Phase II National Register Testing and Evaluation of Site 96-166 (Locus 7) Within the Proposed Candlewood Solar Facility in New Milford, Connecticut

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ABSTRACT

This report presents the results of Phase II National Register of Historic Places testing and evaluation of Site 96-166 (Locus 7), which was identified in the second of the proposed Candlewood Solar Project site in New Milford, Connecticut. Heritage Consultants, LLC (Heritage) completed the field investigation portion of this project on behalf of Candlewood Solar LLC (Candlewood), and its contractor, Wood Environment & Infrastructure Solutions, Inc., (Wood) in August of 2019. Heritage previously completed a Phase IA cultural resources assessment survey and Phase IB cultural resources reconnaissance survey of the study area; it was during the latter investigation that Site 96-166 (Locus 7) was identified. During Phase II investigation, 86 of 87 (99 percent) planned shovel tests and eight units measuring 1 x 1 m (3.3 x 3.3 ft) in size were excavated successfully throughout the proposed work areas associated with Site 96-166 (Locus 7). The completion of the Phase II National Register of Historic Places testing and evaluation of Site 96-166 (Locus 7) resulted in the identification of

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total, 299 artifacts were recovered from Site 96-166 (Locus 7) during the delineation shovel testing and unit excavations. Site 96-166 (Locus 7) represents a second structure is the second se

Places. Based on the current construction plan,

, the main occupation area of Site 96-166 (Locus 7) is

. Further,

that were not directly associated with the

main occupation of Site 96-166 (Locus 7). Thus, any proposed work in these areas will not represent a significant impact to Site 96-166, and no additional excavations in the vicinity of Delineation Shovel Tests is recommended prior to construction.

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CHAPTER I

This report presents the results of Phase II National Register of Historic Places testing and evaluation of Site 96-166 (Locus 7), which was identified within the proposed Candlewood Solar Project in New Milford, Connecticut (Figure 1). Candlewood Solar LLC (Candlewood), acting through its contractor, Wood Environment & Infrastructure Solutions, Inc., (Wood), has requested that Heritage Consultants, LLC (Heritage) complete the Phase II National Register testing and evaluation effort as part of the planning process for a proposed 20-megawatt (MW) AC (MWac) solar photovoltaic (PV) electric generating facility. Heritage previously completed a Phase IA cultural resources assessment survey and Phase IB cultural resources reconnaissance survey of the study area associated with the Candlewood Solar Project during 2017 (Heritage Consultants, LLC 2017a and 2017b). It was during the Phase IB survey effort that Site 96-166 (Locus 7) was identified. All work associated with the current Phase II testing and evaluation effort 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 and Methods Overview

Candlewood is proposing to install a 20-MWac solar photovoltaic electric generating facility (the facility) in the Town of New Milford, Connecticut. It will be located on portions of three adjacent parcels that will accommodate the facility, an access road, and electric interconnection route (Figures 1). The facility portion of the project will be constructed on a single parcel of property located on the southern flank of Candlewood Mountain in west central New Milford. This area is situated to the northwest of Candlewood Lake, to the east of Candlewood Mountain Road, and to the southwest of Route 7. The project parcel encompasses a total of 163.5 ac of land. The facility will consist of PV panels mounted on steel racking supports and eight inverters each with a combined output of 2.5 MW AC. The total system size is 26.5 MW DC, with a total rated nameplate AC generating capacity of 20 MWac. The solar panels will be installed on a screwed-in mounting system due to shallow rock conditions, with vertical screws installed four to six feet into the underlying soil/rock across the area. The panels will be oriented to face directly south and will be assembled in a "landscape" orientation, with the top height of the highest panel being at approximately 7 to 8 feet above ground, and the bottom edge of the lowest panel approximately two to three feet above ground. The facility will be completely surrounded by a 7-foot high countersunk chain-link fence. The inverters will consist of eight pad-mounted 2.5 MW inverters that will convert the DC power generated by the panels to AC power that can be fed to the grid. The power will be fed from the inverters to transformers which will step up the voltage from 1,500 Volts ("V") to 13,800 V, upon which the power will be routed through two 13.8 kilovolt ("kV") conductors across the project area to the east to Route 7, where it will connect with the Eversource Energy Rocky River Substation. The topography in the area proposed for installation of the facility slopes generally downward from the northeast to the southwest. Approximate elevations along Candlewood Mountain Road in this area range from 199.3 to 219.2 m (654 to 719 ft) NGVD. The facility will be located between elevations 221.9 and 279.8 m (728 to 918 ft) NGVD. The electric interconnection route drops down the eastern flank of Candlewood Mountain, crosses north of Candlewood Lake to Route 7.

As mentioned above, Heritage previously completed Phase IA cultural resources assessment survey and Phase IB cultural resources reconnaissance survey for this project. The Phase IB effort resulted in the

identification of eight cultural resources loci (Locus 1 through Locus 8) across the study area. Loci 1, 3, and 4,

. Despite delineation testing, Loci 1, 3, and 4 failed to produce additional artifacts or evidence of cultural features. As a result, it was determined that the they lacked research potential and the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of Loci 1, 3, and 4 was recommended. Phase IB survey also resulted in the identification of within Loci 1, 5, 6, and 8. Delineation shovel testing of these four areas also failed to identify significant amounts of cultural material or evidence of cultural features. Thus, they too lacked research potential and the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of Loci 1, 5, 6, and 8 was recommended prior to construction of the proposed solar facility or the potential construction parking and materials storage/staging area. However, in accordance with the Connecticut State Historic Preservation Office's November 28, 2017 determination, construction matting will be used in Area 4 (approximate 5-acre construction parking and materials storage/staging area) to lessen the potential impact to undisturbed resources.

Phase IB cultural resources survey of the Locus 2 area resulted in the identification of

which was designated as Site 96-165. Despite close interval delineation testing, no additional cultural material or evidence of cultural features was identified within Site 96-165 (Locus 2). Consequently, it was determined that Site 96-165 (Locus 2) lacked research potential and the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of it was recommended prior to construction of the proposed solar facility. Finally, archaeological examination of the proposed solar facility also resulted in the identification of Site 96-166 (Locus 7), and the subject of the current investigation. This site contained multiple Phase IB shovel tests that produced applying Criterion D of the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Heritage recommended that the project sponsor develop an avoidance plan for this area so that Site 96-

166 (Locus 7) would not be impacted by the proposed construction.

As a result, Phase II National Register of Historic Places testing and evaluation of Site 96-166 (Locus 7) was completed. This effort included additional delineation shovel testing throughout the site area, mapping, photo-documentation, and unit testing in areas of artifact clusters and near a cultural feature. A synopsis of the results of the Phase II effort is presented below, while a more detailed description of the results is contained within Chapter VI.

Project Results and Management Recommendations Overview

Heritage completed the Phase II National Register testing and evaluation effort using a combination of shovel testing and unit excavations, as well as site mapping and photo-documentation. A total of 86 of 87 (99 percent) planned shovel tests and eight units measuring $1 \times 1 m$ (3.3 \times 3.3 ft) in size were excavated throughout the Site 96-166 (Locus 7) area. The completion of the Phase II National Register of Historic Places testing and evaluation of the Site 96-166 (Locus 7) area resulted in the collection of an

. In total, 299 artifacts were recovered from Site 96-166 (Locus 7) during the delineation shovel testing and unit excavations. The second second second during the Phase II National Register testing and evaluation are typical of the second second

place sometime between service years ago. In sum, Site 96-166 (Locus 7) represents a short-term occupation dating from the service service service and features present within the site area appear to be intact and undisturbed. The site possesses research potential and is eligible for listing to the National Register of Historic Places under Criterion D of the criteria for evaluation (36 CFR 60.4 [a-d]). Based on the current construction plan, with the exception of two (2) positive shovel tests (Delineation Shovel Tests (Delineation Shovel Tests (Delineation Shovel Tests (Delineation of this area of Site 96-166 (Locus 7) is primarily located (Locus 7) is primarily located (Locus 7) is and will be protected from impacts. No additional archaeological examination of this area of Site 96-166 (Locus 7) is recommended. Further, Delineation Shovel Tests (Delineation of Site 96-166 (Locus 7)). Thus, any proposed work in these areas will not represent a significant impact to Site 96-166, and no additional

excavations in the vicinity of Delineation Shovel Tests is recommended prior to construction.

Project 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., and Ms. Kelsey Tuller, M.A., who assisted in the fieldwork portion of the testing and evaluation effort. Mr. George was also assisted by Mr. Stephen Anderson, B.A., who provided GIS support services and project mapping. Finally, Ms. Elizabeth Correia, B.A., completed the laboratory analysis of the recovered cultural materials; she worked under the direct supervision of Mr. George.

Organization of the Report

The natural setting of the region encompassing the study area is presented in Chapter II; it includes a review of the geology, hydrology, and soils, of the project region. The prehistory of the project region is outlined in Chapter III. The previous archaeological investigations in the vicinity of the study area are reviewed in Chapter IV. The methods used to complete this investigation are discussed in Chapter V. Finally, the results of this investigation are presented in Chapter VI, and management recommendations are contained in Chapter VII.

CHAPTER II NATURAL SETTING

Introduction

This chapter provides a brief overview of the natural setting of the region containing the study area associated with the proposed solar project and Site 96-166 (Locus 7). Previous archaeological research conducted throughout southern New England has resulted in the documentation of a few specific environmental factors which can be associated with both prehistoric and historic period site selection. These include general ecological conditions, as well as types of fresh water sources, soils, and slopes present in the area. The remainder of this section provides a brief overview of the ecology, hydrological resources, and soils present within the vicinity of 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: Northwest 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.

Northwest Hills Ecoregion

The Northwest Hills ecoregion consists of a hilly upland terrain characterized by "a moderately hilly landscape of intermediate elevation, with narrow valleys and local areas of steep and rugged topography" (Dowhan and Craig 1976:31). Elevations in the Northwest Hills ecoregion range from 228.6 to 304.8 m (750 to 1,000 ft) above sea level. The bedrock of the region is composed of schists and gneisses deposited during the Paleozoic (Dowhan and Craig 1976; Bell 1985). Soils in these upland areas have developed on top of glacial till in upland locales, and on top of stratified deposits of sand, gravel, and silt in the local valleys (Dowhan and Craig 1976).

Hydrology of the Study Region

The project region is situated within proximity to several sources of freshwater, including Candlewood Lake, Rocky River, Bullymuck Brook, Housatonic River, and Great Mountain Pond, 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 alike. 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. These water sources also may have provided the impetus for the construction of water powered mill facilities during the eighteenth and nineteenth centuries.

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 within the current study area. In contrast, acidic soils enhance the preservation of charred plant remains.

A review of the soils within the vicinity of Site 96-166 (Locus 7) is presented below. The area subjected to Phase II National Register testing and evaluation is characterized by Paxton-Montauk soils. When found on low slopes in proximity to fresh water and in an undisturbed state, Paxton-Montauk soils are well correlated with both historic and prehistoric archaeological site locations. A descriptive profile for this soil type is presented below.

Paxton-Montauk Soils

A typical profile for Paxton-Montauk soils is as follows: **Ap** -- 0 to 20 cm; dark brown (10YR 3/3) fine sandy loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; many fine roots; 5 percent gravel; strongly acid; abrupt smooth boundary; **Bw1** -- 20 to 38 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; 5 percent gravel; few earthworm casts; strongly acid; gradual wavy boundary; **Bw2** -- 38 to 66 cm; olive brown (2.5Y 4/4) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; 10 percent gravel; strongly acid; clear wavy boundary; and **Cd** -- 66 to 165 cm; olive (5Y 5/3) gravelly fine sandy loam; medium plate-like divisions; massive; very firm, brittle; 25 percent gravel; many dark coatings on plates; strongly acid.

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 areas such as the coastal zone, e.g., shell middens, and Connecticut River Valley. As a result, a skewed interpretation of the prehistory of Connecticut was developed. It was suggested that the upland portions of the state, i.e., the northeastern and northwestern hills ecoregions, were little used and rarely occupied by prehistoric Native Americans, while the coastal zone, i.e., the eastern and western coastal and the southeastern and southwestern hills ecoregions, were the focus of settlements and exploitation in the prehistoric era. This interpretation remained unchallenged until the 1970s and 1980s when several town-wide and regional archaeological studies were completed. These investigations led to the creation of several archaeological phases that subsequently were applied to understand the prehistory of Connecticut. The remainder of this chapter provides an overview of the prehistoric setting of the region encompassing the Area of Potential Effect.

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 gravers, drills, core fragments, scrapers, and channel flakes, which indicates that the full range of stone tool production and maintenance took place at the site (Moeller 1980). Moreover, the use of both local and non-local raw materials was documented in the recovered tool assemblage, suggesting that not only did the site's occupants spend some time in the area, but they also had access to distant stone sources, the use of which likely occurred during movement from region to region.

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

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

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

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

The Archaic Period, which succeeded the Paleo-Indian Period, began by ca., 10,000 B.P. (Ritchie and Funk 1973; Snow 1980), and it has been divided into three subperiods: Early Archaic (10,000 to 8,000 B.P.), Middle Archaic (8,000 to 6,000 B.P.), and Late Archaic (6,000 to 3,700 B.P.). These periods were devised to describe all non-farming, non-ceramic producing populations in the area. Regional archaeologists recently have recognized a final "transitional" Archaic Period, the Terminal Archaic Period (3,700-2,700 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 and 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, 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<u>+</u>280 and 7,015<u>+</u>160 B.P. (Dincauze 1976).

In addition to Neville points, Dincauze (1976) described two other projectile point 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<u>+</u>180 B.P. Dincauze argued that both the Neville and later Merrimac and Stark occupations were established to take advantage of the excellent fishing that the falls situated adjacent to the site area would have afforded Native American groups. Thus, based on the available archaeological evidence, the Middle Archaic Period is characterized by continued increases in diversification of tool types and resources exploited, as well as by sophisticated changes in the settlement pattern to include different site types, including both base camps and task-specific sites (McBride 1984:96).

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

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

In terms of settlement and subsistence patterns, archaeological evidence in southern New England suggests that Laurentian Tradition populations consisted of groups of mobile hunter-gatherers. While a few large Laurentian Tradition occupations have been studied, sites of this age generally encompass less than 500 m² (5,383 ft²). These base camps reflect frequent movements by small groups of people in search of seasonally abundant resources. The overall settlement pattern of the Laurentian Tradition was dispersed in nature, with base camps located in a wide range of microenvironments, including riverine as well as upland zones (McBride 1978, 1984:252). Finally, subsistence strategies of Laurentian Tradition focused on hunting and gathering of wild plants and animals from multiple ecozones.

The second Late Archaic tradition, known as the Narrow-Stemmed Tradition, is unlike the Laurentian Tradition, and it likely represents a different cultural adaptation. The Narrow-Stemmed tradition is recognized by the presence of quartz and quartzite narrow stemmed projectile points, triangular quartz Squibnocket projectile points, and a bipolar lithic reduction strategy (McBride 1984). Other tools found in Narrow-Stemmed Tradition artifact assemblages include choppers, adzes, pestles, antler and bone projectile points, harpoons, awls, and notched atlatl weights. Many of these tools, notably the projectile points and pestles, indicate a subsistence pattern dominated by hunting and fishing, as well the collection of a wide range of plant foods (McBride 1984; Snow 1980:228; Wiegand 1978, 1980).

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

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

broadspear projectile points and soapstone bowls, the Terminal Archaic has long posed problems for regional archaeologists. 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 Orient Fishtail projectile points (McBride 1984:119; Ritchie 1971).

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

Finally, while settlement patterns appeared to have changed, Terminal Archaic subsistence patterns were analogous to earlier patterns. The subsistence pattern 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 most 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 PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous cultural resources research completed within the vicinity of the study area and Site 96-166 (Locus 7) in New Milford, Connecticut (Figure 2). This discussion provides the comparative data necessary for assessing the results of the current Phase II National Register testing and evaluation effort, and it insures that the potential impacts to all previously recorded cultural resources located within and adjacent to the site area are taken into consideration. Specifically, this chapter reviews all previously completed cultural resources surveys conducted within the project region, as well as those archaeological sites, National and State Register of Historic Places properties, and historic standing structures more than 50 years in age contained within a 1.6 km (1 mi) radius of Site 96-166 (Locus 7). The discussions presented below are based on information currently on file at the Connecticut State Historic Preservation Office in Hartford, Connecticut. In addition, the electronic site files maintained by Heritage also were examined during the course of this investigation. Both the quantity and quality of the information contained in the original cultural resources survey reports and State of Connecticut archaeological site, National and State Register of Historic Places, and historic standing structure forms are reflected below.

Previously Completed Cultural Resources Surveys Within the Vicinity of Site 96-166 (Locus 7)

A review of files maintained by the Connecticut State Historic Preservation Office revealed that three professional cultural resources surveys have been completed within the general project region (CHPC 447; Figure 2). The first was completed by Garrow and Associates, Inc., in 1990, and it consisted of a Phase I cultural resources reconnaissance survey of the then-proposed Iroquois Gas Transmission Pipeline Project. This multi-municipality project stretched over 370 miles throughout portions of New York and Connecticut. Examination of the associated pipeline corridor resulted in the identification of 351 archaeological sites, 105 of which were identified in Connecticut. Garrow and Associates, Inc., concluded that 29 of the identified archaeological sites in Connecticut did not retain intact cultural deposits and/or research potential and, therefore, were not eligible for listing on the National Register of Historic Places; these sites required no further examination. The remaining 76 sites contained cultural deposits that may have been significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and required Phase II testing and evaluation. The Phase II National Register of Historic Places testing and evaluation efforts, as well as some subsequent data recovery projects, were completed during ensuing years; however, none of these efforts were conducted within a 1.6 km (1 mi) area containing the proposed Candlewood Solar Facility. This project does, however, demonstrate that the western portion of Connecticut contains, and is likely to produce additional, important prehistoric and historic archaeological sites.

In addition, Heritage completed a Phase IA cultural resources assessment survey of the Candlewood Solar facility parcel, which contains Site 96-166 (Locus 7), the subject of the current Phase II National Register testing and evaluation effort (Heritage Consultants, LLC 2017a). Heritage completed that investigation in August of 2017. The Phase IA survey was completed through archival research, a careful review of historic maps and aerial images of the study area, a search of files maintained by the Connecticut State Historic Preservation Office, and pedestrian survey of the proposed Candlewood Solar

project area. The results of the Phase IA survey effort revealed that a proposed access road and interconnect route for the solar facility consisted of previously disturbed, steeply sloping, wet, and/or eroded/incised areas. Thus, these project items were designated as no/low archaeological sensitivity areas, and no additional archaeological examination of them was recommended. The area containing the proposed solar facility was characterized by a mix of open fields and forested areas, and it was found to contain steep slopes on the northern, eastern, and southern edges. The central portion of the proposed facility area, in contrast, was characterized by level to gentle slopes that contained well drained soils situated in proximity to the Rocky River and associated wetlands. The central portion of the proposed facility area, which consisted of approximately 35 ac of land along a north to south axis, was considered to retain a moderate/high archaeological sensitivity. Heritage recommended that this area be subjected to Phase IB cultural resources reconnaissance survey prior to disturbance associated with construction of the proposed solar facility. Those portions of the solar facility area that possess steep slopes were characterized as no/low probability areas and were eliminated for further consideration.

During the late summer and early fall of 2017, Heritage followed up the Phase IA cultural resources assessment survey of the Candlewood Solar project area with a Phase IB cultural resources reconnaissance survey (Heritage Consultants, LLC 2017b). Phase IB cultural resources reconnaissance survey of the moderate/high archaeologically sensitive areas previously identified within the proposed Candlewood Solar project area were examined using a combination of pedestrian survey and shovel testing. Phase IB survey of the moderate/high archaeologically sensitive areas associated with the proposed solar facility and the potential construction parking and materials storage/staging area resulted in the identification of eight cultural resources loci (Locus 1 through Locus 8). Locus 1, 3, and 4, all of which were identified within

. Despite delineation

testing, all of these cultural resources loci failed to produce additional artifacts or evidence of cultural features. As a result, it was determined that the prehistoric occupations associated with Loci 1, 3, and 4 lacked research potential and the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of them was recommended prior to construction of the proposed solar facility.

Phase IB survey also resulted in the identification of historic period cultural materials representative of field scatters within Loci 1, 5, 6, and 8. Delineation shovel testing of these four areas also failed to identify significant amounts of cultural material or evidence of cultural features. Thus, it was determined that they too lacked research potential and the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of Loci 1, 5, 6, or 8 was recommended prior to construction of the proposed solar facility or the use of the potential construction parking and materials storage/staging area. However, in accordance with the Connecticut State Historic Preservation Office's November 28, 2017 determination, construction matting will be used in Area 4 (approximate 5-acre construction parking and materials storage/staging area) to lessen the potential impact to undisturbed resources.

Phase IB cultural resources survey of the Locus 2 area resulted in the identification of a

it was designated as Site 96-165. Despite close interval delineation testing, no additional cultural material or evidence of cultural features was identified within Site 96-165 (Locus 2). Consequently, it was determined to lack research potential and the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of it was recommended prior to construction of the

proposed solar facility. Finally, archaeological examination of the proposed solar facility also resulted in the identification of Site 96-166 (Locus 7), **and the second second second and the second second**

Previously Recorded Cultural Resources Within the Vicinity of the Study Area

A review of data currently on file at the Connecticut State Historic Preservation Office revealed that while there are no National Register of Historic Places, State Register of Historic Places, or historic standing structures within or immediately adjacent to the access road, facility, or electric interconnection route associated with the Candlewood Solar Project, there are eight previously recorded archaeological sites (96-17, 96-50, 96-51, 96-59, 96-88, 96-89, 96-90, 96-165) within a 1.6 km (1 mi) area encompassing the Candlewood Solar project study area and Site 96-166 (Locus 7) (Figures 2). While none of these sites are located within the facility area, access road, or electric interconnection route, they provide contextual information regarding archaeological deposits in the region, as well as those that might be expected within the study area. Each of the previously identified archaeological sites is reviewed briefly below.

Site 96-17

Site 96-17 was identified in 1979 by Dr. Fred Warner of Connecticut Archaeological Survey, Inc., (Figure 2). According to the submitted site form, Site 96-17 consists of a Late Archaic/Woodland period camp site that yielded a single radiocarbon date of "1095 BC". Cultural material recovered from the site area included "lithics, steatite, and Vinette pottery." The latter is characteristic of the Early Woodland period of Connecticut prehistory, and the reported radiocarbon date also fits with this interpretation. Excavations at the site also revealed 23 cultural features, 18 of which were classified as hearths. Unfortunately, no additional excavations were undertaken at Site 96-17 prior to the site being destroyed by bulldozing for motel construction. Site 96-17 was not assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]) prior to its destruction.

<u>Site 96-50</u>

Site 96-50, the Kimberly Clark Site, also was recorded in 1979 by Dr. Fred Warner of Connecticut Archaeology Survey, Inc., (Figure 2). According to the submitted site form, this site was identified by local artifact collector J. Pawloski, who recovered an unspecified amount of quartz debitage from the site area. No professional survey of the Site 96-50 area was undertaken at the time of identification, but according the site form, the occupation represented a prehistoric camp from an unknown time period. This site also has been destroyed by construction. Site 96-50 also was not assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]) prior to its destruction.

<u>Site 96-51</u>

Site 96-51 also known as the Nursery Site, was identified in 1979 by Dr. Fred Warner of Connecticut Archaeology Survey, Inc., (Figure 2). According to the submitted site form, this camp yielded

According to the site form, the Nursery Site

took place at the site. Site 96-51 is described as in fair condition on the site form, but it has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). This site is located well to the north of the proposed solar facility, access road and electric interconnection route, and Site 96-51 will not be impacted by construction of the Candlewood Solar Photovoltaic Project.

<u>Site 96-59</u>

Site 96-59, also known as the AIAI 7 Site, was recorded by the American Indian Archaeological Institute at an unknown time (Figure 2). Unfortunately, the site form associated with Site 96-59 is blank. As a result, nothing is known about this site other than its location to the north of the proposed solar facility, access road, electric interconnection route, and potential temporary construction parking and material and equipment storage area, and the fact that it represents a prehistoric occupation of some sort. This site also will not be impacted by the proposed solar project.

<u>Site 96-88</u>

Site 96-88, also known as the Rocky CLP I Site, was recorded in 1990 by Garrow and Associates, Inc. (Figure 2). According to the submitted site form, the site area yielded a single . As a result, it was listed as an isolated find spot that could not be attributed to any specific prehistoric time period or cultural affiliation. It was stated on the site form that the find spot was in good condition at the time of survey, but was determined to be not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]) due to a lack of research potential. No additional investigation of the site area was recommended and it will not be impacted by the proposed solar project.

Site 96-89

Site 96-89, also known as the Rocky CLP II Site, also was recorded in 1990 by Garrow and Associates, Inc. (Figure 2). According to the submitted site form, this site also yielded a single **Constant**. It was listed as an isolated find spot that could not be attributed to any specific prehistoric time period or cultural affiliation. It was stated on the site form that the find spot was in good condition at the time of survey; however, Site 96-89 also was determined to be not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]) due to a lack of research potential. No additional investigation of the site area was recommended and it will not be impacted by the proposed solar project.

<u>Site 96-90</u>

Site 96-90, also known as the Rocky River Mill Site, was recorded in 1990 by Garrow and Associates, Inc. (Figure 2). The submitted site form lists this site as the remains of a constant of a constant collected from the site area consisted of constant.

. These items were collected from within and adjacent to a stone foundation. According to the site form, "the foundation appears to be the site of either the probably the foundation appears to be the site of either the probably the foundation.

former.

While no National Register of Historic Places eligibility assessment was made for Site 96-90, the site form indicates that "further archaeological and historical documentation work would gather material on the economic and industrial issues occurring in the **second second se**

Site 96-165

Site 96-165, also known as Locus 2, was identified in 2017 by Heritage during a Phase IB cultural resources reconnaissance survey of the proposed Candlewood Solar Project (Figure 2). The site area, which measured only 3 x 3 m (10 x 10 ft) in size, was identified during survey of an area covered by secondary growth forest and characterized by sandy, well drained soils. Examination of the Locus 2 area resulted in the collection of **Control Control Cont**

identified in Connecticut.
. Despite an intensive field effort undertaken throughout the Site
96-165 (Locus 2) area, no additional artifacts or cultural features were found in association with the
. While this artifact is of

Connecticut's prehistoric archaeological record, it alone indicates very little about the use of the Site 96-165 (Locus 2) area other than the item was likely lost during a hunting episode. There are no other artifacts or cultural features within Site 96-165 (Locus 2) to suggest that this area was occupied for other than a very short period of time. As a result, it was determined that Site 96-165 (Locus 2) lacks research potential and the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of Site 96-165 (Locus 2) was recommended prior to construction of the proposed solar facility.

Summary and Interpretations

The review of previously completed archaeological research in the vicinity of the proposed study area and Site 96-166 (Locus 7), as well as the analysis of archaeological sites recorded in the region, indicates that the area possesses a long history of both prehistoric Native American occupation and use. Prehistoric archaeological sites recorded in the project region appear to largely date from the Late Archaic period (ca., 6,000 years ago) onward. Moreover, the data noted in the previously identified prehistoric sites indicate that the area was used for a variety of tasks and for variable amounts of time, ranging from task specific and temporary occupations to seasonal camps.

CHAPTER V METHODS

Introduction

This chapter describes the field and laboratory methods used to complete the Phase II National Register of Historic Places testing and evaluation of Site 96-166 (Locus 7) within the Candlewood Solar project area. 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.

Phase II National Register of Historic Places Testing and Evaluation Field Methods

The Phase II testing and evaluation of Site 96-166 (Locus 7) was designed to determine whether the archaeological deposits within the site area possess the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). More specifically, the Phase II National Register testing and evaluation effort was completed to: 1) more clearly identify the limits of the archaeological deposits within Site 96-166 (Locus 7); 2) document whether intact subsurface cultural deposits and features exist within the site area; 3) identify and describe the horizontal and vertical distribution of artifacts and cultural components within Site 96-166 (Locus 7); 4) recover temporally diagnostic artifacts to allow an accurate characterization of the cultural component(s) contained within the site area; 5) examine the archaeological site formation processes responsible for the development of Site 96-166 (Locus 7); 6) assess the site's potential to provide meaningful botanical and faunal data; and 7) assess the overall research potential of the archaeological deposits within the Site 96-166 (Locus 7); anea applying the above-referenced criteria for evaluation (36 CFR 60.4 [a-d]). The methods by which these goals were accomplished are outlined below.

Site Mapping

Prior to initiating Phase II National Register of Historic Places testing and evaluation of Site 96-166 (Locus 7), a permanent project datum was positioned within the vicinity of Locus 7. 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, to the extent possible, all shovel tests excavated during the previously completed Phase IB survey also were tied to the control grid.

Further, during the Phase II National Register testing and evaluation effort, Heritage staff employed a Trimble R1 receiver to collect GPS coordinates for all delineation 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 project, but it allowed the field

staff to instantly transfer GPS data related to cultural resources to Heritage's home office for review and mapping.

Delineation Shovel Testing

In order to isolate the horizontal and vertical boundaries of Site 96-166 (Locus 7), Phase II "delineation" shovel testing was conducted in the vicinity of previously excavated Phase IB survey shovel tests that resulted in the initial identification of the 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 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 until C-Horizon soils or immovable objects were encountered or large obstructions (e.g., boulders or bedrock) 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 using existing standard soils nomenclature. All Phase II shovel tests were backfilled immediately upon completion of the archaeological recordation process.

Unit Excavation

In addition to shovel testing, the Phase II National Register testing and evaluation effort at Site 96-166 (Locus 7) included excavation of larger sampling units; a total of eight units were excavated within each site area. Each excavation unit measured 1 x 1 m (3.3 x 3.3 ft) in size, and each was designed to sample artifact concentrations or cultural features identified within the Site 96-166 (Locus 7) area. All unit excavations were 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 using standard soils nomenclature. Finally, stratigraphic profiles for at least two walls of each excavation unit were prepared and photographed.

Laboratory Analysis

The laboratory analyses of the cultural material recovered during the Phase II National Register testing and evaluation effort at Site 96-166 (Locus 7) 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.

Analysis

The lithic analysis protocol used in this project was a "technological" or "functional" one designed to identify ________. 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, artifact type, was then defined as the general class, e.g., unmodified flake, core, or preform, of lithic artifact, while the last level, artifacts 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 included 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 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.

Curation

Upon completion of the project, all cultural 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 VI RESULTS OF THE INVESTIGATION

Introduction

The results of a previously completed Phase IB cultural resources survey suggested that Site 96-166 (Locus 7) may have contained intact prehistoric cultural deposits and was potentially eligible for listing on the National Register of Historic Places under Criterion D of the criteria for evaluation (36 CFR 60.4 [a-d]). As a result, Heritage recommended Phase II National Register of Historic Places testing and evaluation to assess the integrity and eligibility of the site. The Phase II National Register testing and evaluation effort was designed to determine whether the archaeological deposits previously identified within the Site 96-166 (Locus 7) area are eligible for nomination to the National Register of Historic Places (36 CFR 60.4 [a-d]). More specifically, these investigations were designed to: 1) document whether intact subsurface cultural deposits and/or features exist within the site area; 2) identify and describe the horizontal and vertical distribution of artifacts and cultural components within the work area associated with Site 96-166 (Locus 7); 4) recover a sample of temporally/functionally diagnostic artifacts to permit an accurate characterization of the site area in terms of age, cultural affiliation, and site type; and 5) assess the overall research potential of Site 96-166 (Locus 7). In order to accomplish these goals, both close interval shovel testing and unit excavations were conducted throughout the same area. The methods by which this testing was completed are discussed below.

Phase II Shovel Testing Results

During the National Register of Historic Places testing and evaluation process, a total of 86 of 87 (99 percent) planned delineation shovel tests measuring 50 x 50 cm (19.6 7x 19.7 cm) in size were excavated at intervals varying from 5 to 10 m (16.4 to 32.8 ft) throughout Site 96-166 (Locus 7) (Figures 3 through 6). The shovel test interval was varied in order to accommodate for the large number of rocks and boulders on the site's surface. Excavation of the delineation shovel tests helped to identify the northern, western, and southern boundaries of the site area (Figures 3 through 5).

As seen in Table 1 below, the delineation shovel testing completed throughout Site 96-166 (Locus 7) resulted in the collection of 37 prehistoric artifacts from Strata I though V.

A typical delineation shovel test excavated within the confines of Site 96-166 (Locus 7) exhibited five soil strata in profile and extended to a depth of 54 cmbs (21.2 inbs). Stratum I, the AO-Horizon, was classified as leaf litter or duff; it ranged in depth from the ground surface level to 5 cmbs (1.9 inbs). Stratum II, the intact and unplowed A-Horizon, was identified as a layer of dark brown (10YR 3/3) silty loam that reached from 5 to 16 cmbs (1.9 to 6.2 inbs). Stratum III, the B1-Horizon (subsoil), was encountered between 16 and 40 cmbs (6.2 and 15.7 inbs); it was described as a deposit of yellowish brown (10 YR 5/8) silty loam. Stratum III, the B2-Horizon (lower subsoil), extended from 40 to 54 cmbs (15.7 to 21.2 inbs) and was classified as a layer of olive brown (2.5Y 4/4) silty sand. Finally, the glacially derived C-Horizon was excavated to an average depth of 64 cmbs (25.1 inbs) and was characterized as a compact layer of pale brown (2.5Y 7/4) silty fine to medium sand.

Prehistoric artifacts collected from the A-Horizon (Stratum II) of the delineation shovel tests excavated within the confines Site 96-166 (Locus 7) include

	. In	addition,	the	B1-Horizon	(Stratum	III)	of	the	delineation	shovel	tests
produced											

Table 1. Cultural material recovered from Phase II shovel testing at Site 96-166 (Locus 7).

Stratum	Depth	Material	Туре	Subtype	Total
	0-10 cmbs				
А	10-20 cmbs				
	20-30 cmbs				
	20-30 cmbs				
	20 50 61153				
B1					
DI	30-40 cmbs				
	50-40 cmb3				
Grand Total					37

As seen above, the cultural material collected during the delineation shovel testing effort consisted largely of the seen produced the second from the immediate area containing Site 96-166 (Locus 7) that

were reduced through a bipolar reduction technique where the

Unfortunately, no cultural features were identified during this portion of the Phase II National Register of Historic Places testing and evaluation effort at Site 96-166 (Locus 7); however, the delineation shovel testing was successful in that it helped identify the as well as its time of occupation,

Phase II Unit Testing Results

In addition to the delineation shovel testing, a total of eight 1 x 1 m (3.3 x 3.3 ft) units also were excavated throughout the Site 96-166 (Locus 7) area. These units were placed in areas with the highest concentrations of artifacts as determined during the Phase IB survey and the Phase II delineation shovel testing or in the vicinity of a cultural feature (see below). They were designated as Unit 1 through Unit 8, and excavation of them resulted in the collection of 262 artifacts from Strata I through V (see Tables 2 - 6 below). The recovered cultural material consists of

during the testing and evaluation of

Site 96-166 (Locus 7). The results of the unit excavation are reviewed below.

Unit 1

Unit 1, which was located in the **sector of** of Site 96-166 (Locus 7), was excavated in order to examine a **sector of** s that was identified during the Phase II delineation shovel testing (Figures 6 and 7). Unit 1 exhibited four soil strata in profile and reached to a maximum depth of 60 cmbs (24 inbs) (Figure 8). Stratum I extended from the ground surface to 6 cmbs (0 to 2.4 inbs) and was identified as the duff or leaf litter layer. Stratum II, the intact A-Horizon, reached from 6 to 21 cmbs (2.4 to 8.4 inbs) and was described as a deposit of grayish brown (2.5Y 5/2) silty fine sand. The underlying subsoil, Stratum II, ranged in depth from 21 to 51 cmbs (8.4 to 20.5 inbs) and consisted of a layer of light yellowish brown (2.5Y 6/4) silty fine to medium sand. Finally, Stratum III was the glacially derived C-Horizon; it reached to the base of the unit at 60 cmbs (24 inbs) and consisted of a layer of compact pale brown (2.5Y 8/3) coarse sand with trace amounts of silt and oxidation. Despite the field effort, no cultural material or evidence of cultural features was noted within Unit 1.

Unit 2

Unit 2 was placed in the **Control** of Site 96-166 (Locus 7) and in the **Control** identified during the Phase II delineation testing (Figure 6 and 9). Unit 2 exhibited five soil strata in profile and was excavated to a depth of 60 cmbs (24 inbs) (Figure 10). Stratum I (Ao-Horizon), the leaf-litter layer, extended from the ground surface to 5 cmbs (0 to 2 inbs). Stratum II, the intact A-Horizon, reached from 5 to 15 cmbs (2 to 6 inbs) and was classified as a deposit of grayish brown (2.5Y 5/2) silty fine sand. Stratum III, the underlying subsoil (B1-Horizon), extended from 15 to 34 cmbs (6 to 13.6 inbs) and was described as a layer of light yellowish brown (2.5Y 6/4) silty fine to medium sand. It was underlain by Stratum IV (B2-Horizon), which extended from 34 to 52 cmbs (13.6 to 20.4 inbs) and was identified as yellowish brown (10YR 5/8) silty fine to medium sand. Finally, Stratum V consisted of the glacially derived C-Horizon, which extended to the base of the unit at 60 cmbs (24 inbs); it consisted of a deposit of pale brown (2.5Y 8/3) coarse to medium sand with trace silt. All of the cultural material collected from Unit 2 was recovered

. Despite careful excavation, no cultural features were identified within

Unit 2.

Unit 3

Unit 3 was placed in the previous portion of the Site 96-166 (Locus 7) area and in the vicinity of a identified during the previously completed Phase IB cultural resources reconnaissance survey and Phase II shovel testing (Figures 6 and 11). Unit 3 exhibited also five soil strata in profile; it was excavated to a maximum depth of 70 cmbs (28 inbs) (Figure 12). Stratum I, the leaf litter, extended from the ground surface to 2 cmbs (0 to 0.8 inbs). Stratum II, the intact A-Horizon, was classified as a deposit of dark brown (10YR 3/3) silty loam that ranged in depth from 2 to 7 cmbs (0.8 to 2.8 inbs). The underlying subsoil (B1-Horizon) that comprised Stratum III reached from 7 to 32 cmbs (2.8 to 14 inbs) and was described as a deposit of yellowish brown (10YR 5/8) silty loam. Stratum IV (the B2-Horizon) extended from 32 to 51 cmbs (14 to 20.4 inbs) and was identified as a layer of olive brown (2.5Y 4/4) fine sandy loam. Finally, the glacially derived C-Horizon ranged in depth from 51 to 70 cmbs (20.4 to 28 inbs) and was classified as a deposit of pale brown (2.5Y 7/4) silty fine to medium sand.

The excavation of Unit 3 resulted in the collection of a total of 24 artifacts

(Table 2).

Excavation of this unit

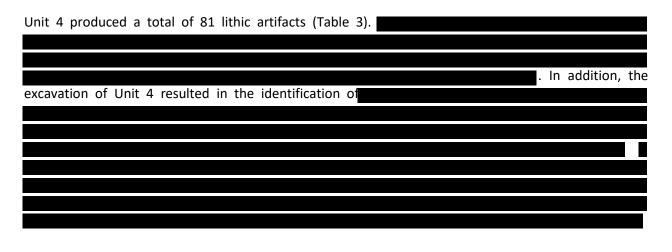
revealed that a rodent burrow had disturbed the subsoil level and, as a result, a deposit of Stratum IV (subsoil) was found mixed in with the glacially derived C-Horizon (Stratum V). The rodent burrow area contained **example 1** This was determined to be a result of natural disturbance; no cultural features were identified within Unit 3.

Stratum	Depth	Material	Туре	Subtype	Total
А	0-10 cmbs				
	o-10 cmbs				
	10-20 cmbs				
B1	10-20 CIIIDS				
DI	20-30 cmbs				
	20-50 cmbs				
	30-40 cmbs				
В2	60-70 cmbs				
	00-70 cmbs				
С	40-50 cmbs				
Grand Tota					24

Table 2. Cultural material recovered from Unit 3 at Site 96-166 (Locus 7).

Unit 4

Due to the high density of artifacts in Unit 3, the highest in the site excavation up until that point in the project, Unit 4 was opened (Figures 6 and 13). Unit 4 extended to a depth of 80 cmbs (32 inbs) and it also exhibited five soil strata in profile (Figure 14). The ground-covering leaf litter, Stratum I, was noted between the surface and 2 cmbs (0 to 0.8 inbs). Stratum II, the intact A-Horizon, reached from 2 to 9 cmbs (0.8 to 3.6 inbs) and was classified as a deposit of dark brown (10YR 3/3) silty loam. The underlying subsoil (B1-Horizon), Stratum III, reached from 9 to 37 cmbs (03.6 to 14.8 inbs) and was described as a layer of yellowish brown (10YR 5/8) silty loam. It was underlain by Stratum IV, the B2-Horizon, which reached from 37 to 59 cmbs (14.8 to 23.6 inbs) and was classified as a layer of olive brown (2.5Y 4/4) silty fine sand. Finally, the glacially derived C-Horizon descended from 59 to 80 cmbs (23.6 to 32 inbs); it was described as a very compact layer of pale brown (2.5Y 7/4) silty fine to medium sand.



Stratum	Depth	Material	Туре	Subtype	Total
A					
B1					
B2					
Grand Total					81

Table 3. Cultural material recovered from Unit 4 at Site 96-166 (Locus 7).

Unit 5

Unit 5 was placed in the

of Site 96-166 (Locus 7), on

(Figures 6 and 15). This part of the Site 96-166 (Locus 7)

contained several positive Phase II delineation shovel tests. This unit exhibited four soil strata in profile and was excavated to a maximum depth of 65 cmbs (26 inbs) (Figure 16). Stratum I, the leaf litter layer (Ao-Horizon), extended from 0 to 5 cmbs (0 to 2 inbs). Stratum II, the intact A-Horizon, reached from 5 to 20 cmbs (2 to 7.8 inbs) and was classified as a layer olive brown (2.5Y 4/4) silty medium to coarse sand. The underlying subsoil, Stratum III, extended from 20 to 50 cmbs (8 to 12 inbs) and was described as a deposit of yellowish brown (10YR 5/8) silty medium sand. Finally, Stratum IV consisted of a glacially derived C-Horizon that extended to the base of the unit at 65 cmbs (26 inbs); it consisted of a layer of very compact pale brown (2.5Y 7/4) medium to coarse sand with oxidation. As seen in Table 4 below,

; however, no cultural features were identified within Unit 5.

Stratum	Depth	Material	Туре	Subtype	Total
А					
Ao					
В					
Grand Tot	al				28

Table 4. Cultural material recovered from Unit 5 at Site 96-166 (Locus 7).

Unit 6

Unit 6 was positioned within the **Sector 1** of Site 96-166 (Locus 7) and in the vicinity of several positive shovel tests completed during the Phase IB cultural resources reconnaissance survey and Phase II National Register delineation effort (Figures 6 and 17). Unit 6, which reached to a maximum depth of 50 cmbs (20 inbs), exhibited four soil strata in profile (Figure 18). Stratum I, the leaf litter layer (A0-Horizon), extended from the surface to 4 cmbs (0 to 1.6 inbs). Stratum II, the intact A-Horizon, reached from 4 to 12 cmbs (1.6 to 4.8 inbs) and was classified as a deposit of brown (10YR 4/3) silty loam. The underlying subsoil (B-Horizon), Stratum III, ranged in depth from 12 to 40 cmbs (12 to 16 inbs) and was described as a layer of yellowish brown (10YR 5/4) silty medium sand. Finally, the glacially derived C-Horizon was classified as a layer of very compact light olive brown (2.5Y 5/4) silty medium to coarse sand with oxidation that reached to 50 cmbs (20 inbs). Unit 6 produced just two artifacts;

. Despite careful excavation, no cultural features were noted within Unit 6.

Unit 7

Due to the artifact density within Unit 3 and Unit 4, Unit 7 was placed (Figures 6 and 19). Unit 7 exhibited five soil strata in profile and extended to a depth of 60 cmbs (24 inbs) (Figure 20). Stratum I, the leaf litter layer (Ao-Horizon), reached from the ground surface to 5 cmbs (0 to 2 inbs). Stratum II, the intact A-Horizon, reached from 5 to 15 cmbs (2 to 6 inbs) and was described as a deposit of dark brown (10YR 3/3) silty loam. The underlying subsoil, Stratum III (B1-Horizon), extended from 15 to 33 cmbs (6 to 13.2 inbs) and was classified as a layer of yellowish brown (10YR 5/8) silty loam. Stratum IV reached from 33 to 48 cmbs (13.2 to 19.2 inbs) and was identified as olive brown (2.5Y 4/4) silty fine sand. Finally, the glacially derived C-Horizon was described as a compact layer of pale brown (2.5Y 7/4) silty fine to medium sand that ranged in depth from 48 to 60 cmbs (19.2 to 24 inbs). Unit 7 produced a total of 74 prehistoric lithic artifacts (Table 5).

Stratum	Depth	Material	Туре	Subtype	Total	
А						
A						
B1						
B2						
ΒZ						
Grand Total					74	

Table 5. Cultural material recovered from Unit 7 at Site 96-166 (Locus 7).

Unit 8

Unit 8 was placed directly of Units 4 and 7 in order to pursue Feature 1 (Figures 6 and 21). Unit 8 exhibited five soil strata in profile and reached to a depth of 80 cmbs (32 inbs) (Figure 22). The leaf litter layer (Ao-Horizon), Stratum I, extended from the ground surface to 5 cmbs (0 to 2.5 inbs). Stratum II, the intact A-Horizon, reached from 5 to 12 cmbs (2.5 to 4.8 inbs) and was classified as a deposit of dark brown (10YR 3/3) silty loam. Stratum III, the underlying subsoil (B1-Horizon), ranged in depth from 12 to 55 cmbs (2.5 to 22 inbs) and was described as a layer of yellowish brown (10YR 5/8) silty loam. Stratum IV (B2-Horizon) reached from 55 to 70 cmbs (22 to 28 inbs) and was identified as a layer of olive brown (2.5Y 4/4) silty fine sand. Finally, the glacially derived C-Horizon was classified as a compact layer of pale brown (2.5Y 7/4) silty fine to medium sand that descended from 70 to 80 cmbs (28 to 32 inbs). Feature 1 also was observed in Stratum III of this unit, between 30 and 55 cmbs (12 and 22 inbs); it consisted of strong brown (7.5YR 5/8) silty fine to medium sand mixed with flecks of charcoal.

A total of 74 lithic artifacts were recovered from Strata I through IV of Unit 8, as well as from Feature 1. As seen in Table 6 below, Stratum II of Unit 8, the A-Horizon, yielded

. In addition,
. Finally, Feature 1 yielded
. A review of Feature 1 is provided below.

Stratum	Depth	Material	Туре	Subtype	Total			
А								
~								
B1								
В2								
DZ								
Frand Total					74			

Table 6. Cultural material recovered from Unit 8 at Site 96-166 (Locus 7).

Feature 1

Feature 1 was first identified within Site 96-166 (Locus 7) during the excavation of Unit 4. This feature was observed in the second of the unit at the second seco

	(Figures	23	and	24).	The	feature	matrix	was	described	as a	deposit	of		
										Featu	re 1 was	also	observe	ed in
the														

In addition,

Once exposed, Feature 1 The horizontal dimensions . As mentioned above, the Feature 1 matrix yielded a total of nine artifacts. A total of . In addition, a large soil sample of approximately three gallons of feature matrix was collected and subjected to flotation analysis. While approximately

Phase II National Register Testing and Evaluation of the Site: Summary and Recommendations
The completion of the Phase II National Register of Historic Places testing and evaluation of Site 96-16
(Locus 7) revealed
. In total, 299 artifacts were recovered from the Site 96-166 (Locus 7
during the Phase II delineation shovel testing and unit excavations. The cultural material collected from the
site area reflected a few key elements. First, the
Further, it is clear based on the
that the material was
. The recovered during the Phase
National Register testing and evaluation are typical of a
In sum, Site 96-166 (Locus 7) represents
The cultural deposits and features present within the site area
site possesses research potential and is eligible for listing to the National Register of Historic Place
under Criterion D of the criteria for evaluation (36 CFR 60.4 [a-d]). Based on the current construction
plan, with the exception of two (2) positive shovel tests (Delineation Shovel Tests), the main accuration area of Site 06.166 (Leave 7) is primerik
occupation area of Site 96-166 (Locus 7) is primarily
and will be protected from impacts during construction. No additional
archaeological examination of the main occupation area 96-166 (Locus 7) is recommended. Further
Delineation Shovel Tests that were no
directly associated with the main occupation of Site 96-166 (Locus 7). Thus, any proposed work in thes
areas will not represent a significant impact to Site 96-166, and no additional excavations in the vicinit
of Delineation Shovel Tests is recommended prior to construction.

CHAPTER VII SUMMARY AND MANAGEMENT RECOMMENDATIONS

This report presents the results of Phase II National Register testing and evaluation of Site 96-166 (Locus 7), which is located in the **second second** of the study area associated with the proposed Candlewood Solar Project in New Milford, Connecticut. Heritage completed this project using a combination of shovel testing and unit excavation, as well as site mapping and photo-documentation. Archaeological examination of Site 96-166 (Locus 7) resulted in the collection of

. This area contained multiple shovel tests and
excavation units that produced
. The cultural material recovered from the site make two important points apparent. First, the
recovered
. Second, it is
clear based on the
·
In sum, Site 96-166 (Locus 7) represents a
The site
possesses research potential and is eligible for listing to the National Register of Historic Places under
Criterion D of the criteria for evaluation (36 CFR 60.4 [a-d]). Based on the current construction plan, with
the exception of
and will be protected from impacts during construction. No additional archaeological examination of the
main occupation area of Site 96-166 (Locus 7) is recommended. Further, Delineation Shovel Tests
that were not directly associated with the main

occupation of Site 96-166 (Locus 7). Thus, any proposed work in these areas will not represent a significant impact to Site 96-166, and no additional excavations in the vicinity of Delineation Shovel Tests is recommended prior to construction.

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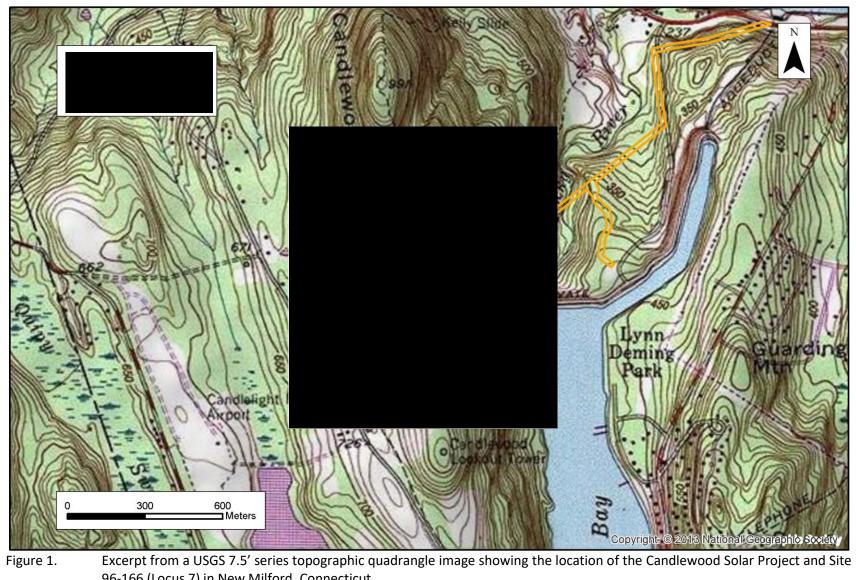
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Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the Candlewood Solar Project and Site Figure 1. 96-166 (Locus 7) in New Milford, Connecticut.

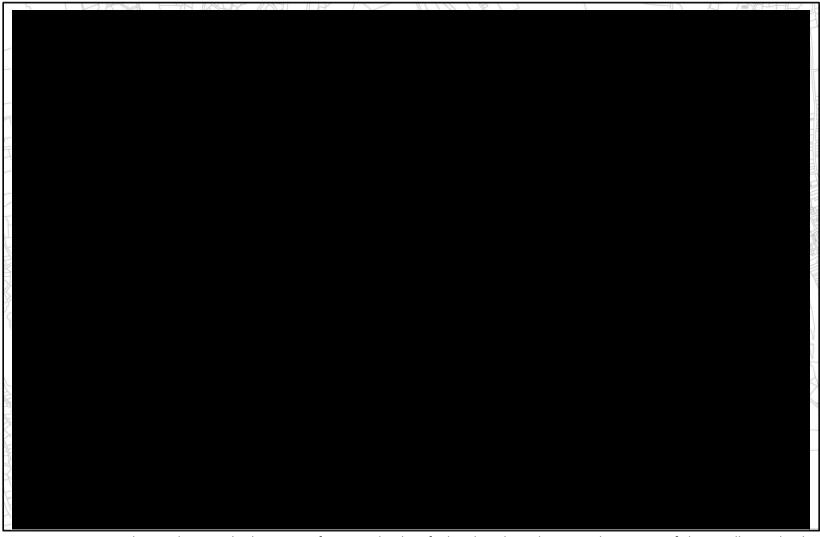


Figure 2. Digital map showing the locations of previously identified archaeological sites in the vicinity of the Candlewood Solar Facility and Site 96-166 (Locus 7) in New Milford, Connecticut.





Figure 4.Overview photograph of the central portion of Site 96-166 (Locus 7) facing east.

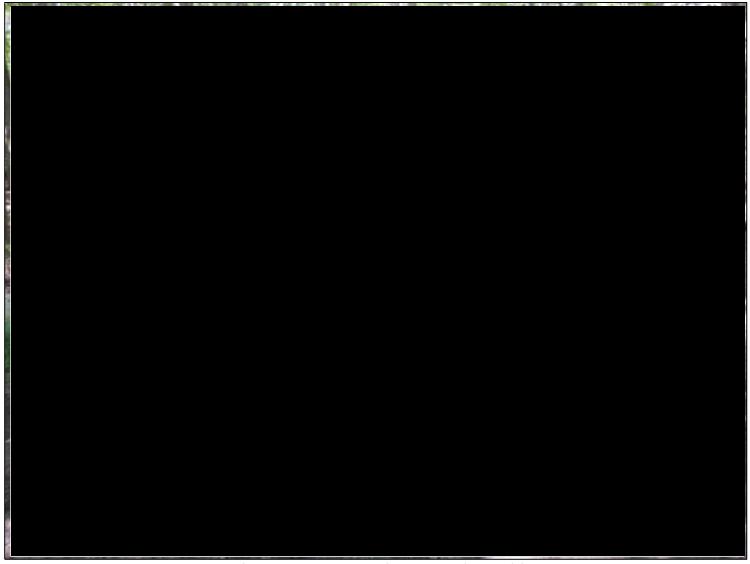


Figure 5. Overview photograph of the southern portion of Site 96-166 (Locus 7) facing east.





Figure 7. Overview photograph of the north wall of Unit 1.

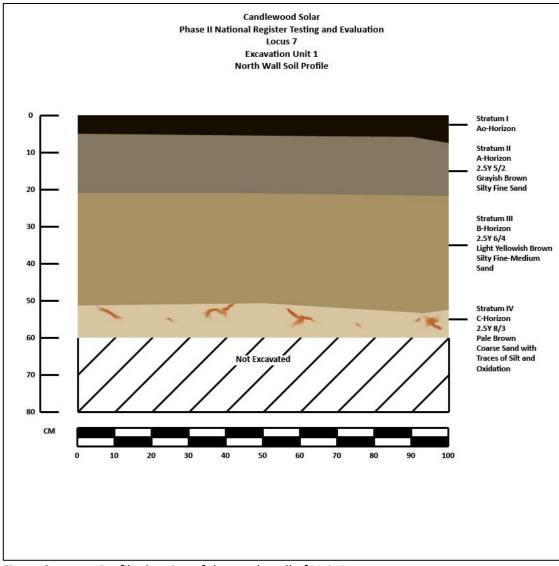


Figure 8. Profile drawing of the north wall of Unit 1.



Figure 9. Overview photograph of the east wall of Unit 2.

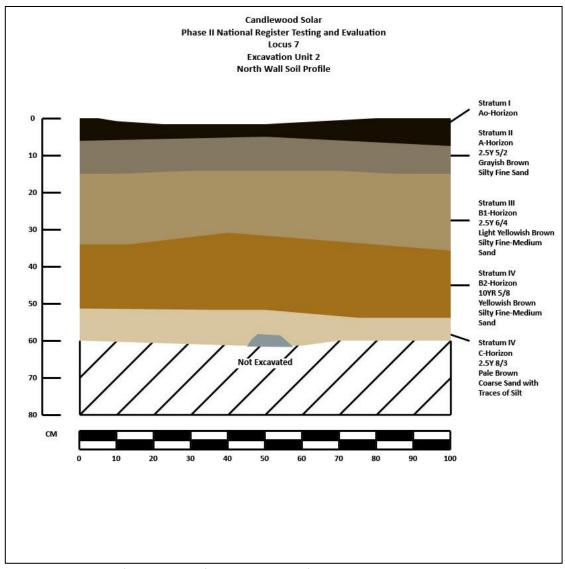


Figure 10. Profile drawing of the north wall of Unit 2.



Figure 11. Overview photograph of the north wall of Unit 3.

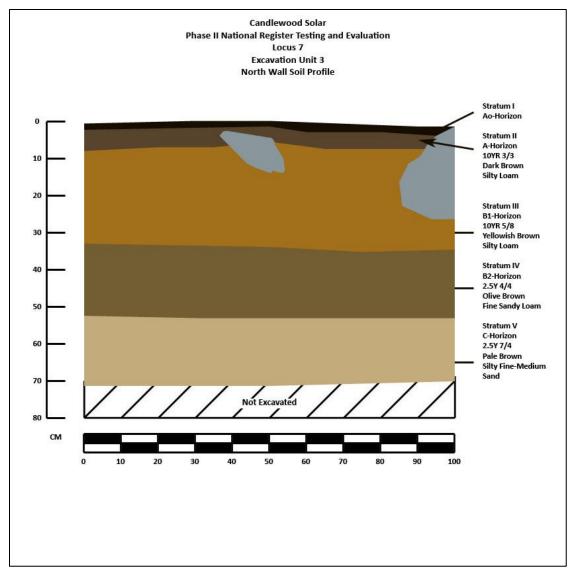


Figure 12. Profile drawing of the north wall of Unit 3.

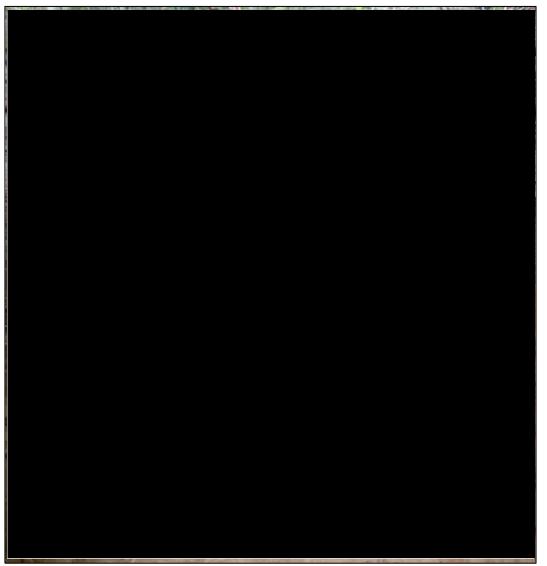


Figure 13. Overview photograph of the east wall of Unit 4.

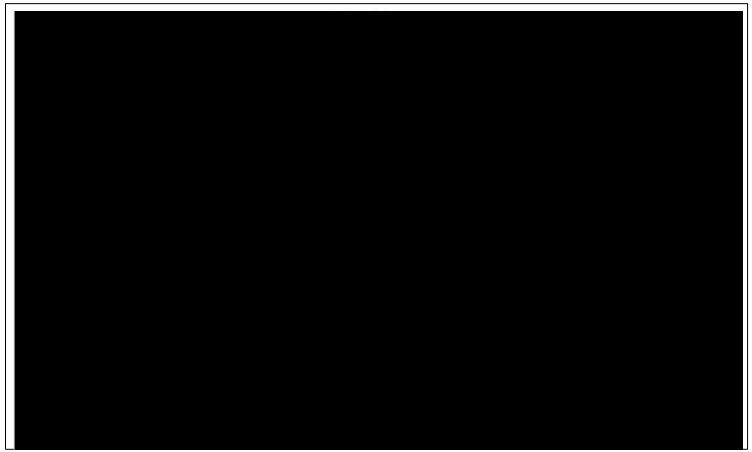


Figure 14. Profile drawing of the north wall of Unit 4.



Figure 15. Overview photograph of the east wall of Unit 5.

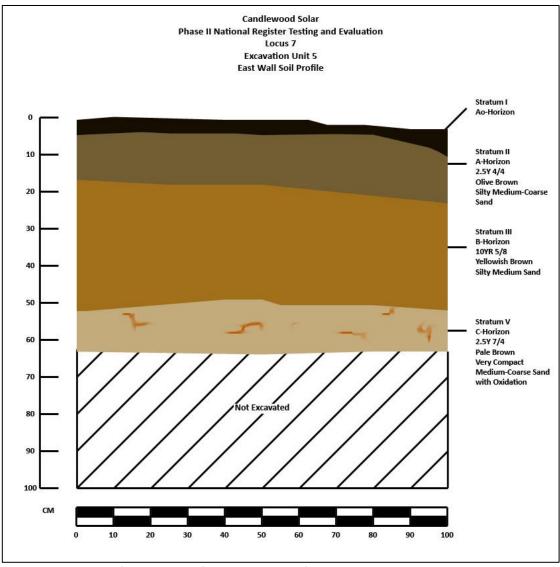


Figure 16. Profile drawing of the north wall of Unit 5.



Figure 17. Overview photograph of the west wall of Unit 6.

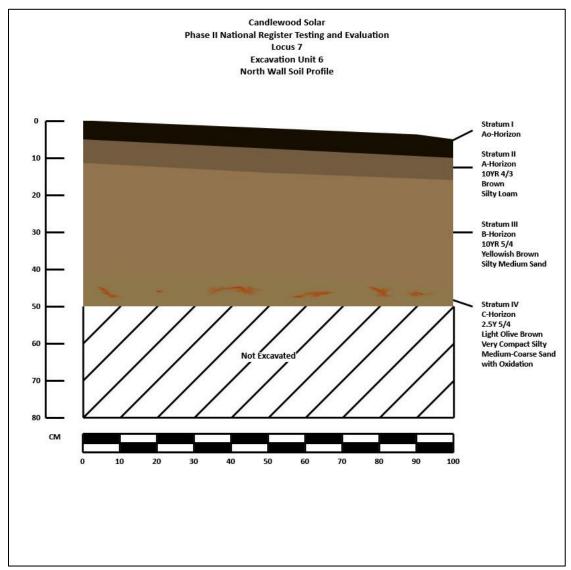


Figure 18. Profile drawing of the north wall of Unit 6.



Figure 19. Overview photograph of the west wall of Unit 7.

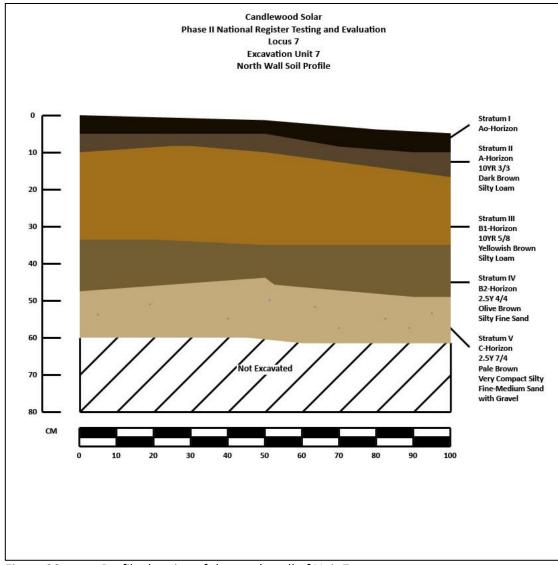


Figure 20. Profile drawing of the north wall of Unit 7.

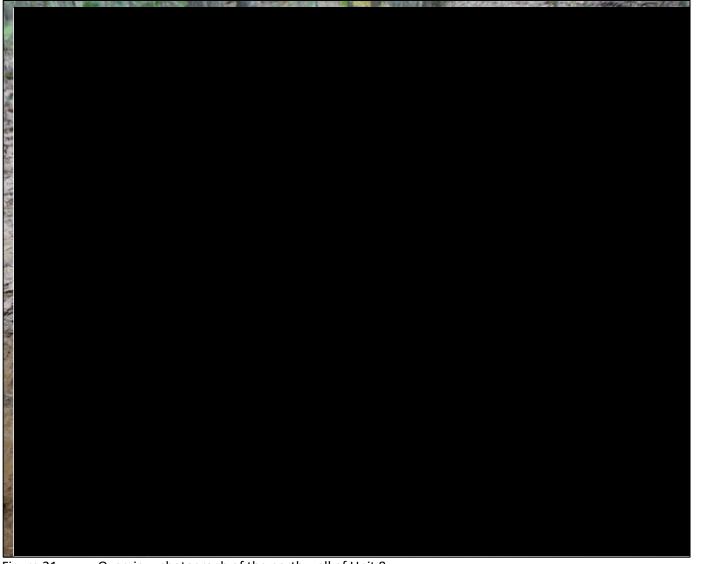


Figure 21. Overview photograph of the north wall of Unit 8.

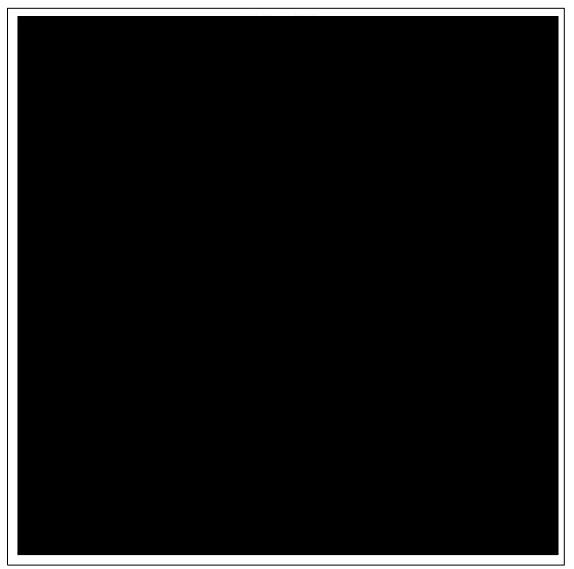


Figure 22. Profile drawing of the north wall of Unit 8.

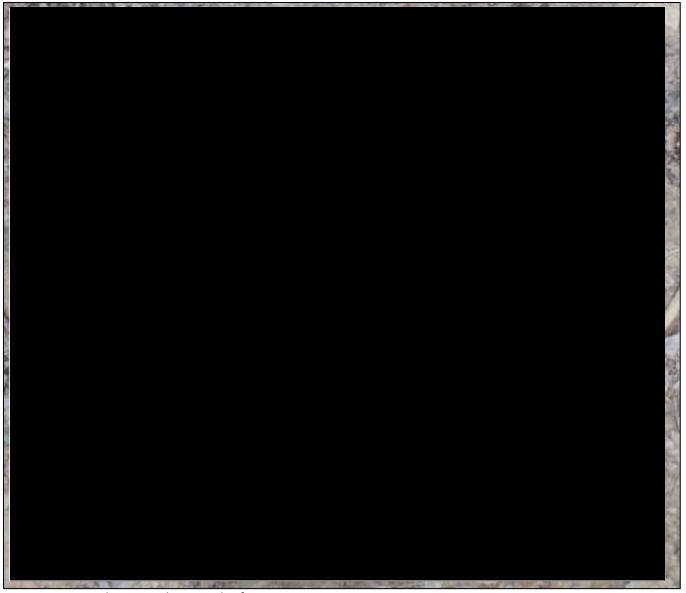


Figure 23. Plan view photograph of Feature 1.

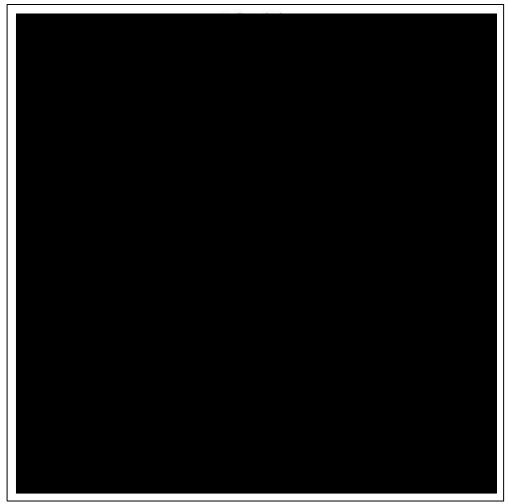


Figure 24. Plan view drawing of Feature 1.