Appendix H – SHPO Letter and Phase 1A Report

State Historic Preservation Office
Department of Economic and Community Development

CONNECTICUT

September 29, 2025

Dr. Gregory F. Walwer
Archaeological Consulting Services
118 Whitfield Street
Guilford, CT 06437
(sent only via email to acsinfo@yahoo.com)

Subject: Archaeological Reconnaissance Survey of a Proposed Solar Facility
170 Preston Road
Plymouth, Connecticut

Dear Dr. Gregory F. Walwer:

The State Historic Preservation Office (SHPO) received the technical report prepared by Archaeological Consulting Services (ACS) titled *Phase I Archaeological Reconnaissance Survey: Proposed Solar Photovoltaic Array, 270 Preston Road, Town of Plymouth, Connecticut* dated September 2025. The completed investigation meets the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources*. SHPO understands that the proposed project entails the construction of a 0.975 MW AC ground-mounted solar voltaic facility with associated equipment, security fence, access road, and other site improvements at the referenced address. The project will require a stormwater discharge permit issued by the Connecticut Department of Energy and Environmental Protection through the authority of the Environmental Protection Agency; therefore, it is subject to review by this office pursuant to Section 106 of the National Historic Preservation Act.

There are no previously reported archaeological sites or properties listed on the National Register of Historic Places (NRHP) recorded within or in close proximity to the Area of Potential Effect (APE) for the project. During survey, 38 shovel tests were excavated at 50 foot (15-meter) intervals along transects placed 50 feet (15 meters) apart within and immediately adjacent to the APE. The effort produced a single quartz biface fragment recovered from the plowzone. Four delineation shovel tests completed at 25-foot (7.5 meter) intervals around the findspot failed to produce additional evidence of cultural material or features. It is the opinion of this office that the identified archaeological deposits are not eligible for listing on the NRHP. Therefore, based on the information submitted to this office, it is the opinion of SHPO that no historic properties will be affected by the project. This comment is conditional upon the submission of two bound copies of the final report; one will be kept for use in the office and the other will be transferred to the Thomas J. Dodd Research Center at the University of Connecticut (Storrs) for permanent archiving and public accessibility. Finally, the report noted the presence of a historic barn within the project parcel, just outside the APE. If project plans change to include additional work space in the vicinity of the barn or removal of the barn, SHPO requests additional consultation prior to construction.

State Historic Preservation Office
Department of Economic and Community Development

CONNECTICUT

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

Sincerely,

Jonathan Kinney
State Historic Preservation Officer

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

Phase I Archaeological Reconnaissance Survey
Proposed Solar Photovoltaic Array
270 Preston Road
Town of Plymouth, Connecticut

September, 2025

ACS

◆ *Archaeological Consulting Services* ◆

Phase I Archaeological Reconnaissance Survey
Proposed Solar Photovoltaic Array
270 Preston Road
Town of Plymouth, Connecticut

by

Gregory F. Walwer, Ph.D.
and
Dorothy N. Walwer, M.A.

of

ACS

for

Solli Engineering
501 Main Street, Suite 2A
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September, 2025

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Abstract

This report provides the results of a Phase I archaeological reconnaissance survey conducted by ACS (Archaeological Consulting Services) during the months of August and September, 2025. The project calls for an evaluation of potential cultural resources to be affected by the construction of a solar farm on a property that measures 7.25 acres in Plymouth, Connecticut. The project property consists of one lot on the north side of the road in the north-central part of town, with the bulk of the property to be impacted with the exception of the northeast corner where a late historic barn is located. The project is being coordinated by Solli Engineering, a civil engineering firm based in Monroe, Connecticut. Solli supplied site plans which show the proposed development and existing conditions. The project is subject to review by the Connecticut Siting Council and the Connecticut State Historic Preservation Office (SHPO).

Background research indicates a moderate sensitivity for potential prehistoric cultural resources, with a statistical prehistoric landscape sensitivity model developed and utilized by ACS indicating a high score of only 11.2 out of a possible 100.0, and therefore within the low sensitivity range (0-20), although significant prehistoric archaeological contexts have been previously recorded across the road to the south on a similar landform. The project area benefits from its south-facing setting and well drained soils, although the Paxton soil is on a glacial moraine landform with substantial till. It is also located close to the Pequabuck River, although in the headlands of the drainage basin. The project area also bears a moderate historic sensitivity, due to its position on the historic course of Preston Road, and proximity to the historic Elias Smith farmstead house that is no longer extant.

For the Phase I archaeological reconnaissance survey, ACS excavated 38 systematic subsurface shovel tests in standard 50-foot intervals throughout the western and central portions of the parcel containing the spine of the hill landform, while the steeper eastern hill slope was not included in the stratified sample. Four more judgmental subsurface shovel tests were placed around a single systematic test producing a white quartz biface fragment, although no other associated artifacts were recovered. There were also no historic artifacts recovered during the survey. No further archaeological conservation efforts are warranted for the current project, although if site plans change to impact the area in the immediate vicinity of the late historic barn in the northeast corner of the proeprty, further archaeological evaluation may be warranted in consultation with SHPO.

Project Summary

Project Name: Proposed Solar Photovoltaic Array, 270 Preston Road, Plymouth, Connecticut.

Project Purpose: To investigate possible cultural resources which may be impacted by the construction of a solar farm in Plymouth, Connecticut, in compliance with requirements of the Connecticut Siting Council and the Connecticut State Historic Preservation Office.

Project Funding: Verogy, 124 LaSalle Road, West Hartford, Connecticut 06107.

Project Location: 270 Preston Road, Plymouth, Connecticut.

Project Size: 7.25 acres (project property).

Investigation Type: Phase I archaeological reconnaissance survey.

Investigation Methods: Background research, pedestrian surface survey, 38 systematic subsurface shovel tests, 4 judgmental subsurface shovel tests.

Dates of Investigation: August to September, 2025.

Performed by: ACS (Archaeological Consulting Services), 118 Whitfield Street, Guilford, Connecticut 06437, (203) 458-0550 (telephone), (203) 672-2442 (fax), acsinfo@yahoo.com.

Principal Investigators: Gregory F. Walwer, Ph.D. and Dorothy N. Walwer, M.A.

Submitted to:
Solli Engineering (Eric Labatte, Director of Operations), 501 Main Street, Suite 2A, Monroe, CT 06468, (203) 880-5455.
Connecticut Office of State Archaeology (Dr. Sarah Sportman, State Archaeologist), University of Connecticut, 354 Mansfield Road, Storrs, Connecticut 06269-1176, (860) 486-5248.

Reviewing Agency:
Connecticut State Historic Preservation Office (Catherine Labadia, Staff Archaeologist), 450 Columbus Boulevard, Hartford, Connecticut 06103, (860) 500-2329.

Recommendations: No further archaeological conservation efforts warranted within the project impact area.

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CHAPTER 1: INTRODUCTION

Project Description

This report provides the results of a Phase I archaeological reconnaissance survey conducted by ACS for the planned development of a solar voltaic array, or solar farm, in Plymouth, Litchfield County, Connecticut. The owner of the project is Verogy of West Hartford, Connecticut. The single privately owned lot consists of approximately 7.25 acres at 270 Preston Road, on the north side of the road. According to the tax assessor office of Plymouth, the property is designated as Map 21, Block 12, Lot 13E-1, and is privately owned. Located in the north-central part of town, the project area contains a mix of orchard tress, scrub growth, and tall grasses.

ACS was contacted by Solli Engineering, a civil engineering firm based in Monroe, Connecticut to conduct the archaeological assessment survey for the project. Solli supplied ACS with a survey map, indicating that the survey was required for review by the Connecticut State Historic Preservation Office (SHPO) according to a letter dated July 18, 2025:

> "...SHPO understands that the proposed project entails the construction of a 0.975 MW AC ground-mounted solar voltaic facility with associated equipment, security fence, access road, and other site improvements at the referenced address. The project will require a stormwater discharge permit issued by the Connecticut Department of Energy and Environmental Protection through the authority of the Environmental Protection Agency; therefore it is subject to review by this office pursuant to Section 106 of the National Historic Preservation Act. There are no previously reported archaeological sites or properties listed on the National Register of Historic Places (NRHP) within or in close proximity to the Area of Potential Effect (APE) for the project. However, the lack of previously recorded archaeological resources in the vicinity is likely the result of a lack of prior professional survey. In addition, the project parcel exhibits environmental characteristics often associated with significant archaeological deposits. As a result, it is SHPO's opinion that well-drained soils in the APE have the potential to contain significant archaeological resources. Therefore, SHPO is requesting that a professional archaeological reconnaissance survey be completed prior to construction to ensure due diligence..."

The survey map shows the proposed development and existing conditions, including topography and wetlands. The project area covers the bulk of the lot, with the exception of the northeast section where there is as existing barn (Figure 1).

ACS conducted the archaeological reconnaissance survey in conformance with the *Environmental Review Primer for Connecticut Archaeological Resources* issued by SHPO. The reconnaissance survey included a thorough background research effort, pedestrian surface survey, and subsurface shovel tests to evaluate the potential presence of significant prehistoric and/or historic cultural resources. Given the moderate sensitivity of the project area for potential historic sites given its proximity to the historic course of Preston Road, as well as the presence of significant prehistoric site contexts on the other side of the road in a similar environmental setting, ACS initiated a relatively saturated systematic subsurface shovel testing pattern for the survey, excluding only the steepest east facing slope of the property. The results of the Phase I reconnaissance survey are presented for review by SHPO.

Figure 1: Map of the Project Property

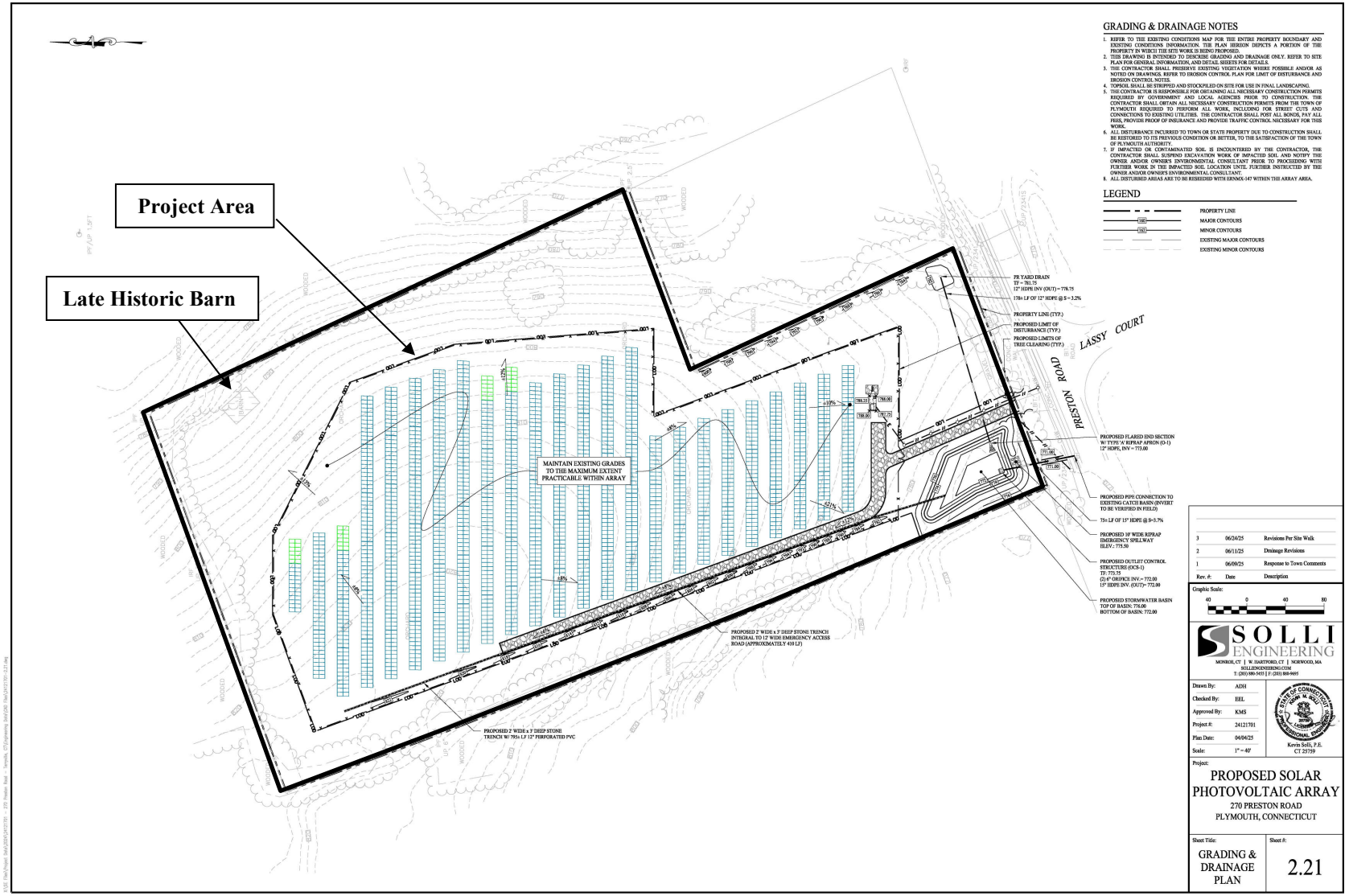

Figure 1: Map of the project area, from site plans drafted by Solli Engineering. Scale 1:1,920 (1" = 160').

CHAPTER 2: BACKGROUND

Environmental Setting

The project area is located in the Town of Plymouth, Litchfield County, Connecticut. The project setting is in the Northwest Hills (III-A) ecoregion of Connecticut (Dowhan and Craig 1976). The project area lies in the north-central part of Plymouth, well to the north of Route 6. The lot address is 270 Preston Road, situated on the north side of the road to the east of Old Farm Road. The property measures 7.25 acres, and is recorded in the town assessor office as Map 21, Block 12, Lot 13E-1. There are no existing structures within the project area other than a bird house pole and small fruit stand, although a barn does exist in the northeast corner of the property outside the bounds of the project area. Surrounding properties are residential, agricultural, and industrial.

Underlying bedrock for the property is dominated by a unit of Bristol Gneiss (Obs), an Ordovician formation on the order of 500 to 440 million years old (Rodgers 1985). The metamorphic formation is flanked to the east by Jurassic sedimentary formations that were part of a failed rift dating to the last breakup of Pangea. Bedrock outcrops of the area reveal dips on the order of 40 degrees to the northwest, reflecting the degree to which they have been foliated by metamorphic processes. The project area contains thick glacial till deposits on a glacial moraine formation that covers a large portion of north-central Plymouth (Stone et al. 1992), dissected by various streams. One of those streams is the Pequabuck River that flanks the project area to the east and flows south into the heart of the drainage basin (#4315), then continuing east about ten miles where it drains into the Farmington River (#4300) (McElroy 1991). Various cores taken in the area reveal that the moraine till can be as deep as 80 feet below the surface, while elevations of the project area vary between about 770 and 820 feet above mean sea level, with the project area set along the spine of a glacial till landform that plunges gently south-southeast (Figure 2). While the bulk of the proposed development is along this spine, the proposed project area includes a steeper eastern slope of the landform.

There is one main soil type within the project area (Figure 3) (Gonick and Shearin 1970; USDA NRCS websoil survey 2025). A unit of Paxton fine sandy loam (PbB / 84B / 84C) occupies the bulk of the project area. This soil type has moderately drained surface and subsoil layers, but due to the compact substratum layer at about two feet below the surface, the drainage of the substratum layer is categorized as slow or very slow. The typical stratigraphy consists of a surface layer of very dark grayish brown fine sandy loam about eight inches thick, followed by an upper subsoil of dark yellowish brown about eight inches thick, over a lower subsoil of light-olive brown fine sandy loam about eight inches thick, and a very firm substratum (hardpan) of dark grayish brown gravelly fine sandy loam at about two feet below the surface, and about three inches thick over olive-brown gravelly fine sandy loam. This soil type is often found in drumlins or drumloidal hills. Depending on the slope of the land, this soil type may be well suited to cultivated crops and orchards (Gonick and Shearin 1970).

Figure 2: USGS 7.5' Topographic Map, Thomaston Quadrangle

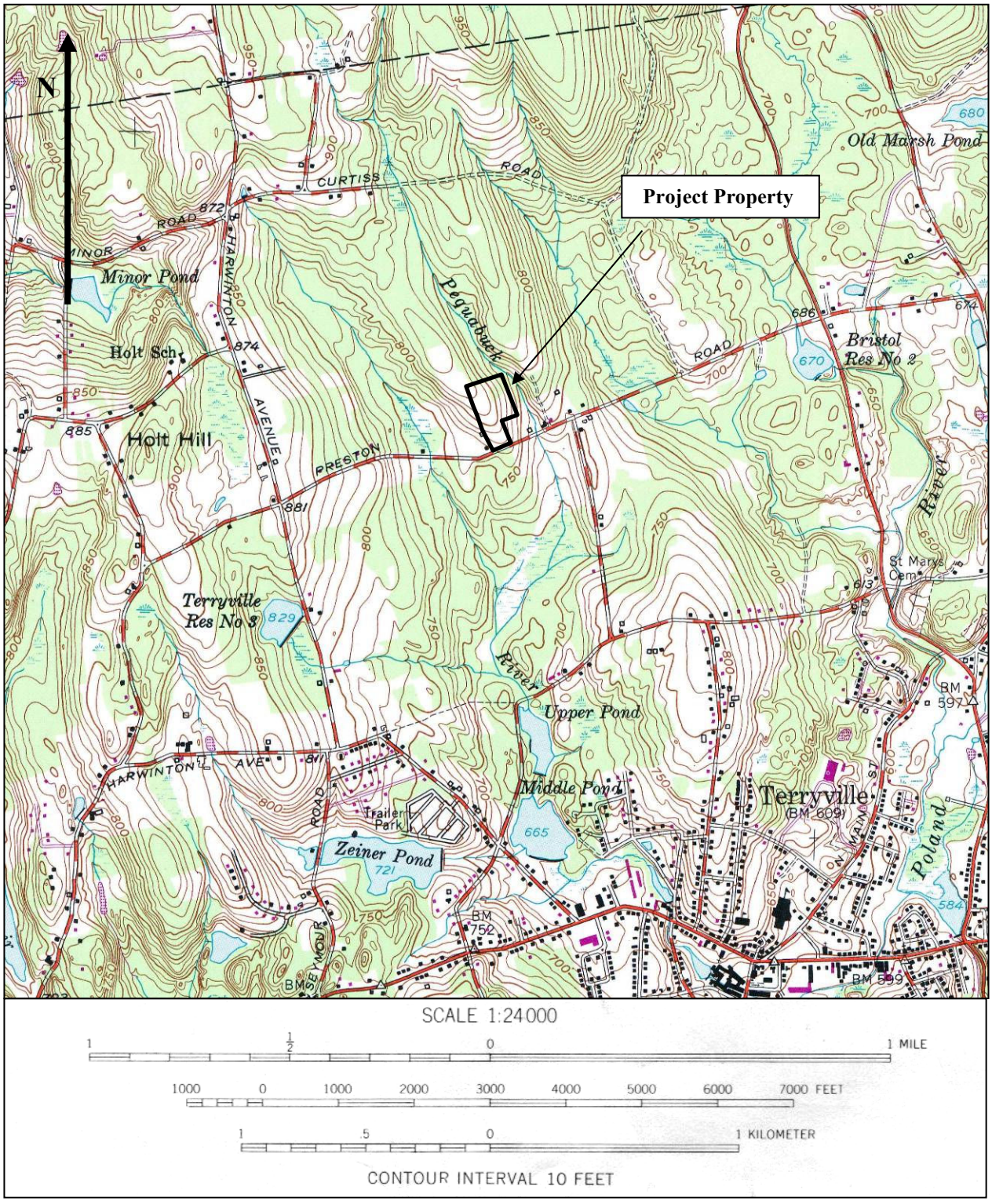

Figure 2: From USGS 1976.

Figure 3: USDA Websoil Survey Map

Figure 3: From USDA NRCS websoil survey.

Cultural Setting

Regional Prehistory

The prehistory of the project region and New England in general can be broadly divided into periods reflecting changes in environment, Native American subsistence and settlement patterns, and the material culture which is preserved in the archaeological record. Although it remains controversial today, the conservative estimates for the first occupations of North America are about 18,000 to 15,000 years ago, just after the maximum extent of the last glaciation and the broadest extent of the Bering land bridge (Kehoe 1981:7; Parker 1987:4; Jennings 1989:52). Southern Connecticut itself remained glaciated until about 15,200 B.P. (Snow 1980:103; Gordon 1983:71; Parker 1987:5; McWeeney 1994:181, 1999:6).

Paleo-Indian

The Paleo-Indian period is documented in Connecticut after 13,000 years ago and extends to roughly 9,500 B.P. (Swigart 1974; Snow 1980:101; Lavin 1984:7; Moeller 1984, 1999). The earliest radiocarbon date in Connecticut was secured recently at the Brian D. Jones site, at about 12,500 B.P. (Leslie and Sportman 2020). An unpublished date of 12,600 B.P. was also obtained from the site (Sportman pers. comm. 2022). This was a period of climatic amelioration from full glacial conditions, and a rise in sea levels which fell short of inundating the continental shelf. It was during this time that tundra vegetation was replaced by patches of boreal forests dominated by spruce trees (Snow 1980:114; Parker 1987:5-6), and eventually white pine and several pioneering deciduous genera (McWeeney 1994:182, 1999:7). Early in the period, the environment was conducive to the existence of large herbivores and a low population density of humans who procured these animals as a major subsistence resource, although warming temperatures and denser forests contributed to the extinction of certain species. The projected human social and settlement patterns are those of small bands of semi-nomadic or restricted wandering people who hunted mammoth, mastodon, bison, elk, caribou, musk ox, and several smaller mammals especially after the extinction of megafauna (Ritchie 1969:10-11; Snow 1980:117-120; Jones and Forrest 2003). Episodes of sparse vegetation during this period encouraged the use of high lookout points over hollows and larger valleys by people in pursuit of large game. The southern part of New England had an earlier recovery from glacial conditions when compared to areas to the north, however, with a higher density of vegetation that might have precluded Paleo-Indians of Connecticut from focussing heavily on the larger mammals (McWeeney 1994:182).

The cultural material associated with this period includes large to medium-sized, fluted projectile points (cf. Clovis), in addition to knives, drills, pieces esquillees and gravers, scrapers, perforators, awls, abraders, spokeshaves, retouched pieces, utilized flakes, and hammerstones (Wilbur 1978:5; Snow 1980:122-127; Moeller 1980). Although numerous finds from this period have been found in Connecticut, only a few, small *in situ* sites exist throughout the state. Finds tend to be located near very large streams in the lower Connecticut River Valley, and in rockshelters of other regions (McBride 1981). A survey performed by the Connecticut Office of State Archaeology and the Archaeological Society of Connecticut resulted in the documentation of 53 Paleo-Indian "find spots" in Connecticut (Bellantoni and Jordan 1995), while a more updated research survey indicates up to 72 locations and sites (Bouchard 2014). Many more sites have likely been eradicated by rising sea levels since the Paleoindian period (Anderson 2001).

Early Archaic

The Early Archaic period lasted from approximately 9,500 B.P. to 7,500 B.P. (Snow 1980:159; Lavin 1984:9; Moeller 1984). Sea levels and temperatures continued to rise during this period as denser stands of forests dominated by pine and various deciduous species replaced the vegetation of the former period (Davis 1969:418-419; Snow 1980:114; Parker 1987:9; McWeeney 1994:184-185, 1999:8-9). This environmental change was rapid and caused a major shift in the animals it supported, including deer, moose, other small to medium-sized mammals, migratory birds, fish, and shellfish. The material culture changed along with the environmental conditions to include the atlatl and smaller stemmed and bifurcated projectile points (Stanly, cf. Kanawha and Lecroy) for procuring smaller, faster game in more closed settings (Wilbur 1978:6-7). The expanded tool set included choppers and anvil stones. Fish weirs and nets with stone weights could have been used as early as the Early Archaic in Connecticut (Wegner 2018). Settlement patterns were probably becoming more territorialized towards a central-based wandering character (Snow 1980:171; see also Forrest 1999), and possibly a greater focus on wetlands (Jones and Forrest 2003). Some semi-subterranean habitation structural features are evident in the region at this time, and may be part of a Gulf of Maine Archaic tradition in which there was a focus on quartz as a lithic resource without a high emphasis on projectile points (Robinson et al. 1992; Forrest 1999) and instead more of a focus on more expedient tool forms than the more formalized Paleoindian toolkit (Anderson 2001). The Early Archaic period is poorly represented in Connecticut and the lower coastal river valleys, probably resulting from a combined effect of low population densities in response to rapidly changing environmental conditions, as well as site location and preservation factors (Snow 1980:168; McBride 1981; McBride and Dewar 1981:45; Lavin 1984:9; McWeeney 1986; see also Forrest 1999).

Middle Archaic

The Middle Archaic period extended from approximately 7,500 B.P. to 6,000 B.P. (Snow 1980:173; Lavin 1984:9; McBride 1984; Jones 1999). It was by the end of this period of increased warming that sea levels and coastal configurations had stabilized and approached their present conditions (Kehoe 1981:211; Gordon 1983:82; Parker 1987:9). The period is marked by the establishment of forests with increasing proportions of deciduous hardwoods in relation to the pine predecessors in Connecticut (Davis 1969; Snow 1980:114; McWeeney 1999:10). The material culture included square or contracting-stemmed points (Neville, Stark, and Merrimac), semi-lunar groundstone knives, ground and winged banner stones for atlatls, plummets for nets, gouges, denticulates, perforators, percussed celts and adzes and grooved axes for woodworking (Snow 1980:183-184), as well as tools used in previous periods and rare triangular projectile points that may be precursors of Squibnocket points of the Late Archaic (Forrest 2010). This more extensive range of material culture indicates a broader subsistence base than in previous periods, including greater fish and shellfish procurement (Wilbur 1978:8; Snow 1980:178-182; Anderson 2001) which was associated with the stabilization of sea levels towards the end of the period. The increased breadth of subsistence resources had the effect of increasing scheduling efforts and may have caused settlement patterns to take on more of a central-based or seasonally circulating pattern with bands joining and dispersing on a seasonal basis (Snow 1980:183). Sites found in the lower Connecticut River Valley region suggest that a wider range of environments and associated site types were exploited, including both large and special task sites in upland

areas (McBride 1981, 1984:56). This regional pattern may confirm the suggested settlement pattern of central-based, seasonally circulating or restricted circulating groups of people supported by logistical procurement sites throughout the state. Middle Archaic sites are fairly rare in Connecticut, again a combined product of rising sea levels and poor site preservation (see Forrest 1999).

Late Archaic

The Late Archaic period ranged from approximately 6,000 B.P. to 3,700 B.P. (Snow 1980:187; Lavin 1984:11; McBride 1984; Pfeiffer 1984; Cassedy 1999). This period is marked by a warm-dry maximum evident from pollen cores in the region (Davis 1969:414; Ogden 1977; Anderson 2001). Hardwood, oak-dominated forests very similar in character to ones established today covered most of Connecticut by the Late Archaic (Parker 1987:10). The Late Archaic in Connecticut has been divided into two traditions: the Laurentian and the Narrow Point (Lavin 1984:11), with the former perhaps being distributed more in the interior. The Laurentian tradition is defined by wider-bladed, notched and eared triangular points, and ground slate points and ulus, while the Narrow Point tradition includes smaller, thicker, and narrower points, which as a succinct tradition may have survived well into the Woodland era (Millis and Millis 2007). The tool kit and general material culture became even more expanded during this period, with the advent of ground stone manos, nut mortars, pestles, and bowls, as well as stone pipes, bone tools, corner-notched (Vosburg, Brewerton, and Vestal), side-notched (Otter Creek, Brewerton, Normanskill), smaller narrow-stemmed (Dustin, Lamoka, Squibnocket, and Wading River), and triangular points (Squibnocket, Brewerton, and Beekman), grooved and perforated weights, fish weirs and harpoons, and decorative gorgets (Wilbur 1978:15-24; Snow 1980:228-231). The groundstone material has been inferred as being associated with an increased vegetable diet that consisted of berries, nuts, and seeds (Snow 1980:231; Lavin 1984:13), including acorn, butternut, chestnut, walnut, hickory, bayberry, blackberry, goose foot, cranberry, partridge berry, service berry, strawberry, and swamp current (Cruson 1991:29). Deer continued to be the predominant meat source, although animal remains recovered from archaeological sites in the region include black bear, raccoon, woodchuck, rabbit, otter, gray squirrel, red fox, gray fox, wolf, wild turkey, grouse, pigeon, migratory fowl, and anadromous and freshwater fish and shellfish (Cruson 1991:28-29). Various sea mammals and fish were procured along the coast.

The increasing breadth of the subsistence base and material culture was in turn associated with a central-based settlement pattern in which a restricted range of seasonally scheduled and used areas were exploited in a more semi-sedentary fashion than previously (Lavin 1984:13; Dincauze 1990:25). Sites in the lower Connecticut River Valley suggest that the larger rivers served more as long-term bases within a central-based circulating system than in the Middle Archaic (McBride 1981; McBride and Dewar 1981:48). The interior uplands of Connecticut may have supported a relatively independent set of seasonally circulating groups which used larger wetlands as long-term bases (Wadleigh 1981). Mortuary practices of the time suggest some sedentism for certain groups of people who were buried in specialized secondary cremation cemeteries and who may have had some control over restricted resources (e.g. riparian transportation routes) (Walwer 1996). Although the cremation sites largely include utilitarian funerary objects, some contain non-local materials which suggest trade association with cultures to the west of Connecticut (Walwer 1996).

Terminal Archaic

The Terminal Archaic period extended from approximately 3,700 B.P. to 2,700 B.P., as defined by the Susquehanna and Small-Stemmed traditions (Swigart 1974; Snow 1980:235; Lavin 1984:14; Pfeiffer 1984; Pagoulatos 1988; Cruson 1991; Cassedy 1999). Steatite, or soapstone, was a frequently used material by this time, and could be fashioned into bowls and other objects. The mass, permanency, and labor intensiveness of creating these heavy items have led to the inference of more sedentary base camps, especially on large rivers where the development of a canoe technology had become fully established and increased the effective catchment area within which groups of people were gathering resources on a continuous basis. The material culture of the period was very similar to the Late Archaic, with a proliferation of stemmed projectile point types including Snook Kill, Bare Island and Poplar Island stemmed points, Orient Fishtail points, Sylvan and Vestal side-notched points, and Susquehanna corner-notched points. The resource base continued to consist of deer and small mammals, nuts, shellfish, turtles, and birds (Snow 1980:249). The first signs of ceramics (Vinette I pottery) tempered with steatite fragments appeared during this period (Lavin 1984:15; Lavin and Kra 1994:37; see also Cassedy 1999:131), and archaeological evidence of trade with other regions becomes more substantial for this time (Pfeiffer 1984:84).

The distribution of sites and site types in the lower Connecticut River Valley during this period suggests that there was a change in settlement to one with fewer, yet larger sites in riverine settings, and associated satellite task-specific sites in the uplands (McBride 1981; McBride and Dewar 1981:49). The implications are less foraging-strategy residential movement and more task-oriented collection activities within a radiating settlement pattern, but probably one in which some degree of seasonal circulation of settlement took place. Pagoulatos (1988) has shown that while sites associated with the Small-Stemmed tradition tend to suggest a more mobile settlement pattern in the interior uplands, sites of the Susquehanna tradition indicate a semi-sedentary collector strategy in major riverine and estuarine environments. At least certain groups exhibited semi-sedentism and some control over restricted resources, as indicated by the elaborate burials of the Terminal Archaic (Walwer 1996). Mortuary practices from the period include secondary cremation interments in formalized cemetery areas, with individual pits containing fragmented utilitarian material from communal cremation areas, as well as highly stylized funerary objects from non-local material (Walwer 1996). The lack of other, less formalized burial types evident in the archaeological record may be a matter of poor preservation, in which case it has been proposed that the cremation cemeteries are representative of a stratified society in which a portion of the people (of the Susquehanna "tradition") were able to generate a surplus economy that supported a semi-sedentary settlement pattern. This surplus may have been generated by the procurement and control over the transportation of steatite from various areas in Connecticut and surrounding territory.

Early Woodland

The Early Woodland period in Connecticut extended from about 2,700 B.P. to 2,000 B.P. (Lavin 1984:17; Juli and McBride 1984; Cruson 1991; Juli 1999). A cooling trend during the Early Woodland (Davis 1969:414; Parker 1987:10; McWeeney 1999:11; Fiedel 2001) is thought to have reduced population sizes and regional ethnic distinction as the hickory nut portion of the

resource base was significantly decreased, although the apparent decline in populations may possibly be related to other factors such as the inability to confidently distinguish Early Woodland sites from those of other periods (Filios 1989; Concannon 1993). Climatic deterioration and depopulation are in turn thought to have inhibited the progression towards, and association with, more complex social structures and networks that were developing further to the west and south (Kehoe 1981:215). A proliferation of tobacco pipes may indicate the beginnings of agricultural efforts in the northeast. The Early Woodland of this region, however, exhibits no direct traces of subsistence crop remains, indicating continuity with previous periods in terms of subsistence practices (Lavin 1984:18).

Materially, the period is marked by a substantial development of a ceramic technology, with the Early Windsor tradition of pottery being dominant in the Early Woodland of Connecticut (Rouse 1980:68; Lavin 1984:17, 1987). Both Early Windsor cord-marked and Linear Dentate ceramic forms were being produced at this time. Diagnostic projectile points can be developmentally traced to indigenous points of previous periods, consisting of many stemmed forms in addition to Meadowood and Fulton side-notched points, Steubenville points, and Adena-Rossville types, but now may have been used in conjunction with the bow and arrow (Lavin 1984:18). Adena-like boatstones are also found in this period. Although rare contact with the Adena culture is evident throughout assemblages of the period, the Early Woodland in southern New England remained a very gradual transitional period (Snow 1980:279,287; Lavin 1984:19).

A heightened use of ceramics has been erroneously promoted as an automatic indication of increased sedentism in many areas. Instead, central-based camps with restricted seasonal encampments appear to be the dominant settlement pattern (Snow 1980:287). Minimal archaeological evidence from the lower Connecticut River Valley appears to suggest a similar settlement pattern to the Terminal Archaic in which large riverine sites served as central bases with upland seasonal dispersal or specific task sites (McBride 1981; McBride and Dewar 1981:49), but with a lesser degree of sedentism. Interior uplands populations also decreased during the Woodland era, perhaps related to the intensification of agricultural resources along major riverine and coastal areas (Wadleigh 1981:83). The trend towards greater mobility may in part be attributed to the decline in the use of steatite that no longer gave certain groups control over critical and restricted resources, as indicated by the declining ceremonialism of burial sites at the time which were more often located in habitation sites and exhibited combinations of secondary cremation features and primary inhumations (Walwer 1996). This transition in the socio-economics of the region was brought about by the decrease in importance of steatite as ceramics obscured its value for producing durable containers. Partially preserved primary inhumations appear for the first time in the region based on preservation considerations.

Middle Woodland

The Middle Woodland period lasted from about 2,000 B.P. to 1,000 B.P. (Lavin 1984:19; Juli and McBride 1984; Cruson 1991; Juli 1999). The climate was returning to the conditions basically witnessed today (Davis 1969:420; McWeeney 1999:11). It is a period which exhibited considerable continuity with previous periods in terms of both subsistence and material culture. Cylindrical pestles and groundstone hoes are tools diagnostic of the period and reflect developing

agricultural efforts, including the cultivation of squash, corn, and beans on a seasonally tended basis (Snow 1980:279). Direct evidence for agriculture in the form of preserved vegetal remains, however, does not generally appear until the early Late Woodland (Lavin 1984:21) when corn is thought to have been introduced into the Connecticut River Valley from the upper Susquehanna and Delaware River Valleys (Bendremer and Dewar 1993:386). Projectile point forms from the period include Snyders corner-notched, LongBay and Port Maitland side-notched, Rossville stemmed, and Greene lanceolate types. A proliferation of ceramic styles was witnessed during the Middle Woodland (Rouse 1980; Lavin 1984:19-20, 1987; Lavin and Kra 1984:37), including Rocker Dentate, Windsor Brushed, Sebonac Stamped, Hollister Stamped, Selden Island, and Windsor Plain types that were all also produced in the Late Woodland, with the exception of the Rocker Dentate. Net and fabric-marked ceramics are key indicators of the shift into the Windsor tradition that would follow into the Late Woodland (Wink and Leslie 2021), although ceramic forms from the Early Woodland were still being produced as well. Minor traces of the Hopewell cultures to the west are also present in the archaeological record of this period. Site types and distributions in the lower Connecticut River Valley imply that a moderate increase of sedentism with aspects of a radiating settlement pattern took place on large rivers, supported by differentiated upland task sites (McBride 1981; McBride and Dewar 1981:49). This trend may have been supported by the expansion of tidal marshes up larger rivers (McBride 1992:14).

Late Woodland

The Late Woodland period extended from approximately 1,000 B.P. to 1600 A.D., the time of widespread European contact in the broader region (Snow 1980:307; Kehoe 1981:231; Lavin 1984:21; Feder 1984, 1999). A warmer climate and increased employment of large scale agriculture for subsistence in New England were associated with increased population densities, more sedentary settlements, and more permanent living structures and facilities in larger villages. Settlements in Connecticut, however, tended to remain smaller with only small scale agricultural efforts, and as part of a seasonal round in which smaller post-harvest hunting and task-specific settlements were established in fall, and protected settlements occupied in winter (Guillette 1979:CI5-6; McBride and Bellantoni 1982; Lavin 1984:23; Starna 1990:36-37). Instead of maintaining permanent villages near agricultural plots, aboriginal populations engaged in the slashing and burning new plots and let old plots lie fallow periodically (Salwen 1983:89). In this area, domestic resources included corn, beans, squash, Jerusalem artichoke, and tobacco (Guillette 1979:CI5; Starna 1990:35). Agriculture was largely maintained by women, with the exception of tobacco (Salwen 1983:89; Starna 1990:36). Deer, small mammals, fish and shellfish, migratory birds, nuts and berries, and other wild foods continued to contribute significantly to the diet (Waters 1965:10-11; Russell 1980). Many of the foods produced were dried and/or smoked and stored in baskets and subterranean holes or trenches.

The increasing diversity of wild estuary resources may have served to increase sedentism in the coastal ecoregions of Connecticut (Lavin 1988:110; Bragdon 1996:67), while agriculture and sedentism may have been even more prominent along the larger river bottoms as floodplains stabilized and experienced less flooding (Bragdon 1996:71; Forrest et al. 2008:11). Late Woodland settlement patterns of groups in the uplands interior ecozones of Connecticut may have included the highest degree of mobility, while many sites from the central lowlands

represent task-specific sites associated with larger settlements along the Connecticut River (McBride 1992:16). House structures consisted of wigwams or dome-shaped wooden pole frameworks lashed and covered with hides or woven mats, and clothing was made from animal hides (Guillette 1979:CI7-8; Starna 1990:37-38). Pottery for the period is defined as the Late Windsor tradition in Connecticut (Rouse 1980:68; Lavin 1984:22, 1987). Most of the ceramic forms of the Middle Woodland were still being produced, in addition to the newer Niantic Stamped and Hackney Pond forms. Ceramics of the East River tradition also appear in the area during the Late Woodland, having originated and been concentrated in the New York area (Rouse 1980; Wiegand 1987; Lavin 1987). The period exhibits some continuity in terms of projectile point forms, although the Jack's Reef, Madison triangular, and Levanna points are considered diagnostic for the period. As likely with earlier periods, the material culture included various textile products such as baskets and mats, and wooden utensils such as bowls, cups, and spoons (Willoughby 1935; Russell 1980:56).

Unlike groups of the Mississippi valley, the overall cultural pattern for the entire Connecticut Woodland era exhibits considerable continuity. Interregional contact increased during this period, however, with non-local lithic materials increasing from as low as 10% to as high as 90% from the early Middle Woodland to the Late Woodland (McBride and Bellantoni 1982:54; Feder 1984:105), although most trade appears to have been done between neighboring groups rather than initiated through long-distance forays (Salwen 1983:94). The lack of enormous agricultural surpluses for the time is indicated by the low density of small storage features in habitation sites, as well as the ubiquitous primary inhumation of people without a select portion of graves exhibiting special treatment that would require high energy expenditure (Walwer 1996). As confirmed by early ethnohistoric accounts, this suggests a largely egalitarian and relatively mobile society for the Late Woodland despite the fact that this period marks the highest development of food production (i.e. agriculture) during the course of prehistory in the region. Corn was undoubtedly important, however, as a disproportionate amount of the simple, flexed burials were oriented towards the southwest which was the aboriginally acknowledged direction for the origins of corn and the Spirit Land.

Local Sites and Surveys

According to site files of the Connecticut Office of State Archaeology (CT OSA 2025) and Connecticut State Historic Preservation Office (CT SHPO 2025), as recorded in the ConnCRIS electronic portal, there are no previously recorded prehistoric archaeological sites within or adjacent to the project area, however, five prehistoric archaeological sites (111-1, 2, 3, 4, 5) were identified as a result of reconnaissance and intensive archaeological surveys of the Plymouth Business Park located to the south of the project property on the southern side of Preston Road (Raber 1994, 1999, 2002). Mostly containing lithic debitage representing the maintenance and manufacturing of stone tools, all five were determined to be short-term camp sites or task-specific sites with a limited range of functions, although two were found to bear potentially significant feature contexts, a range of diagnostic projectile points and other lithic tools ranging from the Middle Archaic through Late Woodland periods, and a hearth feature whose charcoal generated a radiocarbon date of nearly 5,000 years ago (Raber 1999, 2002).

Figure 4: Prehistoric Sites of the Region

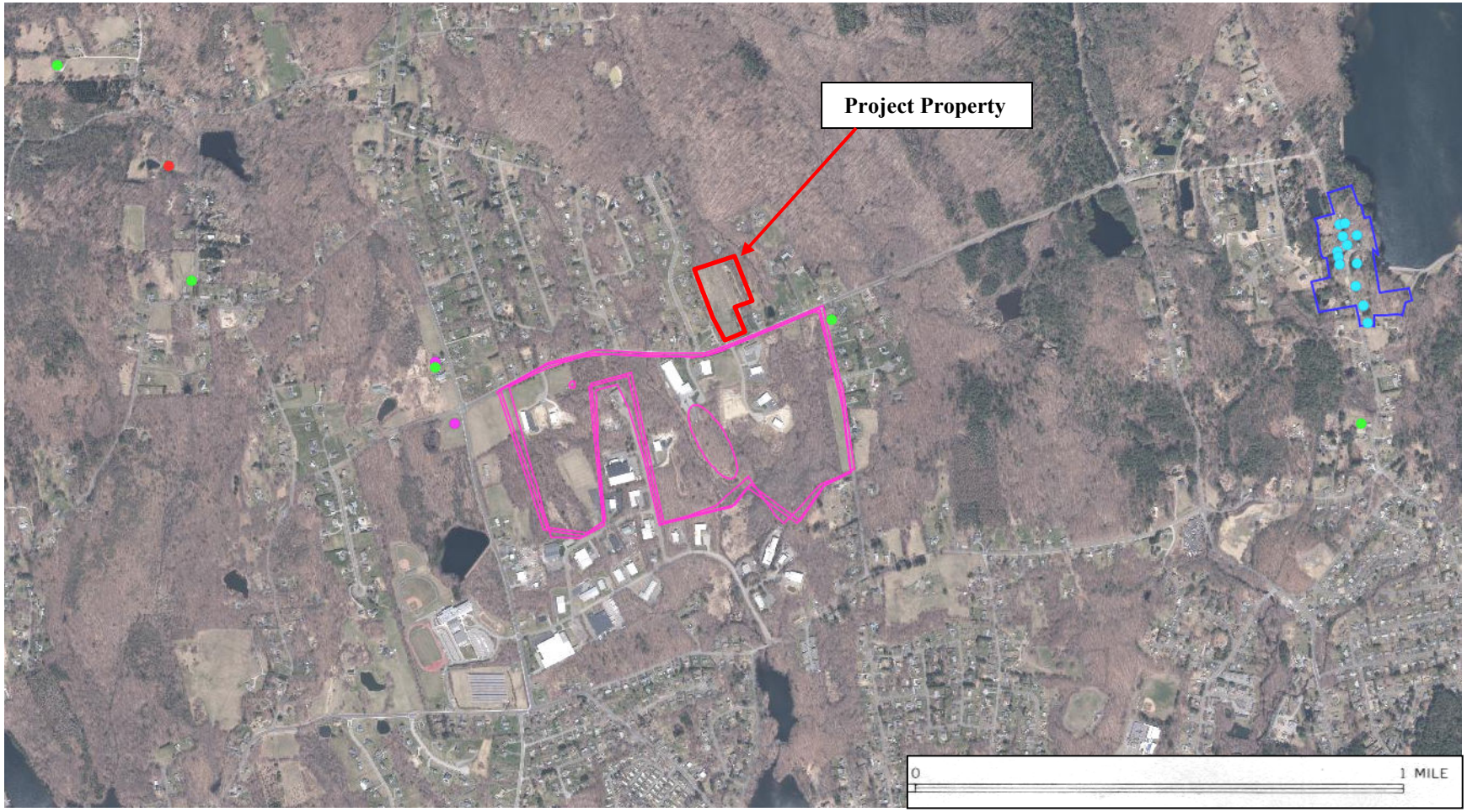

Figure 4: From CT SHPO 2025 / ConnCRIS. All five previously recorded prehistoric sites in the area were recorded by professional surveys of the Plymouth Business Park on the south side of Preston Road, shown in purple outline. Green dots are state inventoried historic barns; purple dots are historic houses listed with the Connecticut State Register of Historic Places; red dot is local historic district; blue dots and outlines are historic districts listed with the National Register of Historic Places.

ACS preformed a Phase III data recovery at site 111-3 when expansion of the spice factory within the Plymouth Business Park was proposed (Walwer and Walwer 2020). Cultural material recovered included mostly lithic artifacts such as debitage from a variety of lithic materials, and a number of hearth features dating from Late Archaic through Late Woodland preiods. Percussed lithic tools recorded at the site include a knife, drills, endscrapers, side scrapers, and projectile points. Diagnostic point types at the site include Brewerton / Vosburg and Lamoka forms. The site revealed an emphasis on lithic reduction, particularly quartz, and its south-facing gentle slope in an uplands setting in addition to moderate densities of material and feature contexts indicate probable temporary or seasonal occupations by smaller groups during winter. Radiocarbon dates from the site range from about 600 to 5,250 years ago, thus revealing intermittent occupation from the Late Archaic through Late Woodland periods. The site was probably part of a network of sites occupied on a seasonal or sub-seasonal basis up and down the Pequabuck River drainage, with more substantial village sites previously recorded closer to its confluence with the Farmington River.

Summary

There are no previously recorded prehistoric archaeological sites within the project area, although a significant site was identified to the south of Preston Road when the industrial business park was built. ACS conducted a Phase III data recovery at the site in 2019, on a landform similar to that of the project area adjacent to the Pequabuck River. The positions of the site and current project area are at the head of the Pequabuck River drainage, which eventually flows east and empties into the Farmington River where more substantial long-term village sites have been recorded.

Local History

Contact Period

The Contact period is designated here as the time ranging from the first substantial contact between European explorers and Native American inhabitants of Connecticut to the time of thorough occupation by European settlers, roughly 1600 to 1700. Initial contact in the broader region occurred in 1524 when Verrazano reached the coast of New England (Terry 1917:16). Others followed in the first decade of the 1600s (Salwen 1983), and in 1614 Dutch explorers reached the Connecticut River (DeForest 1852:70; DeLaet 1909 [1625-1640]). The Dutch were met by the Quinnipiacs at New Haven Harbor in 1625 (Brusic 1986:9) when they initiated fur trading relationships with several local tribes. The trade relationship between local tribes and the Dutch was short-lived, however, coming to an abrupt end by the mid-1630s (Guillette 1979:WP2) when substantial English settlements were being established in the area. DeForest (1852:48) estimates about 6,000 to 7,000 Native Americans in pre-epidemic Connecticut (early 1630s), while others consider the aboriginal population to have been as high as 16,000 to 20,000 or more (Trumbull 1818:40; Gookin 1970 [1674]; Cook 1976; Snow 1980:35; Bragdon 1996:25).

The spatial configuration of tribal territories at the time of initial contact is fairly well known, although boundaries are known to have fluctuated significantly, as did the political alliances by which the tribes could be defined (Thomas 1985:138). Three major divisions of Algonkian speaking groups can be delineated in eastern Connecticut, and their original territories conform well to present ecozone distributions (see Dowhan and Craig 1976:26 and Speck 1928:Plate 20). Centralized in East Windsor and South Windsor (Trumbull 1818:40; DeForest 1852:54-55; Spiess 1933), the Podunks occupied that part of the Connecticut River drainage basin which constitutes the North-Central Lowlands east of the river. Linguistically, the Podunks were part of the Wappinger or Mattabesec Confederacy of tribes that extended west of the Connecticut River and onto Long Island (Speck 1928). The validity of the Wappinger-Mattabesec Confederacy as a cultural entity has been challenged (Salwen 1983:108-109), however, with many smaller and somewhat independent tribes occupying much of the western half of the state. In the northeast part of the state, the Nipmucs occupied areas covering the Northeast Uplands and Northeast Hills ecoregions, but were centrally based in Massachusetts (Gookin 1970 [1674]; Van Dusen 1975:21; DeForest 1852:57). Blanketing the Southeast Hills and Eastern Coastal regions, the territory of the Pequots lay adjacent to the Narragansetts of Rhode Island to the east (Speck 1928).

Several cultural distinctions can be made at a higher level of resolution within these three broad divisions. For instance, the Western Nehantics were concentrated just east of the Connecticut River on the coast, while the Eastern Nehantics occupied the southeast corner of the state and part of Rhode Island (Speck 1928: Plate 20; Swanton 1952:31 and map insert). Although considered to be two separate cultural groups, the Nehantics may have been historically divided by an incursion of the Mohegan-Pequots. The Western Nehantics are frequently cited as having been confederates of the Pequots (Guillette 1979:WP2), while the Eastern Nehantics may have been more aligned with the Narragansetts of Rhode Island (Caulkins 1895:20).

There is considerable debate as to the origins of the Pequots, or Mohegan-Pequots who would eventually split into two distinct tribes. Many authors believe that they originated in the Hudson Valley or upstate New York (Caulkins 1895:21; Learned 1903:52; Speck 1909:184; Tantaquidgeon 1972:65; Fawcett 1995:10), with cultural and traditional knowledge links to the Lenni Lenape (Delaware) of the Pennsylvania region who have stories of their wolf clan having moved to the northeast, later migrating to southeastern Connecticut during the late 16th to early 17th Century. Others cite archaeological and linguistic evidence to support the idea that they developed *in situ* (Salwen 1969, 1983:107; Rouse 1980). The Pequots may have received their name from an Algonkian word for "destroyers" (Salwen 1969:81; Guillette 1979:WP1) or "powerful ones" (Avery 1901:254) or "invaders" (Fawcett 1995:10). Alternatively, it may have derived from the informal name of several Pequot Sachems shortly before the arrival of Euroamericans, including Wopiguand (Wo-pequoit or Wo-pequand or Pekoath) (Caulkins 1895:21) or Tamaquashad (Pekoath or Pequot) (Guillette 1979:WP1).

Most early historic accounts describe the Pequots as an invading tribe which had forcibly entered southeast Connecticut, although it is not clear what their motivation for migration might have been. While the Pequots were concentrated near the southern coast between the Thames River and the Pawcatuck or Wecapaug River (Guillette 1979:WP2), Pequot political control was more extensive, in the form of tributes exacted on aboriginal populations on parts of Long Island and some of the "river" tribes to the west. Tribes to the west of the Connecticut River were also occasionally subject to attacks and expectations of tributes by the Mohawks from the northwest (DeForest 1852; Spiess 1933:18). The Narragansetts of Rhode Island were the principal rivals of the Pequots, for they were most able to resist Pequot aggression (Guillette 1979:WP2). Tribes who were subject to Pequot power approached Dutch traders and English colonists in Massachusetts with offers of attractive settlement areas in order to help defend against Pequot domination (DeForest 1852; Howard 1935:7).

The Pequot Sachem Wopiguand was killed in the early 1630s by the Dutch over trade disagreements (DeForest 1852:73), essentially ending the Dutch-Pequot trade relationship and initiating a pattern of increased hostilities between Euroamericans and Native Americans of the region (Hauptman 1990). Political turmoil ensued within the Pequot tribe as to who should succeed Wopiguand and how best to engage the Europeans. The choice of Sassacus to lead the tribe and subsequent disputes as to tribal policy with respect to the Europeans prompted Uncas and his supporters to defect as the Mohegan tribe (DeForest 1852:84; Fawcett 1995:11). The Mohegan base of settlement was situated at the confluences of the Shetucket, Quinebaug, and Yantic Rivers, and along the Thames River in Montville (Baker 1896:10; Speck 1909:185). The Mohegans were, however, still largely under the control of the Pequots, as were groups in other areas including tribes along the Connecticut River.

The Poquonock Indians were known to occupy the Windsor area at the time of contact (Stiles 1891:110). Poquonock territory at that time included the towns of Windsor, Windsor Locks, and parts of East Granby and Bloomfield, with their principal village located along the Farmington River (DeForest 1852:53; Spiess 1933:27). The Saukiogs were located directly to the south, principally in Hartford and West Hartford, and possibly north into Windsor. Poquonock and Saukiog territory was bound by the Agawams to the north, the Massacos and Tunxis on the west, and the Connecticut River to the east (DeForest 1852:363; Spiess 1933:28). The word "Poquonnoc" and its variants are generally thought to mean cleared fields where

agricultural plots were located, thus the reason for its occurrence in several parts of Connecticut (Trumbull 1974:54-55). The name Saukiog, also known as "Sicaog," refers to place of dark ground in Algonkian (Spiess 1933:14), presumably referring to the rich soils of the area. The severe epidemic of 1633 killed the local sachem and the vast majority of the local indigenous population of the area (Howard 1935:10; Uricchio 1976:24-25). Already afflicted by severe disease epidemics, various representatives of the Poquonocks and Saukiogs sold lands to early Euroamerican settlers relatively early, with many tribal members removed west to join the Tunxis or other tribes (Spiess 1933:15,28).

A series of events led conflicts between area tribes and Euroamerican tribes, as well as each other during the Contact period. Some of this relates to the fact that the Pequots and Mohegans had by relation and other means, influence over the Podunk tribe along the Connecticut River, as well as disputes that naturally arose between neighboring tribes. Sequassen of the Saukiogs had battled with the Pequots several times until ousted by the Pequots (DeForest 1852:61). His sachemdom was re-established with the help of Euroamericans, to whom he had granted Hartford and West Hartford land in 1636 (DeForest 1852:83; Spiess 1933:15). A dispute with Uncas of the Mohegans over the accused murder of a tribal member brought Sequassen and Uncas before the Euroamerican government in Hartford, which merely deferred the matter back to the tribes to resolve (DeForest 1852:187-188). Uncas and the Mohegans attacked the principal settlement of Sequassen. The Narragansetts had sided with the Saukiogs in the matter, leading to the effectively English sanctioned execution of Miantonimo by Uncas (DeForest 1852:188-192). Sequassen reportedly plotted to have various English officials murdered, leading to his capture by Uncas and subsequent imprisonment by the English, only to be released after some time and lack of strong evidence of conspiracy (DeForest 1852:218-222; Spiess 1933:16). Strangely, Sequassen and Uncas would soon thereafter become allies following the murder of a Saukiog associate by a Podunk, with an attack on the Podunks led by Tontonimo (DeForest 1852:249-252). The "War" of 1637 resulted in the defeat of the Pequots by the English at Mystic, and after this time Saukiogs lived in relative peace alongside Euroamericans in the Hartford area until finally removing in 1730 west to Tunxis territory.

The Tunxis Indians occupied an area generally stretching along the Pequabuck and Farmington Rivers at the time of contact (DeForest 1852: map). Spiess (1933:18) indicates that the Tunxis range included the current whole towns of Farmington and Southington, and nearly all of New Britain, Berlin, Bristol, Burlington, Avon, and Plainville, all within an original "sale" of land in 1640, and by logical extension, would have included northern and eastern Plymouth within the Pequabuck drainage basin, although Speck indicates that a precise western boundary of the Tunxis could not be determined (see also DeForest 1852:175-176). The agreements that resulted in widespread control of the land by Euroamerican settlers were confirmed in later documents of 1650 and 1673. Speck also indicates that the Tunxis were a subtribe of the Saukiogs who were concentrated on the west bank of the Connecticut River in the vicinity of current Hartford and West Hartford territory (DeForest 1852:52), although it should be noted that it is the Poquonocks who were located on the lower Farmington River to its confluence with the Connecticut River. Speck cites an early Farmington record in which it is the Sachem of the Saukiogs, Sequassen, who first sold territory of the Tunxis. Tunxis is likely short for "Tunckseasapose," as found in early Hartford records, and possibly "Wattunkshausepo," that means fast flowing and winding river or stream (Spiess 1933:17). The Pequabuck River, also

referred to as Pauquapaug River, was reportedly named after a principal source of the river, being the marshy ponds near the Plymouth and Bristol border (Trumbull 1974:47), which would now include the Bristol Reservoir and other ponds in the area.

The Tunxis did not have the same degree of antagonistic relationship with the Euroamericans of the area as other tribes (Spiess 1933:18-19), although this may have been partly a function of greater diminishment by disease and less concentrated Euroamerican settlement away from the Connecticut River. They had also not been heavily involved in the conflicts that the tribes along the Connecticut River faced with each other, perhaps for some of the same reasons (although see DeForest 1852:254-255). Eventually, a reservation at "The Indian Neck" in Farmington was established for remaining Tunxis (DeForest 1852:263-264), while most removed in 1750 to the west, including Oneida County of New York and as far as Green Bay in Wisconsin (Spiess 1933:19). The reservation lands established for the Tunxis dwindled during the 18th century, through a series of encroachments, unauthorized sales, lack of recording, and other means (DeForest 1852:369-375). An Indian school established in Farmington at this time likely had an evangelical basis (DeForest 1852:370-371). A distribution of lands approved by the government in Hartford in 1777 led to more removals to Schaghticoke and then Stockbridge (DeForest 1852:375). Some continued to live in the Farmington area, with 25 families in 1761 (DeForest 1852:373), although the last recorded Tunxis Indian of the area died in 1820 (Spiess 1933:19).

Early in the Contact period, the fluctuating nature of tribal territory boundaries could be additionally attributed to aspects of mobility and subsistence. Ethnohistoric sources offer descriptions of terminal Woodland and early Contact subsistence-settlement strategies of the area (McBride and Bellantoni 1982; Starna 1990:36-37). Spring settlements were located to take advantage of anadromous fish runs in larger drainages and along the coast. By late spring, attention was focused on tending corn fields on alluvial terraces and glacial meltwater features along perennial streams and rivers. Semi-sedentary settlements near these fields were supported by task-specific hunting and gathering sites. Dispersal in the late fall and winter brought smaller groups into protected, upland or interior valleys where hunting and gathering continued. This model is confirmed by an archaeological survey of the lower Connecticut River Valley (McBride and Dewar 1981:49-50) in which large, early Contact period villages were found to be a part of a central-based circulating settlement pattern. Family units occupied major villages on a seasonal basis. The dispersal phase had a longer duration in the Contact period than the Late Woodland, and consisted of smaller subsistence units (e.g. single families).

The fortification of some larger villages in the early Contact period was likely a response to intertribal and inter-cultural political conflicts resulting from increased economic pressures induced by Euroamerican trade relationships (Salwen 1983:94; McBride 1990:101; but see Thomas 1985:136). The fortified villages are representative of the trend towards increasing sedentism and territoriality during the Contact period. Eventually, Native American populations became dispersed and afflicted by disease, warfare, and intertribal conflict to the point that small, scattered reservations served as the final restricted territories for some indigenous populations.

The economic base for Native Americans in eastern Connecticut during the Contact period continued to consist of hunting deer and small mammals, gathering berries, nuts, and roots, and procuring shellfish and fish on larger drainages and along the coast (Waters 1965:7; Salwen 1970:5). This basic subsistence strategy was supported by various horticultural products,

including corn as a staple, squash, beans, Jerusalem artichoke, and tobacco (Guillette 1979:CI5; Starna 1990:35). The importance of corn is evident in historic descriptions of ritual activities, including variations of the Green Corn Festival that extended with various groups, including the Mohegans, into the present day (Speck 1909:194; Speck 1928:255; Tantaquidgeon 1972:81; Fawcett 1995:54-57). Elderly women possessed extensive knowledge of wild plants which provided a host of medicines and treatments (Russell 1980:35-37).

The material culture included a mix of aboriginal forms and European goods such as metal kettles and implements (e.g. knives and projectile points), cloth, glass beads, and kaolin pipes (Salwen 1966, 1983:94-96). Wigwams continued to serve as the principal form of housing, in some cases well into the 18th Century (Sturtevant 1975). Unlike the Late Woodland, however, Contact aboriginal lithic products were predominantly manufactured from local quartz sources (McBride and Bellantoni 1982:54). Dugout canoes may have continued to provide a major form of transportation in larger drainages (Salwen 1983:91). Late Contact period Euroamerican trade goods included various metal tools, glass bottles, ceramic vessels, kaolin clay pipes, and nails (McBride and Grumet 1992).

Wampum (shell beads) served as an important item for exchange by Native Americans with European traders, but their original use was in the form of belts as symbolic signs of allegiance or reciprocity between tribes, and as sacred markers or tokens of honor for individuals (Guillette 1979:CI8; Ceci 1990:58-59; Salisbury 1990:87; Fawcett 1995:59). With European metal drill bits, tribes along the coast were now mass producing wampum for trade with the Dutch and English, who in turn used the shell beads to trade for fur procured by other tribes farther inland (Salwen 1983:96; Ceci 1990:58). Control of wampum production along the eastern Connecticut coast may have contributed to Pequot dominance over other tribes at this time. Although wampum was initially traded for Euroamerican goods, it was eventually used to pay fines imposed by colony governments on the tribes for "illegal" acts. While colonization brought new material goods to Native Americans in the area in exchange for fur, land, and services, the indigenous inhabitants became increasingly subject to legislative economic restrictions by the colonists (Salisbury 1990:83).

Sachems and councils of leading males formed the basic political unit for groups of villages (Gookin 1970 [1674]; Simmons 1986:12). The authoritative roles of clan mothers had diminished as a result of a strong European leadership bias towards males in trade relationships (Fawcett pers. comm. 1996). Tributes paid to sachems were generally used as reserves for the tribe at large. Although sachems were generally assigned by hereditary lineage, this was not always the case (Bragdon 1996:140-141). Additionally, authority was usually enforced by persuasion of a council. Shamans were "magico-religious" specialists of the tribes who also had a considerable role in leadership and decision-making (Speck 1909:195-196; Simmons 1986:43; Starna 1990:42-43). Other special status roles included warriors and persons who had visions, thus social status was largely based on achievement and recognition. Rules of obligation and reciprocity operated on all levels of tribal-wide decision-making (Bragdon 1996:131-134), serving to diffuse centralized authority. While the assignment of lineality (i.e. matrilineal vs. patrilineal) for the area tribes is still debated (Bragdon 1996:157), the well established practice of bride-pricing and traditional accounts support a patrilineal social organization (Speck 1909:193; Salwen 1983:97). Post-marital residence appears to have been ambilocal.

On a larger scale, more powerful tribes demanded tributes from smaller ones, often resulting in loose alliances between the latter. This process created a dynamic political environment that prompted intertribal conflict, especially after contact with Euroamericans (Guillette 1979; Bragdon 1996). The European settlers of the Contact period used this embedded rivalry system to their advantage in trade relationships and the procurement of land. The colonists were placed at a further political advantage because of the severe reduction in aboriginal populations as a result of disease (Starna 1992). Major epidemics occurred between 1616 and 1619, and more severely around 1633 (Snow and Lanphear 1988; Starna 1990:45; Snow and Starna 1989). Diseases introduced into the Americas included chicken pox, cholera, diphtheria, malaria, measles, oncercerosis, poliomyelitis, scarlet fever, smallpox, tapeworms, trachoma, trichinosis, typhoid fever, whooping cough, and yellow fever (Newman 1976:671).

A large Tunxis "encampment" was located along the Farmington River in Farmington (Giguere 2011a). It has also been reported that there were also large fields of corn planted by Native Americans in the Allentown section of Fall Mountain in Plymouth (Giguere 2011a:13). The Plymouth area was first reported to be of interest for Euroamerican settlement when, in 1657, permission to mine black lead from the land in the Naugatuck Valley was granted by Tunxis leaders to Farmington settlers John Steel, William Lewis, and Samuel Steel (Lewis 1881:18; Ryan 1976:7; Giguere 2013a). The lead mine was reportedly abandoned after not prospering, and although not precisely located, it was reportedly located near the Harwinton boundary (Lewis 1881:18; Johnson 1996:8; Giguere 2011a:7; Giguere 2011b). More permanent Euroamerican settlement of the Plymouth area did not occur until the early 18th century.

18th Century

Plymouth, originally known as Northbury, was originally part of the Mattutuck Plantation and the larger town of Waterbury, incorporated in 1686 (Lewis 1881:487-91; Giguere 2011a:7). Settlement in the Plymouth area began in 1728, when Henry Cook built a cabin near the Naugatuck River (Lewis 1881:20; Johnson 1996:8; Giguere 2011a:17). Soon after, several Waterbury farmers followed, and the first meetinghouse was built in 1746, with a second meetinghouse erected in 1768 (Johnson 1996:16). The site of the first and second meetinghouses was drained swamp land and became the Plymouth Green and Burying Ground (Giguere 2011a:23,85). By the end of the 18th century, the population of Plymouth had grown close to 2,000 people, and Plymouth was officially incorporated in 1795, encompassing the present town of Thomaston (originally Plymouth Hollow) and the villages of Terryville and Pequabuck (Lewis 1881:487-91;Johnson 1996:8; Ryan 1976:11; Giguere 2011a:11; CHO 2013, 2014a).

Water power of the area contributed to the significance and success of early industry in the area. The first gristmill of the area was built by John Sutliff in about 1730, just north of what is now Terry's Bridge (Lewis 1881:144). As industry grew around the water sources, Plymouth became nationally recognized as the leader of clock manufacturing and design in the late 18th century. Eli Terry was an industry innovator, whose family influenced the growth of Plymouth (Giguere 2011a:37). Terry originally established a clock manufacturing and design company on Niagra Brook, but moved it to Hancock Brook when he teamed up with partners Silas Hoadley and Seth Thomas (Johnson 1996:9-10; Giguere 2011b). As an apprentice in the hand-crafted clock-making business in Norwich and South Windsor, Eli Terry had gained the experience to start his own clock manufacturing company in Plymouth (Lewis 1881:144; CHO 2014b). Terry

implemented innovative techniques into their factory, including using water-powered instead of foot-powered machinery, manufacturing interchangeable clock parts from brass and wood, and reducing the overall size of the clock parts, thereby reducing the cost of the product to the consumer (Giguere 2011a:37; CHO 2013, 2014b). These industrial innovations contributed to Plymouth's recognition as a leader in clock manufacturing throughout the 19th century and attracted workers and settlers to the town. Most of northern Plymouth at this time, however, remained agricultural.

19th Century

The population of Plymouth continued to rise in the 19th century, reaching close to 4,000 people by 1870 (CHO 2014b). Although industry grew around water power sources, much of Plymouth was agricultural. Plymouth comprised several areas, including Hoadleyville / Greystone, Allentown, The Lakes, Pequabuck, Terryville, East Plymouth, and the Holt District (Johnson 1996 10-11). The Holt district in northern Plymouth was agricultural, with many large dairy farms as well as stone quarries, lumber businesses, and several taverns (Johnson 1996:11; Ryan 1976:12). Infrastructure of the town of Plymouth included fourteen school houses, a post office built in 1812, and two post offices in Terryville and Pequabuck (Johnson 1996:10). The Plymouth Congregational Church was constructed in 1838 on the Plymouth Green, housing a unique wooden tower clock made by Eli Terry (Johnson 1996:16). The Hart Female Seminary was established at the church in 1853 (Johnson 1996:16). Town offices were constructed along the Plymouth Town Green in the mid-19th century, but were later moved to Terryville in 1890 (Ryan 1976:11). The Town Hill area of Plymouth had originally been conceived as the center of the town, however the lack of water power in that area led to it remaining agricultural (Ryan 1976:11). Instead, Terryville became the industrial center of Plymouth (Ryan 1976:11).

The clock manufacture and design industry continued its success, however Terry, Hoadley, and Thomas split up the original partnership in the early 19th century. Their individual successful clock manufacturing companies continued and remained in the Plymouth area. Eli Terry established a "shelf clock" manufacturing and design business with his sons, Henry and Eli Jr. in Plymouth Hollow, and later moved to the Pequabuck River in 1824 (Johnson 1996:9). The industrial village of Terryville quickly became the business and residential center of Plymouth, as housing was built for the industry's workforce (Johnson 1996:9).

Hoadley and Thomas also continued their own clock manufacturing companies, expanding the areas of growth in Plymouth. In 1875, the village of Plymouth Hollow was incorporated and became known as Thomaston (Johnson 1996:10), and the Hoadley Clock Factory was built by Silas Hoadley near Greystone Falls (Johnson 1996:28). This area was originally known as "Ireland," as many of its community's settlers were from that country (Johnson 1996:30). The area later became known as Hoadleyville, and later as Greystone (Johnson 1996:30). A water-powered grist mill, school, and railroad station were also established in this area (Johnson 1996:28).

Plymouth was an active refuge area for the Underground Railroad (Giguere 2011a:11). Town residents Joel Bakeslee, William Bull, and Ferrand Dunbar provided shelter and help along the journey of escaped slaves (Giguere 2011a:11). In the late 19th century, the industrial center of Terryville attracted many immigrants from Poland, Lithuania, and Germany to settle in the area (Ryan 1976:21-23). As larger populations from these countries came to Plymouth, social clubs were established in the villages (Ryan 1976:21-23).

Although the clock manufacturing industry declined by the mid-19th century in the Plymouth area, the success of the Eagle Lock Company and the manufacture of malleable iron fittings at the O.Z./Gedney Company established by two of Eli Terry's sons began at this time (Johnson 1996:29-31; Ryan 1976:7). Several other manufacturing businesses were established in the area, including manufacturers of carriages, harness trimmings, shears, plows, wool, chairs, hats, wood products, and toys (Johnson 1996:10). The E.R. Ives & Co toy company was established by Edward Riley in 1868 on Matton's Pond / Thomaston Reservoir (Ryan 1976:62-63). They toy company was one of the largest exporters of toys to Europe and South America, but was moved to Bridgeport by the 1870s (Ryan 1976:62-63). Another successful business started in Plymouth was the Cooper Thermometer Company established in 1886 (Ryan 1976:63-64). The barrel production industry, including the manufacturing of "hoop poles" or the straps that bound barrels together, was also established in the Plymouth area (Giguere 2013b). The hoop poles were made from hickory, oak, mountain ash, and chestnut saplings sourced along the Poland River in the northern section of Plymouth (Giguere 2013b).

Historic maps and land records reveal that northern Plymouth remained mostly agricultural during the 19th century. The project property was part of a larger farm owned by Elias Smith, as depicted on maps from 1859 and 1874 (Figures 5a and 5b). The Smith home was located to the east of the property, and is no longer extant. Smith had a mortgage on the property in 1848 from Albert Medrick (Plymouth Land Records, volume 16, page 9), with a dwelling house and other buildings on 30 acres, in addition to a barn and cow house on the south side of the road on 15 acres, and had acquired many parcels in the early to mid-19th century. Smith sold the land to Conrad and Louise Burger in 1893 (PLR 39/97).

20th Century+

Before the 20th century, Plymouth was largely agricultural, with industrial centers located along major waterways. The many successful dairy, poultry, and fruit farms were located throughout Plymouth at the turn of the century, however by the 1920s, farms were being developed into subdivisions, airports, and industrial parks (Ryan 1976:198). Clock manufacturing in Plymouth continued into the early 20th century, as well as many other manufacturing industries. Associated infrastructure of the town was improved in the 20th century. The trolley system in Plymouth began in 1902 by the Bristol Tramway Company, which connected Terryville to Bristol (Ryan 1976:118-119). Trolley use was heavy on the weekends in the early 20th century, but as more and more automobiles were owned, usage began to dwindle (Ryan 1976:119).

In 1910, the mile-long Pequabuck Tunnel/Sylvan Hill Tunnel was constructed for the railroad line to Terryville (Johnson 1996:41; Giguere 2011a:79). Taking over three years to complete through dangerous conditions, 700 workers often had to dig by hand to complete the tunnel (Giguere 2011a:79). Construction of the tunnel was essential for transporting raw materials to Plymouth and shipping manufactured products out of Plymouth to other parts of the country (Giguere 2011a:79). After completion of the tunnel, a new passenger train station was constructed in Terryville (Giguere 2011a:80). The passenger train, first established by the Hartford, Providence and Fishkill Railroad, then the New York, New Haven and Hartford Railroad Company, ended operation in 1960 (Johnson 1996:41; Ryan 1976:115-117).

Figure 5a: Historic Sites of the Area (1859 Map)

Figure 5a: From Hopkins 1859.

Figure 5b: Historic Sites of the Area (1874 Map)

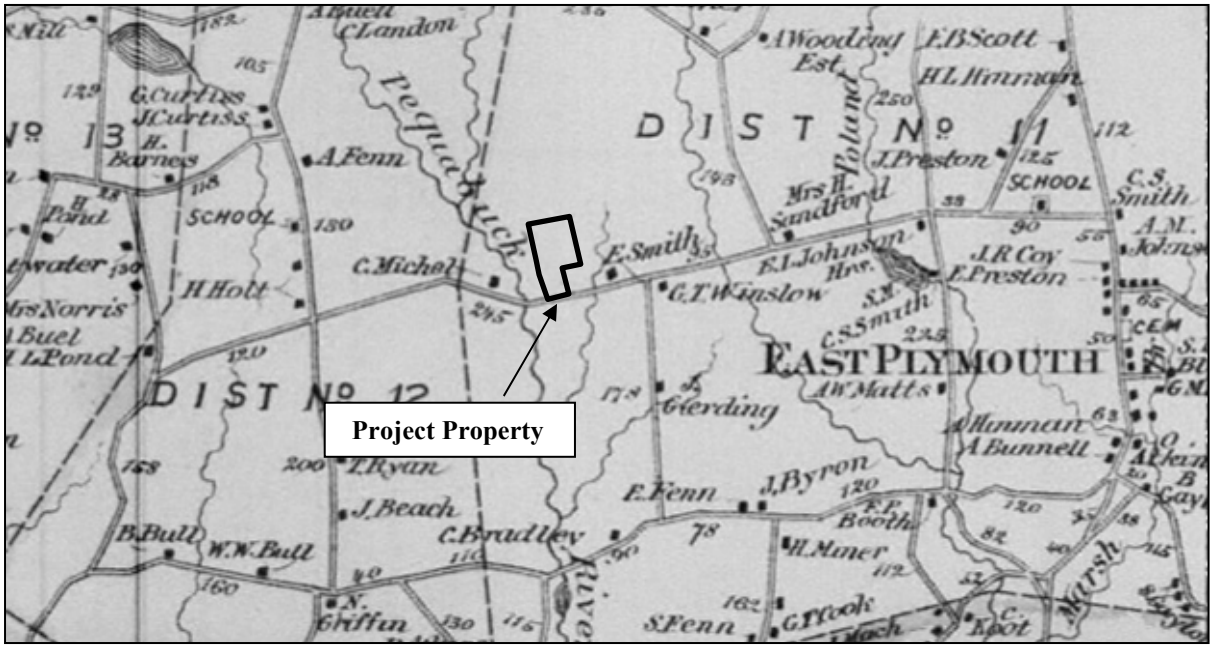

Figure 5b: From Beers 1874.

The project area and surrounding territory was still mostly agricultural into the early 20th century. The project area was part of farmland owned by the Burger family, until sold by George and Jennie Burger to Thomas F. Higgins in 1914 (PLR 51/430), still including 30 acres with buildings on the north side of the road. Higgins transferred the property the same year to the Eagle Lock Company (PLR 55/87). That company, with major manufacturing facilities on South Main Street (Ryan 1976:60-62; Johnson 1996:89-96; Giguere 2011a:45-55), sold the property to Howard and Etta Gomme in 1941 (PLR 77/99), with land to the east containing the Pequabuck River, by then controlled by the Bristol Water Company. The property passed from the estate of Etta Gomme in 1982 (PLR 173/1070) to the Tonn family, who has owned it ever since, although the acreage of open farmland was reduced to 7.25 acres. The original Elias Smith house no longer exists, with the homes to the east of the property along Preston Road built in the latter half of the 20th century. The industrial business park immediately to the south, that included some of the land of Elias Smith, started construction in the early 1990s, and continues to be developed today. The project area has most recently been used as a peach orchard, with aerial maps and USGS maps of the early to mid-20th century revealing a lack of late historic development and continued use of the project property for agriculture, (Figures 5c and 5d), without the barn that is now located in the northeast corner of the project property outside the bounds of the project area.

Local Sites and Surveys

Several historic barns, as noted by "Historic Barns of Connecticut, A Connecticut Trust for Historic Preservation Project" on ConnCRIS, are located near the project property. The closest recorded historic barn is located on the southern side of Preston Road at Burger Road, about one quarter mile to the southeast of the project property. This historic L-shaped English-style barn, constructed circa 1900, consists of a wood-frame building constructed on a stone masonry foundation and associated with a main residence dating to circa 1800. Just over one mile to the northwest of the project property on North Street, is an English-style wood-frame historic barn built on a cement plastered masonry foundation associated with a circa 1950s Cape Cod style main residence. A two-barn complex dating to circa 1900 is located just over one and one-half miles to the northwest of the project property on Bissell Road. This latter two-barn complex combines the English design style and the later New England barn design styles. Another "multi-unit barn complex" consisting of several New England style barns from circa 1910, several concrete silos, a corn crib, and associated historic Philip Ambruster Farmstead that was once over 500 acres, is located just under one mile to the west of the project property. Just over one mile to the southeast of the project area is an English-style barn located on Plymouth Road, associated with a late 18th century main residence.

The Milton Historic District is located one mile to the northwest of the project property, and contains 25 18th century houses, two schoolhouses, two churches, 19 historic town features including an 18th century cemetery and town green area, and four 18th century roads, foundations, and stone walls (MHDSC 1975). Just over one mile to the east of the project property is the East Plymouth Historic District (Clouette 1984). At the intersection of East Plymouth Road and Marsh Road, this latter historic district consists of several 18th century rural farming vernacular buildings and the 18th century meetinghouse of St. Matthews Church.

Figure 5c: Historic Sites of the Area (1934 Map)

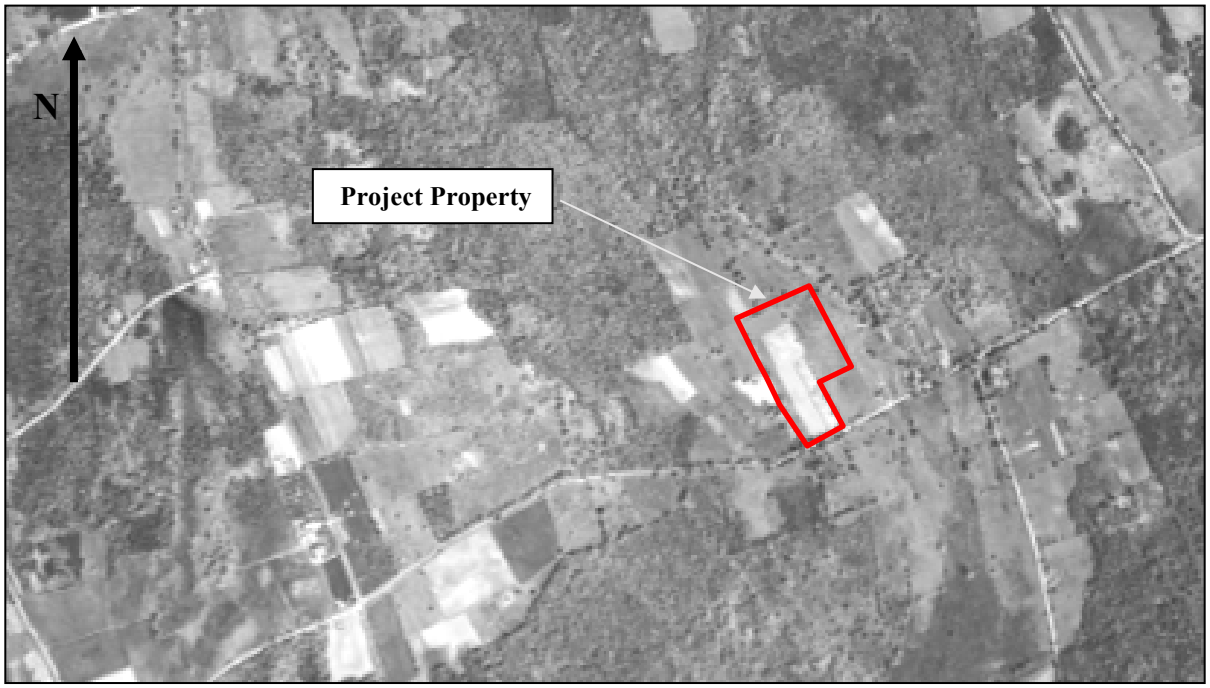

Figure 5c: From Fairchild 1934.

Figure 5d: Historic Sites of the Area (1951 Map)

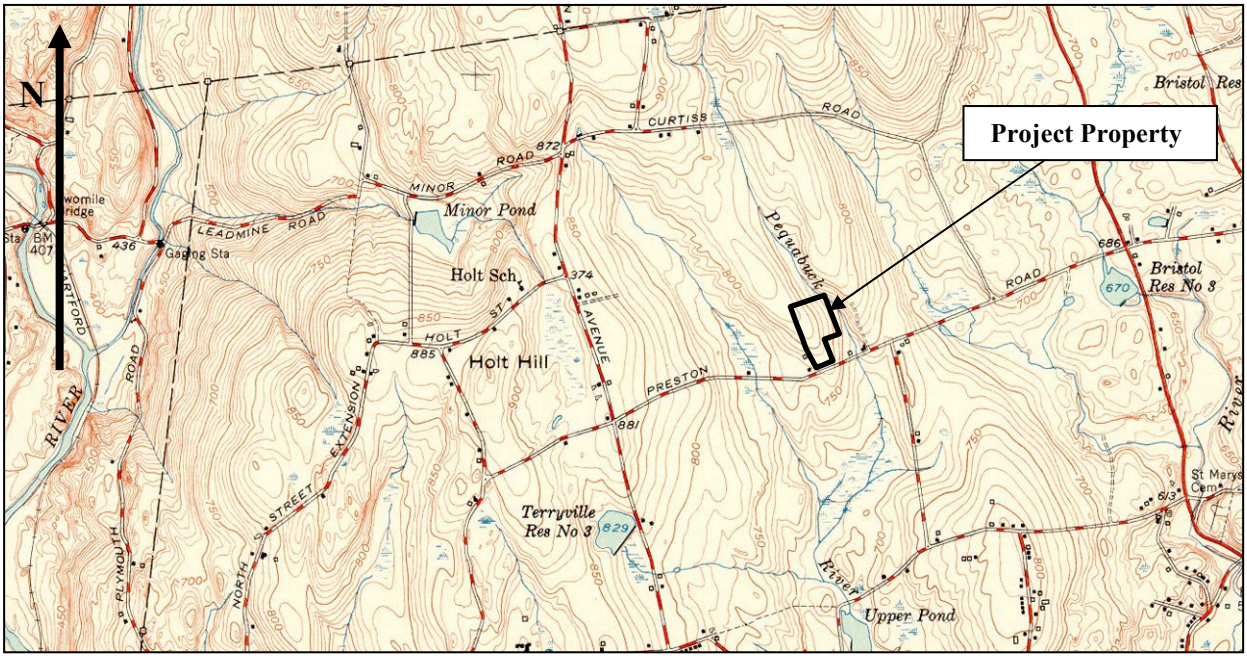

Figure 5d: From USGS 1951.

Summary

The project area was in the headlands part of Tunxis tribal range at the time of contact with Euroamerican settlers in the late 17th century. Northern Plymouth remained sparsely occupied and mostly agricultural through the 18th and 19th centuries, with Elias Smith owning the project area and surrounding land by the mid-19th century. The land containing 30 acres, dwelling house, and various outbuildings on the north side of Preston Road passed to the Burger, Gomme, and then Tonn families during the 20th century, and has most recently been used as a peach orchard. Land records and historic maps reveal no structural developments on the property, with the Elias Smith house, once located to the east, no longer extant.

CHAPTER 3: METHODOLOGY

Research Methodology

Background

Establishing background information is critical in constructing a research design that is problem oriented. Here the problem is assessment of cultural resources, including traces of both prehistoric and historic activity. Background information provides an understanding as to which parts of a survey area are likely to be culturally sensitive. It may also dictate the nature of the excavation and distribution or density of testing. Finally, all data must be related to an historic and ecological context if they are to provide meaningful information.

The background research in this study is basically aligned along the sections already covered. Primary environmental information was procured from USGS quadrangle 7.5' series topographic maps; CGNHS bedrock geology, surficial materials, and drainage basin maps of Connecticut; the USDA SCS soil book for Litchfield County; NRCS websoil survey; and various bulletins published by the Connecticut State Geological and Natural History Survey. Secondary sources such as general texts and various guides useful for interpreting what plant and animal life is and may have been relevant to the cultural use of the area were also consulted.

Establishing the present and any past environmental information for an area is critical as cultural behavior is highly integrated with and founded upon resource procurement, while resources are in turn highly integrated with the conditions of the environment (Jochim 1979; Butzer 1982). This relationship is especially greater as one considers earlier groups of people whose technological and social networks may not have provided for the mesh of buffers intervening between humans and the environment that is evident in today's modern industrial settings. Once the past and/or present environmental conditions for a project area have been assessed, they can be related to what is known about land-use as indicated by other sites and surveys in the region for predicting archaeological sensitivity across space (Kohler and Parker 1986; Kvamme 1990; Walwer and Pagoulatos 1990; Walwer 1996).

Several types of sources are critical for gathering background cultural information. Prehistoric cultural data must be procured via past archaeological surveys and excavations. These studies often rely upon rational application, ethnographic analogy, or less frequently, ethnohistoric, experimental, and folklore studies to provide behavioral interpretations of data derived from the archaeological record. Nevertheless, an abundance of independent sources for a region may provide fruitful information in relation to prehistoric cultural behavior. Sources consulted in this study include information from books on Native Americans in the northeast, articles from publications such as the *Bulletin of the Archaeological Society of Connecticut* and *Man in the Northeast* (*Northeast Anthropology*), existing archaeological surveys of the area, and Connecticut State Historic Preservation Office (CT SHPO) site files which give valuable summary information for individual sites in the region. Professional and avocational archaeologists as well as landowners, municipal historians, and project engineers are typically consulted as to knowledge of significant remains in the project area or surrounding region.

For the historic component of the background research, there are records which can be consulted. For this study, primary documents such as historic maps and land records were

reviewed, as were secondary documents in the form of local histories and registers of historic places. As with prehistoric background research, local informants, historians, and project officials can also be important sources of historic cultural resource information. The combined research of these types of sources helps to indicate the potential sensitivity for historic cultural remains within a project setting.

Various institutions were approached for information concerning the environmental and cultural background of the area. The State Historic Preservation Office (SHPO) in Hartford and its online ConnCRIS database yielded the information on past archaeological and historic architecture surveys in the area, as well as site files which yielded detailed information about individual prehistoric and historic sites. Libraries consulted for environmental and cultural history sources include the Terryville Public Library in Plymouth, and various libraries at Yale University in New Haven, such as Sterling Memorial, Kline Science, Henry S. Graves Forestry, Geology, Mudd, and Cross Campus. The Plymouth Town Hall contains land records dating back to its full incorporation in 1795.

Methodology and Analysis

Research for methodology is based on a combination of past experience and formal training. Part of the formal training for the directors of ACS includes lectures and text books which cover methodological issues such as research design and excavation. Research for analysis of the archaeological record is also based upon formal training and published identification guide books. With respect to artifacts, analysis is segmented according to time (prehistoric and historic), and material types (i.e. wooden, metal, lithic, ceramic, etc.), while structures and features are analyzed by comparing case studies. Coordinating the information into a summary and meaningful form is based on knowledge gleaned from both theoretical and practical lectures, articles, and texts.

Field Methodology

Testing Design

In the face of temporal and monetary constraints when considering cultural resource management, sampling design is critical. In this process, a portion or sample of the entire sample frame or population of sample units is selected which will ideally represent the nature of what is to be described (Binford 1964; Ragir 1967; Thomas 1986). A sample strategy that employs the whim of the investigator to position subsurface testing has been shown to be subject to severe biases and results in invalid statements when statistically extrapolating sample data to a whole area or site. Judgmental testing, however, can be fruitful in cases where something is known about the history of a project area, or if prior work has yielded results which require further clarification. Random sampling achieves validity, but may result in large areas remaining untested despite an adequate sample fraction. Systematic testing with regularly spaced tests avoids the problem of large untested areas, although there is a risk of missing linear subsurface features or distributions of artifacts with larger testing intervals. Where certain portions of an area to be tested have been statistically shown to be more sensitive or prone to the incorporation of cultural material, it may be appropriate to stratify or partition an area into sections which receive differential proportions of testing.

A statistical model has been developed and tested by ACS for prehistoric sites in Connecticut (Walwer 1996), and was used to assess the sensitivity of the project area with respect to the potential to contain sites (*www.acsarchaeology.com/sensitivity-model.html*). Qualitatively, the most sensitive areas tend to be those on nearly level, well drained soils overlying glacial meltwater features and alluvial terraces in close proximity to major waterways. Project areas are typically partitioned according to areas scoring between 0 and 100 in increments of 10, with a score of more than 20 representing a moderate to high likelihood of containing prehistoric sites. The statistical prehistoric landscape sensitivity model developed and utilized by ACS indicates in this case that the project property scores no higher than 11.2 out of a possible 100.0, and therefore within the low sensitivity range (0-20). The property contains well drained soils relatively close to the Pequabuck River, although the glacial moraine setting assures rocky subsurface contexts, and the core of the project is set relatively high above the nearest stream at its uplands head. Despite the relatively low statistical landscape sensitivity score, the property retains an overall moderate sensitivity rating due to the presence and past documentation of a significant site (111-3) located across the road to the south in a similar landform setting where ACS conducted a prior data recovery (Walwer and Walwer 2020).

The project area has a moderate sensitivity for historic cultural resources. Historic maps and land records reveal that the project property was farm land since at least the late 18th century, and borders historic course of Preston Road. The project area is associated with a late historic barn within the project property, but outside of the project impact area to the northeast, and a historic house of the historic land owner, Elias Smith, was formerly located just to the east of the property on the north side of Preston Road. Historic maps and land records reveal no major structural developments within the project area itself, however, although previous early historic occupations and developments could have been present due to the early establishment of Preston Road through Plymouth.

A total of 38 systematic subsurface shovel tests were located at the project area for the Phase I reconnaissance survey (Figure 6), placed in standard 50-foot intervals. Tests were saturated within the central and western section of the project area, and did not include the sloping area in the eastern part of the project area. Datum for the survey was set in the south-central part of the property where two open paths or clearings intersect, with a zero bearing set along the spine of the hill landform containing the property, also roughly parallel to the western boundary of the parcel. There was a total of 37 systematic subsurface shovel tests excavated, while there were four more judgmental tests placed about a single systematic test (0N-1W) containing a quartz biface fragment. ACS used a transit and long measuring tapes to plot tests in the field, marked with wire flags and flagging tape.

Easy access to the project area allowed for a complete pedestrian surface survey, although tall grasses and scrub growth made for low visibility during the surface survey. This is an important technique in cases where historic features such as foundations leave depressions in the landscape, and often with signs of disturbance or differentiation in vegetation type. Additionally, prehistoric features and artifacts may be identified in areas where erosion out-paces soil development or deposition of leaf cover, or where historic agricultural activity often brings materials from buried archaeological contexts to the surface. The deep sedimentary and soil contexts of the project area, and most of this part of the country, however, requires that subsurface testing be employed as well. This is generally true in cases where thick vegetation or

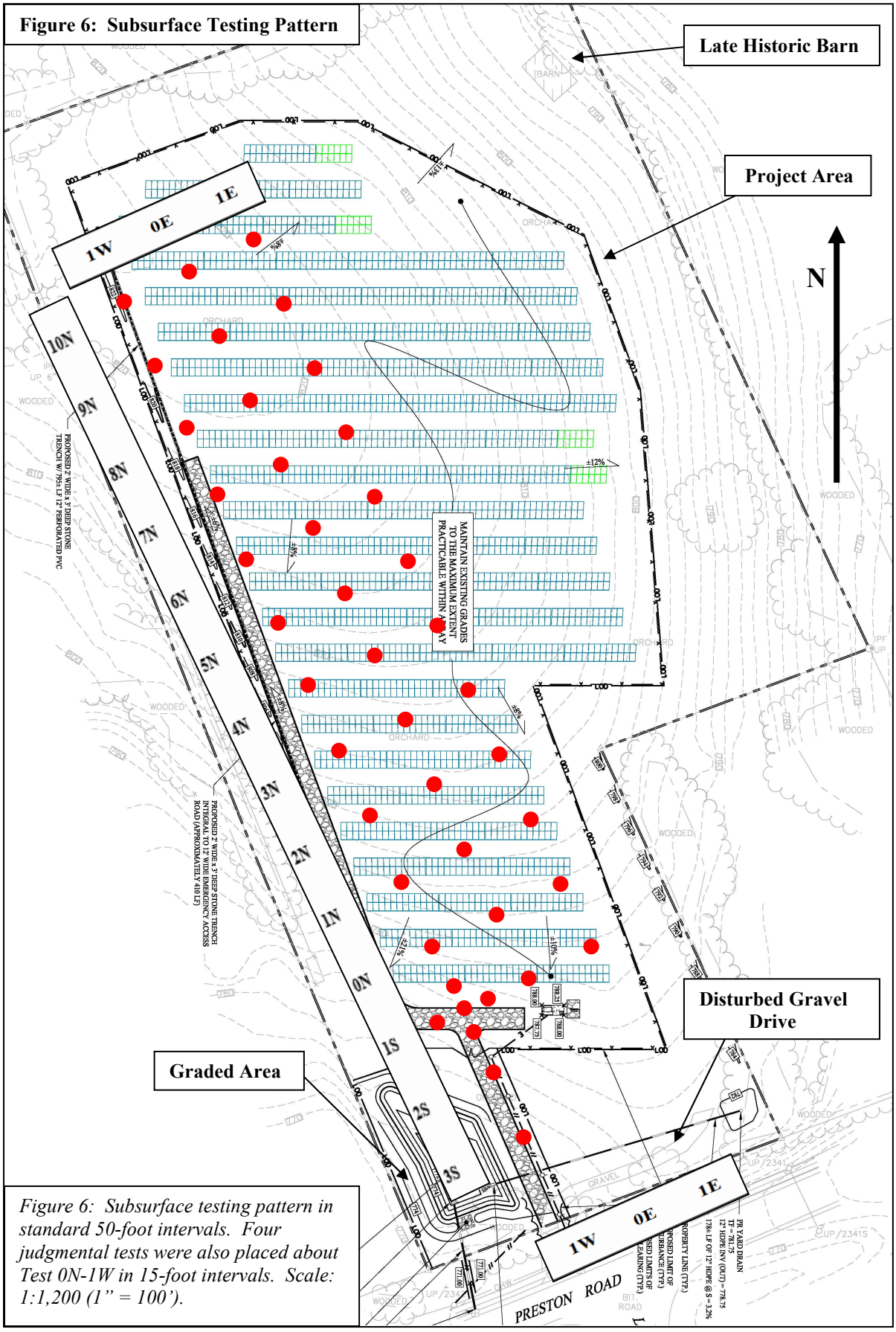

Figure 6: Subsurface testing pattern in standard 50-foot intervals. Four judgmental tests were also placed about Test 0N-1W in 15-foot intervals. Scale: 1:1,200 (1" = 100').

maintained grass and/or a relative lack of erosion encourage deep sedimentary and soil profiles, such as that of the project area.

Test Execution

The pedestrian surface survey was performed by two people for the project. Pedestrian traverses were made along all test transect lines, and in a less systematic fashion along the project area perimeter and along Preston Road. Notes were taken as to any remnant features or structures, with the possibility that judgmental subsurface testing be applied in response to the results of the pedestrian survey. Any collected artifacts which are clearly in excess of 50 years in age are bagged and provenienced according to the nearest subsurface test location within areas subjected to the traverses, or to the nearest group of tests and/or major landscape area otherwise.

Round shovel tests measuring 1.5 feet in diameter were excavated according to natural or cultural layers and by arbitrary four-inch level in cases where high densities of artifacts were encountered, with the use of round-point shovels, trowels, and trench spades. Augers were used at the end of each test to confirm aspects of stratigraphy. Surface conditions were noted for each test prior to excavation, including any signs of natural or cultural disturbance. Standardized shovel test forms were used to record information such as soil types encountered, their depths, any bags for soil samples or artifacts collected, closing depth and reason for test termination, and any comments pertaining to unique conditions encountered. Extracted soil was screened and any artifacts retained. Hand screens consisted of wood frames with 1/4" mesh through which soil was passed for the recovery of artifacts. Recovered artifacts were provenienced according to test number and layer, and placed in labelled zip-lock bags for laboratory processing. Material that could be positively identified as modern debris was merely noted and left in place.

All test units were generally excavated to a depth which confidently exhausts any possibility of cultural resources being present, as often indicated by bedrock or Pleistocene gravels and sand that comprise the "C" horizon of soil units in the project area. North American archaeologists have the advantage of knowledge that humans were present in the New World only after the end of the Pleistocene, thus Pleistocene sediments are an extremely useful indication for unit termination. Tarps were used to retain shovel test backfill piles, which were returned to the test units subsequent to complete excavation and recording.

Laboratory Procedures

Processing

ACS maintains 850 square feet of alarm-secured and climate-controlled dedicated lab space for the processing and analysis of materials. Processing procedures include those involving cleaning, labeling, conservation, and documentation, as mandated by the Connecticut Office of State Archaeology (OSA) and the Connecticut State Historic Preservation Office (CT SHPO) (Poirier 1987). A daily record of soil sample and artifact bags retrieved from the field was maintained in the laboratory. Cleaning procedures depend upon material type. Ceramics, glass, lithic artifacts, and well preserved bone and shell are washed in warm water and scrubbed with plastic brushes. Heavily rusted artifacts are dry-brushed lightly with a soft wire brush. Non-rusted metal artifacts, wood, and poorly preserved bone and shell are cleaned with a dry,

soft plastic brush. Charcoal or burnt wood is separated and dry-brushed if necessary. Artifacts cleaned with water are dried on plastic trays, while those processed dry are bagged immediately. All artifacts are given new zip-lock bags, fresh tags, and significant artifacts are bagged separately according to material type. In the case of this study, labeled bags are given abbreviated codes for project area (PMPR), test number according to 50-foot interval from datum (e.g. 2N-1W), layer below surface by Roman numeral (e.g. II), and four-inch level below surface by Arabic numerals (e.g. 3) where high densities of artifacts are encountered. Highly significant artifacts are additionally labeled with India ink covered by an acetate solvent nail-polish, or given a separate labeled bag if labeling jeopardizes the integrity of the material or its potential to be studied in the future. Labeled artifacts bear an abbreviated indication of provenience. At the end of the project, all artifacts are scheduled to be submitted to the Laboratory of Archaeology and Museum of Natural History (LAMNH) at the University of Connecticut (UCONN) in Storrs, Connecticut.

Analysis

Analysis of artifacts in terms of individual identification are performed with the use of identification guide books, type collections (where possible), past experience, and standardized forms. The artifacts are separated by material type, with each material analyzed for designated variables. The variables selected for each material type reflect their significance in terms of identifying chronological and cultural demarcations, as well as variables which may ultimately shed light on the dynamics of the cultural behavior with which they were associated.

ACS has generated standardized data forms for lithic materials, faunal remains, and ceramics. This obviously does not exhaust the potential range of material types, however it covers those which are most often preserved or which show the greatest degree of variability through time and across space. Variables assessed for all materials include those of material type, horizontal and vertical provenience, and for those other than modern debris, shell, or metal - weight, color, and condition or portion present. Lithic artifacts are analyzed for variables of raw material type and texture, manufacturing method, stage in the reduction sequence (including tool type where applicable), presence of heat treatment, indications of use and curation efforts, as well as those involving metric dimensions (size and weight). Ceramic materials are analyzed for variables of raw material or ware type, inclusions or tempering, manufacturing method, firing method, surface treatment, thickness, rim and vessel diameters, container volume, decoration, and maker's marks. Shell is analyzed for species and weight. Finally, bone is analyzed for taxonomic classification, element, age, sex, seasonality, human modification, exposure to heat, and possible use as tools. Weight measurements of all artifacts are made to the nearest 0.1 gram using an Acculab V-1200 electronic balance. Metric measurements are made to the nearest 0.1 millimeter with the use of electronic calipers for significant artifacts.

Soil samples are analyzed for standard variables of color and texture, and pH where appropriate. Color is measured along the variables of hue or color, value or shade, and chroma or degree of saturation. The standardized Munsell charts also provide names of colors which may be universally recognized. Texture is assessed based on behavior in hand samples as indicated by standard soil science manuals.

Architectural features and sites are documented in standardized forms published by the Connecticut State Historic Preservation Office (SHPO). For purposes of the general report, architectural features and prehistoric sites as a whole are analyzed in terms of their capacity to

explain cultural and historic phenomena, and tend to involve a less standardized procedure based on examining similar case studies. Analysis of artifacts and features will frequently involve factors such as the spatial distribution, density, and association of artifacts within a site. Copies of all field records and copies of the final report are sent to LAMNH along with the processed artifacts. In addition, analysis raw data sheets and a CD with the raw data stored in standard Excel format are sent to the LAMNH in cases where large databases are generated, or upon request.

CHAPTER 4: RESULTS

Field Conditions and Test Summary

A pedestrian surface survey was conducted for the project area by ACS in August, 2025, with particular attention paid to any areas where subsurface contexts were exposed due to erosion or any other natural or cultural processes. The surface survey included regularly spaced traverses through the project area where tests were plotted in standard 50-foot intervals, and in a less systematic fashion along the project area perimeter and along Preston Road. The 7.25-acre project property mostly consists of open orchard fields, including some peach-bearing trees, tall grasses, and scrub growth (Figures 7 and 8). Structural elements within the project area include a bird house and supporting pole, and a former fruit stand, with a late historic barn located beyond the northeast corner of the project area. The surface survey did not reveal any prehistoric artifacts or feature contexts. Areas of disturbance noted at the surface included the former gravelly drive and immediate surrounding area along the southern perimeter of the project area, and grading at the edge of the neighboring property at the southwest corner.

For potential prehistoric resources, ACS concentrated its subsurface testing along the spine of the hill landform that makes up the bulk of the project area, and near Preston Road for potential historic resources. Recall that the principal soil type for the project area is Paxton fine sandy loam (PbB), with a surface layer of very dark grayish brown (10YR3/2) fine sandy loam to about eight inches below the surface, overlying an upper part of subsoil of dark yellowish brown (10YR4/4) fine sandy loam to about 16 inches below the surface, a lower subsoil of light-olive-brown (2.6Y5/4) fine sandy loam to about 24 inches below the surface, and a three-inch thick very firm substratum of dark grayish brown (2.5Y4/2) gravelly fine sandy loam over olive-brown (2.5Y4/4) gravelly fine sandy loam (Gonick and Shearin 1970).

Tests in the field (38 systematic, four judgmental in 15-foot intervals about Test 0N-1W) were fairly well matched to the ideal Paxton soil type, with a topsoil of very dark grayish brown (10YR 3/2) fine sandy loam to about seven inches below the surface, over a dark yellowish brown (10YR4/4) fine sandy loam upper subsoil to about 13 inches below the surface, a light olive-brown (2.5Y 5/4) fine sandy loam lower subsoil to about 19 inches below the surface, and an olive (5Y 5/3) fine sandy loam substratum to 25 inches or more below the surface. Profiles were typically gravelly and rocky, and some iron staining was present in lower portions of the tests. Compact layers were often noted at 15 inches or more below the surface, correlating to some truncated profiles related to prior agricultural activity, but also natural to the Paxton type.

Prehistoric Cultural Resources

There were no rock outcrops on the property that could have served as prehistoric rockshelters, nor any prehistoric subsurface features identified. There was one prehistoric artifact collected during the subsurface survey, consisting of a white quartz biface fragment from Test 0N-1W. Found in the top plowzone layer, the piece likely represents a failed attempt at lithic tool manufacturing. There were no other prehistoric artifacts found within the test or in any of the four surrounding judgmental tests, nor were any historic artifacts recovered during the survey.

Figure 7: Project Area – North View

Figure 7: North view of the project area, with a mix of orchard trees, scrub growth, and tall grasses. Note bird house on pole, fruit stand out of view at right.

Figure 8: Project Area – South View

Figure 8: South view of the project area, Preston Road in background.

CHAPTER 5: CONCLUSION

Recommendations

ACS recommends that no further archaeological conservation efforts are warranted for the proposed project impact area. Despite a moderate sensitivity for potential prehistoric sites given previously documented significant site contexts on the other side of Preston Road, and moderate sensitivity for potential historic sites given proximity to the historic course of Preston Road and the historic occupation of Elias Smith immediately to the east, there were no historic artifacts recovered, and just one quartz biface fragment from a single test, with no further artifacts in surrounding judgmental subsurface shovel tests. Much of the project area has been impacted by historic orchard activity, leading to some truncated and compact soil profiles. Should site plans change to include impacts to the late historic barn structure in the northeast corner of the parcel that is beyond the currently defined project area, however, further archaeological investigations may be warranted, in consultation with the Connecticut State Historic Preservation Office.

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Appendix A: Field Test Summary

Test #	Layer I Color	Layer I Texture	Layer I Depth"	Layer II Color	Layer II Texture	Layer II Depth"	Layer III Color	Layer III Texture	Layer III Depth"	Layer IV Color	Layer IV Texture	Layer IV Depth	Auger"	Close Reason	Comments
0N-0E	10YR4/3	fsl	10	5Y5/3	sl	17							13	rck	Compact Lay I, II
0N-0.7W	10YR3/3	fsl	10	2.5Y4/4	fsl	11	5Y5/4	fsl	14					rck	rock and gravel throughout; Lay III compact
0N-1E	10YR3/2	fsl	4	10YR4/4	fsl	9	2.5Y4/4	fsl	12	5Y5/3	fsl	14		com	Compact Lay III, IV
0N-1W	10YR3/2	fsl	7	2.5Y4/4	fsl	12	5Y5/3	fsl	17				13	arb	Possibly disturbed Lay I; Compact Lay II
0N-1.3W	10YR3/3	fsl	8	2.5Y5/6	fsl	12	5Y5/3	fsl	16				13	arb	rock and gravel throughout; compact Lay II, III
0.3N-1W	10YR3/3	fsl	6	10YR4/4	fsl	11	2.5Y4/4	fsl	16	5Y5/3	fsl	22	19	arb	rock and compact Lay III
0.3S-1W	10YR3/3	fsl	9	2.5Y5/4	fsl	17	5Y5/3	fsl	23				18	arb	rock and gravel throughout; dry
1N-0E	10YR3/2	fsl	4	10YR4/4	fsl	9	2.5Y5/4	fsl	16	5Y5/3	sl	24	17	arb	rock and gravel throughout; compact Lay III
1N-1E	10YR3/2	fsl	3	10YR4/4	fsl	7	2.5Y5/4	fsl	13	5Y5/3	sl	15	13	arb	Offset 3'SW; compact Lay III
1N-1W	10YR3/4	fsl	6	10YR4/4	fsl	10	2.5Y6/4	lsand	19	5Y5/3	lsand	25	20	arb	Offset 2.5' SE
1S-0E	10YR3/2	fsl	14	10YR2/1	sl	18	2.5Y5/4	sl	24	5Y5/3	lsand	31	25	arb	rock and gravel throughout
1S-1E	10YR3/2	fsl	8	2.5Y5/4	fsl	15	5Y5/3	fsl	20				17	arb	compact Lay II, III; rock and gravel Lay III
1S-1W	10YR3/3	fsl	8	10YR4/4	fsl	13	2.5Y4/4	sl	25	5Y5/3	fsl	31	27	arb	rock and gravel throughout
2N-0E	10YR3/3	fsl	4	10YR4/4	fsl	8	2.5Y4/4	fsl	13	5Y5/3	fsl	15	13	arb	naturally compact Lay III
2N-1E	10YR3/3	fsl	3	10YR4/4	fsl	6	2.5Y4/4	fsl	15					rck	compact and very rocky Lay III
2N-1W	10YR3/4	fsl	6	10YR4/4	fsl	11	10YR5/6	fsl	14	2.5Y5/4	fsl	22	26	arb	Lay V 5Y5/3 sl 29"
2S-1W	10YR3/2	fs	8	10YR4/4	fsl	12	7.5YR4/4	sl	23	5Y5/3	sl	27	24	arb	rock and gravel throughout
3N-0E	10YR3/2	fsl	5	10YR4/3	fsl	9	2.5Y4/4	fsl	17	5Y5/3	fsl	22	17	arb	rock and gravel throughout
3N-1E	10YR3/2	fsl	3	2.5Y5/4	fsl	13	5Y5/3	fsl	17				14	arb	Compact Lay II
3N-1W	10YR3/2	fsl	5	10YR4/4	fsl	9	2.5Y4/4	sl	16	5Y5/3	sl	22	18	arb	Iron staining in Lay IV
3S-1W	10YR3/2	fsl	4	10YR4/4	fsl	13	2.5Y5/6	fsl	25					rck	Very compact Lay III
4N-0E	10YR3/2	fsl	7	10YR4/4	fsl	12	2.5Y5/3	fsl	17	5Y5/2	lsand	23	18	arb	rock and gravel throughout
4N-1E	10YR3/3	fsl	7	10YR4/4	fsl	11	2.5Y5/3	fsl	22	5Y5/3	lsand	27	22	arb	rock and gravel throughout
4N-1W	10YR3/2	fsl	10	10YR4/4	fsl	13	2.5Y4/4	fsl	18	5Y5/3	fsl	24	20	arb	rock and gravel throughout
5N-0E	10YR3/2	fsl	7	10YR4/4	fsl	11	2.5Y4/4	fsl	18	5Y5/3	sl	24	18	arb	rock and gravel throughout
5N-1E	10YR3/3	fsl	5	10YR4/4	fsl	11	2.5Y5/3	fsl	20	5Y5/3	lsand	24	21	arb	rock and gravel throughout
5N-1W	10YR3/2	fsl	4	10YR4/4	fsl	9	2.5Y4/4	fsl	12	5Y5/3	sl	22	15	arb	rock and gravel throughout
6N-0E	10YR3/2	fsl	7	10YR4/4	fsl	13	2.5Y5/4	fsl	17	5Y5/3	sl	23	18	arb	rock and gravel throughout
6N-1E	10YR3/2	fsl	7	10YR4/4	fsl	12	2.5Y5/4	fsl	19	5Y5/3	sl	24	20	arb	rock and gravel throughout
6N-1W	10YR3/3	fsl	11	5Y5/3	sl	20							15	arb	rock and gravel Lay II
7N-0E	10YR3/2	fsl	8	10YR4/3	fsl	12	2.5Y4/4	fsl	19	5Y5/3	sl	26	20	arb	Iron staining Lay III
7N-1W	10YR3/2	fsl	5	10YR4/4	fsl	10	2.5Y5/4	fsl	17	5Y5/3	sl	24	18	arb	rock and gravel throughout
7N-1E	10YR3/2	fsl	7	10YR4/4	fsl	16	2.5Y5/4	fsl	19	5Y5/3	sl	24	20	arb	rock and gravel throughout
8N-0E	10YR3/3	fsl	9	2.5Y4/4	fsl	12	5Y5/3	fsl	27				15	arb	rock and gravel throughout
8N-1E	10YR3/2	fsl	6	10YR4/4	fsl	13	2.5Y4/6	fsl	20	5Y5/3	fsl	24	21	arb	rock and gravel throughout
8N-1W	10YR3/2	fsl	7	10YR4/4	fsl	12	2.5Y5/4	fsl	18	5Y5/3	sl	24	19	arb	rock and gravel throughout
9N-0E	10YR3/2	fsl	7	10YR4/4	fsl	13	2.5Y4/4	fsl	17	5Y5/3	fsl	22	18	arb	rock and gravel throughout
9N-1E	10YR3/2	fsl	6	10YR4/4	fsl	12	2.5Y6/6	sand	23	5Y5/3	sand	28	24	arb	rock and gravel throughout; iron staining in Lay III and IV
9N-1W	10YR3/2	fsl	8	10YR4/3	fsl	13	2.5Y4/4	fsl	18	5Y5/3	fsl	24	18	arb	rock and gravel throughout
10N-0E	10YR3/2	fsl	8	10YR4/3	fsl	12	2.5Y5/4	fsl	16	5Y5/3	fsl	21	18	arb	rock and gravel throughout
10N-1E	10YR3/2	sl	8	10YR4/3	sl	14	7.5YR5/8	lsand	19	5Y5/2	sl	25	20	arb	rock and gravel throughout
10N-1W	10YR3/2	fsl	8	2.5Y4/4	fsl	12	5Y5/3	fsl	21				15	arb	rock and gravel throughout

Appendix A: Field Test Summary

Abbreviations:

arb - arbitrary termination
cl – clay loam
com - termination due to compact soil; compact
fsand - fine sand
fsl - fine sandy loam
grv - termination due to dense gravel; gravel, gravelly
lfs - loamy fine sand
lo - lower
lsand - loamy sand
mtld - mottled
prof - profile
rck - termination due to rock; rock, rocky
scl - sandy clay loam
sl - sandy loam
sloam - silt loam
unc - termination due to unconsolidated sediments
wtr - termination due to water

Appendix B: Artifacts by Test Unit

Test #	*Layer*	*Artifacts*
0N-1W	I	1 fragment white quartz biface, 4.3g.