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December 4, 2019

VIA ELECTRONIC MAIL AND FIRST CLASS MAIL

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Petition 1310 - Quinebaug Solar, LLC petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed construction, maintenance and operation of a 50 megawatt AC solar photovoltaic electric generating facility on approximately 561 acres comprised of 29 separate and abutting privately-owned parcels located generally north of Wauregan Road in Canterbury and south of Rukstela Road and Allen Hill Road in Brooklyn, Connecticut

Dear Ms. Bachman:

I am writing on behalf of the Petitioner, Quinebaug Solar, LLC, in connection with the above-referenced Connecticut Siting Council ("Council") proceeding.

Enclosed please find an electronic version of Volume I of the Phase IB/Phase II Cultural Resources Report (Exhibit Q). While Volume I was previously submitted to the Council as a bulk filing on November 12, 2019, the electronic version was inadvertently omitted.

Please do not hesitate to contact the undersigned or David Bogan of this office (860-541-7711) should you have any questions regarding this submission.

Very truly yours,

A handwritten signature in black ink that reads "Kate Boucher".

Kathryn E. Boucher

CERTIFICATION

I hereby certify that on December 4, 2019, the foregoing was delivered by email and regular mail, postage prepaid, in accordance with § 16-50j-12 of the Regulations of Connecticut State Agencies, to all parties and intervenors of record, as follows:

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Kathryn E. Boucher
Commissioner of the Superior Court

NOVEMBER 2019

PHASE IB CULTURAL RESOURCES RECONNAISSANCE SURVEY
OF THE PROPOSED QUINEBAUG SOLAR FACILITY AND PHASE II NATIONAL
REGISTER OF HISTORIC PLACES TESTING AND EVALUATION OF SITES 19-35
AND 22-38 IN CANTERBURY AND BROOKLYN, CONNECTICUT
VOLUME I

PREPARED FOR:

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ABSTRACT

This report presents the results of a Phase IB archaeological reconnaissance survey of the Quinebaug Solar Project in Brooklyn and Canterbury, Connecticut, as well as the results of Phase II National Register of Historic Places testing and evaluation of Site 22-38 (Locus 2-1) in Brooklyn, Connecticut and Site 19-35 (Locus 11-1) in Canterbury, Connecticut. Phase IB survey of the Development Area associated with the Quinebaug Solar Project resulted in the identification of 32 archaeological loci and sites. They consisted of Loci 4-2, 5-1, 7-1, 8-1 through 8-5, 9-1, 13-1, 15-1, 16-1 through 16-5, 17-1, 18-1, 18-2, 19-1, 19-2, 20-1, 20-2, 21-1, 23-1, and 24-1. The majority of these (n=26) lacked substantial numbers of artifacts, cultural features, and/or research potential. They were assessed as not eligible for listing in the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional examination of these 26 loci was recommended. The remaining six archaeological sites/loci yielded intact archaeological deposits from the prehistoric and/or historic era, including artifacts and features (above and below ground), that appeared to retain research potential. They consisted of Loci 2-1, 4-1, 6-1, 11-1, 12-1, and 25-1. Archaeological deposits at five of these six loci were determined to constitute archaeological sites: Site 22-38 at Locus 2-1, Site 22-36 at Locus 4-1, Site 19-34 at Locus 6-1, Site 19-35 at Locus 11-1, and Site 19-8 Locus 25-1. The archaeological deposits at the sixth locus, Locus 12-1, were determined to not constitute an archaeological site, but this locus contained an upright cut granite stone that represented a relatively rare late eighteenth century boundary marker that established between the Towns of Brooklyn and Canterbury. Of these, Locus 4-1, 6-1, 12-1, and 25-1 will be avoided completely during construction. No additional examination of them was recommended.

The northeastern portion of Site 22-38 (Locus 2-1) could not be avoided according to Project design plans. Thus, Phase II examination of this part of the site was undertaken. The remainder of the site area will be part of an exclusion zone and will not be impacted by construction. The Phase II testing and evaluation of the northeastern portion of Site 22-38 (Locus 2-1) was completed through the excavation of delineation shovel tests and unit excavations, which resulted in the recovery of over 4,000 artifacts and several features dating from the Late Archaic and Middle Archaic periods. These remains were segregated into two clusters of artifacts and features separated by a zone of comparatively little archaeological refuse. It was determined that the Middle and Late Archaic deposits within the two clusters in northeastern part of the site have the potential to yield additional significant information about the prehistoric use and occupation of the site area and the Quinebaug River drainage. The project sponsor, Quinebaug Solar, LLC has agreed to avoid the two clusters of artifacts and features during construction by fencing them off and including them within construction the exclusion area. The remainder of the northeastern portion of the site where archaeological deposits are minimal will be developed as part of the Quinebaug Solar Project. Quinebaug Solar, LLC also has agreed to complete tree clearing in the vicinity of Site 22-38 (Locus 2-1) in the winter when frozen conditions prevail so that ground disturbance within the site area will be minimalized. In addition, all stumps will be left in place and no grubbing will take place within the construction exclusion areas.

Site 19-35 (Locus 11-1) also could not be avoided according to Project design plans. Thus, Phase II examination of this site also was undertaken. This was accomplished through a program of shovel testing, unit excavation, and limited mechanical stripping. The Phase II effort at Site 19-35 (Locus 11-1) resulted in the collection of very few lithic artifacts, most of which were not temporally diagnostic in nature. The single diagnostic artifact recovered during the Phase II testing and evaluation was a heavily reworked Susquehanna Broad Spear projectile point. The site area also contained several features, most of

which were not cultural in origin, but were related to previous disturbances of the area, including agricultural practices and a nearby sand and gravel operation. Features that were determined to be cultural in origin were confined to the eastern part of the site and they consisted of a pit, a post mold, and burning episodes. The pit feature yielded charcoal that was radiocarbon dated to the Terminal Archaic period, which is when the Susquehanna Broad Spear projectile point would have been used. Thus, a small, temporary Terminal Archaic period occupation was evident within the site area; however, it yielded few artifacts and little, if any, research potential. This archaeological component, as well as the remainder of the archaeological deposits within Site 19-35 (Locus 11-1) were assessed as not eligible for listing to the National Register of Historic Places applying the criteria for evaluation (36 60.4 [a-d]). No additional examination of this site was recommended.

Heritage Consultants, LLC also identified three historic farmsteads within the Study Area associated with the Quinebaug Solar Project. The Mowrey Farmstead, located in the southern portion of the Study Area, dates from the late eighteenth century and contains a house foundation, well, and barns foundations. These remains will be avoided completely during construction. The Rukstella Farmstead is located in the northern portion of the Study Area and includes two concrete silos, a stone retaining wall, a concrete barn foundation and a well. Examination of this area during the Phase IB survey revealed that it did not possess intact archaeological deposits or research potential. Thus, it was assessed as not eligible for listing to the National Register of Historic Places applying the criteria for evaluation (36 60.4 [a-d]). The third farmstead, which was related to the Butts, Harris, and Cady Families, also was located in the northern portion of the Study Area. It also was examined during the Phase IB survey and it was found to lack intact archaeological deposits or research potential. It also was assessed as not eligible for listing to the National Register of Historic Places applying the criteria for evaluation (36 60.4 [a-d]). No additional examination of either the Rukstella or the Butts/Harris/Cady Farmsteads was recommended.

Heritage Consultants, LLC also identified a historic period cemetery within the central portion of the Study Area associated with the Quinebaug Solar Project. This cemetery was used by the Bennett, Taylor, and Gallagher Families, all of which had ties to the Mowrey Farmstead. This cemetery contained several graves dating from the nineteenth to early twentieth centuries, all of which were enclosed by a stone wall and it situated to the north of the Mowrey Farmstead. Quinebaug Solar, LLC understands the sensitivity of the cemetery and will completely avoid it during construction.

Finally, Quinebaug Solar, LLC also proposes to remove 12 stone wall segments within the project area to facilitate construction and ongoing maintenance of the proposed solar facility. These wall segments were examined by Heritage Consultants, LL and all them were found to represent typical rounded and angular cobble walls that are typical of eastern Connecticut and the project region. They are not rare types, nor are they associated with any events or persons of transcending historical importance. Thus, their removal will not represent an adverse impact to cultural resources.

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CHAPTER I

INTRODUCTION

This report presents the results of a Phase IB archaeological survey for a utility-scale solar energy project in Brooklyn and Canterbury, Connecticut, as well as the results of Phase II National Register of Historic Places (NRHP) testing and evaluation of Sites 19-35 (Locus 11-1) and 22-38 (Locus 2-1) in Brooklyn and Canterbury, Connecticut, respectively (Figure 1). Quinebaug Solar, LLC (Quinebaug Solar), working through its contractor, Tighe & Bond, requested that Heritage Consultants, LLC (Heritage) complete the Phase IB survey and the Phase II NRHP testing and evaluation effort as part of the planning process for an approximately 50 MWac solar energy facility, the Quinebaug Solar Project (Project). The Project will be constructed within the Study Area, 556.2 ac of land shown in Figure 1, but will only occupy a what is referred to as the Development Area, which will encompass 226.5 ac of land. The Study Area is bordered to the south by Wauregan Road and private residences, to the west by Blackwell Brook, to the north by Allen Hill Road and forested areas, and to the east by the Quinebaug River (Figure 1). The central and western portion of the Study Area contain sand and gravel pits that will not be developed as part of the Project. The central gravel will be used as a temporary laydown/staging area for construction, and the existing road located within the pit is intended to be used for construction and the operation of the facility. The power generated by the Project will interconnect with Eversource Energy Line 1607-1505, which is located approximately 457 m (1,500 ft) to the west of the Quinebaug River. The Phase IB survey also included an assessment of specific sections of stone walls located within the Development Area that will require removal during the construction phase of the project. Heritage completed this investigation on behalf of Quinebaug Solar, LLC in 2018 and 2019. All work associated with this project was performed in accordance with the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987), which is promulgated by the Connecticut State Historic Preservation Office.

Project Description

As mentioned above, the Project is located in Brooklyn and Canterbury, Connecticut. It will be the site of a utility-scale solar power generating facility, consisting of photovoltaic (PV) solar panels, racking, access roads, DC/AC inverters, an interconnection with a nearby Eversource Energy electrical transmission line, and a project collector substation. The Project will have access points along public and private roadways. The area in which it will be built consists of a flat to steeply sloping area that currently contains a combination of agricultural fields, forested areas, wetlands, sand and gravel pits, and a pond. The pond, which is located in the northern portion of the Study Area, as well as the wetlands and gravel pits, will not be affected during installation of the solar facility. The topography throughout the Study Area ranges in elevation from approximately 42.7 to 85.3 m (130 to 280 ft) NGVD. In addition, soils situated throughout the Study Area can be characterized primarily as sandy to gravelly loams with some areas of mucks intermixed, especially near water courses and within wetlands. The nearest freshwater sources are Blackwell Brook, Cold Spring Brook, and the Quinebaug River.

Key Personnel

Key personnel for this project included Mr. David R. George, M.A., R.P.A, who acted as Principal Investigator for the project. He was assisted by Mr. Antonio Medina, B.A., Ms. Jess Jay, B.A., and Ms. Kelsey Tuller, M.A., who acted as field supervisors for the project. Mr. Stephen Anderson, B.A., and Mr. William Keegan, B.A., provided GIS support services and project mapping. Dr. Kristen Keegan completed this historic background research of the project and contributed to the final report. Ms. Elizabeth Correia,

B.A., completed the laboratory analysis of the recovered cultural material. The key personnel were assisted by Heritage support staff, both in the field and while compiling the report.

Organization of the Report

The natural setting of the region encompassing the Study Area is presented in Chapter II; it includes a brief overview of the geology, hydrology, and soils of the project region. The prehistory of the project region is outlined briefly in Chapter III. The history of the region encompassing the Study Area is chronicled in Chapter IV, while a discussion of previous archaeological investigations in the region is presented in Chapter V. The methods used to complete this investigation are discussed in Chapter VI. The results of the Phase IB investigation and management recommendations stemming from them are presented in Chapter VII, while the results and management recommendations related to the Phase II NRHP testing and evaluation effort are contained in Chapter VIII. Finally, Chapter IX contains management recommendations for the identified cultural resources.

CHAPTER II

NATURAL SETTING

Introduction

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

Ecoregions of Connecticut

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

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

Dowhan and Craig defined nine major ecoregions for the State of Connecticut. They are based on regional diversity in plant and animal indicator species (Dowhan and Craig 1976). Only one of the ecoregions is germane to the current investigation: Northeast Hills 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 Study Area.

Northeast Hills Ecoregion

The Northeast Hills ecoregion region consists of a hilly upland terrain located between approximately 40.2 and 88.5 km (25 and 55 mi) to the north of Long Island Sound (Dowhan and Craig 1976). It is characterized by streamlined hills bordered on either side by local ridge systems, as well as broad lowland areas situated near large rivers and tributaries. Physiography in this region is composed of a series of north-trending ridge systems, the western-most of which is referred to as the Bolton Range and the eastern-most as the Mohegan Range (Bell 1985:45). Elevations in the Northeast Hills range from 60.9 to 243.8 m (200 to 800 ft) above sea level, reaching a maximum of nearly 304.8 m (1,000 ft) above sea level near the Massachusetts border (Bell 1985). The bedrock of the region is composed of Schist and gneiss created during the Paleozoic and well as gneiss and granite created during the Precambrian period (Bell 1985). Soils in upland areas have been deposited on top of glacial till. In the valleys they consist of stratified deposits of sand, gravel, and silt (Dowhan and Craig 1976).

Hydrology in the Vicinity of the Study Area

The proposed Study Area is situated within in a region that contains several sources of freshwater, including Blackwell Brook, Cold Springs Brook, Moosup Pond, Tatnic Pond, Moosup River, and Quinebaug River, as well as several unnamed wetlands. The brooks, ponds, rivers, and wetlands may have served as resource extraction areas for Native American and historic populations. Previously completed archaeological investigations in Connecticut have demonstrated that streams, rivers, and wetlands were focal points for prehistoric occupations because they provided access to transportation routes, sources of freshwater, and abundant faunal and floral resources.

Soils Comprising the Study Area

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

A review of the soils within the Study Area is presented below. The Study Area is characterized by the presence of approximately 25 soil types ranging from sandy loams to mucks (Figure 2). The most ubiquitous soil types found within the Study Area, which cover approximate 40 percent of the property, include Hinckley, Windsor, Woodbridge, Agawam, and Paxton-Montauk soils. These five soil types are well correlated with both historic and prehistoric archaeological site locations. Descriptive profiles for each, which were accessed via the National Resources Conservation Service, are presented below.

Hinckley Soils:

A typical profile for Hinckley soils is described as follows: **Oe**-0 to 1 inch; moderately decomposed plant material derived from red pine needles and twigs; **Ap**-1 to 8 inches; very dark grayish brown (10YR 3/2) loamy sand; weak fine and medium granular structure; very friable; many fine and medium roots; 5 percent fine gravel; very strongly acid; abrupt smooth boundary; **Bw1**-8 to 11 inches; strong brown (7.5YR 5/6) gravelly loamy sand; weak fine and medium granular structure; very friable; common fine and medium roots; 20 percent gravel; very strongly acid; clear smooth boundary; **Bw2**-11 to 16 inches; yellowish brown (10YR 5/4) gravelly loamy sand; weak fine and medium granular structure; very friable; common fine and medium roots; 25 percent gravel; very strongly acid; clear irregular boundary; **BC**-16 to 19 inches; yellowish brown (10YR 5/4) very gravelly sand; single grain; loose; common fine and medium roots; 40 percent gravel; strongly acid; clear smooth boundary; and **C**-19 to 65 inches; light olive brown (2.5Y 5/4) extremely gravelly sand consisting of stratified sand, gravel and cobbles; single grain; loose; common fine and medium roots in the upper 8 inches and very few below; 60 percent gravel and cobbles; moderately acid.

Windsor Soils:

A typical profile for Windsor soils is described as follows: **Oe**-0 to 3 cm; black (10YR 2/1) moderately decomposed forest plant material; many very fine and fine roots; very strongly acid; abrupt smooth boundary; **A**-3 to 8 cm; very dark grayish brown (10YR 3/2) loamy sand; weak medium granular structure; very friable; many very fine and fine roots; strongly acid; abrupt wavy boundary; **Bw1**-8 to 23 cm; strong brown (7.5YR 5/6) loamy sand; very weak fine granular structure; very friable; many fine and

medium roots; strongly acid; gradual wavy boundary; **Bw2**-23 to 53 cm; yellowish brown (10YR 5/6) loamy sand; very weak fine granular structure; very friable; common fine and medium roots; strongly acid; gradual wavy boundary; and **Bw3**-53 to 64 cm; light yellowish brown (10YR 6/4) sand; single grain; loose; few coarse roots; strongly acid; clear wavy boundary; **C**-64 to 165 cm; pale brown (10YR 6/3) and light brownish gray (10YR 6/2) sand; single grain; loose; few coarse roots; strongly acid.

Woodbridge Soils:

A typical profile for Woodbridge soils is described as follows: **Ap**-0 to 18 cm; very dark grayish brown (10YR 3/2) fine sandy loam, light brownish gray (10YR 6/2) dry; moderate medium granular structure; friable; many fine and medium roots; few very dark brown (10YR 2/2) earthworm casts; 5 percent gravel; moderately acid; abrupt wavy boundary; **Bw1**-18 to 46 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; few very dark brown (10YR 2/2) earthworm casts; 10 percent gravel; moderately acid; gradual wavy boundary; **Bw2**-46 to 66 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; few very dark brown (10YR 2/2) earthworm casts; 10 percent gravel; few medium prominent strong brown (7.5YR 5/6) masses of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; gradual wavy boundary; **Bw3**-66 to 76 cm; light olive brown (2.5Y 5/4) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; 10 percent gravel; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; clear wavy boundary; **Cd1**-76 to 109 cm; light olive brown (2.5Y 5/4) gravelly fine sandy loam; weak thick plates of geogenic origin; very firm, brittle; 20 percent gravel; many medium prominent strong brown (7.5YR 5/8) masses of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; gradual wavy boundary; and **Cd2**-109 to 165 cm; light olive brown (2.5Y 5/4) gravelly fine sandy loam; weak thick plates of geogenic origin; very firm, brittle; few fine prominent very dark brown (10YR 2/2) coatings on plates; 25 percent gravel; common fine prominent strong brown (7.5YR 5/8) masses of iron accumulation; moderately acid.

Agawam Soils:

A typical profile for Agawam soils is described as follows: **Ap**-0 to 11 inches; dark grayish brown (10YR 4/2) fine sandy loam; light brownish gray (10YR 6/2) dry; weak medium and coarse subangular blocky structure; very friable; common fine and medium roots; strongly acid; abrupt smooth boundary; **Bw1**-11 to 16 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium and coarse subangular blocky structure; very friable; common fine and medium roots; strongly acid; abrupt smooth boundary; **Bw2**-16 to 26 inches; light olive brown (2.5Y 5/4) fine sandy loam; weak medium subangular blocky structure; very friable; common fine and medium roots; strongly acid; clear smooth boundary; **2C1**-26 to 45 inches; olive (5Y 5/3) loamy fine sand; massive; very friable; few fine roots; strongly acid; **2C2**-45 to 55 inches; olive brown (2.5Y 4/4) loamy fine sand; massive; very friable; strongly acid; abrupt smooth boundary; and **2C3**-55 to 65 inches; olive (5Y 5/3) loamy sand; single grain; loose; strongly acid.

Paxton-Montauk Soils:

A typical profile for Paxton and Montauk soils is described as follows: **Ap**-0 to 20 cm; dark brown (10YR 3/3) fine sandy loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; many fine roots; 5 percent gravel; strongly acid; abrupt smooth boundary; **Bw1**-20 to 38 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; 5 percent gravel; few earthworm casts; strongly acid; gradual wavy boundary; **Bw2**-38 to 66 cm; olive brown (2.5Y 4/4) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; 10 percent gravel; strongly acid; clear wavy boundary; **Cd**-66 to 165 cm; olive (5Y 5/3) gravelly fine

sandy loam; medium plate-like divisions; massive; very firm, brittle; 25 percent gravel; many dark coatings on plates; strongly acid.

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 as 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 Study Area.

Paleo-Indian Period (12,000-10,000 B.P.)

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

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

The only other Paleo-Indian site studied in detail in Connecticut is the Hidden Creek Site (72-163) (Jones 1997). The Hidden Creek Site is situated on the southeastern margin of the Great Cedar Swamp on the Mashantucket Pequot Reservation in Ledyard, Connecticut. While excavation of the Hidden Creek Site produced evidence of Terminal Archaic and Woodland Period components (see below) in the upper soil horizons, the lower levels of the site yielded artifacts dating from the Paleo-Indian era. Recovered Paleo-Indian artifacts included broken bifaces, side-scrapers, a fluted preform, graters, and end-scrapers.

Based on the types and number of tools present, Jones (1997:77) has hypothesized that the Hidden Creek Site represented a short-term occupation, and that separate stone tool reduction and rejuvenation areas were present.

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

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

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

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

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

Like their Paleo-Indian predecessors, Early Archaic sites tend to be very small and produce few artifacts, most of which are not temporally diagnostic. While Early Archaic sites in other portions the United States are represented by projectile points of the Kirk series (Ritchie and Funk 1973) and by Kanawha types (Coe 1964), sites of this age in southern New England are identified recognized on the basis of a series of ill-defined bifurcate-based projectile points. These projectile points are identified by the presence of their characteristic bifurcated base, and they generally are made from high quality raw materials. Moreover, finds of these projectile points have rarely been in stratified contexts. Rather, they occur commonly either as surface expressions or intermixed with artifacts representative of later periods. Early Archaic occupations, such as the Dill Farm Site and Sites 6LF64 and 6LF70 in Litchfield County, and 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 \pm 280 and 7,015 \pm 160 B.P. (Dincauze 1976).

In addition to Neville points, Dincauze (1976) described two other projectile points styles that are attributed to the Middle Archaic Period: Stark and Merrimac projectile points. While no absolute dates were recovered from deposits that yielded Stark points, the Merrimac type dated from 5,910 \pm 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 3,900 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; Wiegand 1978, 1980).

The Terminal Archaic Period (3,900 to 2,700 B.P.)

The Terminal Archaic, which lasted from ca., 3,900 to 2,700 BP, is perhaps the most interesting, yet confusing of the Archaic Periods in southern New England prehistory. Originally termed the "Transitional Archaic" by Witthoft (1953) and recognized by the introduction of technological innovations, e.g., broadspear projectile points and soapstone bowls, the Terminal Archaic has long posed problems for

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

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

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

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

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

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

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

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

Careful archaeological investigations of Early Woodland sites in southern New England have resulted in the recovery of narrow stemmed projectile points in association with ceramic sherds and subsistence

remains, including specimens of White-tailed deer, soft and hard shell clams, and oyster shells (Lavin and Salwen: 1983; McBride 1984:296-297; Pope 1952). McBride (1984) has argued that the combination of the subsistence remains and the recognition of multiple superimposed cultural features at various sites indicates that Early Woodland Period settlement patterns were characterized by multiple re-use of the same sites on a seasonal basis by small co-residential groups.

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

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

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

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

The Late Woodland Period in southern New England dates from ca., 1,200 to 350 B.P., and it is characterized by the earliest evidence for the use of corn in the lower Connecticut River Valley (Bendremer 1993; Bendremer and Dewar 1993; Bendremer et al. 1991; George 1997; McBride 1984); an increase in the frequency of exchange of non-local lithics (Feder 1984; George and Tryon 1996; McBride 1984; Lavin 1984); increased variability in ceramic form, function, surface treatment, and decoration (Lavin 1980, 1986, 1987; Lizee 1994a, 1994b); and a continuation of a trend towards larger, more permanent settlements in riverine, estuarine, and coastal ecozones (Dincauze 1974; McBride 1984; Snow 1980; Wiegand 1983).

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 Study 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

The Study Area associated with the Quinebaug Solar Center straddles the town line between Brooklyn and Canterbury, Connecticut. Canterbury was established in 1703 and Brooklyn was separated from it in 1786. Both towns are characterized by long and rich histories, and both contributed greatly to the overall growth and development of northeastern Connecticut. This chapter discusses the Native American history of the region, the general history of both the towns, and the ownership history of the most historically active portions of the proposed Study Area.

Native American History

At the time of European contact, the portion of the State of Connecticut containing the Study Area was inhabited by the Wabbaquassetts tribe of Native Americans, which was part a of a confederation of tribes that is often referred to as a single tribe known as the Nipmucks. These Native Americans occupied a wide area, mainly in Massachusetts but also within parts of northeastern Connecticut. They occupied numerous small villages and employed a subsistence strategy focused on hunting, fishing, and shifting cultivation, which is a typical lifestyle of the Indians of this time period. Prior to the 1650s, the native residents of this landlocked upland region were largely undisturbed by colonial incursions. During the 1660s and early 1670s, various sales of land were made to English colonists, but by 1675 it appears that the Indians not only had grasped the fact that these sales were permanent transfers, but also that it was the intention of the Massachusetts Bay and Connecticut Colony governments to dispossess them of their territory entirely. As a result, many of the Nipmuck tribes' members joined in King Philip's War against the English in 1675 (Connole 2001). After the end of King Philip's War, in 1681, the General Court of Massachusetts Bay appointed a committee to investigate land claims in the Nipmuck Country and buy up any outstanding claims by Indians. The result was the opening the territory to settlement by the whites (Bowen 1886).

In addition to this sequence of events, Connecticut historical tradition claims that the Wabbaquassetts, as well as other neighboring groups, were "entirely under the domination of the Mohegans," who sold away all their lands to the English (DeForest 1852:376; Bowen 1886). The two traditions about the Wabbaquassetts' actions in King Philip's War are that they "deserted their homes and threw themselves at the feet of Uncas at Mohegan" and also that while some of them fought against King Philip, others ran off and joined with him (Bowen 1926:14-15). The Connecticut legislature recognized the claim of the Mohegan sachem Uncas to the Wabbaquassetts territory based on the argument that the Wabbaquassetts were tributaries of the Pequots, whom the Mohegans had conquered nearly 40 years earlier during the Pequot War. When Uncas died in the late seventeenth century, his will resulted in the division much of the vast Mohegan territorial claims between his two sons, Joshua and Owaneco. The latter received all of the Wabbaquassetts territory (plus the eastern half of the older Mohegan lands). In 1680 and 1684, however, Owaneco deeded all of this land to magistrate Captain James Fitch (Bushman 1967). As the colonial authorities perceived that the Native Americans' claim to this territory had been cleared by the sale to Fitch, there appear to be no records regarding the identity of any of the natives established there, although they may have continued living in the uncolonized portions for some time.

Seventeenth and Eighteenth Century History of Brooklyn, Connecticut

As noted above, the whole of the Wabbaquassett territory came into the possession of Captain James Fitch by 1684. After buying the rights to the land from Owaneco, Fitch became involved with Captain John Blackwell, a former member of the British Parliament and an exile after the Restoration. In 1686, the Connecticut legislature granted a township patent (that is, official permission to begin setting up a town) to John Blackwell, Esq., Captain James Fitch, and several others. The patent included the present Town of Pomfret and the northern part of the Town of Brooklyn (Public Records, Volume 3, Page 202 n. 2); however, Blackwell also had purchased directly from Fitch a parcel of 5,075 acres to the south of Mashomoquet Brook in what is now Pomfret and to the north of a line extending westward from the junction of the Quinebaug River and the Five Mile River (where Danielson is located). In 1687, Blackwell secured his own land patent from the Connecticut Colony, confirming his purchase as approximately 5,000 acres to be called "Mortlake." This area extended approximately seven miles to the south from Mashomoquet Brook and six miles from east to west, and it was to become its own town (Bayles 1889). However, the intrusion of the British government into New England affairs, in the form of imposing Governor Edmund Andros upon them, interrupted Blackwell's plans to establish a manor there. And, after the Glorious Revolution of 1688, Blackwell was able to return to England, having never established the new town. The tract remained unorganized until after 1713, when Blackwell's son (John, Jr.) sold Mortlake to Jonathan Belcher of Boston. Belcher hired Captain John Chandler to survey the tract, during which Chandler found a single north-south path and the squatter family of Jabez Utter living on the land. The division of the parcel reserved two large estates for Belcher; of the other parcels, the one that contained the proposed Study Area appears to have been sold, or apparently only rented, to a man named Saltonstall. All of the Mortlake area was in the peculiar legal position of being technically a manor in the English style, rather than simply a town in the traditional New England sense (Larned 1874). This was an unusual situation for Connecticut at this time.

In 1714, the legislature decreed that jurisdiction over the land between the original bounds of the Towns of Pomfret and Canterbury, including Mortlake and some other properties, was to be divided between Pomfret and Canterbury. The Town of Pomfret received all of Mortlake and some land situated to the south of it; however, the area containing Mortlake remained a separate territory with no formal government owned by Jonathan Belcher. In 1728, a committee reviewing the situation of the territory between the original bounds of the Towns of Pomfret and Canterbury recommended that Mortlake's 5,000 acres and seven inhabitants should be joined with the adjacent 8,000 acres and 32 inhabitants should be made into a new town. The Upper House of the legislature rejected the idea as potentially infringing on the powerful Belcher's rights. In 1731, however, the residents of the area succeeded in establishing as a separate ecclesiastical society for religious and church tax purposes. This society was informally called Mortlake (although it only included the southern half of Mortlake). In 1739, the greater part of the Mortlake lands was sold by Jonathan Belcher to Godfrey Malbone of Newport, Rhode Island for £10,500.

Godfrey Malbone also purchased other land in the area, and it appears that, as he was a more accessible person, the unchanged manorial status of the lands was less irritating to the Town of Pomfret. Nonetheless, the existence of Mortlake and its effectively ungoverned – and untaxed – inhabitants remained an issue. In 1751, even its inhabitants (all 20 of them – presumably 20 heads of families) desired the benefits of being part of a town government and petitioned to be annexed to the Town of Pomfret. In 1752, the legislature, claiming that its predecessors surely had never intended for this anomalous situation to exist, merged the territory with the Town of Pomfret, and thus, settled the matter. In addition, the ecclesiastical society was renamed Brooklyn (Larned 1874). In 1769, Godfrey Malbone began work on establishing an Episcopal church there, which he succeeded in doing by 1770. In

1771, a building was erected on land acquired from Azariah Adams, which was located to the south of Malbone's own land (Bayles 1889). During the Revolutionary War, attendance to the church fell off so much that it was closed (Larned 1874).

In 1754, an epidemic of dysentery killed 70 people in the Brooklyn Society, including the minister, who also had some medical training (Larned 1874). The society had built a meetinghouse in 1734, and in 1771 it was replaced with a new and larger building a short distance away. The second meetinghouse boasted a steeple with a clock and the second church bell in the county (Bayles 1889). In the years leading up to the Revolutionary War, the citizens of Windham County generally were in accord with the region's strong sentiments against the British government's policies. In 1774, Brooklyn Parish in particular sent 125 sheep to the relief of the blockaded city of Boston, the task of conveying them being carried out by Israel Putnam, Joseph Holland, and Daniel Tyler Jr. At this time, Godfrey Malbone was still the owner of most of the former Mortlake and other lands, and he was a neighbor of Israel Putnam and also a Tory, as was the Reverend Samuel Peters of the Episcopal Church. Reverend Peters took a public stand against anti-British actions and was run out of town, and by year's end returned to England. Malbone, on the other hand, was verbally outspoken against the rebellion but took no real action against it (rumors outside Pomfret notwithstanding). No action was taken against him during the war (Larned 1874).

At the time of the Lexington Alarm, a large party of men from the county assembled and many went to the Boston area. A rumor went around that the loyalist Malbone had armed his "negroes" and they were marching on the Town of Killingly. As the preparations for war advanced, Windham County soldiers were organized into the Third Regiment, under Colonel Israel Putnam, Lieutenant-Colonel Experience Storrs, and Major John Durkee. The 10th company was from the Town of Brooklyn, and it was led by Captain Israel Putnam Jr., First Lieutenant Samuel Robinson Jr., Second Lieutenant Amos Avery, and Ensign Caleb Stanley. Throughout the war, soldiers from the county – including General Israel Putnam – were active participants. After the war, Malbone was one of a few Tories allowed to stay in the region; however, he did lose a portion of his property as a consequence of his political views (Larned 1874).

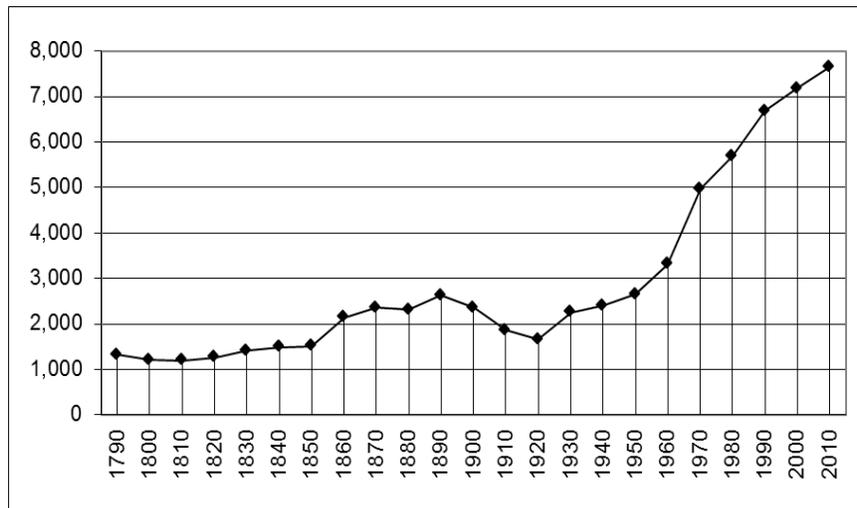
Once the Revolutionary War was over, matters such as the organization of towns returned to the fore, and Brooklyn became a separate town. It held its first town meeting in 1786, with Colonel Israel Putnam serving as moderator. Godfrey Malbone, though both a generous and sharp-tongued man, had financial difficulties prior to the end of his life in 1785; one source attributes this in part to his investment in slaves, which brought him little financial return for their support (Larned 1784).

Nineteenth and Twentieth Century History of Brooklyn, Connecticut

In 1816, the Congregational church building in Brooklyn was taken over by the newly Unitarian majority in town, and the Congregationalists eventually had to construct a new chapel in 1821, as well as a larger church in 1832. A Baptist church was organized in town in 1828. At the southeastern corner of the town, where the Plainfield factory village of Wauregan spilled over into Brooklyn, a Roman Catholic Church was built later in 1872. In 1819, in response to petitions to move the county courthouse to a more central location within the county, the legislature agreed that if construction of a courthouse could be independently funded, it would be moved to the Town of Brooklyn, and in 1820 it was. The village thus gained more importance, and acquired a newspaper, bank (the Windham County Bank, chartered 1822), and fire insurance company (Bayles 1889).

In addition, the presence of multiple turnpike roads passing through the town was also cause for early optimism, as the improved transportation routes created by these private companies were expected to increase business. The Norwich and Woodstock Turnpike was incorporated in 1801, and it extended northward from Norwich to Woodstock, passing through the center of Brooklyn on the way. In 1846, the corporation informed the legislature that it was unable to compete with the new Norwich and Worcester Railroad, and the road was made free and the corporation disbanded. In 1825, the “Providence Turnpike” was incorporated to connect a Rhode Island turnpike to Danielson, and in fact it was built from Brooklyn center, through Danielson. It extended from Brooklyn to the Rhode Island border; it became a free road in 1866. Finally, in 1826 the Windham and Brooklyn Turnpike was built to connect the center of Windham with the county seat in Brooklyn. In 1845, the corporation took over the existing road from Brooklyn to Danielson. Why it did this when railroads were taking over transportation is unknown, and so is the date of the road’s abandonment, although in fact this route is still an important one between the two towns (Wood 1919).

Despite these transportation advantages, the population figures reported in the chart depicted below are those of an agricultural town, which did not pass 2,500 residents until 1850 and then lost population again until 1920. In ca., 1812, the town’s complement of industrial facilities included one carding machine (for preparing wool), two tanneries, three grist mills, and two sawmills. At that time, the central village of Brooklyn contained approximately 20 houses and two shops. At one point a cotton mill was built on the Quinebaug River, and a silversmith named Edwin C. Newbury established a shop in town that later developed the manufacture of spectacles, pens, and watch cases. However, for the most part Brooklyn’s population relied on agriculture for its livelihood (Bayles 1889).



According to the 1850 industrial census, there were exactly three manufacturing businesses in town: Quinebaug Mills Company, which made 480,000 yards of cotton cloth with the labor of 20 males and 25 females; a maker of silver spectacles, Edwin Newbury, who employed eight males and one female in making 40,000 pairs; and Colby Cleveland’s broom-making business, in which two men made 3,000 brooms (valued at \$500, the minimum output value to be included in the census returns) (United States Census 1850). Whatever the local proponents may have hoped for, the acquisition of the courthouse did not yield much benefit to the town. Probably the most important reason for the town’s failure to thrive is the fact that when railroads were constructed through the region, all of them bypassed the Town of Brooklyn in favor of the more industrial towns that flanked it on the west and the north.

As of 1932, the town's principal industries were reported as solely agriculture and cotton textile manufacturing, although this source claims it could be reached by railroad as well – perhaps via Danielson (Connecticut 1932). As the population figures in the chart above show, the town's population remained below 3,000 residents until 1950, did not double until after 1980, and was still under 8,000 residents as of 2010. In 2000, 2.1 percent of the workers were engaged in agriculture and 2.6 percent in manufacturing, while construction and mining occupied another 7.2 percent. As with the rest of the country, the remainder was employed in one aspect or another of tertiary activities (services, trade, government, finance, and so on). The largest landowners in 2006 were retirement homes and a convention center; the largest employers consisted of a retirement home, the town itself, the Brooklyn Correctional Institute (a juvenile offender facility), and a printing company (CERC 2008). The ongoing rise in population in the Town of Brooklyn from the late twentieth into the twenty-first century is undoubtedly a result of the expansion of suburban residence patterns into regions ever further from regional business centers. Even so, the trend's effects in the Town of Brooklyn are relatively minor when compared to the rest of the State of Connecticut. This slow growth may also be due to the Town's development priorities. Its current Plan of Conservation and Development calls for attention to maintaining its rural, historic, and agricultural character as much as possible, and limiting new commercial, residential, and industrial development to designated areas (Brooklyn 2011).

Seventeenth and Eighteenth Century History of the Town of Canterbury

Much of Canterbury's earliest history is the same as that of Brooklyn, as presented above, save that it was not involved in the Mortlake affairs. Instead it was part of the general "Quinebaug Country" disputes, in which arguments over the validity of Native American land transfers combined with competing claims of the prominent Winthrop and Fitch families to cause years of uncertainty regarding ownership of the land and delays in its colonization (Bushman 1967). The earliest documented colonist in the future Canterbury was Major James Fitch, Jr., who moved to a riverside farm that he called Kent in 1697. By 1703, enough colonists had already moved there that it was separated from its parent town, Plainfield – which itself had only been incorporated in 1699. During the Revolutionary War, the town's residents were highly supportive of the cause, sending numerous soldiers and supplies from the time of the Lexington Alarm to the conclusion of the war (Crofut 1937).

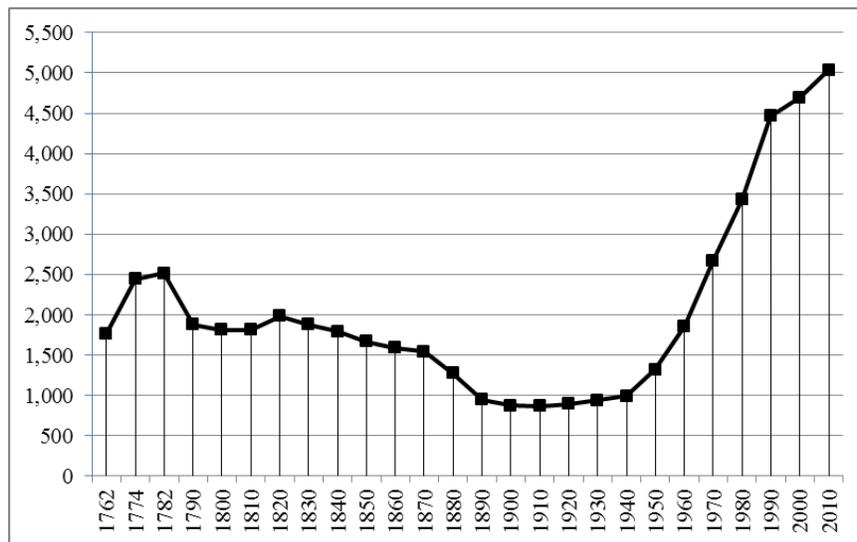
Nineteenth and Twentieth Century History of the Town of Canterbury

One of the earlier of the state's turnpikes, the Windham Turnpike, was incorporated in 1799 and it passed through the center of Canterbury, well to the south of the Study Area. It continued in operation until 1852 when the corporation was dissolved (Wood 1919). A short report on the town of Canterbury, compiled in 1801, indicates that the eastern part of the town near the Quinebaug River was level and excellent for corn, grain, and hay cultivation, while the western part was hilly and forested, with good grazing and numerous orchards. Canterbury's farmers grew and prepared flax there. They were served by five taverns kept in town, one distillery, and also many sawmills and grist mills. Most of the town's trade was with the Connecticut coastal cities of Norwich and New London, but also enough to mention was with the major regional cities of New York, Boston, and Providence. Blackwell Brook (near the Study Area) was notable for its trout population (Frost 1801). According to a gazetteer published in 1819, the flood plains of the Quinebaug River helped the town produce numerous grain crops and also flax (used to make linen cloth), while the Little River provided excellent waterpower for factories including three textile mills. The town also had a wool-carding machine, two fulling mills, a pottery, two tanneries, and multiple grist mills and sawmills, along with seven stores. The two Congregational Churches each centered a small village with houses and stores (Pease and Niles 1819). By the 1830s the town still had two Congregational churches and had added a Baptist one in the north; there was also a manufacturing

village called Packersville, which was partly in Plainfield, where two of the town’s three cotton mills were located. It was also in the 1830s that Canterbury became a locus of racial animosity and violence in the state, when Prudence Crandall’s decision to open her boarding school to African-American girls caused the state legislature to pass a law against the education out-of-state African-Americans in Connecticut and prosecuted Crandall under that law (Barber 1836). Older sources omit the fact that a white mob attacked the school building and caused her to give up the effort (Walsh 1985). The former school building is now a museum.

As the nineteenth century progressed, Canterbury saw an overall decline in population, similar to that of Brooklyn and for similar reasons (see chart below). From a high point of around 2,500 residents in 1782, the number of residents dropped to below 1,000 in 1890, where it stayed for 50 years. By the time of the writing an 1889 history of the county, it could still be reported that the main occupation of the town’s residents was agriculture and its textile mills had vanished. The town’s waterpower was being used for sawmills and a grist mill, and the other businesses were simply general stores, blacksmiths, and similar necessities for a rural economy. “The importance of Canterbury,” the author opined, “seems to lie mainly in the past and in the future, not in the present” (Bayles 1889:482).

The town’s main industry was still agriculture in 1932, and it did still have railroad access at that time (State of Connecticut 1932). The population did not begin to rise significantly until after 1940, however, in sync with the automobile-based suburbanization trends of the 1940s and forward – yet the population did not pass 5,000 residents until the 2010 census. In fact, unlike many towns that saw more rapid suburban growth, Canterbury’s population has continued to grow since 1990, albeit by only about 500 people. A recent economic profile of the town projected modest continuing growth through the present decade. The document also reported no manufacturing activity in the town, and in fact only 81 business units at all, employing a total of 543 people, 172 of them in government functions. The largest employees were the town schools, its volunteer fire company, a recycling facility, and a supermarket. Of the labor force of 2,862 people in 2014, a survey of commuting patterns indicated that 366 worked in Norwich, and between 100 and 167 in the nearby towns of Plainfield, Killingly, Windham, Montville, and Ledyard (CERC 2016). The town’s current plan of conservation and development emphasizes preservation of the town’s rural character through farmland preservation and control of residential and commercial development (Canterbury 2010).



Study Area History – Town of Brooklyn

The objectives of the background research portion of the current Phase IA assessment survey were to isolate the archaeological sensitivity of the proposed Study Area and the documentable history of resources located within the Study Area. In order to accomplish the latter objective, chain of title research was conducted and it was focused on the portions of the proposed project parcels that contains historic house foundations. Thus, the following section of the report documents the parcels identified as B, C, and D (herein after “B/C/D”), including the specific history of the transfer of ownership of the parcels and salient details about the owners (see Figure 3).

The earliest known owner of the B/C/D parcels in Brooklyn was Deacon Samuel Butts (Larned 1880:250). He owned the property when he passed away in 1818. Although his probate record contains no inventory, his detailed 1815 will described the farm where he lived as containing about 140 acres, which he left to his daughter Eunice Butts (a one-third interest) and his grandson Samuel Cady (a two-thirds interest), along with an 11-acre wood lot similarly divided. His will also divided another farm, containing about 93 acres, into 10 shares among his children and grandchildren, and ordered payment of a very large amount of cash to these various heirs – \$7,095, to be spread out over 11 years. He had nine children still living at the time of his death, and also named the children of one deceased daughter, and the children of one of the living sons. One of the living daughters was named Mary Cady, and she was presumably the mother of Samuel Cady. In addition, his wife Lodema survived him, but was, very unusually, provided for by a prenuptial agreement, the terms of which were not given in the will (though he also willed her another \$40) (Plainfield Probate District, File #335).

In March 1820, Eunice Butts quit-claimed her one-third interest in the 140 acres (and the 11 acres) to her nephew Samuel Cady, who paid her \$1,200 and thereafter became the sole owner of the property (Brooklyn Land Records, Vol. 5, Pg. 329). According to the 1850 U.S. Census, Samuel Cady was a 58-year-old farmer who owned \$10,000 in real estate; his wife, Alice, was 60 and had been born in neighboring Canterbury. The household also included four apparently unrelated people: Augustus Mowrey, age 21, a laborer whose birthplace was unknown; two other laborers who were Irish-born and had no recorded surnames, Patrick, aged 47 and Peter, aged 22; and Ellen Wallace, aged 22, also Irish-born (U.S. Census 1850). When he passed away ca., 1852, Samuel Cady he would have been about 60 years old. He left an estate valued at \$11,955.10, including both real and personal property. In addition to the 140 acres of the “Home Farm,” he owned a second farm containing 225 acres, a third farm of unstated acreage (identified as the one on which Henry Johnson lived), and six other lots in Brooklyn, Canterbury, and Killingly – the latter including a “Stone House & land attached.” Going by their inventoried values, the Home Farm was the second largest (\$3,400) and Henry Johnson’s the smallest (\$925) (Brooklyn Probate District, File #97). The 1833 historic map shown in Figure 4 does not show very many cultural features, but the Cady farmstead was located between Blackwell’s Brook on the west and the schoolhouse on the east (the rectangle with the “1” written in it). This schoolhouse is featured in later descriptions of the property.

Interestingly, the Butts/Cady Home Farm was being described as “encumbered by Widow Butts.” This must have been Lodema Butts, whose interest must have derived from the prenuptial agreement mentioned in the 1815 will of Samuel Butts. Certain entries in the administrator’s accounts for Samuel Cady’s indicate that the farm was still being used to support Lodema with meat and cash some 30 years after her husband’s death, some of it going directly to a man named William Safford (Brooklyn Probate District, File #97). The 1850 census reported that the Canterbury household of the blacksmith William Safford included 92-year-old Lodema Butts, confirming this relationship (U.S. Census 1850). The inventory of Samuel Cady’s estate was extensive, including much clothing, maps, bibles and other books,

carpentry tools, general farm tools, items related to dairying, 10 cows, two horses, three oxen, and various livestock (turkeys, pigs, geese, and hens). Samuel's probate inventory specifically describes some of the household goods: glass tumblers, a tea set, earthenware, black printed ware, blue edged plates, white plates, numerous cups and saucers, and numerous silver spoons, as well as 50 tin milk pans. Also of interest is that he owned small amounts of brick and boards located at the "Brickyard," and also 75,000 bricks valued at \$262 and located at the "H[enry]. Johnson Place." He was still holding on to a bounty land warrant, valued at \$26, most likely from service in the War of 1812 (Brooklyn Probate District, File #97).

Samuel Cady's large and complex estate was under administration for several years, but the actual disposition of turned out to be straightforward. In November 1853, the two heirs agreed upon a division: Lydia Minerva Johnson, wife of Henry Johnson, would receive the farm they lived on; Eliza Harris, wife of George W. Harris, received all the other real estate with the exception being the stone house in Killingly, which was to be sold and the money divided between them; and the personal property was to be divided between them by the administrator. Both husbands signed the document (Brooklyn Probate District, File #97). The names of the heirs were also found in the 1850 Census. Henry Johnson (aged 39) and his wife Lydia M. (aged 36), resided in Brooklyn, and they were listed only four entries away from Samuel Cady in the census. Henry's occupation was given as "Brick Maker," and he owned no real estate. The couple had seven children, the oldest aged 13, and no servants. George Harris (aged 38) and his wife Eliza (aged 29) lived in Millbury, Massachusetts, where he worked as a brick maker and owned \$3,000 in real estate. Both them were born in Connecticut, but their children had all been born in MA: Austin (7), Caroline A. (6), Hannah A. (4), Ellen A. (1), and Samuel (2 months). The household also included five male brick makers, two of them Canadian-born, and an Irish servant woman (US. Census 1850). The occupations of the two sons-in-law make the mentions, in Samuel Cady's probate inventory, of a brickyard and numerous bricks, more comprehensible.

In addition, there were the dower rights of the widow, Alice Cady, which were decided to be 130 acres of the home farm, and described in enough detail to be approximately mapped. This map is shown in Figure 6. The wording of the boundaries, as reported in the documents, matches the sketch map's appearance only imperfectly because of the changes in magnetic north since 1853 and the difference between magnetic north and true north (the latter being what is used in modern mapping programs). The dower distribution did not specify any particular part of the house for Alice's use, but she did receive \$104.21 in household goods, including a blue pitcher, some of the black printed ware, furniture, and a cow (Brooklyn Probate District, File #97). The mapped description can also be compared to the landowners named in the historic map from 1856 (Figure 5). According to this map, Widow Cady's house was on the south side of what is now Rukstella Road, west of the modern Allen Hill Road. The 1856 map also includes additional important landmarks: the schoolhouse to the east and the gristmill the west, the landowners Davison, Parkhurst, Kendall, Chaffee, Dorrance, and Cheney, and the Wauregan Mills village in the next town to the east.

According to the 1860 census, George W. Harris (aged 48) and Eliza (aged 40) were back in Brooklyn, most likely living in the house on parcel B. Alice Cady (aged 70) was living with them. George gave his occupation as farmer and reported owning \$8,000 in real estate and \$3,000 in personal estate. Their children were Austin (17), Maria (14), Ellen (11), Samuel (9), Lyman W. (8), Andrew (5), Amanda (4), and Harvey (9 months). The household also included Hannah O. Connell (25), an Irish domestic, as well as Daniel Johnson (23) and Jerome Jackson (19), farm laborers. The neighborhood on the census pages was mostly locally-born farmers and farm laborers, with a few Irish servants (U.S. Census 1860). In a historic map published in 1869, the George W. Harris house was in the same location as the Widow Cady house.

Most of the nearby landowners had the same surnames and the schoolhouse was still present (Figure 6: Sheets 1 and 2). The 1870 Census found the Harris couple 10 years older, and with fewer children at home: Ellen A. (aged 21, who helped keep house); Samuel C. (aged 20, who worked in a saw mill); Lyman W. (aged 18, who worked on the farm); Andrew J. (aged 16, who worked on the farm and also attended school); Amanda (aged 14, schoolgirl); and Harvey (aged 10, schoolboy). Alice Cady had either passed away or moved to her other daughter's home, as she is not named as part of the George Harris household as of 1870. The household also included Charles Town (19), a farm laborer from Connecticut, and Alfred Arkin (18), a farm laborer from Canada who was illiterate. By the time of the next census, 1880, George W. Harris (aged 68) was a widower and his household was being kept by daughter Ellen C. (31) and son Harvey (20) who worked on the farm. They were assisted on the farm by Edward Webster (23), a Connecticut born African-American man and Thomas Higgins (22), who was from Massachusetts.

Interestingly, in 1889 George W. Harris purchased a quit-claim to the property (along with three other pieces) from the heirs of Eliza Harris, who had received it from her father Samuel Cady. The 140 acres was "known as the Samuel Cady place" and formerly known as "the Butts Place" (Brooklyn Land Records, Vol. 14, Page 365). It is interesting because Eliza received the property in 1853 and passed away in about 1889, during which time the state's Married Women's Property Act was passed, which made it theoretically possible for Eliza to own this property in her own name despite being married – except that she'd received it over 20 years prior to the act's passage. The potential ambiguity of the situation may explain why their children gave him this quit-claim deed. There were seven heirs listed: Samuel Harris, Harvey Harris, and Amanda Young (wife of Lewis Young) of Brooklyn; Austin Harris and Lyman Harris of "Birmingham" Connecticut, a village in Derby; Andrew J. Harris of Millbury, Massachusetts; and Ellen Boutwell ("abandoned by her husband") of Worcester, Massachusetts. The following summary from the Brooklyn Land Records (Vol. 14, Page 365) corrects an error in the original that stated what should be the northern abutters as a second set of western abutters.

N	Charles Dorrance, George Kendall;
E	Amos Kendall, heirs of John Kendall;
S	Horace and George Kendall (occupied by the same), and formerly Daniel Bennett;
W	John W. Kendall, Amos Kendall

On August 31, 1891, George W. Harris quit-claimed his "home place" at "Christian Corners" in Brooklyn to Lyman W. Harris, which consisted of 140 acres and buildings (plus another piece). The description on this deed (Brooklyn Land Records, Vol. 14, Pg. 130) read:

Start at the northwest corner of the premises, near the highway from Spauldings Mills to Christian Corner Schoolhouse; then

Southeasterly by land of George T. Kendall, Charles Dorrance, and Amos Kendall to a corner adjacent to said Amos Kendall; then

Southwesterly by land of Amos Kendall and Edmond (or Edward) L. Warren to a corner of a wall at land of said Warren and Horace Kendall; then

Northwesterly by land of Horace Kendall and the heirs of Daniel Bennett to a corner adjoining land formerly of John W. Kendall; then

Easterly by land formerly of John W. Kendall to the starting point.

George W. Harris died in Brooklyn, Connecticut on September 11, 1897, and his daughter Amanda Young signed the application for probate. His son Harvey Harris was the executor of the estate. His will,

dated 1892, led to the distribution of thousands of dollars among his children and grandchildren, though according to the inventory he owned very little property (Brooklyn Probate District, File #611).

Lyman W. Harris, George's son, died less than two years after his father, on April 10, 1899. His probate record identified his widow as Jennie M. Harris, and the sole heir-at law as Clarence W. Harris of Brooklyn, his son. The inventory of the estate (much less thorough than inventories from earlier in the century) reported that he owned 28 cows and a bull, suggesting an interest in dairy farming, along with various farming and haying equipment and four pieces of real estate, including the 140-acre home farm. The latter was valued at \$5,000, and the estate as a whole at \$7,126.25. The estate applied for permission to sell some or all of the real estate, and an administrator's account was filed in 1900 (Brooklyn Probate District, File #613). According to the 1900 Census, the widowed Jennie Harris (47) reported that she had borne one child, who was still living, and that her occupation was farmer on her own farm. She was born in Connecticut but her parents were both from Rhode Island. Her household included her son, Clarence W. (14), who was at school; Rebecca J. Lathrop (53), a widowed servant (2 children born, 1 living); and Herbert Baker (41), a widowed laborer. They probably still lived on the farm as of 1900, because the estate (by action of Jane M. Harris under the probate court order of 1899) did not sell it until 1905, when William J. Pomroy of Killingly paid \$3,250 for the land and buildings "in the southeasterly part of town at Christian Corners so-called," formerly owned by Samuel Cady (Brooklyn Land Records, Vol. 15, Pg. 398).

In 1907, William J. and Anna F. Pomroy sold the same land after owning for only two years (specifying that it contained 140 acres) to Linda Alba de Costa. Anna Pomroy, signing with a mark, released all her dower rights to the property. The deed's description was very similar to the prior one, only omitting a few details (Brooklyn Land Records, Vol. 17, Pg. 277). The 1910 census tells us that Frank A. DaCosto (aged 62) was a Spanish immigrant who had arrived in the U.S. in 1857 and was still an alien. Frank's wife, Linda T. (aged 35), was born in New York to a Portuguese father and a New York mother, and in 10 ten years of marriage had borne four children who were all still living. The birthplaces of their children reflect the couple's peregrinations in the northeast region: Anita L. (aged 9, born in New York); Linda F. (aged 7, born in Virginia); Francis (aged 5, born in New York); and Wgean(?) (aged 1, born in Connecticut). The household also included three Connecticut-born boarders: a woman (43) who worked as a servant, a man (22) who worked as a laborer on a general farm, and a youth (16) who worked as a laborer on a general farm. Presumably they all worked for the family, but the form is unclear on that point. This was the first time that the B/C/D property shown in Figure 4 was owned by an immigrant, but it was certainly not the last.

The Alba de Costas probably did not stay in Brooklyn for very long. In 1911 they lost the farm in a foreclosure action instituted by Minnie M. Warren of Killingly. The foreclosure was under court order and the 140 acres of land were sold to Alexander Rukstella of Jamesport, New York for \$4,500 (Brooklyn Land Records, Vol. 18, Pg. 92). The Rukstella Family would continue to own the property until 1970, and of course Rukstella Road is named after them. The Rukstellas (surname also spelled Ruxstella, Raukestela, and Ruckstela in different census years) were Lithuanian immigrants who had arrived in the United States in the 1890s and became naturalized citizens sometime during the next decade. The 1910 census found them living on the truck farm they owned in Riverhead, New York with five children and three Lithuanian hired men (U.S. Census 1910). In 1920 they were living on their farm in Brooklyn, Connecticut. Their household included 6 children: Sarah (19, born in New York); Catherine (15, born in New York); John (11, born in New York); Alphonse (10, born in New York); Peter (6, born in Connecticut); and Martha (4, born in Connecticut). In 1930, only three of the children were still living with the Rukstella Family on their truck farm, but they had added Anna Curtis (aged 83), identified as Alex

Rukstella's widowed, Lithuanian-born aunt-in-law. As of 1940, according to the census, Alexander Rukstella who was 74 years old and wife Antonia aged 67 and shared their household with two of their sons and their wives, but no children. They also provided living space for a 60-year-old Lithuanian man. The 1934 aerial image of the Study Area clearly shows the farm complex flanking Allen Hill Road and the mix of orchards and other fields, with some patches of woodland within the B/C/D parcels (Figure 7).

In 1948, having kept the land through the Depression and World War II, Alex Rukstella sold the farm to Peter A. and Helen I. Rukstella, his son and daughter-in-law (which they immediately mortgaged back to him for \$5,950, mentioning an existing \$6,500 mortgage to the Federal Land Bank of Springfield). The deed reserved to the grantor and his wife "Antenina" a life use of a half-acre of the land for a garden, and four rooms "on the main floor in the house on said premises" as well as joint use with the grantees of one of the second-floor bedrooms. It was also subject to a right of way to Alban F. Rukstella (Brooklyn Land Records, Vol. 29, Pgs. 405, 406). This right of way was specifically located in a hand drawn map filed on the land records on the same day, which is reproduced in Figure 8. In addition to the right of way, it also shows the arrangement of farm buildings in the northeast corner of the farm and the configuration of the farm fields (Brooklyn Land Records, Map Vol. 2, Pg. 72). The right of way was created by Alex and Antenina Rukstella in a 1945 deed to their son Alban F. Rukstella, which stated that it was to run from that land across "Birchwood Farm" to Rukstella Road and last as long as Alban owned the property. The right of way it also included access to land to the south in Canterbury parcel near the "Mowry Farm" (Brooklyn Land Records, Vol. 28, Pg. 345). This right of way can be clearly seen in the 1951 aerial image, running along the edge of the cleared fields; the image also shows the continued farm use of the B/C/D parcels and adjacent areas (Figure 9).

The second generation of the Rukstella Family sold the farm to Ruth Bedford of Westport, Connecticut in 1970, taking back a mortgage for \$80,000 (Brooklyn Land Records, Vol. 49, Pgs. 480, 482). The 1970 aerial image shows that the property was still an active farm, although some reforestation had occurred along its northern edge (Figure 10). By 1974, however, it appears that the farmstead had been torn down, except for a pair of silos. The surrounding land remained in agricultural use at this time (Figure 11). In 1977, Ruth Bedford (still resident in Westport) sold the property to Robert J. Gluck of Plainfield (Brooklyn Land Records, Vol. 66, Pg. 197). Robert held the property until 1998, when he quit-claimed it to Dolores F. Gluck of Plainfield, who passed away only a few days later, making her executor the same Robert J. Gluck (Brooklyn Land Records, Vol. 260, Pg. 261; Vol. 199, Pg. 50). In 2002, the estate sold this property (together with the rest of the overall Study Area, which Robert had also transferred to her in 1998) to O&G Industries (headquartered in Torrington) (Brooklyn Land Records, Vol. 260, Pg. 261). O&G Industries is construction materials supplier and it had purchased the land for sand and gravelling rights. It is in the 2008 aerial image that graveling operations on the B/C/D parcels, notably near the southwest corner, became clearly visible (Figure 12). In 2009, the whole group of properties (including B/C/D) was sold to River Junction Estates LLC, headquartered in Putnam, Connecticut. O&G Industries, however, reserved the right to continue sand and gravel extraction on much of the property for 20 years, as long as the activity did not interfere with the grantee's plan to build a proposed golf course (Brooklyn Land Records, Vol. 451, Pg. 235). As no golf course exists there today, it is assumed that those developments plans were abandoned by River Junction Estates LLC.

Study area History – Town of Canterbury

As determined during the pedestrian survey portion of this investigation, Parcel J contains three historic foundations, a stone lined well, and a historic cemetery. The title search of this area provides a sketch of the parcel's historic ownership. The earliest transaction found for Parcel J dates to 1819 and relates to 70 acres of the somewhat larger Parcel J, which was described as being located partly in Canterbury and

partly in Brooklyn – it may include Parcel G, but this has not been confirmed; it is also possible that the owners were not quite sure where the town line was at that time. In 1819, Joseph Pike sold this land, together with a smaller parcel of swamp land, to Caleb Cook for \$2,000. According to Canterbury Land Records, Vol. 19, Pg. 215, the description runs as:

Beginning at the southeast corner, at a corner of wall on land of John Kendal Jr.; then
Westerly to land of Comfort Hide; then
By land of Comfort Hide to Palmer's land; then
Northerly about 3 rods (49.5 feet) to land of Asa Bacon; then
By land of Asa Bacon to land of William Putnam; then
Easterly by land of William Putnam to land of Samuel Cady, lately owned by Deacon Butts [i.e., Parcel C]; then
By land of Samuel Cady to "the aforesaid lot" [reference unclear]; then
Southerly by land of Samuel Cady to land of John Kendal Jr.; then
By land of John Kendal Jr. to beginning

This transaction is enmeshed in a series of related transactions aimed at providing financial support to Joseph and Hannah Pike, who were poor enough that an overseer had been appointed for them. The upshot was that in exchange for a total of about 90 acres of land, Caleb Cook promised to feed and clothe the couple and pay their debts; under the agreement, Hannah received the right to dispose of some of the household furniture and her clothing. The Town of Canterbury was also involved, as a way of guaranteeing that the couple's support wouldn't cost the town anything (Canterbury Land Records, Vol. 19, Pg. 225 and Vol. 18, Pg. 128). It is probable that the Pikes were elderly and unable to work enough to support themselves, and had no relatives to assist them (though it is possible that Caleb Cook was a relative – the documents simply do not say so).

At some point, the land came into the hands of one John Bennett, who sold it to Daniel Bennett in 1828 for \$1,500. This was still two pieces, with the swamp piece described as containing 18 acres and 18 rods (18.1125 acres in total) and the other containing 70 acres, a house and a barn, and located in both Canterbury and Brooklyn. According to Canterbury Land Records, Vol. 20, Pg. 219, the description also had changed somewhat:

Beginning at the northeast corner, a bound of land of Samuel Cady; then
Southerly on land of Samuel Cady and land of John Kendal; then
Westerly on land of John Kendal and land of Sally Hyde to land of Oren Palmer; then
Northerly on land improved by Oren Palmer and land improved by Fitch Adams to land of William Putnam; then
Easterly on land of William Putnam and land of Samuel Cady to the beginning

Daniel Bennett also paid another \$804.66 to the Town of Canterbury for a release of the 1819 mortgage on the two parcels. Why there was still money owed on the property is not clear from the documents, but this release cites the 1819 deed from Pike to Cook (Canterbury Land Records, Vol. 20, Pg. 219). In

1835, Daniel Bennett bought another 37 acres, located on the south and east boundaries of his own land (and also abutting land of Comfort Hyde), from the estate of Albe Hyde for \$296 (Canterbury Land Records, Vol. 21, Pg. 302). In 1837, he added another 40 acres, which according to Canterbury Land Records, Vol. 22, Pg. 72, was abutted

N William Putnam;
E Daniel Bennett [the grantee];
S Oren Palmer; Comfort S. Hyde; and
W Blackwell Brook

This total of about 165 acres is larger than the later Parcel J descriptions, but pieces may have been sold off or the number of acres deflated over time.

Although the historic cemetery identified during the pedestrian survey contains a headstone for Daniel Bennett, his name does not appear in the 1850 census. His wife, Fanny is also buried in the cemetery on the Brooklyn/Canterbury town line; she died on April 8, 1842 at age 31. Examination of the Canterbury vital records revealed the marriage, in 1843, of Mary L. Bennett of Canterbury to Micah L. Taylor of Pomfret, by Daniel Bennett, Justice of the Peace (Vital Records, Vol. 2, Pg. 79). This is significant for two reasons. First, we can tentatively assume that Mary L. Bennett was Daniel Bennett's relative and inherited some or all of his property. Second, there are the gravestones in the cemetery, which include a Micah Taylor and a Lewis G. Taylor, suggesting a close connection with the property. Seeking these Taylor names in the census records has been productive. Examination of the 1850 census page that lists Comfort S. Hyde, John M. Kendall, and Orvin Palmer (names from the deed descriptions) reveals the family of Lewis Taylor (aged 29 and born in Pomfret) and Louisa Taylor (aged 23 and born in Canterbury), owning no real estate and living with their sons Daniel (age 6) and Lewis Jr. (age 4) (U.S. Census 1850). The 1856 historic map is only somewhat helpful, as the Bennett farmstead's distance from the roads seems to have led to it being left off the map. It can be seen, however, the lands of C. S. Hyde and J. Kendall to the west, as well as Widow Cady to the north (Figure 5).

In the 1860 Census, in roughly the same location as before, Micah L. Taylor (age 43) and Mary L. Taylor (age 33) are shown living with their son Daniel B. (age 15). The family now reported owning \$2,000 in real estate and \$1,400 in personal estate (U.S. Census 1860). The cemetery headstone of Lewis G. Taylor, son of Micah L. Taylor, states that he died in 1859 at the age of 12 years and 9 months, so we can be confident that this is the same family. The swapping of first and middle names is not unheard of in nineteenth-century records, although the coincidence of both parties sometimes preferring a different name is unusual. According to the headstone of Micah Taylor, he died in May of 1861, with an age that might (based on the 1860 Census information) be the appropriate 44 (it is difficult to read). His probate record has not been reviewed, but we can tentatively assume that his property went to his wife or children.

The next transaction provides the same basic description, in terms of acreage and abutters, of the land that was used (with some changes) up to the present day. In 1865, John and Mary L. Gallagher of Canterbury sold 110 acres of land with a dwelling house, barn, and other buildings, located partly in Canterbury and partly in Brooklyn. Because Mary L. Gallagher is buried on the property, it is assumed that she is Mary L. Bennett Taylor, remarried. The buyer was Maria Mowry (wife of Augustus) of Brooklyn, who paid \$2,200. According to Canterbury Land Records, Vol. 26, Pg. 225. the abutters were listed approximately as follows:

N & E	John Kendall, George Harris;
S	John Kendall, John Sharp, Josiah Palmer, Comfort S. Hyde; and
W	Blackwell Brook

The similarities with the descriptions of Daniel Bennett’s purchases are the reason it is believed there is a direct, if currently unknown, link between these transactions. A few months later, Augustus Mowry, resident of Canterbury, died and his widow, Maria, was appointed administrator. For an unknown reason, given the law of the time – which held that a wife’s property was her husband’s, even if she bought it herself – the probate inventory listed only a small amount of personal property (clothing, livestock, and farm tools), and no real estate (Canterbury Probate Vol. 3, Pgs. 447, 452). According to the 1860 census, Augustus Morey (age 32) was a farmer who owned \$1,000 in real estate and \$1,000 in personal estate and lived in Brooklyn, Connecticut, among other small farmers. He was born in Rhode Island. His wife, Maria, was 26 and born in Connecticut, and they had a 2-year-old daughter, Jennie M. (who provides an important link going forward) (U.S. Census 1860). Note that the various records use multiple spellings of this surname – Mowrey, Mowry, and Morey, which is also not unusual in older records. The 1869 map, like the earlier one, omits this farm, although it does show a J. Bennett to the east, along with H. Kendall; to the west, again, were Hyde, Adams, and Kendall families (Figure 6; Sheets 1 and 2).

In the 1870 census, there is no sign of anyone named Gallagher in the town or county. Nor is there any trace of “Maria Mowry” during this census year. What is found, however, is a Benjamin J. Mowrey (aged 5), and a George A. Mowrey (aged 7), living in Plainfield, both of who are involved in later land transactions. They were part of the household of Andrew Bennett (aged 35), and Martha Bennett (aged 34), who had just been married the previous May. Andrew was a farmer who owned \$3,000 in real estate and \$3,000 in personal estate, and Martha reported owning \$1,000 in personal estate. The household also included Grafton Bennett (aged 19), probably Andrew’s brother, and Albert Bennett (aged 3), probably Andrew’s son (U.S. Census 1870). It must be assumed here that Maria Mowrey had changed her name to Martha Bennett, and naturally had brought her children to her new marriage. The 1880 census clarifies family relationships by stating them directly on the form. The Plainfield Bennetts, headed by Andrew (age 45), a farmer, and Martha (age 44), had a household that included: his son Albert (aged 13), identified as a farmer; his daughter Lulu M. (aged 7); his wife’s daughter Jennie M. Morey (aged 22) (whom we saw in the 1860 census); his wife’s daughter S. Anna Morey (aged 19); his wife’s son George A. Morey (aged 17), identified as a farmer; and his wife’s son Benjamin J. Morey (aged 15), identified as a farmer. Moreover, a few doors away (on the same census page) was the widowed Mary L. Gallagher (aged 50) and her daughter Emily (aged 12) (U.S. Census 1880). It is highly likely that there was some relationship between Mary Louisa Bennett Taylor Gallagher and Maria/Martha Mowrey Bennett, or their spouses.

These are crucial details because between 1886 and 1890, a record of a quarter-interest and half-interest is found in the transactions among Mary L. Gallagher of Hampton, Benjamin Mowry of Plainfield, Jennie M. Bennett of Putnam, George A. Mowrey of Hampton, and Susan A. and Robert J. Wilson Jr. of Putnam (the “S. Anna” from the 1880 Census), with Jennie and George Mowrey both referring to the property as formerly of their mother Maria Mowrey (Canterbury Land Records, Vol. 29, Pgs. 179, 252, 351, 368, 400, 696, 712). In the end, George A. Mowry of Hampton and Mary L. Gallagher of Canterbury each owned a half-interest in 110 acres with a house, barn, and other buildings on it. According to the 1900 U.S. Census, George A. Mowrey lived in Canterbury, a single man aged 37, working as a farmer on his own farm. His household consisted of a 17-year-old nephew, Winfield Mowrey, who worked on the farm, and Mary L. Gallagher (aged 71), a widow whose role in the

household was “Housekeeper” (not a relative) and who reported that she had borne five children, of whom two were still living (U.S. Census, 1900). It seems likely that they were living on the farm and had been for some time, although it also seems likely that for some part of the period 1865 to 1890 the place was rented out, and may not have had anyone living on it at all.

Mary L. Gallagher passed away on June 12, 1906, aged 79 – her headstone is in the cemetery on the subject property, with the heading “Mother.” In her estate, her heirs-at-law were identified as her son Daniel B. Taylor, resident in St. Louis, Missouri, and her daughter Emily A. Gallagher, resident in Canterbury. Her will directed that a trustee be appointed to manage her property, with all the income going to support her daughter Emily A. Gallagher for life, with Daniel B. Taylor to receive it after Emily’s death. Tragically, her mother’s death left Emily with no one available and willing to care for her, and she was committed to Norwich State Hospital before the end of the year based on a mental state that reportedly had persisted for 20 years at that point – when she was 58 years old. The inventory of Mary’s estate valued her half-interest in the farm at only \$300, and her belongings included only another \$15.10 in household goods; and her estate owed George A. Mowrey \$225.05 for care and doctors’ bills (Canterbury Probate Vol. 5, Pgs. 547-551, 553-557, 559). According to Canterbury Land Records, Vol. 32, Pg. 251, the administrator sold Emily’s half-interest in the farm to George A. Mowrey for \$300, giving a new list of abutters:

N & E	Andrew Clark and wife, William J. Pomeroy; Joseph Brouter
S	Andrew Clark and wife; Eugene Shoales; Charles L. Hyde
W	Blackwell Brook

Thus, in 1906 George Mowrey became the sole owner of Parcel J.

Nonetheless, according to the 1910 census, there was no George A. Mowrey in Canterbury. There was, however, a George Morey of the right age (47) living in Plainfield in the household of Frank H. Bennett as a hired man; the form indicates that George was divorced (U.S. Census 1910). In 1920, however, he was back in Canterbury (aged 57 and single), living and working on the farm with his widowed sister Jennie M. Bennett (aged 60) (U.S. Census 1920). He passed away on May 5, 1930, and his heirs were identified as Benjamin Mowrey, his brother, who lived in New London, and his sister Anna Wilson and her sons. His 1928 will, however, left his estate to Joseph and Elise Brodeur, as compensation for their care while he lived with them. The inventory reported that the house was “Unnhabital no value,” the barn was worth \$50, the land worth \$795, and that he had \$1,995.01 in two bank accounts (Canterbury Probate Records, Vol. 9, Pgs. 283-284, 288-289). After the string of elderly, non-resident owners, and very small families that the house went through, it is not surprising that a lack of investment in it had made it uninhabitable by this time. According to Canterbury Land Records, Vol. H-3, Pg. 196, the certificate of devise filed on the land records in 1931 described the property as 110 acres and buildings, with a right of way to the cemetery on it. The abutters were given approximately as:

N	A. T. J. Clarke and wife, Linda Alba De Costa;
E	Linda Alba De Costa, Joseph Brodeur;
S	A. T. J. Clarke and wife, Eugene Shoales, Charles S. Hyde; and
W	Blackwell Brook

It is likely that the later owners never lived on the property, given the reported state of the house in 1930. The 1934 aerial image shows some structures on the parcel, but as a less well-organized and intensively used space, it is not easy to interpret visually (Figure 7). The mix of cleared fields and

forested areas is likewise typical of the less-intensively used nature of this part of the greater Study Area.

The Brodeurs held on to Parcel J for only a few years before selling it to George Rukstella in 1936, again as 110 acres with buildings and a right of way to the cemetery. The abutters description was slightly different again:

N	A. T. J. Clarke and wife, Alex Rukstella;
E	Alex Rukstella, Frank Liepis;
S	A. T. J. Clarke and wife, Charles Phillips, W. F. Herr; and
W	Blackwell Brook.

Joseph Brodeur signed the deed with a mark, and the sellers reserved the right “to cut and draw birch wood” on the property for two years “for domestic use only” (Canterbury Land Records, Vol. 39, Pg. 29). This brought the property into direct connection with the owners of Parcel B/C/D in Brooklyn: George Rukstella. George would have been about 33 years old when he bought this land. He might have been the “George Rukstella” who, according to the 1930 Census, was 27 years old in that year and working in an iron foundry in Boston (the form also stated that he had been married since age 25, but there is no sign of a spouse) (U.S. Census 1930). Back in Connecticut a few years later, and giving his residence as Brooklyn, he died intestate in 1939 (only about 36 years old) and his property fell to his parents as his only heirs-at-law. The certificate of devise again called the property 110 acres with buildings and a right of way to the cemetery (Canterbury Land Records, Vol. H-5, Pg. 273).

Alexander and Antenina Rukstella held on to the property until 1945, when they sold it to their son Alban F. Rukstella, including the right of way across their own “Birchwood Farm” (Parcel B/C/D, mentioned above) and the right of way to the cemetery (Canterbury Land Records, Vol. 44, Pg. 6). Alban would have been about 34 when he received this property; as was discussed above, according to the 1940 census, he was actually living with his parents (and his wife) in Brooklyn. The right of way across the Brooklyn farm would have been very convenient for accessing this farmland in Canterbury, and it should be emphasized that its terms had it lasting only as long as he owned it. The 1951 aerial image indicates that Alban had abandoned the easternmost end of the parcel, as it was clearly in the process of reforestation (Figure 9); it also looks as though some of the buildings there were razed between 1934 and 1951 (Figure 9). The 1965 aerial seems to show all the structures have been destroyed, and also the development of pond south of where the farm buildings had been previously (Figure 13).

Alban Rukstella in fact continued to own Parcel J until his death in 1982, and in 1985 a certificate of devise in the land records showed that the 110 acres (with right of way to the cemetery) belonged to Kathryn Rukstella, presumably his daughter. The deed also mentioned the now-defunct right of way across Birchwood Farm (Canterbury Land Records, Vol. 75, Pg. 152). The 1985 aerial image shows that over the preceding 20 years, the area of cleared fields had remained consistent, except for a growth of forest north of the pond that probably encompassed most or all of the old farm buildings (Figure 14). In 1993, Kathryn Rukstella filed an application to get the property into the state’s Preservation of Agricultural Lands program (Canterbury Land Records, Vol. 165, Pg. 132). But instead, in 2005 she sold it to River Junction Estates LLC, an entity that has also been discussed above (Canterbury Land Records, Vol. 165, Pg. 132). The aerial images from 2010 forward show encroachment of graveling operations from the north and development of access roads, but little other change in the area (Figure 15).

Conclusions

The documentary evidence indicates that on Parcel B/C/D there was formerly a farmhouse (and presumably associated barns and outbuildings) dating to at least the early nineteenth century, if not earlier, located south of Rukstella Road. This property was removed in the late nineteenth century. In addition, a second farmhouse and associated barns and outbuildings used to stand on the north side of Rukstella Road, located mainly on the west side of Allen Hill Road (Figure 5). This was the Rukstella Farmstead and it was probably built sometime between 1870 and 1900. Two silos once attached to the farmstead's barn are still standing. Parts of these parcels have been significantly impacted by commercial excavations, while others appear to still be used for agricultural purposes; they correspond to Survey Areas 24 and 23, respectively (see Chapter VII below). In general, modern development of the vicinity has been restricted to the area north and east of this farm, probably a result of the town's close management of development over at least the last few decades.

The presence of a historic cemetery on Parcel J has been confirmed by fieldwork, as have the ruins of the farmhouse and two barns buildings formerly belonging to the Bennett/Taylor/Mowrey-Gallagher Families. It is possible that the farmhouse dates to the early nineteenth century or before, and it was abandoned no later than the 1930s. Parts of this parcel have been significantly impacted by commercial excavations, while others appear to still be used for agricultural purposes. In general, modern development of the vicinity appears to have been very limited, probably as a result of its slow population growth and the remoteness of this area from the major roads.

CHAPTER V

PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous archaeological research completed within the vicinity of the Study Area in Brooklyn and Canterbury, Connecticut. This discussion provides the comparative data necessary for assessing the results of the Phase IB archaeological resources reconnaissance survey and the Phase II NRHP testing and evaluation of Sites 22-38 (Locus 2-1) and 19-35 (Locus 11-1), and it ensures that the potential impacts to all previously recorded archaeological resources located within and adjacent to the Study Area are taken into consideration. Specifically, this chapter reviews all previously completed archaeological resources surveys conducted within in the vicinity of the Study Area, as well as those archaeological sites, NRHP properties, and historic standing structures situated in the project region. The discussions presented below are based on information currently on file at the Connecticut State Historic Preservation Office in Hartford, Connecticut. In addition, the electronic site files maintained by Heritage also were examined during the course of this investigation. Both the quantity and quality of the information contained in the original survey reports and State of Connecticut archaeological site forms are reflected below.

Previously Conducted Surveys Located Within the Vicinity of the Study Area

A total of four investigations (CHPC 399, CHPC 690/797, and CHPC 730) have been completed in the region containing Study Area (Figure 18). These surveys were conducted in 1982, 1996, 1997, and 2017, respectively. As seen in Figure 16, the survey associated with CHPC 399 extended from east to west and included portions of the northern limits of the Study Area, particularly Survey Areas 1, 7, and 25. These four previously completed investigation are discussed briefly below.

CHPC 399

CHPC 399 documents the results of Phase I and II investigations of the Relocation of Route 6/I-84 Project, which was sponsored by the Connecticut Department of Transportation in 1982. The field investigations were completed by Public Archaeology Survey Team, Inc. (PAST) under Contract No. 11.12-01. The Phase I survey portion of the project included the survey of 28 miles of then-proposed highway right-of-way that extended through Bolton, Coventry, Andover, Windham, Scotland, Hampton, Canterbury, Brooklyn and Plainfield. The area was divided into two corridors: Eastern Corridor, which is located to the east the Route 6 Willimantic Bypass, and the Western Corridor, which is located to the west of the Route 6 Willimantic Bypass. The results of survey in the Eastern Corridor are discussed below. The results of the Western Corridor survey are omitted here because it is situated well to the west of the Study Area and the results offer no additional insights into the Brooklyn/Canterbury area.

A total of 46 prehistoric sites were identified during the Phase I survey of the Eastern Corridor. These sites range in age from 10,000 to 450 B.P. A total of 26 of the 46 (57 percent) sites identified within the Eastern Corridor fall within the general vicinity of the proposed Study Area, including Sites 19-2 through 19-16, 22-8, 22-8, 22-14, 109-1 through 109-6, 109-8 and 109-9. These sites represent prehistoric occupations dating from the Early Archaic to Late Woodland periods, as well as a variety of occupation types ranging from task specific sites to temporary camps to seasonal occupations. Of these 26 sites, PAST completed Phase II

NRHP testing at 17 sites, including Sites 19-4 through 19-9, 19-14, 22-8, 109-1 through 109-4, 109-6, and 109-14. The results of the Phase I and Phase II examination of the archaeological sites in the vicinity of the proposed Study Area are outlined in the site summaries presented in the next section, as well as in Table 1. Finally, none of the archaeological sites in the Eastern Corridor were subjected to Phase III data recovery because the Connecticut Department of Transportation abandoned the Eastern Corridor in the Fall of 1983 after the completion of the Phase II investigations.

CHPC 690/797

CHPC 690/797 represents a Phase IA assessment survey and subsequent Phase IB reconnaissance survey of the proposed replacement of the Beecher Road bridge in Brooklyn, Connecticut. This review was completed by Raber Associates in July of 1996 on behalf of the Connecticut Department of Transportation under Project Number 19-104. The project consisted of a review of available historic maps, previously identified historic resources in the region, and a pedestrian survey of the proposed bridge replacement area. Raber Associates concluded that the proposed bridge replacement “may remove known or possible cultural resources with potential National Register eligibility” (1996:4). As a result, Phase IB reconnaissance survey of the proposed Study Area was recommended, including hand excavated shovel tests at intervals of no greater than 10 m (32.8 ft) and development of a plan of action for any identified archaeological resources. The Phase IB survey of the proposed bridge replacement area failed to result in the identification of any archaeological resources, and no additional testing of the Study Area was recommended prior to construction.

CHPC 730

CHPC documents the results of a Phase IB reconnaissance survey that Raber Associates completed in 1997 on behalf of the Connecticut Department of Transportation under Project Number 22-100. The proposed undertaking consisted of the replacement of the Wauregan Road Bridge in Canterbury, Connecticut. The survey was completed to insure no archaeological resources, whether potentially eligible or eligible for the NRHP, would be impacted by the proposed construction project. Raber Associates completed pedestrian survey of the Area of Potential Effect, as well as the excavation of 15 shovel tests throughout the Study Area. No prehistoric or historic period cultural material was identified during survey, and Raber Associates concluded that no additional investigation of the proposed Study Area was recommended prior to construction of the new bridge.

Unnumbered Survey

In 2017, Heritage completed a Phase IA assessment survey of a large project parcel in Brooklyn and Canterbury, Connecticut that will be the site of the proposed Quinebaug Solar Facility, the subject of this report. During that investigation, a review of historic maps and aerial images of the proposed project parcel, files maintained by the Connecticut State Historic Preservation Office, and pedestrian survey of the Area of Potential Effect resulted in the identification of six areas that produced evidence of above-ground historic features, numerous stone walls, the locations of six previously identified prehistoric archaeological sites, and two historic standing structures adjacent to the Study Area boundaries. The six locations with above ground historic signatures were labeled as the Former Butts/Harris/Cady House location, Well House Foundation, Rukstella Farmstead, Mowrey Farmstead, Bennett/Taylor/Gallagher Cemetery, and Stone Town Line Boundary Marker. The previously identified archaeological sites included Sites 19-2, 19-8, 19-9, 19-11, 19-15, and 19-16. The two historic standing structures are located at 29 Liepis Road and 215 Wauregan Road.

Of the above-ground historic resources, the Well House Foundation and the Rukstella Farmstead were assessed as not significant applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]) due to previous

impacts and lack of research potential. No additional archaeological investigation of these two resources was recommended. The Former Butts/Harris/Cady House location and the Mowrey Farmstead, in contrast, were determined to possibly contain archaeological data relevant to Late Colonial/Early American occupation and use of the area. Phase IB survey of these two areas, including subsurface testing, was recommended. The Stone Town Line Boundary Marker and the Bennett/Taylor/Gallagher Cemetery were identified as important landscape features and it was recommended that neither one of these archaeological resources be impacted in any way. At the time of the Phase IA survey, construction buffer of 5 m (16.4 ft) was recommended around the stone town line boundary marker, and a buffer of 15 m (50 ft) was is recommended around the Bennett/Taylor/Gallagher Cemetery. It was further recommended that construction be planned in the buffered areas so that these two archaeological resources may be protected in place. In addition to the items discussed above, Heritage personnel revisited all prehistoric site locations within the proposed project area in an effort to ascertain their current state of preservation and potential impacts to them as a result of the proposed construction project. It was determined that Sites 19-2, 19-8, and 19-11 were likely still situated within agricultural fields in the Study Area, while Sites 19-9, 19-15, and 19-16 were still characterized by wooded areas. It was recommended that an attempt to relocate and asses these sites through a subsurface testing regime as part of a Phase IB survey be made prior to construction of the proposed solar facility. Finally, no additional recordation of the two historic buildings along Liepis Road was recommended since both had been altered to a significant degree and we not eligible for listing on the NRHP

Finally, Heritage Consultants, LLC stratified the proposed project area into zones of no/low and moderate/high archaeological sensitivity. It was determined that of the 540 acres under consideration during the Phase IA survey, 244 acres retain no/low archaeological potential, while 300 acres possess a moderate/high sensitivity for producing archaeological resources. Since the no/low potential areas consist of previous disturbed, paved, mucky, and/or wet conditions, no additional archaeological investigation of these areas was recommended. In contrast, it was recommended that the acreage that was assessed as possessing moderate/high archaeological sensitivity be examined using subsurface testing techniques as part of a Phase IB archaeological resources reconnaissance survey prior to construction of the Quinebaug Solar Project.

Previously Recorded Archaeological Sites Located in the Project Region

A review of data currently on file at the Connecticut State Historic Preservation Office, as well as the electronic site files maintained by Heritage indicated that are 26 previously recorded archaeological sites located within the region containing the Study Area (Figure 17; Table 1). All of the archaeological sites were identified by Public Archaeology Survey Team, Inc., (PAST) during the completion of the above-referenced investigation associated with CHPC 399. Of the 26 identified sites, six are located wholly or partially within the Study Area. These sites are of particular importance to this investigation and they are discussed in detail below. The remainder of the sites (n=20) are presented in Table 1 at the end of this chapter.

Site 19-2

Site 19-2 was identified in 1982 during Phase I survey of the Eastern Corridor of the Route 6/I-84 Relocation Project, and it yielded a single bifurcate base projectile point and 1 flint flake (Figure 20). The projectile point is indicative of an Early Archaic use of the area between ca. 10,000 and 8,000 years ago. During survey, six judgmentally placed shovel tested were excavated around the original find spot. Unfortunately, no additional archaeological material was recovered and no archaeological features were identified. Site 19-2 was not assessed applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]), and no Phase II NRHP testing of the site area was performed.

Site 19-8

Site 19-8 also was identified in 1982 during Phase I survey of the Eastern Corridor of the Route 6/I-84 Relocation Project (Figure 17). During survey, six Phase I shovel tests were excavated at the site and they produced 11 quartz, 11 quartzite, and 3 flint artifacts, as well as 1 “other” artifact made from an unidentified lithic material. The recovered artifacts included bifacial reduction flakes, bifaces, chunks, a shell fragment, and a single untyped projectile point. Based on the recovery of flint artifacts, PAST assigned the site to the Late Woodland period of Connecticut prehistory. PAST indicated that Site 19-8 required additional investigation prior to construction of the roadway and recommended Phase II NRHP testing and evaluation of Site 19-8.

The Phase II investigation of Site 19-8 was completed in 1983 and included the excavation of 63 additional shovel tests throughout the site area. This resulted in the identification of two archaeological components, one dating from the Late Archaic period of Connecticut prehistory and one dating from the Late Woodland period of Connecticut prehistory. The Late Archaic component yielded 138 artifacts, while the Late Woodland period component produced 59 artifacts. Late Archaic cultural material recovered from the site area consisted of bifacial reduction flakes, chunks, bifaces, a hammerstone, a worked cobble, and Brewerton projectile points. It was concluded that the Late Archaic period component of Site 19-8 represented a seasonal camp. Phase II examination of the Late Woodland component resulted in the collection of bifacial reduction flakes, chunks, bifaces, and a second untyped projectile point. In addition, a radiocarbon sample was recovered from an untyped cultural feature; it yielded a date of 450 +/- 130 BP for the occupation. The Late Woodland component was classified as a temporary camp. PAST did not assess Site 19-8 applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]) after the Phase II testing was completed because the roadway construction project was cancelled; however, they did indicate that Phase II examination of the site area revealed that the site contained intact archaeological deposits and “could yield information about prehistoric settlement and subsistence systems.”

Site 19-9

Site 19-9 also was identified in 1982 during Phase I resources reconnaissance survey of the Eastern Corridor of the Route 6/I-84 Relocation Project (Figure 17). During survey, only three shovel tests were excavated at the site. These shovel tests yielded 7 quartzite artifacts. The artifacts included bifacial reduction flakes, chunks, and a single Neville projectile point. The recovery of Neville projectile point indicates that the site belongs to the Middle Archaic period of Connecticut prehistory, a rarely identified prehistoric site type. PAST indicated that Site 19-9 required additional examination prior to construction and recommended Phase II NRHP testing and evaluation of Site 19-9.

The Phase II investigation of Site 19-9 was completed in 1983 and included the excavation of 41 additional shovel tests spaced at 5 m (16.4 ft) intervals throughout the site area. This resulted in the identification of additional artifacts dating from the Middle Archaic period, including bifacial reduction flakes chunks, bifaces, a drill, and a second Neville projectile point. It was concluded that Site 19-9 period component represented a temporary camp. PAST did not assess Site 19-9 applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]) after the Phase II testing was completed because the roadway construction project was cancelled; however, they did indicate that Phase II examination of the site area revealed that the site contained intact archaeological deposits and could yield additional “cultural information.”

Site 19-11

Site 19-11 also was identified by PAST in 1982 during Phase I survey of the Eastern Corridor of the Route 6/I-84 Relocation Project (Figure 17). This site it yielded a single quartzite flake; however, only one shovel test was in the site area before the landowner asked the survey crew to leave his property. Site 19-11 was not assessed applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]), and no Phase II testing of the site was performed because landowner permission could not be obtained.

Site 19-15

PAST recorded Site 19-15 during Phase I reconnaissance survey of the Eastern Corridor of the Route 6/I-84 Relocation Project in 1982 (Figure 17). During the Phase I survey, nine shovel tests were excavated throughout the site area. They produced 3 quartz and 5 quartzite artifacts, which consisted of re-sharpening flakes, bifacial reduction flakes, a biface, and a quartz chunk. None of the recovered artifacts were temporally diagnostic, and Site 19-15 could not be assigned to a specific prehistoric period. Site 19-15 also was not assessed applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]), and no Phase II testing of the site was performed at the site.

Site 19-16

Finally, PAST also documented Site 19-16 during Phase I survey of the Eastern Corridor of the Route 6/I-84 Relocation Project in 1982 (Figure 17). A total of seven shovel tests were excavated throughout the site area during survey. They produced two artifacts, a quartz chunk and a flint biface. Neither of the recovered artifacts was temporally diagnostic. As a result, Site 19-16 could not be assigned to a specific prehistoric period. No Phase II testing of the site area was performed at Site 19-16, and this archaeological resource was not assessed applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]).

Table 1. Previously identified archaeological sites in the project region.

Site #	Town	Period	Type	Reporter/Date	NRHP
19-3	Brooklyn	Unknown	Unknown	PAST/1982	Not Assessed
19-4	Brooklyn	Unknown	Temporary Camp	PAST/1982	Not Assessed
19-5	Brooklyn	Late Archaic/Late Woodland	Seasonal Camp	PAST/1982	Not Assessed
19-6	Brooklyn	Late Archaic through Early Woodland	Temporary Camp	PAST/1982	Not Assessed
19-7	Brooklyn	Late Woodland	Temporary Camp	PAST/1982	Not Assessed
19-10	Brooklyn	Unknown	Unknown	PAST/1982	Not Assessed
19-12	Brooklyn	Unknown	Unknown	PAST/1982	Not Assessed
19-13	Brooklyn	Unknown	Unknown	PAST/1982	Not Assessed
19-14	Brooklyn	Middle Archaic/Woodland	Temporary Camp	PAST/1982	Not Assessed
22-8	Canterbury	Middle Woodland	Seasonal Camp	PAST/1982	Not Assessed
22-14	Canterbury	Nineteenth Century	Industrial	PAST/1982	Not Assessed
69-40	Killingly	Nineteenth Century	Grist Mill	Milner/1989	Not Assessed
109-1	Plainfield	Unknown	Task Specific	PAST/1982	Not Assessed
109-2	Plainfield	Unknown	Task Specific	PAST/1982	Not Assessed
109-3	Plainfield	Unknown	Task Specific	PAST/1982	Not Assessed
109-4	Plainfield	Late Woodland	Seasonal Camp	PAST/1982	Not Assessed
109-5	Plainfield	Woodland Period	Seasonal Camp	PAST/1982	Not Assessed
109-6	Plainfield	Woodland Period	Temporary Camp	PAST/1982	Not Assessed
109-8	Plainfield	Woodland Period	Temporary Camp	PAST/1982	Not Assessed
109-16	Plainfield	Late Woodland	Task Specific	PAST/1982	Not Assessed

Summary and Interpretations

The review of previously completed archaeological resources research in the vicinity of the proposed Study Area and the analysis of previously archaeological sites, indicates that both the larger project region and the Study Area contains a long and rich history of prehistoric Native American occupation and use of the area. Archaeological sites recorded within and adjacent to the Study Area date from between the Early Archaic to Late Woodland periods (ca. 10,000 to 450 B.P.). Moreover, the data recovered to date indicates that the area was used for a variety of tasks and for variable amounts of time. The recorded sites range from task specific sites to temporary occupations to seasonal camps. All of this data has been collected from only a very limited portion of the proposed Study Area and adjacent landforms. This suggests that additional prehistoric archaeological sites may be expected within the Development Area.

The Phase IA survey completed by Heritage in 2017 also indicates that there are historical archaeological resources located within the Study Area (Heritage 2017). They include the former Rukstella, Butts/Cady/Harris, and Mowrey Farmsteads; the Bennett/Taylor/Gallagher Cemetery; and the Town Boundary Marker between Brooklyn and Canterbury Connecticut. The Rukstella Farmstead dates from the nineteenth century and contains a well, barn foundations, and two silos; it was located in Survey Area 24 (see Chapter VII). The Butts/Cady/Harris was identified during review of historic maps and was located within Survey Area 23 (see Chapter VII). This Farmstead likely dated from the late eighteenth to

early nineteenth centuries. The Mowrey Farmstead contained a large house foundation, a well, and associated barn foundations dating from the late eighteenth through the nineteenth centuries. These cultural features were not surveyed as they fall within areas that will not be developed by Quinebaug Solar, LLC. The Bennett/Taylor/Gallagher Cemetery is located to the north of the Mowrey Farmstead in the central portion of the Study Area. This nineteenth through early twentieth century burial ground will not be impacted by Quinebaug Solar, LLC. Finally, the Town Boundary marker was identified in the southeastern portion of the Development Area and within Survey Area 12 (see Chapter VII). It too will be avoided during construction. The above-referenced historic resources indicate that the Study Area has been occupied and used for farming purposes for at least the last 250 years. Therefore, additional historic archaeological deposits may be expected within the Development Area.

CHAPTER VI

FIELD & LABORATORY METHODS

Introduction

This chapter describes the research design and field methodology used to complete the Phase IB survey of the Development Area associated with the proposed Quinebaug Solar Center, as well as those methods used during Phase II NRHP testing and evaluation of Sites 22-38 (Locus 2-1) and 19-35 (Locus 11-1). 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 Phase IB survey, as well as the Phase II NRHP testing and evaluation effort, was designed to identify all prehistoric and historic archaeological resources located within the previously identified moderate/high sensitivity areas associated with the proposed solar center, as well as to examine the integrity and NRHP significance of Sites 22-38 (Locus 2-1) and 19-35 (Locus 11-1). Fieldwork for the project was comprehensive in nature; planning considered the results of previously completed archaeological surveys within the larger project region, the distribution of previously recorded archaeological sites located near the parcels of land associated with Quinebaug Solar Center, and an assessment of the natural qualities of the LOW. The methods used to complete this investigation were designed to provide complete and thorough coverage of all portions of the moderate/high sensitivity areas, as well as Sites 22-38 (Locus 2-1) and 19-35 (Locus 11-1). This undertaking entailed pedestrian survey, systematic subsurface testing (shovel testing and unit excavation), detailed mapping, photo-documentation, and GPS recordation. The field methods used during the two phases of investigation area described in more detail below.

Phase IB Survey Field Methods

The Phase IB survey associated with the Quinebaug Solar Center was completed utilizing pedestrian survey, shovel testing, mapping, photo-documentation, and GPS recordation. The pedestrian survey portion of the Phase IB survey included visual inspection of the entirety of the LOW scheduled for construction related impacts. It also included subsurface testing of those areas thought to retain a moderate to high archaeological sensitivity as determined during a previously completed Phase survey (Heritage Consultants, LLC 2017). Subsurface testing during the Phase IB investigation included the application of a shovel test regime as follows. Depending upon the landform being tested and its natural qualities, shovel test were excavated at intervals of 7.5 to 30 m (24.6 to 98.4 ft) along survey transects spaced 7.5 to 30 m (24.6 to 98.4 ft) apart. These methods were in keeping with those recommended in the previously completed Phase IA survey report, which was reviewed and approved by the CT-SHPO.

During survey, each square shovel test measured 50 x 50 cm (19.7 x 19.7 in) in size and each was excavated to a minimum depth of 50 cmbs (19.7 inbs), until water penetrated the shovel test, until immovable objects (e.g., large boulders, bedrock) were encountered, or until glacially derived C-Horizon soils were identified. 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 0.64 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 immediately upon completion of the archeological recordation process. Finally, all shovel test locations and areas where archaeological deposits were identified were recorded using a GPS unit with submeter accuracy, recorded in Heritage's GIS system, and plotted on maps of the area associated with the Quinebaug Solar Center Project.

Phase II NRHP Testing and Evaluation Field Methods

After completion of the Phase IB survey, the Phase II testing and evaluation was designed to determine whether the archeological deposits within Sites 22-38 (Locus 2-1) and 19-35 (Locus 11-1) possessed the qualities of significance as defined by the NRHP eligibility criteria (36 CFR 60.4 [a-d]). Specifically, the Phase II testing and evaluation effort was designed to: 1) identify the limits of the archaeological deposits within Sites 19-35 and 22-38; 2) document whether intact subsurface archaeological deposits and features exist within the site areas; 3) identify and describe the horizontal and vertical distribution of the archaeological deposits and archaeological components within Sites 22-38 (Locus 2-1) and 19-35 (Locus 11-1); 4) recover temporally diagnostic artifacts to permit an accurate characterization of the archaeological component(s) contained within the site area; 5) examine the archeological site formation processes responsible for the development of Sites 22-38 (Locus 2-1) and 19-35 (Locus 11-1); 6) assess the sites' potential to provide meaningful botanical and faunal data; and 7) assess the overall research potential of Sites 22-38 (Locus 2-1) and 19-35 (Locus 11-1) applying the above-referenced criteria for evaluation (36 CFR 60.4 [a-d]). The methods by which these goals were accomplished are outlined below. The following field methods were employed to meet these goals.

Site Mapping

Prior to initiating Phase II NRHP eligibility testing and evaluation of Sites 22-38 (Locus 2-1) and 19-35 (Locus 11-1), a permanent project datum, labeled with the coordinates NO E0, was positioned within the vicinity of each sites. All subsequent coordinates, i.e., shovel test locations and units were provided with north and east prefixes relative to those datum locations. This control grid also provided the x and y coordinates for all specific measurements, e.g., point proveniences for temporally diagnostic artifacts collected from the locus area and elevations taken during the mapping phase of the investigation. Finally, all shovel tests excavated during the previously completed Phase IB survey also were tied to the control grid.

Further, during the Phase II NRHP eligibility testing and evaluation effort, Heritage field personnel employed a Trimble R1 receiver to collect GPS coordinates for all shovel tests, unit excavations, surface finds, and surface expressions. The company's R1 receiver is a rugged, compact, lightweight GNSS receiver that provides sub-meter positioning information to any one of Heritage's Samsung Galaxy S4 tablets using Bluetooth connectivity. These components are purpose-built for Heritage's field staff, and the data collected is seamlessly transferred to Heritage's GIS professionals, either once the project has been completed or in "real-time" over the Internet connection on the Samsung Galaxy S4 tablets. This system not only provided Heritage with accurate locational data for the current project, but it allowed the field staff to instantly transfer GPS data related to archaeological resources to Heritage's home office for review and mapping.

Shovel Testing

In order to delineate both the horizontal and vertical boundaries of Sites 22-38 (Locus 2-1) and 19-35 (Locus 11-1), additional "delineation" shovel testing was conducted in the vicinity of previously excavated shovel tests that resulted in the initial identification of each site area. The Phase II shovel tests were excavated at regular intervals between the previously excavated Phase IB survey shovel tests.

As was the case with the Phase IB survey shovel tests, each Phase II shovel test measured approximately 50 x 50 cm (19.7 x 19.7 in) in size, and each was excavated to a minimum depth of 50 cm (19.7 in) or until C-Horizon soils or immovable objects were encountered. Each shovel test was excavated in 10 cm (3.9 in) artificial levels within natural strata, and the fill from each level was screened separately. All shovel test fill was passed through 0.64 cm (0.25 in) hardware cloth. Munsell Soil Color Charts were used to record soil color; texture and other identifiable characteristics also were recorded using existing standard soils nomenclature. All Phase II shovel tests were backfilled immediately upon completion of the archeological recordation process.

Unit Excavation

In addition to shovel testing, the Phase II NRHP eligibility testing and evaluation effort at Sites 22-38 (Locus 2-1) and 19-35 (Locus 11-1) included excavation of units. A total of 24 units were excavated within the examined portion of Site 22-38 (Locus 2-1) and a total of 15 units were excavated to examine Site 19-35 (Locus 11-1). The unit excavations measured 1 x 1 m (3.3 x 3.3 ft) in size, and each was designed to sample artifact concentrations and features identified within the respective site areas. All unit excavation was conducted by hand using flat shovels and trowels. Each unit was excavated in 10 cm (4 in) arbitrary levels within natural strata, and the fill from each level was screened separately. The unit excavations were tied to the site grid and labeled with the appropriate provenience information. All units were excavated until the C-Horizon was encountered. All excavated soils were screened through 0.64 cm (0.25 in) hardware cloth. Munsell Soil Color Charts were used to record soil color; soil texture and other identifiable characteristics also were recorded using standard soils nomenclature. Finally, stratigraphic profiles for at least two walls of each excavation unit were prepared, recorded in a drawing, and photographed.

Laboratory Analysis

The laboratory analyses of the archaeological material recovered during the Phase IB survey and the subsequent Phase II NRHP eligibility testing and evaluation effort was designed to provide information pertaining to site type and chronology. First, all of the recovered materials were cleaned and rinsed, as necessary. The artifacts were then sealed in clean plastic bags with provenience data recorded permanently on the outside of each bag. Each item was then identified and classified by material, type, and distinguishing attributes. General accessioning of the materials was completed using Microsoft Excel.

Historic Archaeological Material Analysis

The analysis of the historic archaeological material recovered during the Phase IB survey was organized by class, functional group, type, and subtype. The first level, class, represented the material category, e.g., ceramic, glass, metal. The second level, functional group, e.g., architecture, kitchen, or personal, was based on standard classifications. The third and fourth levels, type and subtype, described the temporally and/or functionally diagnostic artifact attributes. The identification of artifacts was aided by consulting standard reference works.

Prehistoric Lithic Analysis

The lithic analysis protocol used in this project was a “technological” or “functional” one designed to identify prehistoric reduction trajectories, lithic industries, and tool functions. The protocol therefore focused on recording technological characteristics of the recovered lithic artifacts. The lithic artifact database was organized by lithic material group, type, and subtype. The first level described the raw material type of the artifact. Lithic materials were identified utilizing recognized geological descriptions

and terminology, and with the use of type specimens of known source. Lithic raw materials were divided into distinct categories based on three factors: texture, color, and translucence.

The second analysis level, type, was used to define the general class, e.g., unmodified flake, core, or preform, of lithic artifact, while the last level, subtype, was employed to specify morphological attributes, e.g., primary cortex, extensively reduced, or corner-notched. These levels followed standard lithic artifact classification schema. Typological identifications for temporally and regionally diagnostic tools also were included in the analysis. Such identifications will be made by reference to established lithic artifact typologies for the New England region.

Flotation Techniques

Each soil sample collected during the fieldwork effort first was weighed and then recorded in a Feature Log, which will include Sample Number, Locus Designation, Feature Number, Provenience, Weight, Collection Procedures, Collector, and Date Collected, as well as any other pertinent information. Once that basic data was collected, the sample was subjected to flotation, using the following technique. The soil sample was placed in a large water basin filled with clean water. It was then be carefully agitated to release all small items that may float, including charcoal fragments, pieces of bone, charred seeds, etc. This material was skimmed from the top of the water, placed on a tray to dry at room temperate and labeled as "light fraction." Once the light fraction was removed from the sample, the basin was emptied of water and the contents of the soil sample that settled on the bottom of the basin. The basin contents were drained through a series of fine geological sieves and the material caught in the sieves was collected, placed on a tray to dry at room temperature, and labeled as "heavy fraction." Both the light and heavy fractions then were examined for small artifacts, bone fragments, and plant remains, which were collected for further analysis. Once the light and heavy fractions were "picked" and it was determined that no additional archaeological materials remain in them, they were discarded. The procedures for analysis of the archaeological materials recovered from flotation of the soils samples is discussed below.

Faunal Specimens

All faunal specimens recovered from secure cultural feature contexts were identified to the lowest taxon possible following standard zoological classification and nomenclature. The same was true of faunal specimens recovered during flotation of soils samples collected from cultural features. For each identified specimen, a record was made of the element represented, portion of element recovered (e.g., proximal, distal, and/or shaft), its symmetry (right or left), any evidence of modification (burning, gnawing, cutting, and/or polishing), and its weight. Quantification of the faunal materials included counts of the total numbers of identified specimens of each taxon (NISP), as well as the weights of the identified specimens.

Curation

Upon completion of the project, all archaeological material, drawings, maps, photographs, and field notes will be curated with:

Connecticut State Archaeologist
The Office of Connecticut State Archaeology
Box U-1023
University of Connecticut
Storrs, Connecticut 06269

CHAPTER VII

RESULTS OF PHASE IB SURVEY

Introduction

As mentioned above, the proposed Study Area is located in Brooklyn and Canterbury, Connecticut. It will be the site of a utility-scale solar power generating facility, consisting of photovoltaic (PV) solar panels, racking, access roads, collector lines, an interconnection with the Eversource Energy Line 1607-1505 electrical transmission line, and a project substation. The Project will have at least two gated access points. The Study Area for the Project consists of a flat to steeply sloping area that currently contains a combination of agricultural fields, forested areas, wetlands, and gravel pits. The topography throughout the area ranges in elevation from approximately 42.7 to 85.3 m (130 to 280 ft) NGVD. In addition, soils situated throughout the proposed Study Area can be characterized primarily as sandy to gravelly loams. The nearest freshwater sources are Blackwell Brook, Cold Spring Brook, and the Quinebaug River.

Phase IB Survey Field Methods Overview

Moderate/high archaeologically sensitive areas, as determined in the Phase IA survey by Heritage (2017), were subjected to Phase IB survey utilizing pedestrian survey, subsurface testing, mapping, photo-documentation, and GPS recordation. The pedestrian survey portion of the investigation included visual reconnaissance of all areas selected for Phase IB survey; each area also was subjected to photo-documentation to record landscape conditions at the time of survey. For those portions of the Study Area that contained low to moderate slopes, well drained soils, and proximity to a fresh water sources (i.e., archaeologically sensitive areas), the subsurface testing regime involved the excavation of shovel tests that were excavated along parallel survey transects situated throughout the Development Area. The interval between shovel tests and survey transects varied from 7.5 to 30 m (25 to 98.4 ft) intervals depending on the type and size of landform that was under examination. In addition, where systematic subsurface testing along survey transects was not optimal, judgmental shovel testing was employed, with the locations of the shovel tests chosen at the discretion of the field director. A total of 2,457 of 2,457 (100 percent) planned shovel tested were excavated during the Phase IB survey (see Table 2 below).

Each shovel test measured 50 x 50 cm (19.7 x 19.7 in) in size and was excavated until glacially derived C-Horizon or obstructions (e.g., boulders or large tree roots) were encountered. Each shovel test was excavated in 10 cm (4 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. Soil characteristics were recorded in the field using Munsell Soil Color Charts and standard soils nomenclature. Each shovel test was backfilled immediately upon completion of the archaeological recordation process. Finally, in order to facilitate control during the survey process, the archeologically sensitive portions of the Study Areas were divided into 25 survey areas (Survey Areas 1 through 25) (Figure 18). The results of the Phase IB survey fieldwork in each area is presented below (Table 2).

Table 2. Summary of Phase IB archaeological resources reconnaissance survey results.

Survey Area	Number of Shovel Tests Planned & Excavated	Results	NRHP Eligibility	Recommendations
1	29 of 29	No Cultural Materials	-	No Additional Survey
2	224 of 224	Locus 2-1 (Site 22-38)	Potentially Eligible	Avoidance or Phase II Testing
3	70 of 70	No Cultural Materials	-	No Additional Survey
4	162 of 162	Site 22-36 (Locus 4-1) and Locus 4-2	Locus 4-1 is Potentially Eligible; Locus 4-2 is Not Eligible	Avoidance or Phase II Testing of Locus 4-1; No Additional Survey of Locus 4-2 area
5	71 of 71	Locus 5-1	Not Eligible	No Additional Survey
6	113 of 113	Locus 6-1	Potentially Eligible	Avoidance or Phase II Testing
7	73 of 73	Locus 7-1	Not Eligible	No Additional Survey
8	511 of 511	Loci 8-1 through 8-5	Not Eligible	No Additional Survey
9	45 of 45	Locus 9-1	Not Eligible	No Additional Survey
10	39 of 39	Deemed to be part of Locus 6-1	Potentially Eligible	Avoidance or Phase II Testing
11	120 of 120	Locus 11-1 (Site 19-35)	Potentially Eligible	Avoidance or Phase II Testing
12	10 of 10	Locus 12-1	Potentially Eligible	Avoidance or Phase II Testing
13	87 of 87	Locus 13-1	Not Eligible	No Additional Survey
14	18 of 18	No Cultural Materials	-	No Additional Survey
15	37 of 37	Locus 15-1	Not Eligible	No Additional Survey
16	254 of 254	Loci 16-1 through 16-5	Not Eligible	No Additional Survey
17	116 of 116	Locus 17-1	Not Eligible	No Additional Survey
18	163 of 163	Loci 18-1 and 18-2	Not Eligible	No Additional Survey
19	48 of 48	Loci 19-1 and 19-2	Not Eligible	No Additional Survey
20	74 of 74	Loci 20-1 and 20-2	Not Eligible	No Additional Survey
21	27 of 27	Locus 21-1	Not Eligible	No Additional Survey
22	46 of 46	No Cultural Materials	-	No Additional Survey
23	32 of 32	Locus 23-1	Not Eligible	No Additional Survey
24	20 of 20	Locus 24-1	Not Eligible	No Additional Survey
25	68 of 68	Site 19-8 (Locus 25-1)	Potentially Eligible	Avoidance or Phase II Testing

Area 1

Area 1 was located in the northeastern portion of the Development Area. It was forested at the time of survey and was situated to the north of an agricultural field located to the northeast of the intersection of Rukstella Road and Allen Hill Road (Figures 18 and 19). Area 1 encompassed approximately 0.69 acres of land and was positioned at an approximate elevation of 85.4 m (280 ft) NGVD; the nearest source of freshwater was a wetland to the east. A total of 29 shovel tests were excavated throughout Area 1 during the Phase IB survey (Figure 20). They contained intact deposits associated with both Woodbridge and Paxton/Montauk sandy loams, but they failed to produce any prehistoric or historic period artifacts or evidence of cultural features. No additional archaeological examination of this survey area was recommended.

Area 2

Area 2 was located in the southwestern portion of the Development Area (Figure 18). It was situated to the southwest of a soccer field, to the east of Blackwell Brook, and to the north of an unnamed stream. The eastern part of the survey area bordered on an existing gravel parking lot. This area contained 6.94 acres of land and was characterized by undulating topography that varied from approximately 44.4 to 45.7 m (145 to 150 ft) NGVD. At the time of survey, it was covered in mixed deciduous forest (Figure 21). The higher topography in Area 2 was characterized by sandy loamy soils belonging to the Windsor and Hinckley series, while the lower swales that extended across this area from northeast to southwest

contained Rippowam and Saco soils, both of which are poorly drained. A total of 224 shovel tests were excavated throughout this area during the Phase IB archaeological resources reconnaissance survey (Figure 22). This effort resulted in the identification of a prehistoric occupation that was designated as Locus 2-1 during survey and later assigned State of Connecticut Site Number 22-38. The Phase IB survey results of Site 22-38 (Locus 2-1) are described below.

Site 22-38 (Locus 2-1)

Site 22-38 (Locus 2-1) was recorded during the Phase IB survey of Area 2; it was identified in the southwestern portion of the Development Area and near the confluence of Blackwell Brook and an unnamed brook (Figure 22). The locus was identified at an approximate elevation of 45.7 m (150 ft) NGVD and it was covered in secondary forest at the time of survey (Figure 21). The locus area was described as irregular in shape and measured approximately 80 x 250 m (262 x 820 ft) in size. This area was subjected to Phase IB survey due to its relatively level topography, sandy soils, and proximity to the confluence of the two brooks referenced above.

A typical shovel test excavated within Site 22-38 (Locus 2-1) extended to a depth of 90 cmbs (36 inbs) and it exhibited four soil horizons. The Ap-Horizon (plowzone) was classified as a layer of dark brown (10YR 3/3) silty medium sand that reached from 0 to 30 cmbs (0 to 12 inbs). It was underlain by the B1-Horizon (subsoil), which was classified as a deposit of yellowish brown (10YR 5/6) silty fine sand that continued from 30 to 56 cmbs (12 to 22 inbs). The B2-Horizon, which corresponded to the lower subsoil, ranged in depth from 56 to 76 cmbs (22 to 30 inbs) and was described as a layer of brownish yellow (10YR 6/6) silty fine sand. Finally, the glacially derived C-Horizon extended from 76 to 90 cmbs (30 to 36 inbs); it was classified as a layer of light yellowish brown (2.5Y 6/4) coarse sand mixed with gravel.

Phase IB survey of Site 22-38 (Locus 2-1) resulted in the recovery of 467 artifacts, as well as the identification of three features. The prehistoric artifacts collected from Site 22-38 (Locus 2-1) originated from the Ap, B1, and B2-Horizons, as well as from one of the identified features. Cultural materials collected from the plowzone (Ap-Horizon) consisted of a single secondary thinning flake fashioned from an unidentified lithic material, 8 argillite secondary thinning flakes, 1 piece of argillite shatter, 13 chert secondary thinning flakes, 1 quartz biface, 10 quartz secondary thinning flakes, 1 quartz scraper, 1 piece of quartz shatter, 198 quartzite secondary thinning flakes, 1 quartzite knife, 2 quartzite preforms, 5 quartzite scrapers, 8 utilized quartzite flakes, 1 quartzite projectile point tip, 1 untyped quartzite projectile point, 1 quartzite Squibnocket Triangle projectile point base, and 1 complete Squibnocket Triangle projectile point. The recovered projectile points date from the Late Archaic period, ca., 6,000 to 3,900 B.P.

The B1-Horizon within Site 22-38 (Locus 2-1) yielded 179 artifacts. These consisted of 3 argillite secondary thinning flakes, 8 chert secondary thinning flakes, 6 quartz secondary thinning flakes, 1 quartz scraper, 1 piece of quartz shatter, 1 utilized quartz flake exhibiting crushing on the edge, a single piece of fire-cracked rock, 1 quartzite biface, 1 quartzite end scraper, 149 quartzite secondary thinning flakes, 1 quartzite projectile point tip fragment, 3 quartzite scrapers, 2 quartzite utilized flakes, and a single quartzite Brewerton Eared-Triangular projectile point. The latter is typical of the Late Archaic period, c.a., 6,000 to 3,900 B.P. Finally, the B2-Horizon (lower subsoil deposit) within the Locus 2-1 area produced a single argillite secondary thinning flake, 1 piece of quartz shatter, 14 quartzite secondary thinning flakes, 1 quartzite scraper, 1 quartzite utilized flake, and a single hammerstone fashioned from an unidentified material.

Phase IB survey of Site 22-38 (Locus 2-1) also resulted in the identification of three stains at the interface of topsoil and subsoil horizons that may represent cultural features. The first feature (Feature 1) was

identified within the southwestern portion of the site during the excavation of Judgmental Shovel Test 1 near the confluence of Blackwell Brook and the unnamed stream (Figure 22). This feature was first identified at a depth of 38 cmbs (15 inbs) and it exhibited two soil layers. The first layer was described as a deposit of dark brown (10YR 3/3) medium sandy loam mixed with very dark brown (10YR 2/2) fine sandy loam; it extended from 38 to 48 cmbs (15 to 19 inbs). It was underlain by a second distinct soil layer that was classified as a deposit of dark yellowish brown (10YR 4/4) loam mixed with flecks of charcoal. This lower level reach from 48 to 68 cmbs (19 to 25 inbs) and it yielded 2 quartzite secondary thinning flakes. This feature was deemed to be cultural in origin, perhaps related to a burning episode. It will not be impacted by construction as it is located in an area that will be excluded from development.

A second feature (Feature 2) was identified in the westernmost portion of Site 22-38 (Locus 2-1) near Blackwell Brook. This feature was revealed during the excavation of Shovel Test 2 along Survey Transect 4 (Figure 24). It was noted at the base of the plowzone (A-Horizon) at a depth of 11 cmbs (4 inbs) and it consisted of an area of dark mottled soil that was described as basin shaped. It contained a deposit of very dark brown (10YR 3/2) silty sand mixed with minor amounts of charcoal and it extended to a depth of 20 cmbs (8 inbs). The feature most likely represents a burn episode, although the exact nature and function of this deposit remains unknown. It also will not be impacted by construction as it is located in an area that will be excluded from development.

The third feature (Feature 3) was identified in the northeastern portion of Site 22-38 (Locus 2-1) during the excavation of Shovel Test 4 along Survey Transect 12 (Figure 24). It was observed at 28 cmbs (11 inbs), a few centimeters into the top of the B1-Horizon. It consisted of three small circular stains that each measured approximately 10 cm (4 in) in diameter and were situated 20 cm (8 in) apart. All three stains contained dark brown (10YR 3/3) loamy sand and resembled post molds when viewed in plan. The three stains were bisected in order to determine depth and shape. The first was very thin and interpreted as a natural occurrence; however, the other two extended into the subsoil for approximately 15 cm (5 in) and both tapered to the base. The circular stains were interpreted as post molds that may have been related to a portion of a prehistoric structure or some other type of feature comprised of posts.

In sum, Phase IB archaeological reconnaissance survey of Site 22-38 (Locus 2-1) resulted in the recovery of hundreds of prehistoric artifacts from Ap, B1, and B2-Horizons, suggesting that additional intact archaeological deposits may be present in the area. This site also yielded three features of possible cultural origin. Based on the aerial extent of the archaeological deposits and the age of the temporally diagnostic artifacts, it appeared that Site 22-38 (Locus 2-1) likely represented a Late Archaic period upland seasonal camp that may have been re-occupied several times. It was determined that Site 22-38 (Locus 2-1) may possess research potential and the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). It was recommended that Site 22-38 (Locus 2-1) be avoided during construction of the solar facility. If this was not feasible, it was recommended that Phase II HRHP testing and evaluation be completed throughout any portions of Site 22-38 (Locus 2-1) that may be impacted by the proposed solar facility.

Area 3

Area 3 was situated in the western part of the Development Area (Figure 18). It was bordered by a soccer field to the south, a large sand and gravel operation to the east, a gully to the north, and a wooded area to the west. This survey area was covered in a mix of deciduous and pine trees at the time of Phase IB survey and it encompassed 4.27 acres of land situated at an approximate elevation of 45.7 m (150 ft) NGVD (Figure 23). The nearest source of freshwater was Blackwell Brook, which was located approximately 250 m (820 ft) to the west. A total of 70 shovel tests were excavated throughout Area 3

during Phase IB survey (Figure 24). They contained intact strata associated with Sudbury, Windsor, and Hinckley sandy loams; however, examination of the area failed to produce any prehistoric or historic period artifacts or evidence of cultural features. Thus, no additional archaeological examination of this area was recommended.

Area 4

Area 4 also was also located in the southwestern portion of the proposed Development Area, and immediately to the west of Area 3 (Figure 18). It was situated to the northwest of an existing soccer field, to the south of a gully, and to the north, and east of Blackwell Brook. This survey area contained 1.82 acres of land and was situated at an approximate elevation of 45.7 m (150 ft) NGVD. At the time of the survey, it also was covered in mixed deciduous and pine trees (Figure 25). During survey, 162 shovel tests were excavated throughout Area 4 (Figure 26). The shovel tests contained intact strata associated with Sudbury, Windsor, and Hinckley sandy loams. The Phase IB survey of this area resulted in the identification of two archaeological loci: Locus 4-1 and Locus 4-2 (Figure 3). Locus 4-1 was later assigned a site number by the Connecticut State Historic Preservation Office: Site 22-36. The Phase IB survey results of the Site 22-36 (Locus 4-1) and Locus 4-2 areas are described below.

Site 22-36 (Locus 4-1)

Site 22-36 (Locus 4-1) was identified during the Phase IB survey of the western portion of Area 4 (Figures 18 and 26). It was situated in a well-drained, relatively flat area at an approximate elevation of 42.6 m (140 ft) NGVD. It was irregular in shape and measured approximately 60 x 100 m (196 x 328 ft) in size. A typical shovel test excavated in this area exhibited three soil horizons in profile and reached to a depth of 78 cmbs (31 inbs). The Ap-Horizon (plowzone), was described as a layer of dark yellowish brown (10YR 4/4) silty fine sand that extended from 0 to 27 cmbs (0 to 11 inbs). It was underlain by the B1-Horizon (subsoil), a deposit of light olive brown (2.5Y 5/6) silty fine sand that continued from 27 to 48 cmbs (11 to 19 inbs). Finally, the glacially derived C-Horizon ranged in depth from 48 to 78 cmbs (19 to 31 inbs); it was described as a layer of light yellow brown (2.5Y 6/5) silty coarse sand.

Examination of Site 22-36 (Locus 4-1) resulted in the collection of 37 artifacts and ecofacts, four of which were historic or modern in origin. The modern period ecofacts consisted of a 3 large mammal bone fragments, while the single historic period artifact was classified as a machine cut nail. The prehistoric artifacts collected from Site 22-36 (Locus 4-1) originated from both plowzone (Ap-Horizon) and subsoil (B1-Horizon) contexts. Prehistoric artifacts collected from the plowzone (Ap-Horizon) included 10 quartz secondary thinning flakes, 2 pieces of quartz shatter, 5 quartzite secondary thinning flakes, 2 quartzite secondary thinning flakes showing edge damage consistent with use, and a single rhyolite secondary thinning flake. In addition, the B1-Horizon (subsoil) yielded 3 chert secondary thinning flakes, 1 utilized flake of an unidentified material, 3 quartz secondary thinning flakes, and 6 quartzite secondary thinning flakes. The prehistoric component of Site 22-36 (Locus 4-1) also produced six features at the interface of plowzone (Ap-Horizon) and the subsoil (B1-Horizon) that appear to represent cultural features. They are summarized below.

The first feature (Feature 5) was identified within the central portion of Site 22-36 (Locus 4-1); it was recorded during the excavation of Shovel Test 8 along Survey Transect 4 (Figure 26). It was revealed at 35 cmbs (14 inbs) and appeared as a layer of soil containing charcoal flecking. The feature soil was described as a deposit of dark yellowish brown (10YR 4/4) loamy fine sand mixed with yellowish brown (10YR 5/6) loamy fine sand and charcoal. Further excavation revealed a pit-shaped soil stain that extended from 35 to 70 cmbs (14 to 28 inbs). In addition, lithic debitage was noted within the soil layer immediately above the

feature. This feature may represent the remnant of a storage or refuse pit, though no artifacts were recovered from it during survey.

The second feature (Feature 6) was recorded in the northwestern portion of Site 22-36 (Locus 4-1) during the excavation of Shovel Test 5 along Survey Transect 4 (Figure 26). This feature was first revealed at 23 cmbs (9.2 inbs). It consisted of a circular dark brown (10YR 3/3) stain measuring approximately 8 cm (3.2 in) in diameter. Bisection of the feature showed that it extended 5 cm (2 in) into the subsoil, tapered, and may have represented the remnants of a truncated post mold.

The third feature (Feature 7) was recorded during the excavation of Shovel Test 5 along Survey Transect 4 (Figure 26). The feature soil was first revealed a depth of 34 cmbs (13.6 inbs); it appeared as a layer of soil containing charcoal flecks. The feature matrix was described as a deposit of dark yellowish brown (10YR 3/4) fine sandy loam mixed with yellowish brown (10YR 5/6) loamy fine sand. Excavation revealed that it was bowl-shaped and extended to a depth of 85 cmbs (34 inbs). This feature produced a single quartz secondary thinning flake. This feature is very similar to Feature 5 and may also represent the remains of a storage or refuse pit.

The fourth feature (Feature 8) was recorded in the north-central portion of Site 22-36 (Locus 4-1); it was noted within Shovel Test 8 along Survey Transect 8 (Figure 26). This deposit was observed at 30 cmbs (12 inbs) at the top of the B1-Horizon (subsoil). It consisted of two small circular stains that were interpreted as possible postmolds. Each stain measured approximately 8 cm (3 in) in diameter and they were situated 25 cm (10 in) apart. Both were described as dark yellowish brown (10YR 3/4) fine sandy loam. They were bisected and found to taper to a point approximately 15 cm (6 in) into the subsoil deposit. Like Feature 6 described above, the stains comprising Feature 8 most likely represent the remains of prehistoric postmolds.

The fifth feature identified within Site 22-36 (Locus 4-1) (Feature 9) was recorded in the northeastern portion of the site area within Shovel Test 3 along Survey Transect 9 (Figure 26). This deposit was first observed at a depth of 35 cmbs (14 inbs) where it appeared as mottled soil containing charcoal flecks. Unlike the other features described above, this feature was left undisturbed and the excavation of the shovel test was terminated upon its discovery. Based on the soil type and charcoal present it was presumed to be a cultural feature.

The final feature (Feature 10) was recorded in the southeastern portion of Site 22-36 (Locus 4-1); it was noted within Shovel Test 11 along Survey Transect 13 (Figure 26). This deposit was first observed at 35 cmbs (14 inbs, at the Ap/B1-Horizon (plowzone/subsoil) interface. It was described as circular in shape and extended into the northern and western walls of the shovel test. When revealed in profile, it extended to a depth of 50 cmbs (20 inbs) and contained three distinct matrices. The first was described as a deposit of light olive brown (2.5Y 5/4) fine sandy loam. The second was characterized as a deposit of dark yellowish (10YR 4/6) fine sandy loam, while the third horizon was classified as a layer of grayish brown (2.5Y 5/2) silt. In addition, evidence of three post molds were identified adjacent to the feature. Each of them measured approximately 8 cm (3 in) in diameter, and all three contained matrix described as dark yellowish (10YR 4/6) brown fine sandy loam mixed with yellowish brown (10YR 5/4) sandy loam with charcoal flecking throughout. Based on the soil type and charcoal present Feature 10 may be presumed to be cultural in origin.

In sum, Phase IB archaeological reconnaissance survey of Site 22-36 (Locus 4-1) resulted in the recovery of a single historic period artifact that appeared to represent an accidental loss or field scatter. This artifact

was not associated with a substantial occupation or any historic period cultural features. As such, the historic period component of Site 22-36 (Locus 4-1) lacked research potential and the qualities of significance applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional examination of this component of Site 22-36 (Locus 4-1) was recommended. The mammal bones found within the A-Horizon at Site 22-36 (Locus 4-1) were not burned or otherwise altered; thus, they appeared to have represented incidental inclusions in the site area as the result of a natural death of an animal and incorporation into the soil column.

The prehistoric component of Site 22-36 (Locus 4-1) produced prehistoric artifacts from both plowzone and subsoil deposits. The latter suggested that additional intact archaeological deposits may be present in the area. This component also yielded six features. Based on the presence of intact archaeological deposits and cultural features, it was determined that the prehistoric component of Site 22-36 (Locus 4-1) may have possessed research potential and the qualities of significance as defined by the NRHP (36 CFR 60.4 [a-d]). It was recommended that Site 22-36 (Locus 4-1) be avoided during construction of the solar facility. If this was not feasible, it was recommended that Phase II NRHP testing and evaluation be completed in this area.

Locus 4-2

Locus 4-2 was identified within the northeastern portion of Area 4 at an approximate elevation of 48.7 m (160 ft) NGVD (Figures 18 and 26). Described as circular in configuration and encompassing an area that measured approximately 1 x 1 m (3 x 3 ft) in size, Locus 4-2 yielded a single prehistoric period artifact from Shovel Test 5 along Survey Transect 16. This artifact was a utilized quartzite secondary thinning flake that was recovered from the plowzone (Ap-Horizon) at a depth of 10 to 20 cmbs (4 to 8 inbs). Despite shovel testing throughout the area containing Locus 4-2, no additional artifacts or evidence of archaeological deposits was identified.

A typical shovel test excavated within the Locus 4-2 area extended to a depth of 67 cmbs (26 inbs) and exhibited four strata in profile. The Ap-Horizon (the plowzone) was described as a deposit of dark yellowish brown (10YR 4/4) fine sand that extended from the ground surface to 26 cmbs (0 to 10 inbs). The B1-Horizon (subsoil) was classified as layer of yellowish brown (10YR 5/6) silty sand that ranged in depth from 26 to 40 cmbs (9 to 16 inbs). The underlying B2-Horizon (subsoil) consisted of a layer of olive brown (2.5Y 4/6) sand that reached from 40 to 55 cmbs (16 to 22 inbs). Finally, the glacially derived C-Horizon, reached from 55 to 67 cmbs (22 to 26 inbs) and consisted of a deposit of light yellowish brown (2.5Y 6/4) silty medium sand.

The archaeological data recovered from the Locus 4-2 area indicates that this prehistoric find spot contained a single artifact that was not temporally diagnostic and could not be assigned to any particular cultural affiliation. Locus 4-2 lacked evidence of substantial archaeological deposits and/or research potential. As a result, it was assessed as not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended.

Area 5

Area 5, which was situated in the northwestern portion of the Development Area, was covered in mixed deciduous forest at the time of the Phase IB survey (Figures 18 and 27). It was located to the north of a gully, to the east of Blackwell Brook, to the south of a sand and gravel pit, and to the west of a large wetlands area (Figure 30). This area contained 4.54 acres undulating topography that varied from approximately 45.7 to 48.7 m (150 to 160 ft) NGVD. Soils noted in the area included sandy loamy soils belonging to the Agawam, Hinckley, and Windsor soil series. A total of 71 shovel tests were excavated

throughout this area during the Phase IB survey (Figure 28). This resulted in the identification of a single locus (Locus 5-1).

Locus 5-1

Locus 5-1 consisted of a small area that produced 14 prehistoric artifacts recovered within the south-central portion of Area 5. They were collected from Shovel Tests 1, 2, 6, and 7 along Survey Transect 20, as well as from Shovel Test 1 along Survey Transect 21. Locus 5-1 was described as ovoid in configuration and it encompassed an area that measured approximately 20 x 40 m (65 x 131 ft) in size. Despite survey throughout the area encompassing Locus 5-1, none of the other shovel tests produced evidence of archaeological deposits (Figure 28).

A typical shovel test excavated within the Locus 5-1 area extended to a depth of 76 cmbs (30 inbs) and exhibited four soil horizons in profile. The plowzone (Ap-Horizon) was described as a deposit of dark yellowish brown (10YR 3/6) silty fine sand that extended from the ground surface to 28 cmbs (0 to 11 inbs). The underlying B1-Horizon (subsoil) was classified as layer of yellowish brown (10YR 5/8) silty fine sand that ranged in depth from 28 to 38 cmbs (11 to 15 inbs). The B2-Horizon (subsoil) consisted of a layer of light olive brown (2.5Y 5/6) silty fine to medium sand that reached from 38 to 56 cmbs (11 to 22 inbs). Finally, the glacially derived C-Horizon, which reached from 56 to 76 cmbs (22 to 30 inbs), consisted of a deposit of olive yellow (2.5Y 6/6) coarse sand mixed with gravel.

Archaeological data collected from Locus 5-1 was collected from both the plowzone and subsoil deposits. Cultural material collected from the plowzone (Ap-Horizon) consisted of 10 quartzite secondary thinning flakes that originated from depths of 0 to 20 cmbs (0 to 8 inbs). The artifacts recovered from the underlying subsoil (B1-Horizon) were classified as 4 quartzite secondary thinning flakes; they were recovered from depths of 20 to 30 cmbs (8 to 12 inbs). The artifacts, while indicative of either stone tool manufacturing or maintenance, were not temporally diagnostic in nature, Locus 5-1 could not be assigned to a particular prehistoric period or cultural affiliation. Further, no cultural features were identified during survey of this area. The lack of features and the paucity of artifacts collected from the area indicated that Locus 5-1 did not possess research potential and/or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended.

Area 6

Area 6 was located in the northwestern portion of the Study Area (Figure 18). This area was bordered by Cold Spring Brook to the north, a wooded area to the east, corn fields to the south, and Blackwell Brook to the west. It contained 4.29 acres of undulating topography with approximate elevations that ranged from 45.7 to 51.8 m (150 to 170 ft) NGVD. In addition to Blackwell Brook and Cold Spring Brook, a freshwater seep was located immediately adjacent to the northeastern part of Area 6. At the time of the survey, the majority of this area was covered in mixed deciduous trees (Figure 29). A total of 113 shovel tests were excavated throughout this survey area (Figure 30). The shovel tests excavated throughout this area contained intact strata associated with Agawam, Windsor, and Hinckley sandy loams. The Phase IB of this area resulted in the identification of one locus, Locus 6-1 (Figure 3). Locus 6-1 was later assigned State of Connecticut Site Number Site 19-34. The Phase IB survey results of the Site 19-34 (Locus 6-1) area are described in detail below.

Site 19-34 (Locus 6-1)

Site 19-34 (Locus 6-1) was identified in the northwestern portion of the Development Area and in the vicinity of the confluence of Blackwell Brook and Cold Spring Brook (Figure 32). The locus is situated at

an approximate elevation 45.7 m (150 ft) NGVD and at the time of Phase IB survey it was covered mostly in secondary forest, though the southern edge of the locus extended into a nearby cornfield that was part of survey Area 10 (see below). The locus area was irregular in shape and measured approximately 70 x 192 m (229 x 630 ft) in size (Figure 32). This area was subjected to Phase IB survey due to its proximity to relatively level topography and the confluence of the two brooks referenced above.

A typical shovel test excavated within the Site 19-34 (Locus 6-1) area extended to a depth of 86 cmbs (34 inbs) and it exhibited four soil horizons in profile. The Ap-Horizon (plowzone) was classified as a layer of dark brown (10YR 3/3) silty medium sand that extended from the 0 to 17 cmbs (0 to 7 inbs). It was underlain by the B1-Horizon (subsoil), which was classified as a deposit of yellowish brown (10YR 5/6) silty fine sand that continued from 17 to 38 cmbs (7 to 15 inbs). The B2-Horizon (subsoil) ranged in depth from 38 to 68 cmbs (15 to 27 inbs) and was described as a layer of brownish yellow (10YR 6/6) silty very fine sand. Finally, the glacially derived C-Horizon ranged in depth from 68 to 86 cmbs (27 to 34 inbs); it was classified as a layer of light yellowish brown (2.5Y 6/4) silty coarse sand with gravel.

Archaeological examination of Site 19-34 (Locus 6-1) resulted in the collection of 165 prehistoric artifacts and three features. The prehistoric artifacts collected from Locus 6-1 originated from Ap, B1, and B2-Horizons. Cultural material collected from the plowzone (Ap-Horizon) consisted a single thinning flake fashioned from an unidentified lithic type, 2 basalt secondary thinning flakes, 1 basalt scraper, 21 chert secondary thinning flakes, 15 quartz secondary flakes, 2 quartz scrapers, 1 piece of quartz shatter, a single utilized quartz flake with crushing on the edge, 64 quartzite secondary thinning flakes, 1 quartzite scraper, 1 piece of quartzite shatter, 2 utilized quartz flake, 1 quartzite primary reduction flake, 2 quartzite scrapers, and a Brewerton Eared-Notched projectile point. The latter suggested a date of occupation for the Site 19-34 (Locus 6-1) area of ca., 6,000 to 3,900 B.P., (i.e., the Late Archaic period).

The B1-Horizon (subsoil) of Site 19-34 (Locus 6-1) yielded 43 artifacts. These consisted of 1 basalt thinning flake, 9 chert secondary thinning flakes, 7 quartz secondary flakes, 23 quartzite secondary thinning flakes, 1 quartzite biface fragment, 1 quartzite utilized flake with crushing evident, and a single Quartz Squibnocket Triangular projectile point. This point type also was common during the Late Archaic period from ca., 6,000 to 3,900 B.P. The B2-Horizon (lower subsoil deposit) within the Site 19-34 (Locus 6-1) area yielded 1 rhyolite secondary thinning flake. The prehistoric component of Site 19-34 (Locus 6-1) also produced evidence of three soil anomalies at the interface of the Ap and B1-Horizons that may represent cultural features.

The first feature (Feature 11) was identified within the northeastern portion of Site 19-34 (Locus 6-1) during the excavation of Shovel Test 2 along Survey Transect 1 (Figure 30). It was first identified at a depth of 35 cmbs (14 inbs) and it appeared as a deposit of dark yellowish brown (10YR 3/6) oxidized soil that contained charcoal flecking. Excavation of the shovel test revealed the profile of a bowl-shaped stain that extended from 35 to 44 cmbs (14 to 18 inbs). No artifacts were noted in the feature soil, and it appeared that it represented a burning episode.

The second feature (Feature 12) was identified in the northwestern portion of Site 19-34 (Locus 6-1) during the excavation of Shovel Test 13 along Survey Transect 2 (Figure 30). It was uncovered at a depth of 31 cmbs (12 inbs) and it was described as a circular stain that measured approximately 39 cm (16 in) in diameter. The feature matrix consisted of a deposit of dark brown (10YR 3/3) silty sand mixed with minor amounts of charcoal, a single quartzite secondary flake, and 1 piece of fire-cracked rock. A bisection of the circular feature revealed that it extended to a depth of 41 cmbs (16 inbs). It was interpreted as the remains of a hearth.

The third feature (Feature 13) was recorded in the east-central portion of Site 19-34 (Locus 6-1) during the excavation of Shovel Test 15 along Survey Transect 2 (Figure 30). It was first identified at a depth of 26 cmbs (10 inbs) and it consisted of a deposit of dark yellowish brown (10YR 5/4) loamy sand, mixed with olive brown (3.5Y 5/4) sand and minor amounts of charcoal. Feature 13 covered the entirety of the bottom of Shovel Test 15 at this level. Excavation revealed that it extended to a depth of 37 cmbs (15 inbs). The feature was interpreted as the result of a burning episode.

In sum, Phase IB survey of Site 19-34 (Locus 6-1) resulted in the recovery of prehistoric artifacts from both the plowzone (Ap-Horizon) and subsoil (B1 and B2 Horizon) deposits. The latter indicated that additional intact archaeological deposits may have been present in the area. This site also yielded evidence of three features, one of which was identified as a hearth and two of which were related to burning episodes. Based on the areal extent of the archaeological deposits and the age of the temporally diagnostic artifacts, it appeared that Site 19-34 (Locus 6-1) likely represented a Late Archaic period upland seasonal camp that may have been re-occupied several times. It was determined that Site 19-34 (Locus 6-1) may possess research potential and the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). It was recommended that Site 19-34 (Locus 6-1) be avoided during construction of the solar facility. If this was not feasible, it was recommended that Phase II NRHP testing and evaluation be completed.

Area 7

Area 7 was situated in the northeastern portion of the Development Area and immediately south of Area 1 (Figure 18). It was characterized by an agricultural field that was bordered by Rukstella Road to the south, Allen Hill Road to the west, and a wetland area to the east (Figure 31). This survey area encompassed approximately 3.37 acres of land, was situated at an approximate elevation of 85.4 m (280 ft) NGVD, and once contained horse stables associated with the former Rukstella Farmstead, which was located in the western side of Arnold Hill Road. A total of 73 shovel tests were excavated throughout this area during the Phase IB survey (Figure 20). This effort revealed that this area was characterized by Woodbridge and Paxton/Montauk sandy loams. Phase IB survey of Area 7 resulted in the identification of a single locus. It was designated as Locus 7-1 and it is described below.

Locus 7-1

Locus 7-1 yielded a single piece of quartz shatter that was recovered from the northwestern portion of Area 7 (Figure 20). The quartz shatter was collected from the Ap-Horizon (plowzone) during the excavation of Shovel Test 8 along Survey Transect 10. Despite close interval testing throughout the area, no additional artifacts or evidence of cultural features was recovered from Area 7. A typical shovel test within Area 7 was excavated to a maximum depth of 67 cmbs (26 inbs) and it exhibited four strata in profile. The plowzone (Ap-Horizon) was described as a deposit of very dark grayish brown (10YR 3/2) silty sand that extended from the ground surface to 23 cmbs (0 to 9 inbs). The underlying subsoil (B1-Horizon) was characterized as a deposit of dark yellowish brown (10YR 4/4) silty fine sand; it ranged in depth from 23 to 40 cmbs (9 to 16 inbs). The B2-Horizon (lower subsoil deposit) which was described as a layer of light yellowish brown (10YR 6/4) silty sand that extended from 40 to 55 cmbs (16 to 22 inbs). Finally, the glacially derived C-Horizon reached from 55 to 67 cmbs (22 to 26 inbs) and consisted of a layer of light olive gray (5Y 5/2) compact silty sand mixed with gravel.

Archaeological data collected from Locus 7-1 indicated that it was represented by a single temporally non-diagnostic prehistoric artifact that originated from the disturbed plowzone (Ap-Horizon). The locus lacked evidence of substantial archaeological deposits and/or cultural features. As a result, it was determined that Locus 7-1 did not possess research potential and/or the qualities of significance as

defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this Locus 7-1 was recommended.

Area 8

Area 8, which was located in the northeastern portion of the Development Area, was characterized by a large agricultural field that encompassed approximately 33.5 acres of land (Figure 18). It was bordered by Rukstella Road to the north, a sloping area to the west, a large forested parcel of land to the south, and a wetland area to the east (Figure 32). This area contained undulating topography situated at approximate elevations of 76.2 to 90 m (250 to 295.3 ft) NGVD. The nearest source of freshwater was a wetland to the east and south. During survey, 511 shovel tests were excavated throughout this area (Figure 33). The shovel tests excavated throughout Area 8 contained Woodbridge and Paxton/Montauk sandy loams. Phase IB survey of this area resulted in the identification of five loci that were designated as Loci 8-1 through 8-5.

Locus 8-1

Locus 8-1 was identified near the center of Area 8 (Figure 33). It yielded two prehistoric artifacts and one historic period artifact from the Ap-Horizon (plowzone) at an approximate elevation of 88 m (289 ft) NGVD. The archaeological material was collected from two Phase IB survey shovel tests. The first, Shovel Test 11 along Survey Transect 12, yielded a single whiteware sherd from the Ap-Horizon (plowzone) at a depth of 10 to 20 cmbs (4 to 8 inbs). Excavation of the second positive shovel test, Shovel Test 10 along Survey Transect 16, resulted in the recovery of 1 quartz secondary thinning flake and 1 quartzite secondary thinning flake, both of which originated from the Ap-Horizon (plowzone) at depths ranging from 10 to 30 cmbs (4 to 12 inbs). Locus 8-1 was described as ovoid in configuration and encompassed an area that measured approximately 45 x 25 m (82 x 148 ft) in size. Delineation shovel testing throughout the Locus 8-1 area failed to produce any additional archaeological material or evidence of cultural features.

A typical shovel test excavated within Locus 8-1 area extended to a depth of 58 cmbs (23 inbs) and exhibited three strata in profile. The Ap-Horizon (plowzone) consisted of a deposit of dark brown (10YR 3/3) fine sandy loam that extended from the ground surface to 28 cmbs (0 to 11 inbs). Underlying the plowzone was the B1-Horizon (subsoil), which was described as a layer of yellowish brown (10YR 5/6) fine sandy loam; it continued from 28 to 49 cmbs (11 to 19 inbs). Finally, the glacially derived C-Horizon spanned from 49 to 58 cmbs (19 to 23 inbs) and was classified as a layer of light olive brown (2.5Y 5/4) very fine sand with oxidation throughout.

The recovered archaeological data indicated that Locus 8-1 was represented by prehistoric artifacts that were displaced from their original depositional context. Further, the recovered prehistoric artifacts were not temporally diagnostic in nature. Thus, the prehistoric component of Locus 8-1 lacked intact deposits and research potential. In addition, the single whiteware sherd recovered from the plowzone represented typical historic field scatter that dated from post 1820. Thus, the historic component of Locus 8-1 also lacked depositional integrity and research potential. In sum, it was determined that both components of Locus 8-1 did not possess the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of Locus 8-1 was recommended.

Locus 8-2

Locus 8-2, which was situated at an approximate elevation of 86 m (282 ft) NGVD within the southern portion of Area 8, yielded a single kaolin pipe stem fragment from the plowzone (Ap-Horizon); it was recovered from Shovel Test 20 along Survey Transect 12. The locus was described as circular in configuration and encompassed an area measuring approximately 1 x 1 m (3 x 3 ft) in size (Figure 33). The

positive shovel test excavated within Locus 8-2 extended to a depth of 34 cmbs (13 inbs) and it exhibited two soil horizons in profile. The Ap-Horizon (plowzone) was described as a deposit of dark brown (10YR 3/3) fine sandy loam that extended from 0 to 27 cmbs (0 to 11 inbs). Underlying the plowzone was glacially derived the C-Horizon, which reached from 27 to 34 cmbs (11 to 13 inbs). It was described as light olive brown (2.5Y 5/4) fine sand. The water table was relatively shallow at a depth of 34 cm (13.4 inbs). The soil profile noted within the confines of Locus 8-2 exhibited clear evidence of disturbance associated with the plowing of the field. Soil profiles for shovel tests in the vicinity of Locus 8-2 indicated that plowing throughout the area has removed most or all evidence of the B1-Horizon (subsoil).

The single historic artifact recovered from plowzone (A-Horizon) of Locus 8-2 represents a typical nineteenth century pipe stem fragment. The lack of substantial numbers of artifacts and evidence of cultural features indicated that Locus 8-2 did not possess research potential and/or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional archeological examination of this locus was recommended.

Locus 8-3

Locus 8-3, which yielded of a single plain whiteware sherd from the plowzone (Ap-Horizon), was identified during the excavation of Shovel Test 6 along Survey Transect 24. This locus was identified within the northeastern portion of a large plowed agricultural field at an approximate elevation of 91 m (299 ft) NGVD (Figure 33). It was described as circular in configuration and encompassed an area measuring approximately 1 x 1 m (3 x 3 ft) in size. The positive shovel test excavated within Locus 8-3 exhibited two soil horizons in profile and extended to a depth of 46 cmbs (18 inbs). The plowzone (Ap-Horizon) was classified as a deposit of dark brown (10YR 3/3) fine sandy loam that reached from 0 to 20 cmbs (0 to 8 inbs). It was underlain by the glacially derived C-Horizon, which reached from 20 to 46 cmbs (8 to 18 inbs). The C-Horizon was classified as a layer of light olive yellow (2.5Y 6/2) fine sand. Similar to Locus 8-2, the soil profile noted within the confines of Locus 8-3 also exhibited evidence of clear disturbance associated with the plowing of the field, the removal of the subsoil deposits, and the plowzone resting on top of the glacially derived C-Horizon soils.

The single historic period artifact recovered from Locus 8-3 dates from post 1820, and it represented typical historic field scatter. As a result, it was determined that Locus 8-3 did not possess research potential or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No archaeological examination of this locus was recommended.

Locus 8-4

Locus 8-4 produced 1 quartzite secondary thinning flake, 1 quartz secondary thinning flake, and 1 secondary thinning flake of an unidentified material. It was identified during the excavation of Shovel Tests 13, 11, and 3 along Survey Transects 26, 30, and 34, respectively. The locus was recorded at an approximate elevation of 85 m (279 ft) NGVD within the southeastern portion of Area 8 (Figure 33). The recovered artifacts originated from the plowzone (Ap-Horizon). Locus 8-4 was described as ovoid in configuration and encompassed an area measuring approximately 30 x 75 m (98 x 246 ft) in size. A typical shovel test excavated within the Locus 8-4 area extended to a maximum excavated depth of 72 cmbs (28 inbs) and exhibited three soil horizons in profile. The plowzone (Ap-Horizon) consisted of a layer of dark brown (10YR 3/3) fine sandy silt that reached from the ground surface to 25 cmbs (0 to 10 inbs). It was underlain by the B1-Horizon (subsoil), which was described as a deposit of yellowish brown (10YR 5/6) silty fine sand that extended from 25 to 62 cmbs (10 to 24 inbs). Finally, the glacially derived C-Horizon ranged in depth from 62 to 72 cmbs (24 to 28 inbs) and consisted of a layer of olive yellow (2.5Y 6/2) fine sand.

Archaeological data collected from Locus 8-4 revealed a small scatter of prehistoric artifacts that have been displaced from their original depositional context through plowing. Aside from the three secondary thinning flakes recovered from plowzone (Ap-Horizon), Phase IB survey of Locus 8-4 did not produce any artifacts from intact soil deposits, nor did it yield any evidence of cultural features. Further, the recovered artifacts were not temporally diagnostic in nature. As a result, it was determined that Locus 8-4 did not possess the research potential or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended.

Locus 8-5

Locus 8-5 was identified within the northwestern portion of Area 8 and during the excavation of Shovel Tests 1 and 5 along Survey Transects 44 and 46, respectively. It was recorded at an approximate elevation of 76 m (249 ft) NGVD and it yielded 1 redware sherd, a single quartz secondary thinning flake, and 1 secondary thinning flake of an unidentified material, all of which were recovered from the plowzone (Ap-Horizon). The Locus 8-5 area was described as ovoid in configuration and encompassed an area measuring approximately 20 x 80 m (61 x 262 ft) in size (Figure 33). Delineation shovel testing in the locus area resulted in the collection of a single pearlware ceramic sherd from Shovel Test 1 on Survey Transect 44. All other surrounding shovel tests failed to produce additional artifacts or evidence of archaeological deposits.

A typical shovel test excavated within the Locus 8-5 area reached to depth of 70 cmbs (27 inbs) and exhibited three soil horizons in profile. The plowzone (Ap-Horizon) was described as a deposit of brown (10YR 4/3) sandy silt that extended from 0 to 29 cmbs (0 to 11 inbs). It was underlain by the subsoil (B-Horizon), which consisted of a deposit of dark yellowish brown (10YR 4/6) sandy silt that continued from 29 to 62 cmbs (11 to 24 inbs). Finally, the glacially derived C-Horizon reached to 70 cmbs (27 inbs) and was classified as a layer of light olive brown (2.5Y 5/4) fine sand with oxidation.

The lithic artifacts recovered from the prehistoric component of Locus 8-5 were recovered from the disturbed plowzone (Ap-Horizon); their original depositional context has been compromised. Historic artifacts recovered from this locus represented typical field scatter and are unassociated with any architectural remains or historic period cultural features. They dated from the late eighteenth and nineteenth centuries. Based on the recovered archaeological data, it was clear that both the prehistoric and historic period components of Locus 8-5 lacked evidence of substantial archaeological deposits and/or cultural features. Further, the recovered artifacts were not temporally diagnostic in nature. It was determined that both the prehistoric and historic components of Locus 8-5 lacked research potential and/or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended.

Area 9

Area 9, which is identified in the south-central portion of the Development Area, was covered in mixed deciduous forest at the time of survey (Figure 18). It was located to the east of an existing gravel road and was bordered by forested areas on the north, east, and south (Figure 34). This area contained 7.12 acres of land and was characterized by variable topography that ranged in elevation from approximately 54.8 to 76.2 m (180 to 250 ft) NGVD. Local soils in this area represented the Woodbridge and Canton/Charlton series, which consist of well drained sandy loams. A total of 45 shovel tests were excavated throughout this area during the Phase IB survey (Figure 35). The field effort resulted in the identification of a single locus (Locus 9-1). It is discussed below.

Locus 9-1

Locus 9-1, which yielded a single pearlware sherd from the plowzone (Ap-Horizon), was identified during the excavation of judgmental Shovel Test 29. This shovel test was excavated within the western portion of Area 9 and in the vicinity of a building foundation that was constructed of Portland cement mixed with a stone aggregate (Figure 36). Situated at an approximate elevation of 68 m (223 ft) NGVD, this locus was characterized by hardwood/deciduous forest. Despite the excavation of 45 shovel tests throughout Area 9, no other archaeological material was recovered other than the above-referenced pearlware sherd (Figure 35).

The positive shovel test within Locus 9-1 was excavated to a depth of 100 cmbs (39 inbs) and exhibited three soil horizons in profile. The uppermost soil horizon, which consisted of redeposited soil/fill, was described as a layer of olive brown (2.5Y 4/4) silty sand that extended from the 0 to 68 cmbs (0 to 27 inbs). It was underlain by a thin buried A-Horizon that consisted of a deposit of dark yellowish brown (10YR 3/4) fine sandy silt; it spanned from 68 to 70 cmbs (27 to 28 inbs). Finally, the B1-Horizon, reached from 70 to 100 cmbs (28 to 39 inbs); it was described as a layer of light yellowish brown (10YR 5/4) sandy silt.

The single pearlware sherd recovered from Locus 9, which was representative of a teacup rim with a blue border and black transfer print, dated from ca., 1807 to 1840. It was recovered from a shovel test that was positioned near a partially collapsed poured Portland cement and stone aggregate foundation that measured approximately 6.1 x 6.1 m (20 x 20 ft) in size (Figure 37). At the center of the foundation was a dry laid, square, fieldstone structure that measured approximately 1.5 x 1.5 m (5 x 5 ft) in size; it may have served as a hearth foundation (Figure 37). The Portland cement and stone aggregate suggested that this foundation dated from the early twentieth century. It may have represented a later addition to the nearby Mowrey Farmstead, which was situated to the northwest and within an area that will not be impacted by construction of the proposed solar facility (see the previously submitted Phase IA report). Given the age of the foundation, the ceramic sherd recovered from Locus 9-1 likely was not associated with these architectural remains. In sum, the archaeological deposits associated with Locus 9-1 did not contain substantial numbers of artifacts or possess research potential. Thus, they were assessed as not eligible for listing the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). In addition, the historic foundation identified in the area was found to be collapsing in places and exhibited no unique characteristics. Thus, no additional archaeological examination of this former building or the Locus 9-1 area was recommended prior to construction of the proposed solar facility.

Area 10

Area 10 was located in the northwestern portion of the Development Area (Figure 18). It consisted of an agricultural field (Figure 38). Area 10 was located to the south of Area 6, to the west of a sand and gravel pit, to the north of a forested area, and to the east of Blackwell Brook. Area 10, which encompassed approximately 2.25 acres of land, was situated on undulating topography that varied from approximately 48.7 to 54.8 m (160 to 180 ft) NGVD. A total of 39 shovel tests were excavated throughout this area during the Phase IB survey (Figure 30). The shovel tests excavated throughout Area 10, which contained intact strata associated with both Agawam and Hinckley series sandy loamy soils produced prehistoric archaeological deposits. However, due to their proximity to Site 19-34 (Locus 6-1) to the north, these deposits were considered to be part of that area and are discussed in the section documenting Site 19-34 (Locus 6-1) above.

Area 11

Area 11 was located in the northwestern portion of the proposed Development Area (Figure 18). This area was bordered directly to the north by a wooded area containing a moderately steep drop into the Cold Spring Brook drainage. Areas 6 and 10 were located to the west of this survey area, while Area 13 was located to the south and a sand and gravel pit border situated to the southwest. A wooded wetland area was located to the east. This area contained 12.4 acres of land, was situated on undulating topography that contained low areas with poor drainage and higher areas with better drainage and varied from approximately 48.7 to 57.9 m (160 to 180 ft) NGVD, and the nearest freshwater source was Cold Spring Brook. At the time of the survey, this area consisted of an open agricultural field (Figures 39 and 40). A total of 120 shovel tests were excavated throughout the elevated portions of this survey area (Figure 41). The shovel tests excavated throughout this area contained intact strata associated with the Merrimac, Windsor, and Agawam soil series. The Phase IB survey of this area resulted in the identification of one locus, Locus 11-1 (Figure 3). Locus 11-1 was later assigned State of Connecticut Site Number Site 19-35. The Phase IB survey results of the Site 19-35 (Locus 11-1) area are described in detail below.

Site 19-35 (Locus 11-1)

Site 19-35 (Locus 11-1) was identified in the northwestern portion of the Development Area and within a large agricultural field to the east of Blackwell Brook and to the south Cold Spring Brook (Figures 41 through 43). The locus was situated within an area of variable topography that included elevations ranging from 51.8 to 57.9 m (170 to 190 ft) NGVD. At the time of survey, this area had recently been cleared of corn (Figures 23 and 24). The locus area was described irregular in shape and measured approximately 80 x 200 m (263 x 656 ft) in size (Figure 25). This area was subjected to Phase IB survey due to its sandy, well drained soils and the proximity of the two sources of freshwater referenced above.

A typical shovel test excavated within the Site 19-35 (Locus 11-1) survey area extended to a depth of 100 cmbs (39 inbs) and it exhibited four soil horizons in profile. The plowzone (Ap-Horizon) was classified as a layer of dark brown (10YR 3/3) silty fine sand that reached from the 0 to 25 cmbs (0 to 10 inbs). It was underlain by a deposit of yellowish brown (10YR 5/6) silty fine sandy subsoil (B1-Horizon) that continued from 25 to 60 cmbs (10 to 24 inbs). The B2-Horizon (subsoil) was encountered between 60 and 90 cmbs (24 to 35 inbs) and consisted of a deposit of light yellowish brown (10YR 6/4) silty very fine sand. Finally, the glacially derived C-Horizon ranged in depth from 90 to 100 cmbs (35 to 39 inbs) and was classified as a layer of light yellowish brown (2.5Y 6/3) silty very fine sand.

Phase IB survey of Site 19-35 (Locus 11-1) resulted in the collection of 22 prehistoric artifacts and three possible cultural features. The prehistoric artifacts collected from Locus 11-1 originated from the plowzone (Ap-Horizon), the B1-Horizon (subsoil), from possible feature matrix, and from an anomalous soil horizon detected in the southern and western portions of the locus. Prehistoric cultural material collected from the plowzone (Ap-Horizon) of Site 19-35 (Locus 11-1) consisted of 1 piece of calcined mammal bone, 6 chert secondary thinning flakes, 1 chert projectile point tip, 5 quartzite secondary thinning flakes, and a single secondary thinning flake fashioned from an unidentified lithic material. Unfortunately, the projectile point tip could not be associated with any specific type of cultural affiliation. The B1-Horizon (subsoil) within Site 19-35 (Locus 11-1) yielded 3 chert secondary thinning flakes, 1 quartzite secondary thinning flake, and single utilized quartzite flake that exhibited evidence of crushing along its edges. The anomalous soils horizon detected in some of the shovel tests excavated throughout western and southern portion of Site 19-35 (Locus 11-1) yielded 2 quartzite secondary thinning flakes and a quartzite Levanna projectile point. The latter is typical of the Late Woodland period of Connecticut prehistory (ca. 1,500 to 600 BP). Finally, one of the identified features yielded a single chert secondary thinning flake (see below).

The first feature identified within Site 19-35 (Locus 11-1) (Feature 15) was recorded within the southern portion of the agricultural field during the excavation of Shovel Test 9 along Survey Transect 6 (Figure 41). It was identified at the base of the plowzone at a depth of 20 cmbs (8 inbs), where it appeared as a deposit of dark brown (10YR 3/3) sandy loam mottled with dark yellowish brown (10YR 4/6) silty fine sand and flecks of charcoal. This feature covered the entirety of the bottom of the shovel test at this depth. Continued excavation revealed that it terminated at approximately 30 cmbs (8 inbs), where it appeared as a band of soil in all four walls of the shovel test. Despite careful excavation of the feature matrix, no artifacts were recovered from this deposit. This feature was interpreted as the remains of burning episode of unknown origin.

The second feature (Feature 16) also was identified in the southern portion of Site 19-35 (Locus 11-1); it was uncovered during the excavation of Shovel Test 9 along Survey Transect 4 (Figure 41). The feature was revealed at a depth of 14 cmbs (6 inbs) and it too encompassed the entirety of the floor of the shovel test at this depth. The feature matrix was described as a deposit of mottled dark brown (10YR 3/3) sandy loam and dark yellowish brown (10YR 4/6) silty sand mixed with charcoal flecking throughout. Excavation of the feature matrix resulted in the collection of a single chert secondary thinning flake. A bisection of the circular feature revealed that it was larger than the shovel test, as it was observed as a 13 cm (5 in) thick layer in all four walls of the shovel test. This feature also was interpreted as the remains of burning episode of unknown origin.

The third feature (Feature 17) was recorded in the west-central portion of Site 19-35 (Locus 11-1) during the excavation of Shovel Test 2 along Survey Transect 12 (Figure 41). It was uncovered at a depth of 40 cmbs (16 inbs) and it consisted of a deposit of dark grayish brown (10YR 2/1) loamy sand. The feature, which extended from the northwestern corner of the shovel test, measured 33 x 38 centimeters (13 x 15 inches) in size and reached to a depth of 54 cmbs (22 inbs). Fire reddened soil also was noted in the southern portion of the feature and charcoal flecking appeared throughout the feature matrix. While no artifacts were recovered, the size and contents of the feature (especially the fire reddened soil and charcoal) suggested that it represented a hearth.

In addition to Feature 15 through 17, several of the shovel tests in the southern and western portions of Site 19-35 (Locus 11-1) produced evidence of anomalous soils located between the base of the plowzone (Ap-Horizon). This anomalous band of soil consisted of a mixture of very dark brown (10YR 3/2) sandy loam, dark grayish brown (10YR 2/1) fine sand, and dark yellowish brown (10YR 4/6) loamy sand. It varied from ca., 10 to 30 cm (4 to 12 in) in thickness across this portion of Locus 11 and it contained varying amounts of charcoal flecking throughout. As mentioned above, this soil deposit also yielded 2 quartzite secondary thinning flakes and a quartzite Levanna projectile point, suggesting it may have been cultural in origin. Due to its distribution across multiple shovel tests, it was thought that the anomalous layer may represent a prehistoric living surface.

In sum, Phase IB survey of the Site 19-35 (Locus 11-1) area resulted in prehistoric artifacts from both the culturally modified and undisturbed soil deposits. This locus also yielded evidence of three features, one of which was identified as a hearth and two of which were related to burning episodes. In addition, a large soil anomaly was detected in the southern and western portion of the locus area and was interpreted as a possible prehistoric living surface. Based on the areal extent of the archaeological deposits and the age of the temporally diagnostic artifacts, it appeared that Site 19-35 (Locus 11-1) may have represented a Late Woodland period (1,500 to 600 BP) occupation. The recovered archaeological data suggested that it may have possessed research potential and the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). It was recommended that the Site 19-35 (Locus 11-1) area be avoided

during construction of the solar facility. If this was not feasible, it was recommended that Phase II NRHP testing and evaluation be completed throughout any portions of the site that may be impacted by the proposed solar facility.

Area 12

Area 12 was located in the east central portion of the Development Area and consisted of a large wooded parcel that contained stone walls and dirt walking paths (Figure 18). This survey area was bordered to the north by Survey Area 8, to the south by Survey Area 18 (see below), and to the west by a large, wooded but poorly drained area. Area 12 contained 33.8 acres of land and variable topography that range in elevation from approximately 76.2 to 85.3 m 250 to 280 NGVD. Soils within Area 12 belonged to the Paxton/Montauk and Ridgebury, Leicester, and Whitman series. Due to the general poor drainage and very rocky soils in this part of the Study Area, testing of Area 12 was limited to the southwestern portion of the area that contained a historic town boundary marker for Brooklyn and Canterbury, a damaged building foundation, a stone-lined well, and stone walls (Figure 42 and 43). A total of 10 shovel tests were excavated throughout this area during the Phase IB survey (Figure 44). They resulted in the examination of Locus 12-1.

Locus 12-1

Phase IB survey of Locus 12-1 resulted in the recovery of 1 brick fragment, 1 creamware rim sherd, 1 unglazed redware sherd, 1 brown lead glazed redware sherd, 2 black glazed redware sherds, a single refined earthenware rim sherd with blue and yellow annular designed, 1 plain whiteware sherd, and 1 shard of olive bottle glass; all of these artifact were recovered from the A-Horizon. The artifacts were collected during the excavation of Judgmental Shovel Tests 4, 6, 9, and 10, which were placed within the southern portion of Area 12 (Figure 44). Situated at an approximate elevation of 84 m (276 ft) NGVD, this locus was located within a forested area that also contained low brush. Locus 12-1 was described as circular in configuration and it encompassed an area that measured approximately 45 x 45 m (148 x 148 ft) in size.

A typical shovel test excavated within Locus 12-1 extended to a depth of 77 cmbs (30 inbs) and it exhibited two soil horizons in profile. Stratum I, the topsoil (A-Horizon), consisted of a deposit of dark brown (10YR 3/3) silty loam that reached from the ground surface to 48 cmbs (0 to 19 inbs). It was underlain by the B1-Horizon (subsoil), which ranged in depth from 48 to 77 cmbs (19 to 30 inbs) and was classified as a layer of yellowish brown (10YR 5/6) silty loam. The glacially derived C-Horizon could not be reached within the Locus 12-1 area due to the intrusion of ground water into the shovel tests.

During pedestrian survey associated with the Phase IA assessment survey of the southeastern portion of the Locus 12-1, Heritage personnel noted the presence of an upright cut granite stone (Figure 45). The stone was situated at an elevation of approximately 82.3 m (270 ft) NGVD and it did not appear on any historic maps or aerial images of the region. The stone measured approximately 1 m (3 ft) in height. The cut stone was described as square in shape with chamfered edges and stone chisel marks throughout its four faces. The northern side of the stone contained the letter "B" and the southern side was inscribed with the letter "C." The stone represented one of the early boundary markers established between the Towns of Brooklyn and Canterbury. This stone was most likely set in place in ca., 1786 or shortly thereafter since this is when the town of Brooklyn was formed and its boundaries were formally established by the town government. The identification of early town boundary markers in the State of Connecticut is relatively rare, as many of these objects have been removed or destroyed in the past. Given that this object has a legal purpose in that it demarcates the Brooklyn/Canterbury town line, it

was recommended that it not be removed or impacted in any other way during construction of the proposed solar facility.

In addition to the archaeological deposits and the above referenced boundary marker, Locus 12-1 also contained a small damaged fieldstone foundation that measured approximately 5 x 5 m (16 x 16 ft). This former building location also was encountered during pedestrian survey of the locus area. Portions of this stone foundation have collapsed into the existing cellar hole and it appeared that some stones may have been removed from the area for other purposes (Figure 43). Further, a dry-laid fieldstone well was identified located approximately 3 m (10 ft) to the north of the foundation (this area was overgrown and the time of survey and could not be photographed satisfactorily). Heritage historians searched local and state repositories and online sources for historic maps and aerial photos that may have shown the resources located within Locus 12-1; however, that search failed to identify the origin of the building, its date of construction, and/or its function. Given its proximity to the recovered archaeological deposits, it has been surmised that the former building most likely dates from the late eighteenth to nineteenth centuries. Furthermore, due to the types of artifacts recovered and the proximity of the well as a source of reliable fresh water, it is assumed that the former building situated within Locus 12-1 had a domestic function and may have been a historic residence. In addition, the town boundary marker is rare and of significance to the recordation of the boundary between Brooklyn and Canterbury. Using Best Management Practices (BMPs), Quinebaug Solar, LLC has agreed to incorporate a buffer zone around Locus 12-1 that will ensure the protection of the boundary marker, foundation, and well. However, if construction plans are altered, additional archaeological investigation will be required.

Area 13

Area 13 was located in the north-central portion of the Development Area and consisted of a long and relatively narrow agricultural field (Figure 18). The area was bound by a wooded and poorly drained area to the south (Figure 45). A dirt road used to access a sand and gravel operation to the northwest extended along the northern edge of the survey area and divided Area 13 from Area 11 to the north. Area 13 contained topography that varied from approximately 51.8 to 53.3 m (170 to 175 ft) NGVD. Soils in this area belonged to the Agawam, Merrimac, and Hinckley series. A total of 87 shovel tests were excavated throughout this area during the Phase IB survey (Figure 46). They resulted in the identification of a single locus that was designated as Locus 13-1.

Locus 13-1

Locus 13-1, which was recorded in the northeastern portion of Area 13, was identified during the excavation of Shovel Test 3 along Survey Transect 2 (Figure 18). This locus was situated at an approximate elevation of 52 m (171 ft) NGVD and was positioned within a plowed agricultural field (Figure 45 and 46). Phase IB survey of this area resulted in the collection of a single machine-cut nail that originated from the plowzone (Ap-Horizon]). Locus 13-1 was described as circular in configuration and it encompassed an area that measured approximately 1 x 1 m (3 x 3 ft) in size. The positive shovel test excavated within the Locus 13-1 area extended to a depth of 78 cmbs (31 inbs) and exhibited four soil horizons in profile. The uppermost horizon, which consisted of a plowzone deposit (Ap-Horizon) of dark yellowish brown (10YR 3/4) very fine sandy silt, extended from 0 to 17 cmbs (0 to 7 inbs). Underlying the plowzone was the B1-Horizon (subsoil), which was classified as a deposit of yellowish brown (10YR 5/8) very fine sand; it continued from 17 to 37 cmbs (7 to 15 inbs). The B2-Horizon consisted of a brownish yellow (10YR 6/6) very fine sand that extended from 37 to 68 cmbs (15 to 27 inbs). Finally, the glacially derived C-Horizon reached from 68 to 78 cmbs (27 to 31 inbs); it was classified as a layer of light yellowish brown (5YR 6/8) very fine sandy silt.

The machine cut nail recovered from the Locus 13-1 area dated from ca., 1810 to 1900 and represented an incidental loss within Area 13. No other artifacts or evidence of architectural remains of buried cultural features were identified within Locus 13-1. Thus, it was determined that Locus 13-1 did possess research potential and/or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended.

Area 14

Area 14 is located in the northeastern portion of the proposed Development Area (Figure 18). It consists of a narrow agricultural field that is bounded to the south and east by a sand and gravel operation area, and to the north and west by a low-lying and poorly drained area (Figure 47). A stone wall runs east to west along the southern border of Area 14; it will not be impacted by the proposed construction. Area 14, which encompasses approximately 1.3 acres of land, is situated at an approximate elevation of 48.7 m (160 ft) NGVD, and the nearest sources of freshwater are a small unnamed stream and associated wetland to the west. A total of 18 shovel tests were excavated throughout this area during the Phase IB archaeological survey (Figure 48). The shovel tests excavated throughout Area 14, which contained intact soils associated with Hinckley sandy loams, failed to produce any prehistoric or historic period artifacts or evidence of cultural features. No additional archaeological examination of this area is recommended.

Area 15

Area 15 was located in the northwestern portion of the Development Area and was characterized by an open, agricultural field at the time of survey (Figure 18 and 49). It was bounded to the west, south, and east by a poorly drained area that contained an unnamed stream. A disused portion of the Rukstella Road alignment extended to the north of this survey area. The northwestern quarter of Area 15 was located outside the Development Area at the time of the Phase IB survey. Area 15 was situated at an approximate elevation of 45.7 to 51.8 m (150 to 170 ft) NGVD. A total of 37 shovel tests were excavated throughout this area during the Phase IB survey (Figure 48). The field effort resulted in the identification of a single locus designated as Locus 15-1; it is described below.

Locus 15-1

Locus 15-1, which yielded a single shard of olive bottle glass from the subsoil (B1-Horizon), was identified during the excavation of Shovel Test 5 along Survey Transect 4. This find spot was situated within the northern portion of Area 15 and was positioned at an approximate elevation of 47 m (154 ft) NGVD. Locus 15-1 was described as circular in configuration and it encompassed an area that measured approximately 1 x 1 m (3 x 3 ft) in size (Figure 48). The positive shovel test excavated within Locus 15-1 exhibited three soil horizons in profile and reached to a maximum excavated depth of 67 cmbs (26 inbs). The plowzone deposit (Ap-Horizon) consisted of a layer of dark brown (10YR 3/3) silty fine to medium sand that reached from the ground surface to 26 cmbs (0 to 10 inbs). It was underlain by the B1-Horizon, a subsoil deposit of brownish yellow (10YR 6/6) loamy silt that extended from 26 to 57 cmbs (10 to 22 inbs). Finally, the glacially derived C-Horizon, was excavated to a depth of 67 cmbs (26 inbs) and was classified as a deposit of light yellowish brown (2.5Y 6/4) silty coarse sand with gravel.

The single bottle glass shard collected from Locus 15-1 represented typical historic field scatter. This artifact was not associated with any architectural remains or evidence of historic period cultural features. As a result, it was determined that Locus 15-1 did not possess research potential and/or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended.

Area 16

Area 16 consisted of a large agricultural field located near the center of the Development Area (Figure 18). The field was bordered by a dirt road that wrapped around the east, north, and west sides. The wooded area to the south of the field was poorly drained and contained a pond. Directly to the west was an existing playground/soccer field. Area 16 was marked undulating topography characterized by low areas with poor drainage and higher areas with better drainage (Figure 50). The topography of this area varied from approximately 45.7 to 48.7 m (150 to 160) NGVD and local soils belonged to the Sudbury, Hinckley, and Windsor series. A total of 254 shovel tests were excavated throughout this area during the Phase IB survey (Figure 51). The field effort resulted in the identification of a five loci. They were designated as Loci 16-1 through 16-5.

Locus 16-1

Locus 16-1, which was situated at an approximate elevation of 47 m (154 ft) NGVD, was identified within the southwestern portion of Area 16 (Figure 51). This locus yielded 1 piece of brick, 2 bottle glass shards, and a mule shoe, all of which were collected from the plowzone deposit within Shovel Test 4 along Survey Transect 20. The locus was described as circular in configuration and it encompassed an area that measured approximately 1 x 1 m (3 x 3 ft) in size. The positive shovel test excavated within the Locus 16-1 area extended to a depth of 105 cmbs (41 inbs) and exhibited four soil horizons in profile. The plowzone (Ap-Horizon) was characterized as a deposit of dark brown (10YR 3/3) fine sandy loam that reached from 0 to 27 cmbs (0 to 11 inbs). The underlying soil horizon consisted of a layer of very dark brown (10YR 2/2) loam that ranged in depth from 27 to 40 cmbs (11 to 16 inbs). The next soil horizon was described as a disturbed layer of very dark gray (10YR 3/1) silt mottled with a dark yellowish brown (10YR 3/6) silt and a brownish yellow (10YR 6/6) silt; it ranged in depth from 40 to 91 cmbs (16 to 36 inbs). Finally, the glacially derived C-Horizon extended from 91 to 105 cmbs (36 to 41 inbs) and was classified as a layer of light olive brown (2.5Y 5/4) very fine sand. The soil profile noted within the confines of Locus 16-1 exhibited evidence of disturbance.

Based on the recovered archaeological data, it has been determined that Locus 16-1 was represented by historic artifacts that were consistent with typical nineteenth through early twentieth century field scatter that was not associated with any structural remains. The locus, which was disturbed, lacked evidence of substantial archaeological deposits and/or cultural features. Since substantial number of artifacts were not found in this area and evidence of soil disturbance was present, it was determined that Locus 16-1 did not possess research potential and/or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of Locus 16-1 was recommended.

Locus 16-2

Locus 16-2, which yielded a single blue decorated pearlware sherd from the plowzone [Ap-Horizon], was identified within the southwestern portion of Area 16 during the excavation of Shovel Test 8 along Survey Transect 16 (Figure 51). This locus was positioned at an approximate elevation of 47 m (154 ft) NGVD within what was a plowed agricultural field at the time of survey. Locus 16-2 also was described as circular in configuration and it encompassed an area that measured approximately 1 x 1 m (3 x 3 ft) in size. The positive shovel test excavated within locus extended to a depth of 55 cmbs (22 inbs) and it exhibited three soil horizons in profile. The plowzone (Ap-Horizon) was characterized as a deposit of very dark grayish brown (10YR 3/2) silty loam that extended from 0 to 31 cmbs (0 to 12 inbs). It was underlain by the subsoil (B1-Horizon), which ranged in depth from 31 to 40 cmbs (12 to 16 inbs) and was described as a deposit of light olive brown (2.5Y 5/6) fine to medium sand. Finally, the glacially derived C-Horizon was penetrated to a depth of 55 cmbs (22 inbs); it consisted of a layer of light yellowish brown (2.5Y 6/4) coarse sand.

Data collected from Locus 16-2 indicated that the archaeological deposits there were represented by historic artifacts typical of late eighteenth to early nineteenth century field scatter or incidental loss. Locus 16-2 lacked evidence of substantial numbers of artifacts and/or cultural features. Thus, it was determined that Locus 16-2 did not possess research potential or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended prior to construction of the proposed solar facility.

Locus 16-3

Locus 16-3 yielded historic ceramic sherds from Shovel Test 14 along Survey Transect 12 and Shovel Test 15 along Survey Transect 16, respectively (Figure 51). The locus was identified within a plowed field at an approximate elevation of 47 m (154 ft) NGVD. It is described as ovoid in configuration and encompassed an area approximately 10 x 40 m (33 x 131 ft) in size. Archaeological material collected from Locus 16-3 consists of 1 redware ceramic sherd with a white slip and a single Rockingham ware ceramic sherd. Both of these artifacts were recovered from the plowzone (Ap-Horizon) within the northern part of Area 16.

A typical shovel test excavated within the Locus 16-3 extended to a depth of 73 cmbs (29 inbs) and exhibited four soil horizons in profile. The plowzone (Ap-Horizon) consisted of a deposit of very dark grayish brown (10YR 3/2) silty loam that reached from the ground surface to 27 cmbs (0 to 11 inbs). It was underlain by the B1-Horizon (subsoil), which consists of a deposit of olive yellow (2.5Y 6/6) fine to medium sand that ranged in depth from 27 to 47 cmbs (11 to 19 inbs). The B2-Horizon (lower subsoil) was classified as a layer of light yellowish brown (2.5Y 6/4) silty very fine sand that reached from 47 to 60 cmbs (19 to 24 inbs). Finally, the glacially derived C-Horizon, was excavated to a maximum depth of 73 cmbs (24 to 29 inbs) and consisted a layer of light brownish gray (2.5Y 6/2) very fine sand.

The archaeological data recovered from the Locus 16-3 area indicated that the archaeological deposits identified there most likely represented historic field scatter. The collected artifacts date from post 1830, as this was when Rockingham ware came into common usage. Despite pedestrian survey and shovel testing of the area, no historic architectural remains or other subsurface historic features were identified during the Phase IB survey. Thus, the results of the archaeological examination indicated that Locus 16-3 lacked substantial archaeological deposits and research potential. As a result, Locus 16-3 was assessed as not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended.

Locus 16-4

Locus 16-4 yielded 3 pearlware sherds from the plowzone and 3 quartzite flakes from the subsoil. The pearlware sherds were recovered from Shovel Test 11 along Survey Transect 28 and Shovel Test 3 along Survey Transect 34, while the quartzite flakes were recovered from Shovel Test 8 along Survey Transect 32 (Figure 51). Locus 16-4 was situated within the southeastern portion of Area 16 and approximately 60 m (197 ft) to the west of barn foundations associated with the former Mowrey Farmstead that were identified during the previously completed Phase IA survey of the Study Area (Heritage Consultants, LLC 2017). The foundations were identified in the tree line along the southeastern margin of Area 16 and were excluded from potential impacts by the proposed construction. Situated at an approximate elevation of 49 m (161 ft) NGVD, Locus 16-4 was characterized by a plowed agricultural field at the time of survey. It was described as ovoid in configuration and it encompassed an area that measured approximately 10 x 70 m (33 x 230 ft) in size.

A typical shovel test excavated within Locus 16-4 extended to a depth of 98 cmbs (39 inbs) and exhibited four soil horizons in profile. The uppermost soil horizon, which was identified as a plowzone (Ap-

Horizon) deposit of very dark grayish brown (10YR 3/2) fine to medium sandy silt, extended from 0 to 39 cmbs (0 to 15 inbs). It was underlain by the B1-Horizon ([subsoil), which was characterized as a layer of yellowish brown (10YR 5/6) silty fine to medium sand that continued from 39 to 64 cmbs (15 to 25 inbs). The B2-Horizon (subsoil) was described as a layer of light olive brown (2.5Y 5/6) sand that ranged in depth from 64 to 87 cmbs (25 to 34 inbs). Finally, the glacially derived C-Horizon, reached from 87 to 98 cmbs (34 to 39 inbs) and was classified as a layer of light gray (2.5Y 7/2) very fine sand.

As mentioned above, Locus 16-4 yielded both prehistoric and historic period artifacts. The prehistoric component of Locus 16-4 included 3 quartzite secondary thinning flakes that were recovered from intact subsoil contexts at depths ranging from 40 to 80 cmbs (16 to 32 inbs). Despite delineation shovel testing throughout the locus area, no additional prehistoric artifacts or evidence of prehistoric cultural features was identified during the Phase IB survey of this area. It was determined that the prehistoric component of Locus 16-4 lacked substantial deposits and research potential. It was assessed as not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of the prehistoric component of Locus 16-4 was recommended. In addition, the historic period component of Locus 16-4 yielded three late eighteenth to early nineteenth century artifacts that were interpreted as historic field scatter. This component of Locus 16-4 also lacked substantial archaeological deposits and evidence of historic features or architectural remains. Thus, it was assessed as not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of either component of Locus 16-4 was recommended.

Locus 16-5

Locus 16-5 was identified within the southern portion of Area 16 at an approximate elevation of 48 m (157.5 ft) NGVD (Figure 51). This area also was situated within a plowed agricultural field at the time of survey. Described as ovoid in configuration and encompassing an area that measured approximately 10 x 30 m (33 x 98 ft) in size, Locus 16-5 produced two historic period artifacts from Shovel Tests 2 and 3 along Survey Transect 28. These included a single wire nail that was recovered from the plowzone at a depth of 10 to 20 cmbs (4 to 8 inbs) and 1 plain whiteware sherd that was found at a depth of 20 to 30 cmbs (8 to 12 inbs); it originated from the disturbed plowzone.

A typical shovel test excavated within the Locus 16-5 area extended to a depth of 67 cmbs (26 inbs) and exhibited three soil horizons in profile. The plowzone deposit (Ap-Horizon) consisted of a dark brown (10YR 3/3) silty fine to medium sand that reached from the ground surface to 23 cmbs (0 to 9 inbs). The subsoil (B1-Horizon) was classified as a layer of light olive brown (2.5Y 5/6) sand mixed with minor amounts of gravel; it ranged in depth from 23 to 43 cmbs (9 to 17 inbs). Finally, the glacially derived C-Horizon, reached from 43 to 67 cmbs (17 to 26 inbs) and was described as a layer of light brownish gray (2.5Y 6/2) coarse sand.

The archaeological data recovered from the Locus 16-5 area indicated that the archaeological deposits identified there represented historic period field scatter. The recovered whiteware sherd dated from post 1820, while the wire nails date from after ca., 1860. Despite pedestrian survey and delineation shovel testing of the area, no historic architectural remains or subsurface features were identified during Phase IB survey. Thus, the results of the archaeological examination indicate that Locus 16-5 lacked evidence of substantial archaeological deposits and research potential. As a result, it was assessed as not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended.

Area 17

Area 17 consisted of an agricultural field located within the northernmost limits of the Development Area. It was bounded to the east by Allen Hill Road and to the south by Rukstella Road (Figure 18). A low-lying, poorly drained area containing a small pond was situated to the west, and the northern edge of the Development Area coincided with the northern edge of the survey area. Area 17 was characterized by undulating topography that contained low areas with poor drainage and higher areas with better drainage (Figure 52). Topography in this area varied from approximately 70.1 to 82.3 m (230 to 270 ft) NGVD. Soils in this area belonged to the Woodbridge, Sutton, and Paxton and Montauk series. A total of 116 shovel tests were excavated throughout Area 17 during the Phase IB survey (Figure 53). The field effort in this area resulted in the identification of Locus 17-1; it is described below.

Locus 17-1

Locus 17-1 was recorded within the southeastern portion of Area 17 at an approximate elevation of 83 m (272 ft) NGVD. At the time of survey, this area was characterized by a plowed agricultural field (Figure 53). Locus 17-1 was described as ovoid in configuration and it encompassed an area that measured approximately 75 x 15 m (246 x 49 ft) in size (Figure 55). Archaeological examination of this area resulted in the identification of both prehistoric and historic artifacts. The prehistoric artifacts consisted of 1 quartzite secondary thinning flake that was recovered from the plowzone (A-Horizon) and 1 quartz secondary thinning flake that originated from the subsoil (B1-Horizon). The historic period archaeological material collected from Locus 17-1 included a single wire nail and 1 screw, both of which were recovered from the B1-Horizon (subsoil) at depths ranging from 20 to 40 cmbs (8 to 16 inbs). The above-referenced archaeological material was collected from Shovel Tests 1, 1, 3, and 2 along Survey Transects 2, 10, 12, and 16, respectively.

A typical shovel test excavated within the Locus 17-1 area extended to a depth of 70 cmbs (28 inbs) and exhibited three soil horizons in profile. The plowzone deposit (Ap-Horizon) was described as a layer of dark brown (10YR 3/3) fine sandy silt; it extended from the ground surface to 46 cmbs (0 to 18 inbs). It was underlain by the B1-Horizon (subsoil), which was classified as a deposit of yellowish brown (10YR 5/6) silty sand that continued from 46 to 59 cmbs (18 to 23 inbs). Finally, the glacially derived C-Horizon, reached from 59 to 70 cmbs (23 to 28 inbs) and was described as a layer of olive brown (2.5Y 4/4) silty sand.

As referenced above, the Locus 17-1 area contained both prehistoric and historic period components. The former was represented by two lithic artifacts, one of which was recovered from the disturbed plowzone, while the other originated from subsoil contexts. Despite the excavation of delineation shovel tests throughout the Locus 17-1 area, no additional prehistoric artifacts or evidence of prehistoric cultural features was identified. Thus, it was determined that the prehistoric component of Locus 17-1 did not possess research potential or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). In addition, the historic period component was represented by two metal fasteners, both of which originated from subsoil contexts. No other historic period archaeological material or evidence of historic cultural features were found within the Locus 17-1 area despite delineation shovel testing. Thus, the historic period component of Locus 17-1 also was assessed as not eligible for listing to the NRHP criteria for evaluation applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended prior to construction of the proposed solar facility.

Area 18

Area 18 was situated within a large agricultural field in the southeast portion of the Development Area. The field was bordered to the west by Liepis Road and to the south by Wauregan Road. Survey Area 12

was located to the northeast. Area 18 also was characterized by undulating topography that contained low areas with poor drainage and higher areas with better drainage (Figure 18). The topography in this survey area varied from approximately 70.1 to 79.2 m (230 to 260 ft) NGVD (Figure 54). Soils in this area belonged to the Woodbridge, Hinckley, Ninigret, and Paxton and Montauk series. A total of 163 shovel tests were excavated throughout Area 18 during the Phase IB survey, resulting in the identification of two loci. They were designated as Locus 18-1 and Locus 18-2 (Figure 55).

Locus 18-1

Locus 18-1 yielded of a single sherd of Rockingham ware that was recovered from the plowzone (Ap-Horizon) during the excavation of Shovel Test 3 along Survey Transect 12 (Figure 55). Situated at an approximate elevation of 74 m (242ft) NGVD, this locus was identified to the north of Liepis Road. Locus 18-1 was described as circular in configuration and it encompassed an area that measured approximately 1 x 1 m (3 x 3 ft) in size. The positive shovel test excavated within the Locus 18-1 area extended to a depth of 51 cmbs (20 inbs) and it exhibited three soil horizons in profile. The Ap-Horizon (plowzone) was described as a layer of brown (10YR 4/3) silty loam that reached from the ground surface to 25 cmbs (0 to 10 inbs). Underlying the Ap-Horizon was the B1-Horizon, which consisted of a subsoil deposit of yellowish brown (10YR 5/6) silty loam that continued from 25 to 45 cmbs (10 to 18 inbs). Finally, the glacially derived C-Horizon, ranged in depth from 45 to 51 cmbs (18 to 20 inbs); it was classified as a layer of gray (2.5Y 7/1) silty clay.

As mentioned above, Locus 18-1 produced a single sherd of Rockingham ware, which was recovered from the plowzone at depths of 10 to 20 cmbs (3.9 to 7.9 inbs). This artifact represented typical of nineteenth to twentieth century field scatter. The locus lacked evidence of substantial archaeological deposits and cultural features. As a result, it was determined that Locus 18-1 did not possess research potential or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended.

Locus 18-2

Locus 18-2 was identified during the excavation of Shovel Tests 16 and 14 along Survey Transects 8 and 14, respectively (Figure 55). It was situated within the northern portion of Area 18 and it yielded a single machine-cut nail and 1 plain whiteware sherd, both of which were recovered from the plowzone (Ap-Horizon). Locus 18-2 was described as ovoid in configuration and it encompassed an area that measured approximately 30 x 60 m (98 x 196 ft) in size. A typical shovel test excavated within Locus 18-2 extended to a maximum excavated depth of 60 cmbs (24 inbs) and exhibited three soil horizons in profile. The plowzone (Ap-Horizon) consisted of a deposit of dark brown (10YR 3/3) silty fine sand that reached from 0 to 22 cmbs (0 to 9 inbs). The underlying B1-Horizon (subsoil), which was described as a deposit of yellowish brown (10YR 5/6) fine sandy silt, spanned from 22 to 49 cmbs (9 to 19 inbs). Finally, the glacially derived C-Horizon was excavated to a maximum depth of 60 cmbs (19 to 24 inbs) and was classified as a layer of gray (2.5Y 7/1) silty fine sand.

Locus 18-2 was represented by two historic artifacts that were considered typical of nineteenth century field scatter. They included 1 machine-cut nail and 1 whiteware sherd, both of which were recovered from the plowzone (Ap-Horizon) between 10 to 30 cmbs (3.9 to 11.8 inbs). It was determined that this locus did not contain evidence of substantial archaeological deposits and cultural features. It was assessed as not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended.

Area 19

Area 19 was characterized by an agricultural field that was located to the west of Area 18. The field was bounded to the south and east by private residences and to the north and west by a poorly drained wooded area (Figure 18). Area 19 was characterized by undulating topography that contained low areas with poor drainage and higher areas with better drainage (Figure 56). Topography in this area varied from approximately 73.1 to 76.2 m (240 to 250 ft) NGVD. Soils within Area 19 belonged to the Woodbridge and Charlton/Chatfield series. A total of 48 shovel tests were excavated throughout this area during the Phase IB survey (Figure 57). This resulted in the identification of two loci. They were designated as Loci 19-1 and 19-2.

Locus 19-1

Locus 19-1, which yielded a single piece of ferrous metal that originated from the plowzone (Ap-Horizon), was identified in the eastern portion of Area 19 during the excavation of Shovel Test 3 along Survey Transect 16 (Figure 57). This locus was identified at an approximate elevation of 75 m (246 ft) NGVD and it was described as circular in configuration, encompassing an area that measured approximately 1 x 1 m (3 x 3 ft) in size. The positive shovel test excavated within the Locus 19-1 area extended to a depth of 56 cmbs (22 inbs) and it exhibited three soil horizons in profile. The plowzone (Ap-Horizon) was classified as a deposit of dark brown (10YR 3/3) very fine sandy silt that reached from the ground surface to 24 cmbs (0 to 9 inbs). It was underlain by the subsoil (B1-Horizon), a deposit of yellowish brown (10YR 5/8) silty fine sand that ranged in depth from 24 to 45 cmbs (9 to 18 inbs). Finally, the glacially derived C-Horizon reached from 45 to 56 cmbs (18 to 22 inbs) and was classified as a layer of light brownish gray (2.5Y 7/2) silty fine sand.

The single artifact recovered from the Locus 19-1 area represented typical field scatter that was not temporally diagnostic. As a result, it was determined that this locus did not possess research potential or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of Locus 19-2 was recommended.

Locus 19-2

Locus 19-2, which produced a single sherd of plain lead-glazed whiteware from the plowzone (Ap-Horizon), was identified in the southern portion of Area 19 during the excavation of Shovel Test 3 along Survey Transect 8 (Figure 57). This find spot was identified at an approximate elevation of 79 m (259 ft) NGVD. It was described as circular in configuration and encompassed an area that measured approximately 1 x 1 m (3 x 3 ft) in size. Reaching to a maximum excavated depth of 54 cmbs (21 inbs), the positive shovel test excavated within Locus 19-2 exhibited three soil horizons in profile. The plowzone (Ap-Horizon) was described as a layer of dark brown (10YR 3/3) silty fine sand mixed with gravel that extended from the surface to 22 cmbs (0 to 9 inbs). The underlying subsoil (B1-Horizon) consisted of a deposit of yellowish brown (10YR 5/6) silty fine sand with some gravel; it continued from 22 to 33 cmbs (9 to 13 inbs). Finally, the glacially derived C-Horizon, was excavated to a depth of 54 cmbs (13 to 21 inbs) and was classified as a layer of light brownish gray (2.5Y 7/2) fine sandy silt with some gravel.

The single historic artifact recovered from Locus 19-2 dated from post 1820 and it represented typical historic field scatter. As a result, it was determined that Locus 19-2 did not possess research potential or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended.

Area 20

At the time of the Phase IB survey, Area 20 consisted of a soccer field that was bounded on all sides by a perimeter fence (Figure 18). The field also was bordered by Area 2 to the south, Area 3 to the north, and a steep drop down to Blackwell Brook drainage to the west. To the east, a dirt road separated the soccer field from the large agricultural field that was Area 16. The topography in this area was level and situated at 48.7 m (160 ft) NGVD. Soils in this area belonged to the Windsor series (Figure 58). A total of 74 shovel tests were excavated throughout Area 20 during the Phase IB survey (Figure 59). The field effort resulted in the identification of two loci designated as Loci 20-1 and 20-2.

Locus 20-1

Locus 20-1, which consisted of a multicomponent deposit, yielded 2 chert secondary thinning flakes, 1 refined earthenware sherd, and 1 yellowware sherd, all of which were recovered from the plowzone (Ap-Horizon). The 2 chert secondary thinning flakes were identified during the excavation of Shovel Test 7 along Survey Transect 2, while both of the historic artifacts were recovered from Shovel Test 6 along Survey Transect 4 (Figure 59). Locus 20-1 was identified in the northwestern portion of Area 20 and was situated at an approximate elevation of 47 m (154 ft) NGVD. It was described as ovoid in configuration and it encompassed an area that measured approximately 10 x 30 m (32 x 98 ft) in size. Despite delineation shovel testing throughout this area, no additional artifacts or evidence of cultural features were recovered from Locus 20-1.

A typical shovel test excavated within the confines of Locus 20-1 extended to a depth of 74 cmbs (29 inbs) and it exhibited two soil horizons in profile. The plowzone (Ap-Horizon) was classified as a deposit of brown (10YR 4/3) very fine sandy silt that extended from the ground surface to 26 cmbs (0 to 10 inbs). The glacially C-Horizon, reached from 26 to 74 cmbs (10 to 29 inbs); it was classified as a layer of light olive brown (2.5Y 5/4) silty very fine sand. The soil profile noted within the confines of Locus 20-1 exhibited evidence of disturbance associated with the past plowing of the field. The B-Horizon (subsoils) has been fully incorporated into the plowzone so that the plowzone (Ap-Horizon) was identified directly above the C-Horizon.

The 2 chert secondary thinning flakes recovered from Locus 20-1 have been displaced from their original depositional context, as they were recovered from the plowzone from between 0 to 30 cmbs and directly above the C-Horizon. Further, the chert secondary thinning flakes were not temporally diagnostic. The prehistoric component of Locus 20-1 lacked substantial archaeological deposits and research potential. The historic artifacts recovered from this locus were recovered from the plowzone between 10 to 20 cmbs (4 to 8 inbs); they represented typical nineteenth to early twentieth century field scatter and were not associated with any architectural remains. The historic period component of Locus 20-1 also lacked evidence of substantial archaeological deposits or research potential. As a result, it was determined that both the prehistoric and historic period components of Locus 20-1 did not possess qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended.

Locus 20-2

Locus 20-2, which also consisted of a multi-component archaeological deposit, yielded a single piece of quartz shatter, 1 clam shell fragment, and 1 pearlware sherd, all of which were recovered from the plowzone (Ap-Horizon). These artifacts were collected during the excavation of Shovel Tests 4, 3, and 3 along Survey Transects 10, 14, and 18 respectively, in the eastern portion of Area 20 (Figure 59). Situated at an approximate elevation of 48 m (157 ft) NGVD, this locus was described as ovoid in configuration and it encompassed an area that measured approximately 15 x 60 m (49 x 196 ft) in size. A

typical shovel test excavated in the Locus 20-2 area extended to a depth of 70 cmbs (28 inbs) and it exhibited four soil horizons in profile. The plowzone (Ap-Horizon) was described as a deposit of dark brown (10YR 3/3) very fine sandy silt that extended from the 0 to 30 cmbs (0 to 12 inbs). The underlying subsoil (B1-Horizon) was a deposit of yellowish brown (10YR 5/6) very fine sandy silt that continued from 30 to 44 cmbs (12 to 17 inbs). The B2-Horizon (subsoil) was classified as a layer of light olive brown (2.5Y 5/4) silty very fine sand that reached from 44 to 60 cmbs (17 to 24 inbs). Finally, the glacially derived C-Horizon was excavated to a maximum depth of 60 to 70 cmbs (24 to 28 inbs) and was described as a layer of pale brown (2.5Y 7/4) fine sand.

The single piece of quartz shatter was recovered from the plowzone (Ap-Horizon) between 0 to 10 cmbs (0 to 4 inbs) and was displaced from its original depositional context. Further, quartz shatter is not temporally diagnostic, which indicated that the prehistoric component of Locus 20-2 could be assigned to any particular prehistoric cultural affiliation or time period. This component of Locus 20-2 lacked substantial archaeological deposits and/or research potential. In addition, the single plain pearlware sherd recovered from the historic period component of Locus 20-2 dated from ca., 1780 to 1830 and was recovered along with the clam shell from the plowzone at a depth of between 20 to 30 cmbs (8 to 12 inbs). Both the shell fragment and the pearlware sherd represented typical field scatter and were not associated with any structural remains. Thus, the historic period component of Locus 20-2 also lacked evidence of substantial archaeological deposits and/or cultural features. It was determined that neither the prehistoric nor the historic period components of Locus 20-2 possessed research potential and/or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended.

Area 21

Area 21 consisted of an open field located on the west side of Liepis Road in Canterbury and opposite Area 18 (Figure 18). Private residential lots located off of Liepis Road separated Area 21 from Survey Area 19 to the north. Area 21 was covered in weeds at the time of Phase IB survey (Figure 60). It was characterized by undulating topography that contained low areas with poor drainage and higher areas with better drainage. The topography throughout this survey area varied from approximately 65.5 to 68.5 (215 to 225 ft) NGVD and soils in this area belonged to the Windsor and the Paxton and Montauk series. A total of 27 shovel tests were excavated throughout this area during the Phase IB survey (Figure 63). The field effort in this area resulted in the identification of a single locus that was designated as Locus 21-1.

Locus 21-1

Locus 21-1 was identified during the excavation of Shovel Test 1 along Survey Transect 8 within the northern portion of Area 21 (Figure 57). Situated at an approximate elevation of 86 m (282 ft) NGVD, this locus was characterized by a plowed agricultural field at the time of survey. Locus 21-1 yielded a single kaolin pipe stem fragment from the plowzone (Ap-Horizon) and was described as circular in configuration; it encompassed an area that measured approximately 1 x 1 m (3 x 3 ft) in size. The positive shovel test excavated within Locus 21-1 extended to a depth of 78 cmbs (31 inbs) and exhibited three soil horizons in profile. The plowzone (Ap-Horizon) was described as a deposit of dark brown (10YR 3/3) fine sandy silt with gravel that reached from the ground surface to 19 cmbs (0 to 8 inbs). It was underlain by the subsoil (B1-Horizon), which was characterized by a deposit of yellowish brown (10YR 5/8) fine sandy silt that ranged in depth from 19 to 64 cmbs (8 to 25 inbs). Finally, the glacially derived C-Horizon was excavated to a maximum depth of 78 cmbs (31 inbs) and was classified as a layer of light yellowish brown (2.5Y 6/3) silty fine to medium compact sand.

The kaolin pipe stem fragment recovered from the Locus 21-1 area represented typical nineteenth century field scatter. As a result, it was determined that Locus 21-1 did not possess research potential and/or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended.

Area 22

Area 22 was situated in the southeastern portion of the Development Area (Figure 18). It consisted of a plowed agricultural field situated north of a sand/gravel operation and east of Wauregan Road in the town of Canterbury (Figures 61 and 62). Area 22, which encompassed approximately 35.8 acres, was situated on land that was generally flat with topography that varied from 61 to 65.5 m (200 to 215 ft) NVGD. The nearest source of freshwater was a wetland situated approximately 250 m (820 ft) to the southwest. Much of the project area around Area 22 had been previously impacted by sand and gravel quarry operations (Figure 63). However, the agricultural field in the northern portion of Area 22 appeared to be relatively intact at the time of the survey (Figure 64). A total of 46 shovel tests were excavated throughout this area during the Phase IB survey (Figure 65). The shovel tests excavated within Area 22 extended to a depth of 75 cmbs (30 inbs) and exhibited three soil horizons in profile. The plowzone (Ap-Horizon) was 10 as a deposit of dark brown (10YR 3/3) sandy silt that reached from the ground surface to 25 cmbs (0 to 8 inbs). It was underlain by the subsoil (B1-Horizon), which was characterized by a deposit of yellowish brown (10YR 5/6) sandy silt that ranged in depth from 25 to 65 cmbs (10 to 26 inbs). Finally, the glacially derived C-Horizon was excavated to a maximum depth of 75 cmbs (30 inbs) and was classified as a layer of light yellowish brown (2.5Y 6/3) fine to medium mixed with gravel. The shovel tests excavated throughout Area 22 failed to produce any prehistoric or historic period artifacts or evidence of cultural features. No additional archaeological examination of this area was recommended.

Area 23

Area 23 was located in the northern portion of the Development Area, just north of Rukstella Road and to the west side of Allen Hill Road (Figure 18). The area consisted of a grassy field at the time of survey. It contained the former Rukstella Farmstead, which was characterized by a well, the location of a former farmhouse, a barn foundation, and two concrete silos; the latter remained on the northern edge of Area 23 (Figures 64 and 65). Area 23 contained topography that varied from approximately 82.3 to 85.3 m (270 to 280 ft) NGVD. Soils in this area belonged to the Woodbridge and Paxton & Montauk series, sandy loams found on areas with slopes of 0 to 8 percent. A total of 32 shovel tests were excavated throughout this area during the Phase IB survey (Table 1) (Figure 66). The field effort resulted in the identification of a single historic period locus. It was designated as Locus 23-1.

Locus 23-1

Phase IB survey of Locus 23-1, which corresponded to the former location of the Rukstella Farmstead, yielded an assemblage of modern/historic artifacts consisting of ceramic sherds, brick fragments, unidentified pieces of metal, and an assortment of modern trash that included plastic, bottle glass, rubber fragments. Of the 32 test pits excavated, over 20 contained disturbed soil profiles. The disturbance, which consisted of mottled soils, was most likely related to the construction and later razing of structures associated with the nineteenth century Rukstella Farmstead. A typical shovel test profile exhibited three soil horizons in profile and extended to a depth of 66 cmbs (25.9 ins). The topsoil layer (A-Horizon) was encountered between 0 to 29 cmbs (0 to 11.4 inbs) and consisted of a deposit of dark brown (10YR 3/3) silty fine sand. The underlying subsoil layer (B1-Horizon) was encountered between 29 and 55 cmbs (11.4 to 23.2 inbs); it was described as a layer of dark yellowish brown (10 YR 4/6) silty medium sand mottled with dark brown (10YR 3/3) loamy sand. The glacially derived C-Horizon was

encountered at 55 cmbs (23.2 inbs) and excavated to 66 cmbs (25.9 inbs); it was classified as a deposit of light gray fine to medium sand with trace amounts of gravel.

The archaeological material recovered during Phase IB survey of Area 23 included examples of clear glazed redware sherds, clear bottle glass shards, bottle caps, unidentified iron fragments, an iron spike, .22 caliber bullet casings, brick fragments, pieces of rubber, plastic fragments, and asphalt shingles. These items were recovered from disturbed soil contexts. Pedestrian survey of Area 23 also resulted in the identification of two concrete silos, a three-sided barn foundation made of Portland cement, a well, and a stone retaining wall (Figures 64 and 65). The silos were identified in the northern portion of Area 23 and were in a very poor state of repair at the time of survey. The identified barn foundation, which was covered in vegetation, consisted of Portland cement and dated from the twentieth century. The well, which was located in the southern portion of Area 23 and near Rukstella Road, was a stone feature that had been modified in the twentieth century to contain a steel liner. Finally, the stone retaining walls were located in the southwestern portion of Areas 23 and consisted of large cut stones piled in several courses. The retaining wall appeared to have been used to level out the location of the former Rukstella House; however, pedestrian survey and shovel testing in this area failed to result in the identification of the former house foundation. It is possible that the house was razed and the foundation stones were transported elsewhere and re-used.

Despite shovel testing throughout the area containing Locus 23-1, no evidence of intact archaeological deposits were identified. It was determined that Locus 23-1 did not possess research potential and/or the qualities of significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this locus was recommended.

Area 24

Area 24 was situated in the northern portion of the Development Area and approximately 200 m (656 ft) to the west of the intersection of Allen Hill Road and Rukstella Road (Figure 18). This survey area was bordered by Rukstella Road and Area 17 to the north, as well as Area 8 to the south (Figure 67). At the time of survey, it consisted of a fallow agricultural field. Area 24 contained topography that varied from approximately 79.2 to 82.3 m (260 to 270 ft) NGVD. Soils in this area belonged to the Paxton & Montauk soil series, sandy loams found on areas with slopes of 0 to 8 percent. A total of 20 shovel tests were excavated throughout Area 24 (Table 1; Figure 68). Completion of the subsurface testing resulted in the collection of a single prehistoric artifact, which was designated as Locus 24-1.

Locus 24-1

As mentioned above, Phase IB survey of Area 24 resulted in the identification of a single prehistoric artifact. This artifact, a chert secondary thinning flake, was recovered from the B1-Horizon (subsoil) at a depth of 40 to 50 cmbs (16 to 2 inbs). The location of the findspot, which was recorded along the northern edge of a large agricultural field, was situated at an approximate elevation of 81 m (265 ft) NGVD (Figure 67). The locus area was described as circular in configuration and encompassed an area measuring 1 x 1 m (3.3 x 3.3 ft) in area (Figure 68). A typical shovel test excavated within Locus 24-1 exhibited four soil horizons in profile and extended to a depth of 75 cmbs (29.5 inbs). The Ap-Horizon (plowzone) was encountered between 0 and 30 cmbs (0 and 11.8 inbs) and was described as a layer of dark brown (10YR 3/3) silty loam. The underlying subsoil layer (B1-Horizon) spanned from 30 to 40 cmbs (11.8 to 15.7 inbs) and consisted of a layer of yellowish brown (10YR 5/6) silty loam. A second subsoil layer (B2-Horizon) ranged in depth from 40 to 65 cmbs (15.7 to 25.5 inbs) and was described as a layer of dark yellowish brown silty loam. Finally, the C-Horizon was encountered between 65 and 75 cmbs (25.5 to 29.5 inbs) and consisted of a deposit of pale brown (10YR 6/3) medium sandy silt.

The archaeological data recovered from Locus 24 indicates that the area lacked substantial numbers of artifacts, evidence of associated cultural features, and research potential. Thus, Locus 24-1 was assessed as not significant applying the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of Locus 24-1 was recommended.

Area 25

Area 25 is located in the northwest corner of the proposed Study Area (Figure 18). This area is bordered by woods to the north and west, as well as an agricultural field comprising Area 15 to the south and east. The wooded area contains Cold Spring Brook, which runs in a north to south direction along the western edge of the agricultural field. This area contains 1.8 acres of land with topography that varies from approximately 39.5 to 45.7 m (130 to 150 ft) NGVD. At the time of the survey, this area consisted of a fallow agricultural field (Figure 69). A total of 68 tests were excavated through Area 25 (Figure 70). The shovel tests excavated throughout this area contained intact strata associated with the Windsor and Hinckley soil series, both of which are characterized by loamy sands. The Phase IB survey of this area resulted in the identification of Locus 25-1 (Figure 3). Locus 25-1 was determined to coincide with a previously identified prehistoric archaeological site, State of Connecticut Site Number Site 19-8. The Phase IB survey results of the Site 19-8 (Locus 25-1) area are described below.

Site 19-8 (Locus 25-1)

As mentioned in Chapter V of this report, Site 19-8 was identified during 1983 by Public Archaeology Survey Team, Inc., (PAST) during a previously proposed roadway bypass that was never constructed. PAST indicated that the site area yielded stone tool manufacturing debris and formal tools indicative of two separate prehistoric occupations, one dating from the Late Archaic period (ca., 6,000 to 3,900 B.P.) and one dating from the Late Woodland period (ca., 1,200 to 450 BP). During the Phase IB survey for the proposed Quinebaug Solar Project, Heritage field personnel re-identified and sampled the site area using 68 shovel tests (Figure 70). This resulted in the recovery of numerous prehistoric artifacts. Prehistoric archaeological material collected from the plowzone (Ap-Horizon) of Locus 25-1 consisted of 5 chert secondary thinning flakes, 5 quartz secondary thinning flakes, 1 piece of quartz primary reduction shatter (with cortex), 1 piece of quartz shatter, and 2 rhyolite secondary thinning flakes. The underlying B1-Horizon (subsoil) yielded a single clear bottle glass shard, 1 argillite biface, 2 chert secondary thinning flakes, 9 quartz secondary thinning flakes, 1 quartz primary reduction flake (with cortex), 3 pieces of quartz shatter, 9 quartzite secondary thinning flake, 1 quartzite primary reduction flake (with cortex), a quartzite Neville projectile point base, and 2 rhyolite secondary thinning flakes. The clear bottle glass shard appeared to represent an infiltrated find in this soil horizon. In addition, the B2-Horizon (subsoil) yielded 1 quartz secondary thinning flake, 1 piece of quartz shatter, and 1 quartzite secondary thinning flake. Finally, pedestrian survey of the site area resulted in the collection of 1 quartzite secondary thinning flake.

A typical shovel test excavated within the Site 19-8 (Locus 25-1) area exhibited four soil horizons and extended to a maximum depth of 85 cmbs (29.5 inbs). The Ap-Horizon (plowzone) was encountered between 0 and 25 cmbs (0 and 11.8 inbs) and it was described as a layer of dark brown (10YR 3/3) silt loam. The underlying subsoil layer (B1-Horizon) was recorded between 25 and 50 cmbs (11.8 to 17.7 inbs) and it consisted of a deposit of dark yellowish brown (10YR 4/6) silty loam. A second subsoil layer (B2-Horizon) ranged in depth from 50 to 75 cmbs (17.7 to 22.4 inbs); it was and described as a layer of yellowish brown (10YR 5/6) silty loam. Finally, the glacially derived C-Horizon extended from 75 to 85 cmbs (25.5 to 29.5 inbs) and consisted of a deposit of light gray (10YR 7/2) very fine sand. Excavation of

the shovel tests within Site 19-8 (Locus 25-1) resulted in the re-identification of a single archaeological site known as Site 19-8 (Locus 25-1).

In sum, the Phase IB survey of Site 19-8 (Locus 25-1) revealed that it encompassed an area that measured 0.53 acres in size and produced an assemblage of prehistoric Native American stone tool manufacturing debris and formal tool fragments, one of which appeared to the base of a Neville projectile point. This temporally diagnostic artifact suggested a use of the Site 19-8 (Locus 25-1) area during the Middle Archaic period, ca., 8,000 to 6,000 years ago, perhaps as a temporary camp. Thus, a third prehistoric component exists within the site area. Although no cultural features were identified during Phase IB survey of Site 19-8 (Locus 25-1), the presence of prehistoric Native American artifacts in the subsoil (B1 and B2-Horizons) indicated that intact archaeological deposits existed within the site area. As a result, Heritage determined that Site 19-8 (Locus 25-1) was potentially eligible for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). Quinebaug Solar, LLC has indicated to Heritage that the Area 25, and by extension, Site 19-8 (Locus 25-1) will be avoided during construction of the proposed Quinebaug Solar Center, as this area has been removed from the Development Area. However, if construction plans change so that the Site 19-8 (Locus 25-1) area will be impacted by the Quinebaug Solar Center, Heritage recommended Phase II testing and evaluation of the locus area to assess its eligibility for listing on the NRHP.

Phase IB Survey Summary

During the Phase IB survey, the archaeologically sensitive portion of the Quinebaug Solar Project were divided into 25 separate areas to facilitate control during the survey process (Areas 1 through 25) (Figure 18). These 25 areas were subjected to pedestrian survey, photo-documentation, mapping, subsurface testing techniques, and GPS recordation. The latter consisted of a combination of systematic testing by excavating shovel tests at intervals ranging from 7.5 to 30 m (24.6 and 98.4 ft) intervals along survey transects spaced between 7.5 to 30 m (24.6 and 98.4 ft) apart depending upon the size and configuration of the landform that was being investigated. In addition, in areas where systematic testing was not optimal, judgmental shovel testing was employed and the locations of sampling units was selected at the discretion of the field supervisor. The testing Phase IB effort, which entailed the excavation of 2,457 of 2,457 (100 percent) planned shovel tests resulted in the identification and examination of 32 loci (Figure 71).

Of the 32 identified loci, the majority (n=26; 81 percent) contain archaeological deposits that were lacking substantial numbers of artifacts, cultural features, and/or research potential. They consisted of Loci 4-2, 5-1, 7-1, 8-1 through 8-5, 9-1, 13-1, 15-1, 16-1 through 16-5, 17-1, 18-1, 18-2, 19-1, 19-2, 20-1, 20-2, 21-1, 23-1, and 24-1. These loci were assessed as not eligible for listing in the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional examination of these 26 loci was recommended. The remaining six archaeological sites/loci yielded intact archaeological deposits from the prehistoric and/or historic era, including artifacts and features (above and below ground), that appeared to retain research potential. They consisted of Loci 2-1, 4-1, 6-1, 11-1, 12-1, and 25-1. Archaeological deposits at five of these six loci were determined to constitute archaeological sites: Site 22-38 at Locus 2-1, Site 22-36 at Locus 4-1, Site 19-34 at Locus 6-1, Site 19-35 at Locus 11-1, and Site 19-8 Locus 25-1. The archaeological deposits at the sixth locus, Locus 12-1, were determined to not constitute an archaeological site, but this locus contained an upright cut granite stone that represented a relatively rare late eighteenth century boundary marker that established between the Towns of Brooklyn and Canterbury.

According to current project plans, Quinebaug Solar, LLC will avoid Site 22-36 (Locus 4-1), Site 19-34 (Locus 6-1), Locus 12-1, and Site 19-8 (Locus 25-1); thus, no additional archaeological examination of these areas area was recommended. Site 22-38 (Locus 2-1) and Site 19-35 (Locus 11-1), in contrast, were identified within the proposed Development Area. Thus, it was recommended that the Development Area be changed to avoid impacts to these two archaeological sites. If this was not feasible, then Heritage recommended Phase II NRHP testing and evaluation of Site 22-38 (Locus 2-1) and Site 19-35 (Locus 11-1) prior to any construction-related activities associated with the proposed Quinebaug Solar Project.

Stone Wall Segments Examined During Phase IB Survey

Data provided to Heritage by Tighe & Bond indicated that the proposed Study Area contains a total of 11,204.3 linear m (36,759 linear ft) of stone walls. Quinebaug Solar, LLC plans to remove 12 wall segments during construction of the proposed Quinebaug Solar Project (Figure 72; Table 3). Specifically, project plans call for the removal of a total of 904.4 linear m (2967.2 linear ft) of stone walls, in order to provide vehicular access to the various solar arrays and associated facilities for long term maintenance. This amount represents approximately 8.1 percent of the total length of stone walls across the Study Area.

Therefore, in addition to subsurface testing during the Phase IB survey, Heritage was also tasked with the examination of 12 stone wall segments. This included the visual inspection, photo documentation, and description and evaluation of the condition of each stone wall segment. For the purposes of the survey, each segment of wall was assigned a consecutive survey number designation of 1 through 12 (Figure 72). Of the 12 segments to be impacted, three are located within areas where avoidance or extra care is recommended during removal. The three segments located near sensitive archaeological areas are segments 2, 9, and 10. Recommendations for wall removal in these areas are discussed below.

Table 3. Attributes of stone walls to be removed during construction.

Segment Number	Heritage Survey Area/Town	Segment Length	Segment Height/Width	Segment Condition	Segment % of Project Total
1	Segment located in Area 21 Town of Canterbury	64.4 m (211.2 ft)	80 cm (2.6 ft) High by 100 cm (3.2 ft) Wide	Condition is Fair. 4-5 courses of stone. Mix of larger boulders smaller cobbles. Top 1-3 courses have been toppled	0.6
2	Segment located between Area 18 and 12. Partially in Brooklyn and partially in Canterbury.	196.4 m (644.3 ft)	90 cm (2.9 ft) High by 75 cm (2.4 ft) Wide	Condition is fair. 3 Courses of mainly flat angular stones with some large cobbles.	1.8
3	Segment located in Brooklyn and divides Survey Area 8 and Survey Area 12 to the south	251.4 m (824.8 ft)	100 cm (3.2 ft) High by 75 cm (2.4 ft) Wide	Condition good. Wall is largely intact. Up to 8 courses of stone at highest point	2.2
4	Segment borders west edge of Area 12 in Brooklyn	52.9 m (173.5 ft)	100 cm (3.2 ft) High by 50 cm (1.6 ft) Wide	Condition good. 5-6 courses at highest point	0.5
5	Segment borders south edge of	63 m (206.7 ft)	90 cm (2.9 ft) High by	Condition good. 4-5 courses of stone	0.6

	Area 12 in Brooklyn		75 cm (2.4 ft) Wide		
6	Segment located in Area 9	16.2 m (53.1 ft)	60 cm (1.9 ft) High by 75 cm (2.4 ft)	Condition poor. 1-2 courses visible	0.1
7	Segment located in Area 9 in Brooklyn	83.2 m (272.9 ft)	20 cm (0.6 ft) High by 50 cm (1.6 ft) Wide	Condition poor. Wall mostly destroyed. 1-2 courses remain	0.7
8	Segment located in Area 9 in Brooklyn. Perpendicular to Segment 7	23.6 m (77.4 ft)	100 cm (3.2 ft) High by 100 cm (3.2 ft) Wide	Condition fair. Partially intact. Intact portion retains 5-6 courses	0.2
9	Segment located in wooded area between Area 8 and Area 9 in Brooklyn	25.3 m (83 ft)	120 cm (3.9 ft) High by 100 cm (3.2 ft) Wide	Condition good. Located 25 m (82 ft) south of the Bennett/Gallagher/Taylor Cemetery	0.2
10	Segment located in wooded area between Area 8 and Area 9 in Brooklyn	53.6 m (175.8 ft)	90 cm (2.9 ft) High by 100 cm (3.2 ft) Wide	Condition good. Located 63.5 m (208 ft) east of the Bennett/Gallagher/Taylor Cemetery	0.5
11	Segment located along east edge of Area 17. West side of Allen Hill Road, Brooklyn	26.4 m (86.6 ft)	90 cm (2.9 ft) High by 75 cm (2.4 ft) Wide	Condition fair. Top portion of wall has been toppled	0.2
12	Segment divides Area 1 from Area 7 to the south and runs perpendicular to Allen Hill Road in Brooklyn	84.2 m (276.2 ft)	60 cm (1.9 ft) High by 75 cm (2.4 ft) Wide	Condition is good. Wall is fairly intact	0.8

Stone Wall Segment 1

Segment 1 measures 64 m (209 ft) in length and is located in the town of Canterbury (Figures 72 and 73). The segment falls inside Survey Area 21. The wall is composed mainly of rounded cobble stone with some larger angular stone as well. It retains four to five courses of stone, stands approximately 80 cm (2.6 ft) in height and measures approximately 100 cm (3.2 ft) in width. Although the upper 1 to 3 courses appear to have toppled over at some point, the wall was otherwise in fair condition at the time of survey. The segment to be removed represents 0.6 percent of the total linear footage of stone walls in the Study Area. It is typical of the stone walls located throughout the Study Area, the Brooklyn/Canterbury region and eastern Connecticut. It is not a rare type, nor is it associated with any events or persons of transcending historical importance. No special precautions are recommended for the removal of Segment 1.

Stone Wall Segment 2

Segment 2 measures 226 m (741 ft) in length and is located in the town of Canterbury (Figures 72 and 74). It is part of a larger wall that crosses the Canterbury and Brooklyn town line. The southwestern side of the wall contains an agricultural field that is part of Survey Area 18, while the northeastern side of the

wall falls within Survey Area 12 (Figure 73). The wall is composed mainly of flat angular stones mixed with some larger boulders. It contains three courses of stone, stands approximately 90 cm (2.9 ft) in height, and measures approximately 75 cm (2.4 ft) in width. It was in fair condition at the time of survey. The segment proposed to be removed represents 1.8 percent of the total linear footage of stone walls in the Study Area.

The southernmost portion of the segment lies close to a cut granite town marker that likely dates to ca., 1786 when Brooklyn separated from the towns of Canterbury and Pomfret and was incorporated as its own town. As described for Locus 12-1 in Area 12 above, in addition to the cut granite marker, the area contains an abandoned historic road that is lined on each side with stone walls. The abandoned road predates the current Wauregan and Morgan Road alignment and would have connected the homes at the end of Liepis Road in Canterbury, to modern day Christian Hill Road to the northeast (Figures 11 through 13). In addition to the marker and abandoned stone-lined road, the area contains a stone-lined well and the ruins of a historic period structure. Due to the presence of these historic elements, it is recommended that the wall removal be avoided. If avoidance is not a feasible option, it is recommended that the removal take place 30 m (100 ft) further north and away from the sensitive area.

Stone Wall Segment 3

Segment 3 measures 251.4 m (824.8 ft) in length and is located in the town of Brooklyn (Figures 72 and 75). The segment extends from east-to-west and divides Area 8 to the north from Area 12 to the south. The wall is composed of mainly flat angular stones. It retains up to eight courses, stands 100 cm (3.2 ft) in height, and measures approximately 75 cm (2.4 ft) in width. It was largely intact and in good condition at the time of survey. The segment proposed to be removed represents 2.2 percent of the total linear footage of stone wall in the Study Area. It is typical of the stone walls located throughout the Study Area, the Brooklyn/Canterbury region, and eastern Connecticut. It is not a rare type, nor is it associated with any events or persons of transcending historical importance. No special precautions are recommended for the removal of Segment 3.

Stone Wall Segment 4

Segment 4 measures approximately 52.9 m (173.5 ft) in length and is located in the town of Brooklyn (Figures 72 and 76). The segment extends from north to south and borders the southwestern edge of Area 12 (Figure 73). The wall is composed mainly of rounded cobble stone. This wall segment stands 100 cm in height, and measures 50 cm (1.6 ft) in width. The wall contains five to six visible courses of stone. The wall was largely intact and in good condition at the time of survey. This segment of stone wall represents 0.5 percent of the total linear footage of stone wall in the Study Area. It is typical of the stone walls located throughout the Study Area, the Brooklyn/Canterbury region, and eastern Connecticut. It is not a rare type, nor is it associated with any events or persons of transcending historical importance. No special precautions are recommended for the removal of Segment 4.

Stone wall Segment 5

Segment 5 measures approximately 63 m (206.7 ft) in length and is located on the Canterbury/Brooklyn town line (Figures 72 and 77). The segment runs in an east to west direction and borders the southwestern edge of Area 12. The wall is composed mainly of rounded stones mixed with some angular stones. It retains up to five courses of stone, stands approximately 90 cm (2.9 ft) in height, and measures 75 cm (2.4 ft) in width. It was largely intact and in good condition at the time of survey. The segment proposed to be removed represents 0.6 percent of the total linear footage of stone wall in the Study Area. It is typical of the stone walls located throughout the Study Area, the Brooklyn/Canterbury region, and eastern Connecticut. It is not a rare type, nor is it associated with any events or persons of

transcending historical importance. No special precautions are recommended for the removal of Segment 5.

Stone Wall Segment 6

Segment 6 measures approximately 16.2 m (53.1 ft) in length and is located in the town of Brooklyn (Figures 72 and 78). It is situated in Area 9. The wall is composed mainly rounded stones. It retains only three courses of intact stones, stands 60 cm (1.9 ft) in height, and measures 75 cm (2.4 ft) in width. The wall appears mostly disturbed. This segment of stone wall represents 0.1 percent of the total linear footage of stone wall in the Study Area. It is typical of the stone walls located throughout the Study Area, the Brooklyn/Canterbury region, and eastern Connecticut. It is not a rare type, nor is it associated with any events or persons of transcending historical importance. No special precautions are recommended for the removal of Segment 6.

Stone Wall Segment 7

Segment 7 measures 83.2 m (272.9 ft) in length and is located in the town of Brooklyn (Figures 72 and 79). It runs from east to west and is situated in Area 9. The wall is composed mainly of rounded stones mixed with some angular ones. It retains only one to two courses of intact stone, stands approximately 20 cm (0.6 ft) in height and measures 50 cm (1.6 ft) in width. The condition of the wall is regarded as poor because it has been mostly destroyed. This segment of stone wall represents 0.7 percent of the total linear footage of stone wall in the Study Area. It is typical of the stone walls located throughout the Study Area, the Brooklyn/Canterbury region, and eastern Connecticut. It is not a rare type, nor is it associated with any events or persons of transcending historical importance. No special precautions are recommended for the removal of Segment 7.

Stone Wall Segment 8

Segment 8 measures approximately 23.6 m (77.4 ft) in length and is located in the town of Brooklyn (Figures 72 and 80). The segment runs mainly from north-to-south in Area 9, perpendicular to wall Segment 9 referenced above. The wall is composed of a mixture of rounded and angular stones. It retains up to six visible courses of stone, stands 100 cm (3.2 ft) in height, and measures 100 cm (3.2 ft) in width. The condition of the wall was considered to be in fair at the time of survey. This segment of stone wall represents 0.2 percent of the total linear footage of stone wall in the Study Area. It is typical of the stone walls located throughout the Study Area, the Brooklyn/Canterbury region, and eastern Connecticut. It is not a rare type, nor is it associated with any events or persons of transcending historical importance. No special precautions are recommended for the removal of Segment 8.

Stone Wall Segment 9

Segment 9 measures approximately 25.3 m (83 ft) in length and is located in the Canterbury, Connecticut (Figures 72 and 81). The segment extends from north to south in a wooded area to the north of Area 9 and to the south of the Bennett/Taylor/Gallagher Cemetery, which is located within the central portion of Study Area but which will not be impacted by the proposed project (Figure 18). The wall is composed mainly of rounded stones. It retains up to five courses of stone, stands 120 cm (3.9 ft) in height, and measures 100 cm (3.2 ft) in width. The condition of the wall was considered good at the time of the survey. This segment of stone wall represents 0.2 percent of the total linear footage of stone wall in the Study Area. The wall segment proposed to be removed lies within 25 m (82 ft) of the walled, historic period Bennett/Gallagher/Taylor Cemetery. Therefore, adequate buffering or avoidance is recommended at Segment 9 in order to minimize potential impacts to the historic cemetery. It is recommended that special care and consideration be taken to maintain a minimum buffer of 15.2 m (50 ft) from the Bennett/Gallagher/Taylor Cemetery wall when removal of this stone wall segment.

Stone Wall Segment 10

Segment 10 measures approximately 53.6 m (175.8 ft) in length and is located in the town of Brooklyn (Figures 72 and 82). The segment is within a wooded area between Area 8 and Area 9 and, like segment 11, it lies near the above-referenced. The wall is composed mainly of rounded stoned. It retains up to five courses of stone, stands 90 cm (2.9 ft) in height, and measures 100 cm (3.2 ft) in width. Except for a few toppled stones, the wall was in good condition at the time of the survey. This segment of stone wall represents 0.5 percent of the total linear footage of stone wall in the Study Area.

The wall segment proposed to be removed is located within 63.5 m (208 ft) of the walled, Bennett/Taylor/Gallagher Cemetery, which is located within the central portion of Study Area (Figure cemetery 18). Therefore, adequate buffering or avoidance is recommended at Segment 10 in order to minimize potential impacts to the historic cemetery. It is recommended that special care and consideration be taken to maintain a minimum buffer of 15.2 m (50 ft) from the cemetery wall when removing this stone wall segment.

Stone Wall Segment 11

Segment 11 measures 26.4 m (86.6 ft) in length and is located in the town of Brooklyn (Figures 72 and 83). The segment is located along the eastern edge of Area 16, on the west side Allen Hill Road. The wall is composed mainly of rounded stone mixed with some angular ones. It retains up to eight courses of stone at its highest point, stands 90 cm (2.9 ft) in height, and measures approximately 75 cm (2.4 ft) in width. The topmost course of stone is toppled over in some areas, but the overall condition of the wall was considered fair at the time of the survey. This segment represents 0.2 percent of the total linear footage of stone walls in the Study Area. It is typical of the stone walls located throughout the Study Area, the Brooklyn/Canterbury region, and eastern Connecticut. It is not a rare type, nor is it associated with any events or persons of transcending historical importance. No special precautions are recommended for the removal of Segment 11.

Stone Wall Segment 12

Segment 12 measures 84.2 m (276.2 ft) in length and is located in Brooklyn, Connecticut (Figures 72 and 84). This wall segment divides Area 1 to the north from Area 7 to the south and it runs perpendicular to Allen Hill Road. The wall is composed mainly of rounded stones. It retains up two to three courses of larger stones, stands 60 cm (1.9 ft) in height, and measures approximately 75 cm (2.4 ft) in width. Except for a few areas where the topmost course of stone has been toppled, the wall was mostly intact and its condition was considered in fair condition at the time of the survey. This segment of stone wall represents 0.8 percent of the total linear footage of stone wall in the Study Area. It is typical of the stone walls located throughout the Study Area, the Brooklyn/Canterbury region, and eastern Connecticut. It is not a rare type, nor is it associated with any events or persons of transcending historical importance. No special precautions are recommended for the removal of Segment 12.

CHAPTER VIII

RESULTS OF PHASE II NRHP TESTING AND EVALUATION

Introduction

Project plans advanced by Quinebaug Solar, LLC indicated that two of the archaeological sites identified during the Phase IB survey, Site 22-38 (Locus 2-1) and Site 19-35 (Locus 11-1), could not be avoided during the planned construction of the Quinebaug Solar Project. Both sites yielded intact prehistoric Native American archaeological deposits and features. Phase IB survey indicated that Site 22-38 (Locus 2-1) contained an area that produced temporally diagnostic projectile points dating from the Middle Archaic period (Neville projectile points) and the Late Archaic period (Brewerton projectile points), while Site 19-35 (Locus 11-1) yielded triangular projectile points (Levanna projectile points) indicative of a possible Late Woodland period occupation of the site area. Phase IB survey suggested that both sites also contained features that may have been cultural in origin. Both Sites Site 22-38 (Locus 2-1) and Site 19-35 (Locus 11-1) were therefore assessed as potentially eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]), and Phase II NRHP testing and evaluation of the portions of the site areas to be impacted during the construction of the Quinebaug Solar Center was recommended. The CT-SHPO agreed with these recommendations and Quinebaug Solar, LLC, through its contractor Tighe & Bond, requested that Heritage personnel complete the recommended Phase II testing and evaluation efforts. Since the completion of the Phase IB survey and concurrence of the survey findings, Quinebaug Solar, LLC, using Best Management Practices (BMPs), made design changes to the Development Area such that the central and western portions of Site 22-38 (Locus 2-1) would avoided and not impacted during construction of the proposed Quinebaug Solar Center. As a result, the Phase II examination of Site 22-38 (Locus 2-1) was restricted to the northeastern portion of the prehistoric occupation area.

The Phase II NRHP eligibility testing and evaluation of Site 22-38 (Locus 2-1) and Site 19-35 (Locus 11-1) was designed to determine whether the archaeological sites were NRHP eligible. To do so, the testing and evaluation effort was designed to: 1) identify, document, and collect any archaeological material/features present within the site areas; 2) identify and describe the horizontal and vertical distribution of artifacts and archaeological components within Site 22-38 (Locus 2-1) and Site 19-35 (Locus 11-1); 3) recover temporally diagnostic artifacts to permit an accurate characterization of Site 22-38 (Locus 2-1) and Site 19-35 (Locus 11-1) in terms of age, cultural affiliation, and type; and 4) assess the overall research potential of Site 22-38 (Locus 2-1) and Site 19-35 (Locus 11-1) by applying NRHP eligibility criteria (36 CFR 60.4 [a-d]). This was accomplished through a program of delineation shovel testing and unit excavation.

Phase II Shovel Testing of Site 22-38 (Locus 2-1)

Site 22-38 (Locus 2-1) was identified in the southwestern portion of the Development Area near the of Blackwell Brook and an unnamed stream (Figure 18). The site area, which was covered with mixed deciduous forest and contains sandy well drained soils, was situated to the southeast of a soccer field and to the west of a gravel parking lot. Upon completion of the Phase IB survey of the site area, Heritage

assessed Site 22-8 (Locus 2-1) as potentially eligible for listing to the NRHP and recommended avoidance of the site or Phase II NRHP eligibility testing and evaluation of the site prior to construction. Quinebaug Solar, LLC developed project design changes that excluded the majority of the site from impacts during construction and requested that Heritage complete Phase II NRHP eligibility testing and evaluation of the remaining northeastern portion of the site that could not be avoided during construction.

Before the Phase II NRHP eligibility testing and evaluation effort was undertaken, Heritage and Quinebaug Solar, LLC prepared a Phase II testing and evaluation plan for review and comment by the CT-SHPO for the northeastern portion of the site that may be impacted by construction of the proposed solar center. Heritage indicated to the CT-SHPO that no ground disturbance would take place throughout the remainder of the site area. The CT-SHPO agreed with the testing plan for Site 22-38 (Locus 2-1) and requested the excavation of Phase II delineation shovel tests in the four cardinal directions around the positive Phase IB survey shovel tests and the excavation of 24 units measuring 1 x 1 m (3.3 x 3.3 ft) in size to examine artifact clusters and/or cultural features that may be identified during the delineation shovel testing effort. The CT-SHPO agreed with the testing and evaluation plan and the site examination was initiated during the Spring of 2019.

The Phase II NRHP eligibility testing and evaluation of the northeastern portion of the Site 22-38 (Locus 2-1) area began with the excavation Phase II delineation shovel tests. Delineation testing was focused around shovel tests that yielded archaeological material and possible evidence of cultural features during the previous Phase IB survey. The delineation shovel tests were excavated at 3.75 m (12.3 ft) intervals in the cardinal directions around the positive Phase IB survey shovel tests. An additional 74 delineation shovel tests were excavated throughout the northeastern portion of Site 22-38 (Locus 2-1) during the Phase II NRHP testing and evaluation effort (Figure 85).

A typical soil profile for the Phase II delineation shovel tests exhibited four soil horizons in profile and was excavated to a maximum depth of 90 cmbs (36 inbs). The Ap-Horizon consisted of a plowzone deposit of dark brown (10YR 3/3) fine silty sand that reached from between 0 to 30 cmbs (0 to 12 inbs). It was underlain by the B1-Horizon (subsoil), which was encountered between 30 and 50 cmbs (12 and 20 inbs) and was characterized as a layer of dark yellowish brown (10YR 4/6) fine silty sand. The B2-Horizon (lower subsoil) was noted between 50 and 75 cmbs (20 and 30 inbs) and was classified as a deposit of yellowish brown (10 YR 5/6) medium sand with traces of silt. Finally, the glacially derived C-Horizon ranged in depth from 75 to 90 cmbs (30 to 36 inbs) and consisted of a layer of light olive brown (2.5Y 5/6) very fine sand. As seen in Table 4 below, a total of 1,007 artifacts were recovered during the Phase II NRHP delineation shovel testing.

Table 4. Archaeological material collected during Phase II shovel testing of Site 22-38.

Horizon	Material	Subtype	Type	Total
Ap	ceramic	blue decorated rim sherd	pearlware	1
	lithic	flake	argillite	3
			chert	3
			quartz	3
			quartzite	506
	untyped projectile point tip	quartzite	1	
Ap Total				517
B1	lithic	fire cracked rock	schist	2
		flake	chert	1
			quartz	14
			quartzite	501
	utilized flake	quartzite	2	
B1 Total				520
B2	lithic	flake	quartzite	40
B2 Total				40
Grand Total				1,077

The artifacts collected during Phase II delineation shovel testing in the northeastern portion of Site 22-38 (Locus 2-1) were collected from the Ap-Horizon (plowzone) and subsoil contexts (B1 and B2-Horizons). The Ap-Horizon (plowzone) yielded both historic and prehistoric period artifacts. The historic period archaeological material collected from the plowzone (Ap-Horizon) consisted of a single blue decorated pearlware rim sherd, while the recovered prehistoric artifacts included 3 argillite secondary thinning flakes, 3 chert secondary thinning flakes, 3 quartz secondary thinning flakes, 506 quartzite secondary thinning flakes, and a single quartzite projectile point tip. The projectile point tip could not be classified as to type or associated with any particular prehistoric time period or cultural affiliation.

The examination of the upper layer of the subsoil (B1-Horizon) in the delineation shovel tests excavated throughout Site 22-38 (Locus 2-1) resulted in the recovery of 2 pieces of fire-cracked rock, 1 chert secondary thinning flake, 14 quartz secondary thinning flakes, 501 quartzite secondary thinning flakes, and 1 utilized quartzite flake (Table 4). The latter contained evidence of crushing on one of its lateral edges, which was indicative use on a hard material such as wood, bone, or antler. Finally, examination of the lower subsoil layer, the B2-Horizon, in the delineation shovel tests resulted in the collection of 40 quartzite secondary thinning flakes.

The Phase II delineation shovel testing effort also identified evidence of spatial patterning in the lithic assemblage. That is, the majority of the recovered lithic artifacts were collected from two “clusters” that existed within the northeastern portion of Site 22-28 (Locus 2-1). These clusters, which were situated the easternmost and westernmost parts of the Phase II site examination area, were separated by a zone where the density of artifacts was comparatively low (Figure 86). The eastern cluster of artifacts was centered on the area containing Delineation Shovel Test 2-23. The artifacts recovered from the eastern cluster during the delineation shovel testing consisted of 207 pieces of quartzite debitage (all of which came from Shovel Test 2-23). The western cluster of artifacts encompassed the area containing Delineation Shovel Tests 2-48, 2-50, 2-51, and 2-52. The artifacts recovered from the western cluster

were more diverse in nature and spatial distribution, and consisted of debitage made of argillite, chert, quartz, and quartzite recovered from the four shovel tests.

In general, the artifact assemblage collected during Phase II delineation shovel testing indicated that Site 22-38 covered a large area, contained spatial patterning, and indicated that stone tool manufacturing, use, and repair took place at the site. The spatial segregation of the artifacts into two distinct clusters, as well as the differences in the level of material diversity identified in the two areas, suggests that they may have developed as a result of separate uses of (and possibly distinct occupations of) the Site 22-38 (Locus 2-1) area. This was considered during the placement and excavation of units throughout the site area, as discussed below.

Results of Unit Excavation Within Site 22-38 (Locus 2-1)

Once the Phase II delineation shovel testing was complete and the recovered archaeological data was analyzed, it became clear that two distinct areas within the northeastern portion of Site 22-38 (Locus 2-1) contained higher artifact densities than the remainder of the examined site area (Figure 86). Thus, during the subsequent excavations, 1 x 1 m (3.3 x 3.3 ft) sampling units were mostly excavated within these two clusters; however, a subset of the units was placed in the “low density” areas of the examined portion of Site 22-38 (Locus 2-1) to insure that the perceived results of the Phase II delineation shovel testing were not simply a sampling bias. A total of 24 units measuring 1 x 1 m (3.3 x 3.3 ft) in size, as well as two smaller units measuring 50 x 50 cm (19.7 x 19.7 in) in size, were excavated during the Phase II effort. The larger units were labeled as Units 1 through 24, while the two smaller units were labeled as Units 16A and 18A, as they were excavated adjacent to Units 16 and 18, respectively (Figure 89). The results of the unit excavations are presented below.

Unit 1

Unit 1, which measured 1 x 1 m (3.3 x 3.3 ft) in size, was excavated in the westernmost portion of the examined part of Site 22-38 (Locus 2-1). It was placed in this area in order to further examine a high density of lithic artifacts that were identified during the Phase IB survey and Phase II NRHP delineation shovel testing. Unit 1 exhibited three soil horizons in profile and was excavated to a terminal depth of 92 cmbs (36.2 inbs) (Figure 85). The plowzone layer (Ap-Horizon) was encountered between the surface and maximum depth of 30 cmbs (0 and 11.8 inbs); it was described as a layer of dark brown (10YR 3/3) loamy silt (Figures 87 and 88). It was underlain by the subsoil layer (B1-Horizon), which was described deposit of dark yellowish brown (10YR 4/6) fine sandy silt that extended from 18 to 72 cmbs (7.1 to 28.3 inbs). The final soil horizon consisted of the glacially derived C-Horizon; it extended to the base of the unit at 92 cmbs (36.2 inbs) and was classified as a layer of light olive brown (2.5Y 5/6) medium to coarse sand and gravel. Unit 1 yielded a total of 663 prehistoric artifacts from three soil horizons, including the Ap and B1-Horizons (Table 5). The recovered artifacts are discussed below.

Table 5. Archaeological material recovered from Unit 1 within Site 22-38 (Locus 2-1).

Unit	Horizon	Material	Type	Subtype	Total
1	Ap	lithic	quartzite	flake	110
	Ap Total				110
	B1	lithic	quartz	flake	1
			quartzite	flake	547
				shatter	5
B1 Total				553	
Grand Total					663

Archaeological examination of the Ap-Horizon of Unit 1 resulted in the collection of 110 quartzite secondary thinning flake, while the B1-Horizon yielded a single quartz secondary thinning flake, 547 quartzite secondary thinning flakes, and 5 pieces of quartzite shatter. While no cultural features were identified within Unit 1, the area produced a relatively large amount of lithic artifacts that clearly demonstrated the use of this part of Site 22-38 (Locus 2-1) for stone tool manufacturing and maintenance.

Unit 2

As seen in Figure 85, Unit 2 measured 1 x 1 m (3.3 x 3.3 ft) in size and was excavated in the central part of the examined portion of Site 22-38 (Locus 2-1). Phase IB survey and Phase II NRHP shovel testing in this area resulted in the collection of a low to moderate amount lithic chipping debris. The purpose of the unit was to further explore the soils and artifact density in this part of the site. Unit 2 exhibited four soil horizons in profile and was excavated to a terminal depth of 64 cmbs (25.2 inbs) (Figures 89 and 90). The uppermost soil horizon, a developing Ao-Horizon, was described as a layer of very dark brown (10YR 2/2) very fine sandy loam that reached from 0 to 15 cmbs (0 to 5.9 inbs). The underlying plowzone (Ap-Horizon) was encountered between 8 to 29 cmbs (3.1 to 11.4 inbs) and was described as a layer of dark brown (10YR 3/3) sandy loam. The subsoil layer (B1-Horizon) was classified as a deposit of dark yellowish brown (10YR 4/6) silty fine to medium sand and it ranged in depth from 26 to 53 cmbs (10.2 to 21.2 inbs). Finally, the glacially derived C-Horizon was encountered at 53 cmbs (21.1 inbs) and extended to the base of the unit at 64 cmbs (25.2 inbs); it consisted of olive brown (2.5Y 4/4) very fine sand mottled with light olive brown (2.5Y 5/3) coarse sand and gravel. The excavation of Unit 2 produced a much lower density of artifacts than Unit 1, as well as different types of materials. The recovered archaeological material consisted of 18 quartz secondary thinning flakes and 1 chert secondary thinning flake, all of which were recovered from the disturbed plowzone layer (Ap-Horizon). Finally, no cultural features were identified during the excavation of Unit 2.

Unit 3

Unit 3 was situated along the western edge of the examined portion of Site 22-38 (Locus 2-1) and measured 1 x 1 m (3.3 x 3.3 ft) in size. The purpose of Unit 3 was to further explore an area containing a high density of artifacts first identified during the excavation of Unit 1 (Figure 85). Unit 3 was placed directly adjacent to the northern edge of Unit 1, which yielded 663 artifacts. The excavation of Unit 3 revealed four soil horizons in profile and extended to a terminal depth of 82 cmbs (32.3 inbs) (Figures 91 and 92). The plowzone (Ap-Horizon) was characterized as a layer of dark brown (10YR 3/3) silty medium sand that extended from 0 to 32 cmbs (0 to 12.6 inbs). The subsoil layer (B1-Horizon), was encountered between 32 and 66 cmbs (12.6 to 26 inbs) and was described as a deposit of dark yellowish brown (10YR 3/3) fine sandy silt. The glacially derived C1-Horizon consisted of a layer of light olive brown (2.5Y 5/3) coarse sand and gravel; it ranged in depth from 62 to 75 cmbs (24.4 to 29.5 inbs) and became dense with gravel and cobbles at its base. Finally, the C2-Horizon consisted of a layer of light yellowish brown (2.5Y 6/3) fine sand; it was encountered between 75 cmbs (29.5 inbs) and the base of the unit at 82 cmbs (32.3 inbs). As seen in Table 6 below, the excavation of Unit 3 resulted in the recovery of 92 prehistoric artifacts. These artifacts were recovered from the Ap-Horizon, the B1-Horizon, and the C1-Horizons. The recovered archaeological material is discussed in detail below.

Table 6. Archaeological material recovered from Unit 3 within Site 22-38 (Locus 2-1).

Unit	Horizon	Material	Type	Subtype	Total	
3	Ap	lithic	quartzite	flake	6	
	Ap Total				6	
	B1	lithic	quartzite	quartz	flake	1
				quartzite	core fragment	1
					flake	52
					Neville projectile point base	1
					shatter	3
	B1 Total				58	
	C1	lithic	quartz	biface	1	
				flake	5	
				shatter	1	
			quartzite	biface	1	
				flake	19	
				retouched flake	1	
	B2 Total				28	
Grand Total				92		

As seen in Table 6, the Ap-Horizon (plowzone) of Unit 3 yielded 6 quartzite secondary thinning flakes. The underlying B1-Horizon contained a single quartz secondary thinning flake, a quartzite core fragment, 52 quartzite secondary thinning flakes, and 3 pieces of quartz shatter. This soil horizon also yielded a Neville projectile point base, which dated from ca., 8,000 to 6,000 years ago. In addition, C1-Horizon, produced a single quartz biface, 5 quartz secondary thinning flakes, 1 piece of quartz shatter, 1 quartzite biface, 19 quartzite secondary thinning flakes, and a single retouched quartzite flake. This material may have been infiltrated from the B1-Horizon above. Like Unit 1, Unit 3 demonstrates the use of the area as a lithic workstation where stone tools were being manufactured, retouched, and re-sharpened. No cultural features were uncovered during the excavation of Unit 3.

Unit 4

Unit 4 measured 1 x 1 m (3.3 x 3.3 ft) in size and was placed in the west-central portion of Site 22-38 (Locus 2-1) (Figure 85). It was located in an area that contained multiple positive Phase IB survey and Phase II shovel tests that yielded small amounts of lithic chipping debris. The purpose of the unit was to further explore the soils and artifact density in this part of Site 22-38 (Locus 2-1). Unit 4 exhibited four soil horizons capped by a layer of disturbed soil; it was excavated to a terminal depth of 80 cmbs (31.5 inbs) (Figures 93 and 94). The previously disturbed soil horizon was described as a layer of very dark brown (10YR 2/2) very sandy loam that extended from 0 to 5 cmbs (0 to 2 inbs). The underlying plowzone layer (Ap-Horizon) was encountered between 5 and 24 cmbs (6 and 9.6 inbs) and was classified as a layer of dark brown (10YR 3/3) fine to medium sandy loam. The upper subsoil layer (B1-Horizon), was represented by a layer of dark yellowish brown (10YR 4/6) fine to medium sandy silt that ranged in depth from 24 to 50 cmbs (9.6 to 19.7 inbs). The lower subsoil (B2-Horizon) reached from 50 cmbs (19.7 inbs) to a maximum depth of 65 cmbs (26 inbs) and was described as a deposit of dark yellowish brown (10YR 4/6) silty medium to fine sand mixed with gravel. Finally, the glacially derived C-Horizon was revealed at 60 cmbs (24 inbs) and reached to the base of the unit at 80 cmbs (31.6 inbs); it consisted of light olive brown (2.5Y 5/6) coarse sand and gravel.

As Table 7 shows, the excavation of Unit 4 resulted in the recovery of 29 artifacts. Those items collected from the Ap-Horizon (plowzone) included 23 quartzite secondary thinning flakes. The underlying B1-Horizon (subsoil) yielded 1 quartz secondary thinning flake, 4 quartzite secondary thinning flakes, and 1 quartzite utilized flake. The latter exhibited signs of crushing on one of its lateral edges, indicating that it was likely used for scraping on a hard surface such as wood, bone, or antler. Finally, the excavation of Unit 4 resulted in the identification and recordation of a single cultural feature, which was designated as Feature 4. It is described in detail below.

Table 7. Archaeological material recovered from Unit 4 within Site 22-38 (Locus 2-1).

Unit	Horizon	Material	Type	Subtype	Total
4	Ap	lithic	quartzite	flake	23
	Ap Total				23
	B1	lithic	quartz	flake	1
			quartzite	flake	4
				utilized flake	1
B1 Total				6	
Grand Total					29

Feature 4

Feature 4 was interpreted as the remains of a prehistoric post mold. It was identified at the interface of the Ap and B1-Horizons at a depth of 28 cmbs (11.0 inbs) (Figures 95 and 96). The post-mold was roughly circular in shape and measured approximately 8 cm (3.1 in) in diameter; it contained a deposit of very dark grayish brown (10YR 3/2) silty fine to medium sand. A bisection of the post-mold revealed that it extended for 6 cm (2.4 in) into the subsoil (Figure 97 and 98). Feature 4 likely represents the remnant of an ancient post, the top of which has been truncated by the plow or other ground disturbing activity.

Unit 5

Unit 5 measured 1 x 1 m (3.3 x 3.3 ft in size and was located within the northwest portion of the examined part of Site 22-38 (Locus 2-1); this area contained a steep bluff to the north of Unit 5 that drops down to a wetland associated with Blackwell Brook (Figure 85). Unit 5 exhibited four soil horizons in profile and was excavated to a terminal depth of 82 cmbs (32.3 inbs) (Figures 99 and 100). The uppermost horizon, which consisted of a layer of redeposited soil, was described as a pale brown (2.5Y 7/3) fine sand that was mottled with yellowish brown (10YR 5/6) fine sand that extended from 0 to 16 cmbs (0 to 6.3 inbs). The underlying plowzone layer (Ap-Horizon) was described as a layer of dark brown (10YR 3/3) silty medium to fine sand that ranged in depth from 16 to 36 cmbs (6.3 to 14.8 inbs). The subsoil layer (B1-Horizon) was classified as a layer of yellowish brown (10YR 5/6) silty fine sand that extended from 35 to 60 cmbs (13.8 to 23.6 inbs). Finally, the glacially derived C-Horizon, ranged in depth from 60 cmbs (23.6 inbs) to the base of the unit at 82 cmbs (32.3 inbs); it consisted of light yellowish brown (2.5Y 6/4) fine to coarse sand with a high gravel content and oxidation. As seen in Table 8, the excavation of Unit 5 resulted in the collection of 122 artifacts.

Table 8. Archaeological material recovered from Unit 5 within Site 22-38 (Locus 2-1).

Unit	Horizon	Material	Type	Subtype	Total
EU 5	Ap	lithic	quartz	flake	2
			quartzite	flake	27
	Ap Total				29
	B1	lithic	quartz	flake	1
			quartzite	flake	92
	B1 Total				93
Grand Total					122

The plowzone (Ap-Horizon) of Site 22-38 (Locus 2-1) yielded 2 quartz secondary thinning flakes and 27 quartzite thinning flakes. Excavation of the undisturbed subsoil layer (B1-Horizon) resulted in the recovery of 1 quartz secondary thinning flake and 92 quartzite secondary thinning flakes. The data collected from Unit 5 suggests that this part of Site 22-38 (Locus 2-1) contains a moderate density artifact deposit where stone tools were being manufactured, retouched, and re-sharpened. No cultural features were identified during the excavation of Unit 5.

Unit 6

Unit 6 also measured 1 x 1 m (3.3 x 3.3 ft) in size and was placed along the western edge of the examined portion of Site 22-38 (Locus 2-1); it too was located near the bluff leading down to wetlands associated with Blackwell Brook (Figure 85). Unit 6 exhibited five soil horizons in profile and was excavated to a depth of 72 cmbs (28.3 inbs) (Figures 101 and 102). The developing Ao-Horizon extended from 0 to 10 cmbs (0 to 4 inbs) and described as a deposit of very dark brown (10YR 2/2) silty fine to medium sand. The underlying plowzone (Ap-Horizon) was described as a layer of very dark grayish brown (10YR 3/2) fine sandy silt that reached from 10 to 30 cmbs (4 to 11.8 inbs). The subsoil layer (B1-Horizon) was classified as dark yellowish brown (10YR 4/6) silty fine to medium sand that extended from 30 to 39 cmbs (12 to 15.4 inbs). A lower subsoil deposit (B2-Horizon) ranged in depth from 39 to 57 cmbs (15.4 to 22.4 inbs) and consisted of light olive brown (2.5Y 5/6) sand. Finally, the glacially derived C-Horizon extended from 55 cmbs (21.7 inbs) to the base of the unit at 72 cmbs (28.3 inbs); it was represented by layer of light yellowish brown (2.5Y 6/4) fine sand with oxidation. The excavation of Unit 6 resulted in the collection of 49 artifacts from the plowzone (Ap-Horizon) and upper subsoil deposit (B1-Horizon). They are described below (Table 9).

Table 9. Archaeological material recovered from Unit 6 within Site 22-38 (Locus 2-1).

Unit	Horizon	Material	Type	Subtype	Total
EU 6	Ap	lithic	quartz	flake	1
			quartzite	flake	11
	Ap Total				12
	B1	lithic	quartz	flake	2
				untyped projectile point	1
	quartzite	flake	34		
B1 Total				37	
Grand Total					49

The plowzone deposit (Ap-Horizon) within Unit 6 yielded 1 quartz secondary thinning flake and 11 quartzite secondary thinning flakes. The underlying subsoil (B1-Horizon) produced 2 quartz secondary thinning flakes, 34 quartzite secondary thinning flakes, and a projectile point. The projectile point was fashioned from a large quartzite flake and it contained a wide but short stemmed base and convex lateral edges. Its overall length measured approximately 3.5 cm (1.4 in). The type to which this specimen belonged could not be determined. Like nearby Unit 5, no cultural features were identified, but the archaeological data collected from Unit 6 suggests the use of this part of Site 22-38 (Locus 2-1) for stone tool manufacture and re-sharpening.

Unit 7

Unit 7 was excavated in the west-central part of the examined portion of Site 22-38 (Locus 2-1) and measured 1 x 1 m (3.3 x 3.3 ft) in size (Figure 85). The placement of Unit 7 was chosen due to the presence of multiple positive Phase IB survey and Phase II delineation shovel tests throughout the area. Unit 7 exhibited four soil strata in profile and was excavated to a depth of 83 cmbs (33.2 inbs) (Figures 103 and 104). The plowzone (Ap-Horizon) was described as a layer of dark yellowish brown (10YR 3/4) loamy fine sand that reached from 0 to 28 cmbs (0 to 11.2 inbs). A second soil horizon was identified in the northeast corner of the unit and classified as strong brown (7.5YR 4/6) silty very fine sand; it reached from 25 to 32 cmbs (10 to 12.8 inbs) and it was designated as Feature 5 (see feature discussion below). The naturally-occurring subsoil layer (B1-Horizon) was described as a deposit of yellowish brown (10YR 5/6) silty fine sand that extended from 32 to 44 cmbs (12.8 to 17.6 inbs). The lower subsoil layer (B2-Horizon) consisted of a light olive brown (2.5Y 5/6) silty medium sand with gravel that ranged in depth from 44 to 72 cmbs (17.6 to 28.8 inbs). Finally, the glacially derived C-Horizon, was encountered between 72 cmbs (28.8 inbs) and the base of the unit at 83 cmbs (33.2 inbs); it consisted of a layer of olive yellow (2.5Y 6/6) medium sand and gravel. The excavation of Unit 7 resulted in the collection of 437 artifacts and the recordation of Feature 5.

Table 10. Archaeological material recovered from Unit 7 within Site 22-38 (Locus 2-1).

Unit	Horizon	Material	Type	Subtype	Total	
EU 7	Ap	lithic	chert	flake	3	
			quartzite	flake	12	
	Ap Total				15	
	B1	faunal	lithic	bone	Calcined, mammal	22
				chert	flake	15
				quartzite	flake	356
			unidentified	hammerstone	1	
	B1 Total				394	
	B2	lithic		chert	flake	1
				quartzite	flake	27
B2 Total				28		
Grand Total					437	

The archaeological material collected from the plowzone of Unit 7 (Ap-Horizon) consisted of 3 chert secondary thinning flakes and 12 quartzite secondary thinning flakes. In addition, the B-1 Horizon (subsoil) produced 22 unidentifiable calcined mammal long bone fragments, 15 chert secondary thinning flakes, 356 quartzite secondary thinning flakes and a single hammerstone made from an unidentified material (Table 10). The B2-Horizon (lower subsoil deposit) yielded 1 chert secondary thinning flake and

27 quartzite thinning flakes. The recovery of the lithic debitage and hammerstone indicated that stone tool production took place in the vicinity of Unit 7, while the recovery of the calcined bone fragments suggests an association with a burning episode, likely Feature 5, which is described below.

Feature 5

Feature 5 was first described as an amorphous soil stain that was encountered at the base of the plowzone (Ap-Horizon) (Figure 105). It measured 9 cm (3.6 in) in thickness and extended into the B1-Horizon (Figures 106 and 107). Careful examination of the stain revealed that, while the portion of Feature 5 within Unit 7 contained no artifacts, it was represented by a deposit of oxidized soil that was described as a strong brown (7.5YR 4/6) very fine sand mixed with silt. Although very little charcoal was found in association with the feature, the soil appeared to have been fire-reddened. A plan view drawing of the feature at 23 cmbs (9 inbs) shows that it measured approximately 90 cm (35.4 in) from north to south by 50 cm (19.7 in) from east to west (Figures 105 and 106). While no artifacts were collected from the portion of Feature 5 within Unit 7, it most likely represents the fire reddened residual remnants of a larger fire or roasting pit. Further, photo-documentation of Unit 7 after it was completed showed Feature 5 in profile in the east wall of the excavation unit (Figure 107). The extension of Feature 5 into the east wall of the unit prompted the excavation of Unit 8, which is described below.

Unit 8

Unit 8, which also measured 1 x 1 m (3.3 x 3.3 ft) in size, was placed abutting the east wall of Unit 7 in order to further explore Feature 5 (Figure 85). This unit exhibited four soil horizons in profile and was excavated to a depth of 83 cmbs (33.2 inbs) (Figures 103 and 104). The plowzone (Ap-Horizon) was described as a layer of dark yellowish brown (10YR 3/4) loamy fine sand that reached from 0 to 28 cmbs (0 to 11.2 inbs). The second soil horizon was identified in the northwestern corner of the unit and was classified as strong brown (7.5YR 4/6) silty very fine sand; it reached from 25 to 32 cmbs (10 to 12.8 inbs) and it was designated as Feature 5 (see feature discussion above). The subsoil layer (B1-Horizon) was described as a deposit of yellowish brown (10YR 5/6) silty fine sand that extended from 32 to 44 cmbs (12.8 to 17.6 inbs). A lower second subsoil layer (B2-Horizon) consisted of a light olive brown (2.5Y 5/6) silty medium sand with gravel; it ranged in depth from 44 to 70 cmbs (17.6 to 28 inbs). Finally, the glacially derived C-Horizon was encountered between 70 cmbs (28 inbs) and base of the unit at 83 cmbs (33.2 inbs). It consisted of a deposit of olive yellow (2.5Y 6/6) medium sand and gravel. The excavation of Unit 8 resulted in the recovery of 252 artifacts from the Ap and B1-Horizons, nine artifacts from Feature 5, and the identification of a second soil stain, which was designated as Feature 6. These items are discussed below (Table 11).

Table 11. Archaeological material recovered from Unit 8 within Site 22-38 (Locus 2-1).

Unit	Horizon	Material	Type	Subtype	Total
EU 8	Ap	faunal	bone	calcined fragment	1
		lithic	chert	flake	5
			quartzite	flake	6
	Ap Total				12
	B1	faunal	bone	calcined fragment	16
		lithic	chert	flake	50
			quartzite	flake	173
				scraper	1
	B1 Total				240
	Feature 5 Matrix	faunal	bone	calcined fragment	5
		lithic	chert	flake	2
			quartzite	flake	2
	Feature 5 Matrix Total				9
Grand Total					261

Archaeological material recovered from plowzone of Unit 8 (Ap-Horizon) consisted of 1 unidentified calcined mammal bone fragment, 5 chert secondary thinning flakes, and 6 quartzite secondary thinning flakes. The underlying B1-Horizon (subsoil) yielded 16 additional unidentified calcined mammal bone fragments, 50 chert secondary thinning flakes, 173 quartzite secondary thinning flakes, and 1 quartzite scraper. In addition, the examination of the remainder of Feature 5, which extended into the Unit 8 area, resulted in the identification and collection of an additional 5 unidentified calcined mammal bone fragments, 2 chert secondary thinning flakes, and 2 quartzite secondary thinning flakes, confirming the cultural origin of the feature. In addition, the excavation of Unit 8 also resulted in the identification of a second soil stain within Unit 8; it was designated as Feature 6 and it is described in detail below.

Feature 6

Feature 6, which appeared as a grouping of three circular soil stains within Unit 8, was encountered at a depth of approximately 51 cmbs (20 inbs) (Figures 108 and 109). The soil within these stains consisted of deposits of dark yellowish brown (10YR 3/6) silty fine sand and appeared as fire-reddened in contrast to the surrounding subsoil matrix. Each stain measured approximately 25 x 25 cm (9.8 x 9.8 in) in size and was roughly circular in shape. Unfortunately, due to lighting conditions and the color of the surrounding unit soils, the circular stains did not photograph well. A plan view drawing of Feature 6 shows the outline soil stains located within Unit 8 (Figures 111 and 112). A profile drawing after bisection shows that stains comprising Feature 6 had a thickness of 9 cm (3.5 in) and appeared bowl-shaped in profile (Figures 110 and 111). While the exact function of the Feature 6 stains could not be identified, they were similar to that of Feature 5 above, and may have represented the fire reddened remnants of a fire or roasting pits.

Unit 9

Unit 9 was placed in the southwestern part of the examined portion of Site 22-38 (Locus 2-1). This 1 x 1 m (3.3 x 3.3. ft) unit was excavated to the west of a low-lying area that extended down to the unnamed stream that formed the southern boundary of Site 22-38 (Locus 2-1) (Figure 85). The area to the southwest of Unit 9 contained multiple Phase IB survey and Phase II delineation shovel test that yielded a moderate to high density of lithic artifacts. Unit 9 exhibited five soil horizons in profile and was

excavated to a terminal depth of 72 cmbs (28 inbs) (Figures 112 and 113). The uppermost soil deposit, a developing Ao-Horizon, was described as a layer of very dark brown (10YR 2/2) silty fine to medium sand that reached from 0 to 7 cmbs (0 to 2.8 inbs). The underlying plowzone (Ap-Horizon) reached from 7 to 26 cmbs (2.8 to 10.2 inbs) and was described as a layer of dark brown (10YR 3/3) fine to medium sandy silt. The upper subsoil deposit (B1-Horizon) was classified as a layer of dark yellowish brown (10YR 3/6) silty fine to medium sand that reached extended from 23 to 49 cmbs (9 to 19.3 inbs). The lower subsoil layer (B2-Horizon) was identified between 48 to 59 cmbs (19.3 to 23.2 inbs) and was identified as a deposit of dark yellowish brown (10YR 4/6) silty medium to coarse sand and gravel. Finally, the glacially derived C-Horizon was encountered between 58 cmbs (22.8 inbs) and the base of the unit at 72 cmbs (28 inbs); it was characterized as a layer of yellowish brown (2.5Y 6/4) fine sand with oxidation. The excavation of Unit 9 resulted in the recovery of 320 artifacts, which are described in Table 12.

Table 12. Archaeological material recovered from Unit 9 within Site 22-38 (Locus 2-1).

Unit	Horizon	Material	Type	Subtype	Total
EU 9	Ap	lithic	argillite	flake	1
			chert	flake	1
			quartzite	flake	93
	Ap Total				95
	B1	lithic	argillite	flake	3
			quartzite	flake	221
			rhyolite	drill	1
	B1 Total				225
	Grand Total				

The (Ap-Horizon) within Unit 9 yielded a total of 95 artifacts, including 1 argillite secondary thinning flake, 1 chert secondary thinning flake, and 93 quartzite secondary thinning flakes. The underlying subsoil deposit (B1-Horizon) produced 3 argillite secondary thinning flakes, 221 quartzite secondary thinning flakes, and a single rhyolite drill (Figure 114). In addition, the excavation of Unit 9 resulted in the identification of soil staining at the Ap/B1-Horizon interface that appeared to represent post-molds; however, closer inspection of them revealed that they were natural occurrences, probably related to tree roots. Unit 9 contained a comparatively high amount of lithic chipping debris, suggesting that this part of Site 22-38 (Locus 2-1) was used for stone tool production and maintenance.

Unit 10

This unit measured 1 x 1 m (3.3 x 3.3 ft) in size and was located in the southwestern area of the examined portion of Site 22-38 (Locus 2-1). Unit 10 was placed in an area characterized by a block of excavation units that contained two cultural features (see discussion of Feature 8 and Feature 10 below) (Figure 85). This unit exhibited three soil horizons in profile and was excavated to a terminal depth of 70 cmbs (27.6 inbs) (Figures 115 and 116). The plowzone (Ap-Horizon) consisted of a layer of dark brown (10YR 3/3) silty fine sand that reached from 0 to 26 cmbs (0 to 10.2 inbs). The underlying subsoil layer (B1-Horizon) was classified as a deposit of yellowish brown (10YR 5/6) silty fine sand that ranged in depth from 26 to 64 cmbs (10.2 to 25.2 inbs). Finally, the glacially derived C-Horizon extended to the base of unit at 70 cmbs (27.6 inbs); it was characterized as a layer of light yellowish brown (2.5Y 6/3) fine to medium sand mixed with gravel. The excavation of Unit 10 resulted in the recovery of 655 artifacts from the plowzone (Ap-Horizon) and the subsoil (B1-Horizon) (Table 13). The collected artifacts are described below.

Table 13. Archaeological material recovered from Unit 10 within Site 22-38 (Locus 2-1).

Unit	Horizon	Material	Type	Subtype	Total
EU 10	Ap	lithic	chert	flake	35
			quartzite	flake	298
		pigment	iron oxide	piece	1
	Ap Total				334
	B1	lithic	argillite	flake	5
			chert	flake	30
			quartzite	flake	286
	B1 Total				321
Grand Total					655

The plowzone (Ap-Horizon) within Unit 10 contained 35 chert secondary thinning flakes, 298 quartzite secondary thinning flakes, and 1 piece of red oxide, which may have been used as a pigment by the prehistoric occupants of Site 22-28 (Locus 2-1). The underlying B1-Horizon yielded 5 argillite secondary thinning flakes, 30 chert secondary thinning flakes, and 286 quartzite secondary thinning flakes. The unit also contained moderate to high amounts of fire-cracked rock that may have been related to the fire hearth feature identified in nearby Units 16 and 18. The fire-cracked rock was noted in the field and discarded. Unit 10 represents an area that utilized for the manufacturing and maintenance of stone tools.

Unit 11

Unit 11 was positioned in the western part of the examined portion of Site 22-38 (Locus 2-1). It measured 1 x 1 m (3.3 x 3.3 ft) in size and was situated near the edge of a low-lying wetland area to the east (Figure 86). This unit was placed in this area in order to further explore a moderate to high concentration of lithic chipping debris identified in nearby Phase II units and Phase IB/Phase II shovel tests. Unit 11 exhibited five soil horizons in profile and was excavated to a terminal depth of 62 cmbs (24.4 inbs) (Figures 117 and 118). The uppermost soil horizon, a developing Ao-Horizon, was described as a layer of very dark brown (10YR 2/2) silty fine to medium sand that reached from 0 to 5 cmbs (0 to 2 inbs). The underlying plowzone (Ap-Horizon) extended from 5 to 19 cmbs (1.9 to 7.5 inbs) and was classified as a layer of dark brown (10YR 3/3) fine to medium sandy silt. The subsoil (B1-Horizon) was revealed as a deposit of dark yellowish brown (10YR 3/6) silty fine to medium sand that ranged in depth from 16 to 44 cmbs (6.3 to 17.3 inbs). A second subsoil layer (B2-Horizon) was encountered between from 38 and 50 cmbs (15 and 19.7 inbs) and was described as a deposit of dark yellowish brown (10YR 4/6) silty medium to coarse sand and gravel. Finally, the glacially derived C-Horizon was encountered between 46 cmbs (18.1 inbs) and the base of the unit at 62 cmbs (24.4 inbs); it was described as a layer of light yellowish brown (2.5Y 6/4) fine sand with oxidation. Despite careful excavation and examination, only 2 quartzite secondary thinning flakes were recovered from Unit 11, one from the plowzone (Ap-Horizon) and one from the underlying subsoil (B1-Horizon). Finally, no cultural features were identified within Unit 11.

Unit 12

Unit 12 was placed within the north-central area of the examined portion of Site 22-38 (Locus 2-1) and measured 1 x 1 m (3.3 x 3.3 ft) in size (Figure 85). Phase IB survey and Phase II testing of this part of Site 22-38 (Locus 2-1) resulted in the identification of multiple positive shovel tests just to the north, west, and south of the Unit 12 location. Unit 12 exhibited five soil horizons in profile and was excavated to a

depth of 77 cmbs (30.3 inbs) (Figure 119 and 120). The uppermost soil layer, a developing Ao-Horizon, consisted of a deposit of very dark brown (10YR 2/2) fine sandy loam that reached from 0 to 10 cmbs (0 to 3.9 inbs). The underlying plowzone layer (Ap-Horizon) ranged in depth from 10 to 25 cmbs (3.9 to 10 inbs) and was classified as a deposit of dark brown (10YR 3/3) fine to medium sandy loam. The upper subsoil layer (B1-Horizon) was described as a layer of dark yellowish brown (10YR 3/6) fine to medium sandy silt that extended from 25 to 57 cmbs (10 to 22.4 inbs). The lower subsoil layer (B2-Horizon) was described as a deposit of yellowish brown (10YR 4/6) fine to medium sand with silt and gravel; it reached from 54 to 76 cmbs (22.4 to 29.9 inbs). Finally, the glacially derived C-Horizon was observed from 59 cmbs (23.2 inbs) to the base of the unit at 77 cmbs (19.7 inbs) and consisted of a deposit of light olive brown (2.5Y 5/4) coarse sand and gravel. The excavation of Unit 12 resulted in the recovery of 41 prehistoric artifacts. They are discussed below (Table 14).

Table 14. Archaeological material recovered from Unit 12 within Site 22-38 (Locus 2-1).

Unit	Horizon	Material	Type	Subtype	Total
EU 12	Ap	lithic	quartzite	flake	5
	Ap Total				5
	B1	lithic	quartzite	flake	35
				utilized flake	1
	B1 Total				36
Grand Total					41

Excavation of the plowzone deposit (Ap-Horizon) within Unit 12 resulted in the collection of 5 quartzite secondary thinning flakes. In addition, the underlying subsoil deposit (B1-Horizon) produced 35 quartzite thinning flakes and a single utilized quartzite flake. The latter exhibited evidence of crushing along one of its lateral edges, which is indicative of use on a hard material such as wood, bone, or antler. Finally, no evidence of cultural features was identified within Unit 12.

Unit 13

Unit 13 was placed along the northern edge of the examined portion of Site 22-38 (Locus 2-1) and it measured 1 x 1 m (3.3 x 3.3 ft) in size (Figure 85). This area contained little archaeological material in comparison to western, south western, and far east areas of Site 22-38 (Locus 2-1); nevertheless, the unit was placed in this location to determine if any cultural features existed within this portion of Site 22-38 (Locus 2-1). Unit 13 exhibited four soil horizons in profile and was excavated to a depth of 72 cmbs (28.3 inbs) (Figures 121 and 122). The uppermost soil layer, a developing Ao-Horizon, was encountered between 0 and 5 cmbs (0 and 2 inbs); it was described as a deposit of very dark brown (10YR 2/2) silty fine sand. The underlying plowzone (Ap-Horizon), consisted of a deposit of dark brown (10YR 3/3) silty fine sand that extended from 5 to 21 cmbs (2 to 8.3 inbs). The subsoil (B1-Horizon), which was encountered between 21 and 56 cmbs (8.3 and 22 inbs), was represented by a layer of yellowish brown (10 YR 5/6) silty fine sand. Finally, the glacially derived C-Horizon extended from 49 cmbs (19.3 inbs) to the base of the unit at 72 cmbs (28.3 inbs) and was described as a deposit of light yellow brown (2.5Y 6/4) medium to coarse sand. Despite careful excavation and examination, no archaeological material or evidence of cultural features were contained within Unit 13.

Unit 14

Unit 14, which measured 1 x 1 m (3.3 x 3.3 ft) in size, was located toward the northern edge of the examined portion of Site 22-38 (Locus 2-1) (Figure 85). This area contained a cluster of positive Phase IB survey and Phase II delineation shovel tests to the west and south. The unit exhibited five soil horizons

in profile and was excavated to a depth of 74 cmbs (29.1 inbs) (Figures 123 and 124). A developing Ao-Horizon, which was described as a layer of very dark brown (10YR 2/2) fine sandy loam, was encountered between 0 and 8 cmbs (0 and 3.1 inbs). The underlying plowzone (Ap-Horizon) reached from 8 to 22 cmbs (2.8 to 8.7 inbs) and was classified as a deposit of dark brown (10YR 3/3) fine to medium sandy loam. The upper portion of the subsoil (B1-Horizon) consisted of a layer of dark yellowish brown (10YR 3/6) fine to medium sandy silt that was recorded between 22 and 52 cmbs (8.7 to 20.5 inbs). A second subsoil layer (B2-Horizon), which was classified as a layer of dark yellowish brown (10YR 4/6) fine to medium sandy silt, reached from 43 to 62 cmbs (16.9 to 24.4 inbs) at its thickest point. Finally, the glacially derived C-Horizon was encountered at 59 cmbs (23.2 inbs) and extended to the base of the unit at 74 cmbs (29.1 inbs); it consisted of a layer of light olive brown (2.5Y 5/4) coarse sand and gravel. The excavation of Unit 14 resulted in the recovery of 12 artifacts, which are described below.

The archaeological material recovered from the plowzone (Ap-Horizon) of Unit 14 consisted of 2 quartzite secondary thinning flakes. The underlying subsoil (B2-Horizon) also yielded 1 chert secondary thinning flakes, 1 piece of quartz shatter, 7 quartzite secondary thinning flakes, and 1 quartzite primary reduction flake containing cortex. Despite the recovery of these artifacts, which are indicative of stone tool manufacturing, the excavation of Unit 14 did not result in the identification of any cultural features.

Unit 15

Situated in the southeastern part of the examined portion of Site 22-38 (Locus 2-1), Unit 15 measured 1 x 1 m (3.3 x 3.3 ft in size) and was placed in the vicinity of cluster of other excavation units, as well as Phase IB survey and Phase II delineation shovel tests, that produced hundreds of pieces of lithic chipping debris and the base of a Neville projectile point dating from the Middle Archaic period of Connecticut prehistory (ca., 8,000 to 6,000 B.P.) (Figure 85). Unit 15 exhibited three soil horizons in profile and was excavated to a depth of 72 cmbs (28.3 inbs) (Figures 125 and 126). The plowzone (Ap-Horizon) was described as a layer of dark brown (10YR 3/3) silty fine sand that extended from 0 to 22 cmbs (0 to 8.8 inbs). The underlying subsoil layer (B1-Horizon) consisted of a deposit of yellowish brown (10YR 6/6) silty fine sand that reached from 21 to 52 cmbs (8.3 to 20.5 inbs). Finally, the glacially derived C-Horizon ranged in depth from 50 cmbs (19.7 inbs) to the base of the unit at 72 cmbs (28.3 inbs); it was represented by a layer of light yellowish brown (2.5Y 6/4) medium to coarse sand. Although it produced no archaeological materials, Unit 15 was useful in helping to delineate the eastern site boundary of the examined portion of the Site 22-38 (Locus 2-1).

Despite careful excavation and the analysis of all matrices removed from Unit 15, no archaeological material was recovered. However, a single soil stain was recognized at the interface of the Ap and B1-Horizons within Unit 15 and it was initially thought to represent a series of prehistoric post molds. Feature 7 is described in detail below.

Feature 7

As mentioned above, Feature 7 was identified in Unit 15, and it was described as a grouping of three roughly circular stains that each measured ca., 10 cm (3.9 in) in diameter (Figure 127). The circular stains were observed in plan across the unit floor at the plowzone/subsoil interface at a depth of 22 cmbs (8.6 inbs). Bisection and examination the circular stains revealed that they were related to tree root activity and not ancient or cultural in origin. No additional recordation of these stains was undertaken.

Unit 16

Unit 16, which measured 1 x 1 m (3.3 x 3.3 ft) in size, formed part of an excavation block containing Feature 8 and Feature 10 (see below) (Figure 85). The remainder of the units comprising the larger

excavated area are discussed below. Unit 16 exhibited five soil horizons in profile and was excavated to a terminal depth of 68 cmbs (27.2 inbs) (Figures 128 and 129). The developing Ao-Horizon was described as a layer of very dark brown (10YR 2/2) fine sandy loam that reached from 0 to 8 cmbs (3.2 to 9.4 inbs); it was classified as a deposit of dark brown (10YR 3/3) fine sandy loam. The underlying plowzone (Ap-Horizon) ranged in depth from 8 to 25 cmbs (3.2 to 10 inbs) at its deepest and was classified as a layer of dark brown (10YR 3/3) medium sandy loam. The upper portion of the subsoil (B1-Horizon) was classified as a layer of dark yellowish brown (10YR 4/6) silty fine sand that ranged in depth from 22 cmbs (8.8 inbs) at its shallowest depth to 45 cmbs (7.5 to 17.7 inbs). A second subsoil layer (B2-Horizon) was represented by a deposit of yellowish brown (10YR 5/6) sandy silt with gravel that extended from 45 to 55 cmbs (17.7 to 21.7 inbs). Finally, the glacially derived C-Horizon, was encountered between 55 cmbs (21.7 inbs) and the base of the unit at 68 cmbs (27.2 inbs); it consisted of a deposit of light olive brown (2.5Y 5/4) fine to medium sand. A total of 51 artifacts were recovered from the surface, plowzone (Ap-Horizon), and subsoil (B1-Horizon) of Unit 16, as well as from Feature 8 (Table 15).

Table 15. Archaeological material recovered from Unit 16 within Site 22-38 (Locus 2-1).

Unit	Horizon	Material	Type	Subtype	Total
EU 16	Surface	lithic	chert	flake	1
	Surface Total				1
	Ap	lithic	chert	flake	2
			quartzite	flake	10
	Ap Total				12
	B1	lithic	argillite	flake	1
			chert	flake	1
			quartzite	flake	36
				utilized flake	1
	B1 Total				39
Feature 8 Fill	lithic	quartzite	flake	22	
Feature 8 Fill Total				22	
Grand Total					74

As mentioned above, the excavation of Unit 16 resulted in the collection of 52 artifacts from non-feature contexts. These included 1 chert secondary thinning flake collected from the surface of the unit, as well as 2 chert secondary thinning flakes and 10 quartzite secondary thinning flakes that originated from the plowzone (Ap-Horizon). In addition, the subsoil within Unit 16 yielded 1 argillite secondary thinning flake, 1 chert secondary thinning flake, 36 quartzite secondary thinning flakes, and 1 utilized quartzite flake. The latter exhibited signs of crushing along one of its lateral edges. This type of damage is consistent with use of the artifact to work on a hard item such as wood, antler, or bone. Unit 16 also contained a cultural feature designated as Feature 8, which yielded 22 prehistoric artifacts (see below).

Feature 8

The excavation of Unit 16 revealed evidence of a cultural feature that was designated as Feature 8. This soil stain consisted of a large hearth feature that was first identified at the plowzone/subsoil (Ap-Horizon/subsoil) interface during the excavation of Phase II delineation Shovel Test 2-48. Shovel Test 2-48 contained the feature soil, as well as over 200 quartzite flakes, 5 chert flakes, and 1 large anvil stone in the plowzone. The subsoil layer (B1-Horizon) in Shovel Test 2-48 produced an additional 100 quartzite flakes (these artifacts, and those of the Ap-Horizon were reported above in the Phase II shovel testing

results section). Once Feature 8 identified, excavation of Shovel Test 2-48 was terminated and a larger 1 x 1 m (3.3 x 3.3 ft) unit (Unit 16) was placed over the shovel test in order to expose a larger portion of the feature (Figures 130 and 131).

The observed portion of Feature 8 within Unit 16 measured approximately 60 cm (24 in) from north to south by 80 cm (32 in) from east to west, and it was clear that it extended beyond the limits of the unit to the north and east. The feature matrix was described as a deposit of dark yellowish brown (10YR 3/4) fine sandy loam that contained charcoal, as well as approximately 50 pieces of fire-reddened and fire-cracked rock (FCR). The part of Feature 8 identified within Unit 16 yielded 22 quartzite secondary thinning flakes (see Table 15 above). In addition, the soil contained within Feature 8 was collected for flotation analysis in the laboratory. A profile drawing of the bisected feature soil indicated that it measured approximately 8 cm (3.1 in) in thickness, suggesting that it could have been truncated, perhaps by plow activity, tree clearing, or other farm related activity (Figures 132 and 133). Feature 8 is significant because it demonstrates the use of the area by Native Americans as a camp where stone tools were manufactured and maintained, as well as a location where local resources may have been processed for subsistence.

Unit 16A

Unit 16A was excavated to the north of Unit 16 to further expose the limits of Feature 8. This sampling unit measured 50 x 50 cm (19.7 x 19.7 in) in size. Excavation of Unit 16A resulted in the recovery of 6 quartzite secondary thinning flakes, 2 chert secondary thinning flakes, and a single piece of fire cracked rock from the plowzone (Ap-Horizon). In addition, 3 quartzite secondary thinning flakes were collected from the plowzone of Unit 16A while preparing the west wall of the sampling unit for profiling and photographic documentation. While no archaeological materials were collected from the subsoil of Unit 16A, the matrix associated with Feature 8 was identified within the southeastern corner of this smaller sampling unit, as was a second feature in the northwestern corner. The latter was designated as Feature 10 and it is described below (Figures 134).

Feature 10

Feature 10 was identified in the northwestern portion of Unit 16A, which was placed in the northwest corner of the excavation block containing Feature 8 as described above (Figure 130). Feature 10 consisted of an oval stain containing a deposit of very dark brown (10YR 3/2) loamy fine sand; it was encountered between 15 and 25 cmbs (5.9 to 9.8 inbs) and it yielded a single quartzite thinning flake. Although the function of Feature 10 could not be ascertained, it is likely closely related to the adjacent hearth represented as Feature 8. The excavation block containing Feature 8 and Feature 10 revealed at a minimum, two activities taking place at the site. First is the use of fire for cooking, heat, and protection, and the second the manufacture and maintenance of lithic tools, both of which occurred during the Late Archaic period, ca., 6,000 to 3,900 B.P.

Unit 17

Unit was placed in the western portion of the examined part of Site 22-38 (Locus 2-1) and it measured 1 x 1 m (3.3 x 3.3 ft) (Figure 85). The unit exhibited five soil horizons in profile and was excavated to a maximum depth of 70 cmbs (28 inbs) (Figures 135 and 136). The uppermost soil horizon, a developing Ao-Horizon, was described as a layer of black (10YR 2/1) fine sandy loam that reached from 0 to 18 cmbs (0 to 7.1 inbs). The underlying the plowzone layer (Ap-Horizon) was revealed between 12 to 29 cmbs (4.7 to 11.4 inbs) and was described as a deposit of dark brown (10YR 3/3) medium sandy loam. The subsoil layer (B1-Horizon) was classified as yellowish brown (10YR 5/6) medium sandy silt that was encountered from 24 to 49 cmbs (9.4 to 19.3 inbs). A second subsoil layer (B2-Horizon) was recorded

from 47 to 60 cmbs (18.5 to 23.6 inbs) and described as dark yellowish brown (10YR 4/6) medium to coarse sand. Finally, the glacially derived C-Horizon consisting of light olive brown (2.5Y 5/4) coarse sand and gravel with oxidation was encountered from 59 cmbs (23.2 inbs) to the base of the unit at 74 cmbs (29.1 inbs).

Unit 17 produced a total of 31 artifacts from the plowzone (Ap-Horizon) and underlying subsoil (B1-Horizon) deposits (Table 17). The archaeological material recovered from the Ap-Horizon (plowzone) consisted of 1 argillite Brewerton Side Notched projectile point, 1 basalt ground stone tool fragment, 1 chert secondary thinning flake, 20 quartzite secondary thinning flakes, 1 untyped quartzite projectile point, and 1 untyped quartzite projectile point midsection (Figure 137; C). The recovery of the Brewerton Side Notched projectile point indicates that the Unit 17 area was occupied during the Late Archaic period (ca., 6,000 to 3,900 B.P.). The artifacts collected from the B1-Horizon (subsoil) included 6 quartzite secondary thinning flakes. No evidence of cultural features was identified during the excavation of Unit 17.

Table 16. Archaeological material recovered from Unit 17 within Site 22-38 (Locus 2-1).

Unit	Horizon	Material	Type	Subtype	Total
EU 17	Ap	lithic	argillite	Brewerton Side-Notched projectile point	1
			basalt	ground stone tool fragment	1
			chert	flake	1
			quartzite	flake	20
				untyped projectile point	1
				untyped projectile point midsection	1
	Ap Total				25
	B1	lithic	quartzite	flake	6
	B1 Total				6
	Grand Total				

Unit 18

Due to the fact that Feature 8 extended beyond the limits of Unit 16, as described above, another 1 x 1 m (3.3 x 3.3 ft) excavation unit (Unit 18) was opened to the northeast of Unit 16 to expose more of Feature 8 (Figure 85). This unit overlapped with the northeastern quadrant of Unit 16. Unit 18 also exhibited five horizons in profile. It was excavated to a maximum depth of 74 cmbs (29.1 inbs). The developing Ao-Horizon was described as a layer of very dark brown (10YR 2/2) fine sandy loam that reached from 0 to 10 cmbs (0 to 3.9 inbs) at its deepest point. The underlying plowzone (Ap-Horizon) ranged in depth from 6 to 23 cmbs (2.4 to 9.1 inbs) and was classified as a deposit of dark brown (10YR 3/3) fine sandy loam. The upper portion of the subsoil (B1-Horizon) consisted of a layer of dark yellowish brown (10YR 4/6) silty fine sand that extended from 20 to 55 cmbs (7.9 to 21.7 inbs) at its shallowest and deepest points, respectively. The lower portion of the subsoil (B2-Horizon) was classified as a layer of yellowish brown (10YR 5/6) sandy silt with gravel that reached from 38 to 65 cmbs (15 to 25.6 inbs). The glacially derived C-Horizon consisted of a layer of light olive brown (2.5Y 5/4) fine to medium sand that extended from 50 cmbs (19.7 inbs) to the base of the unit at 74 cmbs (29.1 inbs) (Figure 138). Feature 8 also was recorded in the east wall profile of Unit 18; it appeared as a deposit of dark yellowish brown (10YR 3/4) silty fine sand. Unit 18 produced a total of 58 artifacts from non-feature contexts. They are described below (Table 16).

Table 17. Archaeological material recovered from Unit 18 within Site 22-38 (Locus 2-1).

Unit	Stratum	Material	Type	Subtype	Total	
EU 18	Ap	faunal	bone	calcined fragment	1	
			lithic	chert	flake	4
		quartz		flake	1	
		quartzite		flake	41	
			utilized flake	2		
	Ap Total					49
	B1	lithic	quartzite	flake	8	
				knife base	1	
	B1 Total					9
Grand Total					58	

Archaeological material collected during the excavation of non-feature soils within Unit 18 was recovered from both plowzone (Ap-Horizon) and subsoil (B-Horizon) contexts. The artifacts recovered from the plowzone (Ap-Horizon) consisted of 1 calcined medium to large mammal long bone fragment, 4 chert secondary thinning flakes, 1 quartz secondary thinning flake, 41 quartzite secondary thinning flakes, and 2 utilized quartzite flakes, both of which contained crushed lateral edges indicative of use on a hard substance such as bone, wood, or antler. The subsoil (B1-Horizon) soils within Unit 18 produced 8 quartzite secondary thinning flakes and 1 quartzite knife base. The latter contained a transverse fracture near the hafting element, suggesting that breakage occurred as the knife was used in a twisting motion.

Unit 18A

Since the limits of Feature 8 were not fully exposed through the excavation of Units 16, 16A, and 18, Heritage personnel opened Unit 18A adjacent to the excavation block. It measured 50 x 50 cm (19.7 x 19.7 in) in size was excavated to the southeast of Unit 18. The excavation of Unit 18A resulted in the collection of 10 quartzite secondary thinning flakes and 1 piece of quartzite shatter from the plowzone (Ap-Horizon) deposit, as well as 62 quartzite secondary thinning flakes, 2 chert secondary thinning flakes, and 1 quartzite Brewerton Side Notched projectile point from the B1-Horizon (Figure 137; F). The latter dates from the Late Archaic period (ca., 6,000 to 3,900 B.P.) suggesting that Feature 8 also may have dated from a Late Archaic occupation of the Site 22-38 (Locus 2-1) area.

Unit 19

Unit 19 was positioned within the southernmost part of the examined portion of Site 22-38 (Locus 2-1) and it measured 1 x 1 m (3.3 x 3.3 ft) in size (Figure 85). The unit was placed just to the east of a Phase IB survey shovel test that yielded a quartzite Squibnocket Triangular projectile point that dated from the Late Archaic period (ca., 6,000 to 3,900 BP). The projectile point was recovered from the plowzone (Ap-Horizon) of Phase IB survey Shovel Test 25 along Survey Transect 1. Unit 19 exhibited four soil horizons in profile and was excavated to a terminal depth of 55 cmbs (21.7 inbs) (Figures 139 and 140). The developing Ao-Horizon extended from 0 to 10 cmbs (0 to 3.9 inbs) and was described as a deposit of very dark brown (10YR 2/2) loam. The underlying plowzone (Ap-Horizon) ranged in depth from 10 to 21 cmbs (3.9 to 8.3 inbs) at its deepest point; it was classified as a layer of dark brown (10YR 3/3) fine to medium sandy silt. The subsoil layer (B-Horizon) was interpreted as a deposit of dark yellowish brown (10YR 4/6) fine sandy silt and was encountered between 13 to 43 cmbs (5.1 to 16.9 inbs). Finally, the glacially derived C-Horizon was noted between from 38 cmbs (15 inbs) and the base of the unit at 55 cmbs (21.7 inbs); it consisted of a layer of light olive brown (2.5Y 5/4) coarse sand.

The excavation of Unit 19 resulted in the collection of only seven artifacts, four of which originated from the plowzone (Ap-Horizon). The archaeological material collected from the plowzone (Ap-Horizon) consisted of 1 argillite secondary thinning flake, 1 quartz secondary thinning flake, and 2 quartzite secondary thinning flakes. In addition, the underlying B1-Horizon produced 2 quartzite secondary thinning flakes and a single Snook Kill projectile point fashioned from quartzite. The latter dates from the Late Archaic period (ca., 6,000 to 3,900 B.P.).

Unit 20

Unit 20, which measured 1 x 1 m (3.3 x 3.3 ft) in size, was excavated in the western area of the examined portion of Site 22-38 (Locus 2-1) (Figure 85). It was placed next to Phase II delineation Shovel Test 2-57, which contained examples of fire-cracked rock, a single quartz scraper, and 61 quartz and quartzite secondary thinning flakes, all of which were recovered from the subsoil layer. Unit 20 exhibited three soil horizons in profile and was excavated to a depth of 100 cmbs (39.4 inbs) (Figure 141). The plowzone (Ap-Horizon) consisted of a deposit of dark brown (10YR 3/3) fine sandy loam that reached from 0 to 35 cmbs (0 to 13.8 inbs) at its deepest point. The underlying subsoil (B1-Horizon) was classified as a deposit of yellowish brown (10YR 5/8) silty sand that extended from 31 to 73 cmbs (12.2 to 28.7 inbs). Finally, the glacially derived C-Horizon, was encountered at 66 cmbs (26 inbs) at its shallowest point, and it reached to the base of unit at 100 cmbs (39.4 inbs); it was described as layer light olive brown (2.5Y 5/4) medium to coarse sand and gravel.

The excavation of Unit 20 resulted in the collection of 68 artifacts from the Ap-Horizon (plowzone) and the two subsoil layers (B1 and B2-Horizons). It also contained a single cultural feature that was designated as Feature 9. The archaeological material collected from Unit 20 is discussed below, followed by a description of Feature 9 (Table 18).

Table 18. Archaeological material recovered from Unit 20 within Site 22-38 (Locus 2-1).

Unit	Horizon	Material	Type	Subtype	Total	
EU 20	Ap	lithic	chert	flake	1	
			quartz	flake	1	
			quartzite	flake	10	
	Ap Total				12	
	B1	lithic	quartzite		flake	42
					primary flake	1
					shatter	3
					utilized flake	1
	B1 Total				47	
	B2	lithic	quartzite		flake	9
B2 Total				9		
Grand Total					68	

The artifacts collected from the plowzone (Ap-Horizon) of Unit 20 consisted of 1 chert secondary thinning flake, 1 quartz secondary thinning flake, and 10 quartzite secondary thinning flakes. The underlying B1-Horizon (subsoil) yielded 42 secondary thinning flakes, 1 primary reduction quartzite flake (with cortex), 3 pieces of quartzite shatter, and 1 utilized quartzite flake with edge damage indicative of use on a hard substance (e.g., bone, antler, and/or wood). The archaeological material that originated

from the B2-Horizon included 9 quartzite secondary thinning flake. This unit also contained evidence of a cultural feature that was related to burning (Feature 9); it is discussed below.

Feature 9

As mentioned above, Feature 9 is related to a prehistoric burning episode. It was first identified within the confines of Shovel Test 2-57, which was excavated during the Phase II delineation testing of Site 22-38 (Locus 2-1). Feature 9 was first revealed at 58 cmbs (22.8 inbs), and upon its identification, Unit 20 was placed adjacent to and west of the feature. The unit was then excavated down to the level of the feature to reveal its extent and nature (Figure 142 and 143). Feature 9 was described as containing a deposit of black (10YR 2/1) fine sandy silt, charcoal, and 14 pieces of fire-cracked rock. A profile drawing of the feature after bisection revealed that it extended from 57 to 91 cmbs (22.4 to 36.4 inbs) and penetrated through the B1-Horizon and into the B2-Horizon (Figure 144 and 145). A charcoal sample collected from feature 9 was sent to Beta Analytic for radiometric analysis and it yielded a date of 4160 ± 30 B.P. (4770 - 4581 cal B.P.; 4829 - 4780 cal B.P.), which places Feature 9 within the Late Archaic period (ca., 6,000 to 3,900 B.P.). This date is consistent with the temporally diagnostic artifacts recovered from this part of Site 22-38 (Locus 2-1).

Unit 21

Unit 21, which also measured 1 x 1 m (3.3 x 3.3. ft) in size, was positioned within the south-central area of the examined portion of Site 22-38 (Locus 2-1) (Figure 85). Phase IB survey and Phase II delineation shovel testing in this area revealed that it contained a moderate density of prehistoric archaeological material. Unit 21 exhibited five soil horizons in profile and was excavated to a terminal depth of 60 cmbs (23.6 inbs) (Figures 146 and 147). The uppermost soil layer, a developing Ao-horizon, was described as a deposit of very dark brown (10YR 2/2) fine sandy loam that reached from 0 to 8 cmbs (0 to 3.1 inbs). The underlying plowzone layer (Ap-Horizon) extended from 7 to 22 cmbs (2.8 to 8.7 inbs) and was described as a deposit of dark brown (10YR 3/3) fine sandy loam. The upper subsoil layer (B1-Horizon) consisted of a layer of dark yellowish brown (10YR 4/6) fine to medium sandy silt that was encountered between 21 to 38 cmbs (8.3 to 15 inbs). A second subsoil layer (B2-Horizon), was noted between 36 to 48 cmbs (14.2 to 18.9 inbs) and consisted of a layer of dark yellowish brown (10YR 4/6) medium to coarse sandy silt and gravel. Finally, the glacially derived C-Horizon, was situated between 47 cmbs (18.5 inbs) and the base of the unit at 60 cmbs (23.6 inbs); it is described as light olive brown (2.5Y 5/4) fine to coarse sand and gravel. The Ap-Horizon within Unit 21 yielded only 4 quartzite secondary thinning flakes. No other archaeological material or evidence of cultural features were encountered within Unit 21.

Unit 22

Located in the western area of the examined portion of Site 22-38 (Locus 2-1) and measuring 1 x 1 m (3.3 x 3.3 ft) in size. Unit 21 was excavated to further explore archaeological deposits in this part of the site area (Figure 85). Unit 22 exhibited five soil horizons in profile and was excavated to a terminal depth of 60 cmbs (24 inbs) (Figures 148 and 149). The developing Ao-horizon, which was described as a layer of very dark brown (10YR 2/2) sandy loam, extended from 0 to 10 cmbs (0 to 3.9 inbs). The underlying plowzone (Ap-Horizon) reached from 10 to 21 cmbs (3.9 to 8.4 inbs) and was classified as a deposit of dark brown (10YR 3/3) sandy loam. The subsoil (B1-Horizon), which consisted of a layer of dark yellowish brown (10YR 4/6) sandy silt, was encountered between 21 and 40 cmbs (8.3 and 16 inbs). A second subsoil layer (B2-Horizon) was recorded between 40 to 47 cmbs (16 and 18.8 inbs) and was represented by a deposit of dark yellowish brown (10YR 4/6) medium to coarse sandy silt with gravel. Finally, the glacially derived C-Horizon was revealed at 47 cmbs (18.8 inbs) and reached to the base of the Unit 22 at 60 cmbs (24 inbs); it consisted of a layer of light olive brown (2.5Y 5/4) very fine to coarse sand and gravel.

Unit 22 yielded only eight artifacts from the plowzone (Ap-Horizon) and subsoil (B1-Horizon) deposits. The artifacts that originated from the plowzone consisted of 1 chert secondary thinning flake, 4 quartzite secondary thinning flakes, and a single quartzite utilized flake. The archaeological material collected from the underlying subsoil (B1-Horizon) included 1 quartzite secondary thinning flake and 1 quartzite utilized flake. Both of the utilized flakes collected from Unit 22 exhibited evidence of crushing on their later edges, suggesting that they were used on hard surfaces such as bone, alter, and/or wood. No evidence of cultural features was identified during the excavation of Unit 22.

Unit 23

Unit 23 was placed in the northwestern part of the examined portion of Site 22-38 (Locus 2-1), an area that contained a comparatively low density of artifacts compared to other areas within the locus (Figure 85). The unit, which measured 1 x 1 m (3.3 x 3.3 ft) in size, was excavated to the east of Phase IB Shovel Test 1 along Survey Transect 15. Unit 23 exhibited five soil horizons in profile and was excavated to a depth of 60 cmbs (23.6 inbs) (Figures 150 and 151). The developing Ao-horizon, which was described as a layer of very dark brown (10YR 2/2) fine sandy loam, extended from 0 to 9 cmbs (0 to 3.5 inbs). The underlying plowzone (Ap-Horizon) was encountered between 4 and 17 cmbs (1.6 and 6.7 inbs) and was described as a compact layer of very dark gray brown (10YR 3/3) fine sandy loam. The upper portion of the subsoil layer (B1-Horizon) was encountered from 16 to 35 cmbs (6.3 to 13.8 inbs) and described as dark yellowish brown (10YR 4/6) sandy silt. The lower subsoil (B2-Horizon) ranged in depth from 29 to 45 cmbs (11.4 to 17.7 inbs) and was described as a layer of dark yellowish brown (10YR 3/6) medium to coarse sandy silt with gravel. Finally, the glacially derived C-Horizon was situated between 41 cmbs (16.1 inbs) and the base of the unit at 60 cmbs (23.6 inbs); it was described as a deposit of light olive brown (2.5Y 5/4) very fine to coarse sand.

Unit 23 yielded three artifacts from the B1-Horizon, the upper subsoil layer. They consisted of 2 quartzite secondary thinning flakes and an unidentified projectile point made from quartzite. No cultural features were identified during the excavation of Unit 23.

Unit 24

Unit 24, which measured 1 x 1 m (3.3 x 3.3 ft) in size, was positioned in the easternmost area of the examined portion of Site 22-38 (Locus 2-1). It was excavated near Phase II Shovel Test 2-23, which yielded 7 quartzite secondary flakes from the plowzone (Ap-Horizon) and 117 quartzite secondary thinning flakes from the underlying subsoil layer (B-Horizon) (Figure 85). Unit 24 also was located just to the east of a small block of units (Unit 1 and Unit 3), which produced over 300 pieces of quartzite chipping debris, re-touched flakes, biface fragments, and a quartzite Neville type projectile point base, which dates from the Middle Archaic period (ca. 8,000 to 6,000 B.P.). With the addition of Unit 24, the excavation block was "L" shaped, with Unit 1 to the north, Unit 3 to the south, and Unit 24 to the east of Unit 3.

Unit 24 exhibited five soil horizons in profile and was excavated to a depth of 81 cmbs (31.9 inbs) (Figures 152 and 153). The uppermost soil deposit, a developing Ao-Horizon, was described as a layer of very dark brown (10YR 2/2) sandy loam that reached from 0 to 8 cmbs (0 to 3.1 inbs). The underlying plowzone (Ap-Horizon) was encountered between 8 and 31 cmbs (3.1 and 12.2 inbs) and it was described as a layer of dark brown (10YR 3/3) silty loam. The upper subsoil layer (B1-Horizon) consisted of a deposit of dark yellowish brown (10YR 4/6) fine sandy silt that extended from 27 to 59 cmbs (10.6 to 23.2 inbs). The lower subsoil layer (B2-Horizon) was represented by a deposit of yellowish brown (10YR 5/6) sandy silt with gravel; it ranged in depth from 54 to 69 cmbs (19.3 to 23.2 inbs). Finally, the glacially derived C-Horizon was encountered at 68 cmbs (27.8 inbs) and it was excavated to a maximum

depth of 81 cmbs (31.9 inbs); it consisted of a deposit of light olive brown (2.5Y 5/4) medium to coarse sand with gravel. While no cultural features were identified during the excavation of Unit 24, a total of 62 artifacts were recovered (Table 19). They are discussed below.

Table 19. Archaeological material recovered from Unit 20 within Site 22-38 (Locus 2-1).

Unit	Horizon	Material	Type	Subtype	Total
EU 24	Ap	lithic	quartzite	flake	3
	Ap Total				3
	B1	lithic	quartzite	flake	39
	B1 Total				39
	B2	lithic	quartz	preform	1
			quartzite	flake	18
				shatter	1
	B2 Total				20
Grand Total					62

The plowzone layer (Ap-Horizon) within Unit 24 yielded only 3 quartzite secondary thinning flakes, while the B1-Horizon (subsoil) contained 39 quartzite secondary thinning flakes. In addition the B2-Horizon of Unit 24 (subsoil) produced 1 quartz projectile point preform, 18 quartzite secondary thinning flakes, and 1 piece of quartzite shatter. No evidence of cultural features was identified during the excavation of Unit 24 within Site 22-38 (Locus 2-1).

Summary and Interpretations of Site 22-38 (Locus 2-1)

Site 22-38 (Locus 2-1) is situated in an area that contains an abundance of natural resources, including plentiful water necessary to sustain life but also affords good fishing, as well as the attraction of wild game, fowl, and habitats for sustainable foraging. Site 22-38 (Locus 2-1) contains evidence that suggests that the site was being utilized for the procurement of essential resources, including perhaps raw lithic materials obtained from the surrounding stream beds. The site also contains substantial evidence that stone tools were being manufactured, as well as re-touched and re-sharpened at the site. Evidence was also collected suggesting that the inhabitants of the site were utilizing fire for cooking and security. The fire hearths suggest that the area may have been used as a seasonal or temporary base camp where resources could be procured and tool kits could be assembled or refined.

The site is naturally protected to the northwest by a gully that contains wetlands associated with Blackwell Brook, another important resource. The brook and associated wetlands border the site to the west while an unnamed brook runs from east to west along the southern border of the landform containing Site 22-38 (Locus 2-1). The unnamed stream originates to the northeast of the site and flows south, bordering the eastern edge of the landform before turning west where it eventually merges with Blackwell Brook and ultimately drains into the Quinebaug River. The nearby Quinebaug River provides access to the site but also connects the site to other areas throughout the region and presumably provided a means of networking with other prehistoric groups across the region.

The analysis of the distribution of artifacts and features across the site area revealed a few interesting patterns. On the west side of the site, Unit 7 and Unit 8 contained the remnants of a large burn feature, perhaps a roasting pit, as well as several hundred pieces of lithic chipping debris, fragments of calcined mammal bone, charcoal, and a hammerstone. Within 10 m (32 ft) and to the south of the roasting pit

feature, an excavation contained another hearth feature associated with approximately 50 pieces of fire-cracked rock, hundreds of quartzite flakes, and charcoal. This part of Site 22-38 (Locus 2-1) also yielded a Brewerton Projectile point from the Late Archaic period (ca., 6,000 to 3,900 B.P.), as well as a ground stone tool fragment, a biface, a projectile mid-section, and an abundance of quartzite chipping debris. Units 5 and 6, also located in this general area, produced large amounts of stone tool chipping debris and a few tool fragments. Finally, Unit 20, also located in this part of Site 22-38 (Locus 2-1), contained a hearth feature (Feature 9) that produced charcoal that dated from 4160 ± 30 B.P. (4770 - 4581 cal B.P.; 4829 - 4780 cal B.P.). The combination of the radiocarbon date and the recovery of temporally diagnostic artifacts securely date the western half of the examined portion of Site 22-38 (Locus 2-1) from the Late Archaic period (ca., 6,000 to 3,900 B.P.). Based on the types of artifact and features, as well as their densities, this occupation appears to represent a seasonal base camp and is indicative of the type of occupation described by McBride (1984) as belonging to the Golet Phase.

The central portion of Site 22-38 (Locus 2-1) consists of a relatively flat terrace that is bounded to the south by a low-lying wetland area, possibly partially formed by the unnamed stream to the south. Although flat and well drained, this part of Site 22-38 (Locus 2-1) produced far less archaeological material than the area to the west or the small area located to the east (see below). The general lack of archaeological material and the absence of temporally diagnostic artifacts recovered from this area makes it impossible to determine when this part of Site 2-1 was occupied. It also suggests that this particular location was likely used less intensively during the prehistoric era and may have been occupied on a very short-term basis, perhaps in a task-specific way.

In addition, the area located in the far eastern portion of Site 22-38 (Locus 2-1), which contained Units 1, 3 and 24, clearly represents a distinct occupation from the western part of the site. This area contained substantial evidence of intensive stone tool manufacturing and maintenance within a small, confined area. More than 800 artifacts were collected from intact soils in this area of Site 22-38 (Locus 2-1). This material included a Neville projectile, which dates from the Middle Archaic period (ca., 8,000 to 6,000 B.P.). Thus, the occupation of this part of Site 22-38 (Locus 2-1) clearly predates the area to the west that yielded artifacts and features indicative of a Late Archaic period occupation. Further, the Middle Archaic occupation in the eastern portion of Site 22-39 (Locus 2-1) is limited in size as determined through unit excavation and the completion of Phase IB and Phase II delineation shovel tests. The occupation appears to have been focused on stone tool manufacturing, and it was likely used for a very short period of time, as no associated features (hearths, pits, etc.) were identified during the archaeological excavations. These types of occupations from the Middle Archaic period are relatively uncommon in Connecticut.

Based on the recovered archaeological data and discussion provided above, it is clear that Site 22-38, (Locus 2-1) is eligible for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). It is the professional opinion of Heritage that the archaeological deposits clearly satisfy Criterion D in that they contain data "that have yielded, or may be likely to yield, information important in prehistory or history." It is also the opinion of Heritage that Site 22-38 (Locus 2-1) has produced and still retains archaeological data that fulfill Criterion A, in that they "are associated with events that have made a significant contribution to the broad patterns of our history." That is, future investigation of Site 22-38 (Locus 2-1) will yield information crucial to the understanding of prehistoric Native American settlement and use of the Quinebaug River drainage, regional trends, settlement patterns, and prehistoric tool making; exchange networks between prehistoric Native Americans that lived in the eastern portion of Connecticut and beyond; and an overall better understanding of prehistoric lifeways during the Middle and Later Archaic periods (ca., 8,000 to 3,900 B.P.) in eastern Connecticut.

Based on an understanding of the significance of Site 22-38 (Locus 2-1), Quinebaug Solar, LLC has agreed to completely avoid the central and western portions of the site area during construction by instituting a “construction exclusion area” in these portions of the site (Figure 154). This construction exclusion area will include the portion of Site 22-38 (Locus 2-1) that yielded intact Late Archaic period artifacts and features during the Phase II NRHP eligibility testing and evaluation effort. This area will be fenced off during construction to protect the majority of the site area from construction related impacts. Separately, Quinebaug Solar, LLC also will establish a second construction exclusion area around the small area of Middle Archaic deposits identified within the easternmost portion of Site 22-38 (Locus 2-1) during the Phase II NRHP eligibility testing and evaluation effort. This second construction exclusion area will consist of an area measuring 7.5 x 7.5 m (24.6 x 24.6 ft) in size centered on the excavations that occurred within Units 1, 3, and 24, and will also be fenced off to protect the archaeological deposits in this portion of the site (Figure 154). Finally, Quinebaug Solar, LLC has agreed that any tree clearing that may be necessary within the Site 22-38 (Locus 2-1) area will take place during the winter months when the ground is thoroughly frozen and impenetrable by heavy equipment or falling debris. The tree clearing also will be monitored by professional archaeologists to ensure that no impacts to the construction exclusion areas outlined above will occur. If frozen ground conditions are not met, tree clearing will be accomplished by hand. The remainder of the northeastern portion of Site 22-38 (Locus 2-1), which lies outside the construction exclusion areas and produced only small assemblage of lithic artifacts and no cultural features will be incorporated in the Quinebaug Solar Project as an area of solar panels and associated facilities.

Phase II NRHP Shovel Testing of Site 19-35 (Locus 11-1)

Site 19-35 (Locus 11-1) was identified within a large agricultural field in the northwestern portion of the Development Area (Figures 18 and 155). The site is bordered by a wooded area and Cold Spring Brook to the north, and unnamed stream to the east, a two track farm road and an existing gravel pit to the south, and another agricultural field to the west. The agricultural field containing Site 19-35 (Locus 11-1) is routinely used for growing corn, but was fallow at the time of survey. The site area also is characterized by well-drained sandy loam.

Upon completion of the Phase IB survey, Heritage assessed Site 19-35 (Locus 11-1) as potentially eligible for listing on the NRHP and recommended avoidance or Phase II NRHP eligibility testing and evaluation of the site area prior to construction. Before the Phase II NRHP eligibility testing and evaluation effort was undertaken, Heritage and Quinebaug Solar, LLC prepared a Phase II testing and evaluation plan for review and comment by the CT-SHPO that included delineation shovel testing in the cardinal directions at 7.5 m (26.4 ft) around all positive Phase IB survey shovel tests and the excavation of 15 units measuring 1 x 1 m (3.3 x 3.3 ft) in size to examine artifacts clusters and/or cultural features within the site area. The CT-SHPO agreed with the testing and evaluation plan, and the site examination was initiated during the Spring of 2019.

The Phase II delineation effort, which included the excavation of 58 shovel tests, resulted in the recovery of 28 prehistoric Native American artifacts (Table 20; Figure 155). The artifacts were recovered from the surface of the site area, the Ap-Horizon (plowzone), and the subsoil (B1-Horizon). The artifacts collected from the surface of the site area included 6 chert secondary thinning flakes, 2 quartz secondary thinning flakes, 3 quartzite secondary thinning flakes, 1 piece of quartzite shatter with cortex, 3 rhyolite secondary thinning flakes, and 1 piece of rhyolite that had a worked edge. The artifacts recovered from the Ap-Horizon (plowzone) of Site 19-35 (Locus 11-1) included 3 chert secondary thinning flakes, 1 quartz projectile point of an unidentified type, 6 quartzite secondary thinning flakes, and 1 rhyolite

secondary thinning flake. Finally, excavation of the B1-Horizon (subsoil) completed during the delineation shovel testing resulted in the collection of only 1 quartzite secondary thinning flake. No cultural features were identified during the Phase II NRHP shovel testing of Site 19-35 (Locus 11-1).

Table 20. Archaeological material collected during pedestrian survey and Phase II shovel testing of Site 19-35.

Stratum	Material	Type	Subtype	Total
Surface	lithic	chert	flake	6
		quartz	flake	2
		quartzite	flake	3
			primary shatter	1
		rhyolite	flake	3
			worked chunk	1
Surface Total				16
Ap	lithic	chert	flake	3
		quartz	untyped stemmed projectile point	1
		quartzite	flake	6
		rhyolite	flake	1
Ap Total				11
B1	lithic	quartzite	flake	1
B1 Total				1
Grand Total				28

Results of Unit Excavation Throughout the Site 19-35 (Locus 11-1) Area

A total of 15 units measuring 1 x 1 m (3.3 x 3.3 ft) in size were excavated throughout the Site 19-35 (Locus 11-1) area during the Phase II NRHP testing and evaluation effort. The units were placed throughout the site area and were excavated in order to further isolate the site boundaries, recover a larger sample of archaeological material from the site, expose and interpret the soils stratigraphy within the occupation area, and identify and analyze any cultural features that may have been left behind as a result of the prehistoric occupation of the site.

Unit 1

Unit 1, which measured 1 x 1 m (3.3 x 3.3 ft) in size, was positioned in the southwestern portion of Site 19-35 (Locus 11-1). The purpose of the unit was to further explore soil stains encountered in this part of Site 19-35 (Locus 11-1) during the Phase IB survey (Figure 155). Unit 1 exhibited four soil horizons in profile and was excavated to a depth of 135 cmbs (53 inbs) (Figures 156 and 157). The Ap1-Horizon extended from 0 to 20 cmbs (0 to 8 inbs) and was described as a layer of dark yellowish brown (10YR 4/4) fine to medium sand. It was underlain by a second, older plowzone (Ap2-Horizon) that reached from 20 to 30 cmbs (8 to 12 inbs); it consisted of a deposit of dark yellowish brown (10YR 3/4) medium sand. The Ap2-Horizon was underlain by a redeposited soil horizon that was classified as a dark yellowish brown (10YR 4/4) fine to medium sand mottled with strong brown (7.5YR 5.6) sand with gravel; it ranged in depth from 20 to 40 cmbs (8 to 16 inbs). The subsoil (B1-Horizon) extended from 40 to 43 cmbs (16 to 17.2 inbs) and was characterized by a deposit of yellowish brown (10YR 5/8) silty fine sand mixed with strong brown (7.5YR 5/6) coarse sand and gravel. The glacially derived C-Horizon extended from 43 to 135 cmbs (17.2 to 54 inbs) and consisted of a deposit of light yellowish brown (2.5Y 6/3) silt mottled with pale brown (2.5Y 7/3) very fine sand. The disturbance observed in Unit 1,

characterized by heavily mixed and mottled soils, is most likely related to a combination of slope wash and runoff cutting through this low-lying area and the redeposition of soils, as well as modern activity related to the nearby sand and gravel operation located to the southwest.

Only one artifact was recovered from Unit 1. It was described as a quartzite secondary thinning flake that was recovered from the plowzone layer (Ap-Horizon) at a depth of 10 to 20 cmbs (3.9 to 7.8 inbs). No evidence of prehistoric or historic period cultural features were identified during the excavation of Unit 1 within Site 19-35 (Locus 11-1).

Unit 2

This unit was located along the southern edge of Site 19-35 (Locus 11-1) and it measured 1 x 1 m (3.3 x 3.3 ft) in size (Figure 155). It was excavated to explore a soil stain encountered in nearby Shovel Test 9 along Survey Transect 4 during the Phase IB survey. While this unit did not yield any archaeological materials, it did contain a soil stain that was labeled as Feature 16, which is described below. Unit 2 exhibited four soil horizons in profile and was excavated to a depth of 50 cmbs (19.7 inbs) (Figures 158 and 159). The plowzone (Ap1-Horizon) was described as a layer of brown (10YR 5/3) silty fine to medium sand that reached from 0 to 19 cmbs (0 to 7.5 inbs). An underlying historic plowzone (Ap2-Horizon) was encountered between 13 and 31 cmbs (5.1 and 12.2 inbs) and was described as a layer of dark brown (10YR 3/3) fine to medium sand. The B1-Horizon was classified as a deposit of strong brown (7.5YR 5/6) silty fine sand that ranged in depth from 21 to 40 cmbs (8.3 to 15.7 inbs). Finally, the glacially derived C-Horizon extended from 35 cmbs (13.8 inbs) to the base of the unit at 50 cmbs (19.7 inbs); it was characterized as a layer of light gray (2.5Y 7/2) medium sand and gravel with oxidation.

Feature 16

This soil stain was identified in the southern portion of Site 19-35 (Locus 11-1) during the Phase IB survey; it was detected during the excavation of Shovel Test 9 on Survey Transect 4 (Figure 158). The feature was first noted at a depth of 14 cmbs (6 inbs) and encompassed the entirety of the floor of the shovel test at this depth. The feature matrix was described as a deposit of mottled dark brown (10YR 3/3) sandy loam and dark yellowish brown (10YR 4/6) silty sand mixed with charcoal flecking throughout (Figures 158 and 159). Excavation of the feature matrix during the Phase IB survey resulted in the collection of a single chert secondary thinning flake. A bisection of the circular feature revealed that it was larger than the shovel test, as it was observed as a 13 cm (5 in) thick layer in all four walls of the shovel test. Feature 16 was further investigated during the Phase II NRHP testing and evaluation effort.

The excavation of Unit 2, which was placed in close proximity to Shovel Test 9 on Survey Transect 4, resulted in the identification of an anomalous layer of mottled soil corresponding to a historic plowzone layer found beneath the modern plowzone layer. The historic plowzone layer (Ap2-Horizon) exhibited plow scars, some of which extended into the underlying subsoil (B1-Horizon). The anomalous layer was identified as a mixture of soils related to previous plowing; it also was clear that some of the soil in the feature was comprised of tailings and machine manipulated deposits resulting from a sand and gravel quarry operation situated to the southwest. Thus, the soil stain observed in Unit 2 and within Shovel Test 9 along Survey Transect 4 were associated with recent land disturbing activity and not considered either ancient or significant.

Unit 3

Unit 3 measured 1 x 1 m (3.3 x 3.3 ft) in size and was positioned in the southern portion of Site 19-35 (Locus 11-1) (Figure 155). It was excavated to further explore a soil stain encountered during the Phase IB survey; it was designated as Feature 15. The soil stain was first noted within Shovel Test 9 along

Survey Transect 6 and it is described in detail below. Unit 3 exhibited five soil horizons in profile and was excavated to a depth of 84 cmbs (33.1 inbs) (Figures 160 and 161). The plowzone (Ap-Horizon) was described as a layer of dark yellowish brown (10YR 3/6) silty very fine sand that ranged in depth from 0 to 20 cmbs (0 to 7.9 inbs). Underlying the plowzone was an anomalous soil layer labeled as Feature 15; it was recorded as a possible bowl-shaped pit feature. This feature was encountered at the base of the plowzone (Ap-Horizon) at a depth of 14 to 50 cmbs (5.5 to 19.7 inbs). The B1-Horizon (subsoil) was encountered between 31 to 44 cmbs (12.2 to 17.3 inbs) and it was described as a deposit of dark yellowish brown (10YR 4/6) silty very fine sand. A second subsoil layer (B2-Horizon) was recorded between 42 to 68 cmbs (16.5 to 26.8 inbs) and was described as a layer of light olive brown (2.5Y 5/6) fine sand with a trace of silt. Finally, the glacially derived C-Horizon layer was recorded between 58 cmbs (22.9 inbs) and the base of the unit at 84 cmbs (33.1 inbs); it consisted of a deposit of light gray (2.5Y 7/2) medium sand and gravel with oxidation.

While the excavation of Unit 3 failed to yield any archaeological material, a Susquehanna Broadspear projectile point was recovered from the plowzone deposit within Shovel Test, 9 along Transect 6, which was encompassed by the unit excavation during the Phase II NRHP testing and evaluation effort. The projectile point was made from a brown jasper and it was beveled in opposite directions along the lateral edges, most likely for re-use as a drill or boring tool (Figure 139; I). This artifact dated from the Terminal Archaic period of Connecticut prehistory (ca., 3,900 to 2,700 B.P.).

Feature 15

This soil stain was initially recorded during the excavation of Shovel Test 9 along Survey Transect 6 during the Phase IB survey. The feature was identified at the base of the plowzone (Ap-Horizon) at a depth of 20 cmbs (7.8 inbs) and it appeared as a deposit of dark brown (10YR 3/3) sandy loam mottled with dark yellowish brown (10YR 4/6) silty fine sand and flecks of charcoal. It covered the entirety of the bottom of the shovel test at this depth. Excavation of the feature revealed that it terminated at approximately 30 cmbs (11.8 inbs), where it appeared as a band of soil in all four walls of the shovel test (Figures 162 and 163). No artifacts were recovered from this deposit during Phase IB survey and the feature was interpreted as the remains of a possible burning episode.

The feature was further investigated during the Phase II NRHP testing and evaluation of Site 19-35 (Locus 11-1). As referenced above, this involved the excavation of Unit 3 in order to further expose and examine Feature 15. The overlying plowzone layer transitioned into the feature matrix at a depth of approximately 13 cmbs (5.1 inbs). Excavation of the feature matrix resulted in the identification of moderate amounts of charcoal. In order to expose more of the feature, an additional Unit (Unit 6; see below) was placed to the north of Unit 3, creating a 1 x 2 m (3.3 x 6.6 ft) excavation block. A plan view of Unit 6 at 17 cmbs (6.6 inbs) shows Unit 3 to the south, the feature soil, and the Phase IB shovel test (Figure 166). A sample of charcoal taken from Feature 15 was submitted to Beta Analytic for a radiometric dating to determine if the feature was prehistoric in origin. The results of the dating showed that the collected charcoal dated from 110 years \pm 30 B.P., revealing that Feature 15 was not ancient in origin but instead represented a burning episode resulting from a more recent event.

Unit 4

This excavation unit measured 1 x 1 m (3.3 x 3.3 ft) in size and was located along the southern edge of Site 19-35 (Locus 11-1). It was excavated to examine the soil stratigraphy and a cluster of artifacts identified during the Phase IB survey (Figure 155). Unit 4 exhibited five soil horizons in profile and was excavated to a depth of 72 cmbs (28.3 inbs) (Figures 164 and 165). The plowzone (Ap1-Horizon) was described as a layer of dark brown (10YR 3/3) silty fine sand that reached from 0 to 23 cmbs (0 to 9.1

inbs). An underlying historic plowzone layer (Ap2-Horizon) ranged in depth from 18 to 31 cmbs (7.1 to 12.2 inbs) and was classified as a layer of dark yellowish brown (10YR 3/4) silty fine sand. The B1-Horizon (subsoil) was classified as a deposit of brown (10YR 6/8) fine sandy silt that ranged in depth from 33 to 46 cmbs (13 to 18.1 inbs). The lower subsoil (B2-Horizon) was characterized by a layer of yellowish brown (10YR 5/6) silty very fine sand that reached between 44 to 63 cmbs (17.3 to 24.8 inbs). Finally, the glacially derived C-Horizon, was situated between 63 cmbs (24.8 inbs) and the base of the unit at 77 cmbs (19.7 inbs); it consisted of light olive brown (2.5Y 5/4) silty very fine sand with oxidation. The only artifact recovered from Unit 4 was a single quartzite secondary thinning flake; it recovered from the historic plowzone (Ap2-Horizon). Unit 4 failed to yield any intact archaeological deposits or evidence of cultural features.

Unit 5

This excavation unit was located within the northern limits of Site 19-35 (Locus 11-1) and it measured 1 x 1 m (3.3 x 3.3 ft) in size (Figure 155). Unit 5 was excavated in order to further explore a cluster of artifacts found in the northern part of Site 19-35 (Locus 11-1) during the Phase IB survey, as well as to investigate a soil stain that was designated as Feature 1 during Phase IB survey. Unit 5 exhibited two soil horizons in profile and was excavated to a depth of 54 cmbs (21.6 inbs) (Figures 166 and 167). The plowzone layer (Ap-Horizon) extended from 0 to 32 cmbs (0 to 12.8 inbs) at its deepest and was classified as a deposit of dark brown (10YR 3/3) fine to medium sandy loam mottled with dark yellowish brown (10YR 4/6) silty fine to medium sand. The glacially derived C-Horizon ranged in depth from its shallowest point at 20 cmbs (7.9 inbs) to the base of the unit at 54 cmbs (21.6 inbs).

The excavation of Unit 5 resulted in the collection of 11 quartzite secondary thinning flakes, 2 chert secondary thinning flakes, and 1 rhyolite secondary thinning flake. All of the artifacts were recovered from the plowzone (Ap-Horizon). The excavation of Unit 5 did not result in the recovery of any temporally/functionally diagnostic artifacts. Finally, after the excavation of Unit 5, it was clear that what was labeled as Feature 1 during the Phase IB survey consisted of plow scar and was not prehistoric in origin.

Unit 6

Unit 6 measured 1 x 1 m (3.3 x 3.3 ft) in size and, as mentioned above, was placed immediately to the north of Unit 3 in order to further expose Feature 15, which was ultimately determined to be a modern disturbance (Figure 155). A separate soil stain labeled Feature 22 also was identified within Unit 6; it is described in detail below. Unit 6 exhibited six soil horizons in profile and was excavated to a depth of 80 cmbs (31.5 inbs) (Figures 168 and 169). The plowzone (Ap-Horizon) was described as a deposit of dark yellowish brown (10YR 3/6) silty very fine sand that reached from 0 to 21 cmbs (0 to 8.3 inbs). The second identified soil layer was labeled as Feature 15, which was observed from 19 to 30 cmbs (7.6 to 12 inbs) in the north wall profile of abutting excavation unit, Unit 3. The subsoil layer (B1-Horizon) was classified as a deposit of dark yellowish brown (10YR 4/6) silty very fine sand that ranged in depth from 28 to 37 cmbs (11 to 17.3 inbs). The lower subsoil layer (B2-Horizon), was encountered between 37 to 62 cmbs (14.6 to 24.4 inbs) and was classified as a layer of light olive brown (2.5Y 5/6) fine sand with a trace of silt. The glacially derived C-Horizon was recorded between 62 cmbs (22.9 inbs) and the base of the unit at 80 cmbs (31.5 inbs); it was characterized by a layer of light gray (2.5Y 7/2) medium sand and gravel with oxidation. Finally, the sixth soil horizon was recorded as Feature 22, a burn episode that was noted within the subsoil; it is described below. Unit 6 contained 1 quartzite flake recovered from the B1-Horizon (subsoil) at a depth of 20 to 30 cmbs (7.8 to 11.8 inbs). Despite the field effort, the excavation of Unit 6 did not result in the recovery of any temporally/functionally diagnostic artifacts.

Feature 22

This feature was identified during the excavation of Unit 6. It consisted of an amorphous stain that was described as a deposit of strong brown (7.5YR 5/6) silty very fine sand (Figures 170 and 171). The stain was observed in the northwest corner of Unit 6 and extended to 35 cmbs (13.7 in) in the north wall of the unit and to 40 cmbs (15.7 inbs) in the west wall of Unit 6. It extended to an overall depth of 48 cmbs (18.8 inbs), and was treated as an oxidized soil that may have been related to a burn episode. However, excavation of the stain and its proximity to Feature 15 (a disturbed soil deposit), revealed that Feature 22 is either closely associated with Feature 15 or has been impacted by activities associated with those that formed Feature 15 (farming or sand and gravel operations). Feature 22 was not considered prehistoric in origin and no additional examination of it was recommended.

Unit 7

Unit 7 measured 1 x 1 m (3.3 x 3.3 ft) in area and was excavated in the central portion of Site 19-35 (Locus 11-1) in order to further examine a cluster of artifacts noted during the Phase IB survey (Figure 155). Unit 7 exhibited three soil horizons in profile and was excavated to a depth of 68 cmbs (26.8 inbs) (Figures 172 and 173). The plowzone layer (Ap-Horizon) extended from 0 to 27 cmbs (0 to 10.8 inbs) and was described as dark yellowish brown (10YR 3/4) silty fine sand. The underlying subsoil layer (B1-Horizon) was classified as a layer of yellowish brown (10YR 5/8) silty medium sand that ranged in depth from 20 to 40 cmbs (7.9 to 16 inbs). The glacially derived C-Horizon was excavated to a depth of 64 cmbs (25.6 inbs) and was characterized by a layer of light yellowish brown (2.5Y 6/4) medium sand. The excavation of Unit 7 resulted in the recovery of 6 chert secondary thinning flakes, 1 modified chunk of quartz, 1 quartzite secondary thinning flake, and 1 rhyolite secondary thinning flake. All of these were recovered from the plowzone layer (Ap-Horizon). No evidence of cultural features was noted during the excavation of Unit 7.

Unit 8

Unit 8 was situated in the north-central portion of Site 19-35 (Locus 11-1) and it was excavated to examine a cluster of artifacts identified in that part of the site during the Phase IB survey (Figure 155). This unit measured 1 x 1 m (3.3 x 3.3 ft) in size, exhibited five soil horizons in profile, and was excavated to a depth of 90 cmbs (35.4inbs) (Figures 174 and 175). The plowzone (Ap-Horizon) consisted of a layer of dark brown (10YR 3/3) silty fine sand that ranged in depth from to 26 cmbs (0 to 10.2 inbs). Immediately beneath the plowzone in the southeastern portion of Unit 8 was a thin layer of disturbed soil that reached from 11 to 20 cmbs (4.3 to 7.8 inbs); it was characterized as a deposit of dark gray brown (10YR 3/2) fine sandy loam mottled with dark brown (10YR 3/3) fine sandy loam and dark yellow brown (10YR 4/6) silty fine sand and flecks of charcoal. The B1-Horizon (subsoil) was described as a layer of dark yellowish brown (10YR 4/6) silty fine sand that extended from 20 to 50 cmbs (8 to 19.7 inbs). The underlying B2-Horizon (subsoil) was classified as a layer of yellowish brown (10YR 5/8) silty fine sand that extended from 38 to 62 cmbs (15 to 24.4inbs). Finally, he glacially derived C-Horizon extended to a maximum depth 90 cmbs (35.4 inbs) and was represented by a deposit of light olive brown (2.5Y 5/4) fine sand with oxidation.

Artifacts recovered from Unit 8 include 1 chalcedony secondary thinning flake, 1 secondary thinning chert flake, and 1 quartzite secondary thinning flake. These items were collected from the disturbed plowzone layer (Ap-Horizon). Careful inspection of the disturbed layer of soil at the base of the plowzone suggested that it was the result of bioturbation and not cultural in origin. No other cultural features were identified during the excavation of Unit 8.

Unit 9

Unit 9 measured 1 x 1 m (3.3 x 3.3 ft) in size and was excavated in the northern portion of Site 19-35 (Locus 11-1) (Figure 155). It was placed in this location to examine the northern extent of Site 19-35 (Locus 11-1). It exhibited only two soil horizons in profile and was excavated to a depth of 45 cmbs (18 inbs) (Figures 176 and 177). The plowzone (Ap-Horizon) was classified as a deposit of dark yellowish brown (10YR 3/6) silty fine sand that reached from 0 to a maximum of 26 cmbs (0 to 190.4 inbs); it contained deep plow scars. The plowzone (Ap-Horizon) was underlain by the glacially derived C-Horizon, which ranged in depth from an average of 26 cmbs (10.4 inbs) to a maximum of 45 cmbs (18 inbs). This soil horizon consisted of a deposit of light yellowish brown (2.5Y 6/3) fine to medium sand. The soil profile for Unit 9 clearly demonstrates that the subsoil layer has been destroyed. This loss of the subsoil is likely associated with the nearby sand and gravel operation; it is also possible that it was plowed away over the years. The excavation of Unit 9 resulted in the collection of 6 quartzite secondary thinning flakes, all of which were recovered from the disturbed plowzone layer (Ap-Horizon). No cultural features were identified within Unit 9.

Unit 10

This excavation unit was placed within the central portion of Site 19-35 (Locus 11-1) to examine the artifact density in this part of the site (Figure 155). It measured 1 x 1 m (3.3 x 3.3 ft) in size, exhibited four soil horizons in profile, and reached to a maximum depth of 60 cmbs (24 inbs) (Figures 178 and 179). The plowzone layer (Ap-Horizon) consisted of a deposit of dark yellowish brown (10YR 4/4) fine sandy silt that was encountered between the ground surface and a maximum depth of 28 cmbs (0 to 11.2 inbs). The underlying subsoil layer (B1-Horizon) extended from 16 to 34 cmbs (6.3 to 13.4 inbs) and was classified as a layer of yellowish brown (10YR 5/8) fine sand with a trace amounts of silt. A second subsoil layer (B2-Horizon) was characterized by a layer of yellow (10YR 7/6) fine sand that reached from 30 to 50 cmbs (12 to 20 inbs). Finally, the glacially derived C-Horizon was identified between 40 cmbs (16 inbs) and the base of the unit at 60 cmbs (24 inbs); it was described as deposit of light yellowish brown (2.5Y 6/4) very fine sand. Unit 10 did not produce any archaeological material or evidence of cultural features.

Unit 11

Unit 11 was located in the northernmost part of Site 19-35 (Locus 11-1), measured 1 x 1 m (3.3 x 3.3 ft) in area, was excavated to explore the archaeological deposits and artifact distribution within the northern portion the site area (Figure 155). Unit 11 exhibited three soil horizons in profile and was excavated to a depth of 68 cmbs (27.2 inbs) (Figures 180 and 181). The plowzone (Ap-Horizon) was classified as a deposit of dark yellowish brown (10YR 4/4) silty fine sand that reached from 0 to 14 cmbs (0 to 5.6 inbs). Underlying the plowzone (Ap-Horizon) was a layer of fill that consisted of a mixture re-deposited plowzone soil, subsoil, and glacially derived C-Horizon materials. The re-deposited materials were characterized by lenses of pale brown (2.5Y 7/4) coarse sand, dark yellowish brown (10YR 3/6) fine sandy silt, and dark yellowish brown (10YR 4/6) fine to coarse sand mixed with gravel; they extended from 14 cmbs (5.5 inbs) to the base of the northern portion of the excavation unit at 68 cmbs (27.2 inbs). The final soil horizon identified was the glacially derived C-Horizon, which was located in the southeastern portion of the unit and ranged in depth from 27 cmbs (10.6 inbs) to the base of the unit at 68 cmbs (27.2 inbs). It was represented by a layer of pale brown (10YR 6/3) very fine sand. The excavation of the plowzone deposit (Ap-Horizon) within Unit 11 resulted in the recovery of 3 quartzite secondary thinning. No cultural features were identified within Unit 11.

Unit 12

Unit 12 measured 1 x 1 m (3.3 x 3.3 ft) in size and was excavated in the northeastern portion of Site 19-35 (Locus 11-1) (Figure 155). It was placed in this location to examine the artifact distribution and depositional context of this part of Site 19-35 (Locus 11-1). Unit 12 exhibited four soil horizons in profile and was excavated to a depth of 80 cmbs (31.5 inbs) (Figures 182 and 183). The plowzone (Ap-Horizon) consisted of a layer of dark brown (10YR 3/3) fine to medium sandy loam and was noted between 0 and 23 cmbs (0 and 9.1 inbs). The underlying subsoil layer (B1-Horizon) was represented by a deposit of dark yellowish brown (10YR 4/6) silty fine to medium sand situated between an average depth of 19 to 48 cmbs (7.5 to 18.9 inbs). A second subsoil layer (B2-Horizon) extended from 48 to 67 cmbs (18.9 to 26.4 inbs) and was described as a layer of yellowish brown (10YR 5/4) silty fine to medium sand. Finally, the glacially derived C-Horizon consisted of a layer of light olive brown (2.5Y 5/4) fine to medium sand with oxidation and was situated between 67 cmbs (16.5 inbs) and the base of the unit at 80 cmbs (31.5 inbs). The excavation of Unit 12 resulted in the collection of 4 chert secondary thinning flakes from the plowzone (Ap-Horizon). No evidence of cultural features was identified within Unit 12.

Unit 13

Unit 13 measured 1 x 1 m (3.3 x 3.3 ft) in size was situated in the eastern portion of Site 19-35 (Locus 11-1) (Figure 155). The purpose of the unit was to examine the artifact density and soil stratigraphy in the eastern portion of the site. Unit 13 exhibited four soil horizons in profile and was excavated to a depth of 60 cmbs (24 inbs). The plowzone layer (Ap-Horizon) was encountered between 0 to 24 cmbs (0 to 9.4 inbs) and was described as a deposit of dark brown (10YR 3/3) fine sandy loam. The underlying subsoil (B1-Horizon) extended from 22 to 24 cmbs (8.8 to 9.4 inbs) and was classified as a layer of yellowish brown (10YR 5/6) silty fine to medium sand. A second subsoil layer (B2-Horizon) was described as a layer of brownish yellow (10YR 6/6) silty fine sand that extended from 25 cmbs (10 inbs) to a maximum depth of 55 cmbs (22 inbs). The lowest soil horizon reached between 46 cmbs (18.1 inbs) and the base of the excavation unit at 60 cmbs (24 inbs); it represented the glacially derived C-Horizon, which was classified as a layer of light olive brown (2.5YR 5/4) fine sand with a trace of silt. Unit 13 yielded five artifacts from the plowzone (Ap-Horizon). They consisted of 3 chert secondary thinning flakes, 1 quartzite secondary thinning flake, and 1 rhyolite secondary thinning flake. In addition to the artifacts recovered from plowzone (Ap-Horizon), a feature was identified at the interface of the Ap/B1-Horizons. It measured approximately 30 cm (12 in) in depth and contained a deposit of brown (10YR 4/3) fine sandy loam mottled with brownish yellow (10YR 6/6) fine sand and strong brown (7.5TR 4/6) silty fine sand. It was designated as Feature 20 and it is described below.

Feature 20

As mentioned above, this soil stain was first revealed at the interface of the Ap/B1-Horizons in Unit 13. It measured approximately 15 cm (6 in) in diameter and was interpreted as a possible post mold. The feature matrix appeared as mix of soils, including brown (10YR 4/3), brownish yellow (10YR 6/6), and strong brown (7.5TR 4/6) fine sand sandy loams (Figure 184). After identification and recordation of the feature plan view, it was bisected and determined to reach to a depth of 45 cmbs (18 inbs); however, the profile of this feature did not taper to a point as expected with a post mold (Figure 185). Thus, its actual function could not be determined. Nevertheless, since Feature 20 was identified less than 50 cm (19.6 cm) from Feature 21, a pit feature and contained similar soil types, colors, and texture (see below), it was interpreted as possibly cultural in origin.

Unit 14

Unit 14 measured 1 x 1 m (3.3 x 3.3 ft) in area and was excavated directly south of Unit 13 to further investigate the area containing Feature 20 (Figure 155). This unit exhibited four soil horizons in profile

and was excavated to a depth of 66 cmbs (26 inbs) (Figures 186 and 187). The plowzone layer (Ap-Horizon) was classified as a deposit of dark brown (10YR 3/3) fine sandy loam reached from the surface to a maximum depth of to 23 cmbs (0 to 9 inbs) in the northern part of the excavation unit. The underlying subsoil layer (B1-Horizon) extended from 15 to 23 cmbs (6 to 9.2 inbs) and consisted of a layer of yellowish brown (10YR 5/6) silty fine to medium sand that was confined to the southern portion of Unit 14. A second subsoil layer (B2-Horizon) was represented by a deposit of brownish yellow (10YR 6/6) silty fine sand that reached to 50 cmbs (20 inbs). The glacially derived C-Horizon was classified as a layer of light olive brown (2.5YR 5/4) fine sand mixed with traces of silt; it ranged in depth from 50 to 66 cmbs (20 to 26 inbs).

Artifacts recovered from general soil matrix of Unit 14 consisted of 2 chert secondary thinning flakes, 1 quartz secondary thinning flake, and 1 secondary thinning quartzite flake collected from the plowzone layer (Ap-Horizon), as well as 2 chert secondary thinning flakes that originated from the upper subsoil layer (B1-Horizon). In addition, Unit 14 contained a cultural feature that was designated as Feature 21. It also contained two small circular stains that were thought to possibly represent post molds upon first identification; however, examination of them indicated that they were not cultural in origin. Feature 21 is discussed below.

Feature 21

Feature 21 was identified at the junction of Units 13 and 14 (Figures 188 through 192). The feature exhibited a circular shape in plan and measured approximately 50 cm (18.5 to 22.4 in) in diameter. The feature matrix was mostly contained within Unit 14 but a small portion of it was recorded within the southernmost portion of Unit 13. The feature was bisected and the profile drawing showed that it contained a mixture of dark yellow brown (10YR 4/4) silty fine to medium sand/charcoal flecking, dark yellowish brown (10YR 4/6) silty fine sand with charcoal flecking, and black (10YR 2/1) fine sandy loam mottled dark brown (10YR 3/3) fine sandy loam (Figures 191 through 195). The feature was pit shaped and measured approximately 30 cm (12 in) from in depth. Careful examination of the feature matrix resulted in the recovery 14 chert secondary thinning flakes. In addition, a charcoal sample was collected from the basal layer of the feature and sent to Beta Analytic for radiometric dating. The sample returned a date of 3,600 years \pm 30 B.P. (3980 - 3836 cal B.P.), indicating that Feature 21 was produced and used during the Terminal Archaic period of Connecticut prehistory, which spanned from ca., 3,900 to 2,700 years ago.

Unit 15

Unit 15 measured 1 x 1 m (3.3 x 3.3 ft) in size and was placed in the northeastern portion of Site 19-35 (Locus 11-1) (Figure 155). It was excavated in the vicinity of Unit 13 and Unit 14, both of which contained cultural features. Unit 15 exhibited three horizons in profile and was excavated to a depth of 70 cmbs (27.6 inbs) (Figure 193 and 194). The plowzone layer (Ap-Horizon) was represented by a deposit of dark brown (10YR 3/3) fine sandy loam and was noted between 0 to 30 cmbs (0 to 12 inbs). The underlying subsoil (B1-Horizon) was encountered between 25 and 59 cmbs (10 and 23.2 inbs); it was described as a deposit of brownish yellow (10YR 6/6) silty fine sand. The glacially derived C-Horizon was revealed at 59 cmbs (23.2 inbs) and extended to the base of the unit at 70 cmbs (27.6 inbs); it was classified as a layer of light olive brown (2.5Y 5/4) fine sand with a trace of silt and oxidation. Although no cultural features were encountered in Unit 15, the unit did yield 4 chert secondary thinning flakes, all of which were recovered from the plowzone layer (A-Horizon).

Results of Mechanical Stripping within Site 19-35 (Locus 11-1)

Heritage personnel completed Phase II NRHP eligibility testing and evaluation of Site 19-35 (Locus 11-1) in April of 2019 and determined that while most of the site contained previous impacts due to agricultural activities, erosion, and sand and gravel operations, as well as low density archaeological deposits, one area in the eastern portion of the site was characterized by an intact pit feature that yielded charcoal and chert debitage resulting from prehistoric tool manufacturing and/or maintenance. The charcoal returned a radiocarbon date of 3600 +/- 30 B.P. (3980 - 3836 cal B.P.), placing the occupation of this part of the site firmly within the Terminal Archaic period of Connecticut prehistory. This date also was consistent with the temporally diagnostic the Susquehanna Broadspear projectile point that was recovered from Unit 3 to the west. Based on the recovery of artifacts from Feature 21 and the corresponding radiocarbon date, it was determined that this portion of Site 19-35 (Locus 11-1) contained prehistoric deposits in subsoil contexts. Heritage personnel consulted with the CT-SHPO and the staff of that agency recommended that mechanical stripping of the portion of the Site 19-35 (Locus 11-1) that contained Feature 21 was preferable to a large data recovery effort. The remainder of this section discusses the details of the mechanical stripping and the results.

The primary purpose of the mechanical stripping was to remove the plowzone and identify any underlying prehistoric Native American features (i.e., hearths, pits, post molds, etc.) that may have existed within the eastern portion of Site 19-35 (Locus 11-1) (Figures 195 through 197). This was achieved through monitored mechanized stripping, as well as hand excavation and shovel skimming throughout an area measuring approximately 15 x 15 m (50 x 50 ft) in size centered on the location of Feature 21, the pit feature described above. This effort was conducted between May 28 and May 31, 2019 and it was executed using a mini-excavator equipped with a 1.2 meter (4-ft) wide “clean-up” bucket attachment. All stripping was conducted under the guidance of archaeologists from Heritage. The use of the flat blade on the clean-up bucket was preferable to a toothed bucket because it allowed for smooth, even passes across the soil plane, making it easier to detect subtle changes in color and/or texture that may have signaled the presence of soil staining and/or cultural features. In addition, bucket passes skimmed off no more than 10 cm (3.9) inches at a time.

Because of the environmental sensitivity of the project area, mechanized stripping and soil stockpiling was staged in order to control topsoil segregation and minimize erosion due to wind or rain. During mechanical stripping, the 15 x 15 m (50 x 50 ft) area was divided into eastern and western halves. The plowzone layer was carefully removed from the east half and stockpiled. Then the same procedure was applied to the west side of the search area. Once the plowzone layer was mostly removed, the exposed subsoil layer was carefully shovel skimmed by hand in order to identify any cultural features present at the plowzone/subsoil interface. Once identified, cultural features or soil stains were drawn and photographed prior to excavation and examination. The mechanical stripping at Site 19-35 (Locus 11-1) resulted in the identification of three soil stained, which were designated as Feature S1, Feature S2, and Feature S3. Each of them is described in turn below.

Feature S1

This soil stain consisted of two amorphous patches of oxidized soil that were noted in the western portion of the stripped area at the base of the plowzone (Ap-Horizon) at a depth of 20 cmbs (7.8 in) (Figure 198). The oxidized soil areas consisted of deposits of strong brown (7.5YR 4/6) silty fine sand. The first area measured approximately 70 x 80 cm (27.5 x 31.4 in) in size, while the second area of oxidized soil measured roughly 60 x 60 cm (23.6 x 23.6 in) in size (Figure 202). Once bisected, a profile of Feature S1 soil revealed that it had a depth of only 12 cm (4.7 in) (Figure 199). No prehistoric Native

American archaeological material was detected in association with Feature S1. Thus, it could not be definitively assigned as cultural in origin.

Feature S2

This soil stain was encountered during mechanical stripping in area to the north of Feature S1. It was described as an amorphous mixture of soil consisting mainly of very dark grayish brown (10YR 3/3) silty sand and a very small amount of charcoal flecking. The soil stain was encountered at the top of the subsoil layer (B1-Horizon) at a depth of 20 cmbs (7.8 inbs) and it encompassed an area that measured approximately 30 cm (11.8 in) from north to south by 60 cm (23.6 in) east to west (Figure 200). Careful hand excavation of Feature S2 resulted in the collection of 1 chert secondary thinning flake and 1 argillite secondary thinning flake. A profile drawing of the feature revealed that it measured approximately 26 cm (10.2 in) in thickness; however, both plow scars and bioturbation appear to have impacted the feature soil in some areas (Figure 201). Feature S2 was interpreted as possibly representing the truncated remains of a burned area.

Feature S3

This soil stain was encountered along the easternmost edge of the machine stripping area within Site 19-35 (Locus 11-1). Once revealed at the top of the subsoil (B1-Horizon), it was described as an oval-shaped stain that measured approximately 10 cm (3.9 in) in diameter (Figure 202). After it was exposed, mapped in plan view, and photographed, the Feature S3 was bisected to inspect its profile. The bisection showed that it extended for approximately 16 cm (6.2 in) into subsoil (B1-Horizon) and tapered from top to bottom, suggesting that it may have been a prehistoric Native American post mold (Figure 203). Upon identification of this soil stain, Heritage personnel employed a combination of hand excavation and machine assisted stripping in order to examine the area to the east of Feature S3 and determine if any additional features associated with this possible post mold, such as a living surface, hearth, or additional post molds, could be detected. Unfortunately, no additional features were encountered as a result of the extended stripping to the east.

Machine Stripping Summary

The results of the mechanical stripping conducted within the eastern portion of Site 19-35 (Locus 11-1) indicated that three cultural features were located in this portion of the site area, including a pit feature (Features 21), a burned area (Features S2), and a single post mold (Feature S3). As discussed above, the pit feature yielded chert flakes and charcoal that produced a radiocarbon date of 3600 +/- 30 B.P. (3980 - 3836 cal B.P.), indicating that the feature was used during the Terminal Archaic period of Connecticut prehistoric. Due to their proximity to Feature 21 and similar depth in the soil column, it is possible that Features S2 and S3 also date from that time period. Feature S1, in contrast, failed to yield archaeological material and, therefore, could not be definitively assigned as cultural in origin. The cultural features in this part of Site 19-35 (Locus 11-1) appear to have resulted from a short-term occupation of the site during the Terminal Archaic period. In general, however, this part of Site 19-35 (Locus 11-1) lacked substantial numbers of associated artifacts and did not produce any faunal or archaeobotanical specimens (see below) from the Phase IB shovel testing of the Phase II NRHP eligibility delineation shovel testing and unit excavation.

Results of Flotation of Soil Samples Collected from Site 19-35 (Locus 11-1)

As discussed in previous chapters, the Phase II NRHP testing and evaluation of Site 19-35 (Locus 11-1) involved the collection and analysis of soils samples recovered from soil anomalies that were identified definitively as cultural features. This included flotation of the samples and separation of them into light

and heavy fractions using the methods described in Chapter VI. The results of the soil flotation is described below.

As seen in Table 21 below, only two of the cultural features detected during Phase II NRHP testing and evaluation of Site 19-35 (Locus 11-1) yielded enough soil to be subjected to flotation analysis. They included Feature 21, which was identified during the hand excavation of Unit 14, and Feature S2, which was uncovered during the above-referenced mechanical stripping effort. Feature 21 was identified as a pit feature that yielded chert secondary thinning flakes and dated from 3600 +/- 30 B.P. (3980 - 3836 cal B.P.), which corresponds to the Terminal Archaic period of Connecticut prehistory. Feature S2 yielded 1 chert secondary thinning flake and 1 argillite secondary thinning flake; it was identified as the truncated remains of a burned area.

Table 21. Results of flotation of soil samples collected from Site 19-35 (Locus 2-1).

Site	Feature	Unit	Depth	Material	Type	Subtype	Weight/Count	Comments
19-35	21	14	30-40 cmbs	heavy fraction	-	-	5 grams	No archaeobotanical or Faunal Remains
19-35	21	14	40-50 cmbs	light fraction	-	-	3 grams	No archaeobotanical or Faunal Remains; radiocarbon sample processed
19-35	21	14	40-50 cmbs	heavy fraction	-	-	10 grams	No archaeobotanical or Faunal Remains; radiocarbon sample processed
19-35	21	14	50-60 cmbs	light fraction	-	-	2 grams	No archaeobotanical or Faunal Remains
19-35	21	14	50-60 cmbs	heavy fraction	-	-	10 grams	No archaeobotanical or Faunal Remains
19-35	S2	Machine Strip	-	light fraction	-	-	1 gram	No archaeobotanical or Faunal Remains
19-35	S2	Machine Strip	-	heavy fraction	-	-	2 grams	No archaeobotanical or Faunal Remains
19-35	S2	Machine Strip	-	lithic	chert	flake	1	No archaeobotanical or Faunal Remains

The flotation of soil collected from Feature 21 resulted in the collection of a light fraction weighing 5 grams and a heavy fraction weighing 25 grams. Careful scanning through the light and heavy fractions with both the naked eye and with a microscope failed to reveal any charred archaeobotanical or faunal specimens; however, 2 chert tertiary flakes and a single quartzite tertiary flake were recovered from the Feature 21 matrix. These small flakes were indicative of stone tool retouching and/or re-sharpening.

The flotation of soils recovered from Feature S2 resulted in the generation of a light fraction weighing 1 gram and a heavy fraction weighing 2 grams. Scanning of the light and heavy fractions from Feature S-2

resulted in the collection of a single small chert secondary thinning flake; however, no faunal or archaeobotanical remains were collected from this feature. Finally, while Feature S3 appeared to be cultural in origin and represented a post mold, the feature was small and not conducive to soil sampling in a meaningful way. Thus, no flotation data was generated for this feature.

In sum, the data recovered from the flotation samples collected from cultural features identified within Site 19-35 (locus 11-1) indicated that stone tool manufacturing and maintenance was an important activity at this site. The results of the flotation samples also suggest that the soil conditions within Features 21 and S2 were not optimal for the preservation of archaeobotanical and/or faunal specimens over a long period of time. The presence of the lithic artifacts in them however, aided in their identification as cultural in origin.

Summary and Interpretations of Site 19-35 (Locus 11-1)

Site 19-35 (Locus 11-1), like Site 22-38 (Locus 2-1) discussed above, is situated in an area that would have been conducive to prehistoric occupation due a plethora of natural resources located nearby, including plentiful freshwater from a natural seep that flows into Cold Spring Brook immediately to the north, as well as edge habitats that would have been attractive to mammals, birds, and reptiles. Site 19-35 (Locus 11-1) yielded evidence that the site was utilized for the procurement of essential resources, stone tool manufacture/maintenance, and occupation, at least on a short-term basis. Evidence for the latter was contained within an identified pit feature and a post mold in the eastern portion of the site area.

Despite the above-referenced qualities of the local environment and the recovered archaeological data, Site 19-35 (Locus 11-1) did not yield a robust assemblage of artifacts given its large areal extent. Those artifacts that were recovered were characterized in large measure by stone tool chipping debris that were not temporally or functionally diagnostic in nature. The recovered temporally diagnostic artifacts were limited to two Levanna projectile points recovered during the Phase IB survey and a single Susquehanna Broadspear projectile point that was collected during the Phase II NRHP testing and evaluation effort. Further, it is clear that the depositional context of the majority of Site 19-35 (Locus 11-1) has been impacted by years of plowing, erosion, and soil mixing due to the nearby sand and gravel operation. The only portion of the site that appeared to retain intact deposits, albeit in minor amounts, was the eastern portion of the site area where a few cultural features were identified. This area was subjected to mechanical stripping and found to lack substantial numbers of artifacts and features.

In sum, while Site 19-35 (Locus 11-1) yielded projectile points from the Late Woodland period (ca., 1,250 to 450 B.P.), a single reworked Susquehanna Broadspear projectile point dating from the Terminal Archaic period (ca. 3,900 to 2,700 B.P.), and a few cultural features suggesting a short term occupation, one of which was a pit also attributable to the Terminal Archaic period, the site overall has suffered significant impacts, lacks substantial numbers of artifacts/features, and retains little, if any, research potential. Thus, it is the professional opinion of Heritage that Site 19-35 (Locus 11-1) is not eligible for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological investigation of the site area is recommended prior to the construction of the Quinebaug Solar Facility.

CHAPTER IX

SUMMARY AND MANAGEMENT RECOMMENDATIONS

This report has presented the results of Phase IB survey of the Development Area associated with the Quinebaug Solar Project in Brooklyn and Canterbury, Connecticut, as well as the results of Phase II NRHP testing and evaluation of two sites in Canterbury and Brooklyn, Connecticut. During the Phase IB survey of the Development Area, 25 survey areas were subjected to pedestrian survey, photo-documentation, mapping, shovel testing, and GPS recordation. The Phase IB survey effort, which entailed the excavation of 2,457 of 2,457 (100 percent) planned shovel tests, resulted in the identification of 32 archaeological sites and loci. They included Site 22-38 (Locus 2-1), Site 22-36 (Locus 4-1), Locus 4-2, Locus 5-1, Site 19-34 (Locus 6-1), Locus 7-1, Loci 8-1 through 8-5, Locus 9-1, Site 19-35 (Locus 11-1), Locus 12-1, Locus 13-1, Locus 15-1, Loci 16-1 through 16-5, Locus 17-1, Locus 18-1, Locus 18-2, Locus 19-1, Locus 19-2, Locus 20-1, Locus 20-2, Locus 21-1, Locus 23-1, Locus 24-1, and Site 19-8 (Locus 25-1).

Site 22-28 (Locus 21), which was identified in the southwestern portion of the Development Area, was examined through the excavation of 224 Phase IB and Phase II shovel tests, as well as 24 units measuring 1 x 1 m (3.3 x 3.3 ft) in size and two smaller units measuring 50 x 50 cm (19.7 in x 19.7 in) in size. Phase IB survey and Phase II NRHP testing and evaluation of Site 22-38 resulted in the recovery of 4,687 artifacts and the identification and recordation of nine features that were cultural in origin. Cultural material identified in the far northeastern portion of the site dated from the Middle Archaic period (ca., 8,000 to 6,000 B.P.), while archaeological deposits (including features) in the east-central portion of the site originated from a Late Archaic period occupation of the site (ca., 6,000 to 3,700 B.P.). The latter area contained a feature that yielded a radiocarbon date of 4160 ± 30 B.P. (4770 - 4581 cal B.P.; 4829 - 4780 cal B.P.). Both of the above-referenced areas will be incorporated into construction "exclusion zones" and will not be impacted by Quinebaug Solar, LLC during construction, while the western and central parts of the site will be avoided completely. The remainder of the site area will be incorporated into the Development Area and will contain solar panels and associated facilities. Finally, Quinebaug Solar, LLC understands that no tree removal in the exclusion areas can take place until the ground is thoroughly frozen and impacts to the exclusion areas by falling debris or heavy equipment can be avoided. Finally, no grubbing will take place within the two exclusion areas.

Site 22-36 (Locus 4-1) and Locus 4-2 were identified during the excavation of 162 Phase IB survey tests placed throughout Survey Area 4 in the western portion of the Development Area. Site 22-36 (Locus 4-1) yielded 37 artifacts, four of which were historic in age and 33 of which were prehistoric in origin. Shovel testing of the site also produced evidence of six features that were possibly cultural in origin, including two pits, a hearth, and post molds. Heritage determined that although Site 22-36 (Locus 4-1) is from an unknown prehistoric periods, it is potentially eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). Quinebaug Solar, LLC has determined to avoid this site during construction; therefore, no additional testing of the area was conducted.

Locus 4-2 was identified in the northeastern part of Survey Area 4. It yielded one piece of quartzite stone tool chipping debris from the prehistoric era and was determined to be an isolated find. Since this

locus lacked substantial number of artifacts, cultural features, and research potential it was assessed as not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of this locus was recommended.

Locus 5-1 was identified during Phase IB survey of Survey Area 5, which was located in the western portion of the Development Area. A total of 71 shovel tests were excavated through this survey area. They resulted in the collection 14 pieces of quartzite stone tool manufacturing/maintenance waste. No features were identified during Phase IB survey of Locus 5-1, and it was determined that this area lacked substantial archaeological deposits and research potential. Locus 5-1 was assessed as not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of this locus was recommended.

Site 19-34 (Locus 6-1), which was situated in the northwestern portion of the Development Area, was identified during Phase IB survey of Survey Areas 6 and 10. A total of 152 shovel tests were excavated through these two contiguous survey areas. Site 19-34 (Locus 6-1) was identified near the confluence of Cold Spring Brook and Blackwell Brook, and it produced 165 prehistoric artifacts and three features. The artifacts consists mostly of stone tool manufacturing waste, but also included a Brewerton Eared Notched projectile point, which dates from the Late Archaic period (ca., 6,000 to 3,900 B..P.). This site also yielded evidence of the features, including a hearth and two areas characterized by episodes of burning. Heritage determined that the site contained intact archaeological deposits and cultural features. Site 19-34 (Locus 6-1) was assessed as potentially eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). Quinebaug Solar, LLC has designed the proposed project such that Site 19-34 (Locus 6-1) will be completely avoided. No additional archaeological examination of this site was warranted.

Locus 7-1 was identified in the northern portion the Development Area during Phase IB survey of Survey Area 7. This survey area was investigated through the excavation of 73 shovel tests, which yielded only a single piece of quartz shatter. This artifact was collected from disturbed soil deposits. No other archaeological material was collected and Phase IB survey indicated that Locus 7-1 lacked substantial archaeological deposits and research potential. It was assessed as not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of Locus 7-1 was recommended.

Phase IB survey of Survey Area 8 in the central portion of the Development Area was accomplished through the excavation of 511 shovel tests, which produced evidence of five archaeological loci. They were designated as Locus 8-1 through Locus 8-5. Locus 8-1 was situated in the center of Surrey Area 8 and yielded two pieces of prehistoric stone tool chipping debris and a whiteware sherd from the Ap-Horizon (plowzone). Locus 8-2 was situated in the southern portion of Survey Area 8 and yielded only one historic artifact from the Ap-Horizon (plowzone); it was a kaolin pipe stem. Locus 8-3 produced a single historic pearlware sherd from the plowzone in the northeastern part of Survey Area 8. Examination of the Locus 8-4, which was situated in the southeastern portion of Survey Area 8, resulted in the recovery of three pieces of stone tool chipping debris from the Ap-Horizon (plowzone). Finally, Locus 8-5 was identified within the northwestern portion of Survey Area 8 and contained two pieces of prehistoric stone tool chipping debris and a single redware sherd, all of which originated from the Ap-Horizon (plowzone). In sum, Loci 8-1 through 8-5 lacked substantial numbers of artifacts, intact deposits, and research potential. They were assessed not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of these loci was recommended.

Locus 9-1 was identified during Phase IB survey of Survey Area 9, which was located in the south-central portion of the Development Area and examined through the excavation of 45 shovel tests. The field effort in this area resulted in the recovery of a single pearlware sherd from the plowzone (Ap-Horizon). Examination of the locus area also revealed the presence of a foundation made of Portland cement with a dry laid stone feature at its center. The historical use of the foundation was not determined, though it was suspected to date from the early twentieth century. The former building foundation was in poor condition at the time of survey. Due to previous disturbances in the area and the a dearth of artifacts, Locus 9-1 was determined to lack research potential. It was assessed not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]) and no additional archaeological examination of this locus was recommended.

Site 19-35 (Locus 11-1) was identified during Phase IB survey of Survey Area 11 and it was also subjected to Phase II NRHP testing and evaluation. Phase IB survey of Survey Area 11 in the northwestern portion of the Development Area consisted of the excavation of 120 shovel tests, while Phase II NRHP testing of Site 19-35 (Locus 11-1) was accomplished through the excavation of 58 shovel tests, 15 units measuring 1 x 1 m (3.3 x 3.3 ft) in size, and a limited amount a machine stripping. The Phase IB and Phase II field efforts resulted in the collection of 92 artifacts from the surface, as well as shovel test, unit, and feature matrices. These included typical examples of chert, quartz, quartzite, and jasper stone tool chipping debris, two triangular projectile points (Levanna), and a single Susquehanna Broadspear projectile point. The site also yielded evidence of multiple cultural features, two of which (a pit feature and a post mold) were cultural in origin. Charcoal recovered from the pit feature was radiocarbon dated to 3,600 + 30 B.P. (3980 -3836 B.P.), placing the use of that feature, and likely the nearby post mold, within the Terminal Archaic period (ca., 3,900 to 2,700 B.P.). Despite yielding limited evidence of Terminal Archaic and Late Woodland usage, Site 19-35 (Locus 11-1) has undergone significant impacts related to centuries of plowing, erosion, and a nearby sand and gravel operation. Site 91-35 (Locus 11-1) was assessed as not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of this site was recommended.

Locus 12-1, which was identified in the southeastern portion of the Development Area, was examined through the excavation of 10 shovel tests. This locus contained a partially disturbed dry laid stone foundation, a stone lined well, stone walls, and a stone town boundary marker delineating the boundary between Canterbury and Brooklyn. The latter was installed in 1786 when the town boundary was established. Phase IB shovel testing of this locus resulted in the collection of examples of creamware, redware, yellowware, and whiteware sherds, as well as a shard of glass, all of which originated from the topsoil (A-Horizon) and dated from the late eighteenth through the nineteenth centuries. Due to the presence of the above ground features listed above, Quinebaug Solar, LLC has agreed to avoid this area during construction. Further, Quinebaug Solar, LLC understands that any tree clearing in this area must be undertaken in winter when the ground is frozen and heavy equipment and falling debris will not impact the archaeological deposits or above-ground features. Quinebaug Solar, LLC also understands that no stumps can be grubbed from this area.

Locus 13-1 was identified during Phase IB survey of Survey Area 13, which included the excavation of 87 shovel tests in the northwestern portion of the Development Area. Examination of this locus resulted in the recovery of a single machine cut nail from the plowzone (Ap-Horizon). No evidence of cultural features or any other artifacts were recovered from the locus area. As a result, it was determined that Locus 13-3 lacked research potential. It was assessed as not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of Locus 13-1 was recommended.

Phase IB survey of Survey Area 15 in the northwestern portion of the Development Area using 37 shovel tests resulted in the identification Locus 15-1. This locus yielded a single shard of bottle glass from the plowzone (Ap-Horizon). Since it lacked substantial numbers of artifacts and evidence of cultural features, Locus 15-1 was assessed as not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of this locus was recommended.

Phase IB survey of Survey Area 16 in the west-central portion of the Development Area was accomplished through the excavation of 254 shovel tests, which resulted in the identification of five loci. They were designated as Loci 16-1 through 16-5. Locus 16-1 was identified in the southwestern portion of Survey Area 16 and it yielded a piece of brick, 2 glass shards, and a mule shoe from the plowzone (Ap-Horizon). Locus 16-2, which produced a single pearlware sherd from the plowzone (Ap-Horizon), was situated in the southwestern portion of Survey Area 16. Phase IB survey of Locus 16-3, which was identified in the northeastern portion of Survey Area 16, resulted in the recovery of a single redware sherd and 1 Rockingham sherd from the plowzone (Ap-Horizon). Locus 16-4, located in the southeastern portion of Survey Area 16, yielded 3 pearlware sherds from the plowzone (Ap-Horizon) and 3 quartzite secondary thinning flakes from the subsoil (B1-Horizon). Finally, Locus 16-5 was identified in the south-central portion of Survey Area 16. It produced a whiteware sherd and a wire nail from the plowzone (Ap-Horizon). In sum, Loci 16-1 through 16-5 lacked substantial numbers of artifacts, evidence of cultural features, and research potential. They were assessed not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of these loci was recommended.

Locus 17-1 was recorded during Phase IB survey of Survey Area 17 in the northern portion of the Development Area. This survey area was examined through the excavation of 116 shovel tests. The Phase IB field effort resulted in the recovery of a single quartzite flake from the plowzone (Ap-Horizon), as well as a quartz flake, a wire nail, and a screw from the subsoil (B1-Horizon). This locus has been deeply disturbed by centuries of plowing and it was determined that it lacked substantial numbers of artifacts, evidence of cultural features, and research potential. Locus 17-1 was assessed not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of this locus was recommended.

Loci 18-1 and 18-2 were identified and examined during Phase IB survey of Survey Area 18, which was located in the southeastern portion of the Development Area. Phase IB survey of this area included the excavation of 163 shovel tests. Locus 18-1 was identified in the south-central portion of Survey Area 18. It yielded a single Rockingham ceramic sherd from the plowzone (Ap-Horizon). Locus 18-2 was recorded during Phase IB survey of the northwestern portion of Survey Area 18. Shovel testing in this area resulted in the collection of a whiteware sherd and a wire nail, both of which originated from the plowzone (Ap-Horizon). Heritage determined Loci 18-1 and 18-2 both lacked substantial numbers of artifacts, evidence of cultural features, and research potential. They were assessed not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of these loci was recommended.

Phase IB survey of Survey Area 19 in the southeastern portion of the Development Area resulted in the identification of two loci. They were identified during the excavation of 48 shovel tests placed throughout Survey Area 19 and they were designated as Locus 19-1 and Locus 19-2. Locus 19-1 was identified in the northeastern portion of Survey Area 19. It yielded a single piece of ferrous metal from the plowzone (Ap-Horizon). Locus 19-2 was recorded during Phase IB survey of the southwestern

portion of Survey Area 19. Shovel testing in this location resulted in the collection of a single whiteware sherd from the plowzone (Ap-Horizon). Loci 19-1 and 19-2 both lacked substantial numbers of artifacts, evidence of cultural features, and research potential. They were assessed not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of these loci was recommended.

Locus 20-1 and Locus 20-2 were identified and examined during Phase IB survey of Survey Area 20, which was located in the southeastern portion of the Development Area. This survey area was subjected to Phase IB survey through the excavation of 74 shovel tests. Examination of the Loci 20-1 area resulted in the recovery of two prehistoric flakes, a redware sherd, and a yellowware sherd from the plowzone (Ap-Horizon), while Locus 20-2 yielded a piece prehistoric quartz shatter, a clam shell fragment, and a pearlware sherd from the plowzone (Ap-Horizon). Phase IB survey of these two loci indicated that they lacked substantial numbers of artifacts, evidence of cultural features, and research potential. They were assessed not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of these loci was recommended.

Phase IB survey of Survey Area 21 in the southeastern portion of the Development Area was completed through the excavation of 27 shovel tests. This field effort resulted in the identification and examination of Locus 21-1, which resulted in the recovery of a single kaolin pipe stem from the plowzone (Ap-Horizon). While this artifact indicates a date of the nineteenth century for Locus 21-1, the area lacked substantial numbers of artifacts, evidence of cultural features, and research potential. Locus 21-1 was assessed not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of this locus was recommended.

Locus 23-1 was identified in the northern portion of the Development Area during the examination of Survey Area 23. The excavation of 32 shovel tests in this area, which corresponded to the former location of the Rukstella Farmstead (see below), yielded an assemblage of modern/historic artifacts consisting of ceramic sherds, brick fragments, unidentified pieces of metal, and an assortment of modern trash that included plastic, bottle glass, rubber fragments for disturbed soil contexts. The area also contained a stone lined well with a metal sleeve, a three sided barn foundation made of Portland cement, and two cement silos. Phase IB survey of this area revealed that the above and below ground resources in this area lack integrity and research potential. Locus 23-1 was assessed not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of this locus was recommended.

Locus 24-1 was identified during Phase IB survey of Survey Area 24, which was situated in the north-central portion of the Development Area and correlated to the location of the Butts/Cady/Harris Farmstead identified during the Phase IA survey completed by Heritage in 2017. Phase IB survey of this area entailed the excavation of 20 shovel tests and resulted in the recovery of a single chert secondary thinning flake. No historic period artifacts or evidence of the former Butts/Cady/Harris Farmstead was identified during survey, as it likely had been razed and bulldozed from away. Locus 24-1 lacked substantial numbers of artifacts, evidence of cultural features, and research potential. It was assessed not eligible for listing to the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of this locus was recommended.

Site 19-8 (Locus 25-1) was identified during Phase IB survey of Survey Area 25, which was situated in the north-central portion of the Development Area. This area was examined through the excavation of 68 shovel tests and it produced 46 artifacts from the Ap, B1, and B2-Horizons. These consisted of a single

piece of glass, a Neville projectile point base, and 44 pieces of stone tool manufacturing/maintenance debris made of quartz, quartzite, chert, and rhyolite. This locus corresponded to the location of Site 19-8, which was identified by PAST in 1983. PAST indicated that the site contained two components, one dating from the Late Archaic period (ca., 6,000 to 3,900 B.P.) and one dating from the Late Woodland period (ca., 1,200 to 45 BP). Phase IB survey within the site area and the recovery of the Neville projectile point base indicated that a third, Middle Archaic period (ca., 8,000 to 6,000 B.P.), component also located within Site 19-8 (Locus 25-1). While no evidence of cultural features was identified, the results of the Phase IB survey conducted by Heritage indicated that intact archaeological deposits existed within Site 19-8 (Locus 25-1). This site was assessed as eligible for listing to the NHRP applying the criteria for evaluation (36 CFR 60.4 [a-d]). Quinebaug Solar, LLC has designed its project to avoid the site area. No additional archaeological examination was conducted.

Heritage also examined 12 stone wall segments in detail that Quinebaug Solar, LLC plans to remove from the Development Area to provide access to the planned solar panels and associated facilities. Data provided to Heritage by Tighe & Bond indicated the 12 stone wall segments measured a total of 904.4 linear m (2,967.2 linear ft) in length. This represents 8.1 percent of the total stone walls situated within the Study Area, which total 11,204.3 linear m (36,759 linear ft) in length. Generally speaking, the wall segments were comprised of rounded stones, measured no more than 100 cm (39.4 in) in height, and ranged from poor to fair condition at the time of examination. They are typical examples of the many stone walls found through the Study Area, as well as those situated throughout Brooklyn and Canterbury. With the exceptions of Segments 2, 9 and 10, no special precautions are recommended during removal of the wall segments. Segment 2 is located adjacent to Locus 12-1 and the previously identified Brooklyn/Canterbury Town Boundary Marker. Further, Segments 9 and 10 are situated within the vicinity of the previously identified Bennett/Taylor/Gallagher Cemetery, which is located in the center of the Study Area and straddles the Brooklyn/Canterbury town line. Since these three stone wall segments are located close to sensitive cultural resources, it is recommended that limits of the removal areas be clearly marked with high visibility materials prior to removal so that construction crews do not inadvertently impact sensitive areas nearby.

In a 2017 Phase IA assessment survey, Heritage reported the presence of three historic farmsteads in the Study Area (Heritage Consultants, LLC 2017). These included the Butts/Cady/Harris, Rukstella, and Mowrey, Farmsteads. The former location of the Butts/Cady/Harris Farmstead was situated in the northwestern portion of Survey Area 8, a large cornfield located in the northern portion of the Development Area. As discussed above in Chapter VII, this area was subjected to Phase IB survey using pedestrian survey, photo-documentation, and shovel testing. No remaining evidence of the Butts/Cady/Harris Farmstead was identified during survey. This farmstead was destroyed in the past and was assessed as not eligible for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of the area is recommended prior to construction of the proposed Quinebaug Solar Center.

The Rukstella Farmstead was identified during the above-referenced Phase IA survey (Heritage Consultants, LLC 2017) within Survey Area 24 and was noted to the northeast and on the opposite side of Rukstella Road from the Butts/Cady/Harris Farmstead. The remains of this historic farmstead consisted of a stone lined well with steel sleeve, a three sided barn foundation made of Portland cement, and two cement silos. Heritage subjected this area to Phase IB survey through pedestrian survey, photo-documentation, and shovel testing of Survey Area 24. While the farmstead area yielded a minor amount of historic artifacts, including pieces of bricks and whiteware sherds, these items were mixed with a large amount of modern trash, including pieces of rubber, tin foil, asphalt shingles, and

plastic items. It was clear that the Rukstella Farmstead had been almost entirely destroyed. It was assessed as not eligible for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of the area is recommended.

The Mowrey Farmstead was identified by Heritage during the above-referenced Phase IA survey (Heritage Consultants, LLC 2017). It was recorded in the south-central portion of the Study Area near the access road that leads from Wauregan Road to the central portion of the Study Area. Pedestrian survey of the farmstead revealed that it contained two areas of archaeological sensitivity, one to the east of the access road and one to the west. The area to the east of the access road contained the remnants of an eighteenth century house and well, while the area to the west was characterized by foundations of barns associated with the Mowrey Farmstead. These areas were assessed as potentially eligible for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). Quinebaug Solar, LLC has modified design plans to avoid these archaeologically sensitive areas. As a result, no additional examination of the archaeologically sensitive portions of the Mowrey Farmstead is recommended.

As reported in the previously submitted Phase IA assessment survey report (Heritage Consultants, LLC 2018), pedestrian survey of the central portion of the Study Area also revealed the presence of a historic cemetery situated along the Brooklyn/Canterbury town line. The cemetery was fully enclosed by a stone wall and covered an area measuring approximately 12 x 20 m (39.4 x 65.6 ft) in size. The marked burials noted in the cemetery were situated on the top of a knoll that forms the eastern portion of the burial ground. Careful inspection of the area revealed the presence of seven graves with engraved headstones and foot stones (see Phase IA report for photos). The dates of the burials ranged from 1802 to 1906, and they contained five adults and two children from the Bennett, Gallagher, and Taylor Families. The cemetery also contained two small upright unmarked fieldstones indicative of human burials. It is possible that the either predate the 1802 use of the cemetery or represented burials for which inscribed markers were not used. It is clear based on the headstone inscriptions that the people buried in the cemetery are associated with the former Mowrey Farmstead. Although three separate surnames are contained on the headstones, it is clear in land transfer records that individuals buried in the cemetery are all related, either through birth or marriage (see Phase IA report for details). Given the sensitivity of the cemetery, it should not be impacted in any way during construction of the proposed solar center. To accomplish this goal, Heritage recommends leaving a 15 m (50 ft) buffer of undisturbed area around all sides of the burial ground during construction.

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