



June 3, 2020

Mr. David R. George
Heritage Consultants
PO Box 310249
Newington, CT 06131

Subject: Phase IA and Phase IB Cultural Resource Reconnaissance Survey
LSE Phoenix LLC Solar Center
100 Sand Road
North Canaan, Connecticut
ENV-20-0702

Dear Mr. George:

The State Historic Preservation Office (SHPO) has reviewed the cultural resource reconnaissance surveys prepared by Heritage Consultants, LLC (Heritage), dated April 2020 and May 2020, respectively. The proposed activities are under the jurisdiction of the Connecticut Siting Council and are subject to review by this office pursuant to the Connecticut Environmental Policy Act (CEPA). The proposed undertaking includes the construction of a solar facility, which is to occupy an approximately 14.02 acre project area within a larger 23.96 acre parcel. The parcel is bordered to the north, south and east by forested areas, and to the west by a residential development. Access is to be from Ryan Avenue, located at the northwest corner of the parcel. In addition to the solar array, riprap lined swales are proposed to be located on the northern and eastern edges of the project area, and a stormwater basin is proposed to be located in the northeast corner. The submitted reports are well-written, comprehensive, and meet the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources*.

14 previously recorded archaeological sites are located within 1 mile of the project area; however, none will be impacted by the proposed undertaking. No properties listed or formally determined eligible for listing on either the State or National Register are located within one mile of the project area. Following a pedestrian survey, it was determined that 3.55 acres of the project area was characterized as having low slopes, well-drained soils, and proximity to fresh water sources, and therefore, retained a moderate to high potential to contain intact archaeological deposits. A Phase IB reconnaissance survey was recommended and completed.

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Phase IB of the reconnaissance survey consisted of subsurface testing of areas deemed to have moderate to high archaeological sensitivity during Phase IA, and that would be subject to ground disturbing impacts as part of the proposed undertaking. A total of 66 of 66 planned shovel tests were excavated successfully throughout the proposed work area. The reconnaissance survey resulted in the identification of a single locus: Locus 1. Locus 1 consisted of a single chert chunk, exhibiting multiple flake scars. No other cultural material or features were recovered or identified from Locus 1. Based on low density of artifacts and lack of cultural features, Locus 1 does not possess sufficient research potential to be eligible for listing on the National Register of Historic Places.

As a result of the information submitted, SHPO concurs with the findings of the report that additional archeological investigations of the project area is not warranted and that no historic properties will be affected by the proposed activities. However, please be advised that if construction plans change to include previously uninvestigated/undisturbed areas, this office should be contacted for additional consultation.

This office appreciates the opportunity to review and comment upon this project. For additional information, please contact Marena Wisniewski, Environmental Reviewer, at (860) 500-2357 or marena.wisniewski@ct.gov.

Sincerely,

A handwritten signature in black ink that reads "Mary B. Dunne". The signature is fluid and cursive, with a long horizontal stroke at the end.

Mary B. Dunne
State Historic Preservation Officer

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Department of Economic and
Community Development

State Historic Preservation Office

April 3, 2020

Ms. Deborah Leonardo
Project Coordinator
All-Points Technology Corporation
567 Vauxhall Street Extension, Suite 311
Waterford, CT

Subject: Lodestar Energy
100 Sand Road
North Canaan, CT
ENV-20-0455

Dear Ms. Leonardo:

The State Historic Preservation Office (SHPO) has reviewed your request for information concerning the potential effects to historic properties associated with the referenced project. SHPO understands that the proposed solar facility will consist of ground mounted, pile-driven racking system solar panels, along with ancillary equipment, encompassing an approximately 11 acre parcel, located at 100 Sand Road, North Canaan, Connecticut. The proposed activities are under the jurisdiction of the Connecticut Siting Council and are subject to review by this office pursuant to the Connecticut Environmental Policy Act (CEPA).

No properties listed or determined eligible for listing in the National Register of Historic Places are located within 0.5 miles of the project area. Soil profiles of the area indicate low to moderate slopes that are well drained. Additionally, the proposed project area possesses environmental characteristics favorable to pre-contact settlement and land use, including proximity to fresh water sources, and the presence of several recorded archaeological sites within the area.

We are requesting that a professional cultural resources survey be completed prior to construction. All archeological investigations of areas identified as having a moderate or high potential for containing intact archaeological deposits should be in compliance with our *Environmental Review Primer for Connecticut's Archaeological Resources* and no construction or other project-related ground disturbance should be initiated until SHPO has had an opportunity to review and comment upon the requested survey.

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Community Development

State Historic Preservation Office

This office appreciates the opportunity to review and comment upon this project. These comments are provided in accordance with the Connecticut Environmental Policy Act. For additional information, please contact Marena Wisniewski, Environmental Reviewer, at (860) 500-2357 or marena.wisniewski@ct.gov.

Sincerely,

A handwritten signature in black ink that reads "Mary B. Dunne". The signature is fluid and cursive, with a long horizontal line extending from the end of the name.

Mary B. Dunne
State Historic Preservation Officer

State Historic Preservation Office

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APRIL 2020

PHASE IA CULTURAL RESOURCES ASSESSMENT SURVEY OF
THE PROPOSED LSE PHOENIX LLC SOLAR CENTER PROJECT
IN NORTH CANAAN, CONNECTICUT

PREPARED FOR:



567 VAUXHALL STREET EXTENSION, SUITE 311
WATERFORD, CT 06385

PREPARED BY:



P.O. Box 310249
NEWINGTON, CONNECTICUT 06131

ABSTRACT

This report presents the results of a Phase IA cultural resources assessment survey for a proposed solar center in North Canaan, Connecticut. All-Points Technology Corporation, P.C., contracted with Heritage Consultants, LLC to complete Phase IA survey of the project area, which is located at 100 Sand Road in North Canaan, Connecticut. The project area associated with the solar array will occupy approximately 14.02 ac of land and will be accessed from Ryan Avenue to the northwest. The investigation consisted of: 1) preparation of an overview of the region's prehistory, history, and natural setting); 2) a literature search to identify and discuss previously recorded cultural resources in the region; 3) a review of readily available historic maps and aerial imagery depicting the project area to identify potential historic resources and/or areas of past disturbance; and 4) pedestrian survey and photo-documentation of the project area to determine its archaeological sensitivity. The Phase IA survey was completed in April 2020. The results of the survey indicate that 3.55 acres of the project area retain moderate/high sensitivity for intact archaeological deposits. It is recommended that this area be subjected to Phase IB cultural resources reconnaissance survey. The remainder of the project area possesses a no/low sensitivity, and no additional archaeological examination of that acreage is recommended prior to construction.

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CHAPTER I

INTRODUCTION

This report presents the results of the Phase IA cultural resources assessment survey for the proposed LSE Phoenix LLC solar center in North Canaan, Connecticut (Figure 1). All-Points Technology Corporation (All-Points) requested that Heritage Consultants, LLC (Heritage) complete the assessment survey as part of the planning process for the proposed solar array, which will occupy approximately 14.02 ac of land within a larger 23.96 ac parcel of land between Sand Road and Ryan Venue. The proposed 14.02 ac development area is hereafter referred to as the project area and is consists of a combination of wooded areas and meadow. The project area. It is bordered to the north, south, and east by wooded areas and to the west by a residential area. The Housatonic River is approximately 505.7 m (1659.1 ft) to the west of the project area and Robbins Swamp, the largest freshwater wetland in Connecticut, is approximately 367 meters (1,204.1 ft) to the south of the project area. All work associated with the 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). The results the Phase IA cultural resources survey of the project area, including background research, pedestrian survey, photo-documentation, and management recommendations are provided below.

Project Description and Methods Overview

The proposed project will consist of a 7,560-module solar array that will include the installation of rows of solar panels with varied spacing between the rows. The development also will include access from Ryan Avenue at the northwest corner of the property (Figure 2). The proposed project plans depict rip-rap lined swales along the northern and eastern edges of the project area and a permanent grass lined stormwater management basin and overflow weir in the northeastern corner. At the time of survey, the project area consisted of wooded areas and meadows; it ranged in elevation from approximately 203.6 to 248.1 m (668 to 814 ft) NGVD, with the highest elevation in the southwest sloping down to the east and northeast. Soils noted throughout the area are generally characterized as deep well drained soils with stratified sand, gravel, silt, and minor amounts clay.

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 depicting the project area, as well as files maintained by the CT-SHPO, resulted in the identification of 14 previously identified archaeological sites within a 1.6 km (1 mi) radius of the project area. Of the 14 identified sites, six of them were listed as Late Archaic period occupations. A total of five sites were not assigned specific occupation dates; however, artifacts collected from them suggest prehistoric occupations. A single site contained both prehistoric and historic artifacts. One site yielded only historic artifacts; however, it was noted on the submitted site form that the location

held potential for prehistoric materials. Finally, a cemetery dating to the nineteenth century was identified and recorded within 1.6 m (1 mi) of the project area.

In addition to the cultural resources review, Heritage used data recovered during the pedestrian survey, as well as historic map and aerial image analysis, to stratify the project area into zones of no/low and /or moderate/high archaeological sensitivity. It was determined that 10.47 acres of land contained moderate to steep slopes, areas of standing water, poorly drained soils, and limited disturbances. The remaining 3.55 acres in the southwestern portion of the project area retain moderate/high sensitivity for intact archaeological deposits. Phase IB survey of the moderate/high sensitivity area is recommended prior to construction of the proposed solar array.

Project Personnel

Heritage personnel who contributed to the project include Mr. David R. George, M.A., R.P.A., (Principal Investigator); Ms. Renée Petruzelli, M.A., R.P.A. (Project Archaeologist); Mr. Stephen Anderson, B.A., (Geographic Information Specialist) and Ms. Christina Volpe, B.A., (Historian).

Organization of the Report

The natural setting of the project region is discussed in Chapter II and includes a brief overview of the geology, hydrology, and soils of the area. The prehistory of the project region is outlined in Chapter III. The history of the region is chronicled in Chapter IV, and a discussion of previous archaeological investigation 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 OF THE PROJECT REGION

Introduction

This chapter provides an overview of the natural setting of the region containing the project area in North Canaan, Connecticut. Previous archaeological research in the region has documented that there are specific environmental factors that can be associated with both prehistoric and historic period site selection. These include general ecological conditions, fresh water sources, soils, and slopes present in the area. The remainder of this chapter presents an overview discussion of the natural setting of the project area.

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: Northern Marble Valley 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.

Northern Marble Valley Ecoregion

The project area is located within the town of North Canaan, Connecticut and is situated in the Northern Marble Valley ecoregion of the Northern Uplands-Transitional Hardwoods Zone. The Northern Marble Valley ecoregion is characterized by interior valleys, lowlands, and extensive floodplains adjacent to steep valley walls. The Marble Valley’s territory stretches up and down the western Connecticut boundary line, following the Housatonic River (Dowhan and Craig 1976). In regard to the ecoregion’s elevation, the valley floor ranges from 76.2 m (250 ft) to above 152.4 m (500 ft) with the maximum reaching 213.4 m (700 ft) between the valley and upland regions (Dowhan and Craig 1976:41). The Northern Marble Valley is one of three subregions within the Marble Valley; however, all three consist of “soils that are developed on glacial tills in higher areas and on extensive deposits of stratified sand, gravel, silt, and some clay,” (Dowhan and Craig 1976:41). Calcium-rich bedrock lies beneath the valleys which is evident in the soil types and characteristics from the ecoregion.

Hydrology in the Vicinity of the Project Region

The project area is close to numerous ponds, brooks, rivers, and wetlands. Freshwater sources include the Blackberry River, the Housatonic River, the Whiting River, and Robbins Swamp. The latter is the largest freshwater wetland in Connecticut. The Housatonic River is located approximately 505.7 m (1659.1 ft) to the west of the project area and Robbins Swamp is located approximately 367 meters (1,204.1 ft) to the south of the project area. 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 fresh water, and abundant faunal and floral resources. They also served as sources of drinking water and waterpower for historic period milling operations.

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.

As seen in Figure 3, the project area is characterized by the presence of Nellis soils. A description of Nellis soils is presented below.

Nellis Soils (Soil Code 92):

The Nellis series consists of very deep, well drained soils that have formed in calcareous till. They are nearly level to very steep soils located on upland ridges, knolls, and hillsides with slope that range from 0 to 60 percent. Typical sequence, depth, and composition of this soil is as follows: **Ap**-- 0 to 9 inches; dark brown (10YR 3/3) fine sandy loam, pale brown 10YR 6/3, dry; moderate fine and medium granular structure; very friable; many very fine and fine and few medium roots; common fine and few medium tubular pores, and many fine vesicular pores; 5 percent rock fragments; neutral; abrupt smooth boundary; **Bw1**-- 9 to 16 inches; dark yellowish brown (10YR 4/4) fine sandy loam, weak fine and medium subangular blocky structure; very friable; many fine and very fine, and few medium roots; common fine and few medium tubular, and many fine vesicular pores; 5 percent rock fragments; neutral; clear wavy boundary; **Bw2**-- 16 to 21 inches; brown (10YR 4/3) fine sandy loam; moderate fine and medium subangular blocky structure; very friable; common very fine and fine roots; common fine and few medium tubular pores, and many fine vesicular pores; 5 percent rock fragments; neutral; clear wavy boundary; **BC1**-- 21 to 26 inches, brown (10YR 5/3) fine sandy loam; massive with thin and medium plate-like divisions; friable; common very fine and fine roots; common fine vesicular, and few fine tubular pores; 6 percent rock fragments; neutral; clear smooth boundary; **BC2**-- 26 to 37 inches, 80 percent brown (10YR 5/3), 10 percent yellowish brown (10YR 5/6), and 10 percent brown (7.5YR 4/2) fine sandy loam; massive with medium and thick plate-like divisions; firm; few very fine and fine roots; few fine tubular, and common fine vesicular pores; 8 percent rock fragments; few fine faint brown (7.5YR 5/4) soft masses of iron accumulation; neutral; gradual wavy boundary; **C**-- 37 to 60 inches, grayish brown (2.5Y 5/2) fine sandy loam; massive with plate-like divisions; firm; few very fine and fine roots; few fine tubular and vesicular pores; 9 percent rock fragments; moderately alkaline; violently effervescent; gradual wavy boundary; and

Cd-- 60 to 80 inches, grayish brown (2.5Y 5/2) fine sandy loam; massive; very firm; 13 percent rock fragments; moderately alkaline; violently effervescent.

Summary

The natural setting of the area containing the proposed LSE Phoenix LLC solar center is common in the New England Northern Uplands section of Connecticut, an area characterized by narrow river valleys and low hills. The Northern Valley Marble ecoregion stretches up and down the western Connecticut boundary line, following the Housatonic River. The project area is located just slightly over 500 meters (1659.1 ft) to the east of the Housatonic river and approximately 367 meters (1,204.1 ft) to the north of Robbins Swamp. The region demonstrates that there is substantial natural diversity remaining even though the area has undergone modifications and adaptations since the retreat of the glaciers. The proximity of the project area to the Housatonic River and Robbins Swamp would have provided excellent resource extraction areas for prehistoric and historic populations. This is reflected in the number of archaeological sites previously identified in the larger region. Therefore, archaeological deposits may be expected near or within the proposed impact areas.

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

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

By the onset of the Middle Archaic Period, essentially modern deciduous forests had developed in the region (Davis 1969). It is at this time that increased numbers and types of sites are noted in Connecticut (McBride 1984). The most well-known Middle Archaic site in New England is the Neville Site, which is 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 m² (5,383 ft²). These base camps reflect frequent movements by small groups of people in search of seasonally abundant resources. The overall settlement pattern of the Laurentian Tradition was dispersed in nature, with base camps located in a wide range of microenvironments, including riverine as well as upland zones (McBride 1978, 1984:252). Finally, subsistence strategies of Laurentian Tradition focused on hunting and gathering of wild plants and animals from multiple ecozones.

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

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

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

based on the use of high-quality raw materials for stone tool production and a settlement pattern different from the “coeval” Narrow-Stemmed Tradition.

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

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

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

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

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

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 been thought to have been characterized by the advent of farming, the initial use of ceramic vessels, and increasingly complex burial ceremonialism (Griffin 1967; Ritchie 1969a and 1969b; Snow 1980). In the Northeast, the earliest ceramics of the Early Woodland Period are thick walled, cord marked on both the interior and exterior, and possess grit temper.

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

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

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

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

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

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

Stone tool assemblages associated with Late Woodland occupations, especially village-sized sites, are functionally variable and they reflect plant and animal resource processing and consumption on a large scale. Finished stone tools recovered from Late Woodland sites include Levanna and Madison projectile points; drills; side-, end-, and thumbnail scrapers; mortars and pestles; nutting stones; netsinkers; and celts, adzes, axes, and digging tools. These tools were used in activities ranging from hide preparation to plant processing to the manufacture of canoes, bowls, and utensils, as well as other settlement and subsistence-related items (McBride 1984; Snow 1980). Finally, ceramic assemblages recovered from Late Woodland sites are as variable as the lithic assemblages. Ceramic types identified include Windsor Fabric Impressed, Windsor Brushed, Windsor Cord Marked, Windsor Plain, Clearview Stamped, Sebonac Stamped, Selden Island, Hollister Plain, Hollister Stamped, and Shantok Cove Incised (Lavin 1980, 1988a, 1988b; Lizee 1994a; Pope 1953; Rouse 1947; Salwen and Ottesen 1972; Smith 1947). These types are more diverse stylistically than their predecessors, with incision, shell stamping, punctation, single point, linear dentate, rocker dentate stamping, and stamp and drag impressions common (Lizee 1994a:216).

Summary of Connecticut Prehistory

In sum, the prehistory of Connecticut spans from ca., 12,000 to 350 B.P., and it is characterized by numerous changes in tool types, subsistence patterns, and land use strategies. For 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

Introduction

The project area is situated in the southwestern part of the town of North Canaan, Connecticut. Located in the northwestern corner of Connecticut in Litchfield County, North Canaan shares its northern border with the State of Massachusetts. Like most of Litchfield County, the region containing the project area has remained rural almost through to the present day. The remainder of this chapter provides an overview history of the town of North Canaan, as well as more specific data related to the project area.

Native American History

Connecticut historical tradition holds that the “River Indians” living beside the Connecticut River deliberately invited the English to settle within their territory so they would act as a counter to the overwhelming power of the Pequot tribe (Stiles 1892:103-104). This may be correct, at least the limited sense that some local leader or “sachem” did invite them to settle there. Much of historians’ interpretation of historical documents attempts to show that the “River Indians” were a recognizable nation whose legitimate leaders had invited the English to move in and take over the whole region. A contrary interpretation would be that the leaders of one or more small independent groups tendered the invitation but did not have the right to surrender the whole of the area. This debate is influenced by the interpretations of the colonists themselves. Used to the idea that land tenure derives from a sovereign, they repeatedly tried to identify such a sovereign among the natives so that they arrange the transfer of the land from the native sovereign to their own. Ever since, local historians’ attention to Native American matters often has been focused on identifying which of several larger tribal groups or confederations these small local groups belonged to, in order to explain their supposed place in the larger political scheme and demonstrate the legitimacy of the town fathers’ land purchases (or, in some areas, that the local Native Americans had been subjects of the Pequots, and so were dispossessed in the war). These speculations inevitably underlie a large part of the following discussion of colonial-era Native American history, which means that much of the information is of dubious value in understanding what happened.

Relatively little is known about the Native Americans of the northwest highland region of Connecticut. Given the rugged topography and elevation of the general area, it is assumed that pre-Contact Native Americans there were seasonally shifting horticulturists who also relied a great deal on hunting and fishing for their livelihoods. Post-contact development in the region included the arrival of many lowland natives who had been pushed or driven out by the colonists. Documented colonial-era villages in the northwest highlands are mainly located along the Housatonic River, which is less than one mile west of the project area. Early historians of Connecticut’s Native Americans, notably J.W. De Forest (1852), believed that before the northwestern part of Connecticut was entirely uninhabited, Mohawk raiding parties from New York passed through the area at will.

As noted above, since early historians have focused largely on political interactions with larger Native American tribes, it is not surprising that De Forest would overlook the small communities that most likely existed in the northwest. According to Matthias Spiess, an early twentieth century anthropologist, the Mohawks actually claimed what is now northwest Connecticut, so that none of the other tribes dared to settle there, but by the early eighteenth century the Mohawks’ influence had declined to the point that a variety of other Native American bands moved into, or perhaps reclaimed, the area (Spiess 1934).

The keys to understanding Native American settlement in the Northwest Highlands are its history of early Dutch settlement, disease, and the lateness of extensive colonization of the area. Research completed by Shirley Dunn (1994, 2000) has found that the Mohican tribe had a territory extending from what is now Dutchess County to Lake Champlain, and from the east bank of the Housatonic River westward to past Schenectady. This does not mean the literal east bank of the Housatonic, but some difficult-to-define distance eastward from it, probably including at least four or five miles, which was well into Canaan and North Canaan. Because, as is discussed below, the eastern boundary of New York was poorly defined, enterprising Dutch colonists purchased Native American rights to the area. Between 1685 and 1704, a series of their purchases from Mohican landholders effectively cleared the title to this area, in English eyes. These Native groups also suffered badly from repeated disease outbreaks and Mohawk raiding parties. In addition, the Native Americans who settled at Stockbridge in Massachusetts also sold or re-sold much of the southwestern corner of Massachusetts and adjacent parts of New York and Connecticut (Wright 1905). Local Connecticut historians do not appear to have been aware of these early transactions, which explains why they are not discussed in their histories. This means that specific information about the Native American inhabitants of Canaan and North Canaan remains elusive.

The Colonial Period

Litchfield County, where North Canaan and its parent town of Canaan are located, was the last area of Connecticut to be laid out into towns and colonized. This was in part because of its remoteness from the major coastal and riverine towns and overall ruggedness, and in part due to a lengthy controversy over ownership of the territory. In 1687, the Colony of Connecticut feared that the new royal governor of all New England and New York, Sir Edmund Andros, would take advantage of his appointment and distribute previously ungranted colony lands to persons outside the control of Connecticut. Their solution was to grant ownership of all the land lying between the Housatonic River on the west and the towns of Farmington and Simsbury on the east to the towns of Hartford and Windsor. The area west of the Housatonic was not included because of uncertainty about whether it was within the colony's official boundaries. The validity of this grant was never tested by Andros, as the New England colonies' continued objections to his policies led to his departure in 1689, which the new monarchs, King William and Queen Mary (crowned in 1688), did nothing about. The problems arose when, twenty years later, the town of Hartford began a series of attempts to cement its claim to this large area of land, even though it was well known that the 1687 measure had been an expedient. The dispute involved half the land in the future Litchfield County; although Hartford and Windsor managed to found the town of Litchfield between 1717 and 1719, after 1719 the colony government forbade any further laying out of land in the so-called "Western Lands" until things were sorted out (Crofut 1937).

Ultimately, the colonial government agreed to a compromise that divided the land between itself and the two towns. In 1729, the Canaan, North Canaan, and the colony agreed to divide the land (less the previously laid out section of Litchfield) equally between themselves, with the colony receiving the western half and the two towns the eastern half. In 1732, Windsor and Hartford divided their portion between themselves, and Connecticut laid out five new townships in its half, which became Canaan, Goshen, Kent, Cornwall, and Norfolk; in addition, Yale College was granted 300 acres in each of the new towns, which it continued to own into the twentieth century. The method that Connecticut used to distribute the land was a new practice: in 1737, it ordered that 50 "rights" in each township were to be auctioned, with an additional three rights withheld as public property for the benefit of the church, the first minister, and the school (Crofut 1937).

The future Canaan was auctioned at New London in January 1738, and the first meeting of the auction buyers, or proprietors, was held in Wethersfield the next month. These proprietors included men from

Groton, Plainfield, Litchfield, Stamford, and Wethersfield. They voted to name the town Canaan and to lay out at least 30 acres to each proprietor in one or two pieces; these initially surveyed lots were to be drawn at random by the proprietors. By June, the first settlers, including the Lawrence and Franklin Families, had moved to town, all locating in the portion of town that would later be renamed North Canaan. By 1739, enough of the settlers had moved onto their lots that the legislature incorporated the town and gave it permission to organize a Congregational church society. In accordance with colonial practice, the settlers hired a minister in 1740, Elisha Webster, and at some point around that time built a meeting house. The division of the town into two ecclesiastical societies, one northern and one southern, was accomplished in 1767. The legislature designated the southern one as the First Society, and the northern one the Second Society, even though the northern area was settled and churched first (Crofut 1937). The creation of a separate ecclesiastical society was commonly a precursor to the division of a Connecticut town into two municipalities, but that did not happen in Canaan for many years. The whole town had 1,126 inhabitants according to the 1762 census, and 1,635 residents by 1774 (Keegan 2012).

The colonial farmers of the northwest highlands practiced a mixed agricultural system involving limited animal husbandry (cattle, swine, and sheep) and the cultivation of crops such as grass, rye, Indian corn, oats, buckwheat, flax, beans, peas, and apples, as well as wheat in some better soils. Commerce in the region initially was limited to the export of agricultural products such as flour, salted meat, corn, flaxseed, butter, and cheese, as well as lumber, cattle, and hogs. Imports naturally included delicacies such as sugar, molasses, and tea, and manufactured goods such as cloth, hardware, ceramics, and books. North Canaan had three merchants before 1775 and small mills sprang up as soon as they could be arranged, especially gristmills for grinding grain into flour (sometimes used in place of currency), as well as sawmills for lumber products to be used locally and exported, and fulling mills that finished hand-woven cloth. Falls Village, just north of the project area, was one such village that developed around good mill sites; the iron industry of the northwest highlands appeared near Falls Village in the Housatonic River as early as 1732 (Rossano 1997).

The Early National Period, 1780-1850

The need for better transportation was recognized throughout the new state in the opening decades of the nineteenth century, and the first attempt at improving the situation was the establishment of turnpike roads. Corporations were formed by the General Assembly and granted authority to improve existing roads, build new roads, and charge tolls according to regulated rates for passage on them. Canaan's industrial boom required better roads, and three different companies answered the need and built roads through what would become North Canaan. The Greenwoods Company, incorporated in 1798, built a road from New Hartford through or near the village of East Canaan and then north to the Massachusetts line. Finished in 1799, it continued in operation until 1872. The Canaan and Litchfield Turnpike Company was chartered in 1799 and built a road from the Litchfield courthouse to Canaan Village in what is now North Canaan. It continued in operation until 1853, when it was dissolved because of competition from the new railroads. Finally, the Warren Turnpike Company was chartered in 1806, first running from Warren to Falls Village, and in 1809 being extended to the Massachusetts line. The Warren Turnpike Company became a free road in the 1850s, around the same time the Canaan and Litchfield company was dissolved (Wood 1919).

By 1813, the town of Canaan (including present-day North Canaan), had six forges, five in the southern part of the town and one in the north. The northern forge was on the Blackberry River, east of the project area, which at the time also supported a grist mill and a slitting mill. This was undoubtedly the forge established by Richard Seymour in 1738, later expanded by Samuel Forbes and John Adam into a major

enterprise by 1795. During the first half of the nineteenth century, these facilities were expanded to include blast furnaces, offices, worker housing, canals, and other structures (Gordon and Raber 2000).

A gazetteer published in 1819 reported that Canaan was a large and mountainous town, with considerable limestone resources being quarried. The valleys provided plenty of opportunity for agricultural production, ranging from grains (especially rye and corn, which were exported) to flax, meat, cheese, and butter. There were eight forges in the town by that time, seven shops making anchors, and two furnaces for processing iron ore, most of which came from the neighboring town of Salisbury. The town also had a cotton textile mill, a distillery, mills for grinding grain and plaster, four water-powered machines for carding wool, fifteen sawmills drawing on the extensive forests on the town's hillsides, and many limekilns for producing lime. The compilers reported 276 dwelling houses in the town, but no clusters of them, and nine general stores supplying the community; in addition to the two Congregational churches, there was one Methodist and one Quaker community (Pease and Niles 1819).

In the 1830s, Barber described the businesses located near the falls of the Housatonic River (now in the current town of Canaan) as including an iron works, a forge, and an anchor shop. Otherwise, the economic activity he noted was limestone quarrying (Barber 1837). It is also known that a large quarry of dolomite (which has many industrial uses and is often found with limestone) was near the village of East Canaan (Gordon and Raber 2000). The population of Canaan was quite substantial even in the earliest census years, and it passed 2,500 inhabitants in 1850 and 1860, before the town split into North Canaan and Canaan. The jump in population after 1840 probably had to do with the construction of the Housatonic Railroad, which was incorporated in 1836; the financial panic of 1837 delayed construction, but it was completed from Bridgeport to the Massachusetts line in 1842, passing through Falls Village and then across country through Canaan. This railroad was successful for many years, serving passengers and the freight needs of Litchfield County's marble and granite quarries, iron industry, lime production, and porcelain clay operation. In 1892 the Housatonic Railroad was taken over by the New York, New Haven & Hartford Railroad, and during the twentieth century it suffered from the same decline as many other roads and is now largely abandoned (Turner and Jacobus 1989).

The town's population remained quite homogenous in religious terms for many years, but in the 1780s some individuals registered as Baptists exempt from taxes for support of the Congregational church, and in 1792 a Methodist Episcopal Church was organized, building a church in 1793 at a location called Battle Hill, northeast of Falls Village. In 1846, the parish of Christ Church, North Canaan, was founded (J. W. Lewis & Co. 1881; Hughes and Allen 1976). When the town divided in 1858, the southern part, though settled later, retained the name of Canaan, while the northern part became North Canaan (Crofut 1937).

Industrial and Urban Growth Period, 1850-1930

The highest population that Canaan has ever seen was in 1860, at which time 2,834 people lived there (for unknown reasons Canaan and North Canaan were reported together in this census). When separate numbers were reported in 1870, Canaan's population had fallen by more than half to 1,257 residents; North Canaan, in contrast, had 1,695 residents. North Canaan garnered an increasing population after the division, its population rising to an early peak of 2,171 and falling to under 2,000 in 1920, and then recovering lost ground by 1930. Canaan's population, in contrast, fell steadily to just over 500 by 1930. Two banks were chartered in North Canaan during the latter part of the nineteenth century, and only one in Canaan. According to the county history, the village of Canaan (located presently in North Canaan just north of the project area) was "a pleasant village, with churches, numerous stores, two hotels, and a newspaper" and commanded a good position on both the Housatonic and Connecticut Western Railroads (J. W. Lewis & Co. 1881, 485). While the village was not distinctly marked on an 1859 historic map of the

county, there are several clustered homesteads, the town hall, the railroad, and a cemetery noted just north of the project area, near the intersection. The numerous pictures of trees south of the project area on the 1859 historic map indicate the swamp, and the dotted lines marking a road near the project area's southern boundary suggests a seasonal or unreliable road. The only marked structure close to the project area parcel was across the railroad tracks, marked J. Richmond on an 1853, 1859, and 1874 historic maps (Figures 4 through 6).

The only Richmond Family in Canaan in 1850 was that of John H. and Betsey Richmond, who were 37 and 32 years old, respectively. They had two boys, aged 11 and 6. According to the census report, John was a farmer who owned \$2,700.00 in real estate, and his wife had been born in Massachusetts. Most of their presumed neighbors on the census page were Connecticut natives, but there were a smattering of other Massachusetts and New York people recorded as well, which is not surprising for a town located near both those states. There were also seven people recorded who had been born in Ireland. Their neighbors also included two African American families (both headed by laborers), and two African American teenagers living with a white family. Three other farm families on this page owned property; one of the farms was worth \$10,000.00. The occupation of three other heads of household, including the two African-American households, was laborer; two other families were headed by a teamster and an Irish-born furnace man (U.S. Census 1850, Schedule I). At this time, the industrial census of Canaan found 31 firms making more than \$500 of product per year, including six sawmills, and three each of forges, blast furnaces, textile mills, blacksmiths, and lime kilns. Taken all together they employed 117 men and 22 women, but the largest (a woolen mill) employed only 27 people of both sexes (U.S. Census 1850, Schedule 5).

By 1874, the village of Canaan was marked on the map and fully established. J. Richmond was still the only homestead close to the project area, and the cemetery, known as Lower Cemetery or Mountain View Cemetery today, was the only municipal property still nearby (Figure 6). In the 1870 census, the Richmond parents John and Betsey were in their 50s, and their two sons were in their 20s and unmarried. All three men's occupation was listed as farmer, and the family owned \$5,000.00 in real estate and \$500.00 in personal estate. The Noonan family seen on the 1870 map to the south of the Richmond's' was headed by Irish-born parents. The father was a teamster, who owned \$1,000.00 in real estate. The Comstock Family further south had parents born in Massachusetts and New York, the father being a farmer who owned \$1,200.00 in real estate. Even further south, right on the town line, were the Steadmans, an African American family headed by Julius and Celestia, both of whom were born in Massachusetts (Figure 6; U.S. Census 1870). Just as the map suggests, these were rural occupations and they were not making any of the family's rich.

During the mid to late nineteenth century, farming became an increasingly uneconomical proposition in Connecticut. Most farmers switched from meat and grains, which could be purchased more cheaply from the Midwest, to butter and cheese, which did not travel as well. In the 1880s, refrigerated railroad cars were developed, which allowed the production of fresh milk to become important as well. Overall, the farming population fell, and marginal lands were abandoned. Towns with industrial activity managed to keep their populations stable, while primarily agricultural places lost population through the 1930s (Rossano 1997). The primary businesses of North Canaan at that time were the iron industry and the dolomitic limestone quarries. Some of the iron furnaces near East Canaan village continued in operation until 1923, changing ownership to the Barnum & Richardson conglomerate in the later nineteenth century. Overall, the declining economy of the region was supplemented to a certain extent in the late nineteenth and early twentieth centuries by the establishment of summer homes and hobby farms by wealthy city dwellers, and camps and cottage rentals for the less well-off, but these temporary visitors

were not sufficient to boost the population (Gordon and Raber 2000; Bepler and Bepler 1999). An important non-localized impact of the iron industry before ca. 1860 was deforestation caused by an insatiable demand for charcoal to feed the iron furnaces (Gordon and Raber 2000). In Salisbury and Sharon, where furnaces like Canaan's and North Canaan's were in operation, 70 percent of the forested area was owned, rented, or otherwise utilized by iron manufacturers for charcoaling. The Barnum & Richardson Company papers from approximately 1890-1920 indicate that the charcoal supply had dwindled to the point that they had to import anthracite coal from Pennsylvania to operate their furnaces (Gordon and Raber 2000).

The iron and quarrying industries in North Canaan were served and supported by a second railroad, built through the town in 1871. It was primarily the result of the efforts of Egbert Butler of Norfolk, who began working toward that goal in the 1860s. The existence of an east-west line through Litchfield County, he believed, would help reanimate the region's economy. He succeeded in chartering the Connecticut Western Railroad company in 1866, but had to have the charter revised in 1868, when it finally was able to sell stock and begin surveying and building. The company, with its connections to north-south running lines, made some money at first, but then began to decline, a process exacerbated by the collapse of a bridge on the line in 1878 that killed thirteen people. In 1880, the company went bankrupt and was reorganized as the Hartford & Connecticut Western Railroad Company in 1881. Later it was absorbed into the Central New England railroad, and remained an important part of the system until after 1900. Then its profits began to decline once again, and it was absorbed into the New York, New Haven, & Hartford system in 1927. After that much of the track began to be abandoned, by the 1980s little trace of it remained west of Bloomfield or east of Canaan (Turner and Jacobus 1989).

Modern Period, 1930-Present

The town's principal industries in 1932 were agriculture, the manufacture of lime, marble quarrying, and lumbering (Connecticut 1932). The survival of these industries into the 1930s helps to explain the growth of the town's population to that time; although it was slow growth, the 1930 population of North Canaan was 2,287. The 1934 aerial photograph of the project area displays the parcel boundaries of the former J. Richmond homestead possibly by the retention of stone walls, but even in 1934 reforestation is visible throughout these former agricultural areas (Figure 7). The number of farms in the region continued to fall through the twentieth century, but because of suburbanization and the rise of the automobile, many towns began to grow again (Rossano 1997). Reforestation increased within the project area by the time of the 1951 aerial photograph, though some cleared land is visible just north of the project area along present-day Sand Road. The Housatonic Railroad is also visible in the 1951 aerial, east of the project area (Figure 8). North Canaan's population increased steadily between 1940 and 2000, peaking at 3,350 before declining slightly to 2010. Canaan, in contrast, saw much more modest growth during the same period, peaking at 1,081 before also falling (Keegan 2012). Summer visitors continued to be a source of income to some property owners in the region (Bepler and Bepler 1999). Consistent with the general trend in the region, only 3 percent of the town's residents were employed in agriculture in 2005, with another 6.8 percent in mining; unusually, 40.4 percent of employment was in manufacturing, while 47.2 percent was in commercial enterprises. A clear majority of residents worked in the town (CERC 2007). Nonetheless, Canaan was still a very rural town in 2007; only 27 of the state's 169 towns were smaller than it in 1990.

The town's 2006 plan of conservation and development reported a breakdown of the use of developed land as follows: Residential, 61.41 percent Commercial, 14.27 percent; Industrial (11.37 percent, a very large increase since 1972); Agriculture, 7.6 percent (down slightly from 1972). The plan suggested encouraging commercial and industrial growth in certain areas and notes an increase in graveling operations (North Canaan 2006). This is consistent with the 2006 aerial photograph of the project area

which displays a drastic increase in suburban properties west of the project area along Salisbury Road; while the project area itself appears to be completely reforested (Figure 9). This growth continued through 2016, with evident expansion west and north along Sand Road. Within the project area there appears to be a cleared area within the former Richmond farm parcel (Figure 10). Even this cleared area in 2016 displays some reforestation by 2018 with the remainder of the project parcel reforested (Figure 11). However, by 2019, the clearing within the project area is visible once again with visible dirt roads leading into the project area from the west and eastern boundaries (Figure 12).

Conclusions

Historical records indicate that the project area was probably the location of a farmstead dating to at least the mid-nineteenth century, if not earlier. The rest of the parcel was certainly used as farmland for most of that period, up through the mid-twentieth century. The historic owners of the property made no significant impact on the larger historic record.

CHAPTER V

PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous cultural resources research completed within the vicinity of the project area in North Canaan, 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 near the project area are taken into consideration. Specifically, this chapter reviews previously identified archaeological sites, National/State Register of Historic Places properties, and inventoried historic standing structures over 50 years old in the project region. 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. Both the quantity and quality of the information contained in the original cultural resources survey reports and State of Connecticut files are reflected below.

Previously Recorded Archaeological Sites, National/State Register of Historic Places Properties, and Inventoried Historic Standing Structures

A review of data currently on file at the CT-SHPO, as well as the electronic site files maintained by Heritage failed to identify any National/State Register of Historic Places Properties or historic standing structures within 1.6 km (1 mi) of the project area (Figure 13). However, this review resulted in the identification of 14 previously documented prehistoric and historic archaeological sites within 1.6 km (1 mi) of the project area (Figure 14). They are described below.

Site 100-4

Site 100-4, which is also known as the Lyle I Site, is situated on private property on High Street in North Canaan, Connecticut. It sits on a parcel of land that is bordered on the east by the Blackberry River. Site 100-4 was recorded in 1979 by field crew of the American Indian Archaeological Institute (AIAI) of Washington, Connecticut. The site was identified in a cultural resources management survey for the proposed North Canaan Sewer Project. The submitted site form lists Site 100-4 as campsite. The date of the site was listed as unknown. A single decal decorated white earthenware sherd, as well as glass and brick fragments were collected from fill. No prehistoric material culture was recovered; however, the AIAI crew noted that “fluvial geology suggests there are deeply buried sediments likely to yield a prehistoric site.” The Lyle I 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]) and it will not be impacted by the proposed solar center.

Site 100-5

Site 100-5, which is also known as the Dead Exxon II Site, is situated on public land along Route 7 in North Canaan, Connecticut. It sits on a parcel of land bordered on the south by Route 7 and is approximately 0.6 km (.37 mi) to the south of the Blackberry River. Site 100-5 was recorded in 1979 by field crew of the American Indian Archaeological Institute (AIAI) of Washington, Connecticut. The site was identified in a cultural resources management survey for the proposed North Canaan Sewer Project. The submitted site form lists Site 100-5 as a multi-component site with chert flakes, cut nails, and brick fragments identified. The Dead Exxon II site is described by AIAI crew as an “upland camp located at the southeast section of Robbins Swamp.” The Dead Exxon II 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]) and it will not be impacted by the proposed solar center.

Site 100-9

Site 100-9, which is also known as the Smith I Site, is situated on private property on Routes 126 and 44 in North Canaan, Connecticut. The two submitted site forms for this site note that the land was divided into two parcels, with Mr. Bushnell owning the land on the west side of Route 44 and on the west bank of the Blackberry River, and Mr. Smith owning the land on the east side of Route 44. Site 100-9 is located on a terrace above the Blackberry River and was first recorded in 1985 by George Nicholas of the American Indian Archaeological Institute (AIAI) of Washington, Connecticut. Dr. Nicholas reported that the site was discovered in a garden plot on Mr. Smith's property on the east side of Route 126. Dr. Nicholas identified Site 100-9 as a Late Archaic to Early Woodland Period campsite. He noted that surface finds consisted of unidentified lithic projectile points, tools and debitage. The Smith I Site was recorded again in 1996 by Cece Saunders of Historical Perspectives, Inc., of Westport, Connecticut as part of a cultural resources management survey for the proposed Blackberry Riverbank Stabilization and Bridge Reconstruction Projects. Ms. Saunders reported that surface finds, consisting of a total of nine mixed quartz and chert lithic flakes, were identified on Mr. Bushnell's property. She also noted that much of the integrity of the site was either disturbed or destroyed by home construction and highway and bridge construction since the time of its original recordation. The Smith I 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]); it will not be impacted by the proposed solar center.

Site 100-10

Site 100-10, which is also known as the Christmas Tree Farm Site, is situated on private property along Sand Road in North Canaan, Connecticut. Dr. George Nicholas of the American Indian Archaeological Institute of Washington, Connecticut recorded the site in 1985. He noted in the submitted site form that the area was a popular location for local artifact collectors because it was routinely plowed. He reported that the Christmas Tree Farm Site was identified on the western shore of Robbin's Swamp near the base of Dutcher's Hill and that Mr. H. Duntz had previously recovered Middle Holocene-type projectile points at the location. The date of Site 100-10 is listed as unknown on the submitted site form. The Christmas Tree Farm 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]). It will not be impacted by the proposed solar center.

Site 100-11

Site 100-11, which is also known as the Gailles I Site, is situated on residential private property along Route 7 in North Canaan, Connecticut. It sits on the northeastern edge of the Robbin's Swamp where it meets the Blackberry River. Site 100-11 was recorded in 1985 by George Nicholas of the American Indian Archaeological Institute of Washington, Connecticut. Mr. Nicholas reported that the site was identified when a small garden plot on the property was bulldozed. The age of Site 100-11 is listed as unknown. Surface finds consisted of an unknown number of unidentified lithic projectile points. The Gailles I 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]). It will not be impacted by the proposed solar center.

Site 100-12

Site 100-12, which is also known as the Laffargue I Site, is situated on private property along Route 44 in North Canaan, Connecticut. Site 100-12 was situated in a plowed cornfield that was adjacent to the

Blackberry River. Dr. George Nicholas of the American Indian Archaeological Institute in Washington, Connecticut recorded Site 100-12 in 1985. Mr. Nicholas reported that a single steatite bowl fragment and unidentified lithic projectile points were surface collected from the site area. The date and function of the site is listed on the submitted site form as a Late Archaic Period campsite. Dr. Nicholas noted that the integrity of the area was good and that other sites are expected in the general vicinity. The Laffargue I 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]). It will not be impacted by the proposed solar center.

Site 100-16

Site 100-16, which is also known as the Giulian II Site, is situated on private property to the south of Boney Hill Road and to the west of Sand Road in North Canaan, Connecticut. The site sits near the center of a cornfield that is located on top of Dutcher Hill. Dr. George Nicholas of the American Indian Archaeological Institute in Washington, Connecticut recorded Site 100-16 in 1985. Surface collected artifacts consisted of a single quartz side notched projectile point, the distal portion of an unidentified chert projectile point, a partial chert biface, a single quartz core fragment, and many chert and quartz flakes. The date of Giulian II site is listed as unknown on the submitted form. Dr. Nicholas noted that additional sites are known of and expected in the general vicinity of Site 100-16. The Giulian II 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]), and it will not be impacted by the proposed solar center.

Site 100-18

Site 100-18, which is also known as the Giulian IV Site, is situated on private property along Boney Hill Road in North Canaan, Connecticut. The site sits in a cornfield on Dutcher Hill overlooking Redding Swamp and the Housatonic River. Dr. George Nicholas, of the American Indian Archaeological Institute in Washington, Connecticut, recorded Site 100-18 in 1985. Artifacts surface collected from the site area consisted of a single untyped quartz biface and several quartz core fragments. The date of Giulian IV site is listed as unknown on the submitted form. Dr. Nicholas noted that Site 100-18 is important to understanding the changing site and landscape associations in the vicinity of Robbins Swamp. The Giulian IV 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]), and it will not be impacted by the proposed solar center.

Site 100-133

Site 100-133, which is also known as the Melville Site, is situated on private property at 492 Church Street in North Canaan, Connecticut. Site 100-133 was located on a large knoll covered by houses, roads, and gardens. Mr. Melville Smith, the property owner, surface collected artifacts from his garden. The Melville site was recorded in 1984 by F.W. Warner of Connecticut Archaeological Survey of New Britain, Connecticut. A single steatite bowl, a single full-grooved sandstone axe, a single small quartz unidentified projectile point, and "some debitage" were recorded by Mr. Warner. The site is listed as a Late Archaic Period village on the submitted site form; however, Mr. Warner noted that the identification is "highly tentative." The Melville 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]). It will not be impacted by the proposed solar center

Site 100-139

Site 100-139, which is also known as the Sand Road-Robbins Swamp North Site, is situated on private property to the north of Robbins Swamp and south of the intersection of Sand Road and Route 7, in a field "east of the railroad tracks." Site 100-139 was recorded in 2006 by Mr. Timothy Binzen; an independent

researcher. Mr. Binzen reported that the site was identified in an agricultural field and represented a Late Archaic Period camp or village site. The field had been plowed and artifacts had been surface collected by Mr. Elliott Hoben of North Canaan. Mr. Binzen reported that two chert Genesee projectile points were found next to each other. A single Genesee projectile point base fragment and a single chert biface were also found nearby and collected. The Sand Road-Robbins Swamp North 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]), and it will not be impacted by the proposed solar center.

Site 100-140

Site 100-140, which is also known as the North Canaan Boinay Hill Road Site, is situated on private property at 12 Boinay Hill Road. Site 100-140 was recorded in 2014 by Ms. Christine Ames, Project Archaeologist for EBI Consulting of York, Pennsylvania. The site was identified in a cultural resources management survey for the proposed AT&T Mobility, LLC construction of a high monopole and support equipment. Subsurface testing of the project area tested positive for cultural material consisting of a single quartzite fire cracked rock and a single quartz untyped projectile point. Ms. Ames noted in the submitted site form that the presence of the artifacts is indicative of prehistoric use of the area. She referenced Sites 100-16 and 100-18, which are discussed in this report, as further evidence of prehistoric use of the area. Ms. Ames suggests that Site 100-140 was a camp, but the date is listed as unknown on the submitted site form. The North Canaan Boinay Hill Road 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]), and it will not be impacted by the proposed solar center.

Site 122-6

Site 122-6, which is also known as the Nelson I site, is situated on private property along Wheatogue Road and to the north of its intersection with Twin Lakes, in Salisbury, Connecticut. Site 122-6 is located in a cornfield that is less than five meters (16.4 ft) to the west of the Housatonic River. Site 122-6 is listed as a multi-component site with Late Archaic period, as well as nineteenth and twentieth century artifacts, identified. The Nelson I site was recorded in 1978 by the American Indian Archaeological Institute (AIAI) field crew of Washington, Connecticut. The site was surface collected by AIAI crew, and artifacts consisted of a single chert Brewerton projectile point, 1 chert Normanskill projectile point, 1 chert and 1 quartz untyped small-stemmed projectile point, 2 broken untyped projectile point base fragments, 2 chert "triangular knives," 1 hammerstone, 1 chert ovate knife, shell, several unidentified lithic biface tools, fire-cracked rock, unidentified bone fragments, unidentified lithic cores, charcoal and lithic debitage. The submitted site form notes that Site 122-6 is one of the most significant sites in the town of Salisbury along the Housatonic River, and it is a campsite. Nineteenth and twentieth century artifacts were recovered from what was identified as a secondary dump likely associated with a house structure that was located to the west of Site 122-6. Artifacts from the secondary dump consisted of a single blown glass bottle base fragment, a single molded milk glass fragment, salt glazed earthenware and white glazed earthenware sherds. The Nelson I 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]). It will not be impacted by the proposed solar center.

Site 122-7

Site 122-7, which is also known as Dutcher's Bridge Burying Ground, is a historical site located on Weatogue Road at the intersection with Route 44 in the town of Salisbury, Connecticut. The cemetery is located approximately 350 meters (0.2 mi) to the west of the Housatonic River and approximately 1,760 feet (0.33 mi) to the northwest of Dutcher's Bridge. The burying ground was recorded in 1978 by the American Indian Archaeological Institute (AIAI) field crew of Washington, Connecticut. The nineteenth-

century burying ground was inspected, and gravestones were inventoried by AIAI crew. The submitted site form notes that the burying ground encompasses 0.25 ac of land and is surrounded by a white picket fence. The plot of land on which the burying ground is located was bought in 1802 by the town from Captain Ruluff Dutcher of Canaan. The Dutcher's Bridge Burying Ground 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]). It will not be impacted by the proposed solar center

Site 122-46

Site 122-46, which is also known as the Binzen Loci 1-5 Site, is situated on private property at 49 Weatogue Road in Salisbury, Connecticut. The submitted site form describes the location as an "agricultural field/open space/woodland" located less than 500 feet (.09 mi) to the west of the Housatonic River. Site 122-46 is listed as a Late Archaic to Early Woodland period campsite. It was reported in 2006 by independent researcher, Timothy Binzen. The site was previously surface collected by a local farmer in the 1980s and then Binzen Family members. Five distinct loci across 400 meters (1200 ft) were identified. On the submitted site form, Mr. Binzen reported that Locus 1 was in a garden on a knoll. A single black chert Susquehanna Broadspire projectile point, a single stone hoe, and a single chert flake were recovered from the garden. Locus 2, located in a corner of the field by the river, yielded a dense scatter of black, gray, and green chert flakes along with some chalcedony flakes. Locus 3, located on the edge of the field to the southeast of the house, contained a scatter of chert flakes. Locus 4, located on a natural terrace by Weatogue Road, yielded a single green chert biface fragment, and several black chert cores were recovered from Locus 5 which was located in the northern section of the field. Mr. Binzen reported that "a rapids on the river may have served as a fording place or fishing location." The Binzen Loci 1-5 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]), it will not be impacted by the proposed solar center.

Summary and Interpretations

The review of previously completed research in the vicinity of the project area and the analysis of the cultural resources recorded nearby, indicates that the larger project region contains prehistoric Native American deposits. The Housatonic River, which lies just to the west of the project area, passes through land that was formerly occupied by Native people and has a long history of Native American use for fishing and hunting. Robbins Swamp, which lies just to the south of the project area, also has a long history of Native American use. Archaeological sites occupied within the study region date from as early as the Late Archaic period (ca., 4,500 years ago), suggesting that additional archaeological sites may be situated within the vicinity of the project area. Site 100-10, the Christmas Tree Farm Site, is located immediately adjacent to the eastern boundary of the proposed project parcel. In addition, historic sites including Dutcher's Burying Ground and the Nelson I site, which contained historical artifacts, are both located within the study region. Therefore, it is likely that additional historic cultural resources may also be present in the project area.

CHAPTER VI

METHODS

Introduction

This chapter describes the research design and field methods used to complete the Phase IA cultural resources assessment survey of the project area in North Canaan, 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 its 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 and assess the archaeological sensitivity of the project area, as well as to visually examine the proposed solar center and record any previously unidentified cultural resources during pedestrian survey. The undertaking was comprehensive in nature, and project planning took into consideration the distribution of previously recorded cultural resources located with the project region, as well as the 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 field work portion of this undertaking entailed pedestrian survey, photo-documentation, and mapping (see below).

Archival Research and Literature Review

Background research for this project included a review of a variety of historic maps depicting the proposed project area; an examination of the USGA7.5' series topographic quadrangles; and examination of aerial images dating from 1853 to 2019; and a review of all archaeological sites. National and State Register of Historic Places, inventoried historic standing structures on file with the CT-SHPO, as well as electronic cultural resources data maintained by Heritage was reviewed. The intent of this review was to identify all previously recorded cultural resources situated within and immediately adjacent to the project area. This review also provides natural and cultural context of the project area and an assessment of the project area with respect to the potential for identification of intact cultural resources.

Field Methods and Data Synthesis

Heritage performed fieldwork for the Phase IA cultural resources assessment survey of the proposed project area in North Canaan, Connecticut. This included pedestrian survey, photo-documentation, and mapping of the proposed solar center area. All potential areas of impact in the project area were photo-documented by Heritage using digital media.

CHAPTER VII

RESULTS & MANAGEMENT RECOMMENDATIONS

Introduction

This chapter presents the results of the Phase IA cultural resources assessment survey of a proposed solar center in North Canaan, Connecticut, as well as management recommendations for treatment of the proposed impacted areas, including the solar array and associated facilities. As stated in the introductory section of this report, the investigation involved 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 recorded archaeological and 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 area to determine its archaeological sensitivity; and 5) preparation of the current Phase IA cultural resources assessment survey report.

Results of Phase IA Survey

The proposed project area is bordered by Sand Road on the east and Ryan Avenue on the west (Figure 2). The project parcel measures 23.96 ac in size, but only 14.02 ac of this, the project area, will be used solar center. According to the current design plans, the proposed project will consist of a 7,560-module solar array that will include the installation of rows of solar panels with varied spacing between the rows. The development will also include access from Ryan Avenue at the northwest corner of the property. Rip-rap lined swales along the northern and eastern edges of the project area and a permanent grass lined stormwater management basin and overflow weir in the northeastern corner are depicted in the proposed plans (Figure 2).

At the time of survey, the project area was characterized by wooded areas and meadows, and it ranged in elevation from approximately 203.6 to 248.1 m (668 to 814 ft) NGVD, with the highest elevation in the southwest sloping down to the east and northeast. The predominant soil type located throughout the project area are Nellis soils, which consist of very deep, well drained soils found on nearly level to very steep soils on upland ridges, knolls, and hillsides with slopes ranging from 0 to 60 percent. The project area is located just slightly over 500 meters (1,659.1 ft) to the east of the Housatonic River and approximately 367 meters (1,204.1 ft) to the north of Robbins Swamp. Heritage personnel conducted a pedestrian survey of the project area on April 22, 2020. During the pedestrian survey it was determined that a large portion of the project area contained slopes, areas of standing water, poorly drained soils, and limited disturbances. In contrast, the southwestern portion of the project area was characterized by well drained soils and level ground surfaces with no obvious signs of previous disturbance (Figure 15 through 28).

Overall Sensitivity of the Proposed Study Area

The information regarding soils, slopes, aspect, distance to water and previous disturbances that was collected during the pedestrian survey, was utilized in conjunction with the information collected from the review of historic maps, aerial images, and previously identified archaeological sites 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., burying grounds, stone foundations, pens, wells, privies, etc.). Archaeological sites dating from the

prehistoric era, however, 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 variable 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. Proposed project items that are situated within 100 m (328 ft) of a previously identified historic period archaeological site or a National or State Register of Historic Places district/individually listed property also may be deemed to retain a moderate/high archaeological sensitivity. In contrast, those areas situated over 100 m (328 ft) from any of the above-referenced properties would be considered to retain a no/low historic period archaeological sensitivity.

Management Recommendations

The combined review of historic maps, aerial images, land deeds, and pedestrian survey resulted in the determination that 10.47 ac of land in the central, northwestern, northern, and eastern portions of the 14.02 ac project area are characterized by slopes, areas of standing water, poorly drained soils, and limited disturbances (Figure 29). These areas retain a no/low archaeological sensitivity and no additional archaeological examination of them is recommended prior to construction of the solar center. In contrast, 3.55 ac of land in the southwestern portion of the project area contains low slopes and well drained soils, with no obvious signs of large scale previous disturbance. The proximity of this portion of the project area to the Housatonic River and Robbins Swamp would have provided a suitable area for occupation and resource extraction for prehistoric and historic populations. This part of the project areas has been deemed to possess a moderate/high potential to yield archaeological deposits from the prehistoric and/or historic eras. Areas with similar environmental qualities throughout the large project region have produced archaeological sites. For these reasons, it is recommended that a Phase IB cultural resources reconnaissance survey of the 3.55 ac of land in the southwestern portion of the project area be completed prior to construction of the proposed solar center.

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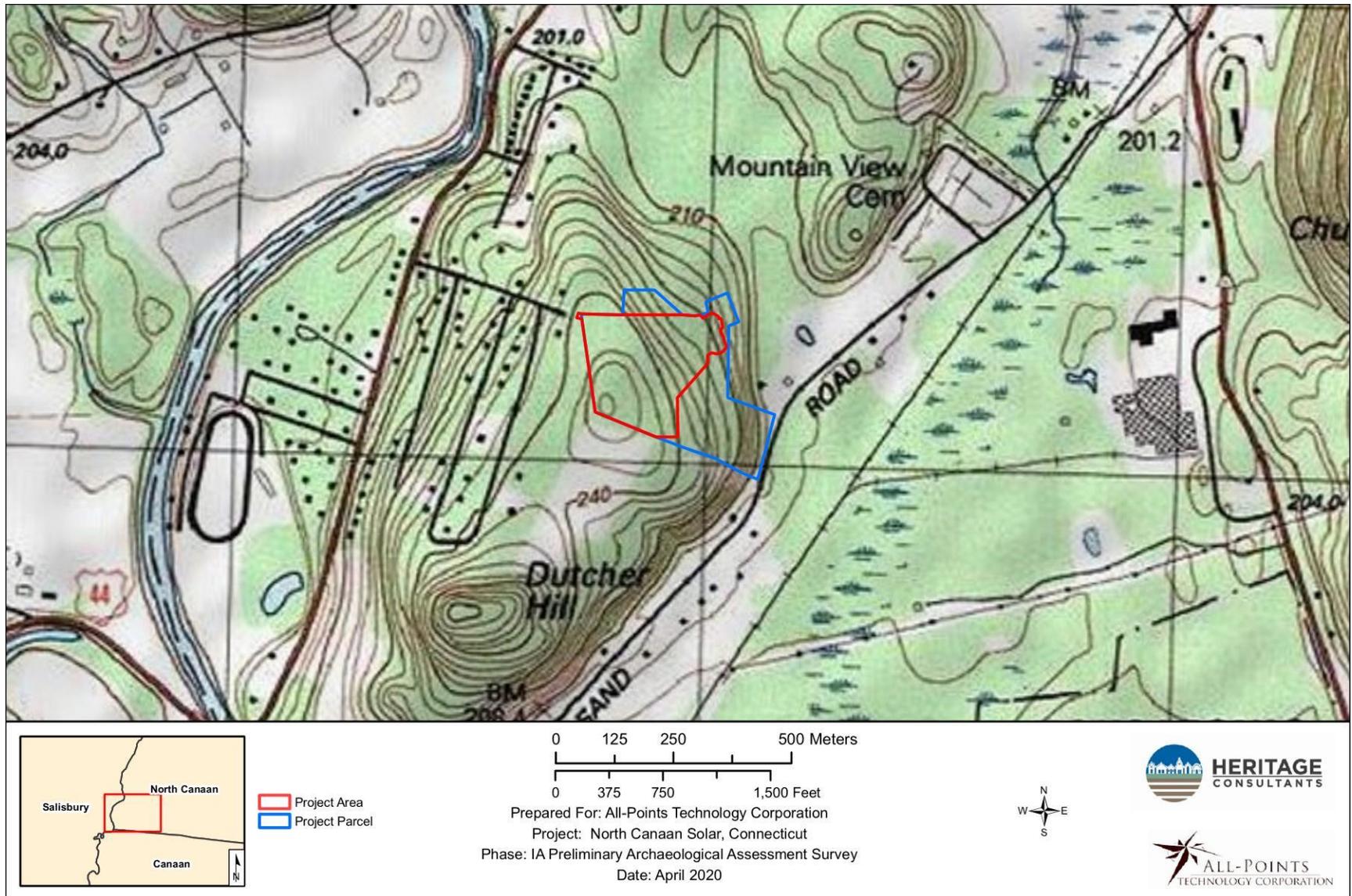


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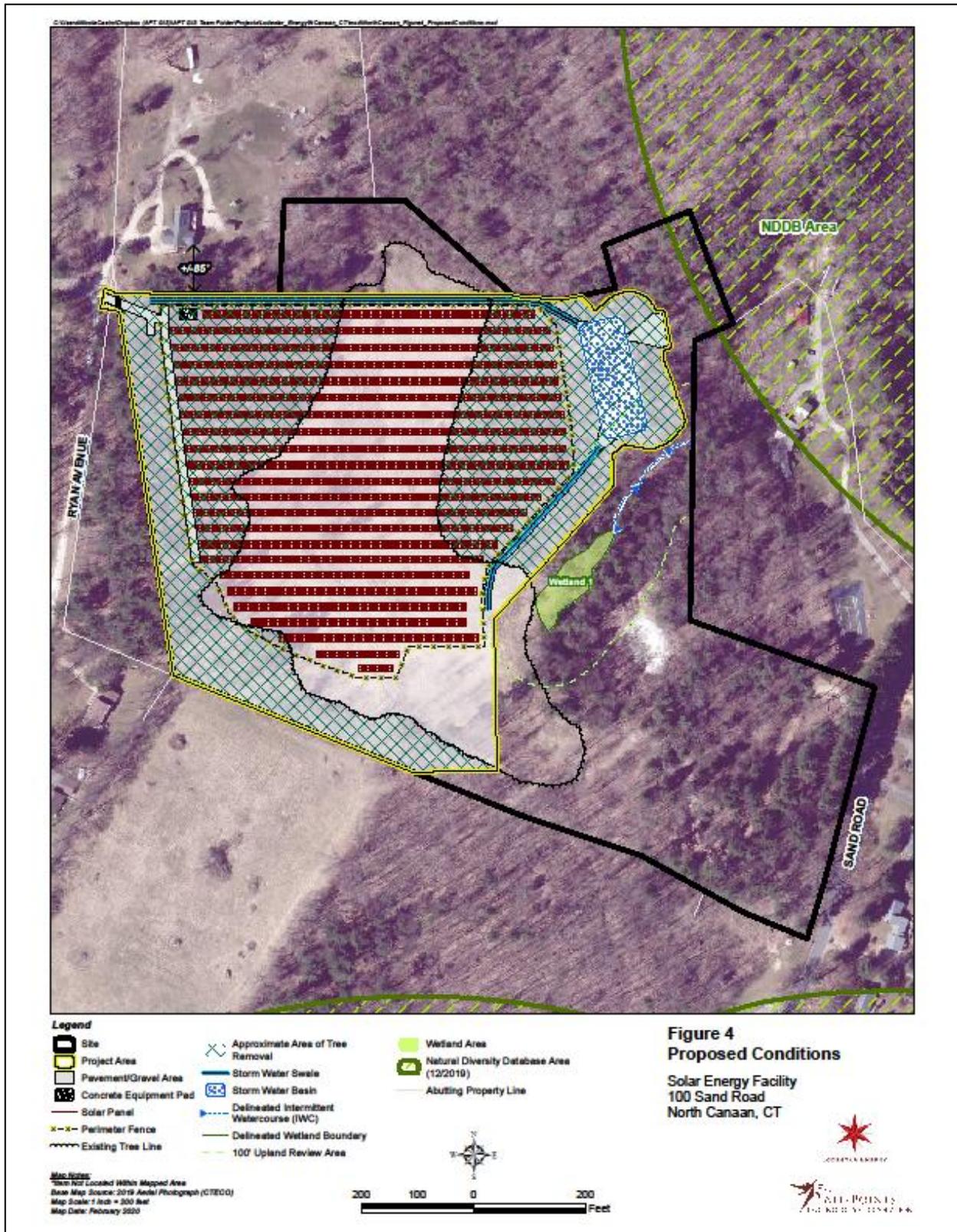


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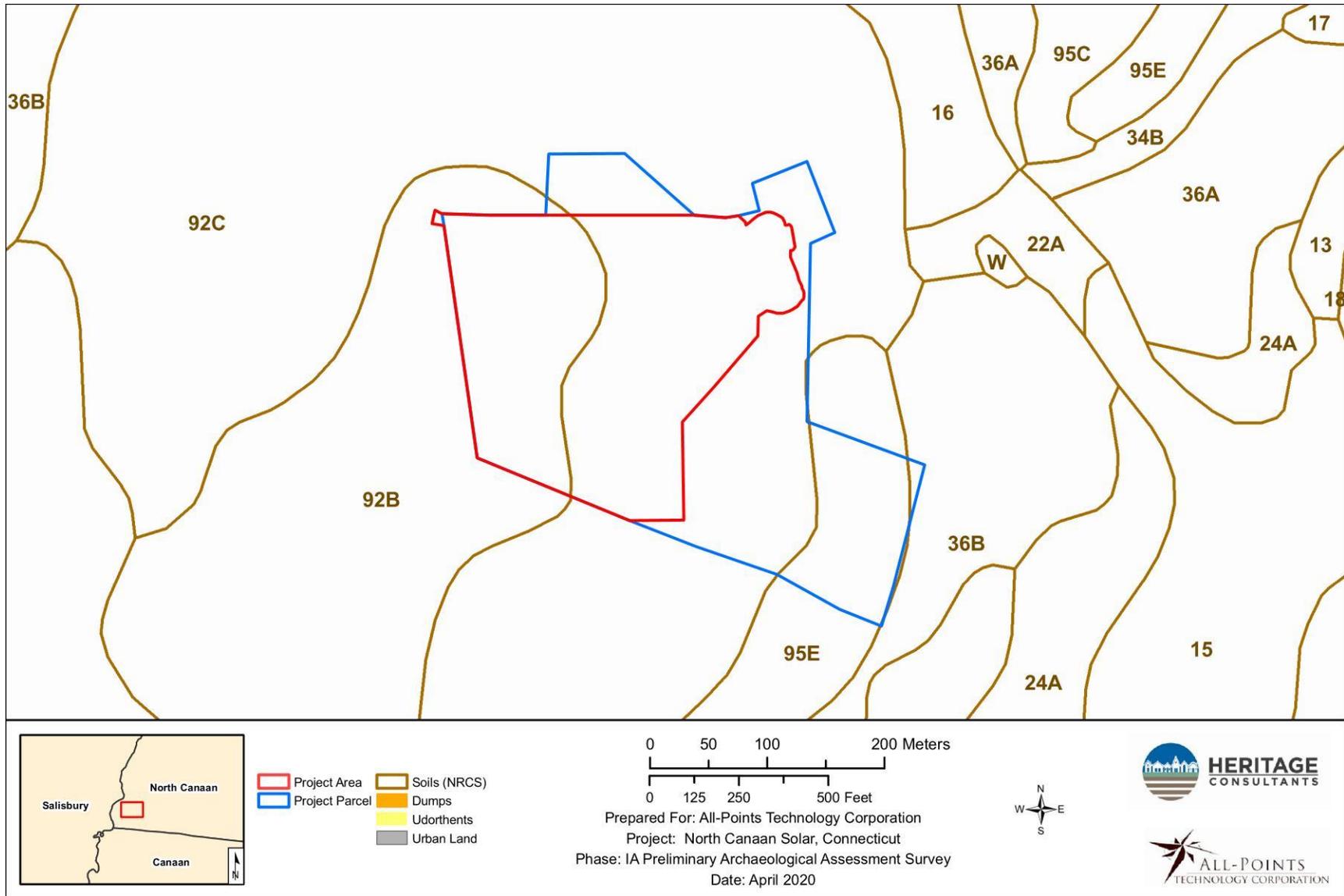


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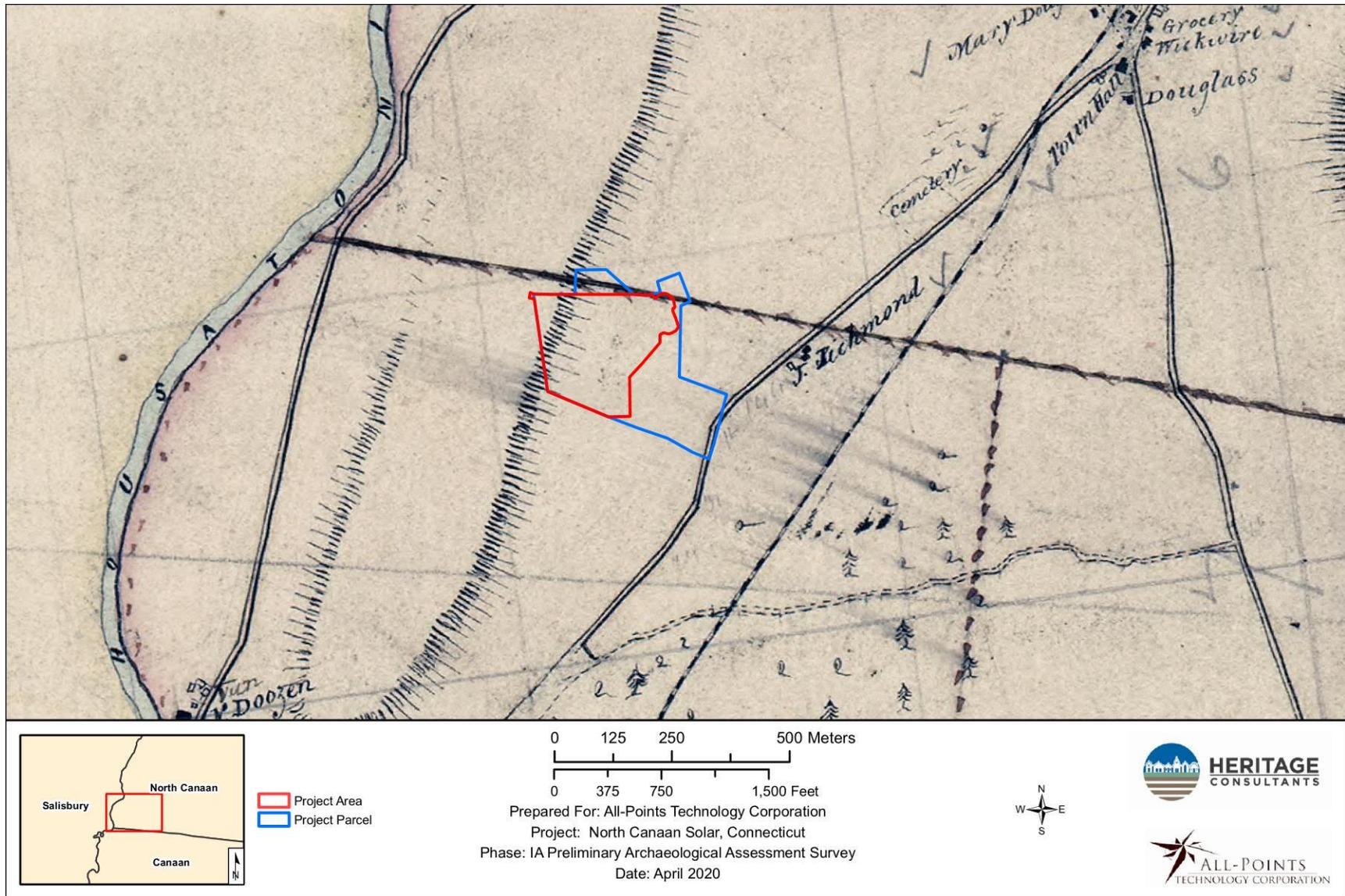


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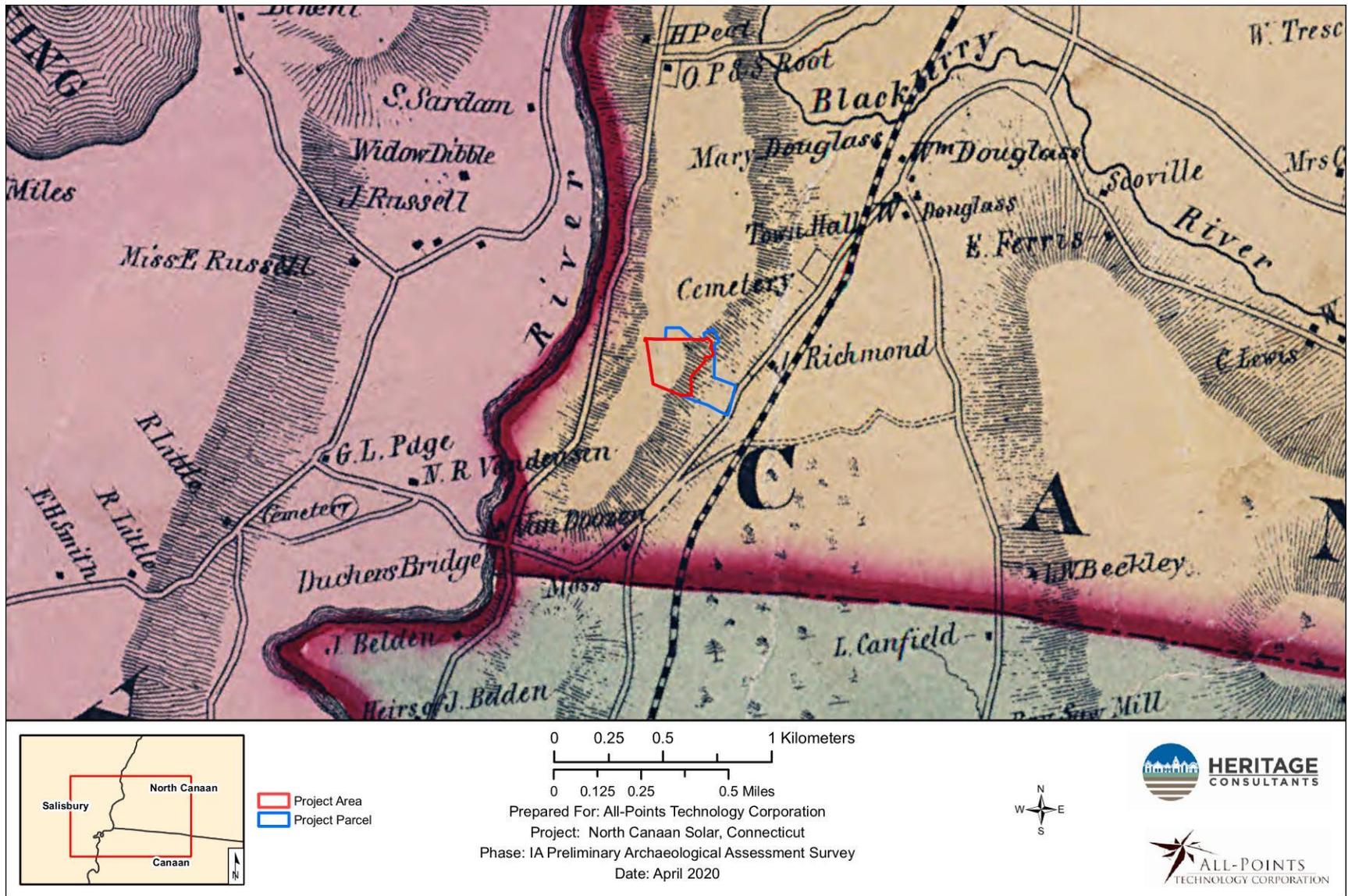


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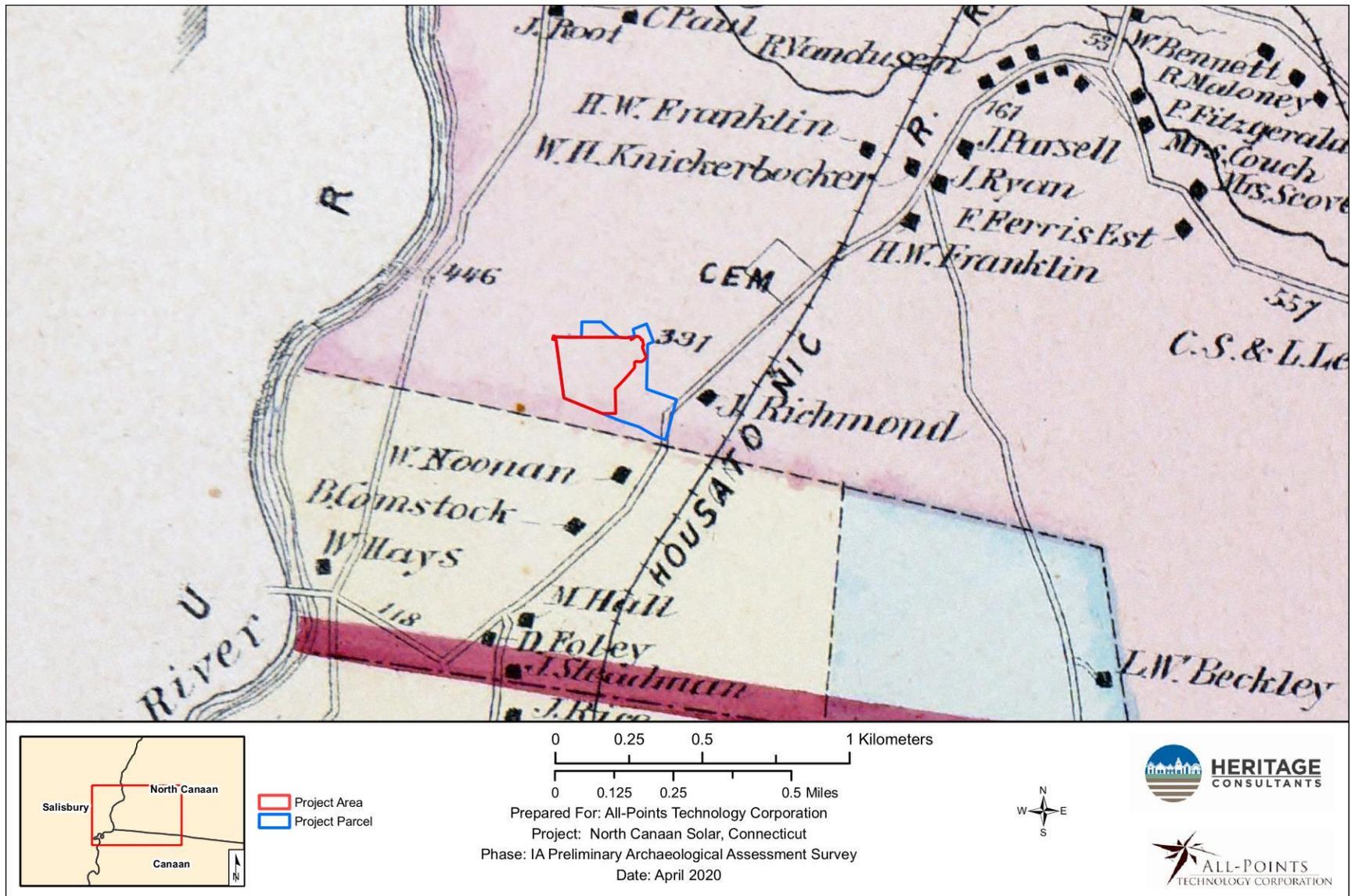


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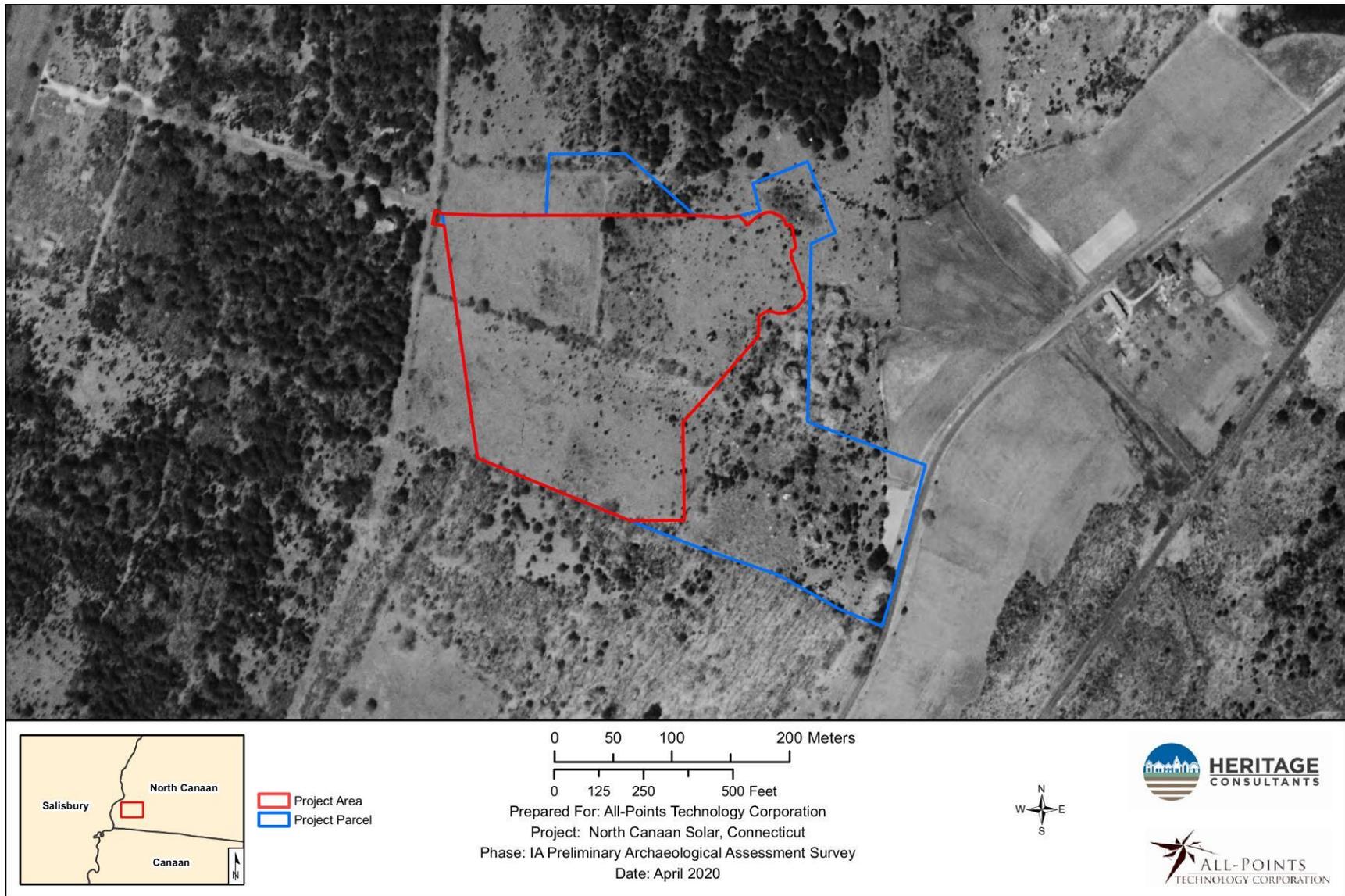


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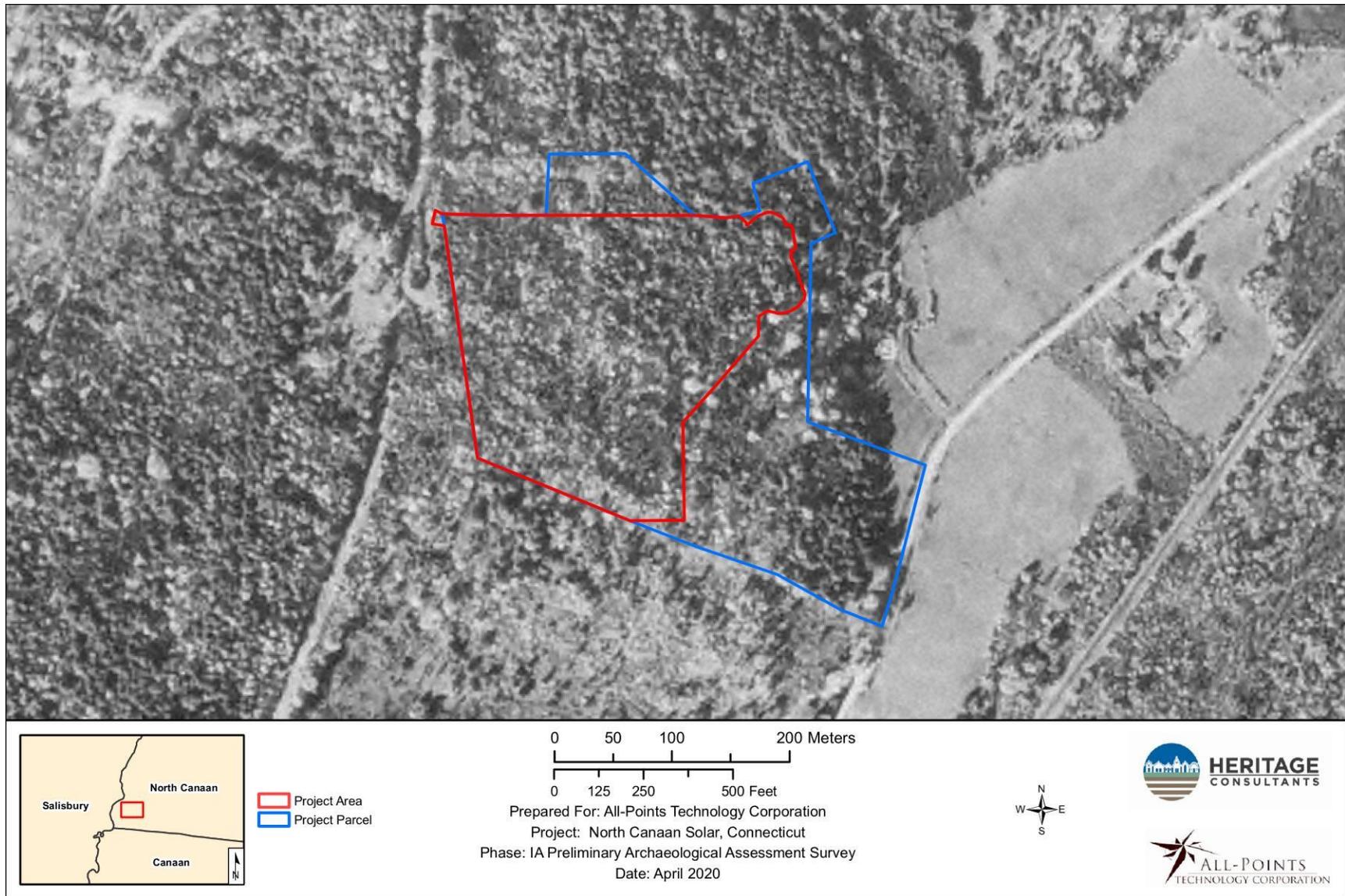


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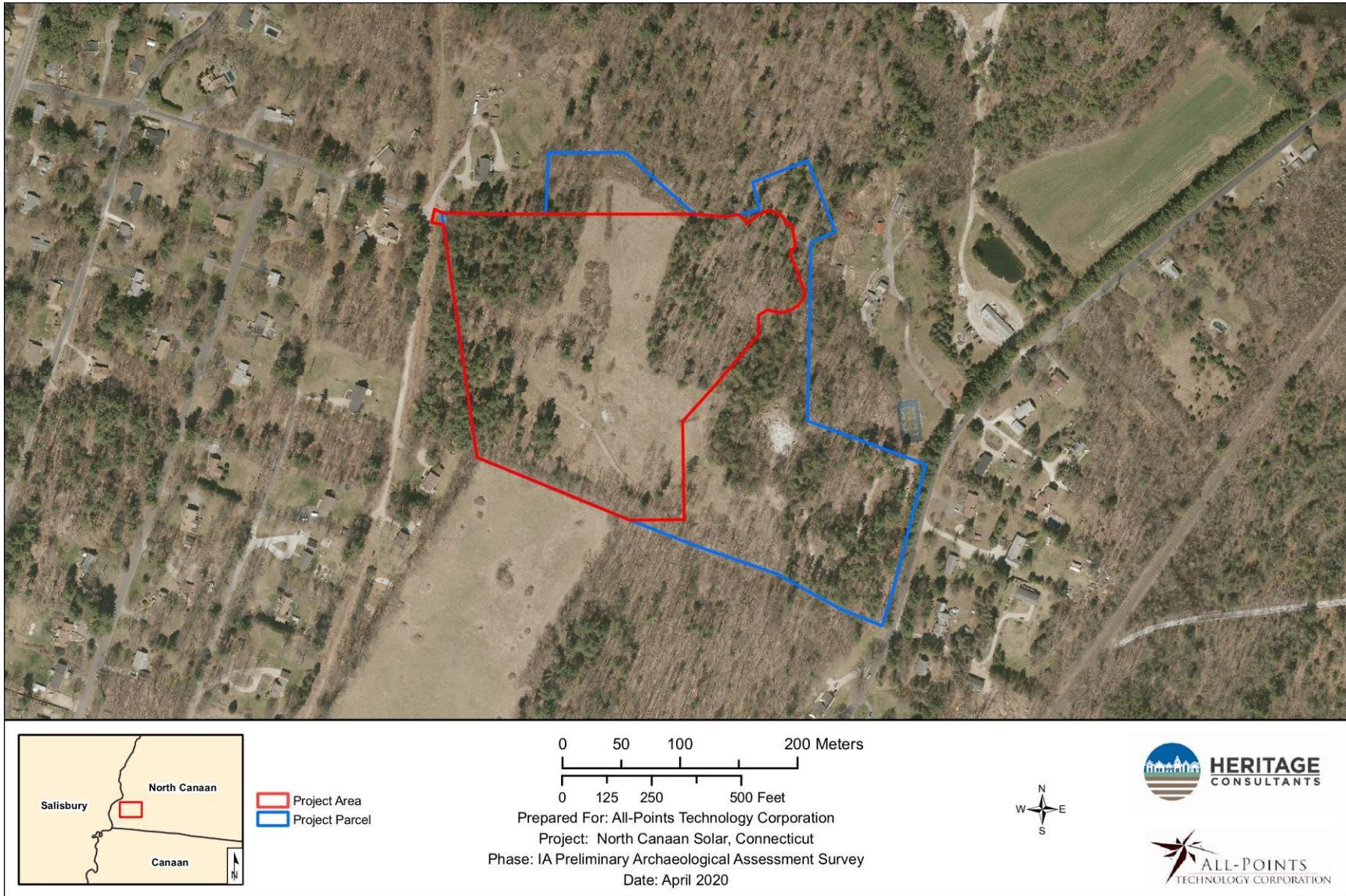


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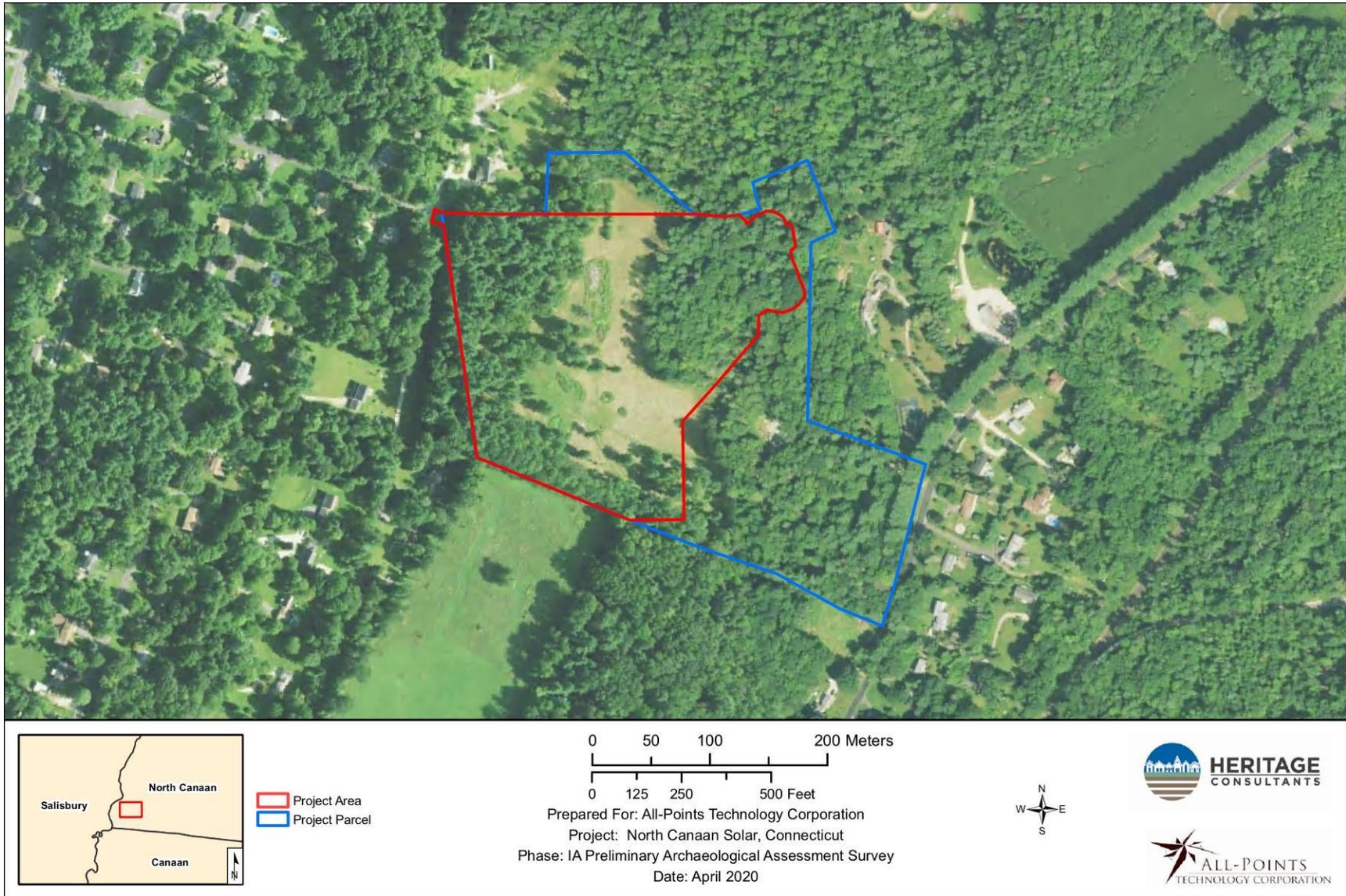


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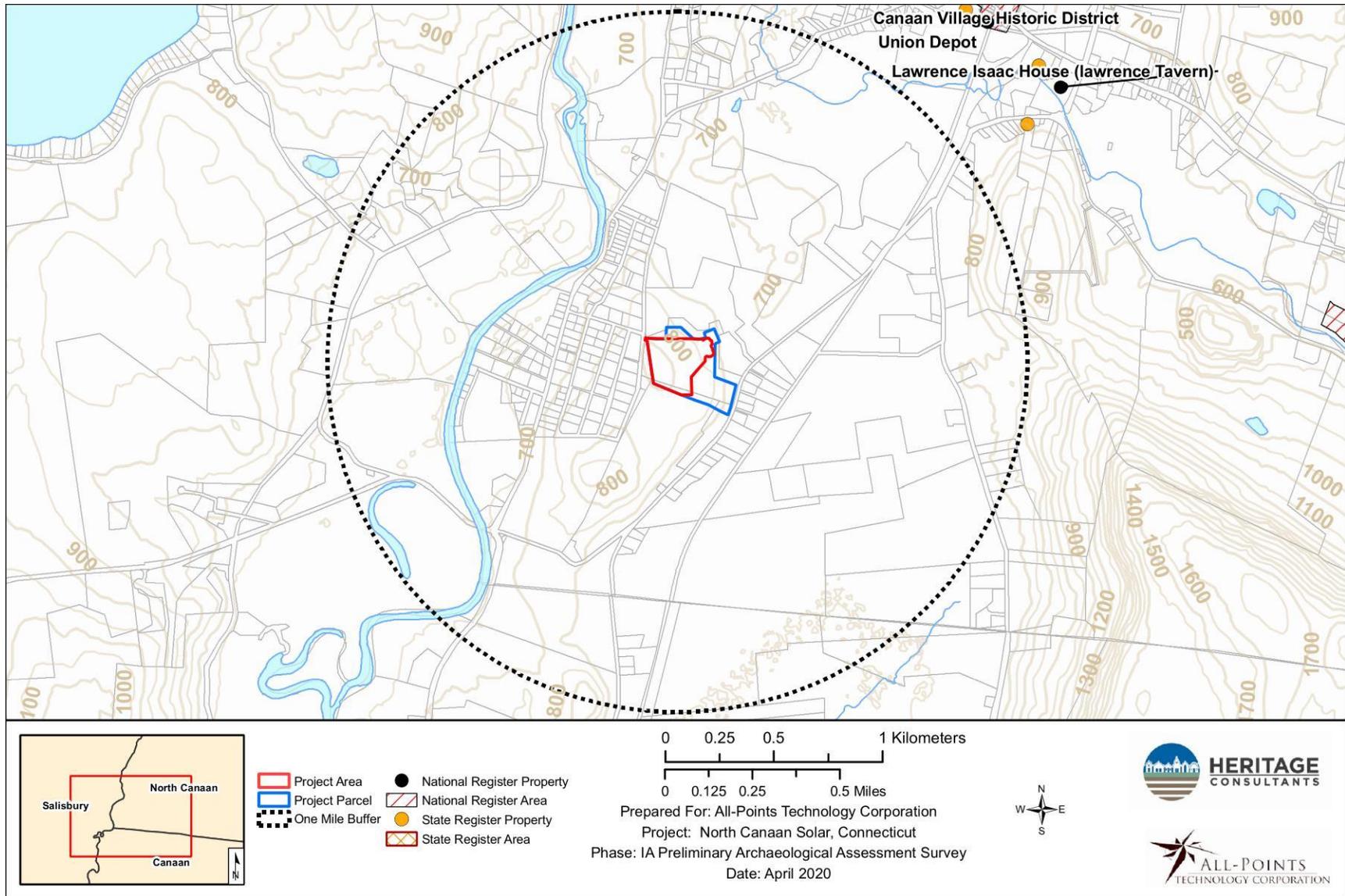


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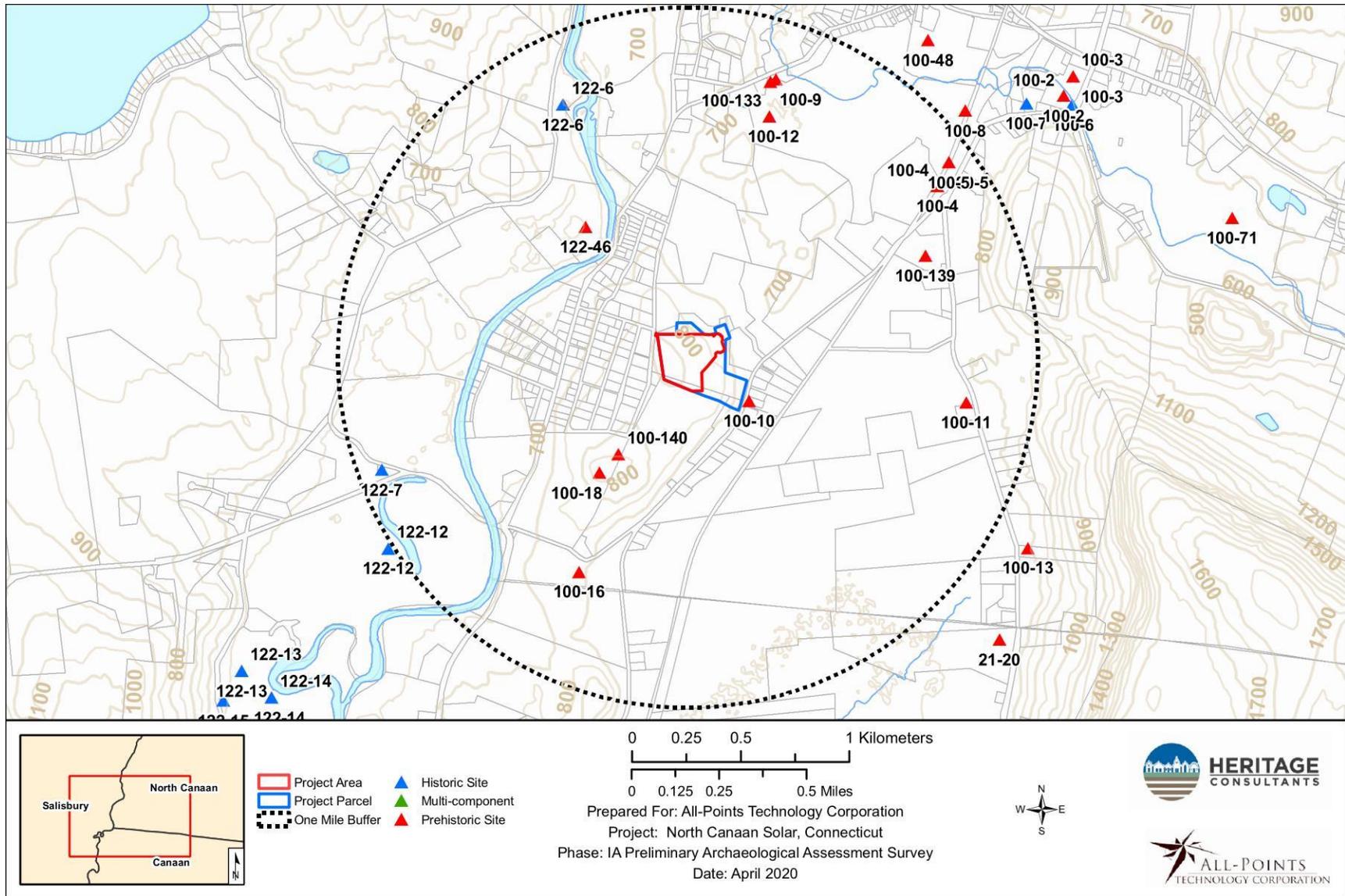


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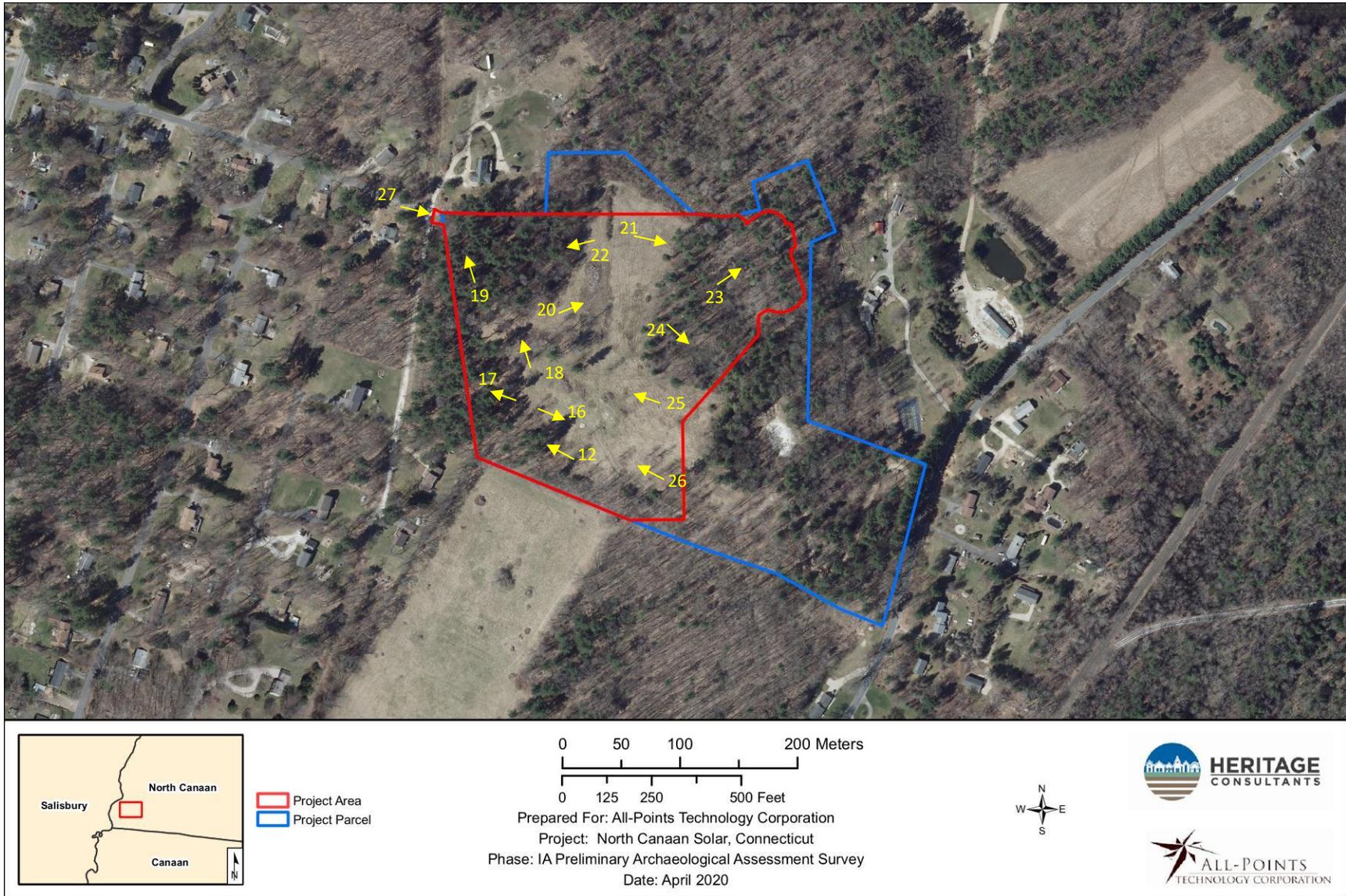


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Figure 28. Overview of project area facing east (note access to solar array is from Ryan Avenue at the northwest corner of the project area).

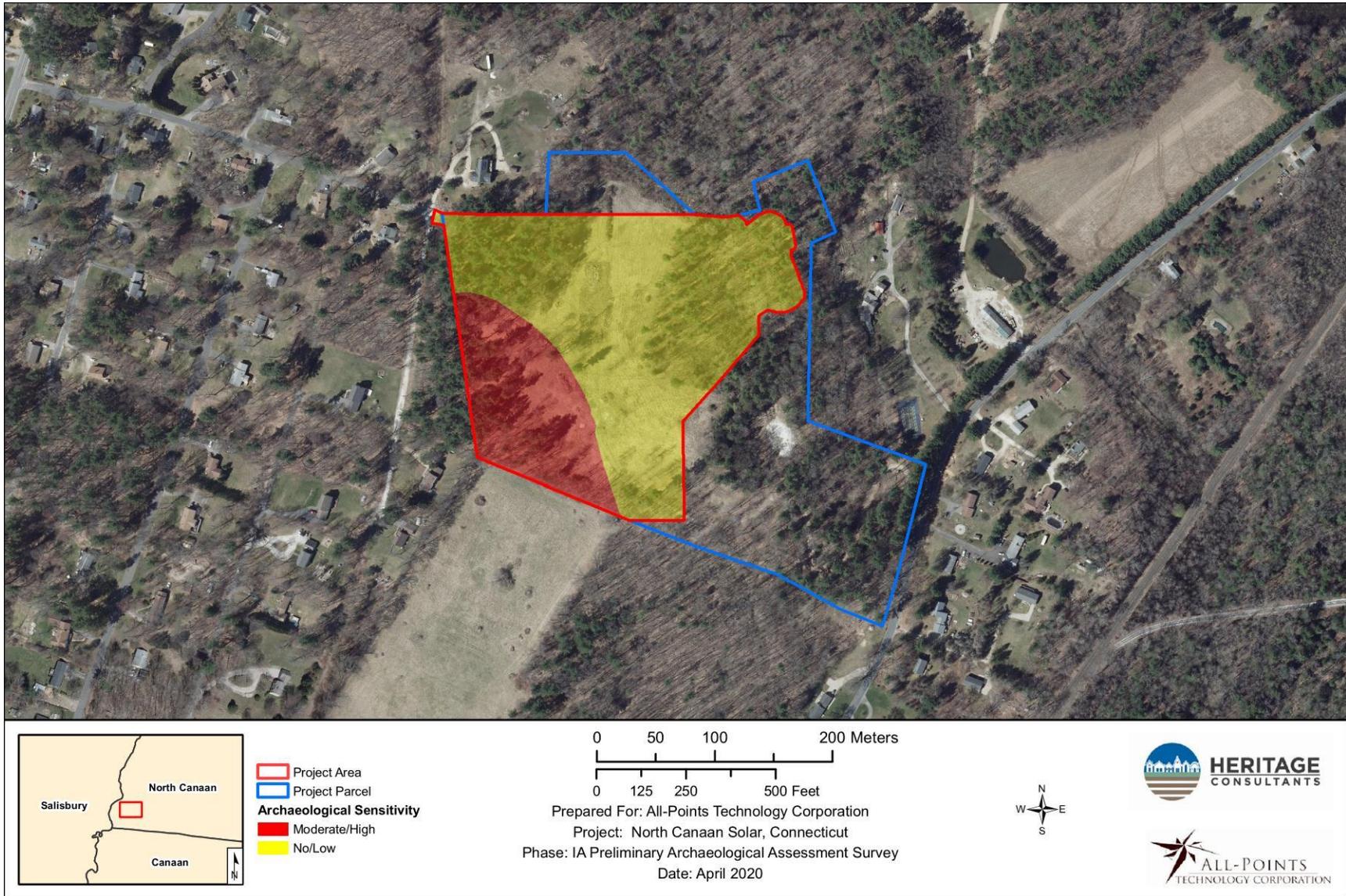


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MAY 2020

PHASE IB CULTURAL RESOURCES RECONNAISSANCE SURVEY
OF THE PROPOSED LSE PHOENIX LLC SOLAR CENTER
IN NORTH CANAAN, CONNECTICUT

PREPARED FOR:



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ABSTRACT

This report presents the results of a Phase IB cultural resources assessment survey of the LSE Phoenix LLC Solar Center in North Canaan, Connecticut. The project area associated with the solar array will occupy approximately 14.02 ac of land within a larger 23.96 ac parcel of land along the western side of Sand Road. The project area will be accessed from Ryan Avenue at the northwestern corner of the property. A previously completed Phase IA cultural resources reconnaissance survey determined 3.55 acres of land in the southwestern portion of the project area was characterized by well drained soils and level ground surfaces that retained moderate/high sensitivity for intact archaeological deposits. It was recommended that this portion of the project parcel be subjected to a Phase IB cultural resources survey prior to the construction of the solar center. The Phase IB survey was completed in May of 2020. A total of 66 of 66 (100 percent) planned shovel test pits were excavated throughout the moderate/high sensitivity area, resulting in the identification of one positive shovel test that was designated as Locus 1. A single chert chunk was recovered from Locus 1. An additional four delineation shovel tests were excavated in the cardinal directions around the original positive shovel test. No cultural features or soil anomalies were identified in association with the lithic debris within Locus 1, and the component could not be assigned a date or cultural affiliation due to the absence of temporally diagnostic artifacts. Locus 1 was assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]) and no additional archaeological examination of it or the project parcel are recommended. No impacts to cultural resources are anticipated by the construction of the solar facility.

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CHAPTER I

INTRODUCTION

This report presents the results of a Phase IB cultural resources reconnaissance survey of the proposed LSE Phoenix LLC Solar Center in North Canaan, Connecticut (Figure 1). All-Points Technology Corporation (All-Points), operating on behalf of LSE Phoenix LLC, requested that Heritage Consultants, LLC (Heritage) complete the Phase IB reconnaissance survey as part of the planning process for the proposed solar center, which will occupy approximately 14.02 ac of land within a larger 23.96 ac parcel of land along the western side of Sand Road. The project area is situated in the central portion of a large parcel of land located at 100 Sand Road in North Canaan. It is bordered to the north, south, and east by wooded areas and to the west by a residential area. Heritage completed the fieldwork for this investigation in May of 2020. 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 consist of a 7,560-module solar array that will include the installation of rows of solar panels with varied spacing between the rows. The development will include access from Ryan Avenue at the northwest corner of the property (Figure 2). The proposed project plans depict rip-rap lined swales along the northern and eastern edges of the project area and a permanent grass lined stormwater management basin and overflow weir in the northeastern corner. At the time of survey, the project area consisted of wooded areas and meadows, and ranged in elevation from approximately 203.6 to 248.1 m (668 to 814 ft) NGVD, with the highest elevation in the southwest sloping down to the east and northeast. Soils noted throughout the area are generally characterized as deep well drained soils with stratified sand, gravel, silt, and some clay.

The Phase IB cultural resources reconnaissance survey was completed utilizing pedestrian survey, systematic shovel testing, GPS recordation, and photo-documentation. During the survey, Heritage conducted the systematic excavation of shovel tests along parallel survey transects. The shovel tests were situated at 15 m (49.2 ft) intervals along 11 parallel survey transects running from north to south and spaced 15 m (49.2 ft) apart. Each shovel test measured 50 x 50 cm (19.7 x 19.7 in) in size and each was excavated to the glacially derived C-Horizon or until immovable objects (e.g., tree roots, boulders, etc.) were encountered. Each shovel test was excavated in 10 cm (3.9 in) arbitrary levels within natural strata, and the fill 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 using Munsell Soil Color Charts and standard soils nomenclature. Each shovel test was backfilled after being recorded.

Project Results and Management Recommendations Overview

The review of historic maps and aerial images depicting the project area, as well as files maintained by the CT-SHPO, resulted in the identification of 14 previously identified archaeological sites within a 1.6 km (1 mi) radius of the project area. Of the 14 identified sites, six were listed as Late Archaic period occupations. A total of five sites were not assigned specific occupation dates; however, the reported artifacts collected suggest prehistoric occupations. A single site contained both prehistoric and historic material culture. One site yielded only historic artifacts; however, it was noted on the submitted site

form that the location also held potential for prehistoric materials. Finally, a cemetery dating to the nineteenth century was identified and recorded nearby.

In addition to the cultural resources review, Heritage used data from a pedestrian survey, as well as historic map and aerial image analysis, to stratify the project area into zones of no/low and/or moderate/high archaeological sensitivity. It was determined that 10.47 acres of land contained moderate to steep slopes, areas of standing water, poorly drained soils, and limited disturbances. The remaining 3.55 acres in the southwestern portion of the project area retain moderate/high sensitivity for intact archaeological deposits. Phase IB survey of the 3.55 resulted in the identification of a single non-site cultural resource locus (Locus 1) that produced one prehistoric chert artifact. No cultural features or soil anomalies were identified in association with the Locus 1 area and the recovered artifact could not be assigned a date or cultural affiliation due to the absence of temporally diagnostic attributes. Thus, Locus 1 was assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No impacts to cultural resources are expected by the construction of the solar facility, and no additional archaeological examination of the project area is recommended.

Project Personnel

Heritage Personnel who contributed to the project include Mr. David R. George, M.A., R.P.A., (Principal Investigator); Ms. Renée Petruzelli, M.A., R.P.A. (Project Archaeologist); Mr. Cory Atkinson, M.A., (Field Director); Mr. Stephen Anderson, B.A., (Geographic Information Specialist), and Ms. Kristen Keegan PhD., (Senior Historian).

CHAPTER II

NATURAL SETTING

Introduction

This chapter provides an overview of the natural setting of the region containing the project area in North Canaan, Connecticut. Previous archaeological research has documented that there are specific environmental factors which can be associated with both prehistoric and historic period site selection. These include general ecological conditions, fresh water sources, soils, and slopes present in the area.

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: Northern Marble Valley 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.

Northern Marble Valley Ecoregion

The project area is located within the town of North Canaan, Connecticut and is situated in the Northern Marble Valley ecoregion of the Northern Uplands-Transitional Hardwoods Zone. The Northern Marble Valley ecoregion is characterized by interior valleys, lowlands, and extensive floodplains adjacent to steep valley walls. The Marble Valley’s territory stretches up and down the western Connecticut boundary line, following the Housatonic River (Dowhan and Craig 1976). In regard to the ecoregion’s elevation, the valley floor ranges from 76.2 m (250 ft) to above 152.4 m (500 ft), with the maximum elevation reaching 213.4 m (700 ft) between the valley and upland regions (Dowhan and Craig 1976:41). The Northern Marble Valley is one of three subregions within the Marble Valley, however, all three consist of “soils that are developed on glacial tills in higher areas and on extensive deposits of stratified sand, gravel, silt, and some clay,” (Dowhan and Craig 1976:41). Calcium-rich bedrock lies beneath the valleys which is evident in the soil types and characteristics from the ecoregion.

Hydrology in the Vicinity of the Project Region

The project area is close to ponds, brooks, rivers, and wetlands. Freshwater sources include the Blackberry River, the Housatonic River, the Whiting River, and Robbins Swamp, the largest freshwater wetland in Connecticut. The Housatonic River is located approximately 505.7 m (1659.1 ft) to the west

of the project area and Robbins Swamp is located approximately 367 m (1,204.1 ft) to the south of the project area. 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 fresh water, 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 Nellis soils (Figure 3). An overview of Nellis soils is presented below.

Nellis Soils (Soil Code 92):

The Nellis series consists of very deep, well drained soils formed in calcareous till. They are nearly level to very steep soils that have formed on upland ridges, knolls, and hillsides. Slope ranges from 0 to 60 percent. Typical sequence, depth, and composition of this soil is as follows: **Ap**-- 0 to 9 inches; dark brown (10YR 3/3) fine sandy loam, pale brown 10YR 6/3, dry; moderate fine and medium granular structure; very friable; many very fine and fine and few medium roots; common fine and few medium tubular pores, and many fine vesicular pores; 5 percent rock fragments; neutral; abrupt smooth boundary; **Bw1**-- 9 to 16 inches; dark yellowish brown (10YR 4/4) fine sandy loam, weak fine and medium subangular blocky structure; very friable; many fine and very fine, and few medium roots; common fine and few medium tubular, and many fine vesicular pores; 5 percent rock fragments; neutral; clear wavy boundary; **Bw2**-- 16 to 21 inches; brown (10YR 4/3) fine sandy loam; moderate fine and medium subangular blocky structure; very friable; common very fine and fine roots; common fine and few medium tubular pores, and many fine vesicular pores; 5 percent rock fragments; neutral; clear wavy boundary; **BC1**-- 21 to 26 inches, brown (10YR 5/3) fine sandy loam; massive with thin and medium plate-like divisions; friable; common very fine and fine roots; common fine vesicular, and few fine tubular pores; 6 percent rock fragments; neutral; clear smooth boundary; **BC2**-- 26 to 37 inches, 80 percent brown (10YR 5/3), 10 percent yellowish brown (10YR 5/6), and 10 percent brown (7.5YR 4/2) fine sandy loam; massive with medium and thick plate-like divisions; firm; few very fine and fine roots; few fine tubular, and common fine vesicular pores; 8 percent rock fragments; few fine faint brown (7.5YR 5/4) soft masses of iron accumulation; neutral; gradual wavy boundary; **C**-- 37 to 60 inches, grayish brown (2.5Y 5/2) fine sandy loam; massive with plate-like divisions; firm; few very fine and fine roots; few fine tubular and vesicular pores; 9 percent rock fragments; moderately alkaline; violently effervescent; gradual wavy boundary; and **Cd**-- 60 to 80 inches, grayish brown (2.5Y 5/2) fine sandy loam; massive; very firm; 13 percent rock fragments; moderately alkaline; violently effervescent.

Summary

The natural setting of the area containing the proposed LSE Phoenix LLC Solar Center is common in the uplands section of Connecticut, which is characterized by narrow river valleys and low hills. The Northern Valley Marble ecoregion stretches up and down the western Connecticut boundary line, following the Housatonic River. The project area is located just slightly over 500 m (1659.1 ft) to the east of the Housatonic river and approximately 367 m (1,204.1 ft) to the north of Robbins Swamp, the largest

wetland in Connecticut. The region demonstrates that there is substantial natural diversity remaining even though the area has undergone modifications and adaptations since the retreat of the glaciers. The proximity of the project area to the Housatonic River and Robbins Swamp would have provided excellent resource extraction areas for prehistoric and historic populations. This is reflected in the number of archaeological sites previously identified in the larger region. Therefore, archaeological deposits may be expected near or within the proposed impact area.

CHAPTER III

PREHISTORIC SETTING

Introduction

Prior to the late 1970s and early 1980s, 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 were located in areas such 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, 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 small and produce few artifacts, most of which are not temporally diagnostic. While Early Archaic sites in other portions of the United States are represented by projectile points of the Kirk series (Ritchie and Funk 1973) and by Kanawha types (Coe 1964), sites of this age in southern New England are identified on the basis of a series of ill-defined bifurcate-based projectile points. These projectile points are identified by the presence of their characteristic bifurcated base, and they generally are made from high quality raw materials. Moreover, finds of these projectile points have rarely been in stratified contexts. Rather, they occur commonly either as surface expressions or intermixed with artifacts representative of later periods. Early Archaic occupations, such as the Dill Farm Site and Sites 6LF64 and 6LF70 in Litchfield County, are represented by camps that were relocated periodically to take advantage of seasonally available resources (McBride 1984; Pfeiffer 1986). In this sense, a foraging type of settlement pattern was employed during the Early Archaic Period.

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

By the onset of the Middle Archaic Period, essentially modern deciduous forests had developed in the region (Davis 1969). It is at this time that increased numbers and types of sites are noted in Connecticut (McBride 1984). The most well-known Middle Archaic site in New England is the Neville Site, which is 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 m² (5,383 ft²). These base camps reflect frequent movements by small groups of people in search of seasonally abundant resources. The overall settlement pattern of the Laurentian Tradition was dispersed in nature, with base camps located in a wide range of microenvironments, including riverine as well as upland zones (McBride 1978, 1984:252). Finally, subsistence strategies of Laurentian Tradition focused on hunting and gathering of wild plants and animals from multiple ecozones.

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

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

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

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

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

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

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

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

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

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 been thought to have been characterized by the advent of farming, the initial use of ceramic vessels, and increasingly complex burial ceremonialism (Griffin 1967; Ritchie 1969a and 1969b; Snow 1980). In the Northeast, the earliest ceramics of the Early Woodland Period are thick walled, cord marked on both the interior and exterior, and possess grit temper.

Careful archaeological investigations of Early Woodland sites in southern New England have resulted in the recovery of narrow stemmed projectile points in association with ceramic sherds and subsistence remains, including specimens of white-tailed deer, soft and hard-shell clams, and oyster shells (Lavin and

Salwen: 1983; McBride 1984:296-297; Pope 1952). McBride (1984) has argued that the combination of the subsistence remains and the recognition of multiple superimposed cultural features at various sites indicates that Early Woodland Period settlement patterns were characterized by multiple re-use of the same sites on a seasonal basis by small co-residential groups.

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

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

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

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

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

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

1988b; Lizee 1994a; Pope 1953; Rouse 1947; Salwen and Ottesen 1972; Smith 1947). These types are more diverse stylistically than their predecessors, with incision, shell stamping, punctation, single point, linear dentate, rocker dentate stamping, and stamp and drag impressions common (Lizee 1994a:216).

Summary of Connecticut Prehistory

In sum, the prehistory of Connecticut spans from ca., 12,000 to 350 B.P., and it is characterized by numerous changes in tool types, subsistence patterns, and land use strategies. For 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

Introduction

The project area is situated in the southwestern part of the town of North Canaan, Connecticut. Located in the northwestern corner of Connecticut in Litchfield County, North Canaan shares its northern border with the state of Massachusetts. Like most of Litchfield, the region of the project area has remained highly rural almost through to the present day. This chapter presents an overview history of the project region.

Native American History

Connecticut historical tradition holds that the “River Indians” living beside the Connecticut River deliberately invited the English to settle within their territory so they would act as a counter to the overwhelming power of the Pequot tribe (Stiles 1892:103-104). This may be correct, at least the limited sense that some local leader or “sachem” did invite them. Much of historians’ interpretation of the documentary evidence attempts to show that the “River Indians” were a recognizable nation whose legitimate leaders had invited the English to move in and take over the whole region. A contrary interpretation would be that the leaders of one or more small independent groups tendered the invitation but did not have the right to surrender the whole of the area. This debate is influenced by the interpretations of the colonists themselves.

Used to the idea that land tenure derives from a sovereign, historians have repeatedly tried to identify such a sovereign among the natives so that they arrange the transfer of the land from the native sovereign to their own. Ever since, local historians’ attention to Native American matters often has been focused on identifying which of several larger tribal groups or confederations these small local groups belonged to, in order to explain their supposed place in the larger political scheme and demonstrate the legitimacy of the town fathers’ land purchases (or, in some areas, that the local Native Americans had been subjects of the Pequots, and so were dispossessed in the war). These speculations inevitably underlie a large part of the following discussion of colonial-era Native American history, which means that much of the information is of dubious value in understanding what happened.

Relatively little is known about the Native Americans of the northwest highland region of Connecticut. Given the rough topography and elevation of the general area, it is assumed that pre-Contact Native Americans there were seasonally shifting horticulturists who also relied on hunting and fishing for their livelihoods. Post-contact development in the region included the arrival of many lowland Native Americans who had been pushed or driven out by the colonists. Documented colonial-era villages in the northwest highlands are mainly located along the Housatonic River, which is less than 1.6 km (1 mi) to the west of the project area. Early historians of Connecticut’s Native Americans, notably J. W. De Forest (1852), believed that before the northwestern part of Connecticut was entirely uninhabited, Mohawk raiding parties from New York passed through the area at will.

As noted above, since early historians have focused largely on political interactions with significant Native American tribes, it is not surprising that De Forest would overlook the small communities that most likely existed in the northwest. According to Matthias Spiess, an early twentieth century anthropologist, the Mohawks actually claimed what is now northwest Connecticut, so that none of the

other tribes dared to settle there. However, by the early eighteenth century the Mohawks' influence had declined to the point that a variety of other Native American bands moved into, or perhaps reclaimed, the area (Spiess 1934).

The keys to understanding Native American settlement in the Northwest Highlands are its history of early Dutch settlement, disease, and the lateness of extensive colonization of the area. Research completed by Shirley Dunn (1994, 2000) has found that the Mohican tribe had a territory extending from what is now Dutchess County to Lake Champlain, and from the east bank of the Housatonic River westward to past Schenectady. This does not mean the literal east bank of the Housatonic, but some difficult-to-define distance eastward from it, probably including at least four or five miles, which was well into Canaan and North Canaan. Because, as is discussed below, the eastern boundary of New York was poorly defined, enterprising Dutch colonists purchased Native American rights to the area. Between 1685 and 1704, a series of their purchases from Mohican landholders effectively cleared the title to this area in English eyes. These Native groups also suffered badly from repeated disease outbreaks and Mohawk raiding parties. In addition, the Native Americans who settled at Stockbridge in Massachusetts also sold or re-sold much of the southwestern corner of Massachusetts and adjacent parts of New York and Connecticut (Wright 1905). Local Connecticut historians do not appear to have been aware of these early transactions, which explains why they are not discussed in their histories. This means that specific information about the Native American inhabitants of Canaan and North Canaan remains elusive.

The Colonial Period

Litchfield County, where North Canaan and its parent town of Canaan are located, was the last area of Connecticut to be laid out into towns and colonized. This was in part because of its remoteness from the major coastal and riverine towns and overall ruggedness, and in part due to a lengthy controversy over ownership of the territory. In 1687, the Colony of Connecticut feared that the new royal governor of all New England and New York, Sir Edmund Andros, would take advantage of his appointment and distribute previously ungranted colony lands to persons outside the control of Connecticut. Their solution was to grant ownership of all the land lying between the Housatonic River on the west, and the towns of Farmington and Simsbury on the east, to the towns of Hartford and Windsor. The area to the west of the Housatonic was not included because of uncertainty concerning whether it was within the colony's official boundaries. The validity of this grant was never tested by Andros, as the New England colonies' continued objections to his policies led to his departure in 1689, which the new monarchs, King William and Queen Mary (crowned in 1688), did nothing about. The problems arose when, twenty years later, the town of Hartford began a series of attempts to cement its claim to this large area of land, even though it was well known that the 1687 measure had been an expedient. The dispute involved half the land in the future Litchfield County; although Hartford and Windsor managed to found the town of Litchfield between 1717 and 1719, after 1719 the colony government forbade any further laying out of land in the so-called "Western Lands" until things were sorted out (Crofut 1937).

Ultimately, the colony government agreed to a compromise that divided the land between itself and the two towns. In 1729, the two towns and the colony agreed to divide the land (less the previously laid out section of Litchfield) equally between themselves, with the colony receiving the western half and the two towns the eastern half. In 1732, Windsor and Hartford divided their portion between themselves, and Connecticut laid out five new townships in its half, which became Canaan, Goshen, Kent, Cornwall, and Norfolk; in addition, Yale College was granted 300 acres in each of the new towns, which it continued to own well into the nineteenth century and even into the twentieth. The method that Connecticut used to distribute the land was a new practice for it: in 1737, it ordered that 50 "rights" in

each township were to be auctioned, with an additional three rights withheld as public property for the benefit of the church, the first minister, and the school (Crofut 1937).

The future Canaan was auctioned at New London in January 1738, and the first meeting of the auction buyers, or proprietors, was held in Wethersfield the next month. These proprietors included men from Groton, Plainfield, Litchfield, Stamford, and Wethersfield, undoubtedly among others. They voted to name the town Canaan and to lay out at least 30 acres to each proprietor in one or two pieces; these initially surveyed lots were to be drawn at random by the proprietors. By June, the first settlers, including the Lawrence and Franklin Families, had moved to town, all locating in the portion of town that would later be renamed North Canaan. By 1739, enough of the settlers had moved onto their lots that the legislature incorporated the town and gave it permission to organize a Congregational church society. In accordance with colonial practice, the settlers hired a minister, Elisha Webster, in 1740, and shortly thereafter built a meeting house. The division of the town into two ecclesiastical societies, one northern and one southern, was accomplished in 1767; confusingly, however, the legislature designated the southern one as the First Society, and the northern one the Second Society, even though the northern area was settled and built a church first (Crofut 1937). The creation of a separate ecclesiastical society was commonly a precursor to the division of a Connecticut town into two municipalities, but that did not happen in Canaan for many years. The whole town had 1,126 inhabitants according to the 1762 census, and 1,635 by 1774 (Keegan 2012).

The colonial farmers of the northwest highlands practiced a mixed agricultural system involving limited animal husbandry (cattle, swine, and sheep) and the cultivation of crops such as grass, rye, Indian corn, oats, buckwheat, flax, beans, peas, and apples, as well as wheat in some areas with better soils. Commerce in the region initially was limited to the export of agricultural products such as flour, salted meat, corn, flaxseed, butter, and cheese, as well as lumber, cattle, and hogs. Imports naturally included delicacies such as sugar, molasses, and tea, and manufactured goods such as cloth, hardware, ceramics, and books. Torrington had three merchants before 1775. Small mills sprang up as soon as they could be arranged, especially gristmills for grinding grain into flour (sometimes used in place of currency), as well as sawmills for lumber products to be used locally and exported, and fulling mills that finished hand-woven cloth. Falls Village just north of the project area was one such village that developed around good mill sites; the iron industry of the northwest highlands appeared near Falls Village in the Housatonic River, as early as 1732 (Rossano 1997).

The Early National Period, 1780-1850

The need for better transportation was recognized throughout the new state in the opening decades of the nineteenth century, and the first attempt at improving things was the establishment of a system of turnpike roads. Corporations were formed by the General Assembly and granted authority to improve existing roads, build new roads, and charge tolls according to regulated rates for passage on them. Canaan's industrial boom required better roads, and three different companies answered the need and built roads through what would become North Canaan. The Greenwoods Company, incorporated in 1798, built a road from New Hartford, through or near the village of East Canaan, and then north to the Massachusetts line. Finished in 1799, it continued in operation until 1872. The Canaan and Litchfield Turnpike Company was chartered in 1799 and built a road from the Litchfield courthouse to Canaan Village in what is now North Canaan. It continued in operation until 1853, when it was dissolved because of competition from the new railroads. Last, the Warren Turnpike Company was chartered in 1806, first running from Warren to Falls Village, and in 1809 being extended to the Massachusetts line. The Warren Turnpike Company became a free road in the 1850s, around the same time the Canaan and Litchfield company was dissolved (Wood 1919). By 1813, the town of Canaan (including present-day North

Canaan), had six forges, five in the southern part of the town and one in the north. The northern forge was on the Blackberry River, to the east of the project area, which at the time also supported a grist mill and a slitting mill. This was undoubtedly the forge established by Richard Seymour in 1738, later expanded by Samuel Forbes and John Adam into a major enterprise by 1795. During the first half of the nineteenth century, these facilities were expanded to include blast furnaces, offices, worker housing, canals, and other structures (Gordon and Raber 2000).

A gazetteer published in 1819 reported that Canaan was a large and mountainous town, with considerable limestone resources being quarried. The valleys provided plenty of opportunity for agricultural production, ranging from grains (especially rye and corn, which were exported) to flax, meat, cheese, and butter. There were eight forges in the town, seven shops making anchors, and two furnaces for processing iron ore, most of which came from the neighboring town of Salisbury. The town also had a cotton textile mill, a distillery, mills for grinding grain and plaster, four water-powered machines for carding wool, fifteen sawmills drawing on the extensive forests on the town's hillsides, and many limekilns for producing lime. The compilers reported 276 dwelling houses in the town, but no clusters of them, and nine general stores supplying the community; in addition to the two Congregational churches, there was one Methodist and one Quaker community (Pease and Niles 1819).

In the 1830s, Barber described the businesses located near the falls of the Housatonic River (now in the current town of Canaan) as including an iron works, a forge, and an anchor shop. Otherwise, the economic activity he noted was limestone quarrying (Barber 1837). It is also known that a large quarry of dolomite (which has many industrial uses and is often found with limestone) was established near the village of East Canaan (Gordon and Raber 2000). The population of Canaan was quite substantial even in the earliest census years, and it passed 2,500 in 1850 and 1860, before the town split into North Canaan and Canaan. The jump in population after 1840 probably had to do with the construction of the Housatonic Railroad, which was incorporated in 1836; the financial panic of 1837 delayed construction, but it was completed from Bridgeport to the Massachusetts line in 1842, passing through Falls Village and then across country through Canaan. This railroad was successful for many years, serving passengers and the freight needs of Litchfield County's marble and granite quarries, iron industry, lime production, and porcelain clay operation. In 1892 the Housatonic Railroad was taken over by the New York, New Haven & Hartford Railroad, and during the twentieth century it suffered from the same decline as many other roads and is now largely abandoned (Turner and Jacobus 1989).

The town's population remained quite homogenous, in religious terms, for many years, but in the 1780s some individuals registered as Baptists exempt from taxes for support of the Congregational church, and in 1792 a Methodist Episcopal Church was organized, building a church in 1793 at a location called Battle Hill, northeast of Falls Village. In 1846, the parish of Christ Church, North Canaan, was founded (J. W. Lewis & Co. 1881; Hughes and Allen 1976). When the town divided in 1858, the southern part, though settled later, retained the name of Canaan, while the northern part became North Canaan (Crofut 1937).

Industrial and Urban Growth Period, 1850-1930

The highest population that Canaan has ever seen was in 1860, was 2,834 (for unknown reasons, Canaan and North Canaan were reported together in this census). When separate numbers were reported in 1870, Canaan's population had fallen by more than half, to 1,257; North Canaan, in contrast, had 1,695 residents. North Canaan garnered an increasing population after the division, its population rising to an early peak of 2,171 and falling to under 2,000 in 1920, and then recovering lost ground by 1930. Canaan's population, in contrast, fell steadily to just over 500 by 1930. Two banks were chartered in North Canaan during the latter part of the nineteenth century, and only one in Canaan. According to the

county history, the village of Canaan (located presently in North Canaan just north of the project area) was “a pleasant village, with churches, numerous stores, two hotels, and a newspaper” and commanded a good position on both the Housatonic and Connecticut Western Railroads (J. W. Lewis & Co. 1881, 485). While the village was not distinctly marked on an 1859 historic map of the county, there are several clustered homesteads, the town hall, the railroad, and a cemetery noted just north of the project area, near the intersection (Figure 5). The numerous pictures of trees south of the project area on the 1859 historic map indicate the swamp, and the dotted lines marking a road near the project area’s southern boundary suggests a seasonal or unreliable road (Figure 5). The only marked structure close to the project area parcel was across the railroad tracks, marked J. Richmond on an 1853, 1859, and 1874 historic maps (Figures 4 through 6).

The Richmond Family, closest to the project area can be reviewed to understand a little about the area’s population. The only Richmond Family in Canaan in 1850 consisted of John H. and Betsey Richmond, respectively 37 and 32 years old, respectively, and their two sons, aged 11 and 6. According to the census report, John was a farmer who owned \$2,700.00 in real estate, and his wife had been born in Massachusetts. Most of their presumed neighbors on the census page were Connecticut natives, but there were a smattering of other Massachusetts and New York people, which is not surprising for a town located near both those states; there were also seven people in the neighborhood who were born in Ireland. Their neighbors also included two African American families (both headed by laborers), and two African American teenagers living with a white family. Three other farm families on this page owned property; one of the farms was worth \$10,000.00. The occupation of three other heads of household, including the two African American households, was laborer; two other families were headed by a teamster and an Irish-born furnace man (U.S. Census 1850). At this time, the industrial census of Canaan recorded 31 firms that produced more than \$500.00 of product per year, including six sawmills and three each of forges, blast furnaces, textile mills, blacksmiths, and lime kilns. Taken all together they employed 117 men and 22 women, but the largest business (a woolen mill) employed only 27 people of both sexes (U.S. Census 1850, Schedule 5).

By 1874, the village of Canaan was marked on the map and fully established. J. Richmond was still the only homestead close to the project area, and the cemetery, known as Lower Cemetery or Mountain View Cemetery today, was the only public facility still nearby (Figure 6). In the 1870 census, the Richmond parents John and Betsey were in their 50s, and their two sons were in their 20s and listed as unmarried. All three men’s occupation was listed as farmer, and the family owned \$5,000.00 in real estate and \$500.00 in personal estate. The Noonan Family, seen on the map to the south of the Richmonds, was headed by Irish-born parents. The father was listed as a teamster who owned \$1,000.00 in real estate. The Comstock Family further south was headed parents born in Massachusetts and New York, the father being a farmer who owned \$1,200.00 in real estate. Even further to the south, right on the town line, were the Steadmans, an African American family headed by Julius and Celestia, both of whom were born in Massachusetts (Figure 6; U.S. Census 1870). Just as the map suggests, these were rural occupations and they were not making any of the family’s rich.

During the mid to late nineteenth century, farming became an increasingly uneconomical proposition in Connecticut. Most farmers switched from meat and grains, which could be purchased more cheaply from the Midwest, to butter and cheese, which did not travel as well. In the 1880s, refrigerated railroad cars were developed, which allowed the production of fresh milk to become important as well. Overall, the farming population fell, and marginal lands were abandoned. Towns with industrial activity managed to keep their populations stable, while primarily agricultural places lost population through the 1930s (Rossano 1997). The primary businesses of North Canaan were the iron industry and the dolomitic

limestone quarries. Some of the iron furnaces near East Canaan village continued in operation until 1923, changing ownership to the Barnum & Richardson conglomerate in the later nineteenth century. Overall, the declining economy of the region was supplemented to a certain extent in the late nineteenth and early twentieth centuries by the establishment of summer homes and hobby farms by wealthy city dwellers. Camps and cottage rentals for the less well-off also developed, but these temporary visitors were not sufficient to boost the population (Gordon and Raber 2000; Bepler and Bepler 1999).

An important non-localized impact of the iron industry before ca., 1860 was deforestation caused by an insatiable demand for charcoal to feed the iron furnaces (Gordon and Raber 2000). In Salisbury and Sharon, where furnaces like Canaan's and North Canaan's were in operation, 70 percent of the forested area was owned, rented, or otherwise utilized by iron manufacturers for charcoaling. The Barnum & Richardson Company papers from approximately 1890-1920 indicate that the charcoal supply had dwindled to the point that they had to import anthracite coal from Pennsylvania to operate their furnaces (Gordon and Raber 2000). The iron and quarrying industries in North Canaan were served and supported by a second railroad, built through the town in 1871. It was primarily the result of the efforts of Egbert Butler of Norfolk, who began working toward that goal in the 1860s. The existence of an east-west line through Litchfield County, he believed, would help reanimate the region's economy. He succeeded in chartering the Connecticut Western Railroad Company in 1866 but had to have the charter revised in 1868 so the company could sell stock and begin surveying and building. The company, with its connections to north-south running lines, made some money at first, but then began to decline, a process exacerbated by the collapse of a bridge on the line in 1878 that killed 13 people. In 1880, the company went bankrupt and was reorganized as the Hartford & Connecticut Western Railroad Company in 1881. It was later absorbed into the Central New England Railroad, and remained an important part of the system until after 1900. Then its profits began to decline once again, and it was absorbed into the New York, New Haven, & Hartford system in 1927. After that much of the track began to be abandoned, by the 1980s little trace of it remained west of Bloomfield or east of Canaan (Turner and Jacobus 1989).

Modern Period, 1930-Present

As of 1932, North Canaan's primary economic pursuits were agriculture, the manufacture of lime, marble quarrying, and lumbering (Connecticut 1932). The survival of these industries into the 1930s helps to explain the growth of the town's population to that time; the 1930 population of North Canaan was 2,287. The 1934 aerial photograph of the project area displays the parcel boundaries of the former J. Richmond homestead possibly by the retention of stone walls, but even in 1934 reforestation is visible throughout these former agricultural areas (Figure 7). The number of farms in the region continued to fall through the twentieth century, but because of suburbanization, a result of the rise of the automobile, many towns began to grow again (Rossano 1997). Reforestation increased within the project area by the time of the 1954 aerial photograph, though some cleared land is visible just north of the project area along present-day Sand Road. The Housatonic Railroad is also visible in the 1951 aerial to the east of the project area (Figure 8). North Canaan's population increased steadily between 1940 and 2000, peaking at 3,350 before declining slightly to 2010. Canaan, in contrast, saw much more modest growth during the same period, peaking at 1,081 before also falling (Keegan 2012). Summer visitors continued to be a source of income to some property owners in the region (Bepler and Bepler 1999). Consistent with the general trend in the region, only 3 percent of the town's residents were employed in agriculture in 2005, with another 6.8 percent in mining; unusually, 40.4 percent of employment was in manufacturing, while 47.2 percent was in commercial enterprises. A clear majority of residents worked in the town (CERC 2007). Nonetheless, Canaan was still a very rural town in 2007; only 27 of the state's 169 towns were smaller than it in 1990.

The town's 2006 plan of conservation and development reported a breakdown of the use of developed land as follows: Residential, 61.41 percent Commercial, 14.27 percent; Industrial (11.37 percent, a very large increase since 1972); Agriculture, 7.6 percent (down slightly from 1972). The plan suggested encouraging commercial and industrial growth in certain areas and notes an increase in graveling operations (North Canaan 2006). This is consistent with the 2006 aerial photograph of the project area which displays a drastic increase in suburban properties west of the project area along Salisbury Road, while the project area itself appears to be completely reforested (Figure 9). This growth continued through 2016, with evident expansion west and north along Sand Road. Within the project area there appears to be a cleared area within the former Richmond farm parcel (Figure 10). Even this cleared area in 2016 displays some reforestation by 2018 with the remainder of the project parcel reforested (Figure 11). However, by 2019, the clearing within the project area is visible once again with visible dirt roads leading into the project area from the west and eastern boundaries (Figure 12).

Conclusions

Historical records indicate that the project area was probably the location of a farmstead dating to at least the mid-nineteenth century, if not earlier. The rest of the parcel was certainly used as farmland for most of that period, up through the mid-twentieth century. The historic owners of the property made no significant impact on the larger historic record.

CHAPTER V

PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous cultural resources research completed within the vicinity of the project area in North Canaan, 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, National/State Register of Historic Places properties, and inventoried historic standing structures over 50 years old situated in the project region. 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. 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

A review of data currently on file at the Connecticut State Historic Preservation Office, as well as the electronic site files maintained by Heritage failed to identify any National/State Register of Historic Places Properties or inventoried historic standing structures within 1.6 km (1 mi) of the project area (Figure 13). However, this review identified a total of 14 previously documented prehistoric and historic archaeological sites within 1.6 km (1 mi) of the project area (Figure 14). The identified archaeological sites are described below.

Site 100-4

Site 100-4, which is also known as the Lyle I Site, is situated on private property along High Street in North Canaan, Connecticut. It sits on a parcel of land that is bordered to the east by the Blackberry River. Site 100-4 was recorded in 1979 by field crew of the American Indian Archaeological Institute (AIAI) of Washington, Connecticut. The site was identified during a cultural resources management survey for the proposed North Canaan Sewer Project. The submitted site form lists Site 100-4 as a campsite. The date of the site was listed as unknown. A single decal decorated white earthenware sherd, and glass and brick fragments were collected from fill (catalog #79-2-47). No prehistoric material culture was recovered; however, the AIAI crew noted that “fluvial geology suggests there are deeply buried sediments likely to yield a prehistoric site” in this area. The Lyle I 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]). Site 100-4 will not be impacted by the proposed project.

Site 100-5

Site 100-5, which is also known as the Dead Exxon II Site, is situated on public land along Route 7 in North Canaan, Connecticut. It sits on a parcel of land bordered on the south by Route 7 and is approximately 0.6 km (.37 mi) to the south of the Blackberry River. Site 100-5 also was recorded in 1979 by field crew of the American Indian Archaeological Institute (AIAI) of Washington, Connecticut. It too was identified during a cultural resources management survey for the proposed North Canaan Sewer Project. The submitted site form lists Site 100-5 as a multi-component site with “chert flakes, “cut nails,” and brick fragments identified. The Dead Exxon II site is described by AIAI crew as an “upland camp

located at the southeast section of Robbins Swamp.” The Dead Exxon II 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]). Site 100-5 will not be impacted by the proposed project.

Site 100-9

Site 100-9, which is also known as the Smith I Site, is situated on private property along Routes 126 and 44 in North Canaan, Connecticut. The two submitted site forms note that the land was divided into two parcels, with Mr. Bushnell owning the land on the west side of Route 44 and on the west bank of the Blackberry River, and Mr. Smith owning the land on the east side of Route 44. Site 100-9 sits on a terrace above the Blackberry River and was first recorded in 1985 by George Nicholas of the American Indian Archaeological Institute (AIAI) of Washington, Connecticut. Nicholas reported that the site was discovered in a garden plot on Mr. Smith’s property on the east side of Route 126. Mr. Nicholas identified Site 100-9 as a Late Archaic to Early Woodland period campsite. He noted that surface finds consisted of unidentified lithic projectile points, tools and debitage. The Smith I Site was recorded again in 1996 by Ms. Cece Saunders of Historical Perspectives, Inc., of Westport, Connecticut as part of a cultural resources management survey for the proposed Blackberry River Bank Stabilization and Bridge Reconstruction Projects. Ms. Saunders reported that surface finds, consisting of a total of nine mixed quartz and chert lithic flakes, were identified on Mr. Bushnell’s property. She also noted that much of the integrity of the site was either disturbed or destroyed by home construction and highway and bridge construction. The Smith I 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]). Site 100-9 will not be impacted by the proposed project.

Site 100-10

Site 100-10, which is also known as the Christmas Tree Farm Site, is situated on private property on Sand Road in North Canaan, Connecticut. George Nicholas of the American Indian Archaeological Institute of Washington, Connecticut, recorded the site in 1985. Nicholas noted that the site area was a popular location for local artifact collectors because the area had been plowed. He reported that the Christmas Tree Farm Site was identified in a plowed field on the western shore of Robbin’s Swamp near the base of Dutcher’s Hill and that Mr. H. Duntz had previously recovered Middle Holocene-type projectile points at the location. The date of Site 100-10 is listed as unknown on the submitted site form. The Christmas Tree Farm 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]). Site 100-10 will not be impacted by the proposed project.

Site 100-11

Site 100-11, which is also known as the Gailles I Site, is situated on residential private property along Route 7 in North Canaan, Connecticut. It sits on the northeastern edge of the Robbin’s Swamp where it meets the Blackberry River. Site 100-11 was recorded in 1985 by George Nicholas of the American Indian Archaeological Institute of Washington, Connecticut. Nicholas reported that the site was identified when a small garden plot on the property was bulldozed. The age of Site 100-11 is listed as unknown. Surface finds consisted of an unknown number of unidentified lithic projectile points. The Gailles I 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]). Site 100-11 will not be impacted by the proposed project.

Site 100-12

Site 100-12, which is also known as the Laffargue I Site, is situated on private property along Route 44 in North Canaan, Connecticut. Site 100-12 was identified within a plowed cornfield that was located adjacent to the Blackberry River. George Nicholas of the American Indian Archaeological Institute in Washington, Connecticut recorded Site 100-12 in 1985. Nicholas reported that a single steatite bowl fragment and unidentified lithic projectile points were surface collected from the surface of Site 100-12. The date and function of the site is listed on the submitted site form as a Late Archaic period campsite. Nicholas noted that the integrity of the area was good and that other sites are expected in the general vicinity. The Laffargue I 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]). Site 100-12 will not be impacted by the proposed project.

Site 100-16

Site 100-16, which is also known as the Giulian II Site, is situated on private property to the south of Boinay Hill Road and to the west of Sand Road in North Canaan, Connecticut. The site sits near the center of a cornfield that is located on top of Dutcher Hill. George Nicholas of the American Indian Archaeological Institute in Washington, Connecticut recorded Site 100-16 in 1985. Artifacts collected from the surface of Site 100-16 consisted of a single quartz side notched projectile point, the distal portion of an unidentified chert projectile point, a partial chert biface, a single quartz core fragment, and an unspecified large number of chert and quartz flakes. The date of Giulian II site is listed as unknown on the submitted form. Nicholas noted that additional sites are known of and expected in the general vicinity of Site 100-16. The Giulian II 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]). It will not be impacted by the proposed project.

Site 100-18

Site 100-18, which is also known as the Giulian IV Site, is situated on private property along Boinay Hill Road in North Canaan, Connecticut. The site was identified within a cornfield on Dutcher Hill that overlooks Redding Swamp and the Housatonic River. George Nicholas of the American Indian Archaeological Institute in Washington, Connecticut recorded Site 100-18 in 1985. Pedestrian survey of the site are resulted in the collection of artifacts consisting of a single untyped quartz biface and several quartz core fragments. The date of Giulian IV site is listed as unknown on the submitted form; however, Nicholas noted that Site 100-18 is important to understanding the changing site and landscape associations in the vicinity of Robbins Swamp. The Giulian IV 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]). Site 100-18 will not be impacted by the proposed project.

Site 100-133

Site 100-133, which is also known as the Melville Site, is situated on private property at 492 Church Street in North Canaan, Connecticut. Site 100-133 was located on a large knoll that was covered by houses, roads, and gardens. Mr. Melville Smith, the property owner, surface collected artifacts in his garden. The Melville Site was recorded in 1984 by Dr. F. W. Warner of Connecticut Archaeological Survey of New Britain, Connecticut. A single steatite bowl, a single full-grooved sandstone axe, a single small quartz unidentified projectile point, and "some debitage" were recorded by Dr. Warner. The site is listed as a Late Archaic period village on the submitted site form; however, Dr. Warner noted that the identification is "highly tentative." The Melville 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]). Site 100-133 will not be impacted by the proposed project.

Site 100-139

Site 100-139, which is also known as the Sand Road-Robbins Swamp North Site, is situated on private property to the north of Robbins Swamp and to the south of the intersection of Sand Road and Route 7 in a field “east of the railroad tracks.” Site 100-139 was recorded in 2006 by Mr. Timothy Binzen, an independent researcher. Binzen reported that the site was identified in an agricultural field and represented a Late Archaic period camp or village site. The field had been plowed and artifacts had been surface collected by Mr. Elliott Hoben of North Canaan. Binzen reported that 2 chert Genessee projectile points were found next to each other in the site area. A single Genessee projectile point base fragment and a single chert biface were also found nearby and collected. The Sand Road-Robbins Swamp North 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]). Site 100-139 will not be impacted by the proposed project.

Site 100-140

Site 100-140, which is also known as the North Canaan Boinay Hill Road Site, is situated on private property at 12 Boinay Hill Road. Site 100-140 was recorded in 2014 by Ms. Christine Ames, Project Archaeologist for EBI Consulting of York, Pennsylvania. The site was identified during a cultural resources management survey for a proposed AT&T Mobility, LLC construction of a high monopole and support equipment. Subsurface testing of the project area resulted in the collection of a single quartzite fire cracked rock and a single untyped projectile point made of quartz. Ames noted in the submitted site form that the presence of the artifacts is indicative of prehistoric use of the area. Ames referenced Sites 100-16 and 100-18, which are discussed in this report, as further evidence of prehistoric use of the area. Ames suggests that Site 100-140 was a camp, but the date was listed as unknown. The North Canaan Boinay Hill Road 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]). Site 100-140 will not be impacted by the proposed project.

Site 122-6

Site 122-6, which is also known as the Nelson I site, is situated on private property on Weatogue Road, north of the intersection with Twin Lakes, in Salisbury, Connecticut. Site 122-6 was identified in a cornfield less than 5 m (16.4 ft) to the west of the Housatonic River. Site 122-6 is listed as a multi-component site with Late Archaic period, as well as nineteenth and twentieth century, artifacts recovered. The Nelson I Site was recorded in 1978 by the American Indian Archaeological Institute (AIAI) field crew of Washington, Connecticut. The site was surface collected and recovered artifacts consisted of a single chert Brewerton projectile point, 1 chert Normanskill projectile point, 1 chert and 1 quartz untyped small-stemmed projectile point, 2 broken untyped projectile point base fragments, 2 chert “triangular knives”, 1 hammerstone, 1 chert ovate knife, shell, several unidentified lithic biface tools, fire-cracked rock, unidentified bone fragments, unidentified lithic cores, charcoal and an unspecified amount of lithic debitage. The submitted site form notes that Site 122-6 is one of the most significant sites in the town of Salisbury, and it is identified as a Late Archaic Period campsite. Nineteenth and twentieth century artifacts were recovered from what was identified as a secondary dump, likely associated with a house structure that was located to the west of the site area. Artifacts collected from the secondary dump consisted of a single blown glass bottle base fragment, a single molded milk glass fragment, salt glazed earthenware sherds, and white glazed earthenware sherds. The Nelson I 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]). Site 122-6 will not be impacted by the proposed project.

Site 122-7

Site 122-7, which is also known as Dutcher's Bridge Burying Ground, is a historical site located on Weatogue Road at the intersection with Route 44 in the town of Salisbury, Connecticut. The cemetery is located approximately 350 m (0.2 mi) to the west of the Housatonic River and approximately 5236 m (1,760 ft) to the northwest of Dutcher's Bridge. The burying ground was recorded in 1978 by the American Indian Archaeological Institute (AIAI) field crew of Washington, Connecticut. The nineteenth-century burying ground was visually inspected, and gravestones were inventoried by AIAI crew. The submitted site form notes that the burying ground encompasses 0.25 ac of land and is surrounded by a white picket fence. The plot of land on which the burying ground is located was purchased in 1802 by the town from Captain Ruluff Dutcher of Canaan. The Dutcher's Bridge Burying Ground 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]). It will not be impacted by the proposed project.

Site 122-46

Site 122-46, which is also known as the Binzen Loci 1-5 Site, is situated on private property at 49 Weatogue Road in Salisbury, Connecticut. The submitted site form describes the location as an "agricultural field/open space/woodland" which was less than 152 m (500 ft) to the west of the Housatonic River. Site 122-46 is listed as a Late Archaic to Early Woodland period campsite. It was reported in 2006 by independent researcher, Timothy Binzen. The site was previously surface collected by a local farmer in the 1980s and then Binzen family members. A total of five distinct loci across a 400 m (1,219 ft) area were identified. On the submitted site form, Mr. Binzen reported that Locus 1 was in a garden on a knoll. A single black chert Susquehanna Broadspear projectile point, a single stone hoe, and a single chert flake were recovered from the garden. Locus 2, located in a corner of the field by the river, yielded a dense scatter of black, gray, and green chert flakes along with some chalcedony debitage. Locus 3, located on the edge of the field to the southeast of the house, contained a scatter of chert flakes. Locus 4, located on a natural terrace by Weatogue Road, yielded a single green chert biface fragment, and several black chert cores were recovered from Locus 5, which was identified in the northern section of the field. Mr. Binzen reported that "a rapids on the river may have served as a fording place or fishing location." The Binzen Loci 1-5 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]). Site 122-46 will not be impacted by the proposed project.

Summary and Interpretations

The review of previously completed research in the vicinity of the project area and the analysis of the cultural resources recorded nearby, indicates that the larger project region contains ample evidence of prehistoric Native American deposits. The Housatonic River, which lies just to the west of the project area, passes through land that was formerly occupied by native people and has a long history of Native American use for fishing and hunting. Robbins Swamp, which lies just to the south of the project area, also has a long history of Native American use. Archaeological sites occupied within the study region date from as early as the Late Archaic Period (ca., 4,500 years ago), suggesting that additional archaeological sites may be situated within the vicinity of the project area. In addition, historic sites including Dutcher's Burying Ground and the Nelson I site, which contained historic period artifacts, are both located within the study region. Therefore, it is likely that additional historic cultural resources may also be present in the project area.

CHAPTER VI

METHODS

Introduction

This chapter describes the research design and field methods used to complete the Phase IB cultural resources reconnaissance survey of the proposed LSE Phoenix LLC Solar Center in North Canaan, 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 current Phase IB cultural resources reconnaissance survey was designed to identify all prehistoric and historic cultural resources located within the previously identified moderate/high sensitivity project area. Fieldwork for the project was comprehensive in nature and project planning considered the distribution of previously recorded archaeological sites located near the project parcel, as well as an assessment of the natural qualities of the project area. The methods used to complete this investigation were designed to provide complete and thorough coverage of all portions of the moderate/high sensitivity areas. This undertaking entailed pedestrian survey, systematic subsurface testing, detailed mapping, and photo-documentation.

Field Methods

Following the completion of all background research, the moderate/high sensitivity area previously identified during the Phase IA cultural resources assessment survey was subjected to a Phase IB cultural resources reconnaissance survey utilizing pedestrian survey, photo-documentation, GPS recordation, and systematic shovel testing. The pedestrian survey portion of this investigation included visual reconnaissance of the moderate/high sensitivity areas scheduled for impacts by the proposed solar project, as well as photo-documentation of them. Field methods also included subsurface testing, during which shovel tests were excavated at 15 m (49.2 ft) intervals along 11 parallel survey transects spaced 15 m (49.2 ft) apart and extending from north to south.

During survey, each shovel test measured 50 x 50 cm (19.7 x 19.7 in) in size and each was excavated until the glacially derived C-Horizon was encountered 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 strata, and the fill 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 after it was recorded. Finally, when identified, all positive shovel tests were delineated by excavating additional shovel tests in the cardinal directions at 10 m (32.8 ft) intervals around the positive shovel tests.

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:

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CHAPTER VII

RESULTS & MANAGEMENT RECOMMENDATIONS

Introduction

This chapter presents the results of the Phase IB cultural resources reconnaissance survey of the LSE Phoenix LLC Solar Center project area in North Canaan, Connecticut. 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 discussion of previously recorded cultural resources nearby to develop an archaeological context for the project area; 3) a review of readily available historic maps and aerial imagery depicting the project area to identify potential historic resources and/or areas of past disturbance; 4) pedestrian survey and photo-documentation of the project parcel; and 5) subsurface examination of the previously identified moderate/high archaeologically sensitive portion of the project area identified during the Phase IA cultural resources assessment survey.

According to the design plans, the proposed project will consist of a 7,560-module solar array that will include the installation of rows of solar panels with varied spacing between the rows (Figure 2). The development will include an access point from Ryan Avenue at the northwest corner of the property. Rip-rap lined swales along the northern and eastern edges of the project area and a permanent grass lined stormwater management basin and overflow weir in the northeastern corner also are depicted in the proposed plans. The total project parcel measures 23.96 ac in size, 14.02 ac of which will house the solar centers.

As discussed in the previously submitted Phase IA report, a total of 3.55 ac of land in the southwestern portion of the project parcel possess a moderate/high sensitivity for archaeological deposits due to the presence of low slopes, well drained soils, and proximity to freshwater. This area was subjected to Phase IB survey. At the time of the survey, the project area was characterized by wooded areas and meadows that ranged in elevation from approximately 203.6 to 248.1 m (668 to 814 ft) NGVD, with the highest elevation in the southwest sloping down to the east and northeast. As discussed in Chapter VI, the Phase IB survey area was examined through pedestrian survey and shovel testing at 15 m (49.2 ft) intervals along survey transects spaced 15 m (49.2 ft) apart. The results of the Phase IB survey are presented below.

Results of the Phase IB survey

A total of 66 of 66 (100 percent) planned shovel test pits were excavated throughout the 3.55 ac survey area, resulting in the identification of one positive shovel test. This positive shovel test was recorded as Locus 1. No other cultural material or evidence of cultural features was identified within the remainder of the survey area. Locus is described below.

Locus 1

During the survey, Locus 1 was identified within Shovel Test 8 along Transect 2, which was located in the northwestern portion of the 3.55 ac survey area. A typical shovel test excavated within the Locus 1 area exhibited three soil horizons in profile and reached to a maximum excavated depth of 80 cmbs (31.5 inbs). The uppermost soil horizon (A-Horizon; plow zone) extended from 0 to 40 cmbs (0 to 15.7 inbs) and was described as a deposit of brown (10YR 4/3) silty fine sand. It was underlain by a layer of subsoil

(B-Horizon) that ranged in depth from 40 to 65 cmbs (15.7 to 25.6 inbs); it was classified as a deposit of brown (10YR 5/3) fine silty sand. Finally, the glacially derived C-Horizon reached from 65-80 cmbs (25.6 to 31.5 inbs) and it consisted of layer of orange brown (2.5Y 4/3) fine sand.

Prehistoric cultural material recovered from Locus 1, which measured 1 x 1 m (3.3 x 3.3 ft) in size, consisted of a single small chert chunk that exhibited multiple flake scars. Despite delineation testing at 7.5 m (24.6) intervals around the original positive shovel test, no additional prehistoric cultural material was recovered from the Locus 1 area. In addition, no cultural features were identified in association with the recovered chert chunk. Due to the low density of artifacts recovered and the lack of cultural features, it was deemed that the Locus 1 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 1 is recommended prior to construction of the proposed solar project.

Management Recommendations

No cultural features or soil anomalies were identified in association with the lithic debris found within the Locus 1 area and the recovered artifact could not be assigned a date or cultural affiliation due to the absence of temporally diagnostic attributes. Thus, Locus 1 was assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No other archaeological deposits were identified within the project parcel and impacts to cultural resources are anticipated by the construction of the solar facility. No additional archaeological examination of the project area is recommended.

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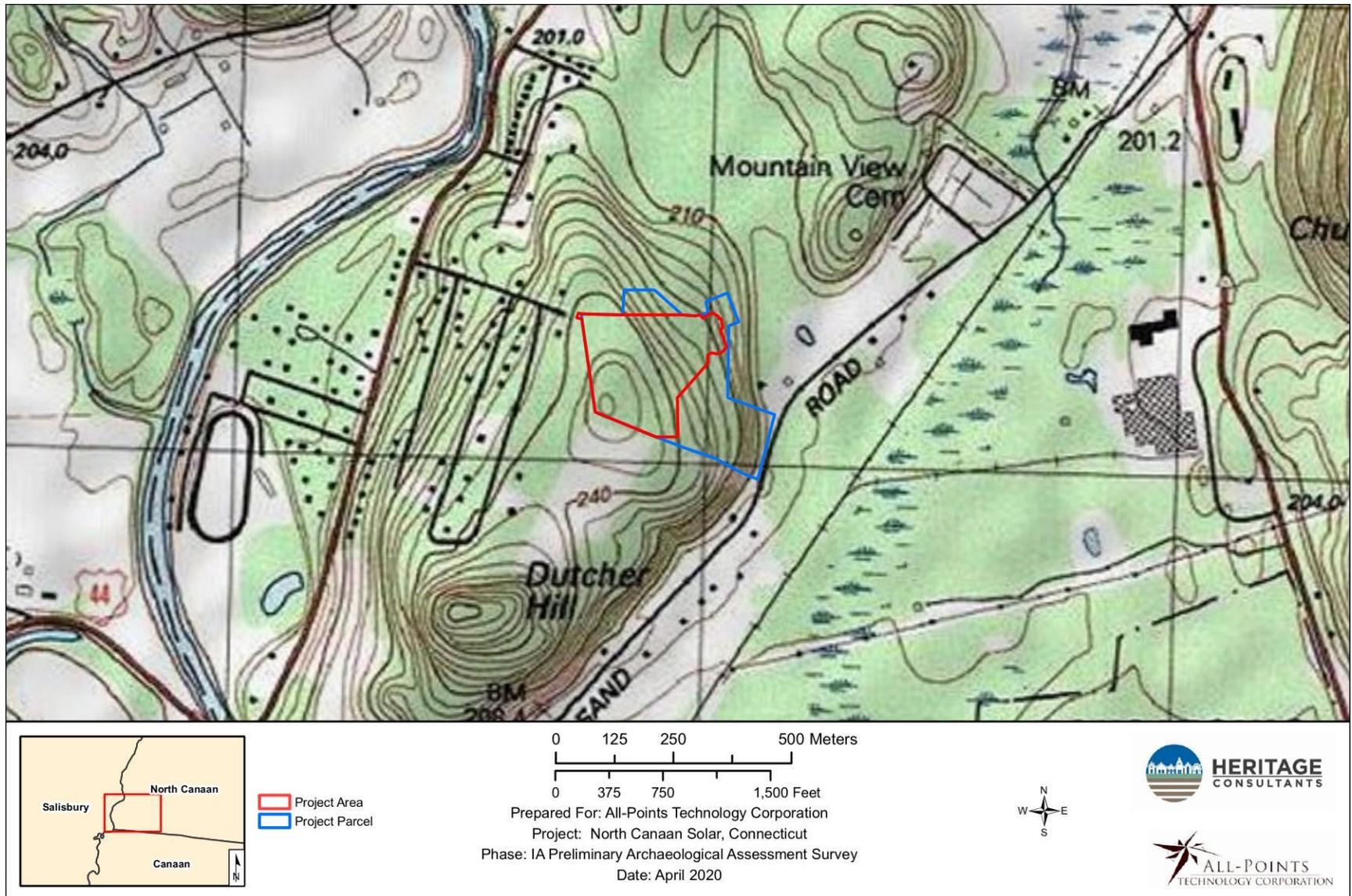


Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the project area in North Canaan, Connecticut.

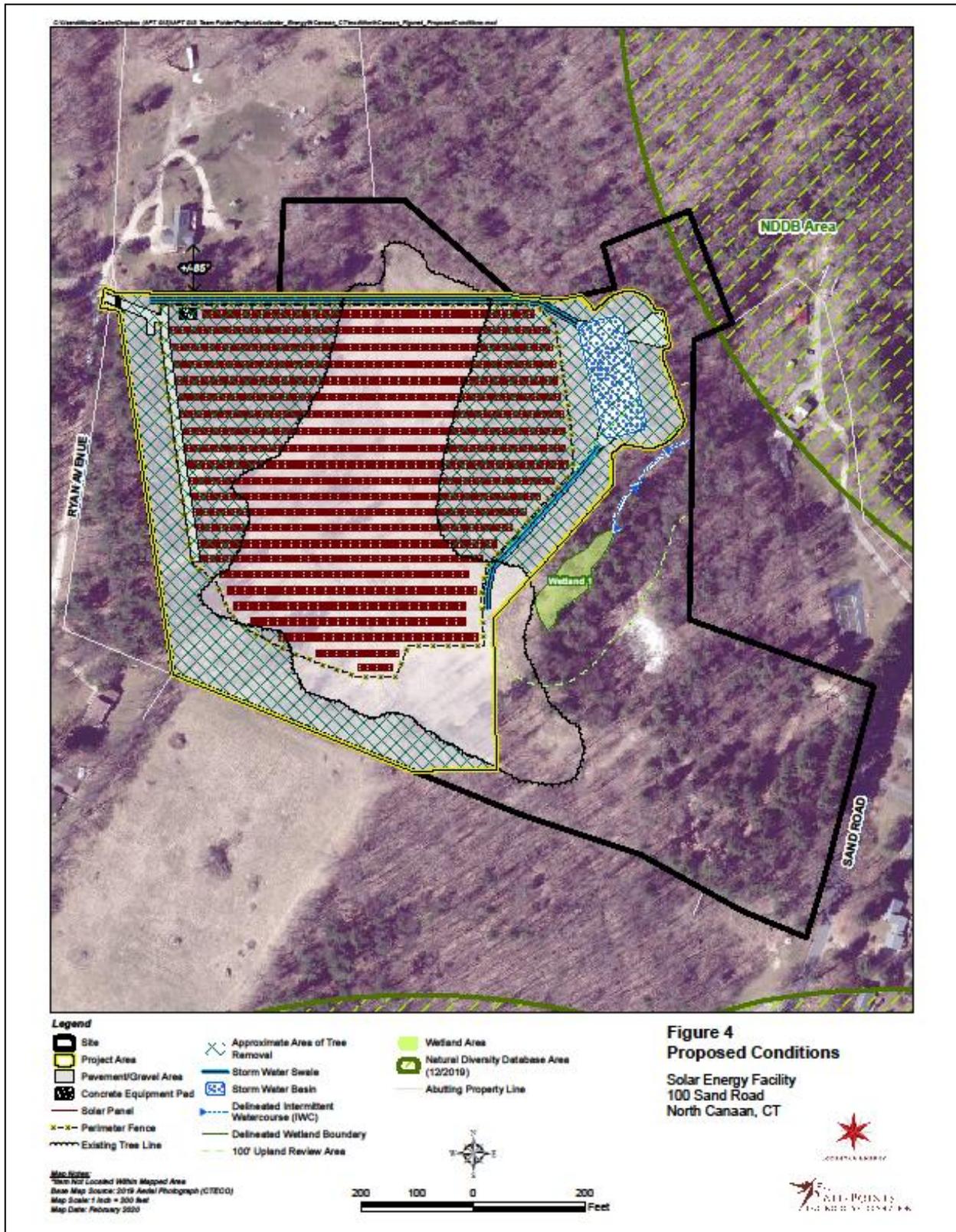


Figure 2. Project plans showing the proposed LSE Phoenix LLC Solar Center in North Canaan, Connecticut

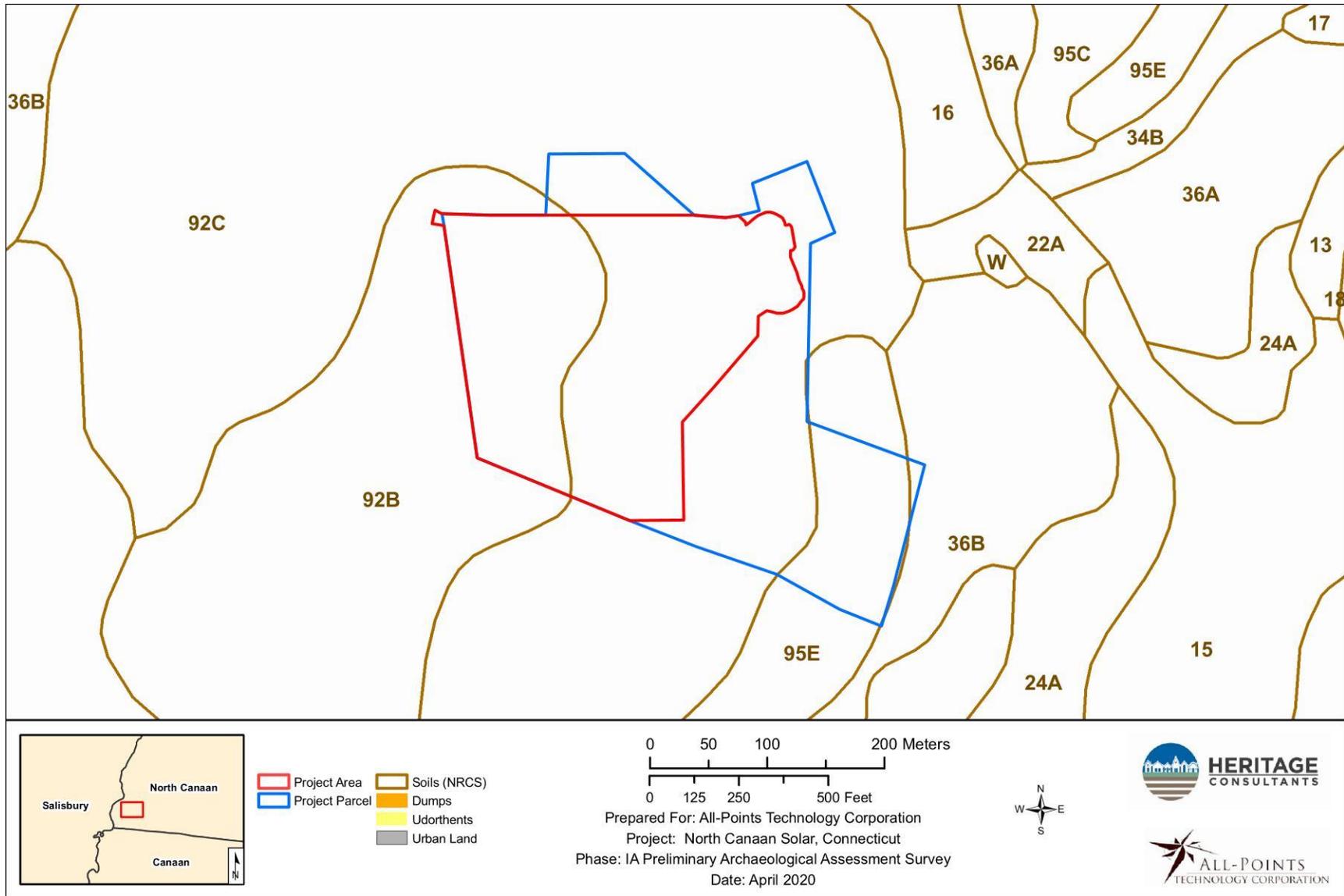


Figure 3. Map of soils located in the vicinity of the project area in North Canaan, Connecticut.

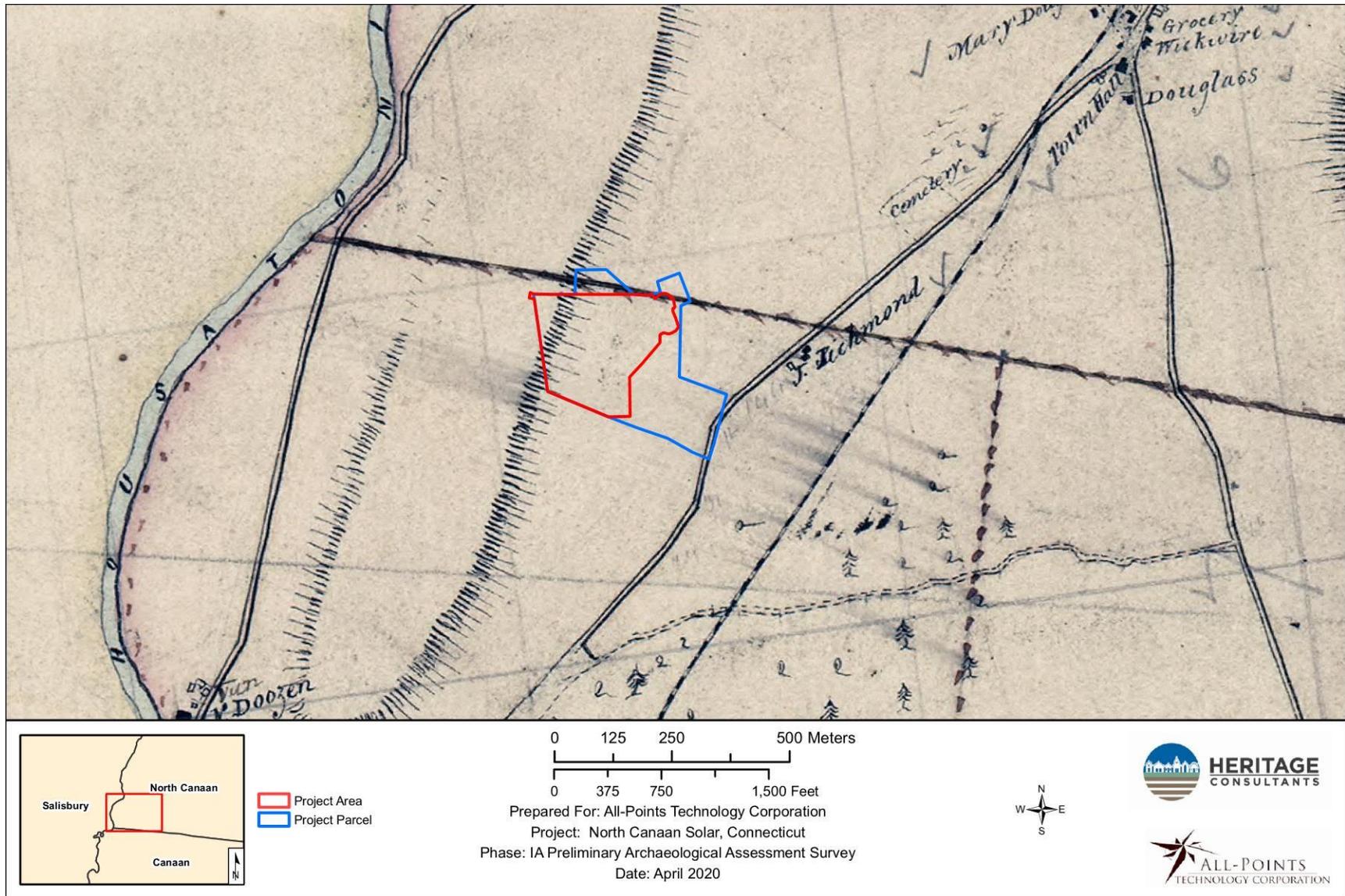


Figure 4. Excerpt from an 1853 historic map showing the location of the project area in North Canaan, Connecticut.

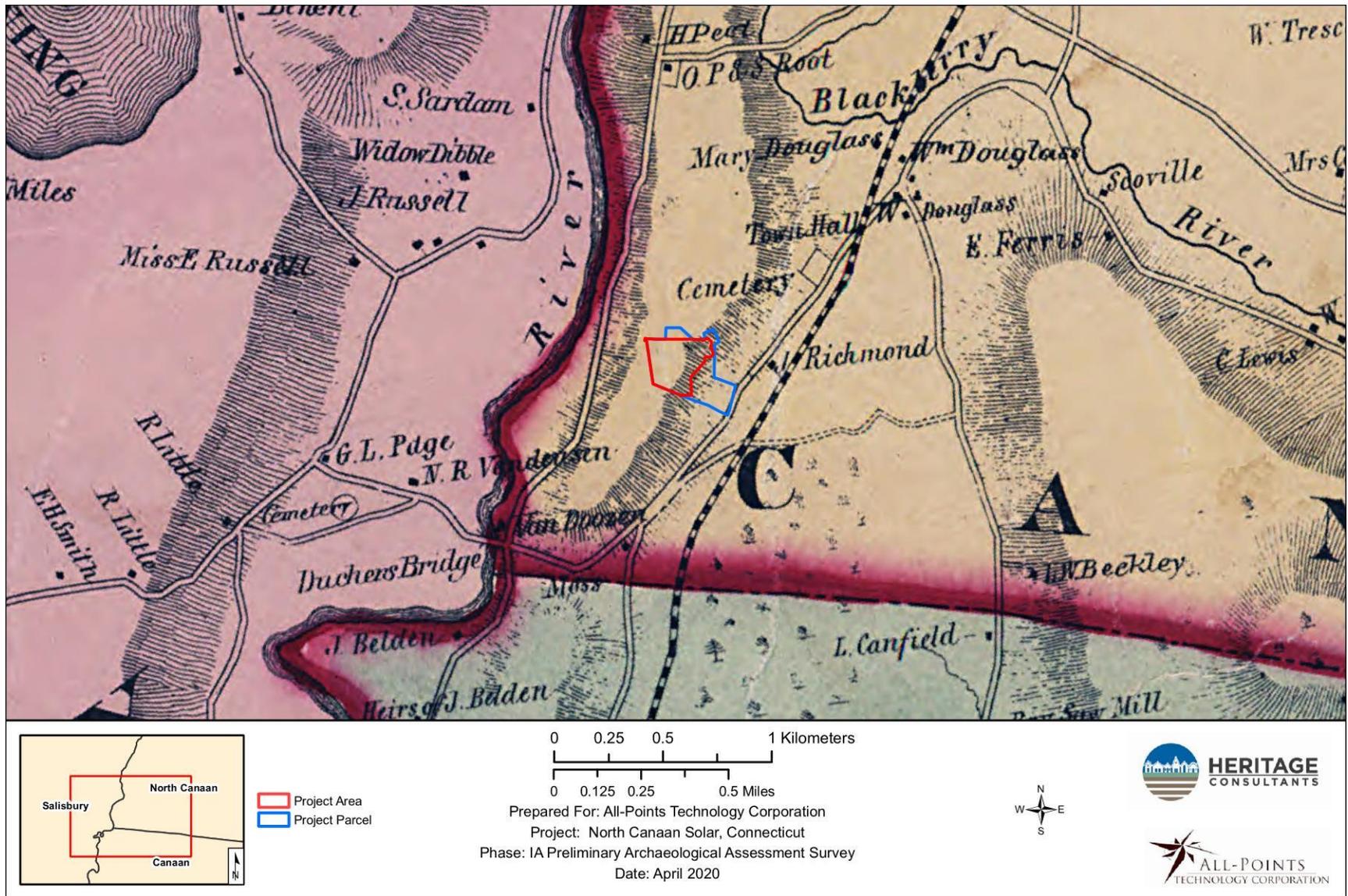


Figure 5. Excerpt from an 1859 historic map showing the location of the project area in New Canaan, Connecticut.

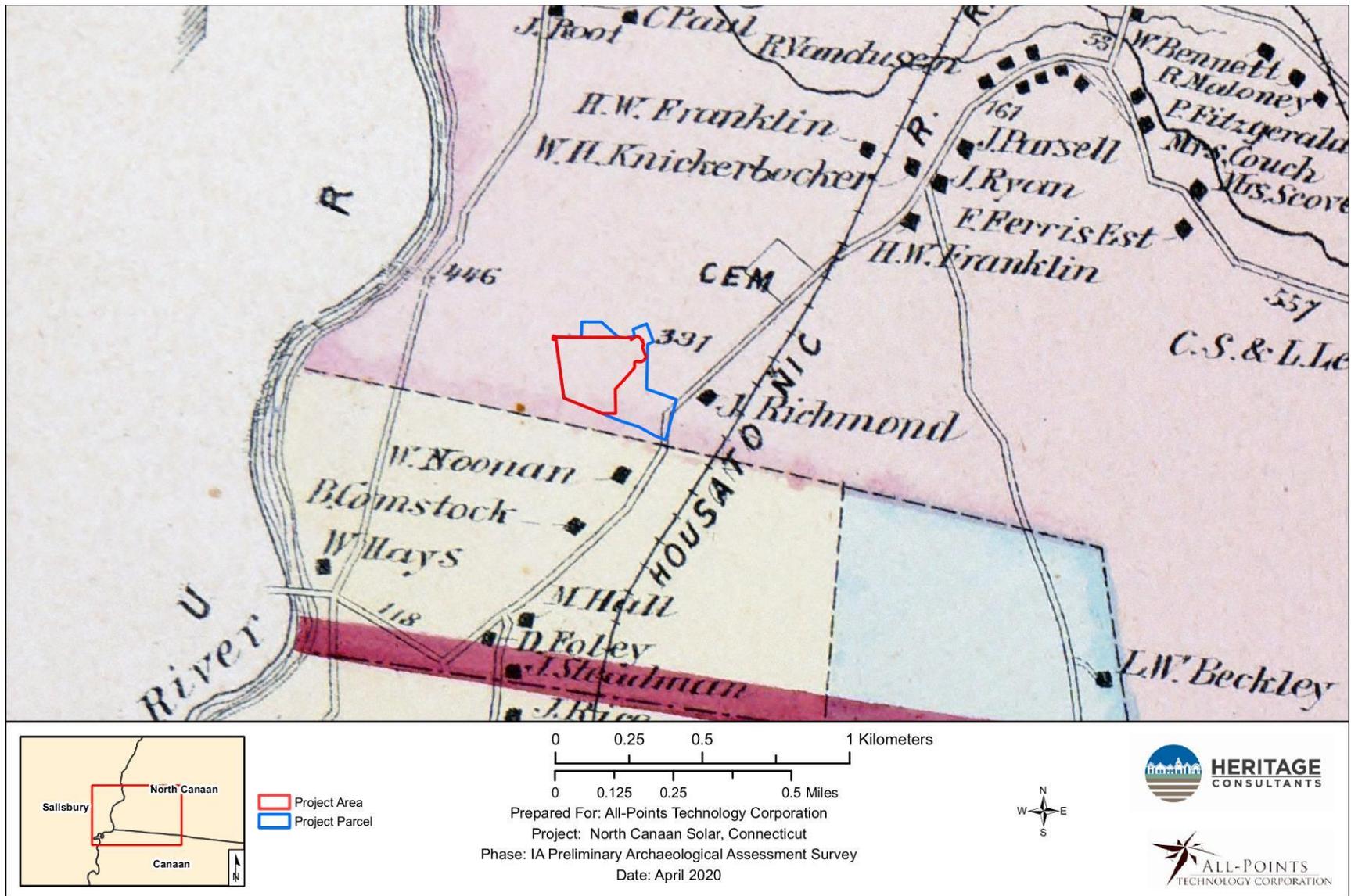


Figure 6. Excerpt from an 1874 historic map showing the location of the project area in North Canaan, Connecticut.

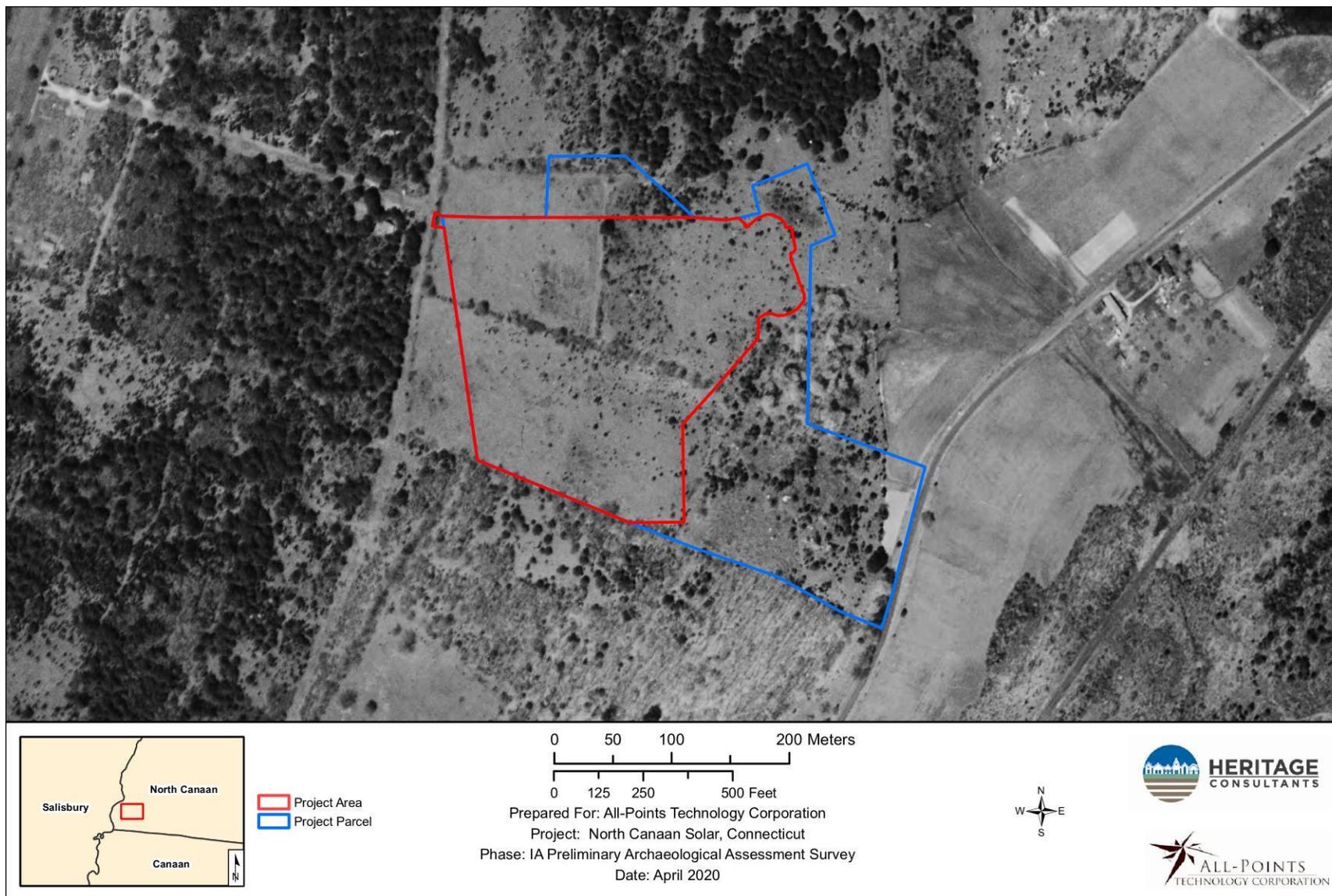


Figure 7. Excerpt from a 1934 aerial photograph showing the location of the project area in North Canaan, Connecticut.

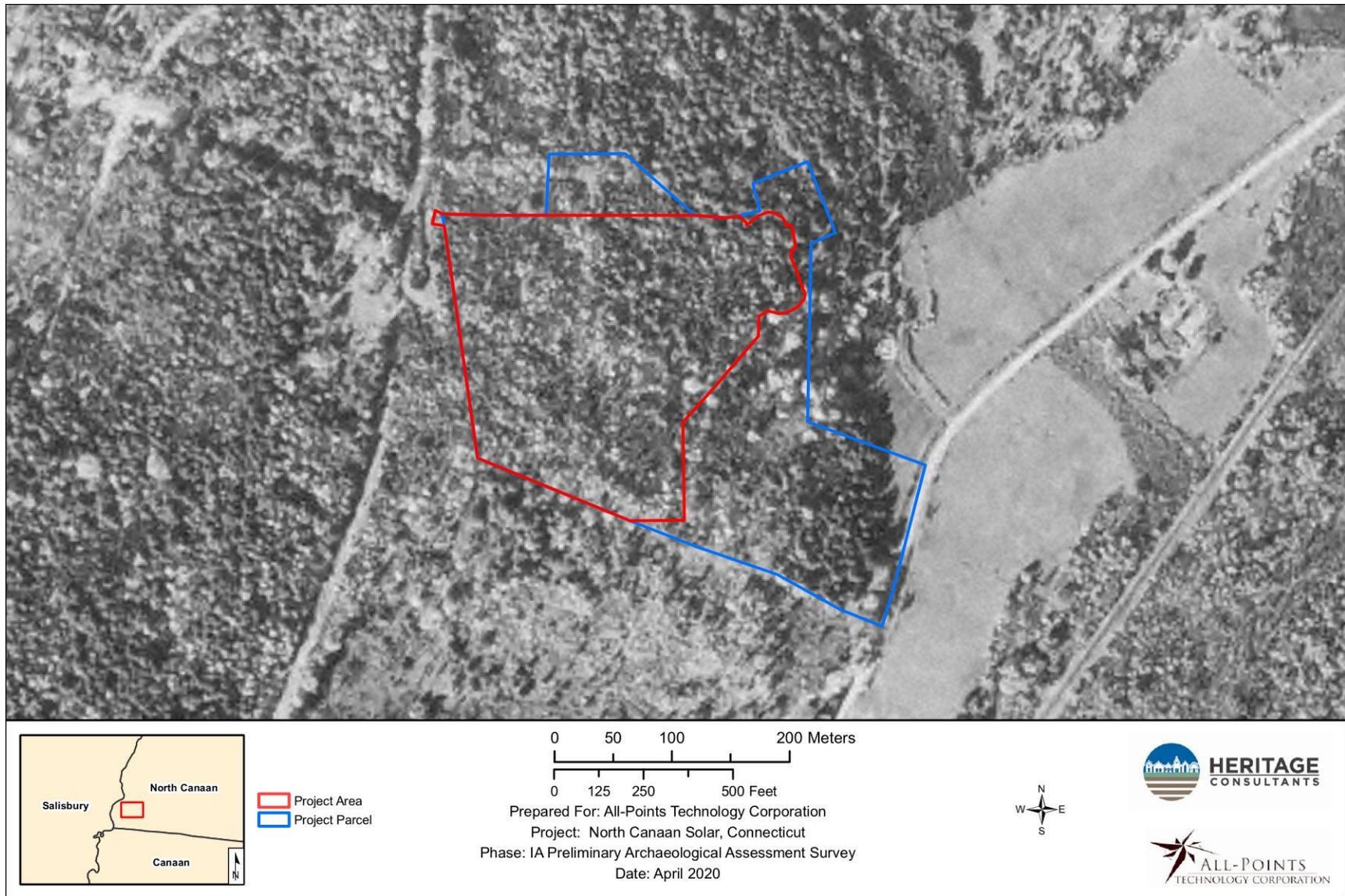


Figure 8. Excerpt from a 1951 aerial photograph showing the location of the project area in North Canaan, Connecticut.

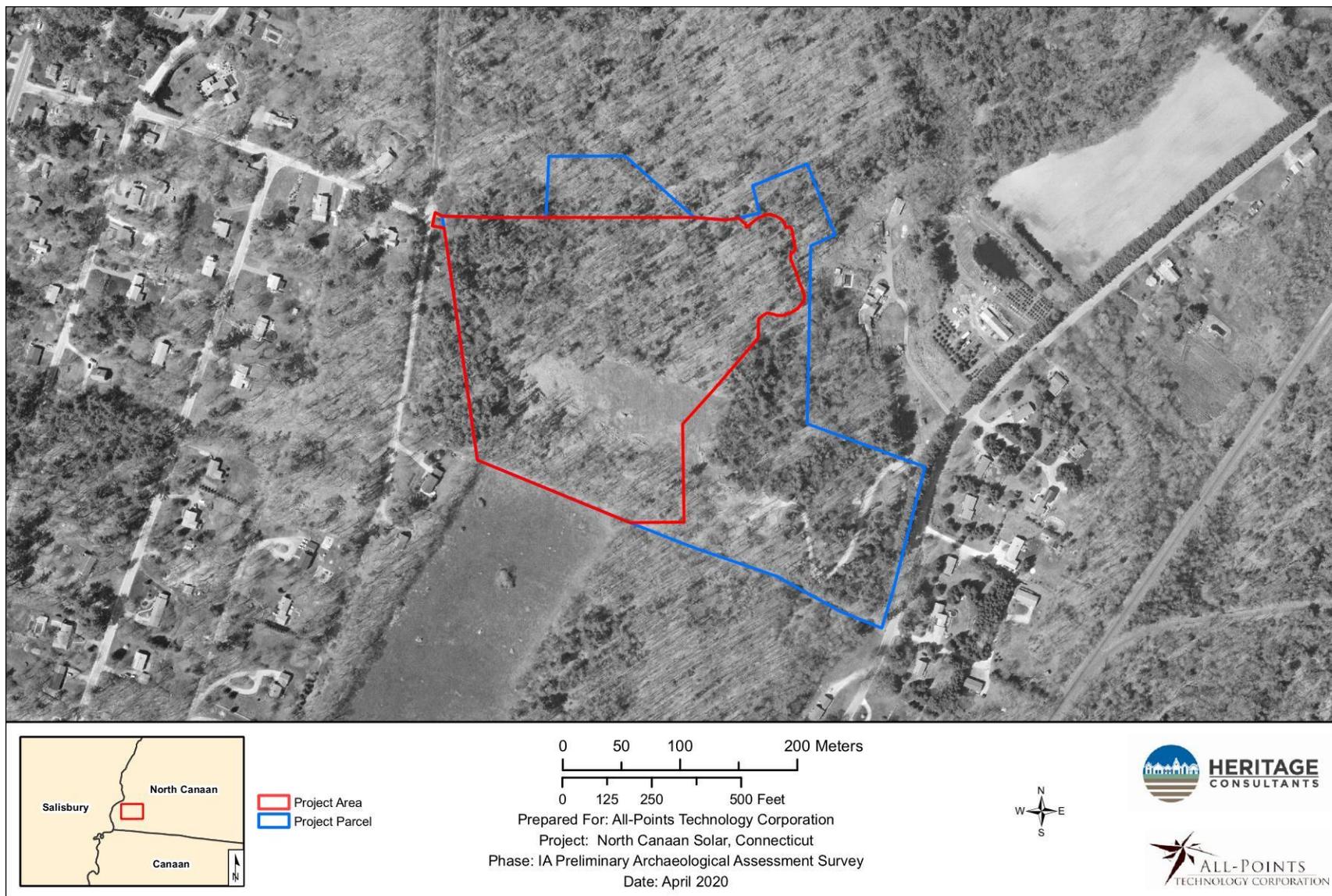


Figure 9. Excerpt from a 2004 aerial photograph showing the location of the project area in North Canaan, Connecticut.

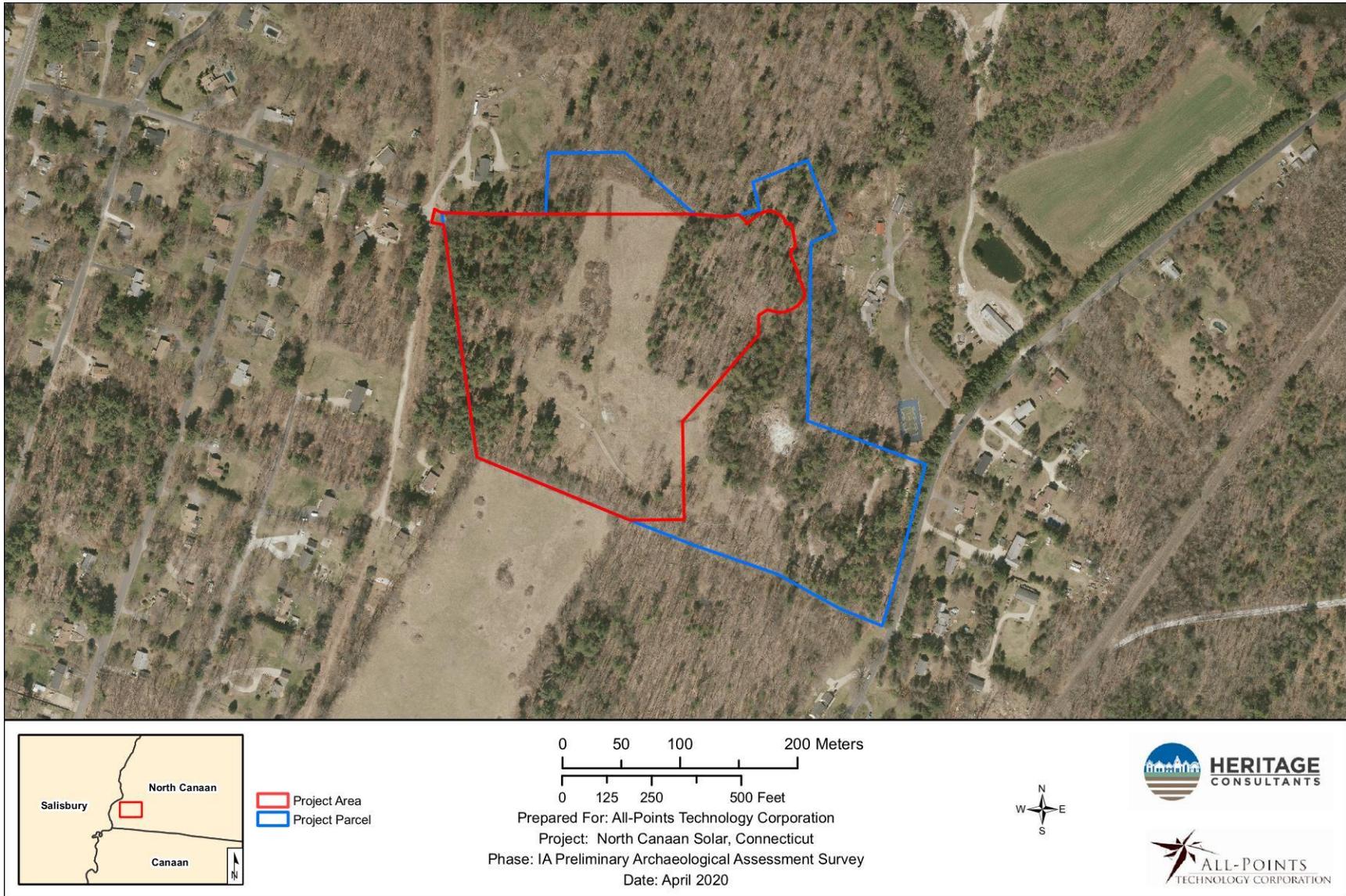


Figure 10. Excerpt from a 2016 aerial photograph showing the location of the project area in North Canaan, Connecticut.

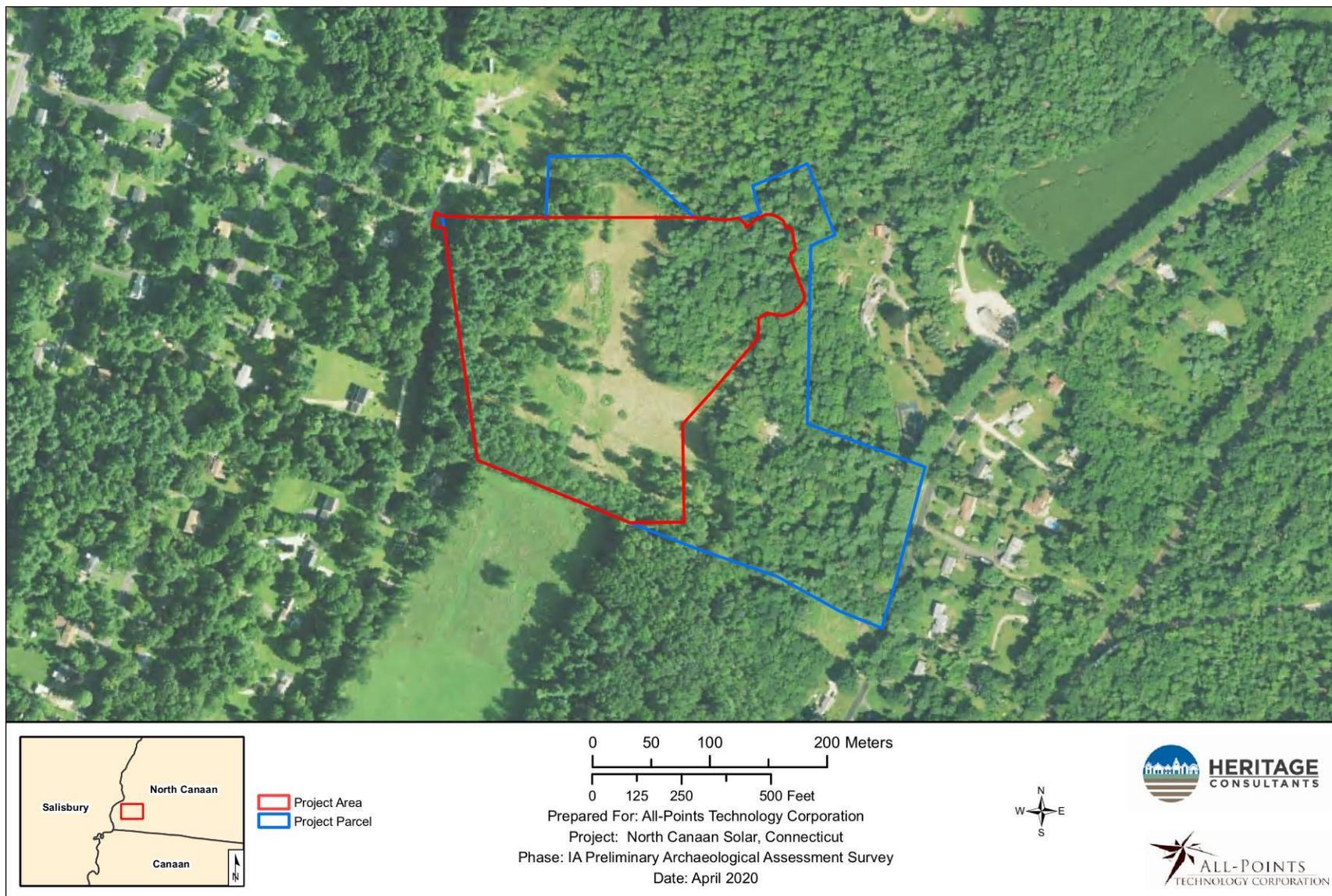


Figure 11. Excerpt from a 2018 aerial photograph showing the location of the project area in North Canaan, Connecticut.



Figure 12. Excerpt from a 2019 aerial photograph showing the location of the project area in North Canaan, Connecticut.

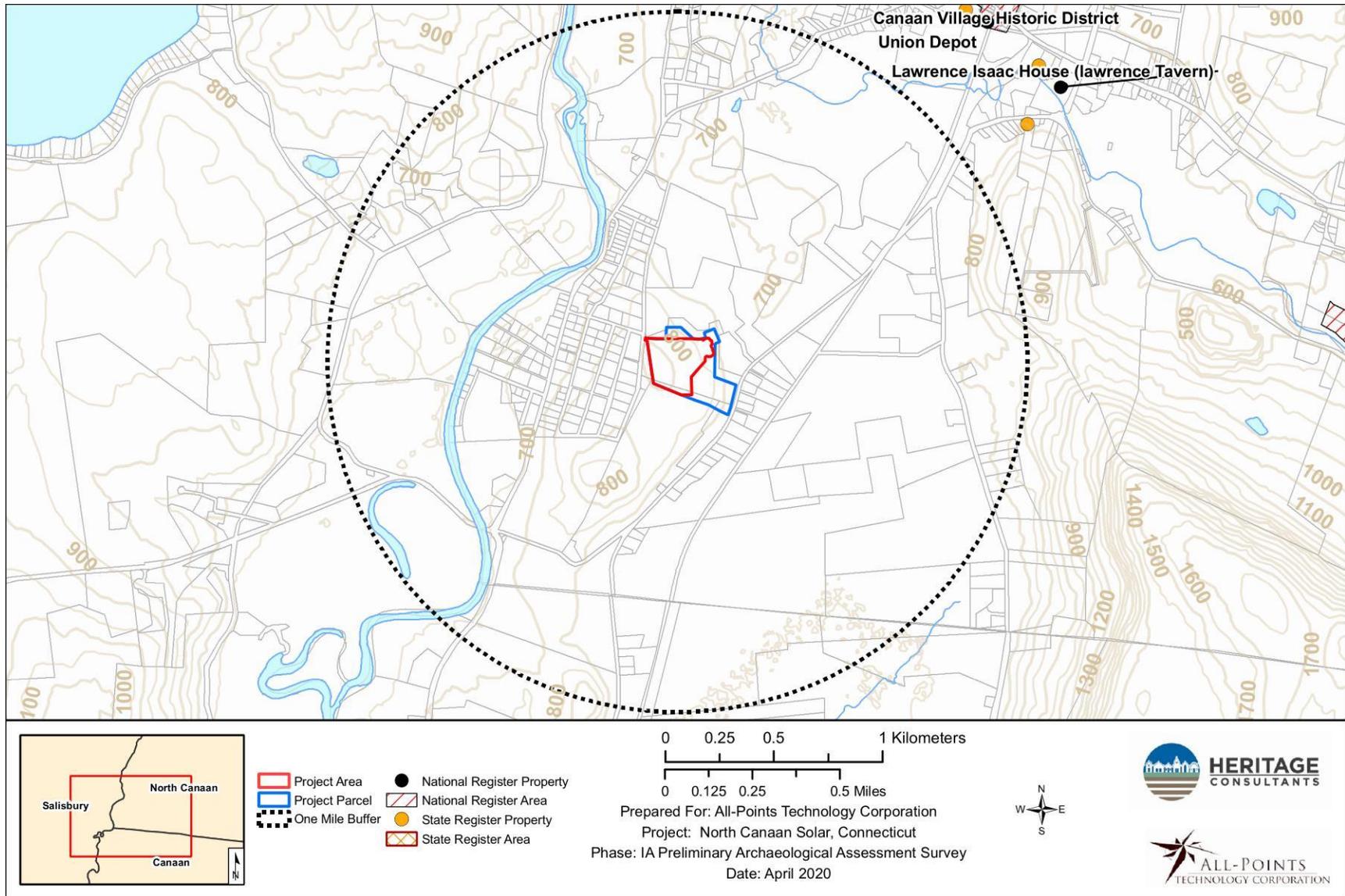


Figure 13. Digital map depicting the locations of previously identified National/State Register of Historic Places properties in the vicinity of the project area in North Canaan, Connecticut.

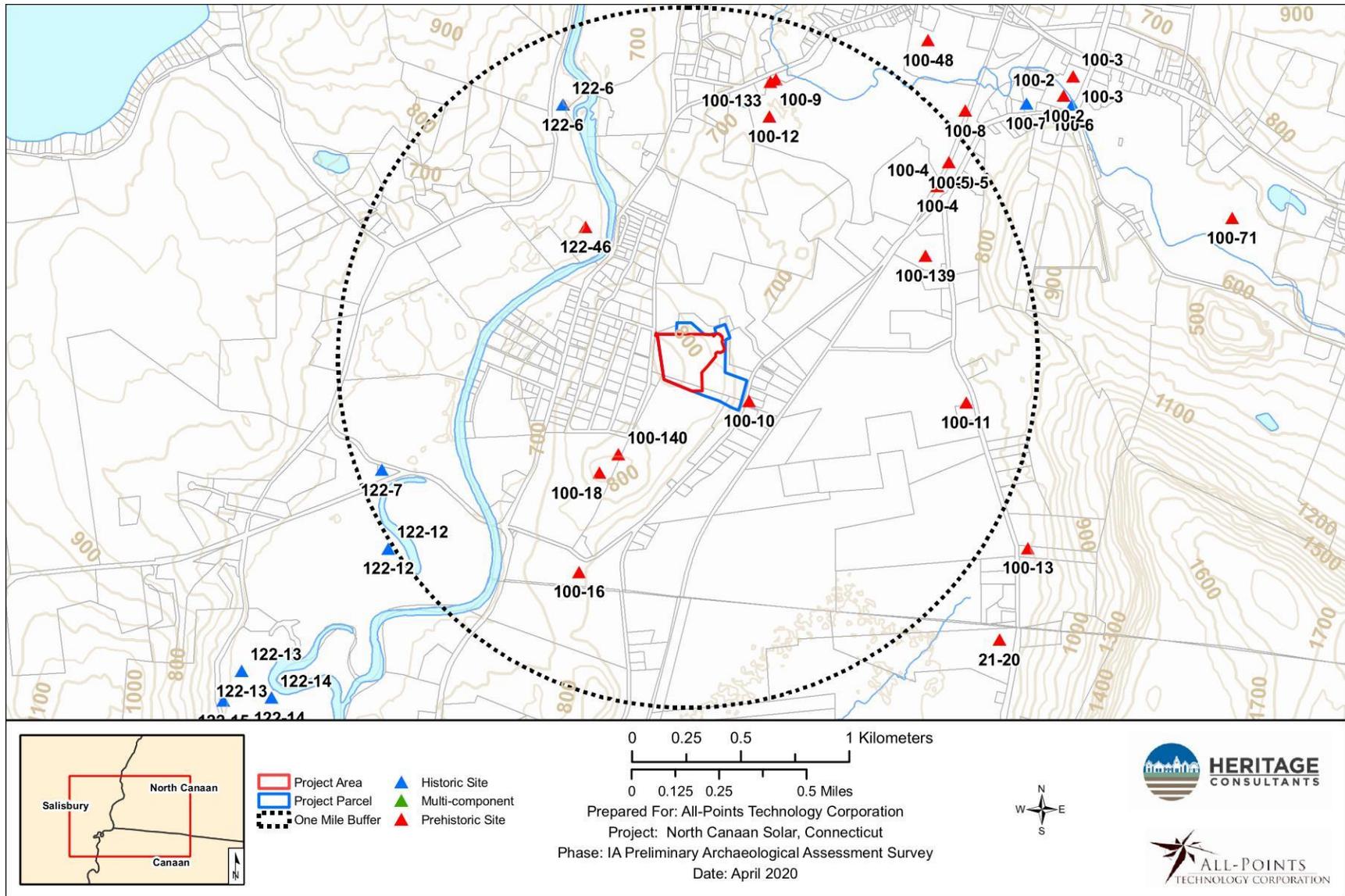


Figure 14. Digital map showing the location of previously identified archaeological sites in the vicinity of the project area in North Canaan, Connecticut.

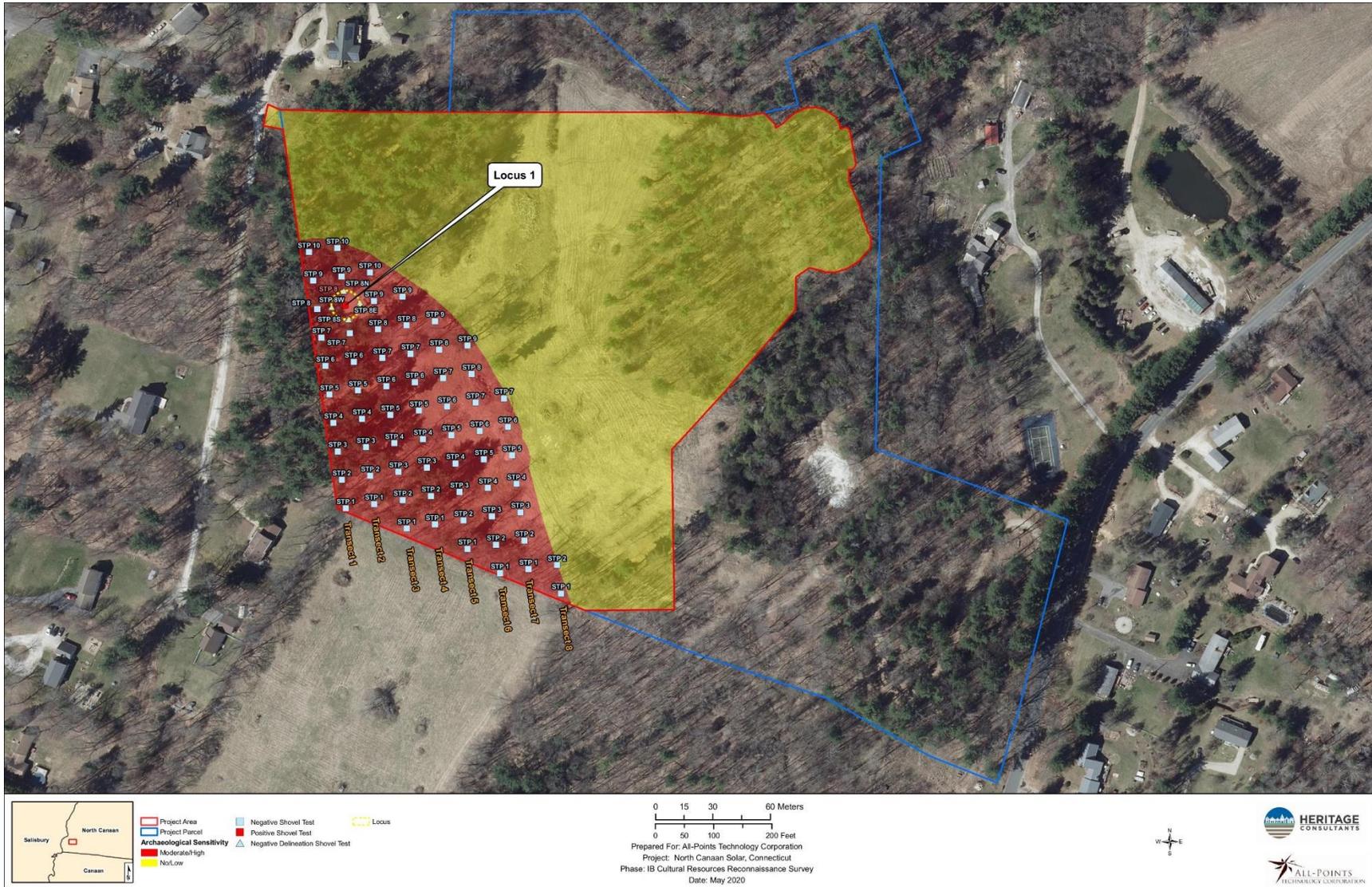


Figure 15. Aerial image of project area depicting archaeological sensitivity areas, Phase IB shovel tests, and Locus 1.

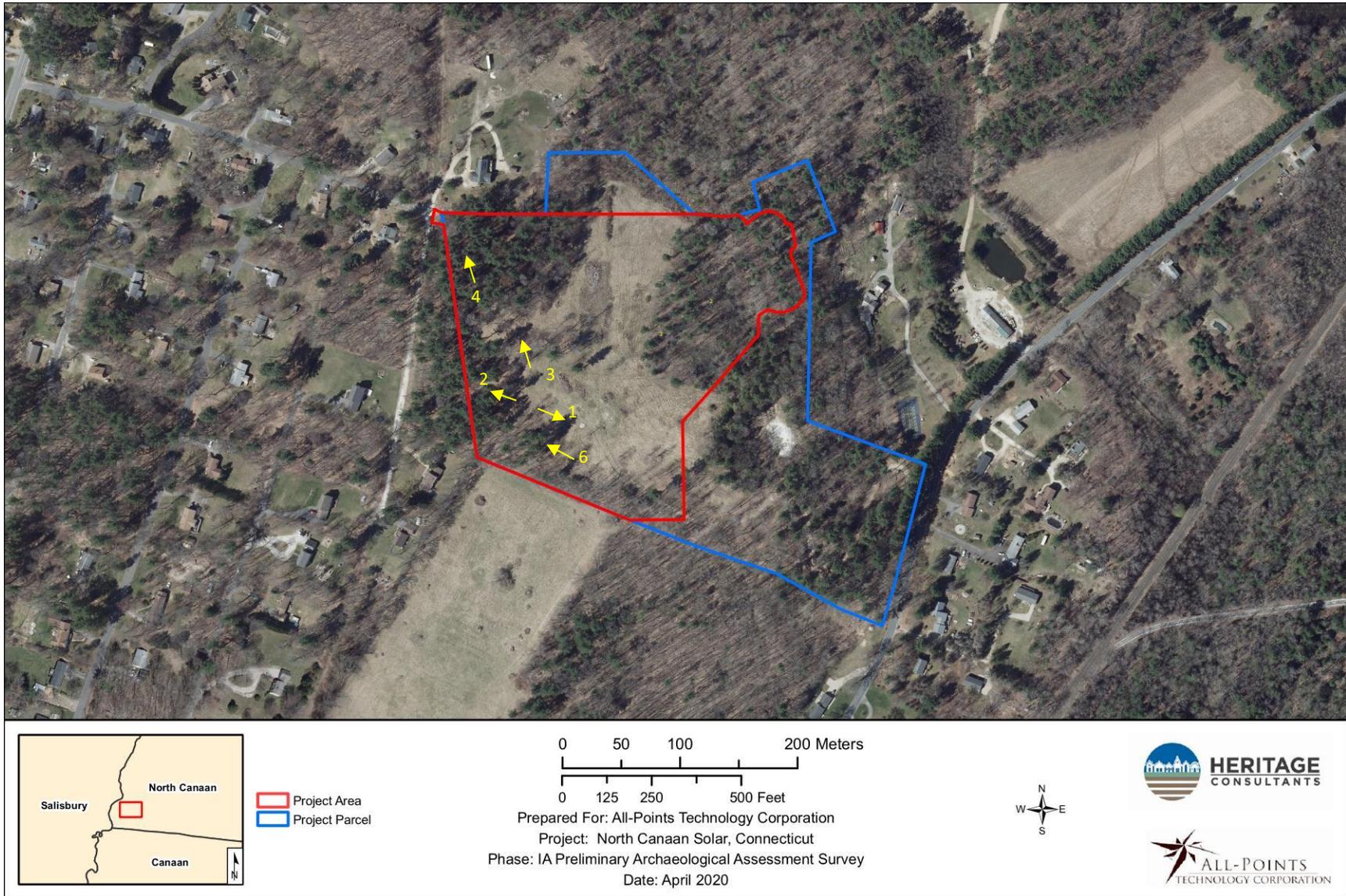


Figure 16. Aerial image of project area depicting photographs taken and direction faced.



Photo 1. Overview of southwestern portion project area facing southeast (note area has well drained soils and low to no slope).



Photo 2. Overview of the southwestern portion of project area facing northwest (note area has well drained soils and low to no slope).



Photo 3. Overview of the southwestern portion of project area facing north (note area has well drained soils and low to no slope).



Photo 4. Overview of the project area facing north (note area is sloped with poorly drained soils and areas of standing water).



Photo 5. Overview of the project area facing northeast.



Photo 6. Overview of southwestern portion of project area facing northwest (note area has well drained soils and low to no slope).