



Public Archaeology Laboratory

March 3, 2017

Brona Simon
State Archaeologist
State Historic Preservation Officer
Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, Massachusetts 02125

Re: Our Island Home/Sherburne Commons- Howard Property
Miacomet Road and Sherburne Commons Lane, Nantucket, Massachusetts
Intensive Archaeological Survey
MHC#RC.29051, PAL #3207.01

Dear Ms. Simon:

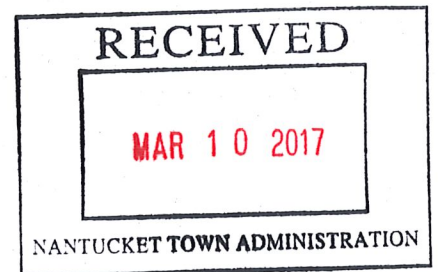
Enclosed please find an application for a permit to conduct an intensive (locational) archaeological survey within the Our Island Home/Sherburne Commons, Howard Property parcels, at Miacomet Road and Sherburne Commons Lane in Nantucket, Massachusetts.

The project area is located on the Nantucket USGS quadrangle. We would like to begin investigations as soon as possible. Thank you in advance for your time and attention to this matter.

If you have any questions or concerns, please do not hesitate to contact Duncan Ritchie, Senior Archaeologist, or me, at your convenience.

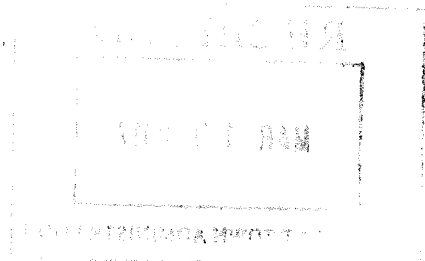
Sincerely,

Deborah C. Cox, RPA
President



Enclosure

cc: Elizabeth Gibson, Town of Nantucket (w/encl.)
Rachel Day, Town of Nantucket (w/encl.)
Richard Webb, SMRT, Inc. (w/encl.)



950 CMR: DEPARTMENT OF THE STATE SECRETARY

**APPENDIX B
COMMONWEALTH OF MASSACHUSETTS**

SECRETARY OF STATE: MASSACHUSETTS HISTORICAL COMMISSION

PERMIT APPLICATION: ARCHAEOLOGICAL FIELD INVESTIGATION

A. General Information

Pursuant to Section 27(c) of Chapter 9 of the General Laws and according to the regulations outlined in 950 CMR 70.00, a permit to conduct a field investigation is hereby requested.

1. Name(s): Duncan Ritchie
2. Institution: The Public Archaeology Laboratory, Inc.

Address: 26 Main Street
Pawtucket, Rhode Island 02860
3. Project Location: Our Island Home/Sherburne Commons-Howard Property (Miacomet Road)
see attached proposal
4. Town(s): Nantucket
5. Attach a copy of a USGS quadrangle with the project area clearly marked.

see attached
6. Property Owner(s): Town of Nantucket, 16 Broad Street, Nantucket, MA 02554
7. The applicant affirms that the owner has been notified and has agreed that the applicant may perform the proposed field investigation.
8. The proposed field investigation is for a(n):
 - a. Reconnaissance Survey
 - ☒ b. Intensive Survey
 - c. Site Examination
 - d. Data Recovery

B. Professional Qualifications

1. Attach a personnel chart and project schedule as described in 950 CMR 70.11 (b).

a. Personnel

Principal Investigator(s): Duncan Ritchie
Project Archaeologist(s): Colin Stephenson

Field Crew: Eric Lott, Nathan Orsi, Ted Datilo

b. Schedule

Fieldwork: March 2017
Laboratory: April, 2017
Report: May, 2017

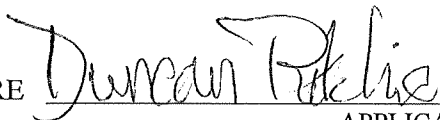
2. Include copies of curriculum vitae of key personnel (unless already on file with the State Archaeologist).

C. Research Design

1. Attach a narrative description of the proposed Research Design according to the requirements of 950 CMR 70.11.
2. The Applicant agrees to perform the field investigations according to the standards outlined in 950 CMR 70.13.
3. The Applicant agrees to submit a Summary Report, prepared according to the standards outlined in 950 CMR 70.14 by:
4. The specimens recovered during performance of the proposed field investigation will be curated at:

The Public Archaeology Laboratory, Inc.
26 Main Street
Pawtucket, Rhode Island 02860

SIGNATURE



APPLICANT(S)

3/3/2017
DATE



Technical Proposal

Our Island Home/Sherburne Commons- Howard Property

Nantucket, Massachusetts

Intensive Archaeological Survey

Submitted to:

February 27, 2017

Town of Nantucket
16 Broad Street
Nantucket, MA 02554

The Town of Nantucket is currently planning to construct a new nursing home (Our Island Home) within a parcel of land located on Sherburne Commons Lane and Miacomet Road in Nantucket. The parcel forming the project area is bounded on the west by Miacomet Road and to the east by South Shore Road and on the north by undeveloped land owned by Nantucket Land Bank (Figure 1). The Town is currently in negotiation to purchase the 4.44 acres identified as Map 80, Parcels 1.2 and 1.3 from the abutting private landowner [Howard] located to the south and west of the existing Sherburne Commons property.

Project Description

Current project plans for the proposed Our Island Home/Sherburne Commons nursing home facility include an access road entering the facility from Miacomet Road, a parking lot and new structures to support a 40 bed skilled nursing/assisted living facility. Ten additional beds are proposed for future expansion. The proposed improvements are intended to straddle the property line between Sherburne Commons and N/F Howard parcels. A maximum of 55,000 square feet (sq ft) of disturbance is permitted on the Sherburne Commons property. The intent is to completely avoid two significant archaeological sites, the Sherburne Commons Locus 1 Site and the Sherburne West Site, identified in the northern portions of the Sherburne Commons property (Figure 2).

Project Authority and History

In July 2001 PAL conducted an intensive (locational) archaeological survey of the Sherburne Commons Assisted Living Facility project area. Background research indicated that the project area was within the late-seventeenth through eighteenth-century Native American settlement of Miacomet; listed in the state inventory of cultural resources as NAN-HA-2. Miacomet consisted of dispersed wigwams or small wood frame houses, a meeting house, and cemetery clustered around Miacomet Pond. After an epidemic in 1763 devastated the Native American community on Nantucket, the Miacomet settlement was mostly abandoned.

The intensive survey located a find spot of historic period cultural material consisting of two sherds of a seventeenth/mid-eighteenth-century ceramic type (tin glazed earthenware/delft), kaolin tobacco pipe bowl fragments, and pieces of brick and shell from a localized area in the western portion of the project area. This deposit of cultural materials was designated as the Sherburne Commons Locus 1 Site (NAN.HA.31) (Waller et al 2001). This site displayed the characteristics or "archaeological

signature” of an isolated post-contact period Native American wigwam or house site associated with the Miacomet Indian settlement. Similar low density deposits of seventeenth to eighteenth century cultural materials were found on three archaeological sites containing the locations of Indian houses or other dwellings associated with the Miacomet settlement (Rainey and Ingham 2004).

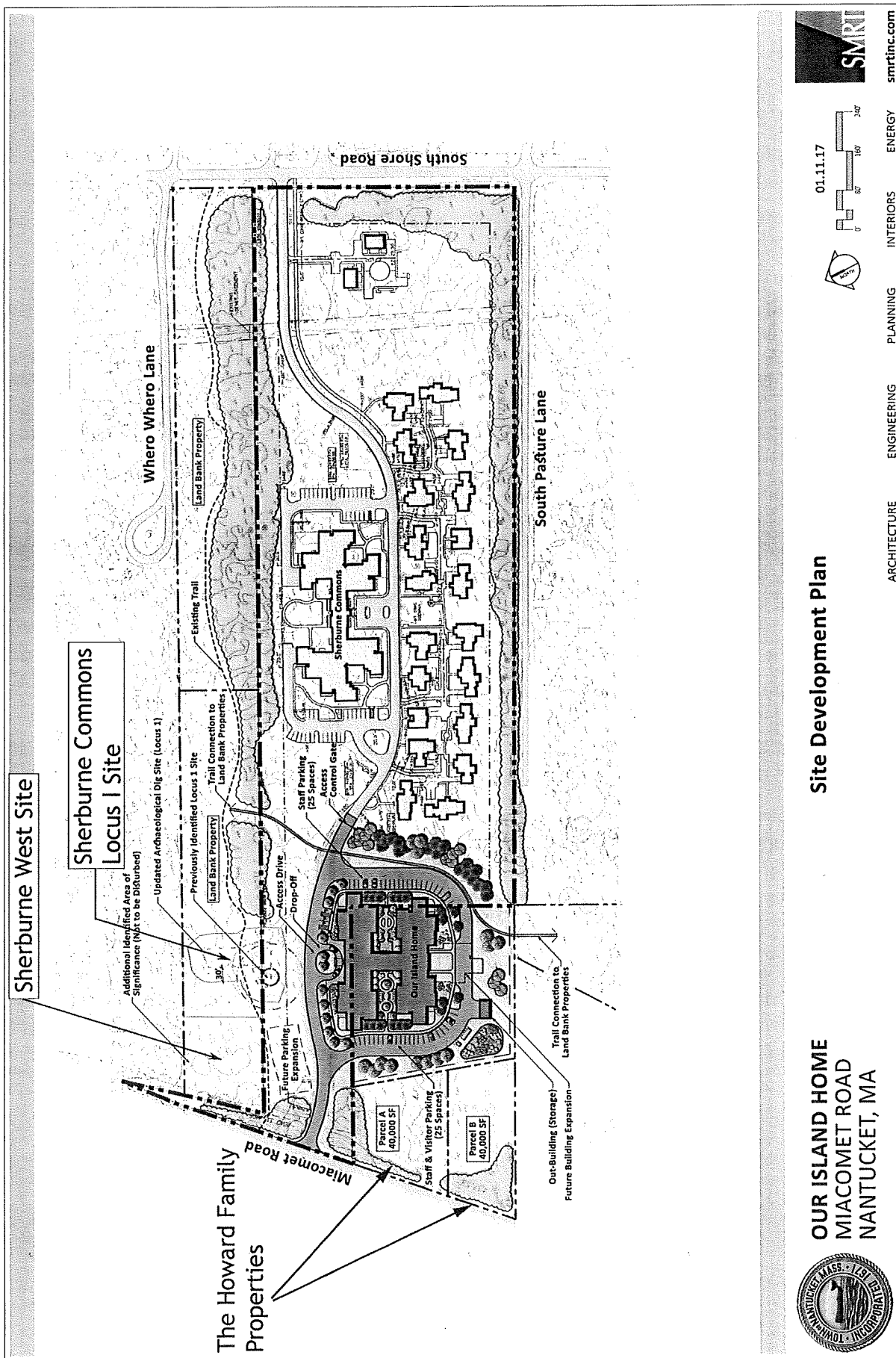
The Sherburne Commons Locus 1 Site (NAN.HA.31) is within the approximate location of a proposed emergency vehicle access road. PAL recommended that proposed development impacts to the site. If avoidance was not possible, then further archaeological investigation of the Sherburne Commons Locus 1 Site should be conducted to evaluate the site’s significance and eligibility for listing in the National Register of Historic Places (National Register) (Waller et al 2001). The Massachusetts Historical Commission (MHC) reviewed the results of the intensive survey and concurred with the recommendations.

In June 2016, PAL conducted archaeological investigations for Our Island Home, a proposed nursing home facility including an access road entering the facility from Miacomet Road, a parking lot and four new buildings. The Sherburne Commons Locus 1 Site is within the proposed parking lot. A portion of the parking lot and three of the new buildings are within an approximately 2.97 acre parcel purchased from the Nantucket Land Bank that was not part of the intensive archaeological survey completed in 2001. The 2016 investigations consisted of an intensive archaeological survey of the Nantucket Land Bank parcel and a site examination of the post-contact Sherburne Commons Locus 1 Site to determine its eligibility for the National Register.

Historical maps did not indicate any post-contact structures were located within the project area, which is located within the southern portion of the recorded Native American settlement of Miacomet (NAN.HA.2) known to have contained a cemetery, a meetinghouse, and at least 10 houses or other dwellings (wigwams) in the mid-eighteenth century. A walkover survey found nine locations within the northern portion of the project area (designated Surface Finds 1–9) where one to four pieces of cultural material, including ceramic sherds, were located. The ceramic sherds include glazed redware; North Devon Gravel Free earthenware (1635–1710); white salt glaze stoneware (Scratch Blue type) (1744–1775); and whiteware (1830–present).

Subsurface testing in the western portion of the project area yielded dense deposits of diagnostic late seventeenth- to eighteenth-century ceramics, bottle glass, and personal items (buttons, clay smoking pipes); structural materials (brick, window glass, nails); and faunal material (burned animal bone and shell) representing food remains. These deposits were designated the Sherburne West Site, and subsurface testing located two features with oxidized and charcoal-stained soil, brick, and cobbles that are likely parts of a house floor and hearth/fireplace. Three pieces of pre-contact quartz and slate chipping debris material were also found in this site, which was interpreted as the location of a house and yard with domestic refuse deposits associated with the Miacomet settlement (Ritchie 2016).

Site examination of the Sherburne Commons Locus 1 Site (NAN.HA.31) yielded pre-contact (projectile points and chipping debris) and post-contact cultural materials (ceramic sherds and clay smoking pipes). A late seventeenth-century threepence coin and sherds of tin enameled earthenware indicated use of the site in the late seventeenth to mid-eighteenth centuries. Low- to moderate-density deposits of cultural material and small amounts of structural material suggested the site may be the location of an ephemeral structure or dwelling such as a wigwam.



The Sherburne West Site is considered to be significant and potentially eligible for listing in the National and State Registers. PAL recommended that the Sherburne West Site be avoided by the proposed Our Island Home/Sherburne Commons project. If avoidance is not possible, then further archaeological investigation should be conducted to evaluate its significance and eligibility for listing in the National and State Registers. The Sherburne Commons Locus 1 Site (NAN.HA.31) is considered to be significant and eligible for listing in the National and State Registers. PAL recommended that the proposed Our Island Home/Sherburne Commons project be re-designed to avoid the Sherburne Commons Locus 1 Site. If this site could not be avoided, an archaeological data recovery program should be developed to mitigate any adverse effects on the site from the proposed project (Ritchie 2016).

In February 2017, MHC concurred with these recommendations, noting that the Sherburne West and Sherburne Commons Locus 1 sites contain important information on historic Native American settlement and land use associated with the Miacomet settlement, and therefore meet criteria for listing in the National register of Historic Places (36 CFR 60).

The Town of Nantucket and its architectural consultant (SMRT Inc.) have developed a plan to avoid and protect the Sherburne West and Sherburne Commons Locus 1 sites through acquisition of the 4.4 acre Howard Property within Map 80, Parcels 1.2 and 1.3 and re-design of the Our Island Home/Sherburne Commons project.

The Town of Nantucket has requested that PAL proceed with an intensive archaeological survey of the Howard Property parcels that will be purchased for the Our Island Home/Sherburne Commons project. The following technical proposal outlines the tasks that will be undertaken for the intensive archaeological survey. The goal of the intensive survey is to determine if any archaeological resources are located in the approximately 4.44 acres forming the project area.

The intensive survey will be conducted in compliance with Massachusetts General Laws, Chapter 9, Sections 26-27C (950 CMR 71) and MEPA, and under a permit issued by the State Archaeologist's office at the MHC.

Research Framework

Environmental Setting

Nantucket and the Our Island Home/Sherburne Commons project area are situated within the Coastal Plain physiographic province (Fenneman 1938). The Coastal Plain includes the continental shelf in the areas now known as Nantucket Sound, Vineyard Sound, and portions of the Gulf of Maine, and its margins correspond with the New England coastline to the north and the terminus of George's Bank to the south.

The topography of Nantucket displays the somewhat low relief typical of the Coastal Plain province, with the maximum elevation at Folger Hill at 111 feet (ft) above sea level (asl) (Oldale 1992:5). Terminal moraine deposits marking the extent of the glacial ice sheet advance include Trotts Hills and the more elevated, knobby terrain of Shawkemo, Saul's, and Folger hills to the northeast. The Our Island Home/Sherburne Commons project area is located within the outwash plain less than 1 mile from the southern shoreline of the island. The terrain in and around the project area is flat, with the exception of a shallow valley to the west and northwest that contains Miacomet Pond. From the

northern end of this pond, a large, shallow glacial outwash channel extends into the more elevated terminal moraine district. Elevations within the project area range from about 10 to 20 ft (3 to 6 m) above mean sea level (amsl). The closest water source is Miacomet Pond which is located less than 200 ft. (60 m) from the western end of the project area.

Cultural Context

Pre-Contact Native American

As with many parts of southern New England, the distribution of known archaeological sites on Nantucket reflects a history of amateur archaeology and avocational artifact collecting extending back to at least the nineteenth century.

Pre-contact Native American occupation on Nantucket began in the PaleoIndian Period, (12,500–10,000 B.P.) when Nantucket, Martha's Vineyard, and Cape Cod were part of a continuous land mass. Archaeological evidence of PaleoIndian activity is limited throughout southern New England; however, an increasing number of PaleoIndian sites have been discovered and investigated, which has provided information about the settlement and subsistence patterns of these early groups. Most researchers have characterized PaleoIndian populations in the Northeast as highly mobile, small groups that explored and colonized the local area as resource-rich territories evolved from the postglacial landscape.

Most PaleoIndian sites are identified by the presence of fluted or lanceolate projectile points, lithic materials from source areas outside southern New England, or assemblages that include graters, scrapers, and channel flakes. On Nantucket, five fluted points have been inventoried in artifact collections, and one has been identified as a reworked Clovis point (Pretola and Little 1988). The MHC mentions the area of Coskata on the eastern shore of Nantucket as the site of a fluted point find (MHC 1987). On Surfside Road, a local collector found a quartz projectile point that appears to have been fluted and may date to the PaleoIndian Period. Despite evidence that PaleoIndian groups were visiting Nantucket, there are no identified archaeological sites from this temporal period. Areas sensitive for PaleoIndian sites would include stable, postglacial landforms that have not been subject to coastal erosion and have access to sources of fresh water.

The discovery of Early Archaic (10,000–8000 B.P.) tools and sites in a variety of environmental settings throughout southern New England indicates the development of a broad-based subsistence pattern during this period. This expansion of settlement developed gradually as the postglacial boreal forest evolved into a mixed deciduous/coniferous forest. On Nantucket, the forest composition for this period was pine-dominant with increasing percentages of birch and oak (Dunwiddie 1990). Archaeological evidence on a regional scale indicates Early Archaic groups had established territories that were much smaller than those exploited by PaleoIndian groups. Bifurcate-base projectile points are diagnostic artifacts of the Early Archaic Period, and assemblages may include ground-stone tools, drills, anvil stones, choppers, and scrapers (Snow 1980:172).

A few bifurcate-base projectile points from Nantucket are in the Nantucket Historical Association (NHA) private collections; however, contextual information is limited. Of the 644 projectile points analyzed during a 1978 site inventory sponsored by the NHA, only 8 percent were attributed to the Early or Middle Archaic periods. A small concentration of Early Archaic points was collected from northeastern Nantucket where there is also evidence for PaleoIndian and Middle Archaic Period

settlement. A lanceolate “Dalton-like” projectile point found on a site bordering Foulger Creek has been interpreted as evidence for Early Archaic activity (MHC site files). Documented sites in the northern outwash plains region and vicinity do not appear to contain Early Archaic components. Since most site documentation on Nantucket is from the 1978 inventory of large, private artifact collections, it is possible that Early Archaic materials were misidentified.

Middle Archaic Period (8000–5000 B.P.) settlement patterns in southern New England suggest the development of localized group territories. In comparison to PaleoIndian and Early Archaic settlement, Middle Archaic sites are found in a much wider range of environmental settings and contain evidence for an expanded resource base. During this period, inundation of the coastal plain due to rising sea levels was ongoing, and both Vineyard Sound and Nantucket Sound were formed. Pine-oak and pine forests were well established on Nantucket, and some sections of the island supported a heathland vegetation type (Dunwiddie 1990). Known Middle Archaic sites on Nantucket have been discovered near freshwater ponds, wetland margins, and shoreline bluffs. Middle Archaic components mark some of the earliest occupations within several large multicomponent sites. The collections inventory for the Bartlett Farm Site (19-NT-102) includes a few diagnostic Stark projectile points (based on site form sketches). Other tapered stem points that may be either Middle Archaic (Stark) or Early Woodland (Rossville) projectile points have been identified in the southern outwash plains region where a cluster of collector sites surrounding Great Mioxes Pond and the former Little Mioxes Pond have been identified (Sites 19-NT-11, 19-NT-12, and 19-NT-99).

Middle Archaic activity has been documented within the Nantucket outwash plains on the margins of freshwater ponds. For example, diagnostic Neville and Stark projectile points were collected by avocational archaeologists from sites in the western and southwestern sections of Nantucket near Gibbs and Tom Nevers ponds (Site 19-NT-61). Similar finds have been recorded along interior ponds, creeks, and former pond locations now marked by wetlands. Similar to the intermittent finds dating to the PaleoIndian and Early Archaic periods, sites from the Middle Archaic Period appear to be associated with specific microenvironments on Nantucket.

The Late Archaic Period (5000–3000 B.P.) may be better defined than previous periods in southern New England because there is a significant increase in the numbers of known archaeological sites. Late Archaic sites have been identified in many different environmental settings across Nantucket, including coastal, estuarine, and interior areas. Palynological research indicates that after about 5,500 years ago, the vegetation on Nantucket consisted of a mixed hardwood forest with oak as the dominant species and some beech, tupelo, and maple. There was an increase in the variety of tree species, but forests appear to have been less diverse than those on the mainland of southeastern Massachusetts (Dunwiddie 1990).

Stone tools diagnostic of the period’s three major cultural traditions (Laurentian, Small Stemmed, and Susquehanna) have been collected from sites in many sections of Nantucket. Projectile points attributed to the Laurentian Tradition include Otter Creek, Vosburg, and Brewerton styles. Brewerton projectile points have been noted in artifact collections from Nantucket but do not appear to be widespread. Pretola and Little (1988:49) found that only 2 percent of the 644 projectile points identified in a 1978 survey of artifact collections were Brewerton types, and 11 percent were identified as Small Stemmed or Squibnocket Triangle points.

Important technological innovations during the Transitional Archaic Period (3600–2500 B.P.) include the manufacture and long-distance transport of steatite or soapstone vessels and probably some early

forms of ceramic production. The exploitation of shellfish is likely to have begun during the period concurrent with slowing sea level rise and the development of tidal flats and estuarine zones that provided a habitat for shellfish species. The Nantucket Public Schools project area is within a zone containing six archaeological sites with Transitional Archaic cremation burial features. In 1983, Elizabeth Little of the NHA developed a predictive model for Transitional Archaic archaeological sites and artifact types within four broad environmental zones. Zone 4 was referred to as “High Sandy Plain” and included land more than 33 ft above mean sea level on the northern half of the outwash plain as far east as Gibbs Pond (Little 1983:7). The six archaeological sites containing possible evidence of cremation burials were all in this environmental setting and concentrated in proximity to Nantucket High School. Although there was no confirmation of human remains at these sites, the archaeological signature created by the presence of certain Transitional Archaic artifact types suggested that cremation burials once existed in these locations. Mansion Inn, Coburn, Hawes and Orient Fishtail projectile points found in combination with steatite vessel fragments, calcined bone, and dense charcoal deposits are characteristic of cremation burial sites (Dincauze 1968).

In developing a research design for an intensive archaeological survey on Nantucket Public Schools property, Ritchie (1988:26) suggested that several identified sites may have been elements of one cremation cemetery. A “cremation burial district” was defined as surrounding and including all the known sites in the immediate vicinity of the high school property above and below the 33-ft contour. This district did not include the entire High Sandy Plain zone identified by Little (1983). The southern boundary of the district extends as far south as Sewer Bed Road and encompasses the eighteenth-century Native American Miacomet burying ground. The 1988 survey at the high school did not locate any evidence of cremation burials or other site types due to construction and the resulting alteration of the original landscape. Although Late and Transitional Archaic artifacts were recovered in this area, archaeological investigations have not yet encountered undisturbed cremation burials in either zone or district (Little 1983; Ritchie 1988).

Of the six sites used to define the cremation burial sensitivity zone, one (19-NT-156) consists of a single complete Mansion Inn blade discovered in 1977 by a local artifact collector in disturbed soil along Surfside Road. The other five sites were discovered to the north on private properties along Surfside Road or at the Nantucket High School and Nantucket Cottage Hospital properties. The Austin Site was identified from interviewing a resident of Surfside Road during a CRM survey (Ritchie 1982). On the west side of Surfside Road opposite Nantucket High School, excavations for a garage foundation on the Austin property uncovered a charcoal-filled pit feature approximately 32 inches below the ground surface. Fragments of one or more steatite bowls, calcined bone, antler and shell, and a mixed assemblage of projectile points and bifacial tool blades were recovered. Five of the points were Coburn-like, side notched types of rhyolite comparable to those found on the high school property. Other diagnostic tools from the Austin property included an Early Woodland Meadowood point of chert, and three Small Stemmed points (Ritchie 1988:26). The charcoal feature and its contents represent evidence of Transitional Archaic cremation practices on Nantucket.

The other Transitional Archaic sites within this zone consist of individual stone tool finds. A large projectile point of the Coburn/Hawes type was found in Wyers’ gravel pit along Surfside Road by a local collector and is in the NHA’s archaeological collections. Site 19-NT-85 on the high school property consisted of Susquehanna Tradition tools and steatite bowl fragments reported by a local collector (Roy 1956). During construction of Nantucket Cottage Hospital on Prospect Street, another local collector reported finding steatite vessel fragments (MHC site form for 19-NT-93).

Other Late and Transitional Archaic tool types have been found in the central outwash plain zone as isolated finds and in association with small campsites and tool production or maintenance locations. Orient Fishtail and Small Stemmed points were found at the Nantucket Housing Authority site on Miacomet Road (Carlson et al. 1992); at the high school staff housing property along First Way (Rainey and Ingham 2006); to the east at Nantucket Memorial Airport (Willan and Ritchie 1995); at the South Shore Links golf course (Rainey 2000); and southwest in Miacomet valley, on land within a proposed expansion of Miacomet Golf Course (Rainey and Ritchie 1997). Late and Transitional Archaic projectile points have also been found at many larger, multicomponent sites within the southern outwash plains on pond or swamp margins. Interior settings for settlement during this temporal period include the Herrecater Swamp Site, Hummock Pond, and Gibbs Pond, which have been visited by amateur archaeologists for at least 100 years.

Following a pattern observed across other sections of coastal southern New England, Early Woodland Period (3000–1600 B.P.) sites on Nantucket contain some of the earliest evidence for intensive use of shellfish resources. After about 3,000 years ago, settlement and resource procurement targeted the rich estuarine and salt marsh environments. In 1987, the MHC (1987:35) recorded 20 known sites with components attributed to the Early Woodland Period. Certain locations on the margins of larger, brackish wetlands and salt marshes with Early Woodland components continued to be used during the Middle and Late Woodland periods for shellfishing and processing, marine and freshwater fishing, procuring lithic raw materials, and deer hunting.

Early Woodland sites on Nantucket often contain assemblages of Meadowood, Lagoon, and Rossville type projectile points and thick, grit-tempered, cord-marked ceramics. During a 2004 archaeological data recovery program on Polpis Road, similar lithic and ceramic types were found at two sites (19-NT-50 and 19-NT-68) within coastal pond and marsh settings. These sites contained Early Woodland components with numerous Rossville-like or untyped lanceolate points and bifacial preforms for similar projectile points. Ceramic sherds from thick-walled, cord-marked vessels tempered with crushed granite were also part of the assemblages. Recovered shellfish remains were primarily quahog; other food remains included deer, fish, and bird bone (Rainey 2004).

Sixteen sites dating to the Middle Woodland Period (1650–1000 B.P.) are listed in the MHC inventory of known sites for Nantucket. Settlement and resource exploitation were concentrated in the coastal zone near freshwater or brackish wetlands, streams, or salt marshes. Numerous locations in the coastal zone south of Nantucket Harbor were occupied, with some sites containing evidence of intensive activity. Sites adjacent to the larger freshwater ponds on the western half of the island were also occupied. For example, Middle Woodland components near Long Pond contained shell midden and non-midden deposits.

Locus Q-6 in the Quidnet section of Nantucket contained a Middle Woodland component radiocarbon dated to 1680 ± 80 and 1575 ± 160 B.P. This site and others in the coastal/estuarine zone contained evidence of intensive shellfishing; at Locus Q-6, shellfish remains were primarily oyster most likely collected from Sesachacha Pond (Little 1984). At Site 19-NT-50 in the Sesachacha Pond area, a Middle Woodland component contained small deposits of shellfish remains, and a sample of oyster shell from one deposit was radiocarbon dated to 1290 ± 60 B.P. Activity areas within the site contained shellfish remains, bone fragments, and lithic workshops with dense deposits of chipping debris. The lithic tool assemblage is dominated by lanceolate projectile points similar to the Greene and Fox Creek types and point preforms made of local rhyolites. Jack's Reef Corner-Notched points were a minority in the assemblage from 19-NT-50 and from other sites with Middle Woodland

components (Rainey 2004). The occasional appearance at Middle Woodland sites of projectile points and bifacial tool blades made of cryptocrystalline lithic materials (chert and jasper) from sources outside southern New England indicates some participation in long-distance trade networks. On Nantucket, this pattern seems to be less prevalent than on the mainland of southeastern Massachusetts.

Of the 644 projectile points identified in the 1978 NHA survey of artifact collections on Nantucket, 303 (47%) were diagnostic Levanna types. Based on variations in frequency among Early, Middle, and Late Woodland projectile point styles inventoried at that time, it was estimated that local Native American populations steadily increased throughout the Woodland Period and reached a peak by the Late Woodland Period (1000–450 B.P.) (Pretola and Little 1988:49). The 1987 MHC inventory of known pre-contact sites on Nantucket does not reflect such a trend and showed a slight drop in the number of locations occupied in the Middle Woodland Period (MHC 1987:35).

Late Woodland settlement was concentrated in the coastal/estuarine zone in many of the same locations occupied by Early and Middle Woodland populations. A few large Woodland sites have been identified along the margins of the outwash plain ponds such as Long and Hummock ponds. Ram Pasture is one example of an extensive site that appears to have functioned as a base camp about 1,100 to 500 years ago. Numerous Late Woodland projectile points and other tool types (drills, flake knives, hammerstones, and ground-stone axes) indicate a wide range of activities. Fragments of bone from various mammal species (deer, fox, and muskrat) and fish species (tautog, sturgeon, and shark) indicate that both terrestrial and marine resources were sources of food for Late Woodland groups on Nantucket.

While hunting and gathering were still an integral part of Native American life throughout the Woodland Period, horticulture or cultivation of domestic plants such as maize was probably established in the region by 1,000 years ago. Evidence for large-scale horticulture has yet to be discovered on Nantucket. However, a large Late Woodland pit feature at a site in Quaise was interpreted as possible evidence for storage of corn (Luedtke 1980:115). Ground-stone pestles have been recovered at Late Woodland sites, suggesting the processing of vegetal material, possibly maize (Brooks 1942). Two more recently investigated sites in the Polpis Road area contained substantial Levanna point assemblages, Late Woodland radiocarbon dates, and small maize samples that span the Late Woodland to Contact periods (Rainey 2004).

Late Woodland components often include both human and dog burials (Bullen and Brooks 1948; Trinkaus 1982; Turchon 1979). The Hughes Site on the east side of Long Pond contained three human burials (one adult male and two children) and a dog burial near a shell midden deposit (Bullen and Brooks 1948). Late Woodland burials have not been discovered in the interior central region of Nantucket, although Ram Pasture may have contained a single burial. The Miacomet burial ground contains the remains of eighteenth-century Native Americans, although there is no evidence that the site was used for interment during the Late Woodland Period (Simon 1988).

Contact and Post-Contact Period Land Use on Nantucket

During the Contact Period, (A.D. 1520–1620), the initial English claim to the Island of Nantucket can be traced to the fifteenth-century voyages of John and Sebastian Cabot (1497–1498), who sailed under the reign of King Henry VII (Douglas-Lithgow 1911:5–6). It was not until 1659 that a permanent English settlement was initiated on the island long after the colonial foothold on mainland

territory had been established and 17 years after settlement of Martha's Vineyard. As a result, there are no primary accounts describing Nantucket's Native American population before 1659, with the exception of some obscure reports of Native Americans on nearby Cape Cod. Although the Cabots did not land on Nantucket, the Native American inhabitants of the island were in contact with the sixteenth-century European traders, fisherman, and explorers who ventured into waters off New England's coastline seeking fishing territories or new land claims. The English mariner Gosnold may have landed at Sankaty Head in the summer of 1602 (Douglas-Lithgow 1911:6), although most accounts indicate that he passed by Nantucket and landed at Cuttyhunk. Captain Weymouth (1605) and Captain Dermer (1620) visited Nantucket, although no European settlements were established during that time (MHC 1987:56). Although explorers and fishermen were knowledgeable of Nantucket during the Contact Period, the lack of primary accounts may account for the difficulty they had in navigating shallow shoal waters and reaching the shoreline (Byers 1987:18).

Contact Period archaeological sites on Nantucket are rare and generally represented by small assemblages at Native American domestic sites established during the Woodland Period and occupied until the Contact Period. Some Contact Period sites remained in use into the eighteenth century. Material culture and specific Native American activities representing trade and exchange with off-island European explorers and settlers before 1659 are difficult to isolate and study. For example, the Polpis Road data recovery excavations at two large sites concluded they were occupied repeatedly for at least 3,000 years, but abandoned during the Contact Period. Traces of Contact Period cultural material were recovered, including seventeenth-century kaolin pipes, flakes of European ballast flint, radiocarbon-dated maize kernels, and early buff-bodied earthenware fragments (Rainey 2004). In contrast, site examination investigations at the Nantucket Golf Club site in Siasconset identified one Native American site containing Contact Period artifacts such as a red clay pipe bowl fragment and eighteenth-century European-made domestic wares, bottle glass, and floral (maize and beans), and faunal remains (Rainey and Ritchie 1996). Manufacturing date ranges for items from this site spanned the Contact Period through the eighteenth century and were not spatially patterned. The Nantucket Golf Club Site was interpreted as a residence established during the Contact Period and occupied well into the eighteenth century, a time of rapid change for Native Americans living on the islands off the Massachusetts coastline.

In the Plantation Period (1620–1675), Nantucket was included with Cape Cod and Martha's Vineyard in the 1621 Royal Grant to Plymouth Company (Douglas-Lithgow 1911:11). Management of this territory was the responsibility of William Earl of Sterling and Sir Ferdinand Gorges, the two principal commissioners of the Plymouth Company in charge of promoting colonization. In 1641, James Forrett, acting as the New York agent to the Earl of Sterling, sold all the islands south of Cape Cod to the Medford, Massachusetts, merchant Thomas Mayhew. This conveyance granted only the right to use the surface of the land (Worth 1992:6–7). Gorges may have held a royal grant to Nantucket, and Mayhew apparently secured title to the island from him (Mooney and Sigourney 1980:12).

In 1642, Mayhew acquired Martha's Vineyard and the Elizabeth Islands and sent his son Thomas (aged 26) to the Vineyard to begin a settlement. The young Mayhew quickly learned the Algonquian language of the Native inhabitants and began converting Native Americans to Christianity. By 1643, his Puritan missionary work on Martha's Vineyard began to influence the Native population, and Christian ideologies were soon accepted. Thomas Mayhew Sr. joined his son at Edgartown in 1644 to extend this missionary work. A permanent settlement on Nantucket had yet to be established, although the Mayhews made brief missionary visits there (MHC 1987; Mooney and Sigourney

1980:13). The Mayhews and other English families from Martha's Vineyard pastured sheep and kept horses on the western end of Nantucket during this period (Byers 1987:25).

In 1659, Thomas Mayhew Sr. sold the islands south of Cape Cod to a group of 10 investors, including himself. The next year, a settlement was initiated on the west end of the island at Madaket. Tristram Coffin, one of the investors, traveled from Salisbury, Massachusetts, in 1659 to assess conditions on the island and returned with favorable reports. Coffin secured the services of Peter Folger, Mayhew's business agent on Martha's Vineyard and a fluent speaker of the Native language. A group of Salisbury residents, including Thomas Macy (Mayhew's cousin), Edward Starbuck, James Coffin, Isaac Coleman, and several of their family members sailed to Nantucket to spend the winter of 1659–1660. The next year, each of the original proprietors was permitted to name an associate, and Nantucket was divided into 20 shares. Before the legalities of the matter were settled, the number of shares was increased to 27, excluding the common land and land reserved for Thomas Mayhew (Douglas-Lithgow 1911:12).

Descriptions of Nantucket's Native population in the seventeenth century refer to the existence of four main settlement areas (or villages) and four leaders (or sachems) when Mayhew's group arrived in 1659 (Gookin 1806; Macy 1880 [1792]; Starbuck 1924; Worth 1992). The largest territories in the eastern part of the island were under the leadership of Wanachmamak and Nickernoose, and the two smaller territories were led by Attapeat (also called Autopscott) and Spotso.

The initial 1660 English settlement was established on high ground at Cappamet Harbor (Capaum), around the head of Hummock Pond and to the west of Reed Pond, where house lots were laid out (Forman 1966:22–23). The first gristmill was constructed on Wesko Pond in the 1660s to accommodate the processing of agricultural products (MHC 1984). By 1671, the governor of New York granted a patent to the Nantucket proprietors, confirming their ownership and authority (Barber 1839:447). In the early 1670s, colonial interests turned to the potential benefits of the local fisheries to supplement the moderate productivity of the island meadows.

During the Colonial Period (1675–1775), cod fishing and weir fishing industries included local Native Americans. A Native American tradition of drift whaling (meaning whales stranded alive or drifted ashore dead) on Nantucket was a precursor to the development of alongshore and pelagic whaling (Little and Andrews 1982). By 1684, there were five main sachemships on Nantucket, three of which had sachems with jurisdiction over the central and western territories: Seiknout (Muskeget Island), Pattacohonet (Tuckernuck Island), and Attapeat (central interior lands) (Little 1996:194). Attapeat controlled a territory that encompassed all of Miacomet valley—from Consue Spring south to the ocean and west to Hummock Pond (Little 1988a:7).

On Nantucket, evidence of Native maritime resource use is found in seventeenth- and early eighteenth-century county records and is part of Native legend. Like many other coastal New England groups, the Nantucket Indians valued the drift whale as a source of food, fuel, raw materials for tools, and as customary tribute to sachems. Sachem rights to drift whales on Nantucket were retained until at least 1728, despite the widespread sale of land and other natural resources by sachems to the English settlers (Little and Andrews 1982). There is currently no documentary or archaeological evidence of a Native offshore whaling industry emanating from Nantucket before or during the Colonial Period.

Alongshore whaling by the colonists began off the south shores of Nantucket after 1690 and "...given the supply of right whales close to shore, and a labor pool of Native Americans with a maritime aptitude as well as an interest in drift whales," the industry was successfully introduced to southeastern New England and eastern Long Island (Little and Andrews 1982:29).

In 1687, the expanding village on Nantucket Harbor was incorporated as the town of Sherburne. Nantucket was transferred from New York's to Massachusetts' jurisdiction through a 1692 act of Parliament and, in 1695, it became a county of Massachusetts (MHC 1984). By the early 1700s, Nantucket had taken the lead in a system of boat-whaling from the shore, which involved the construction of lookout stations (called spars) at prominent points along the coast from which whale sightings were reported. The whale-boat crews were quartered in small huts near the spars, and the lookout man would alert them when whales were spotted. The harpooner and one or two other members of each crew were Native Americans. It was soon recognized that the deep-water sperm whales produced oil of a much finer quality than that obtained from right whales, which were pursued alongshore. New techniques and equipment were designed for offshore whaling, including larger and faster boats, new and better gear, and on-board processing systems. By 1715, six Nantucket sloops were making voyages lasting several weeks and sometimes travelling as far as the waters off Newfoundland (Hohman 1928:27).

The development of the current downtown area of Nantucket was directly related to the growth of the whaling industry. In 1678, the Wescoe Acre Lots were laid out, initiating a gradual shift in the population core from the original Sherburne location at Capaum farther east to the sheltered area along Nantucket Harbor. Before 1717, development in this area was restricted to a few homes not necessarily within the bounds of the Wescoe lots. By 1717, a series of storms transformed Capammet Harbor into an enclosed pond (Worth 1992:203). With the whaling industry fast becoming the island's economic mainstay, some residents moved to the large and protected Great Harbor area. In 1717, a second division of land adjacent to the Great Harbor called the Fish Lots was set off to provide 27 equal parcels, one for each proprietor. By 1720, the town center was officially relocated to Nantucket Harbor (Lang and Stout 1995:26). In the eighteenth and nineteenth centuries, the sequence of lot divisions reflected the rapid expansion of the downtown community in response to a successful local whaling industry.

Native American settlement was concentrated in the Miacomet section of the island from about 1693 to 1763. Worth (1992:293) noted that the word Miacomet is derived from the Algonquian word "maayeakomuk" meaning "the Meeting House," although the source of that information is not given. A postscript in Gookin's *Historic Collections of the Indians in New England* states that by 1694, there were about 500 adult Indians on Nantucket with five assemblies of Christianized Indians and three churches (John Gardner's 1694 letter in Gookin 1806). The documentary evidence indicates that from 1674 to 1694, the number of Christian Indian communities (assemblies) increased from three to five, but there were still only three Indian churches.

In 1700, there were an estimated 800 Native Americans on Nantucket (Byers 1987:27). Despite an influx of Native American whalers and laborers in the 1740s, by the mid-eighteenth century most of the remaining Native American lands were sold to the English, and the Native population continued to decline. A series of eighteenth-century court records re-printed in *The History of Nantucket County, Island and Town* Starbuck (1924:163-169) documents a succession of disputes between Native Americans and English residents from remnant settlement areas in the central and eastern sections of the island through the mid-eighteenth century. Some Native Americans had financial success as part

of the whaling industry, and they appear to be those with the closest genealogical links to important seventeenth-century sachems who began the disposal of Native-held territory and resources (Little 1996).

In 1763, a plague spread through the Native American community on Nantucket, killing 222 of the 358 living there at the time (Little 1988b). The epidemic was historically traced to a lodging house in New Town, a poor non-white community of laborers on the outskirts of town. It is uncertain how long Native Americans may have continued to live in this area after the epidemic, although early nineteenth-century maps indicate that much of the land bordering the east side of Miacomet Pond was taken over for sheep pens (Ewer 1869; Mitchell 1838). De Crevecoeur (1971:123) mentions a Native American community living in houses along Miacomet Pond in 1782, and the Reverend Freeman referred to Miacomet as a former Native American village 25 years later (Freeman 1815). According to one secondary account, only 4 male Native Americans and 16 females were left on Nantucket in 1791 and, by 1809, only 3 or 4 persons of pure Native American blood remained (Douglas-Lithgow 1911:29).

During the Revolutionary War, the English residents of Nantucket chose a position of neutrality because of their exposed and indefensible position at sea and the beliefs of its large Quaker population. Although neither the British nor American naval forces would recognize this neutral position, Nantucket continued to send out ships on whaling expeditions. The repeated capture and plundering of the island's vessels during the war resulted in great losses to the community. In 1784, only 28 whaling ships were left, many of which needed repairs. Approximately 1,200 Nantucket seamen had been lost at sea or captured, and more than 200 women found themselves newly widowed (Hohman 1928:35). This period was marked by economic depression and the emigration of a number of the island's inhabitants to the mainland. The demand for sperm oil candles in American and foreign markets brought renewed short-lived prosperity to the island in the 1790s. The War of 1812 created another episode of commercial ruin, with a second rebound after that war's end.

In the Federal Period (1775–1830), Settlement became concentrated in the town center and at a small village at Siasconset at the southeastern end of the island. There were scattered clusters of farms and houses near salt marshes and creeks at Quaise, Polpis, and Wauwinet on the southern shore of Nantucket Harbor. A sheep-raising industry, largely focused in the outwash plains area, began to increase in significance in the island economy. A pattern of annual events evolved, including the driving of flocks before shearing events, the actual shearing, and community social events (Marshall 1962:15). To regulate the use of common land by sheep owners, the Nantucket proprietors translated each person's share of common land into a specific number of "sheep commons." It was estimated that an acre of common land would maintain one sheep (Worth 1992:198). In the early eighteenth century, the amount of land held in common was calculated at 19,440 acres, so a "sheep common" meant the right to pasture one sheep, or 1/19440 of the common land. Originally, the island common land was held in 27 shares, which is the number of original Nantucket proprietors. As time passed, the shares were subdivided into very small fractions as Nantucket families became larger (Worth 1992:198–200).

A Massachusetts Supreme Court decision in 1815 allowed for a man owning 100 sheep commons to sell his commons for a defined piece of land, thereby giving up any future rights to common lands (Worth 1992:210). The new practice required that the proprietors conduct formal surveys. In 1821, they voted to lay out all of the common and undivided land on the island into 27 shares, excluding the South Pasture (see below). Many people obtained common land "set-offs" in exchange for their

sheep commons within the South Pasture, excluding tracts adjacent to Miacomet Pond. In 1822, a large shear pen pasture was established east of the pond. This land was to be set off in severalty to a group of influential proprietors, but this never transpired. In addition, the lot containing the Miacomet burial ground and adjacent lot to the south were never laid out and remained common land until the 1980s.

The Early Industrial Period (1830–1870), was marked by a peak in population and prosperity from maritime activities, followed by a decline in growth. By 1834, there was dense development in the town center with numerous small side streets and house lots filling spaces between the primary streets. The current location of the Nantucket Public Schools property was outside this zone of development in open land likely used mostly for farming and sheep pastures. In 1840, Nantucket's population reached 9,012 (MHC 1987:114); approximately 65 percent of Nantucket's economic prosperity was derived from maritime activities; and agricultural pursuits totaled only about 5 percent (MHC 1987:116–117). The gradual decline in maritime trade led to a high unemployment rate and the population dropped to 4,123 in 1870 (MHC 1987:114). Residents left the island for more prosperous, industrialized population centers on the mainland. The California Gold Rush of 1849 also attracted hundreds of unemployed island residents. Residential and commercial development in downtown Nantucket, which had continued since the Federal Period, came to a halt in 1850. Some small, short-term manufacturing enterprises developed during this period, producing commodities such as hosiery, straw goods, and shoes.

The maritime economy of Nantucket suffered in part because of its dependence on the mainland for food and manufactured items; from 1840 to 1870, the economic base provided by agricultural pursuits nearly equaled that of maritime efforts (MHC 1987:117). Residents began to grow their own food, and much of the vast, open land on the island was used as pasture for grazing livestock. The extensive outwash plains south of Nantucket Harbor and the terminal moraine ridge system were known as the South Pasture. This part of the island south of the county fairgrounds contained few roads and was used primarily as sheep pasture. In the 1850s, there were more than 100 farms on Nantucket (Gardner and Gibbs 1947). In 1856, the Nantucket Agricultural Society was formed by residents with the intent of educating island farmers and fostering community cohesion, prosperity, and pride (Newell 2001:2). Land adjacent to Fairgrounds Road was purchased for the annual fair, which grew into a three-day event featuring cattle and oxen shows, fruit and vegetable displays, an arts and crafts show, and entertainment. The Nantucket Agricultural Society realized the potential for the fair to draw tourists to Nantucket and revitalize the local economy and began advertising the event on the mainland (Newell 2001). A nineteenth-century map (Ewer 1869) shows the location of the fairgrounds southeast of the town center and the improved road (New Sconset Road) to the village of Siasconset on the eastern end of the island.

In the Late Industrial Period, (1870–1915) and Early Modern (1915-1940) periods, improvements in overland transportation (including a trolley serving summer resorts) led to more tourism, and hotels, cottage colonies, and summer estate districts sprang up around the central village and in several outlying areas of the island (MHC 1987). In 1879, a group of Boston-based investors promoted the design and construction of the Nantucket Railroad. The idea was to provide passenger service for tourists while promoting their own land sales. In 1881, the initial segment of this railroad line from Nantucket Village to Surfside was complete and running. The growth in tourism drew labor away from agricultural enterprises and ultimately contributed to the demise of the Nantucket Agricultural Society. Despite the growing decline in attendance at the annual fair, it continued to be held through 1939.

A second rail section connecting a resort hotel at Surfside to Siasconset along the southern coastline was completed in 1884. This route was abandoned in 1894 because of coastal erosion, forcing the Nantucket Railroad Company into foreclosure. The succeeding Nantucket Central Railroad Company built a new rail line to Siasconset, which ran intermittently under various owners until 1917 (Karr 1995). Late nineteenth-century tourism was promoted by improvements to the harbor and to ferry service connecting Nantucket with the mainland. Resort centers grew, and the population of Nantucket increased slightly during the early part of the Modern Period (1915–Present). Although the automobile was introduced to the island in 1900, from 1906 to 1918, residents succeeded in prohibiting summer auto traffic in the downtown area via a state law.

The Cyrus Peirce High School was built in 1931 near the southeast corner of Surfside Road and Sparks Avenue. It was named after the principal of the first high school on Nantucket which opened in 1838. The most significant change in the central interior section of the island was the development of Nantucket Airport. The airport property was part of a larger tract of farmland owned by Leslie Holmes (or Holms) before World War II. Holmes allocated part of his farm to build a small landing field and dirt landing strips, a hangar, and an administrative building. At the outbreak of World War II, the town purchased the land for use as a training base for the U.S. Navy. The Navy made improvements to the runways and constructed additional facilities. Some anti-submarine patrol reconnaissance flights started at the site during the war. In 1946, the airport was turned over to the Town of Nantucket.

In 1950 there were 11 farms and 3,500 acres of farmland on Nantucket; in 1974, there were only 6 farms (Langlois 1979:14). A larger high school was built south of the Cyrus Peirce High School on the east side of Surfside Road about 1959, and the existing high school building was constructed in the late 1980s. In 1988, a new elementary school was built in the southern end of the current Nantucket Public School property with athletic fields, parking lots, and other improvements. Since about 1990, new residential and commercial development has expanded in zones along the primary routes such as Surfside, Milestone and Old South roads and some smaller side streets between the town center and Nantucket Airport.

Predictive Statements for Archaeological Resources within the Project Area

Pre-Contact Period Resources

The pre-contact archaeological sensitivity of the project area is based primarily on the existing natural environment and results of the previous cultural resource management surveys completed in and around the Our Island Home/Sherburne Commons project area. According to state site files, there are 5 previously recorded pre-contact sites within one mile (1.6 km) of the project area. Two pre-contact period archaeological sites in close proximity to the project area, 19-NT-9 and 19-NT-10, appear to be past find spots of artifacts on level terraces along both the east and west shorelines of Miacomet Pond. Two other sites, 19-NT-155 and 19-NT-157 are located near the north end of this pond. Site 19-NT-155 is an isolated piece of chipping debris and 19-NT-157 is a multicomponent Late to Transitional Archaic site that yielded Brewerton, Orient Fishtail and untyped projectile points, quartz and quartzite chipping debris. Site 19-NT-156 is a find spot of an isolated, Late Archaic Period Susquehanna tradition (Atlantic) projectile point along Surfside Road.

Recent archaeological investigations in the Nantucket Land Bank parcel forming the original Sherburne Commons project area directly north of the current Howard property project area, found that the post-contact Sherburne West and Sherburne Commons Locus 1 (NAN.HA.13) sites also contained small amounts of pre-contact cultural materials.

Three pieces of pre-contact quartz and slate chipping debris material were found in the Sherburne West Site, indicating there is a pre-contact component on this late seventeenth- to eighteenth-century house site associated with the Miacomet settlement (NAN.HA.2). Two pre-contact projectile points were recovered from test pits in the northern end of the Sherburne Commons Locus 1 Site; which may be the location of a late seventeenth to mid-eighteenth century ephemeral structure or dwelling such as a wigwam. They were a Late/Transitional Archaic Period (3600–3000 B.P.) untyped stemmed point of quartz and a Late Woodland Period (1000–450 B.P.) Levanna point of rhyolite. These points may have been collected from a nearby pre-contact site and brought to the location of this historic period structure (Ritchie 2016).

It is expected that small, low density deposits of pre-contact cultural materials could be present within the Howard Property project area. These cultural materials could include chipped stone tools, chipping debris, ceramic sherds, burned rock or refuse (shell deposits) marking temporary encampments. Previous cultural resource management surveys in the outwash plains section of Nantucket have often found isolated diagnostic Late and Transitional Archaic period projectile points and bifacial tool blades. Some of these cultural materials may be associated with small features such as hearths/firepits and refuse disposal pits.

Post Contact Period Resources

While a review of eighteenth and nineteenth century historic maps did not indicate any documented historic structures were located in the Howard Property project area, it is within the southern portion of the former Native American settlement of Miacomet. The location of this settlement is a recorded historic period site (NAN.HA.2), known to have contained a burial ground or cemetery, meetinghouse and at least 10 houses or other dwellings (wigwams) that were occupied from about 1675 to 1785. The project area remained undeveloped during the nineteenth and twentieth centuries and has the potential to contain undocumented Native American house or wigwam sites.

Archaeological investigations have confirmed that the undeveloped land surrounding the existing Our Island Home/Sherburne Commons facility contains post-contact sites associated with the Miacomet settlement. An intensive survey conducted in 2001 found the Sherburne Commons Locus 1 Site (NAN.HA.31), which was identified from a small sample of post contact period cultural material (ceramic sherds, brick, clay tobacco pipe bowl, shell) found in four test pits. The ceramic sherds were of delft; a tin-glazed ceramic type with a manufacture date ranging from the early seventeenth to mid eighteenth century. These sherds indicated that the Sherburne Commons Locus 1 Site was the location of a seventeenth- to eighteenth-century house or wigwam associated with the Miacomet Indian settlement (Waller et al 2001).

A recent intensive survey within a proposed location for the Our Island Home/Sherburne Commons facility (Nantucket Land Bank parcel) identified the Sherburne West Site. It contains dense deposits of cultural materials such as diagnostic late seventeenth- to eighteenth- century ceramics; bottle glass and personal items (buttons and clay smoking pipes); structural materials (brick, window glass, and nails); and faunal material (burned animal bone, and shell) representing food remains. Subsurface

testing located two features with oxidized and charcoal-stained soil, brick and cobbles that likely are parts of a house floor and hearth/fireplace. The Sherburne West Site was interpreted as the location of a house and yard with domestic refuse deposits associated with the Miacomet settlement (Ritchie 2016).

A site examination on the Sherburne Commons Locus 1 Site recovered pre-contact Native American (projectile points and chipping debris) and post-contact cultural materials (ceramic sherds and clay smoking pipes). A late seventeenth-century (1667–1674) threepence coin was evidence for occupation during this period. Sherds of tin enameled earthenware indicate use of the site in the late seventeenth to mid-eighteenth centuries. The low- to moderate-density deposits of cultural material and small amounts of structural material suggest the site may be the location of an ephemeral structure or dwelling such as a wigwam (Ritchie 2016).

The Howard Property parcels forming the current Our Island Home/Sherburne Commons project area are within the Miacomet settlement (NAN.HA.2) and have the potential to contain house or wigwam sites like the Sherburne West and Sherburne Commons Locus 1 Site. Undocumented Native American house or wigwam sites could appear as small deposits of domestic refuse (ceramic sherds, bottle glass, clay pipe stem or bowl fragments, shell, animal bone) or structural materials (brick) similar to that found during the 2016 intensive survey and site examination in the Nantucket Land Bank parcel forming the original Our Island Home/Sherburne Commons project area. Subsurface testing could also identify a feature with charcoal stained or oxidized subsoil, brick and cobbles marking a house floor and hearth or fireplace for a Native American house or wigwam site not shown on historical maps of Nantucket.

Consultation and Coordination

Lead project personnel will prepare the archaeological permit application for review by the proponent and the MHC. The permit application will describe the survey methodology, list expected archaeological resources, and provide a schedule for completion of all project activities. Lead PAL personnel will coordinate all aspects of the project with the proponent and insure the timely and thorough completion of all necessary documentation. **For purposes of this proposal, PAL assumes that the proponent will provide any available information about existing conditions and previous land use. PAL will be responsible for all interested party consultation, including (but not limited to) Native American tribes, town governments, and local historical commissions.**

Upon request from the project proponent, PAL will coordinate with the federally recognized Native American tribes in the area to provide an opportunity to identify any concerns about properties of traditional religious or cultural significance that may be affected by this undertaking, including the Mashpee Wampanoag and Wampanoag Tribe of Gay Head/Aquinnah (WTGH/A), in accordance with Section IX of the Nationwide Programmatic Agreement. PAL will also coordinate with the Massachusetts Commission on Indian Affairs (MCIA) to identify any concerns regarding this project.

Intensive (Locational) Archaeological Survey

The goal of the intensive (locational) archaeological survey will be to locate and identify any potentially significant archaeological deposits that may be present within the project impact areas. The intensive survey will also be designed to collect basic information on the locations and densities

of cultural deposits within the project area and to make recommendations regarding the need for additional archaeological testing, if necessary.

Research Review

Prior to the start of fieldwork, PAL will conduct research consisting of a detailed review of local geography, ecology, soils, and Native American contexts. The results of this research will help to collect information needed to evaluate the archaeological sensitivity of the Howard Property parcels. Sources of information will include the archaeological site files housed at the MHC, comprehensive narratives of the pre-contact and post-contact periods on Nantucket, and previous archaeological reports prepared by avocational and professional archaeologists. Through PAL's past experience conducting archaeological investigations on Nantucket, a considerable amount of documentary information has already been compiled about Miacomet and other late seventeenth to late eighteenth-century Native American settlements on the island.

Miacomet is recognized in most secondary histories of Nantucket, and has been thoroughly researched by Elizabeth Little and published by the Nantucket Historical Association (NHA). Her research using primary documents resulted in an historical context for Miacomet, an inventory of Miacomet Indians mentioned in Nantucket deeds and probate records, a chronology of the meeting house, the estimated physical boundaries of the residential village, and several potential house site locations (Little 1981, 1988a). In order to evaluate the significance of the site PAL will review Elizabeth Little's publications.

Research also may include interviews with individuals knowledgeable about the history of the local area. PAL has conducted several projects in close proximity to Miacomet Pond and South Shore Road with similar environmental conditions as the project area and will review in-house information about sites identified in the area and environmental conditions.

Walkover Survey

A walkover survey of the project area will be conducted to assess the integrity of the ground surface and to collect data on current environmental settings. During the walkover survey, PAL staff will also look for any surface indications of archaeological sites. Although Native American sites in New England are most often found below the present ground surface, it is not unusual to find artifact scatters exposed on the surface because of cultural or natural processes, including road use, gravel pitting, construction activity, and erosion. EuroAmerican sites types that might be visible include cellar holes (depressions), agricultural landscape features, and trash deposits. To supplement the inspection of the project area, augers (23-inch Hoffer corers) may be used to test the integrity of the subsoil in selected project locations.

Sensitivity Assessment

Results of the background research and walkover survey will be used to develop a sensitivity ranking and predictive statements concerning the potential for the presence of Native American and EuroAmerican cultural resources. Native American archaeological sensitivity will be determined by assessing key environmental attributes, the presence of documented cultural resources in and adjacent to the project area, and the degree of disturbance. Key environmental attributes are proximity to fresh or salt water, well-drained soils, and level topography. EuroAmerican archaeological sensitivity will

be determined by assessing information collected during the background research and walkover. Numerous large-scale surveys have determined that historic EuroAmerican sites are not directly correlated with specific environmental variables and that documentary information is not always accurate. As a result, documentary research used in conjunction with an evaluation of the physical condition of a project area and the presence of visible sites is the most useful approach to determining the sensitivity of a project area. Environmental and background information will be used to arrive at the sensitivity assessment. The assessment is then combined with the degree of disturbance present within the project area to obtain the sensitivity ranking. Subsurface testing is planned for areas with high to moderate sensitivity rankings.

Fieldwork Methodology

PAL's intensive survey methodology has been formulated according to the standards and guidelines set forth in *Public Planning and Environmental Review: Archaeology and Historic Preservation* (MHC 1985).

Metal Detector Survey

As a first step in the fieldwork, a metal detector survey of the Howard Property will be judgmentally conducted along cleared transect lines or in natural openings within the dense vegetation likely to be present in much of the project area. Landscaped and previously disturbed areas around the existing house and driveway in the project area will be excluded from this survey, as they are likely to contain modern metal objects (wire nails, aluminum cans and pull tabs etc).

This method could identify buried metal artifacts such as iron nails, lead window kame, lead ammunition/shot, iron, copper or brass kettle fragments, buttons, fireplace fittings and other hardware. Similar artifacts were found within documented Indian house sites associated with the Miacomet settlement (Rainey and Ingham 2005). Any anomalies identified in the metal detector survey will be mapped and flagged for further investigation with 50-x-50cm test pits.

A metal detector survey conducted as part of a site examination of the nearby Sherburne Commons Locus 1 Site did not identify any anomalies. However, this site had a very low frequency of metal objects (Ritchie 2016). If a site with higher frequencies or larger metal artifacts is present in the Howard Property parcels forming the current project area, it may be possible to identify it with a metal detector.

Subsurface Testing

Upon completion of the walkover and metal detector surveys, subsurface archaeological testing will be conducted within the archaeologically sensitive portions of the approximately 4.4 acre Howard Property parcels forming the current project area. To carry out this task, 50-x-50-cm test pits will be placed within the project area in 30-x-30-m sampling blocks and on judgmentally placed transects at 10-m intervals.

If pre-contact cultural material is found in isolated test pits, there will be additional testing to determine the extent and density of the deposition. This additional testing will be completed in the form of arrays, in which 4 test pits are placed at 2.5 or 5-m intervals in each of the cardinal directions around the test pit where the material was originally located. Arrays will also be excavated around

test pits containing seventeenth and eighteenth century post-contact cultural material that could be associated with Native American activity. **Approximately 50 to 60 test pits will be excavated as part of the intensive survey.**

All test pits and excavation units will be excavated by hand in arbitrary 10 cm levels to sterile subsoils. Excavated soils will be screened through ¼-inch hardware mesh. Cultural material and samples (soil, charcoal) will be bagged and labeled with provenience information. Soil profiles will be drawn for all test pits and excavation units. If any features are encountered in test pits, profiles and/or plans will be drawn of the exposed portion of the feature. All test pits will be backfilled following excavation and recording (cultural materials, soil profiles). Digital photographs will be taken of the site area and all cultural features.

Provisions for the Discovery of Human Remains

Unmarked Native American burials have been identified at other sites on Nantucket and within the Miacomet burial ground (19-HA-2) near the Our Island Home/Sherburne Commons project area. It is therefore considered possible that human remains could be located within the project impact area, and subsurface testing will be designed to identify any burial features. If human remains are encountered during the intensive survey, further excavation on the feature or features will cease, the area will be secured to prevent disturbance, and the property owner, State Archaeologist, Mashpee Wampanoag and WTGH/A THPO, and the Commissioner of Indian Affairs will be notified promptly. These actions will be followed in accordance with Massachusetts General Laws, Chapter 9, Sections 26–27c and Chapter 6, Section 38a. Provisions for the excavation of human remains require a special permit from the State Archaeologist or an amendment to the existing permit.

Laboratory Processing and Analyses

All recovered cultural materials will be brought to PAL's laboratory facility in Pawtucket for processing and analyses. These activities will include: cleaning, identification, and cataloging of any recovered cultural materials; the preliminary analysis of spatial distributions of cultural materials; and artifact photography of diagnostic or representative artifact types. Artifacts will be cataloged by unique artifact grouping in PAL's relational database system. Recorded fields include an artifact's material, function, manufacturing techniques, and date ranges.

Following laboratory processing and cataloging activities, all cultural materials will be stored in acid-free Hollinger boxes with box content lists and labels printed on acid-free paper. These boxes will be curated at PAL in accordance with the Secretary of the Interior's standards 36 CFR79 *Curation of Federally-Owned and Administered Archeological Collections* and the MHC's *State Archaeologist's Permit Regulations* (950 CMR 70).

Report Preparation

Upon completion of fieldwork, PAL will inform the client of the results of the fieldwork, describe deposits that were identified, and make recommendations regarding the significance of any identified deposits and the need for additional work and consultation. The technical report will follow the guidelines established by the National Park Service in the *Recovery of Scientific, Prehistoric, Historic, and Archaeological Data* (36 CFR Part 66, Appendix A) and the MHC.

Appendices within the report will include the MHC permit, any relevant correspondence, test pit forms and a catalog of any recovered cultural materials. If necessary, archaeological site forms will be completed and submitted to MHC. One copy of the draft technical report will be submitted to the Town of Nantucket for review and comment. Any comments will be addressed and one copy of the final report submitted to the Town of Nantucket.

Project Schedule

PAL is prepared to submit the technical proposal and MHC permit application on receipt of a notice-to-proceed from the project proponent. The MHC has 60 days to review the application and issue the permit. The intensive survey field investigations will take 5 days to complete. Field investigations can begin within one week of receipt of the permit, weather permitting. The proponent will be notified of the survey results immediately following the completion of fieldwork. The technical report can be submitted within 60 days of the completion of fieldwork.

Project Personnel

The intensive survey will be overseen by a principal investigator. The fieldwork will be supervised by a project archaeologist. All PAL project personnel meet the qualifications set by the National Park Service (36 CFR Part 66, Appendix C).

Cost

A cost estimate for the intensive archaeological survey of the Our Island Home/Sherburne Commons-Howard Property is attached. **Please note that these cost estimates are based on the assumption that the intensive survey fieldwork will be completed before June, 2017 otherwise the lodging costs will increase.**

References

- Barber, John Warner
1839 *Historical Collections Relating to the History and Antiquities of Every Town in Massachusetts*. Dorr, Howland and Company, Worcester, MA.
- Brooks, Edward
1942 Progress Report on Site M-52-3, Nantucket, Massachusetts. *Bulletin of the Massachusetts Archaeological Society* 3(3):34-35.
- Bullen, Ripley, and Edward Brooks
1948 Three Burials at the Hughes Site, Nantucket, Massachusetts. *Bulletin of the Massachusetts Archaeological Society* 10(1):14-15.
- Byers, Edward
1987 *The Nation of Nantucket: Society and Politics in an Early American Commercial Center, 1660-1820*. Northeastern University Press, Boston, MA.
- Carlson, Catherine, Elizabeth Little, Richard Gumaer, Leonard Loparto, and Brenda Baker
1992 *Archaeological Survey and Historical Background Research for the Miacomet Indian Village and Burial Ground, Nantucket, Massachusetts*. UMass Archaeological Services, University of Massachusetts, Amherst, MA.
- de Crevecoeur, Hector St. Jean
1971 [1782] *Letters from an American Farmer*. Reprint. Everyman's Library, New York, NY.
- Dincauze, Dena F.
1968 Cremation Cemeteries in Eastern Massachusetts. *Papers of the Peabody Museum of Archaeology and Ethnology* 59(1). Peabody Museum, Harvard University, Cambridge, MA.
- Douglas-Lithgow, R. A.
1911 *The Nantucket Indians*. The Inquirer and Mirror Press, Nantucket, MA.
- Dunwiddie, Peter W.
1990 Postglacial Vegetation History of Coastal Islands in Southeastern New England. *National Geographic Research* 6(2):178-195.
- Ewer, Rev. F. C.
1869 *Historical Map of Nantucket*. Reproduced in 1974 by E. & E. Williams Jr.
- Fenneman, N. E.
1938 *Physiography of the Eastern United States*. McGraw-Hill, New York, NY.
- Forman, Henry Chandler

-
- 1966 *Early Nantucket and Its Whale Houses*. Hastings House, New York, NY.
- Freeman, Reverend James
- 1815 Notes on Nantucket, August 1st, 1807. *Collections of the Massachusetts Historical Society*, 2nd Series, Vol. 3, pp. 19–38.
- Gardner, William E., and Jay Gibbs
- 1947 [1850] Nantucket Farms. In *Proceedings of the Nantucket Historical Association, Fifty-Third Annual Meeting*, pp. 43–46. Nantucket, MA.
- Gookin, Daniel
- 1806 [1674] Historical Collections of the Indians in New England (1674). *Massachusetts Historical Society Collections* Vol 1, pp. 141–225. Monroe and Francis, Boston, MA.
- Hohman, Elmo Paul
- 1928 *The American Whaleman, A Study of Life and Labor in the Whaling Industry*. Longmans, Green and Co., New York, NY.
- Karr, Ronald Dale
- 1995 *The Rail Lines of Southern New England, A Handbook of Railroad History*. Branch Line Press, Pepperell, MA.
- Lang, Christopher J., and Kate Stout
- 1995 *Building with Nantucket in Mind: Guidelines for Protecting the Historic Architecture and Landscape of Nantucket Island*. Nantucket Historic District Commission, Nantucket, MA.
- Langlois, K. H., Jr.
- 1979 *Soil Survey of Nantucket County, Massachusetts*. United States Department of Agriculture Soil Conservation Service. U.S. Government Printing Office, Washington, D.C.
- Little, Elizabeth A.
- 1981 *Historic Indian Houses of Nantucket*. Nantucket Algonquian Studies #4. Nantucket Historical Association, Nantucket, MA.
- 1983 *Initial Predictive Map for Prehistoric Sites on Nantucket*. Nantucket Archaeology Studies No. 1. Archaeology Department, Nantucket Historic Association, Nantucket, MA.
- 1984 Locus Q–6, Site M52/65, Quidnet, Nantucket, Massachusetts. *Bulletin of the Massachusetts Archaeological Society* 45(1).
- 1988a *History of the Town of Miacomet*. Nantucket Algonquin Studies No. 12. Nantucket Historical Association, Nantucket, MA.

-
- 1988b *The Indian Sickness at Nantucket 1763–1764*. Nantucket Algonquian Study No. 11. Nantucket Historical Association, Nantucket, MA.
- 1996 Daniel Spotso: A Sachem at Nantucket Island, Massachusetts, circa 1691–1741. In *Northeastern Indian Lives, 1632–1816*, edited by Robert S. Grumet. University of Massachusetts Press, Amherst, MA.
- Little, Elizabeth A., and J. C. Andrews
- 1982 Drift Whales at Nantucket: The Kindness of Moshup. *Man in the Northeast* 23:17–38.
- Luedtke, Barbara E.
- 1980 Survey of the University of Massachusetts, Nantucket Field Station. In *Widening Horizons: Studies Presented to Dr. Maurice Robbins*, edited by Curtiss Hoffman, pp. 95–129. Massachusetts Archaeological Society, Attleboro, MA.
- Macy, Obed.
- 1880 [1792] *The History of Nantucket*. Reprint of second edition, originally published in 1835. Augustus M. Kelley Publishers, Clifton, NJ.
- Marshall, Esther S.
- 1962 *Polpis, Past and Present, Nantucket*. The Nantucket Atheneum Collections, Nantucket, MA.
- Massachusetts Historical Commission (MHC)
- 1984 *Town Reconnaissance Survey Report: Nantucket*. Massachusetts Historical Commission, Office of the Secretary of State, Boston, MA.
- 1985 *Historic and Archaeological Resources of Central Massachusetts: A Framework for Preservation Decisions*. Massachusetts Historical Commission, Office of the Secretary of State, Boston, MA.
- 1987 *Historic and Archaeological Resources of Cape Cod and the Islands*. Massachusetts Historical Commission, Office of the Secretary of State, Boston, MA.
- Mitchell, William
- 1838 *Map of the Island of Nantucket*. E. W. Bouves, Boston, MA.
- Mooney, Robert F., and André R. Sigourney
- 1980 *The Nantucket Way: Untold Legend and Lore of America's Most Intriguing Island*. Doubleday & Company, Inc., Garden City, NY.
- Newell, Aimee E.
- 2001 “No Harvest of Oil”: Nantucket’s Agricultural Fairs 1856–1890. *Dublin Seminar for New England Folk Life, Proceedings*.

Oldale, Robert N.

1992 *Cape Cod and the Islands: The Geologic Story*. Parnassus Imprints, Orleans, MA.

Pretola, John, and Elizabeth A. Little

1988 Nantucket: An Archaeological Record from the Far Island. *Bulletin of the Archaeological Society of Connecticut* 51:47–68.

Rainey, Mary Lynne

2000 *Intensive (Locational) Archaeological Survey of the South Shore Links Golf Course Project Area, Nantucket, MA*. The Public Archaeology Laboratory, Inc. Report No. 1133.01. Submitted to Mr. Peter Dooley, Nantucket, MA.

2004 *Polpis Road Bicycle Path Archaeological Data Recovery Program: Site 19-NT-50, The Roadkill Site (19-NT-166), Site 19-NT-68, and the Folger's Marsh Site (19-NT-180) and Supplemental Site Examination of the Folger's Marsh Site, Nantucket, Massachusetts. Volumes I and II*. The Public Archaeology Laboratory, Inc. Report No. 621. Submitted to Nantucket County Planning and Economic Development Commission, Nantucket, MA.

Rainey, Mary Lynne, and Donna Ingham

2005 *Intensive (Locational) Archaeological Survey, Proposed Nantucket Human Services Center and Archaeological Site Examinations, Poison Meadow, Valley View, and Wild Rose Pasture Archaeological Sites, Nantucket, Massachusetts*. The Public Archaeology Laboratory, Inc. Report No. 1666.01. Submitted to Nantucket Council for Human Services, Nantucket, MA.

2006 *Intensive (Locational) Archaeological Survey, Proposed Nantucket High School Staff Housing Project Area, and Archaeological Site Examination, Proposed Nantucket High School Staff Housing Project Area the Dwelling Site, Nantucket, Massachusetts*. The Public Archaeology Laboratory, Inc. Report No. 1576.01. Submitted to Nantucket Education Trust, Nantucket, MA.

Rainey, Mary Lynne, and Duncan Ritchie

1996 *Site Examination on Fenceline, Interval, Vista, and Shadow Prehistoric Sites; and Coffin Farm Complex 1 and 2, Coffin Farmhouse 1, and Milestone Road Historic Sites Nantucket Golf Club Project Area, Nantucket, Massachusetts*. The Public Archaeology Laboratory, Inc. Report No. 718. Submitted to The Nantucket Golf Club Inc., Edwards, CO.

1997 *Intensive Survey, Miacomet Golf Course, Nantucket, MA*. The Public Archaeology Laboratory, Inc. Report No. 763. Submitted to the Nantucket Land Bank Commission, Nantucket, MA, and Hurdzan Golf Course Design, Columbus, OH.

Ritchie, Duncan

- 1982 *An Intensive Archaeological Survey of the Proposed Wastewater Conveyance System Improvements, Nantucket, Massachusetts.* Report on file, Public Archaeology Laboratory, Brown University, Providence, RI.
- 1988 *An Intensive Archaeological Survey of the Nantucket Public School Property, Nantucket, Massachusetts.* The Public Archaeology Laboratory, Inc. Report No. 124. Submitted to Pierce and Kramer, Inc., Boston, MA.
- 2016 *An Intensive (Locational) Archaeological Survey and Site Examination Our Island Home/Sherburne Commons, Nantucket, Massachusetts.* The Public Archaeology Laboratory, Inc. Report No. 3207. Submitted to Town of Nantucket, MA.

Roy, Edward

- 1956 A Steatite Vessel from Nantucket. *Bulletin of the Massachusetts Archaeological Society* 17(3):51.

Simon, Brona G.

- 1988 *Preliminary Field Report: Miacomet Village Elderly and Family Housing/Miacomet Praying Indian Burial Ground, Nantucket.* Report on file at the Massachusetts Historical Commission, Boston, MA.

Snow, Dean

- 1980 *The Archaeology of New England.* Academic Press, New York, NY.

South, Stanley A.

- 1977 *Method and Theory in Historical Archaeology.* Academic Press, New York, NY.

Starbuck, Alexander

- 1924 *The History of Nantucket County, Island and Town.* C. E. Goodspeed and Co., Boston, MA.

Trinkaus, Erik

- 1982 The Human Skeleton from the Nantucket Field Station Site. *Bulletin of the Massachusetts Archaeological Society* 43(2):37-39.

Turchon, Frederic

- 1979 *Report on the Archaeological Investigations Conducted on the University of Massachusetts Nantucket Field Station for the Proposed Field Station Sewage Disposal System.* Report submitted to the Commonwealth of Massachusetts, University of Massachusetts, Boston, MA.

Waller, Joseph and Mary Lynne Rainey and Duncan Ritchie

- 2001 *Intensive (Locational) Archaeological Survey Sherburne Commons Assisted Living Facility, Nantucket, Massachusetts.* PAL Report 1294. Submitted to Sherburne Commons, Inc. Nantucket, Massachusetts.

Willan, Steven, and Duncan Ritchie

1995 *Reconnaissance and Intensive Archaeological Surveys, Nantucket Memorial Airport Perimeter Fence, Nantucket, Massachusetts.* The Public Archaeology Laboratory, Inc. Report No. 595. Submitted to Baystate Environmental Consultants, Inc., East Longmeadow, MA.

Worth, Henry Barnard

1992 [1901] *Nantucket Lands and Land Owners.* Reprinted by the Nantucket Historical Association, Heritage Books, Inc., Bowie, MD.