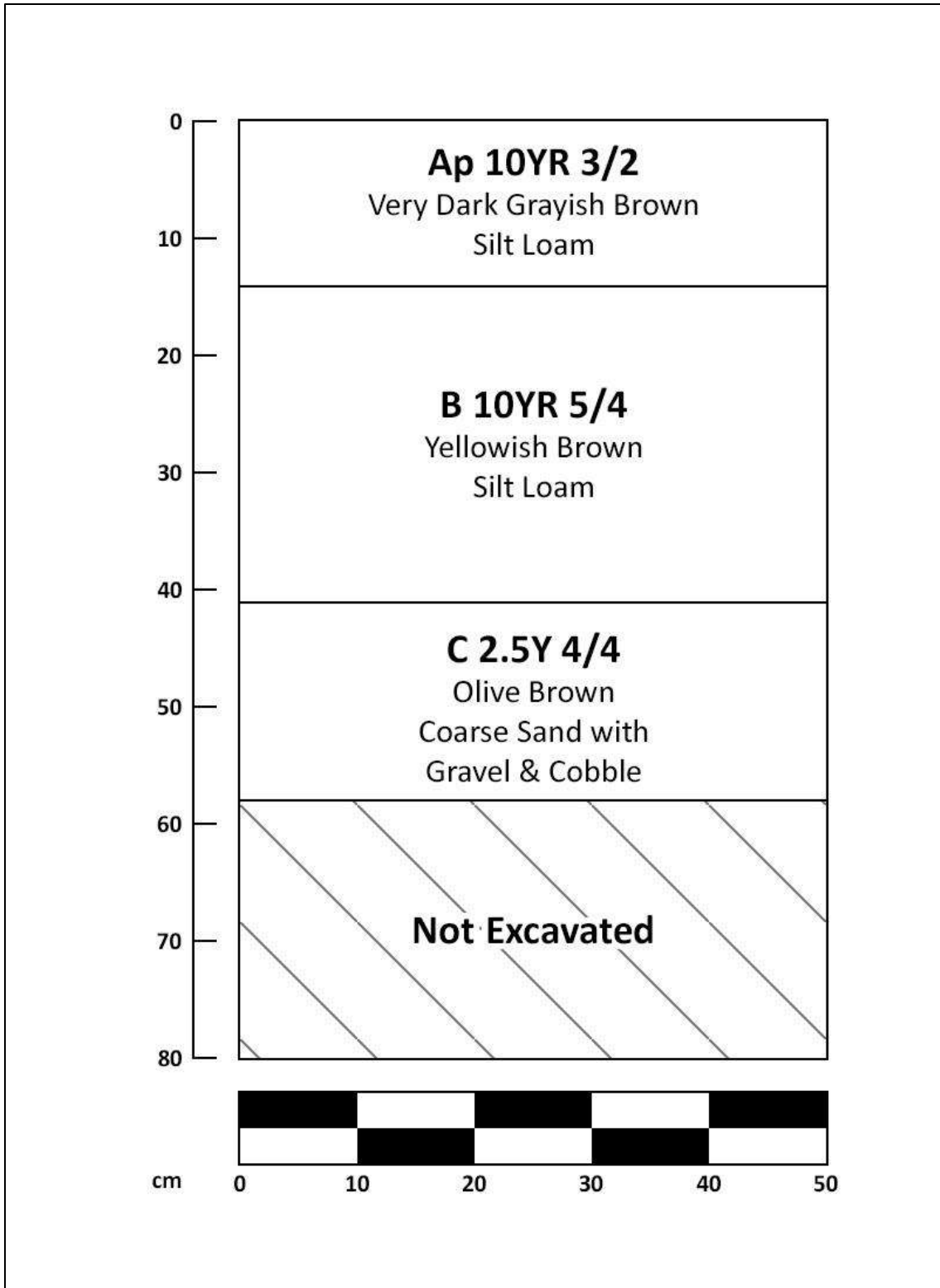


Figure 18.

Digital Profile Phase II. Shovel test 90 located within Locus 2.

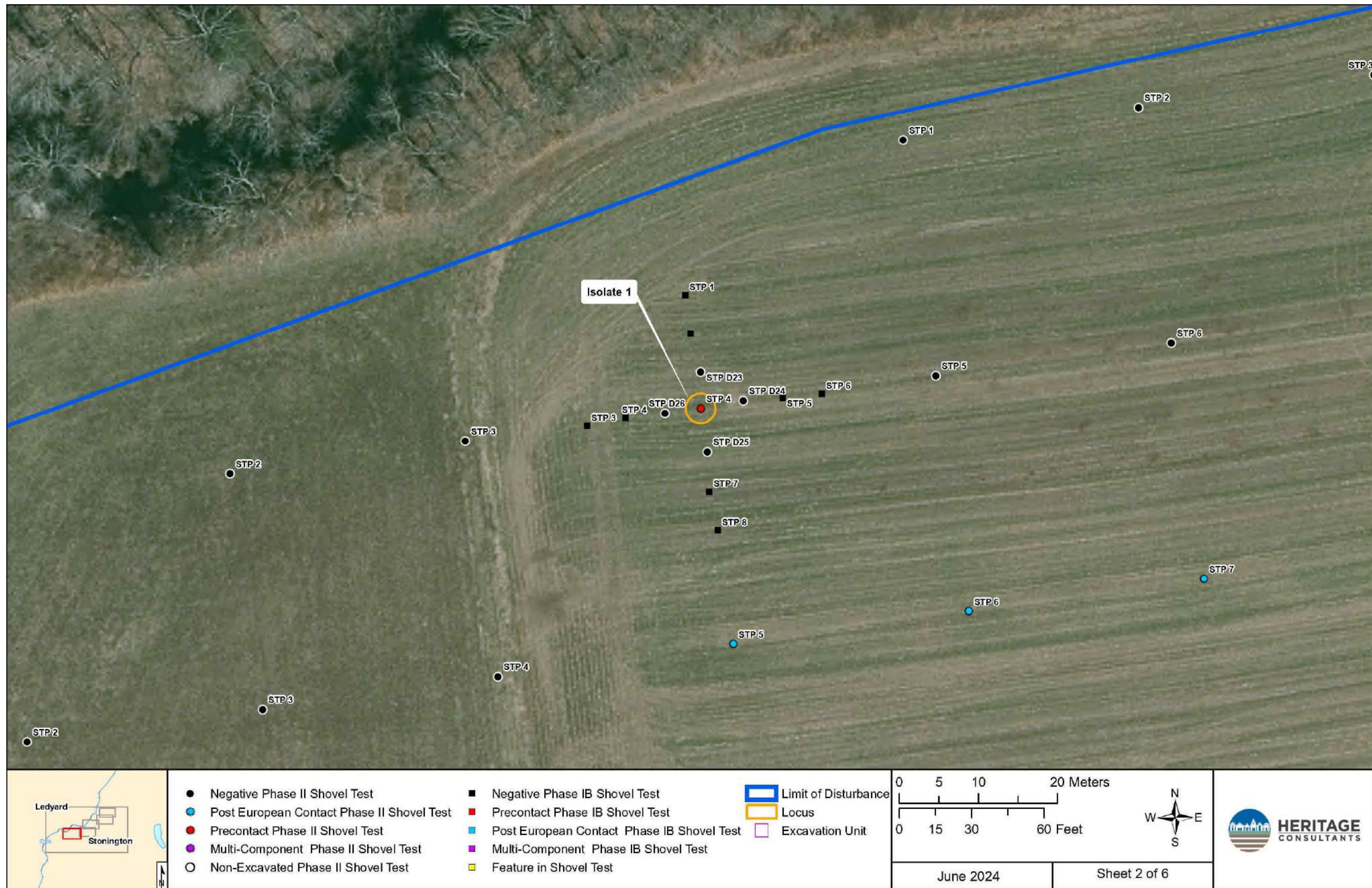


Figure 19. Excerpt of a 2019 aerial photograph showing the location of Phase II Testing effort for Isolated Find 1 (ISO 1), in Stonington, Connecticut.

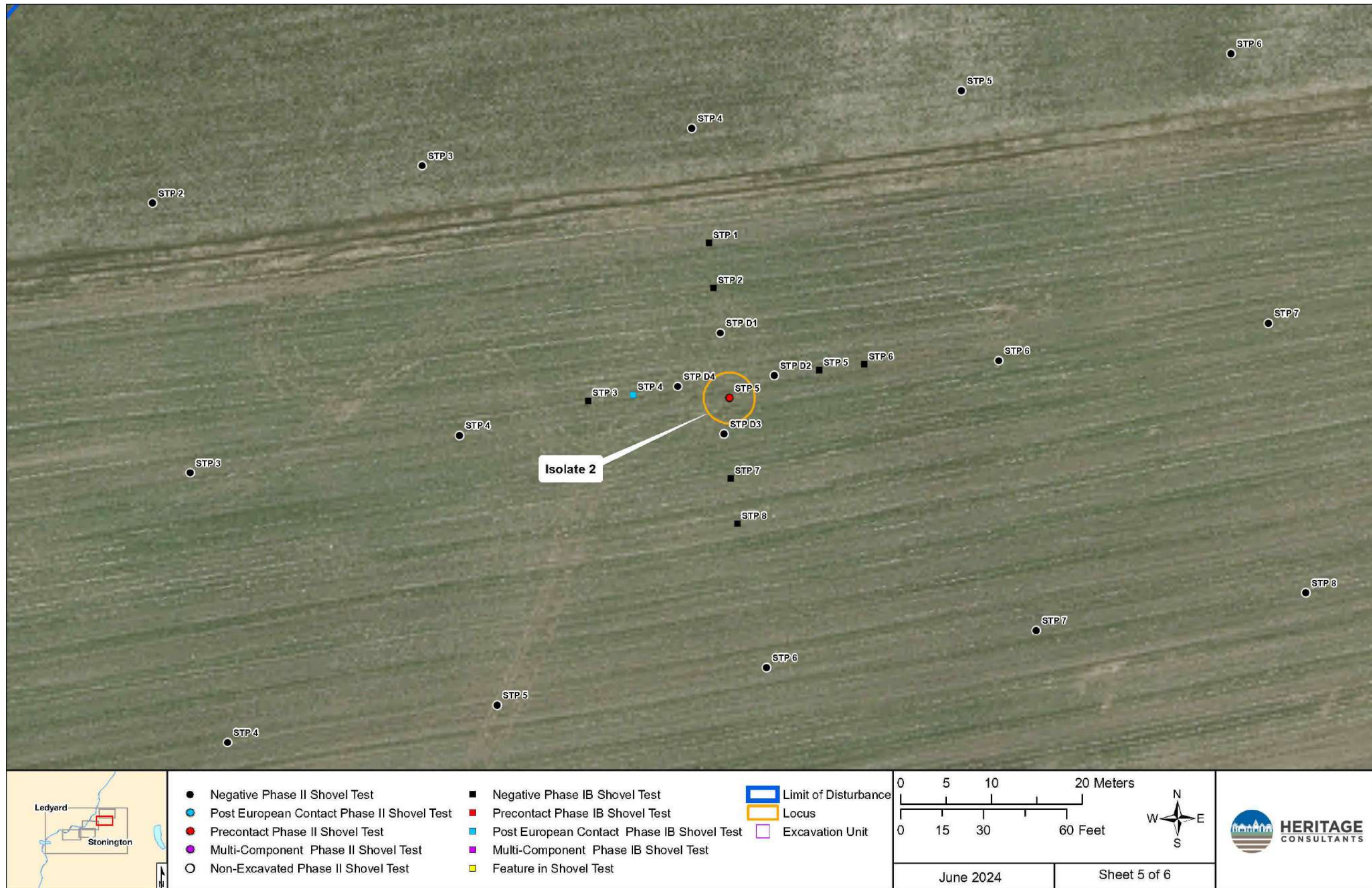
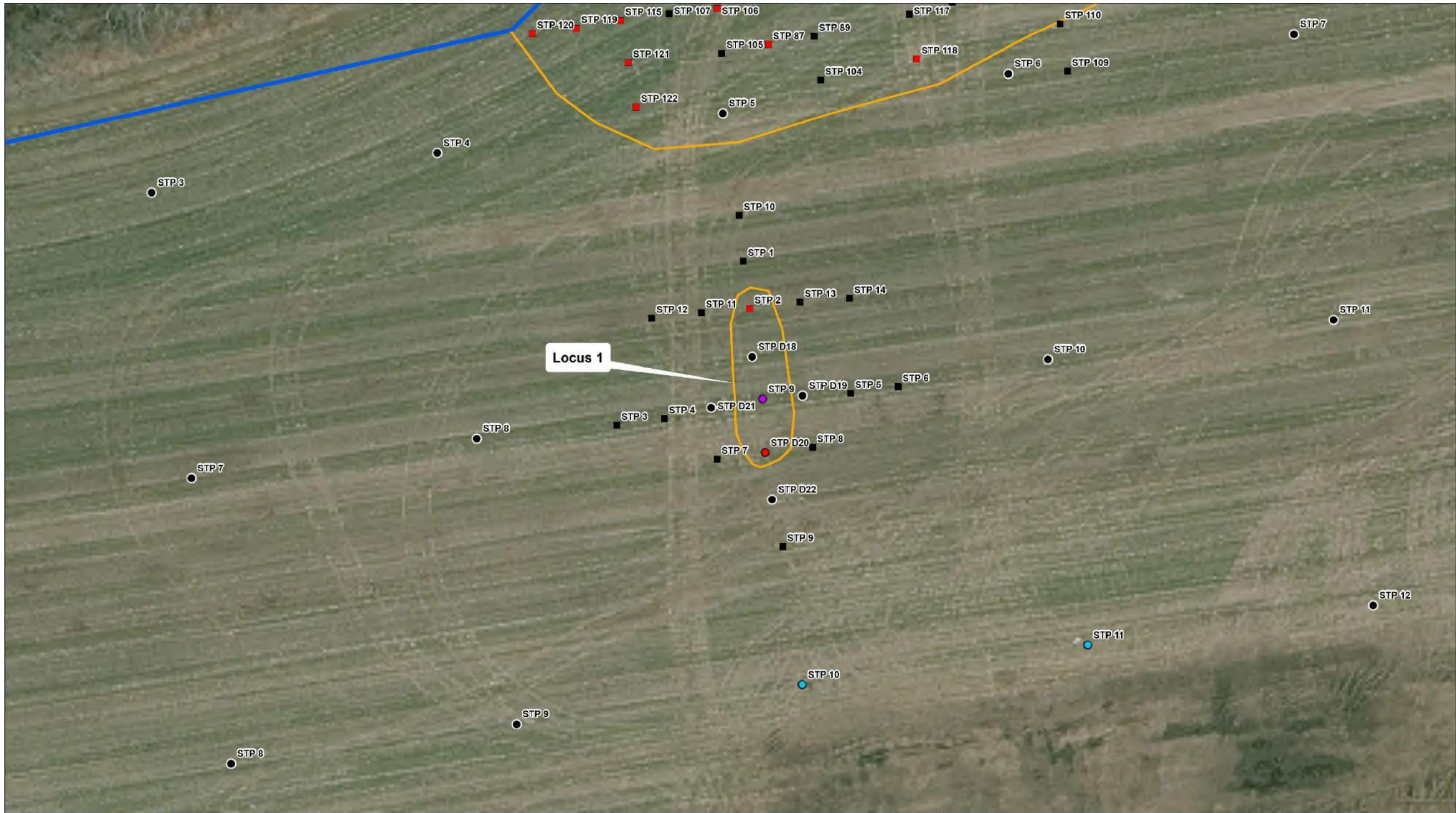


Figure 20. Excerpt of a 2019 aerial photograph showing the location of Phase II Testing effort for Isolated Find 2 (ISO 2), in Stonington, Connecticut.



	<ul style="list-style-type: none"> <li>● Negative Phase II Shovel Test</li> <li>● Post European Contact Phase II Shovel Test</li> <li>● Precontact Phase II Shovel Test</li> <li>● Multi-Component Phase II Shovel Test</li> <li>○ Non-Excavated Phase II Shovel Test</li> </ul>	<ul style="list-style-type: none"> <li>■ Negative Phase IB Shovel Test</li> <li>■ Precontact Phase IB Shovel Test</li> <li>■ Post European Contact Phase IB Shovel Test</li> <li>■ Multi-Component Phase IB Shovel Test</li> <li>■ Feature in Shovel Test</li> </ul>	<ul style="list-style-type: none"> <li>▭ Limit of Disturbance</li> <li>○ Locus</li> <li>□ Excavation Unit</li> </ul>	<p>0 5 10 20 Meters</p> <p>0 15 30 60 Feet</p>	
			<p>June 2024      Sheet 3 of 6</p>		

Figure 21. Excerpt of a 2019 aerial photograph showing the location of Phase II Testing effort for Locus 1, in Stonington, Connecticut.

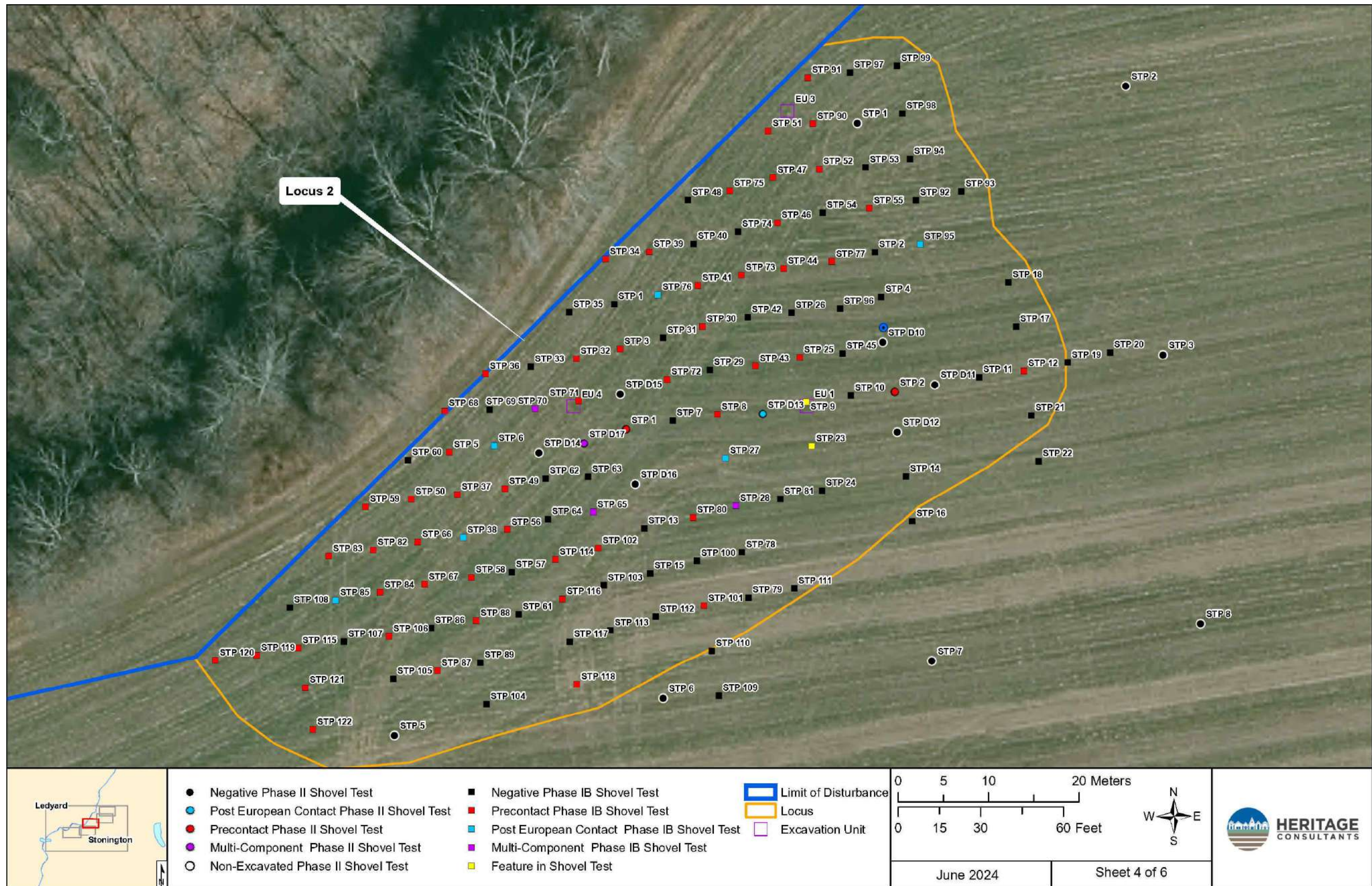


Figure 22. Excerpt of a 2019 aerial photograph showing the location of Phase II Testing effort for Locus 2, in Stonington, Connecticut.

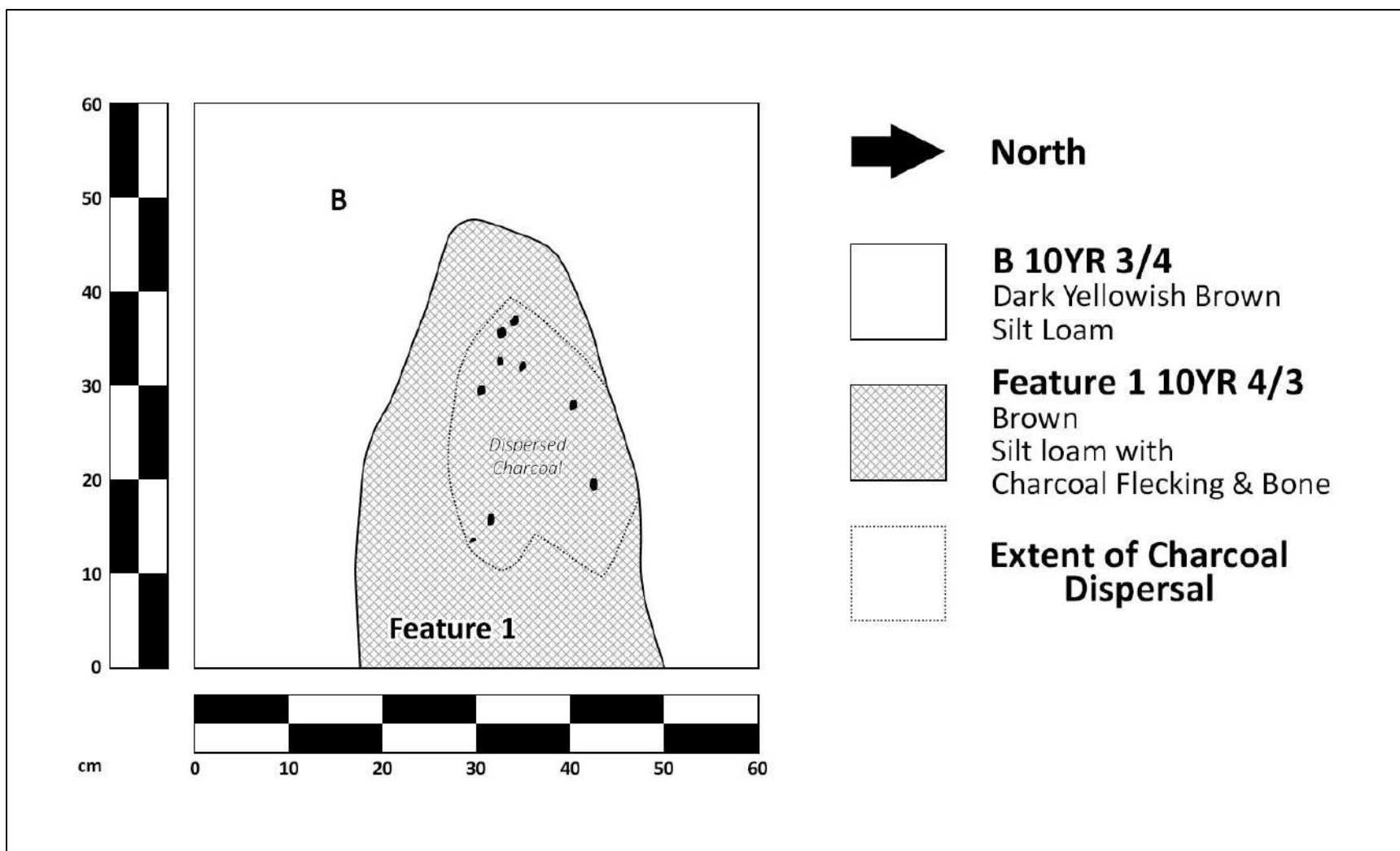


Figure 23. Digital map of Feature 1 in planview identified within Phase II shovel test 9.

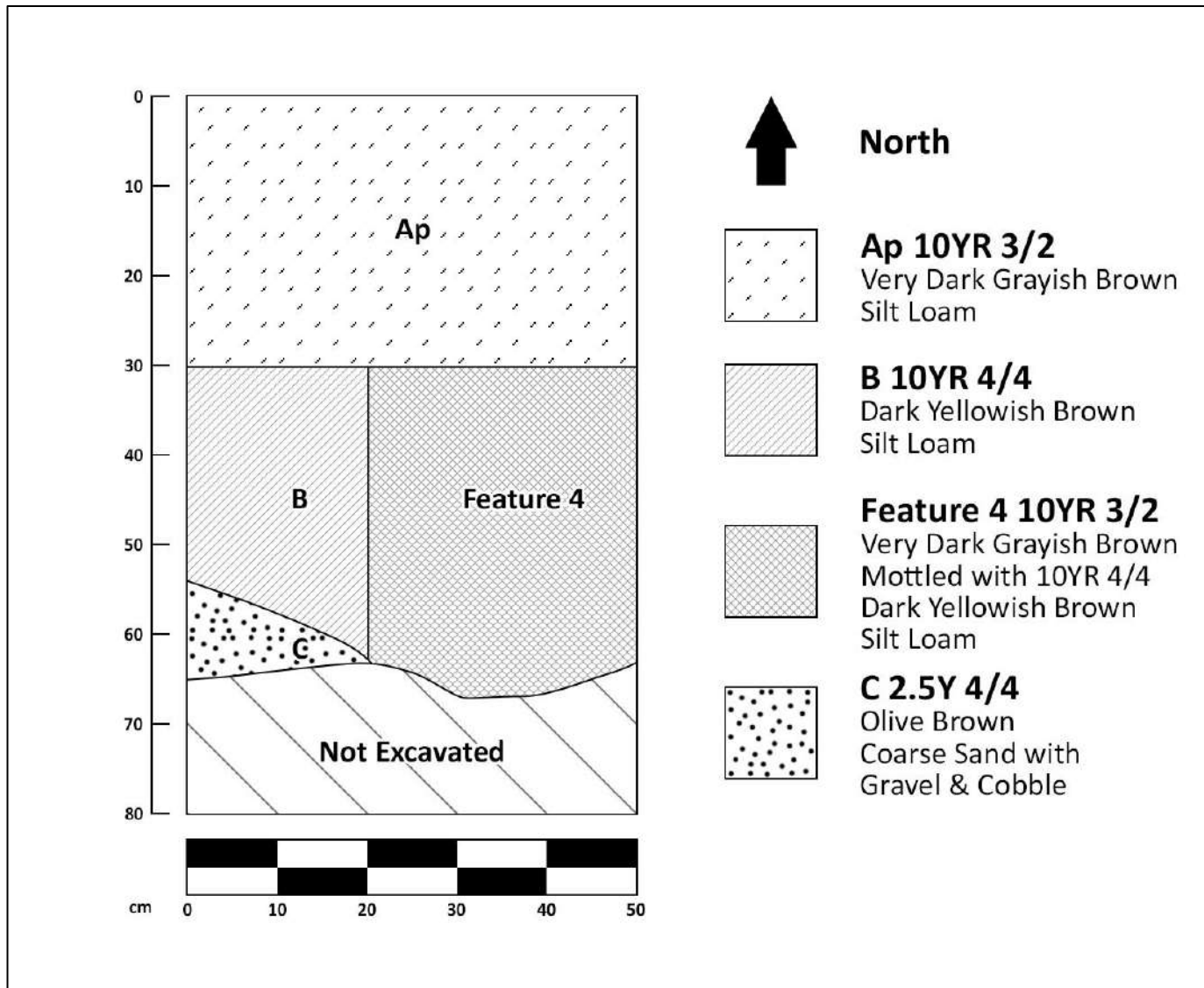


Figure 24. Digital map of Feature 4 in profile identified within the eastern wall of Phase II shovel test 23.

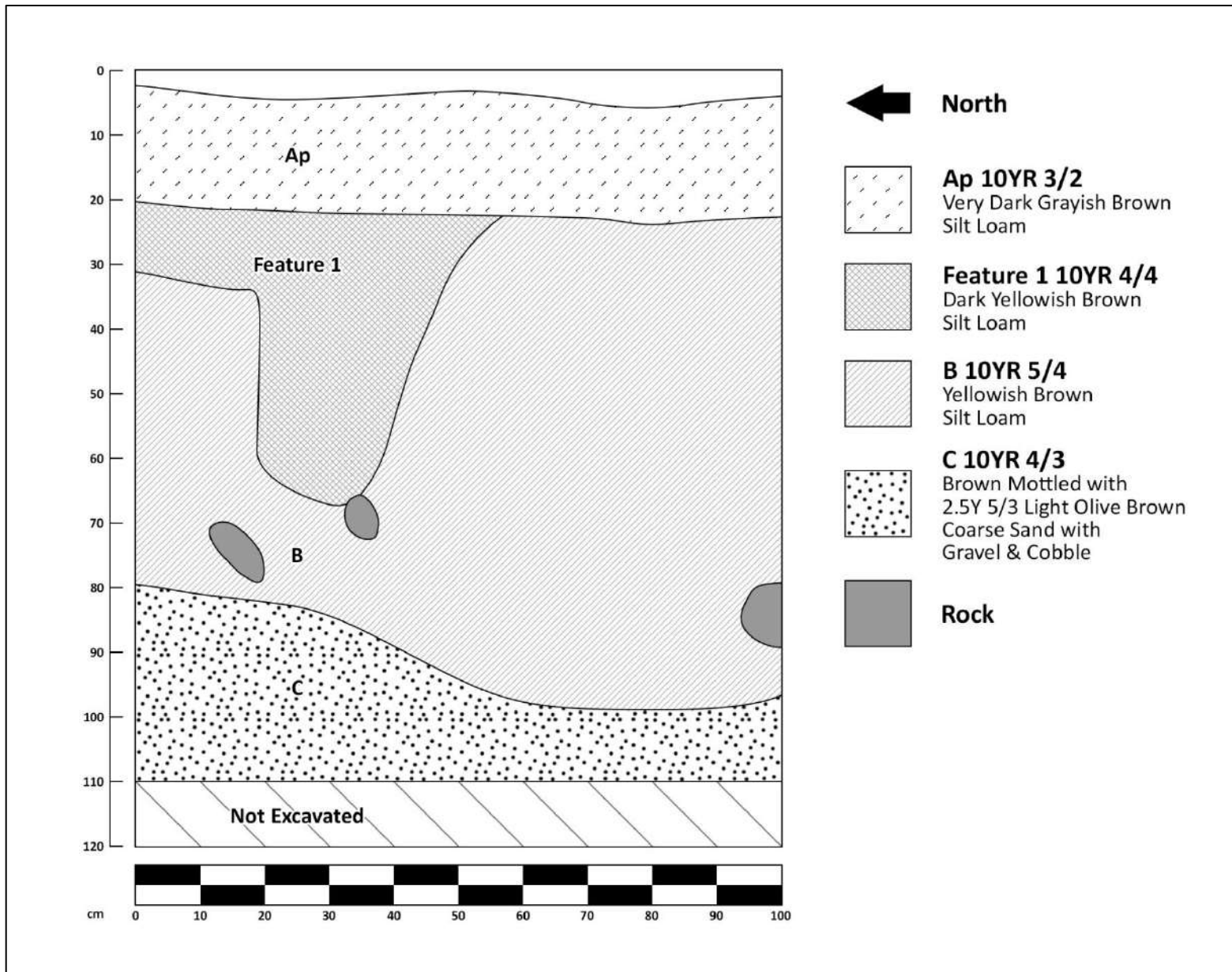


Figure 25. Digital profiles of Excavation Unit, EU-1 east wall profile.

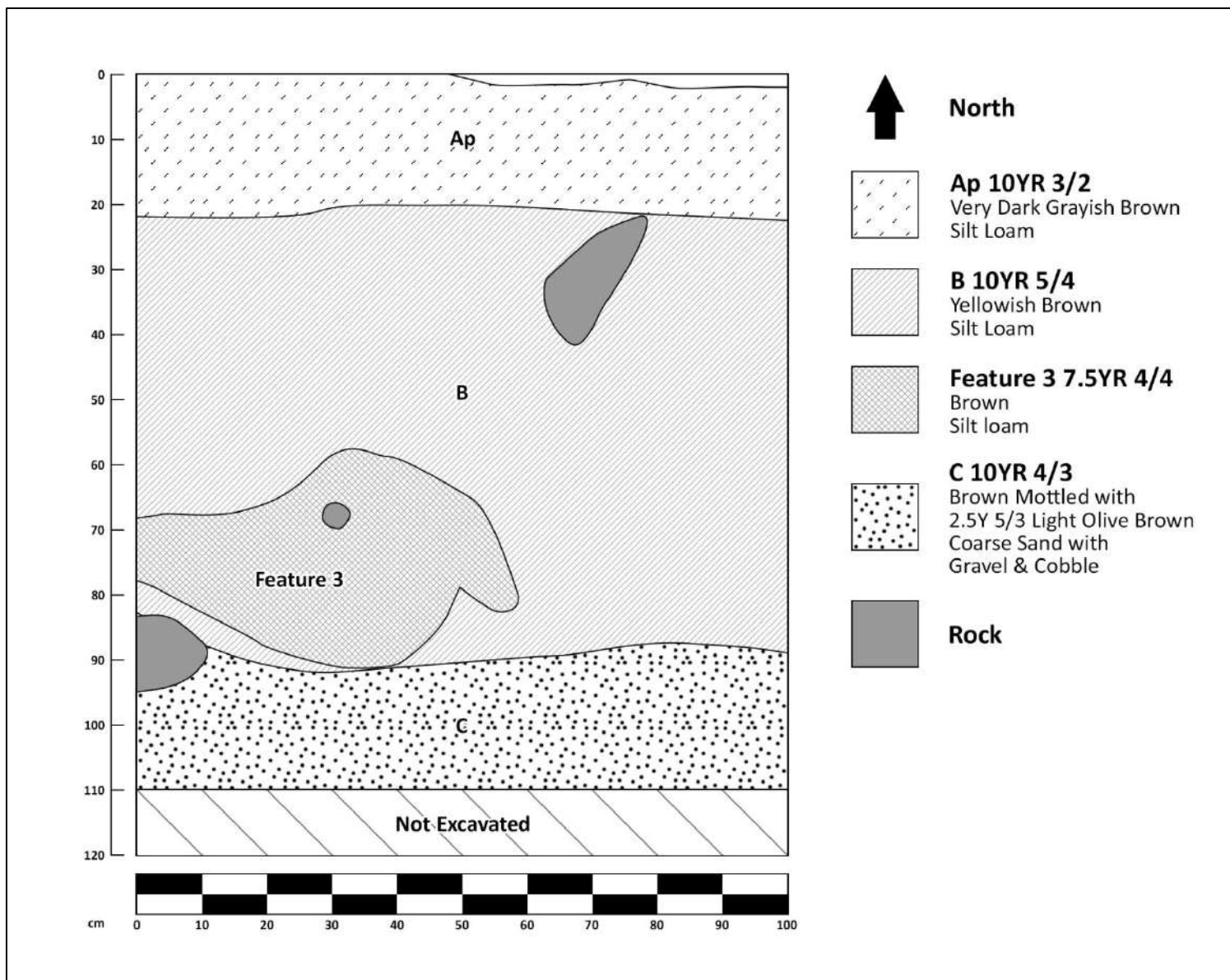


Figure 26. Digital profiles of Excavation Unit, EU-1 north wall profile.

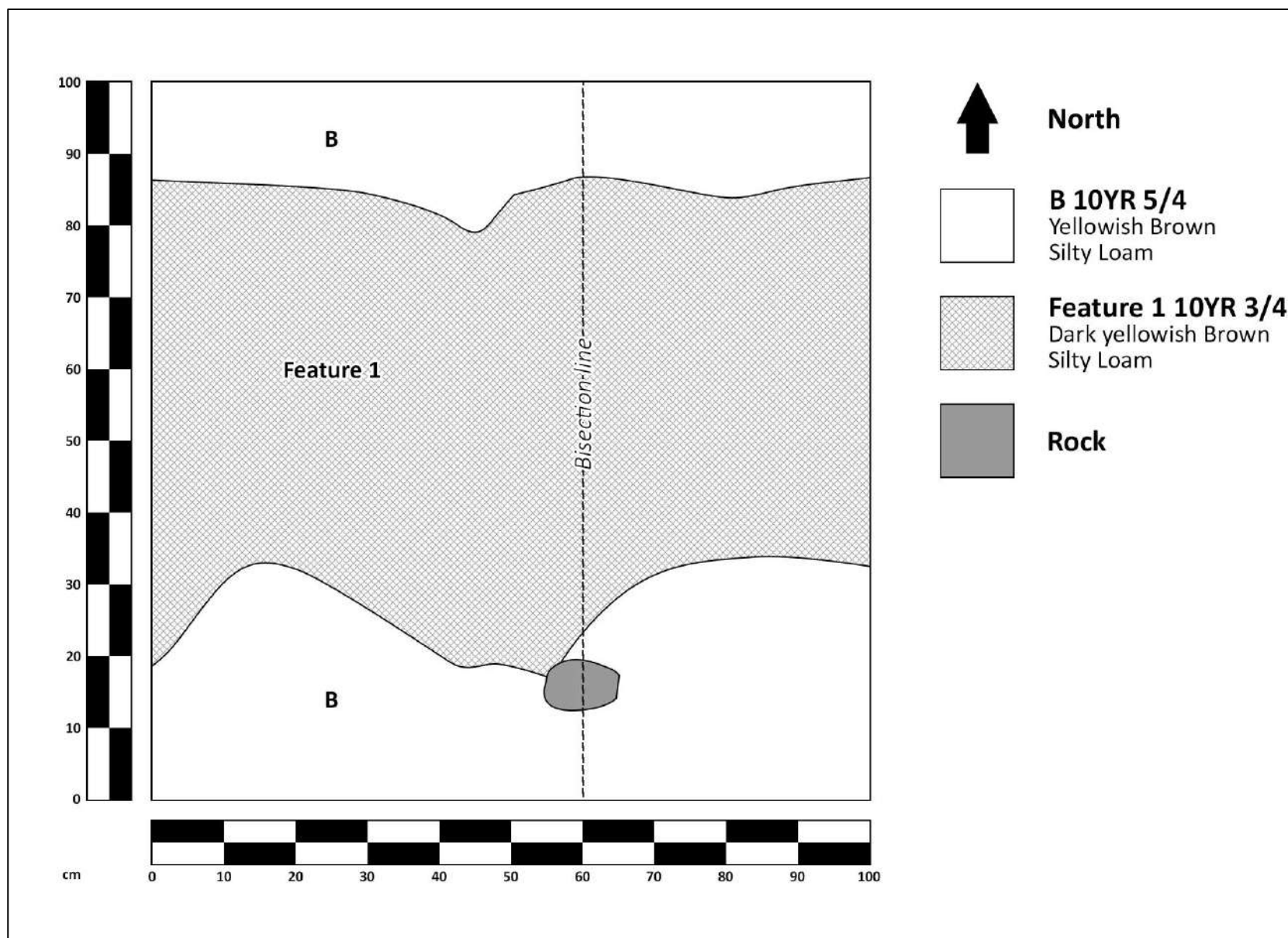


Figure 27. Digital planview of Feature 1 located within EU-1.

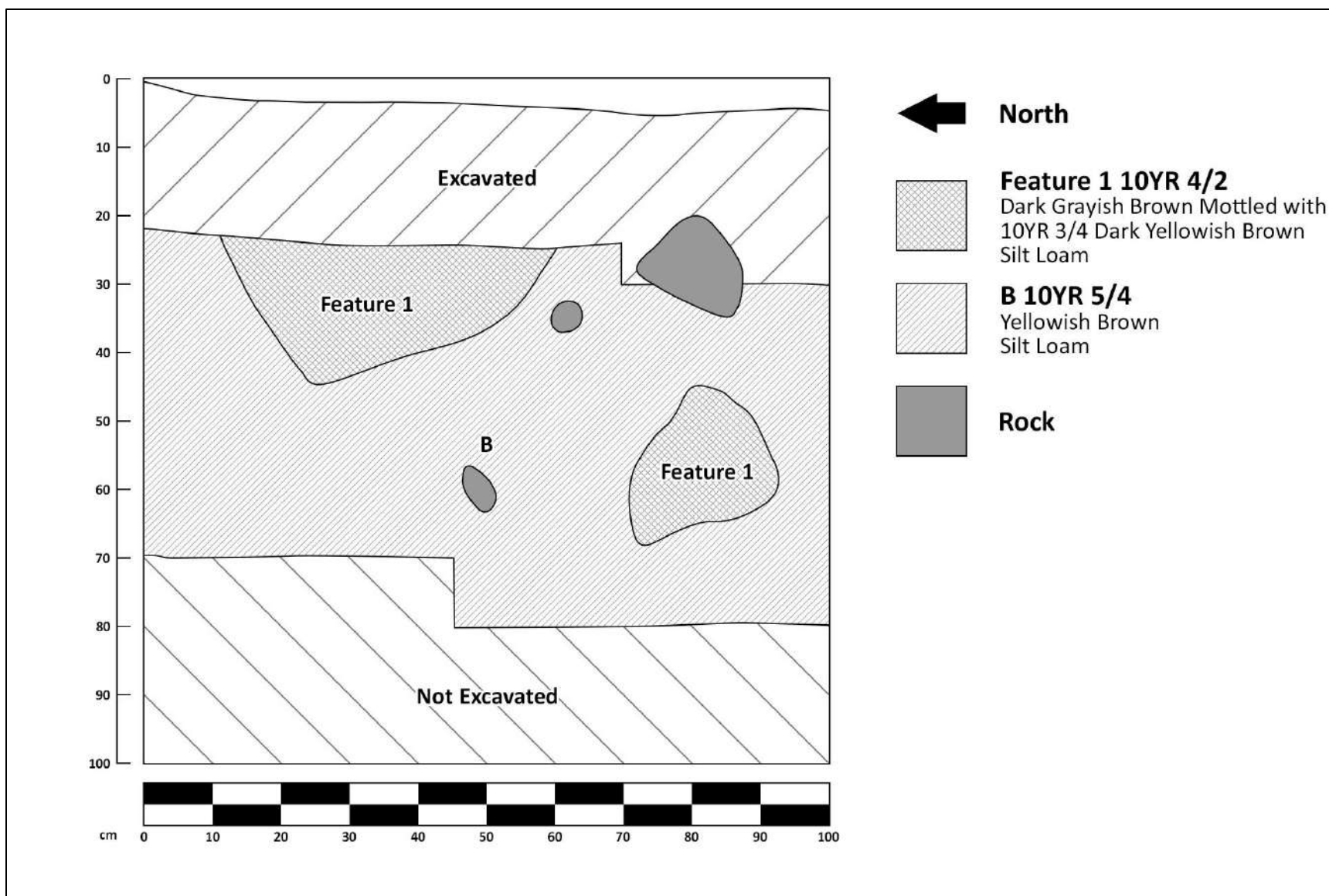


Figure 28. Digital drawing of the eastern profile of Feature 1 located within EU-1.

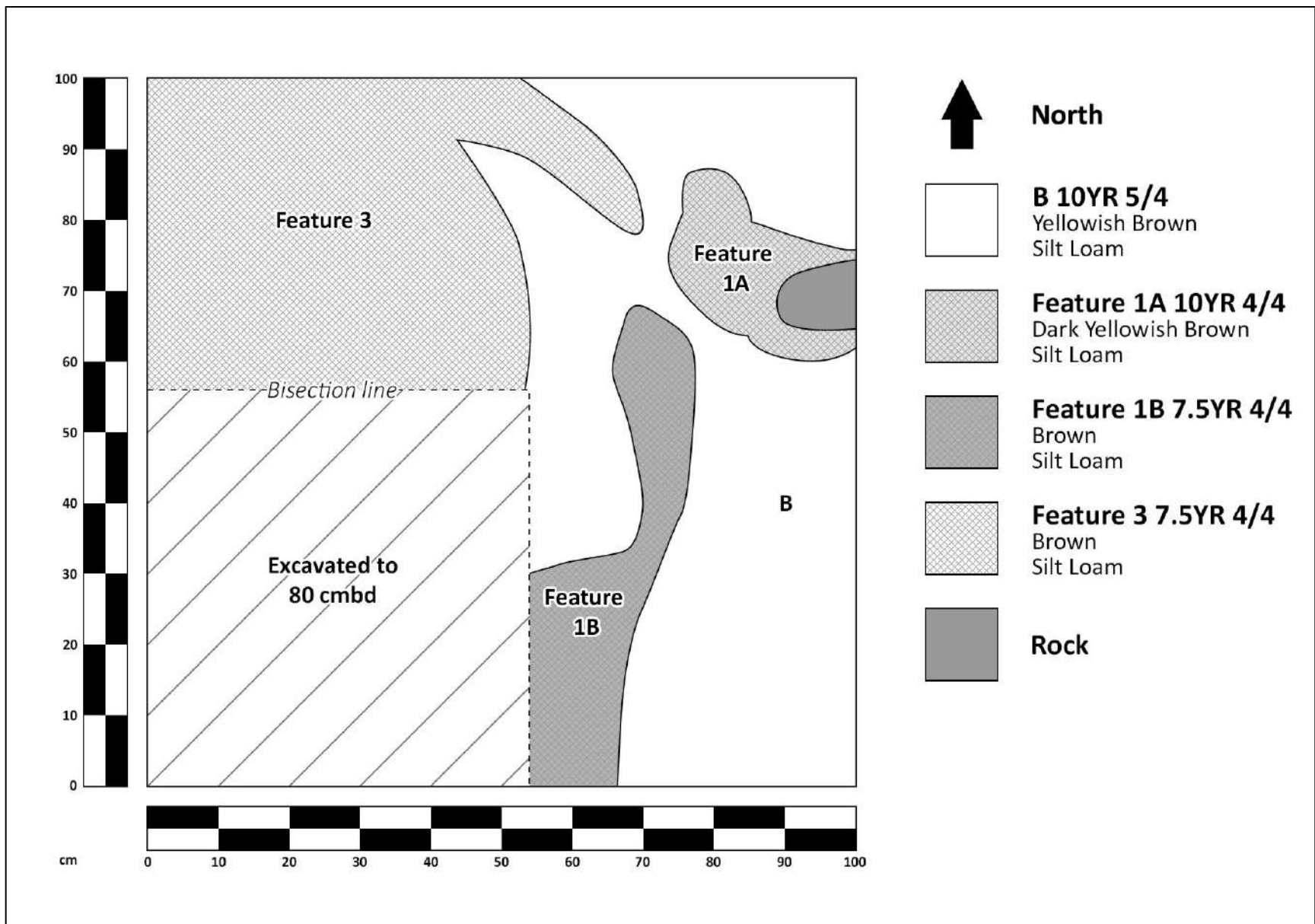


Figure 29. Digital planview of Feature 3 located within EU-1.

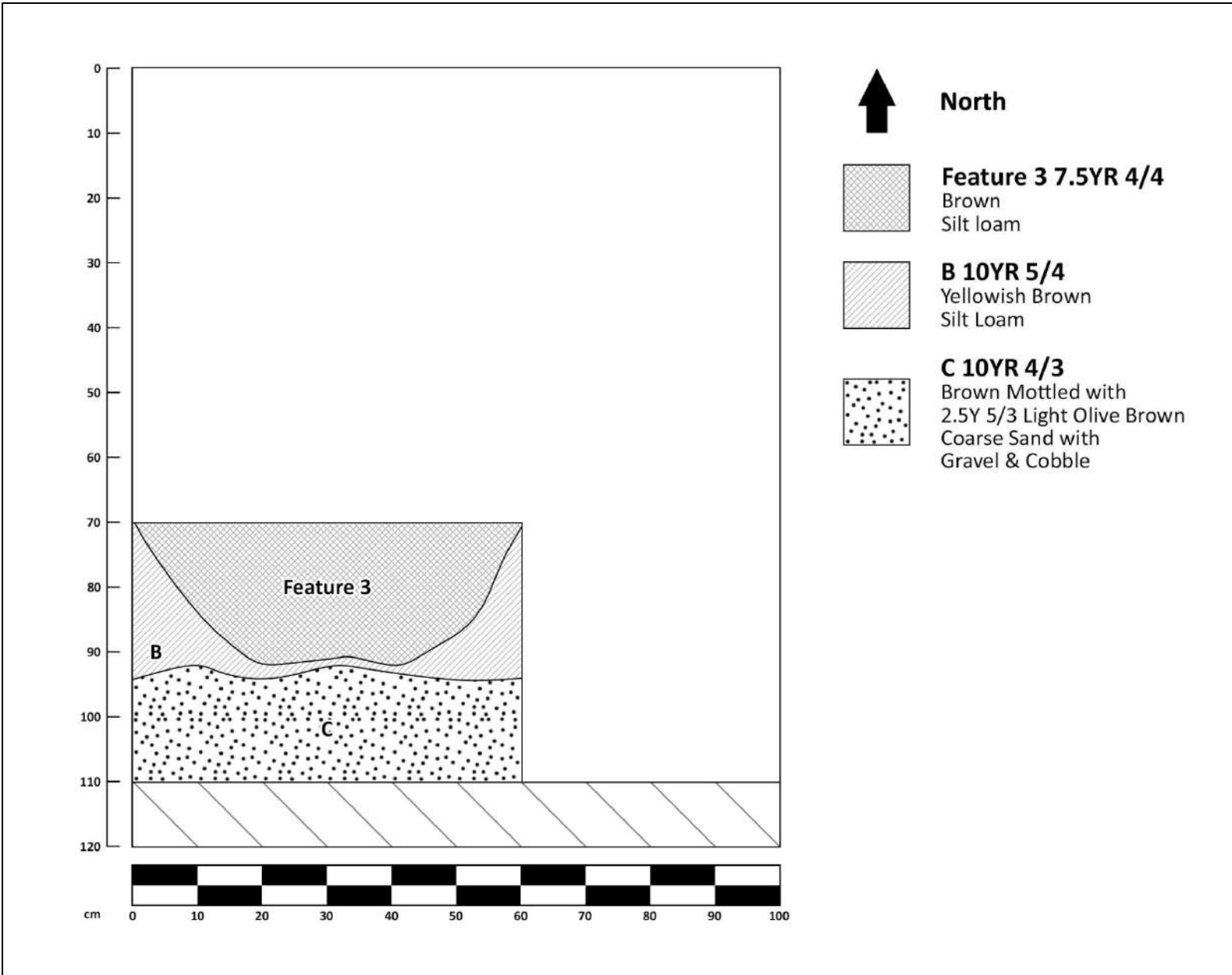


Figure 30. Digital drawing of the northern profile of Feature 3 located within EU-1.

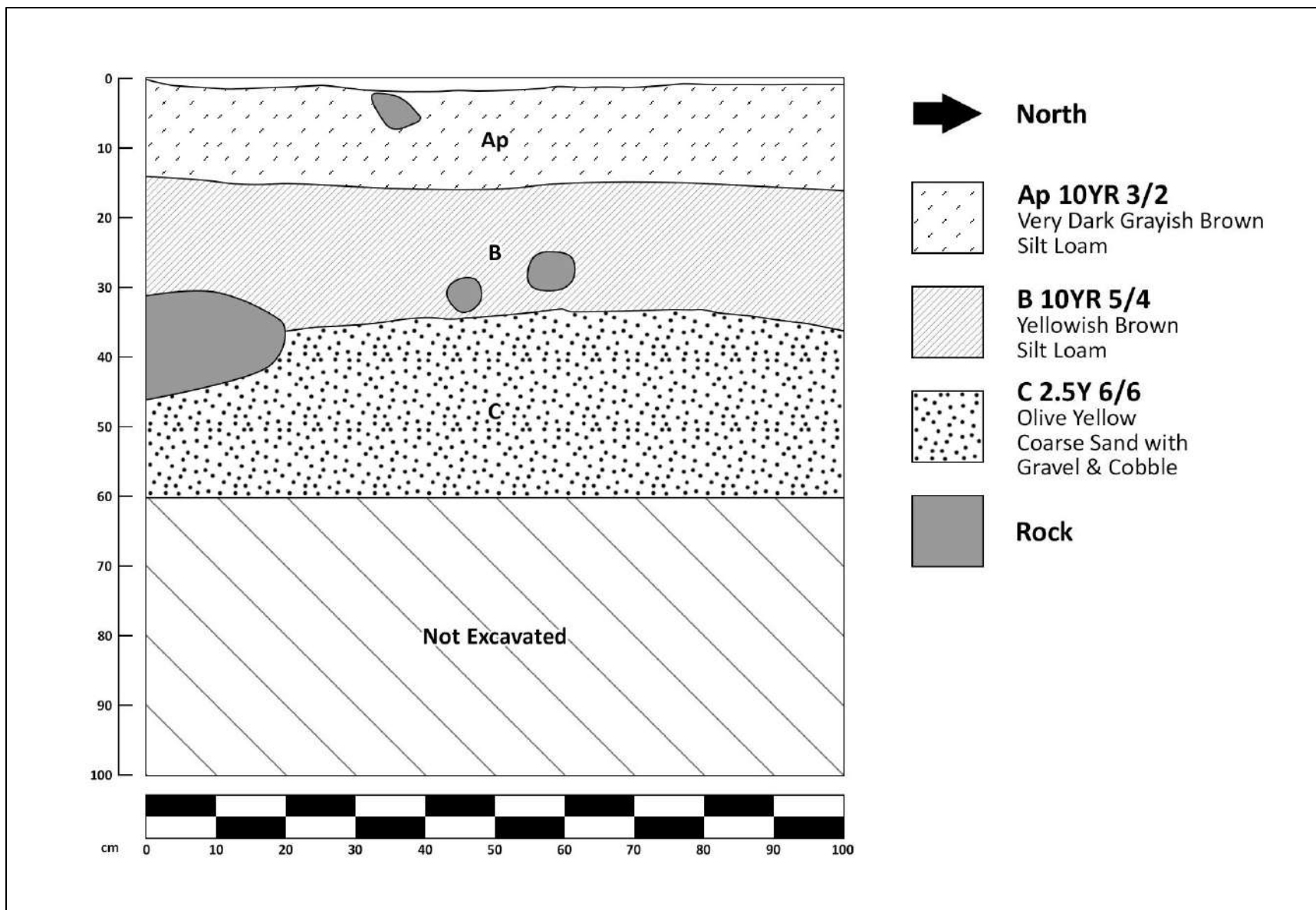


Figure 31. Digital drawing of the western wall profiles of EU-3.

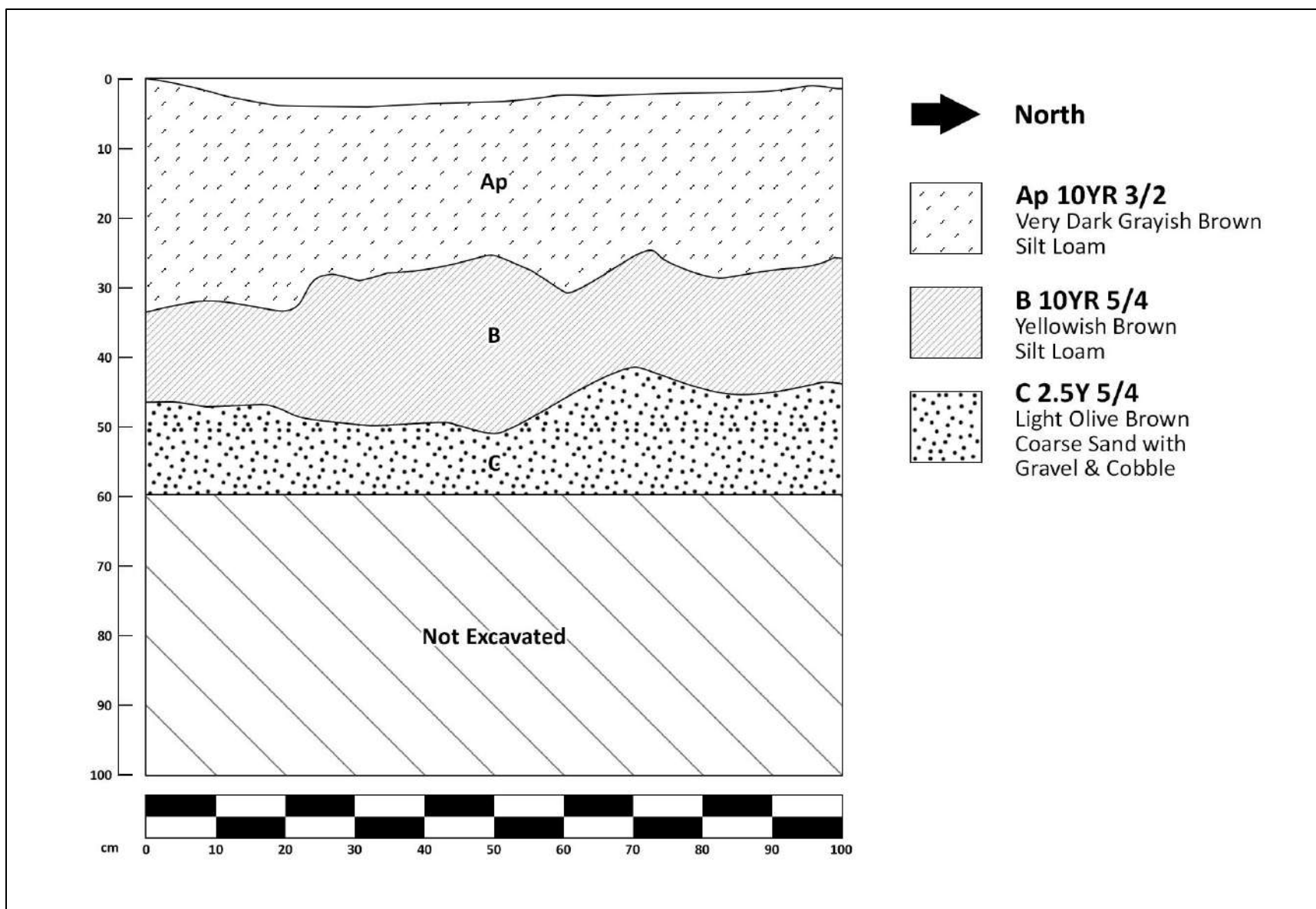


Figure 32. Digital drawing of the western and eastern wall profiles of EU-4.

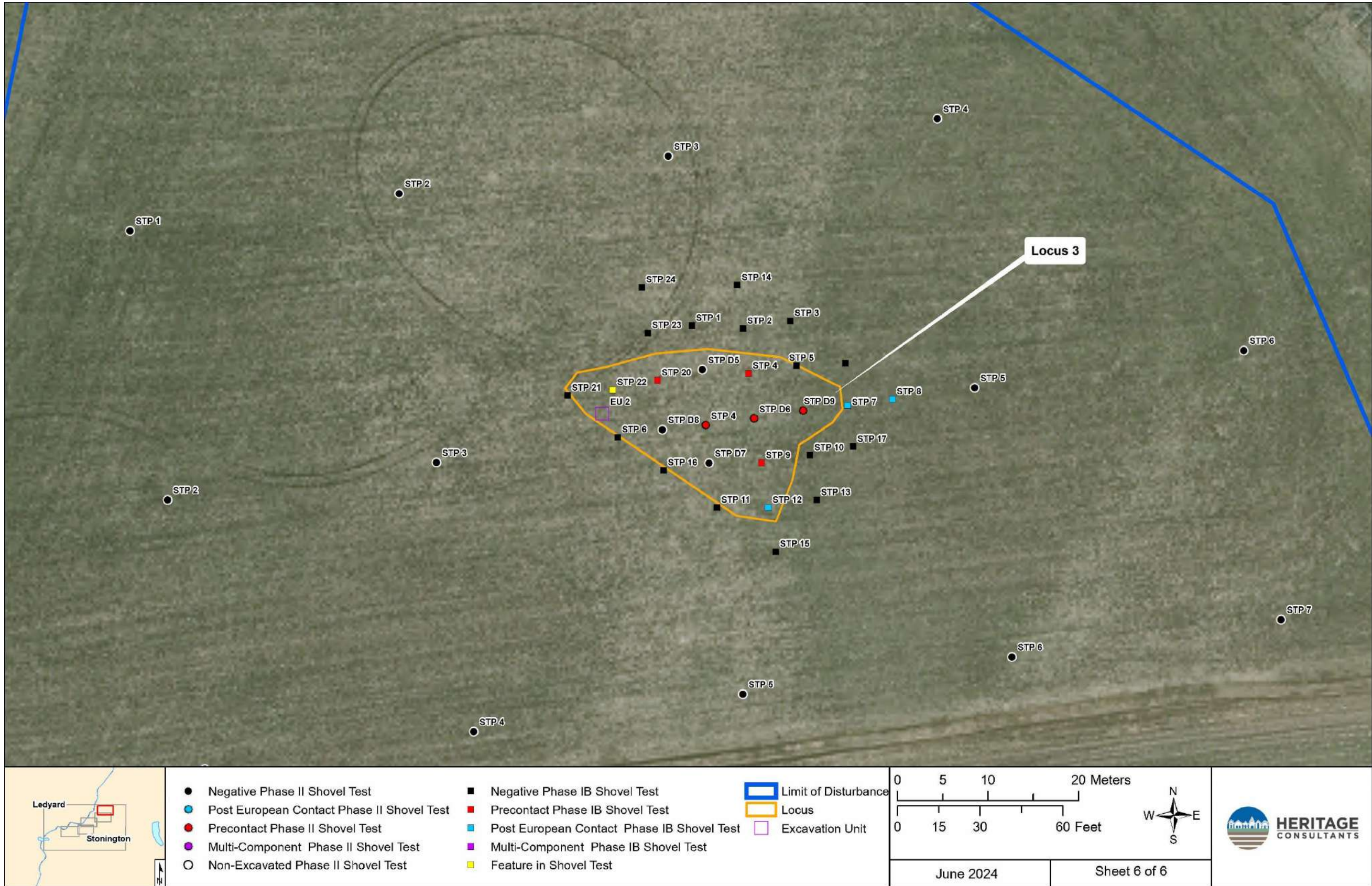


Figure 33. Excerpt of a 2019 aerial photograph showing the location of Phase II Testing effort for Locus 3, in Stonington, Connecticut.

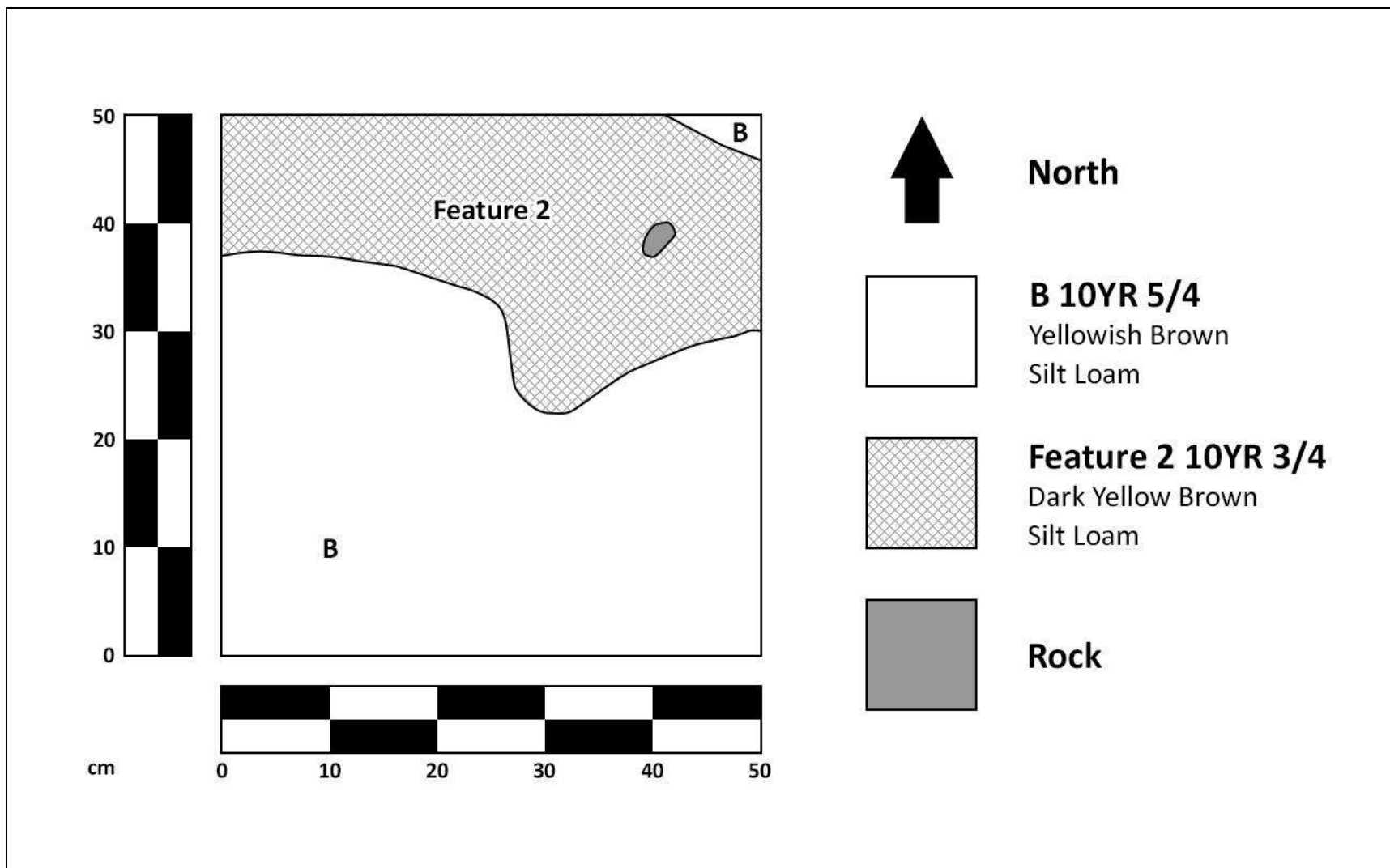


Figure 34. Digital planview drawing of Feature 2 identified within Phase II shovel test 22.

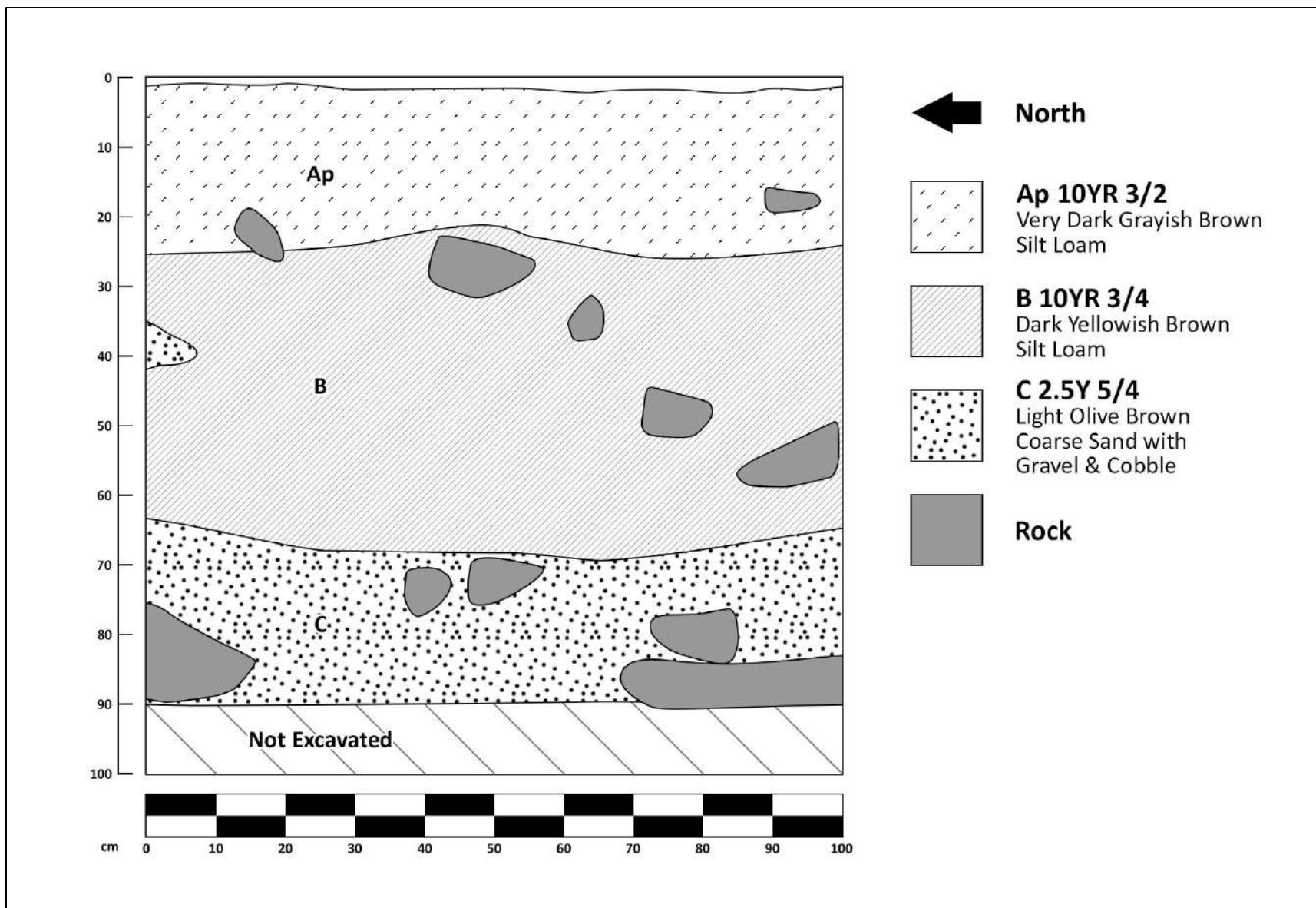


Figure 35. Digital drawing of the eastern wall profiles of EU-2.

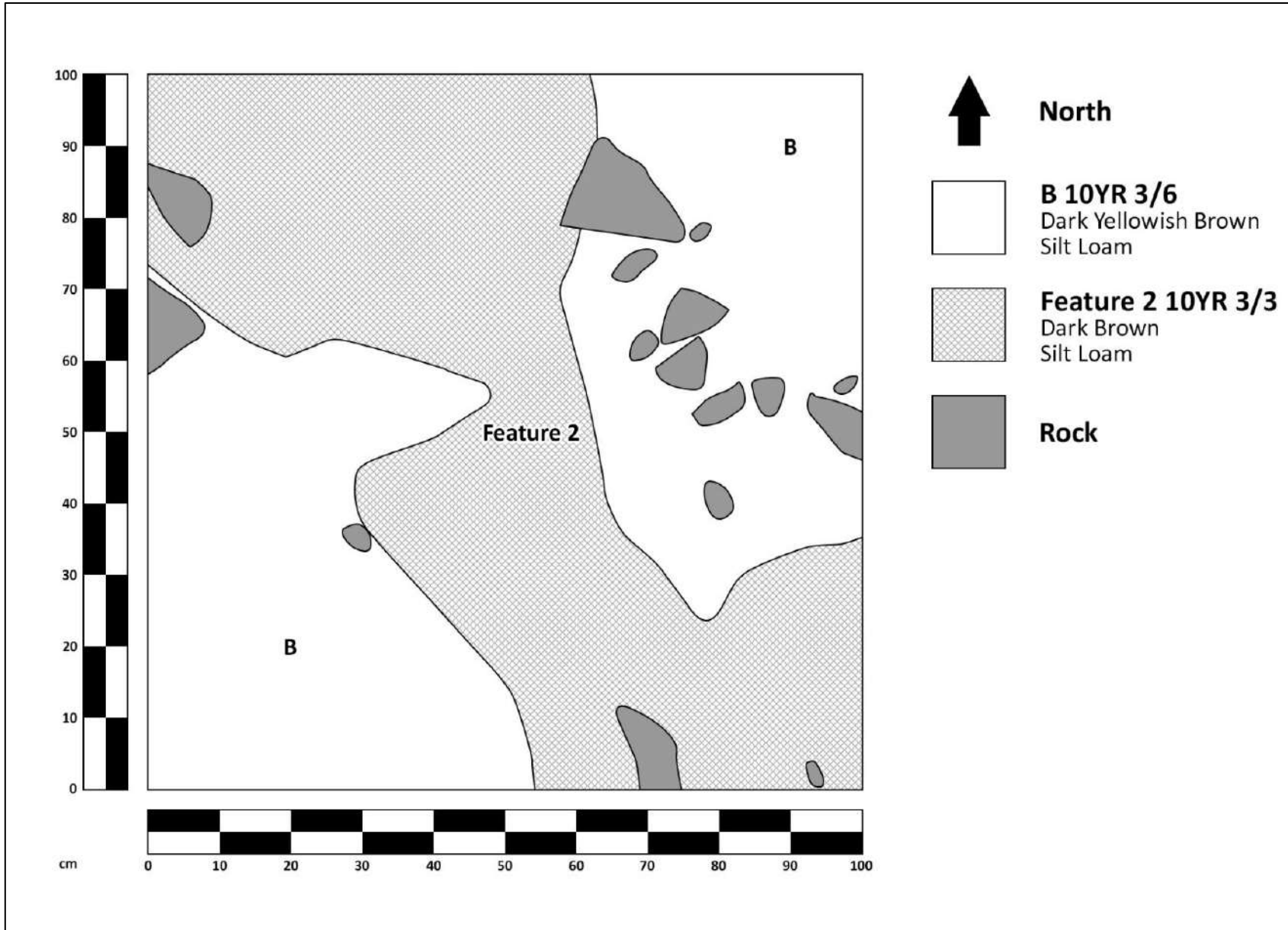


Figure 36. Digital planview of Feature 2 within EU-2.

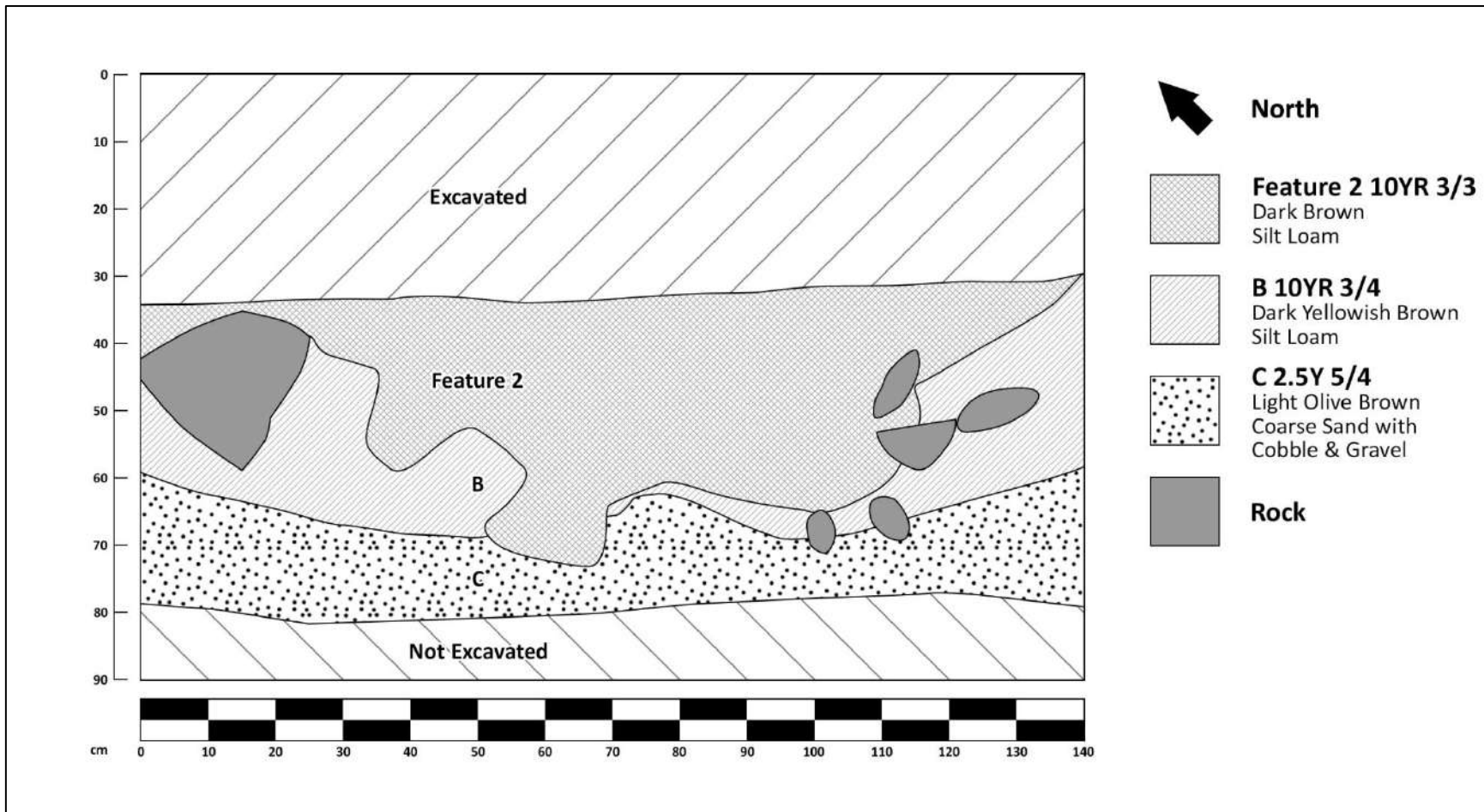


Figure 37. Digital drawing of the northeastern profile of Feature 2 within EU-2.



Photo 1. Overview photo from western boundary of Project Area in Mystic, Connecticut. Photo taken facing east.



Photo 2. Overview photo from southern boundary of Project Area in Mystic, Connecticut. Photo taken facing north.



Photo 3. Overview photo from southern boundary of Project Area in Mystic, Connecticut. Photo taken facing west.



Photo 4. Overview photo from southeast corner of Project Area in Mystic, Connecticut. Photo taken facing east.



Photo 5. Soil profile of Transect 5, STP 1. Photo taken facing east.



Photo 6. Post-European Contact period artifacts recovered during Phase 1B excavation, clockwise from top left: green glazed creamware, stencil printed Japanese porcelain, sprig molded salt glazed stoneware, copper alloy 1-piece button, mouth-blown bottle base, solarized bottle finish.



Photo 7. Overview photo from northern boundary of Project Area with crew excavating an array around a culturally positive STP. Photo taken facing south.



Photo 8. Precontact lithic artifacts recovered from ISO 1, left to right: quartz biface reduction flake, quartzite biface retouch flake. (Side A).



Photo 9. Precontact lithic artifacts recovered from ISO 1, left to right: quartz biface reduction flake, quartzite biface retouch flake. (Side B).



Photo 10. Precontact lithic artifact recovered from ISO 2: quartz primary reduction flake fragment. (Side A).



Photo 11. Precontact lithic artifact recovered from ISO 2: quartz primary reduction flake fragment. (Side B).



Photo 12. Precontact lithic artifacts recovered from Locus 1, left to right: quartz biface reduction flake, quartz medial flake fragment, quartz biface retouch flake. (Side A).



Photo 13. Precontact lithic artifacts recovered from Locus 1, left to right: quartz biface reduction flake, quartz medial flake fragment, quartz biface retouch flake. (Side B).



Photo 14. Precontact lithic artifacts recovered from Locus 2, left to right: quartz primary reduction debris, quartz distal flake fragment, quartz distal flake fragment, quartz biface retouch flake. (Side A).



Photo 15. Precontact lithic artifacts recovered from Locus 2, left to right: quartz primary reduction debris, quartz distal flake fragment, quartz distal flake fragment, quartz biface retouch flake. (Side B).



Photo 16. Precontact lithic artifacts recovered from Locus 3, left to right: quartz distal flake fragment with cortex, quartz distal flake fragment. (Side A).



Photo 17. Precontact lithic artifacts recovered from Locus 3, left to right: quartz distal flake fragment with cortex, quartz distal flake fragment. (Side B).



Photo 18. Post-European Contact period artifacts recovered from ISO 2, left to right: ironstone rim sherd, large avian vertebral bone (possibly turkey.)



Photo 19. Precontact lithic artifact recovered from Locus 1: quartz biface retouch flake. (Side A).



Photo 20. Precontact lithic artifact recovered from Locus 1: quartz biface retouch flake. (Side B).



Photo 21. Post-European Contact period artifacts recovered from Locus 2, clockwise from top left: lead glazed redware base, undecorated whiteware, copper alloy and green paste gem jewelry fragment, solarized bottle fragment, textured colorless window glass.



Photo 22. Precontact lithic artifacts recovered from Locus 2, clockwise from top left: quartz biface fragment, quartz biface fragment, quartz projectile point fragment, quartzite stemmed projectile point base, quartz core fragment, indeterminate metamorphic core fragment. (Side A).



Photo 23. Precontact lithic artifacts recovered from Locus 2, clockwise from top left: quartz biface fragment, quartz biface fragment, quartz projectile point fragment, quartzite stemmed projectile point base, quartz core fragment, indeterminate metamorphic core fragment. (Side B).



Photo 24. EU-1 north wall soil profile, 0-110 cmbd.



Photo 25. EU-1 east wall soil profile, 0-110 cmbd.



Photo 26. Feature 1 bisection within EU-1. Plan view at 40 cmbd.



Photo 27. Feature 1 bisection within EU-1. East wall soil profile, 24-80 cmbd.



Photo 28. Feature 3 bisection within EU-1. Plan view at 100 cmbd.



Photo 29. Feature 3 bisection within EU-1. North wall soil profile, 70-110 cmbd.



Photo 30. EU-3 west wall soil profile, 0-60 cmbd.



Photo 31. EU-3 south wall soil profile, 0-60 cmbd.



Photo 32. EU-4 west wall soil profile, 0-60 cmbd.



Photo 33. EU-4 south wall soil profile, 0-60 cmbd.



Photo 34. Post-European Contact period artifacts recovered from Locus 3, left to right: milk glass canning jar liner, transfer printed whiteware, avian carpometacarpus bone.



Photo 35. Precontact lithic artifacts recovered from Locus 3, left to right: quartzite angular debris, four quartz flake fragments. (Side A).



Photo 36. Precontact lithic artifacts recovered from Locus 3, left to right: quartzite angular debris, four quartz flake fragments. (Side B).



Photo 37. EU-2 north wall soil profile, 0-90 cmbd.



Photo 38. EU-2 east wall soil profile, 0-90 cmbd.



Photo 39. Feature 2 within STP 22, plan view at 35 cmbs.



Photo 40. EU-2 Feature 2 bisection, northeast wall soil profile, 0-80 cmdbd.