Appendix D: Cultural Resources

SOLLI ENGINEERING

Phase Ia Archaeological Assessment Survey
Proposed Solar Photovoltaic Array
250 Carter Street
Town of Manchester, Connecticut

October, 2023

ACS

◆ *Archaeological Consulting Services* ◆

Phase Ia Archaeological Assessment Survey
Proposed Solar Photovoltaic Array
250 Carter Street
Town of Manchester, Connecticut

by

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Abstract

This report contains the results of a Phase Ia archaeological assessment survey conducted by ACS (Archaeological Consulting Services) during the month of September, 2023. 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 41.08 acres in Manchester, Connecticut. The project property consists of one lot at 250 Carter Street on the south side of the road in the Highland Park section of Manchester and in the southeast part of town. 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 low sensitivity for potential prehistoric cultural resources, with a statistical prehistoric landscape sensitivity model developed and utilized by ACS indicating a high score of just 5.1 out of a possible 100.0, and therefore within the low sensitivity range (0-20). The low scores in general can be attributed to very rocky soil contexts and great horizontal and vertical distances to the nearest major water source (Birch Mountain Brook). There are no previously recorded prehistoric archaeological sites within one mile of the project area, which is in a rugged headlands environment.

Land records and historic maps also do not reveal any prior historic developments within the project area, which was historically part of a much larger farm of the Pitkin and then Finley family during the 19th century when they had a farmstead house further northwest on Carter Street. Two east-west stone wall alignments observed in the field likely date to the 19th century and may relate to a former cleared field. The land was bought in the early 20th century by Case Brothers, Inc., which had acquired a lot of land in the surrounding area to protect its watershed that contained Birch Mountain Brook which in turn powered the Case mill complex downstream at Case Pond. That mill complex and a couple of associated houses contribute to the Case Brothers - Highland Park Historic District that is listed with the National Register of Historic Places. The district includes a large open space park that extends as far east as Birch Mountain Road near the project area, although all of the contributing buildings are located at the far western end of the park and district. Without any evidence for substantial prehistoric or historic use of the project area, ACS recommends no further archaeological conservation efforts for the proposed project.

Project Summary

Project Name: Proposed Solar Photovoltaic Array, 250 Carter Street, Manchester, Connecticut.

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

Project Funding: The Nevar Company, Cheshire, Connecticut.

Project Location: 250 Carter Street, Manchester, Connecticut.

Project Size: 41.08 acres (project property).

Investigation Type: Phase Ia archaeological assessment survey.

Investigation Methods: Background research, pedestrian surface survey.

Dates of Investigation: September, 2023.

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:

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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.

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CHAPTER 1: INTRODUCTION

Project Description

This report provides the results of a Phase Ia archaeological assessment survey conducted by ACS for the planned development of a solar voltaic array, or solar farm, in Manchester, Hartford County, Connecticut. The owner of the project is The Nevar Company of Cheshire, Connecticut. The project is contained within a lot owned by the Jacobson Family Trust, and consists of 41.08 acres on the south side of Carter Street. The address for the parcel is 250 Carter Street, and is recorded with the Manchester Town Assessor on Tax Map 150, Block 970, Lot 250. The project area is in southeast Manchester within the Highland Park section of town, to the south of Interstate 384 and just west of the Bolton town line. The parcel is nested between residential parcels lining Amanda Drive to the west and Blue Ridge Drive to the east and south. A natural gas pipeline courses north-south through the property, with the proposed development contained on the east side of the pipeline. There are no existing structures within the project impact area.

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 likely required for review by the Connecticut State Historic Preservation Office (SHPO) and Connecticut Siting Council. The survey map shows the proposed development and existing conditions, including topography and wetlands. The bulk of the proposed development would be in about one-fifth the total acreage on the east side of the pipeline, with an access from Carter Street near the eastern boundary of the property.

ACS conducted the assessment survey in conformance with the *Environmental Review Primer for Connecticut Archaeological Resources* issued by SHPO. The assessment survey evaluated the potential need, if any, for a Phase Ib archaeological reconnaissance survey. The archaeological assessment survey consisted of a thorough background research effort and pedestrian surface survey to evaluate the potential sensitivity of the project area for any prehistoric and/or historic cultural resources, with SHPO to serve as review agency for the final report.

CHAPTER 2: BACKGROUND

Environmental Setting

The project area is located in the Town of Manchester, Hartford County, Connecticut. The project setting is in the Northeast Hills (III-C) ecoregion of Connecticut, just east of the North-Central Lowlands (III-B). The project area lies in the southeast part of Manchester, in the Highland Park section of town, and south of Interstate 384. There are no existing structures on the parcel. The lot measures 41.08 acres, although the project impact area is about one-fifth of the land on the east side of an existing natural gas pipeline (Figure 1).

Underlying bedrock for the property is dominated by Ordovician Glastonbury Gneiss (Ogl), although the eastern part of the property is lined by a unit of Silurian Clough Quartzite (Sbc), and another unit of Devonian Littleton Schist and Quartzite (Dbl) straddles the Bolton town line to the east (Rodgers 1985). The older Ordovician formation is on the western leg of a syncline or trough feature, with the younger Devonian formation in the center that roughly parallels the Bolton town line. The highly foliated formations result in bedding dips up to 75 degrees in the vicinity. These highly foliated formations lie just east of the Honey Hill fault that separates the Paleozoic metamorphic formations from the Mesozoic sedimentary units of the central lowlands to the west, the latter formed as the result of a failed rift occupying the central part of the state. The rugged property contains hill slope landforms with thin glacial till deposits, although thicker moraine deposits are found upslope along the Bolton town line to the east (Stone et al. 1992). The west facing hill slope landform is downslope from a hill peak to the east on the other side of the Bolton town line, with the eastern boundary of the project property at about 680 feet above mean sea level, and the western boundary at about 500 feet above mean sea level, although the natural gas pipeline that bisects the property is at between 550 and 600 feet above mean sea level (Figure 2). Glacial outwash sedimentary deposits of sand and gravel (sg) and more recent alluvial sedimentary deposits occur lower within the Birch Mountain Brook drainage directly to the west of the project property on the other side of Amanda Drive.

The project area is within the South Fork of the Hockanum River drainage basin (#4504) that drains into the main channel of the Hockanum River (#4500) about five miles to the west, with another five miles west to the Connecticut River (4000) (McElroy 1991). Set within the headlands of the Hockanum River system, the project area is just east of Birch Mountain Brook, which flows north and then west around Birch Mountain where, historically, it was dammed to form Case Pond for manufacturing purposes. Moving west, the brook forms a confluence with Porter Brook, at which point the combined drainage is named Hop Brook that flows further west into the South Fork of the Hockanum River. There are no wetlands within the project area itself, although within the larger property there are isolated minor wetland bodies.

There are several dominant soil types within the project area (Figure 3) (Shearin and Hill 1962; USDA NRCS websoil survey 2023). The bulk of the area contains Paxton and Montauk fine sandy loams (86C) and Woodbridge fine sandy loams (46B / 46C). The Paxton soil typically has an eight-inch surface layer of dark brown (10YR 3/3) fine sandy loam, overlying an upper subsoil of dark yellowish brown (10YR 4/4) dark yellowish brown fine sandy loam to 15 inches

Figure 1: Map of the Project Area

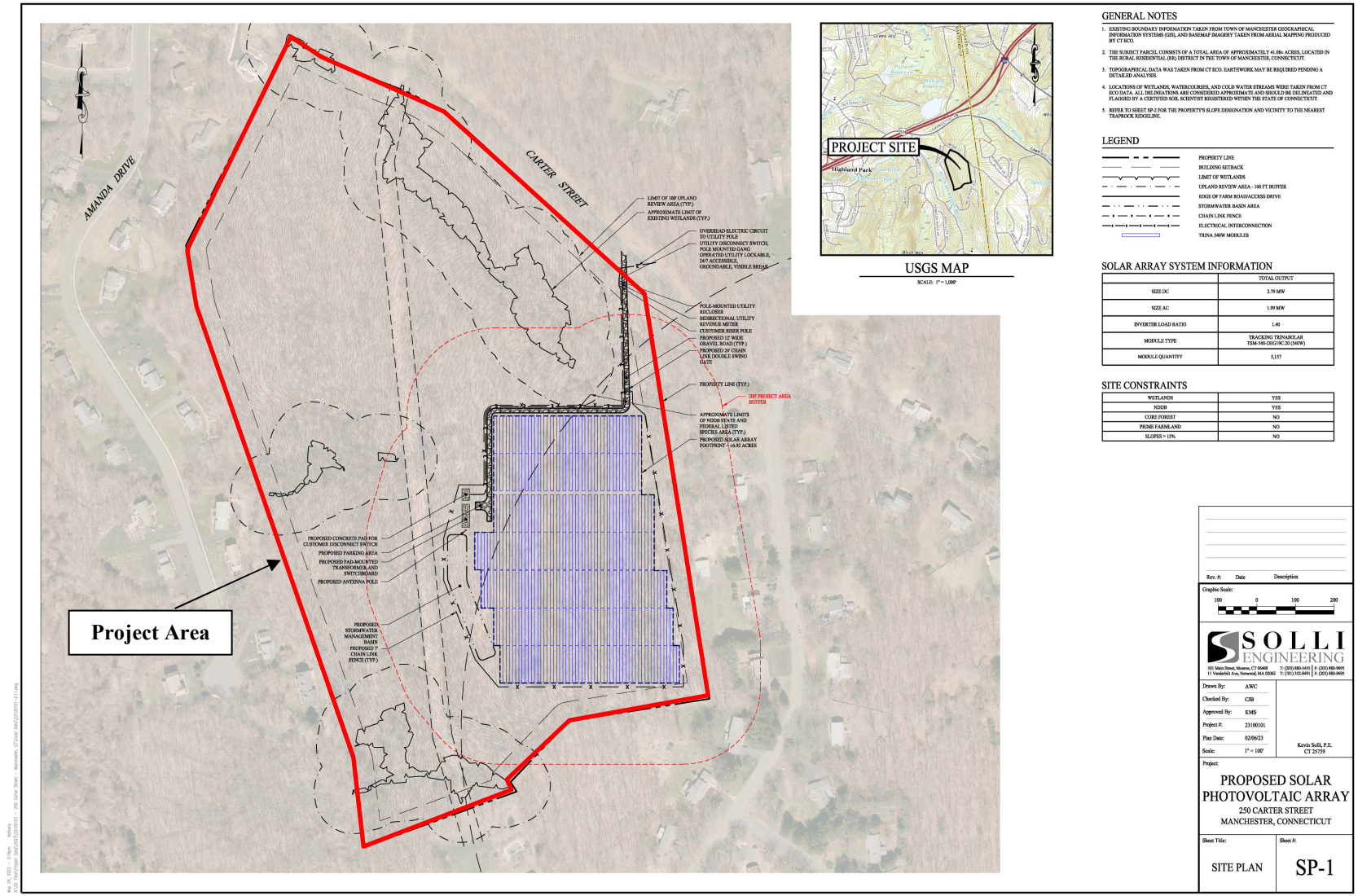

Figure 1: From Solli Engineering, 2023. Scale: 1" = 400' (1:4,800).

Figure 2: USGS 7.5' Topographic Map, Rockville Quadrangle

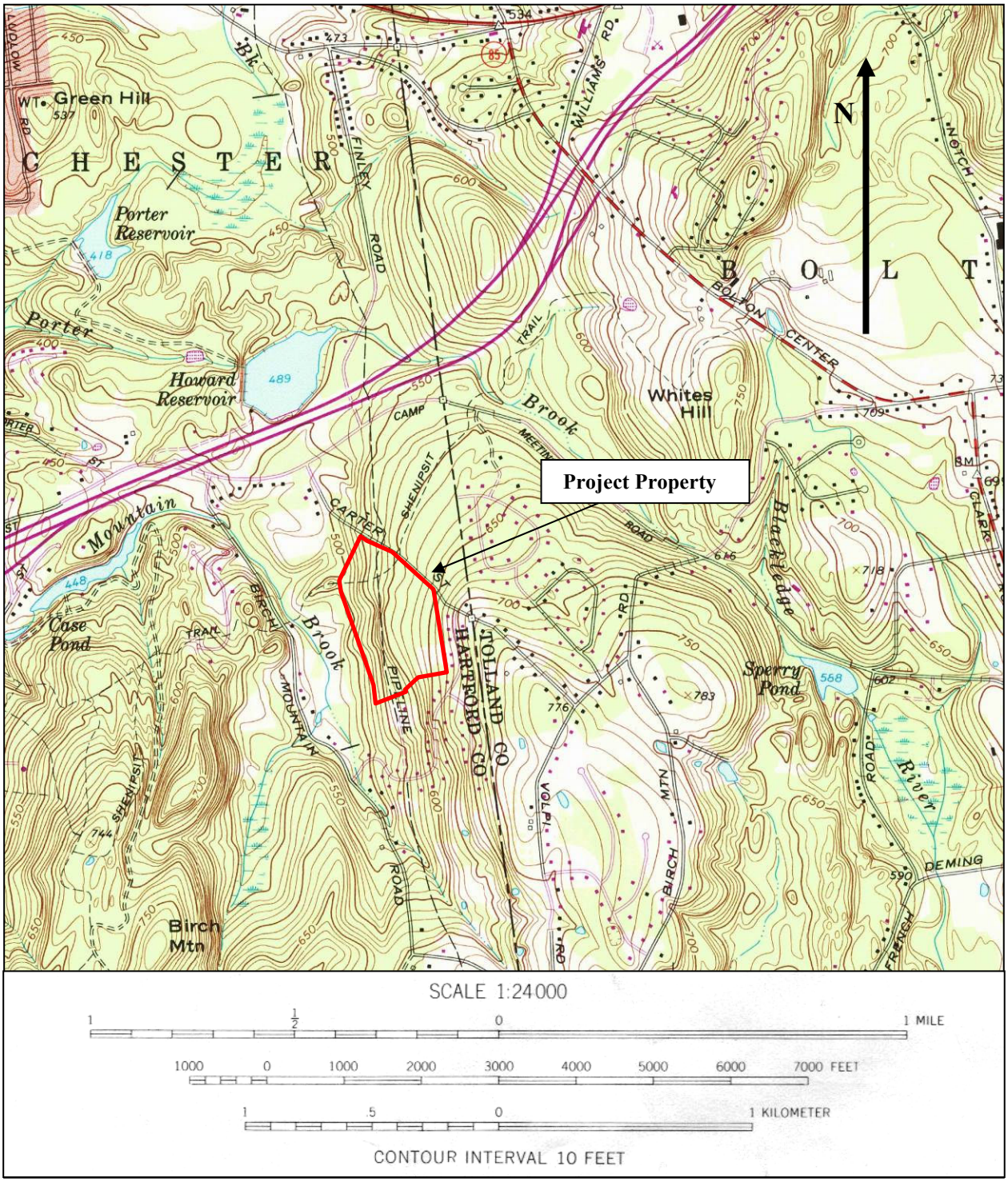

Figure 2: From USGS 1972.

Figure 3: USDA Websoil Survey Map

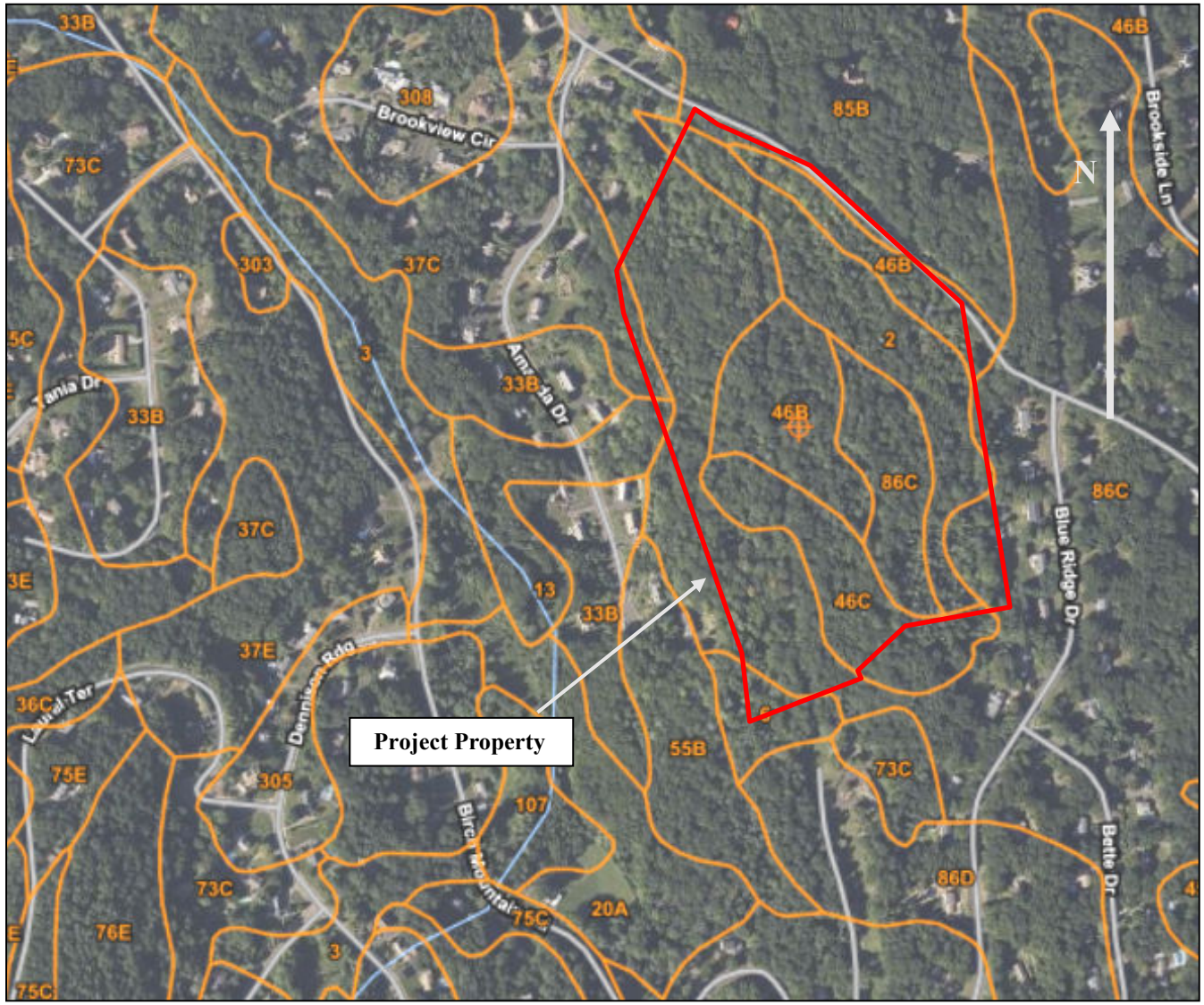

Figure 3: From USDA NRCS websoil survey 2023.

deep, a lower subsoil of olive brown (2.5Y 4/4) fine sandy loam to 26 inches deep, and a substratum of olive (5Y 3/3) gravelly fine sandy loam to five feet deep or more. The closely associated Montauk profiles typically include a surface layer of very dark gray (10YR 3/1) loam to four inches deep, followed by a brown (10YR 4/3) upper subsoil of loam to 13 inches below the surface, a mid subsoil of dark yellowish brown (10YR 4/6) loam to 26 inches below the surface, a lower subsoil of yellowish brown (10YR 5/6) sandy loam to 34 inches deep, and a substratum of strong brown (7.5YR 5/6) to dark yellowish brown (10YR 4/6) gravelly loamy sand to over five feet deep. The Woodbridge soils typically have a profile with a surface layer of very dark grayish brown (10YR 3/2) fine sandy loam to 7 inches below the surface, followed by an upper subsoil of dark yellowish brown (10YR 4/4) fine sandy loam to 18 inches deep, a mid subsoil of mottled dark yellowish brown (10YR 4/4) fine sandy loam to 26 inches deep, a lower subsoil of light olive brown (2.5Y 4/4) fine sandy loam to 30 inches below the surface, and a substratum of light olive brown (2.5Y 5/4) gravelly fine sandy loam to over five feet deep. All three soil types are very rocky and moderately well to well drained. The property supports a secondary forest cover, with generally low scrub growth.

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 2023) and Connecticut State Historic Preservation Office (CT SHPO 2023), there are no previously recorded prehistoric archaeological sites within one mile of the project area, and only one site within a 1.5-mile radius (Figure 4). At about one and one-half miles north-northwest of the project area, the Indian Drive site (077-012) was noted by historian Mathias Spiess, and may be a rockshelter site where a large boulder, mortar, and possible hearth area were located.

Summary

A low density of prehistoric archaeological sites has been recorded in the region surrounding the project area. This is likely attributable to the low density of professional surveys. More sites are likely yet to be discovered in the area, and probably located according to well established settlement models with a focus on proximity to fresh water sources and well drained soils, with sites more abundantly located on the larger streams further along the drainages, in this case the Hockanum River drainage basin.

Figure 4: Prehistoric Sites of the Region

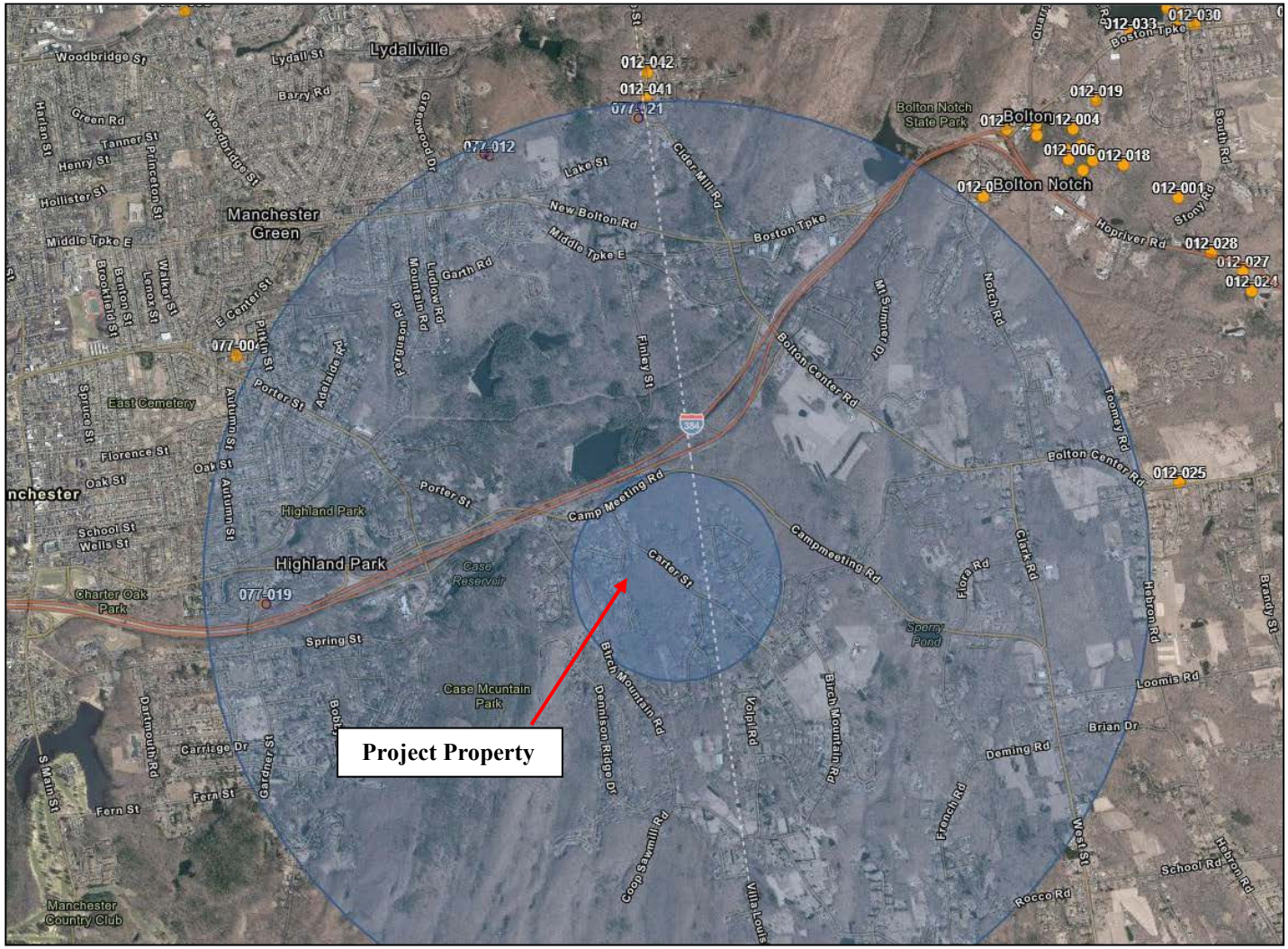

Figure 4: From CT SHPO 2023. Orange dots are previously identified archaeological site locations, 077-012 is the only prehistoric archaeological site within a 1.5-mile radius (area shaded light blue).

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 initial 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).

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). 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, including the Podunks, 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; Spiess 1933:7-8).

The relationships between the tribes were complex and defined to some degree by the relationships of their leaders. At the time of contact, Sequin, or Soheage, was the sachem of the Wangunk tribe on the west side of the Connecticut River and concentrated in Wethersfield and to the south along the river. Sequin was father to Sequassen who would become sachem of the Saukiogs in Greater Hartford, and Montowese who would become sachem of the Quinnipiacs in Greater New Haven, thus demonstrating the close political relationship between tribes of the area whose physical boundaries changed frequently (DeForest 1852:54-55). Correspondingly, Sachem Arramamet of the Podunks and Sachem Sheat of the Poquonocks to the north of the Saukiogs on the west side of the Connecticut River both signed deeds granting territory on the east side of the river (DeForest 1852:55), and later Arramamet sanctioned the marriage of his daughter, Sowgonosk, and territorial rights to Attawanhood, the third son of the Mohegan Uncas (DeForest 1852:258).

The fluctuating nature of tribal territory boundaries can 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 focussed 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 intercultural 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. One such Podunk fort is known to have

been located in South Windsor (Spiess 1933:8). 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).

The project area is situated upon land controlled by the Podunk at the time of European contact. The Podunks were concentrated on the east side of the Connecticut River in an area ranging from East Windsor at the north to East Hartford at the south, and extended as far east as Bolton (DeForest 1852:55; Stiles 1891:108,112; Spiess 1933:10). Their estimated range of territory extended to the south as far as the Wangunks in Glastonbury to the south of Keeney Cove, to the east as far as Bolton, and to the north as far as East Windsor and the Agawams who were concentrated further north in Enfield and into Springfield and Deerfield, Massachusetts (Spiess 1933:10, 1937:21-22). The Podunks were closely affiliated with the Poquonocks west of the Connecticut River, and at the time of contact with Euroamerican settlers, Podunk Sachems included Tantonimo, Arramamet, and Waghinacut (DeForest 1852:55). Population estimates for the Podunk in the late 17th Century range from just 250 to 1,500, with about 1,000 as a reasonable estimate for the period following the epidemics of the 1630s (Cook 1976:64). Historically recorded Podunk villages in the region include those in western South Windsor, East Hartford at Hockanum under the leadership of Tantonimo, up to four in Manchester in the central and southwest parts of town, and one on the Scantic River near Broad Brook under the leadership of Foxen (Spiess and Bidwell 1924:8-9; Spiess 1937:9-10; Swanton 1952:45-46).

The early 1630s marked a period of manipulative efforts by the English and Dutch colonies of the region to control trade along the Connecticut River. In 1632, the Dutch purchased tracts at the mouth of the Connecticut River in Old Saybrook after learning of intentions by the Plymouth Colony to establish a presence in the region, followed by a purchase in the Hartford area in 1633 (Stiles 1976 [1892]:24). The Plymouth Trading Company responded with the construction of a trading house in Windsor at the mouth of the Tunxis or Farmington River in the fall of 1633. When the Plymouth Colony began to make plans for settlement in Connecticut in the early 1630s, the Dutch resisted the idea because of their perceived proprietorship over the area by "right of discovery" (Guillette 1979:WP3). In 1635, English

colonists of the Massachusetts Bay Colony established other settlements on the Connecticut River (Hauptman 1990:71). Isolation of the Dutch was completed that year when Winthrop built a settlement at the mouth of the river in Saybrook (Guillette 1979:WP4). This move was welcomed by some of the aboriginal inhabitants of the area who anticipated protective aid by the English against Pequot incursions (Stiles 1976 [1892]:104). Its placement to the north of the Dutch post ensured that trade down the Connecticut River was predominantly with the English. In an effort to outmaneuver the English colonists, the Dutch attempted to form a post further up the Connecticut River, but failed due to the epidemics and other factors (Stiles 1976 [1892]:26). Most Euroamerican settlement at this time was on the west bank of the Connecticut River (Stiles 1891:50), while Podunk and Agawam settlements dominated the east bank (Spiess 1937).

The earliest Euroamerican civic government in the area consisted of a commission appointed by the Massachusetts colony to govern the river settlements, which included Roger Ludlow and William Phelps of Windsor (Howard 1935:27; Uricchio 1976:30). The towns of Windsor, Hartford, and Wethersfield banded together to form the General Court of what was now the Connecticut Colony in 1637 (Howard 1935:28-29). This was a time of considerable turmoil between Euroamericans and Native Americans of the region, for Euroamerican settlers had effectively forced the removal of Sequin and his settlement from Wethersfield, and there were other conflicts in the trade relationship between the Pequots, neighboring tribes, Dutch traders, and English colonists. Disdained, Sequin consequently encouraged the Pequots to attack the settlement in retaliation. In April of 1637, an attacking group of Pequots managed to kill some of the settlers at Wethersfield, and kidnapped and held others captive. This skirmish, along with others, would lead to the Pequot War shortly thereafter (DeForest 1852:96; Stiles 1891:67). In fact, it was the first official act of the newly formed General Court of the Connecticut Colony to declare war against the Pequots (Howard 1935:29). The colonists formed a group to attack the Pequots in 1637, with a substantial proportion of the men and equipment being provided by the Windsor settlement (Stiles 1891:67). The contingent of soldiers from the Connecticut colonies was joined by the Mohegan sachem Uncas, who led his newly divergent tribe and some Narragansetts on a campaign against the Pequots (Hauptman 1990:73). Most of the latter were massacred at Mystic Fort, the survivors of which were forced to scatter widely.

The Pequot War set a trend of English control over, and arbitration between, native groups (Twitchell 1899; Hauptman 1990:69). Most of the tribes looked favorably on this situation at first, for it had relieved them of control by the Pequots. This control, however, was merely shifted to the English colonists who demanded shell bead payments in return for protection and as penalties for "crimes" (Ceci 1990:61). Eventually, demand for wampum decreased as the fur trade was diminished following the widespread depletion of commercially targeted animals (Salisbury 1990:90). The colonists then turned to land as the principal aboriginal resource to be tapped through "fines."

Native American subsistence patterns were becoming increasingly hindered by English settlement, and closure of the surrounding land further prevented adequate use of hunting ranges. Colonist encroachments on "unused" portions of reservations and other lands occurred without reasonable chance of recourse by legal means (McBride 1990:107; Campisi 1990). Native horticultural efforts were stunted by the introduction of Euroamerican livestock as well as non-indigenous rodents (Cronon 1983:153). The relationship between the English and original

inhabitants of the area was a guarded one, with local acts of legislation demanding that every plantation be equipped with sufficient weaponry and training (Stiles 1976 [1892]:64-65).

The Podunks continued to be embroiled in several disputes with tribes in the surrounding region, until 1656 when Uncas of the Mohegans failed in his attempts to have the English courts bring sanctions against them, and instead solicited the help of the Mohawks to threaten warfare against the Podunks (DeForest 1852:251-252). This period also witnessed an attempt to convert the Podunks to Christianity, via John Eliot whose efforts were rejected (Stiles 1891:119). The Podunks felt the conversion efforts were masking Euroamerican attempts to maintain exclusive control over land and to subjugate the aboriginal inhabitants of the area (DeForest 1852:252).

The alignment of the Podunks with the Agawams or local Pocomtocks is demonstrated in the skirmishes and appeals to English courts made by the two tribes in relation to various hostilities with the Mohegans (DeForest 1852:249-256). The Connecticut English favored alliances with the Mohegans of all the local tribes because of their role in the subjugation of the Pequots (Guillette 1979:M6). After numerous skirmishes between the two sachems, for instance, the Connecticut government effectively sanctioned the execution of Miantonimo, Sachem of the Narragansetts, by Uncas (DeForest 1852:195). The Mohegans and the Connecticut colonists continued to exhibit mutual support in King Philip's War of 1675, when they defeated attempts of the Wampanoags of Massachusetts, the Nipmucs, and some Podunks, to thwart the expansion of Euroamerican settlement (Gookin 1836 [1677]; Barber 1838:20-21; DeForest 1852:288). The war reached East Hartford, with a skirmish in Hockanum leading to the death of William Hill and the subsequent fortification of several homesteads (Goodwin 1976 [1879]:69; see also Johnson 2009:8). This war effectively ended any military threat or potential resistance to full fledged settlement of southern New England by the Europeans (Fawcett 1995:16). Despite several episodes of confrontations, the Podunks had generally close ties to the Mohegans through intermarriage and other relations (Stiles 1891:109; see also Spiess 1933:10), although many Podunks had participated in King Philip's War in 1675 which further reduced the population in the originally inhabited territory. Many had also removed to the towns of Salisbury and Sharon, joined the Tunxis, or joined the Brothertown movement (DeForest 1852:363; Stiles 1891:120).

The Podunk invitations for English groups to establish settlement in the area as a way to protect against Mohawk incursions was first considered by members of the Massachusetts Bay colony who first visited the area in 1631 (Goodwin 1976 [1879]:38). Thomas Hooker, Samuel Stone, and other men from Plymouth settled the area with considerable difficulty in 1635 to 1636 (Goodwin 1976 [1879]:39). At first named "Newbury" and then changed to "Hartford," the new settlement claimed territory that includes Hartford, East Hartford, Manchester, and West Hartford, although initial sale documents from the Saukiogs only specifically mention territory west of the Connecticut River (Goodwin 1976 [1879]:38-40). In 1640, proprietors of Hartford were apportioned meadow and plow lots on the East Hartford side of the river (Goodwin 1976 [1879]:42), and the first settler in East Hartford was John Crow (Johnson 2009:7). By 1653, the first permanent settlements were made on the east side of the river (Goodwin 1976 [1879]:48), and families to settle early in the Hockanum area include Keeney and Risley (Goodwin 1976 [1879]). The meadow lots were ordered fenced in the 1660s, with cattle and swine to feed east of the meadows (Goodwin 1976 [1879]:43-44). Saw, grist, and fulling mill privileges were granted early on the Hockanum River, with the first mills forming the basis of what would become the

village of Burnside well to the east of the town center on the Hockanum River (Goodwin 1976 [1879]:154-156; Johnson 2009:8). Main Street was laid out in 1670 (Goodwin 1976 [1879]:68,177), a ferry established across the Connecticut River in 1681 (Goodwin 1976 [1879]:194), and the first meeting house for the town started to be built by 1699 when East Hartford became the third ecclesiastical society of Hartford following complaints by occupants of East Hartford territory that they could not adequately access civic and church affairs across the river in Hartford (Goodwin 1976 [1879]:71,124-126; Johnson 2009:8). The first permanent Euroamerican settlements within Manchester territory occurred on Hop Brook late in the 17th century, including a saw mill (Spiess and Bidwell 1924:36; Buckley 1973:34).

18th Century

By 1730, only a few Podunk families were reported in Hartford and Windsor, with a last Podunk concentration along the Hockanum River in East Hartford (DeForest 1852:363), and by the 1770s, only a few individual Podunks remained in the area. Old Wapping Cemetery, located in Wapping Center, contains the remains of several Native Americans buried between 1766 and 1781 (Stiles 1976 [1892]:625; Spiess 1937:10; Walwer 1996:106), but thought to be Wangunks who were closely related geographic and cultural counterparts of the Podunks from Wethersfield.

In 1700, a bridge was built across the Hockanum River on Main Street at East Hartford (Goodwin 1976 [1879]:71). Townsmen included selectmen, hayward, surveyor, and constable (Goodwin 1976 [1879]:70-71). Several inns and taverns served travelers at Hockanum and on Hop Brook (Spiess and Bidwell 1924:60-61; Goodwin 1976 [1879]:108-109; Johnson 2009:8). Two schools were established in East Hartford by 1718, one likely located on Willow Brook, and another built in Hockanum by 1738 (Goodwin 1976 [1879]:165-166). Hartford in 1761, then including East Hartford and Manchester, had a population of nearly 4,000, with more than 1,500 living on the east side of the river (Goodwin 1976 [1879]:81).

The territory of Manchster was formally surveyed in 1731 (Spiess and Bidwell 1924:32; Buckley 1973:35). Industry was growing along the Hockanum River drainage, and included a paper mill and iron forge by the end of the century (Spiess and Bidwell 1924:62-63; Goodwin 1976 [1879]:156-157; Johnson 2009:8-9), and copper mining occurred in the southeast part of Manchester known as Highland Park (Spiess and Bidwell 1924:63; Buckley 1973:17-18). Later in the 18th century, woolen cloth, cotton cloth, and glass bottles were manufactured (Spiess and Bidwell 1924:80-82; Buckley 1973:66-67). Most of the town was agricultural, however, with typical farms of about 150 acres including a third woodland, a third pasture for dairy and livestock, and a third cultivated for rye and other crops (Spiess and Bidwell 1924:84-85; Buckley 1973:53-57).

Several school districts were established in Manchester by mid-18th century (Spiess and Bidwell 1924:39). East Hartford, including Manchester territory, was still a subordinate ecclesiastical society of Hartford into the late 18th Century. The territory of what is now Manchester, and known as the "Five Miles" based on the territorial deed description granted by Joshua (third son of Uncas) in 1672, was set off as the Parish of Orford in 1773 (Spiess and Bidwell 1924:27; Goodwin 1976 [1879]:149). The town of East Hartford, including Manchester territory, was incorporated and separated from Hartford in 1783 after more than one-half century of petitions (Goodwin 1976 [1879]:38,92-93; Paquette 1976:7; Johnson 2009:9). East Hartford built a pest-house to inoculate or manage those afflicted with small-pox at "Pock-House Hill,"

and the town built its first almshouse or house for the poor in 1787 (Goodwin 1976 [1879]:102-106; Paquette 1976:9). The town population was uniformly members of the Congregational Church until close to the end of the century when Baptist, Methodist, and Episcopal preachers started to build congregations (Spiess and Bidwell 1924:56; Goodwin 1976 [1879]:145-147).

East Hartford contributed its share of men to fight in the Revolutionary War, as it had for the French and Indian War (Goodwin 1976 [1879]:82-87). Gun powder was being manufactured at Burnside during the war, with one person killed by a mill explosion (Spiess and Bidwell 1924:79; Goodwin 1976 [1879]:157-158; Johnson 2009:8). Rochambeau had an encampment in East Hartford with his French troops during his march from Rhode Island westward - the first time encamped in the meadows of East Hartford in 1780 to meet with General George Washington in Hartford; and then again along Silver Lane in 1781 to take the fight to New York with the colonists (Goodwin 1976 [1879]:88-91; Paquette 1976:2; Johnson 2009:8-9).

As with the west side settlements, the east side was dominated by a self-subsistence agrarian economy. Tobacco was actively produced during the 18th Century, although production for export was cut during the Revolutionary War and cheaper varieties were being grown in Virginia (McDonald 1936:6; Johnson 2009:9). Cigars would be introduced to the area by 1762, having a profound impact on the industry in the area. Agriculture, however, was still conducted to a large degree on a self-subsistence level into the early 19th Century. Farmers grew and raised wheat, rye, buckwheat, flax, corn, hogs, sheep, and cattle (Potwin 1952:39-42; Elmore 1976 [1911]:20; Goodwin 1976 [1879]:71). These products were often taken to local mills or processed on the farm to make flour, linen, leather, butter, cheese, etc. Rare imports included tea, coffee, sugar, molasses, oil, and spices, with local lumber provided for regional and West Indies trade (Potwin 1952:44). The meadows along the Connecticut River were generally used to grow grass for hay (Goodwin 1976 [1879]:xiii). The seriousness of the tobacco trade and more generally of all commerce in East Hartford is reflected in its assignment of "packers of tobacco" and "sealers of measures" as town officials (Goodwin 1976 [1879]:95; Paquette 1976:8).

19th Century

Tobacco emerged as a major income crop during the 19th Century, following a succession of secondary products that included lumber, cattle, and broom corn (Paquette 1976:99; Gorman 2002:15; Johnson 2009:9,36-40). The crop was being explored by corporate ventures in the region as early as the 1830s, but was still mostly grown in small fields tended by individual farmers whose wives hand rolled cigars (Gorman 2002:17). By the middle of the 19th Century, Connecticut was becoming well known for its broad-leaf production good for cigar wrappers (Gorman 2002:17). Connecticut production of tobacco increased from one-half million pounds in 1840 to six million pounds by 1860, and 14 million pounds by 1880 - most of it grown on just 5,000 acres in Hartford County (Paquette 1976:99). Its transport to other regions would have been facilitated by the construction railroads in the mid-19th Century. While about one-ton of tobacco could be grown on a single acre in a given year, this intensive growing required eight to ten cords of fertilizer per acre, with fertilizer transported for delivery by boats from New York up the Connecticut River (Paquette 1976:100).

While the area was serviced by a ferry early in its history, the first bridge was built across the Connecticut River at Hartford and East Hartford in 1808-1810 (Paquette 1976:12). Smaller

roads through East Hartford were being improved into turnpikes at the start of the 19th Century (Goodwin 1976 [1879]:188-190; Paquette 1976:10). Manchester was set off from East Hartford as a town in 1823, with a population of about 2,000 in the remaining town territory rising to about 2,500 by mid century (Spiess and Bidwell 1924:29, 58-59; Paquette 1976:29). Fishing continued to be a major industry in the early 19th Century, particularly shad in the Connecticut River (McNulty 2000:8). Agricultural products of the time include corn, wheat, rye, oats, potatoes, turnips, hay, various fruit (especially peaches, apples, and strawberries), tobacco, butter, cheese, honey, onions, hops, and flax, with local farmers also making charcoal from timber (Chapin 1853:128; McNulty 1970:81-82, 2000:11,22,24,46,64). Some also experimented with Mulberry trees to maintain silk worms (McNulty 1970:35; Goodwin 1976 [1879]:158-160). The shipment of surplus agricultural goods and manufactured items was facilitated by steamboats travelling up and down the Connecticut River (McNulty 1970:76).

The paper, cotton, and woolen manufacturers of the early 19th century expanded considerably during the middle of the century (Spiess and Bidwell 1924:91-92, 141-150). Smaller manufacturing shops made plows, nails, musical instruments, leather goods, coaches and wagons, tin products, cigars, soap, ink, and other items (Spiess and Bidwell 1924:94; Buckley 1973:85). In the 1830s, mulberry trees were cultivated to support a booming silk business until it was impacted by a blight (Spiess and Bidwell 1924:94-100; Buckley 1973:87-88). The silk industry was revolutionized by the Cheney Brothers, who had a mill devoted to the product and invented machinery to spin yarn from silk waste (Spiess and Bidwell 1924:102; Kanehl 2021:59-61), and they expanded their business into a major mill complex (Spiess and Bidwell 1924:133-141; Buckley 1973:88-91; Kanehl 2021:49-51). Mid-19th century industry in Manchester was boosted by the arrival of the Hartford, Providence and Fishkill Railroad in 1850 (Spiess and Bidwell 1924:103). Manufacturing made its way to Highland Park in southeast Manchester by 1862, after which the Case Brothers had several mills including their first mill on Birch Mountain Brook that courses just west of the project area (Spiess and Bidwell 1924:105, 141-142; Kanehl 2021:80). The mid to late 19th century growth of industry in Manchester was also supported by a growth in population, particularly immigrants, and now villages grew around mills with surrounding farms supplying surplus agricultural products (Spiess and Bidwell 1924:106-109; Buckley 1973:80-82, 141-142). This was also a time of diversification of Christian denominations and churches, and rising temperance and anti-slavery movements (Spiess and Bidwell 1924:112-116; Buckley 1973:103-114, 187-193).

Mid-19th century maps reveal no developments on the project property at that time, with the nearest occupations to the north along Carter Street near what is now Camp Meeting Road belonging to the William Russell and then George C. Finley families (Figures 5a and 5b). Land records confirm that George M. Finley held 92 acres with a house at that location into the early 20th century, and had acquired the property from his father George C. Finley. The portion of that estate containing the project area was likely a 49.5-acre parcel conveyed by Timothy Pitkin to George C. Finley in 1863 (Manchester land records volume 12, page 158). Timothy and other Pitkin family member inherited the tract from earlier Pitkin family members.

Figure 5a: Historic Sites of the Area (1855 Map)

Figure 5a: From Woodford 1855.

Figure 5b: Historic Sites of the Area (1869 Map)

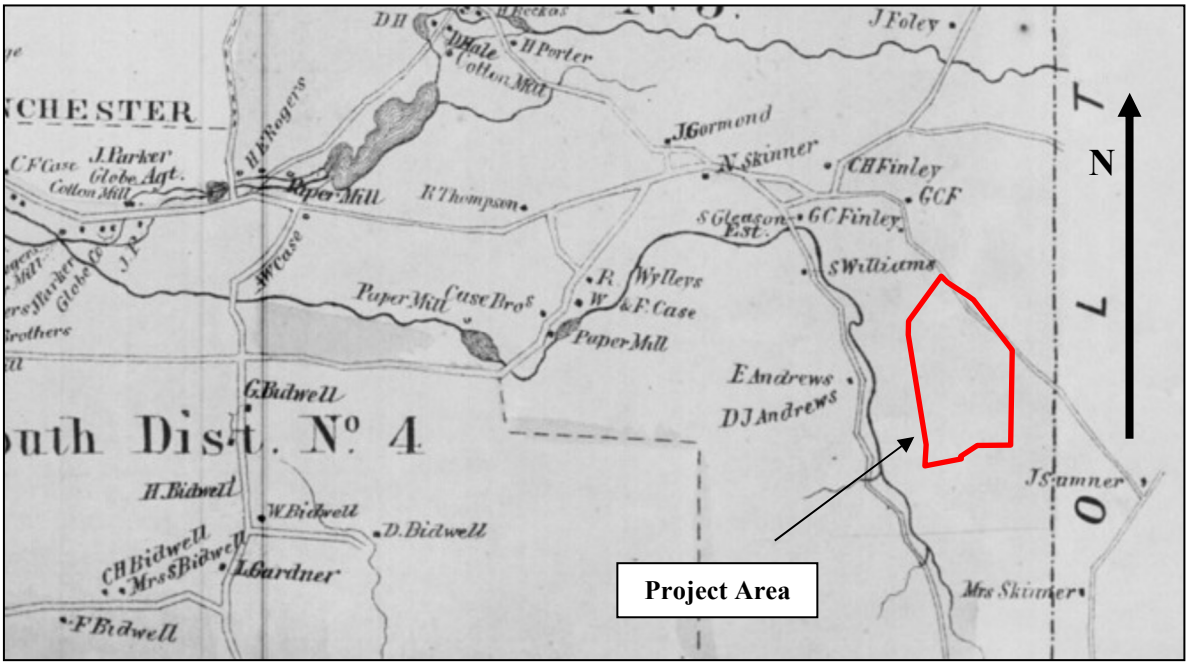

Figure 5b: From Baker and Tilden 1869.

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

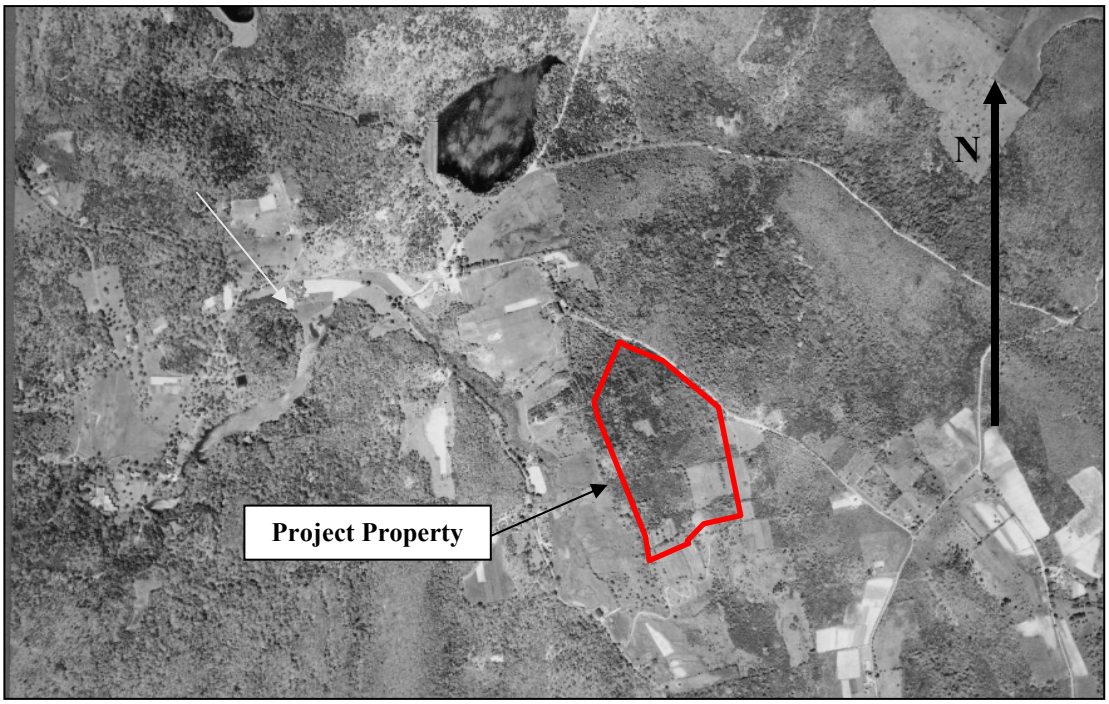

Figure 5c: From Fairchild 1934.

Figure 5d: Historic Sites of the Area (1944 Map)

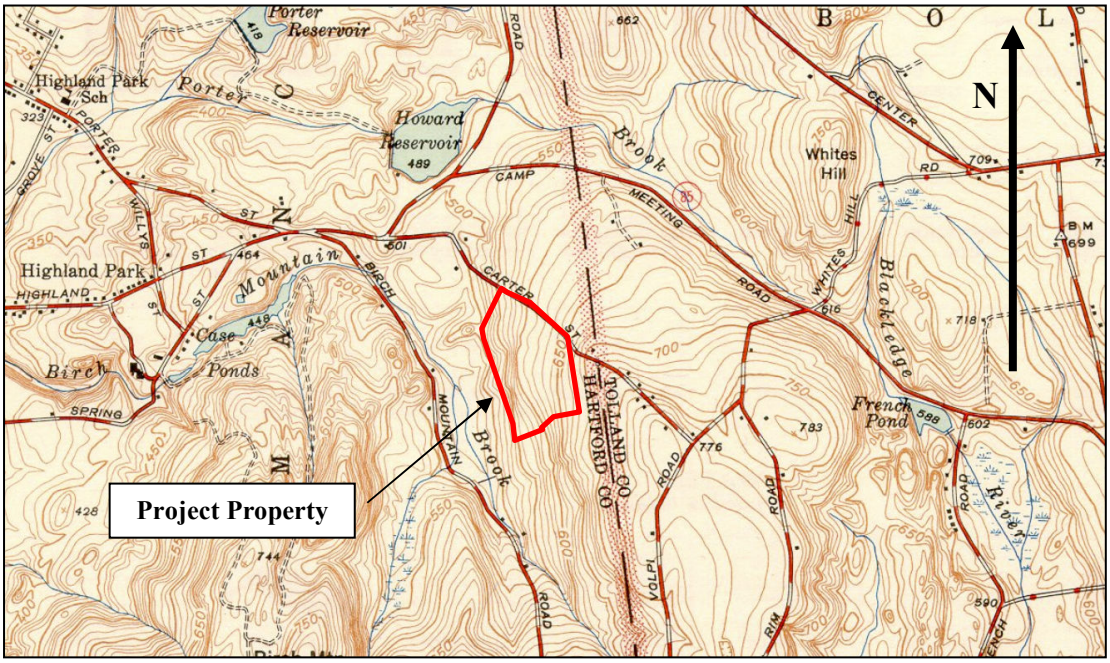

Figure 5d: From USGS 1944.

20th Century+

The turn of the century marked a continuous rise in population and industry throughout Connecticut (Andersen 1975:38), including higher proportions of recent European immigrants and expanded number of churches, schools, and social organizations (Spiess and Bidwell 1924:172-221). Manufacturing in Manchester expanded considerably to include a focus on tools and machinery (Spiess and Bidwell 1924:150-152). Passenger trolleys were run in the area from 1907 into the 1920s (Buckley 1973:173-176; Karr 1995:87; Kanehl 2021:31-33). Other modern developments by the early 20th Century included banking services and advancements such as electric, telephone, water, natural gas, and sewage services (Spiess and Bidwell 1924:155-167; DeVito 1968:110-112; Buckley 1973:145-147). The Case Brothers established a park at Case Mountain in the Highland Park area of town that includes the project area early in the 20th century (Spiess and Bidwell 1924:142; Buckley 1973:13; Kanehl 2021:80-81). The school system of Manchester was consolidated by 1932, and the Mary Cheney Public Library opened in 1937 (Buckley 1973:257-260; Kanehl 2021:38-40).

With a decline of manufacturing in the region (Ransom 1992:43-44), the early 20th Century witnessed the development of large tobacco corporations to handle the business end of the industry, as well as the use of machinery for harvesting and processing (McDonald 1936:25-26). Tobacco was still being largely grown on small farms into the early 20th Century (McDonald 1936:8-9), with a significant decrease in production after 1930 (McDonald 1936:19). One major shift in tobacco agriculture occurred in the region towards the beginning of the 20th Century, in the form of shade-grown tobacco cultivated under mesh or cheesecloth tents for eventual use as cigar wrappers (Gorman 2002:5,22-23). The shade-grown variety of cigar wrapper leaf could successfully compete with a Sumatran variety that threatened to reduce demand in the Connecticut tobacco market (Andersen 1975:51). The long mesh tents or rows of square "bents" were designed to reproduce the heat and humidity of the tropics, with each acre needing 5,000 yards of cloth, 50 cedar poles, 350 pounds of wire, and 1,000 feet of twine (Gorman 2002:22-24). While about 10 million pounds of tobacco was grown in the area during the last decade of the previous century, this was about the amount of shade-grown tobacco harvested in a single year by 1921, representing about one-fourth of overall tobacco production (Gorman 2002:23). The newly employed Sumatra seed was used for the shade-grown variety of leaf, while the more traditional Connecticut broadleaf seed was now used to grow leaves for filler and binder (Gorman 2002:6). And whereas agriculture in the area was previously dominated by farmers of Anglo-Saxon descent, the immigration patterns of the early 20th Century resulted in the tobacco industry being dominated by farmers of Slavic or Polish descent (Gorman 2002:6,36). Children were often utilized for labor, given their small size and agility that allowed them to navigate through thick stands of tall leaves and pick them without damaging others (Gorman 2002:41). Within Manchester, and mostly the western part of town, tobacco farming grew from less than 50 acres in 1823 to about 1,000 acres in 1923, yielding a harvest of 300,000 pounds (Spiess and Bidwell 1924:154).

Major corporations started to consolidate smaller farming operations, and after child labor laws of the early 20th Century were passed, eventually hired many Caribbean workers from places such as Puerto Rico, Jamaica, or various parts of the West Indies as there was a shortage of local labor stemming from the draft of World War II (Gorman 2002:6,44-45). The decline of growing shade-grown tobacco in the area over the last half of the 20th century can be attributed to

a number of factors, including the emergence of homogenized sheet wrappers in the 1950s and awareness of the dangers of smoking since the 1960s (Gorman 2002:2-3). The middle of the 20th Century was the end of the century-long peak period of tobacco production in the Connecticut River Valley (Gorman 2002:5). Post World War II in Manchester led to typical suburbanization of the town, and the town housed a Nike missile site during the 1950s and 1960s (Buckley 1973:286-291).

Land records reveal continued ownership of the project property by the Finley family into the early 20th century, with the 92 encompassing acres and house conveyed by the estate of George M. Finley to Dorsey C. Finley in 1906 (Manchester land records volume 32, page 749). A few years later, Finley conveyed 50 acres containing the project area to Case Brothers, Inc., who owned manufacturing concerns at Case Pond further downstream on Birch Mountain Brook. Case Brothers owned a lot of surrounding land at the time, so as to control the watershed of the stream that powered their mills (Gleason pers. comm. 2023). Ten parcels of Case Brothers were sold to the Dennison family in 1967 (MLR 433/371). 20th century maps reveal no structural developments on the property, although some portion of the project area was cleared for agricultural purposes into the early 20th century (Figures 5c and 5d).

Local Sites and Surveys

There are two previously recorded historic archaeological sites on file with the Connecticut Office of State Archaeology (CT OSA 2023) or Connecticut State Historic Preservation Office (CT SHPO 2023) within one and one-half miles of the project area. At about that distance to the west along Birch Mountain Brook, the Gardner Street Paper Mill site (077-019) is a 19th century manufacturing site represented by a dam and standing ruins, identified during a professional survey of the Charter Oak Greenway Extension project (HCI 2009). At about the same distance to the north of the project area on a tributary of Wilson Brook, the T.F. Wilson site (077-021) was recorded during another professional survey (Harper 2014) at a location where a 19th to 20th century house foundation was located, along with an array of historic artifacts recovered, including redware, yellowware, whiteware, and ironstone china ceramic fragments, as well as bone, shell, coal,, asphalt, nails, brick, and window and bottle glass.

The Case Brothers - Highland Park Historic District lies just west of Birch Mountain Road and is recorded with the National Register of Historic Places (NRHP). Much of the district consists of open woodland comprising Case Mountain Park, with contributing structures limited to the northwestern corner of the district at Case Pond and furthest from the project area. Houses of the district belonging to the Case family at some time include those owned by Alfred Wells Case at 680 Spring Street (Colonial Revival) and at 673 Spring Street (late 19th century). The historic dam and bridges are still in place, with associated mill buildings dating from the late 19th to late 20th centuries.

Summary

The project area was within Podunk territory at the time of contact between Euroamericans and Native Americans in the early 17th century. The southeast part of Manchester became known as Highland Park, relating to the higher topographic setting of this part of town compared to the central and western parts of town that featured larger manufacturing and agricultural concerns. However, historic manufacturing did make its way up Birch Mountain

Brook as far as Case Pond, where there is a standing mill complex today with buildings dating from the late 19th through late 20th century, some contributing to the Case Brothers - Highland Park Historic District listed on the National Register of Historic Places. The Case Brothers company owned a lot of surrounding land in the early 20th century, including the project property which was part of a large watershed control effort for the mill operations. The land had been acquired from the Finley family who had a farmstead house further north on Case Street, with the land formerly owned by the Pitkin family. There were no apparent historic developments of the project property, other than some field clearing for agricultural purposes.

CHAPTER 3: CONCLUSION

Prehistoric Sensitivity

Background research and the pedestrian surface survey indicate a low sensitivity for potential prehistoric cultural resources in the project area. ACS conducted a pedestrian surface survey of the project property that did not reveal any prehistoric artifacts or feature contexts. The surface survey included irregularly spaced traverses along the right-of-way to the west of the project area and then through its wooded context, with soil contexts exposed beneath numerous tree falls. A statistical prehistoric landscape sensitivity model developed and employed by ACS utilizes eight environmental variables to rank sections of project properties relative to a scale of 100.0 (www.acsarcheaology.com/sensitivity-model.html). In this case, the highest score is 5.1 out of a possible 100.0, and therefore solidly within the low (0-20) sensitivity range. The low sensitivity scores for the project property relate to its very rocky soil contexts and considerable horizontal and vertical distances to the nearest major water body, consisting of Birch Mountain Brook, at nearly 1,000 feet and 100 feet, respectively. This headlands environment does not contain substantial rock outcrops that could have served as potential rockshelters, and the rough topographic setting of the area has resulted in a low density of previously recorded prehistoric archaeological sites. ACS therefore recommends no further archaeological conservation efforts for potential prehistoric archaeological resources within the project area.

Historic Sensitivity

Historically, the project area has a low sensitivity for historic cultural resources. A pedestrian surface survey did locate a couple of historic east-west oriented stonewall alignments in the vicinity of the project area (Figures 6 and 7). Constructed of locally available gneiss, the stone wall alignments are likely on the order of 150 to 200 years old and also likely relate to the historic clearing of the agricultural field, as revealed on early to mid-20th century maps. Land records and historic maps also indicate no substantial historic developments within the project area, with historic Russell and Finley occupations located further to the north on Carter Street closer to Camp Meeting Road. The land was bought by the Case Brothers milling operation in the 20th century, with a lot of other land in the area reserved as watershed land to protect the water sources that powered their mill complex downstream on Birch Mountain Brook at Case Pond. ACS recommends no further archaeological conservation efforts for potential historic archaeological resources within the project area.

Figure 6: Stone Wall and Right of Way

Figure 6: North-northeast view of stone wall alignment at right, gas pipeline right-of-way at left.

Figure 7: Stone Wall and Wooded Cover

Figure 7: Northeast view of stone wall alignment at project area with surrounding wooded cover.

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