FINAL REPORT

ARCHAEOLOGICAL OVERVIEW AND ASSESSMENT
MINUTE MAN NATIONAL HISTORICAL PARK

Concord, Lincoln, and Lexington Massachusetts

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MANAGEMENT ABSTRACT

PAL has completed an Archaeological Overview and Assessment (AOA) of the Minute Man National Historical Park located in the towns of Concord, Lincoln, and Lexington, Massachusetts. The National Park Service requires the periodic completion of an AOA as an archaeological planning document that describes and assesses the known and potential archaeological resources of a park. The last AOA for the Park was completed in 1980, and the volume of archaeological data collected over the past two decades has made this document obsolete.

Minute Man NHP contains documented archaeological resources that date from approximately 9,000 B.P. to the early twentieth century. More than one hundred prehistoric and historic period archaeological sites have been identified within the Park through more than 40 years of professional and avocational excavation and collections research.

The AOA included consultation with Park archaeologists and curators, archival and collections research, the development of natural and cultural contexts, the evaluation of previous archaeological studies, and the production of archaeological sensitivity maps. Although the AOA covered the entire park, an emphasis was placed on the Battle Road Unit, the largest of three subunits that comprise the Park. The development of historic contexts and evaluation of potential resources focused on four main research themes, including prehistory; April 19, 1775; the colonial period; and nineteenth-century agriculture and daily life. NPS personnel will use the results of the AOA to help manage potentially significant archaeological sites and identify unknown archaeological resources, address potential research questions generated by these cultural resources, and to use that information to further the Park's mission.

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CHAPTER 1

INTRODUCTION

This report presents the results of an Archaeological Overview and Assessment (AOA) of the Minute Man National Historical Park (the Park) located in the towns of Concord, Lincoln, and Lexington, Massachusetts (Figure 1-1). The National Park Service (NPS) requires the periodic completion of an AOA as an archaeological planning document that describes and assesses the known and potential archaeological resources of a park. The last AOA for the Park was completed in 1980 (Baker), and the volume of archaeological data collected over the past two decades has made this document obsolete.

NPS personnel will use the results of the AOA to help manage potentially significant archaeological sites and identify unknown archaeological resources within the Park. The data contained in the AOA can also be used to address potential research questions generated by the Park's cultural resources, and to use that information to further the Park's mission. Although the AOA covers the entire park, an emphasis has been placed on the Battle Road Unit, the largest of three subunits that comprise the Park (Figure 1-2). The AOA will serve as a primary source of archaeological information for park planners under a new General Management Plan (GMP) for the Battle Road Unit.

Park Mission and History

An Act of Congress created Minute Man NHP on September 21, 1959 for the purpose of preserving the Lexington and Concord Battlefield and its contributing resources "in the public interest as prime examples of the Nation's historical heritage" (Minute Man Park Act, Public Law 86-321). A 1991 amendment (H.R.2896) to the Act altered the Park's mission to include "the preservation and interpretation of (1) the historic landscape along the road between Lexington and Concord, (2) sites associated with the causes and consequences of the American Revolution, and (3) the Wayside on Lexington Road in Concord, the home of Nathaniel Hawthorne, Bronson Alcott, Louisa May Alcott, and Margaret Sidney, whose works illustrate the nineteenth century American literary renaissance." Public Law 102-488 (October 24, 1992) officially revised the Park's mission as stated above.

The primary mission of the park has been to approximate the cultural environment that existed in 1775 and preserve and interpret individual resources that contribute to understanding the events of the Battle of Lexington and Concord. As part of this mission, the NPS has removed more than 300 nineteenth- and twentieth-century buildings and structures in an attempt to recreate the open, agricultural appearance that the area had at the time of the battle.

The Park is comprised of three units — North Bridge, Wayside, and Battle Road — that cover approximately 967 acres of land primarily along Route 2A (see Figure 1-2). The three units were administratively listed in the National Register of Historic Places in 1966, but no list of contributing and non-contributing resources within the park was included. The identification and evaluation of these resources was completed in 2002 as part of the Minute Man NHP National Register (NR) Nomination (PAL 2002). The nomination included 105 contributing and 28 non-contributing properties. The Minute Man NHP NR documentation was accepted by the Keeper of the National Register on November 29, 2002. A Supplementary Listing Record (SLR), signed by the Keeper on December 2, 2002, added several amended items to the National Register Nomination. The SLR also corrected an error in the 1966 NR listing, noting that the only National Historic Landmark within the Park is the Wayside.

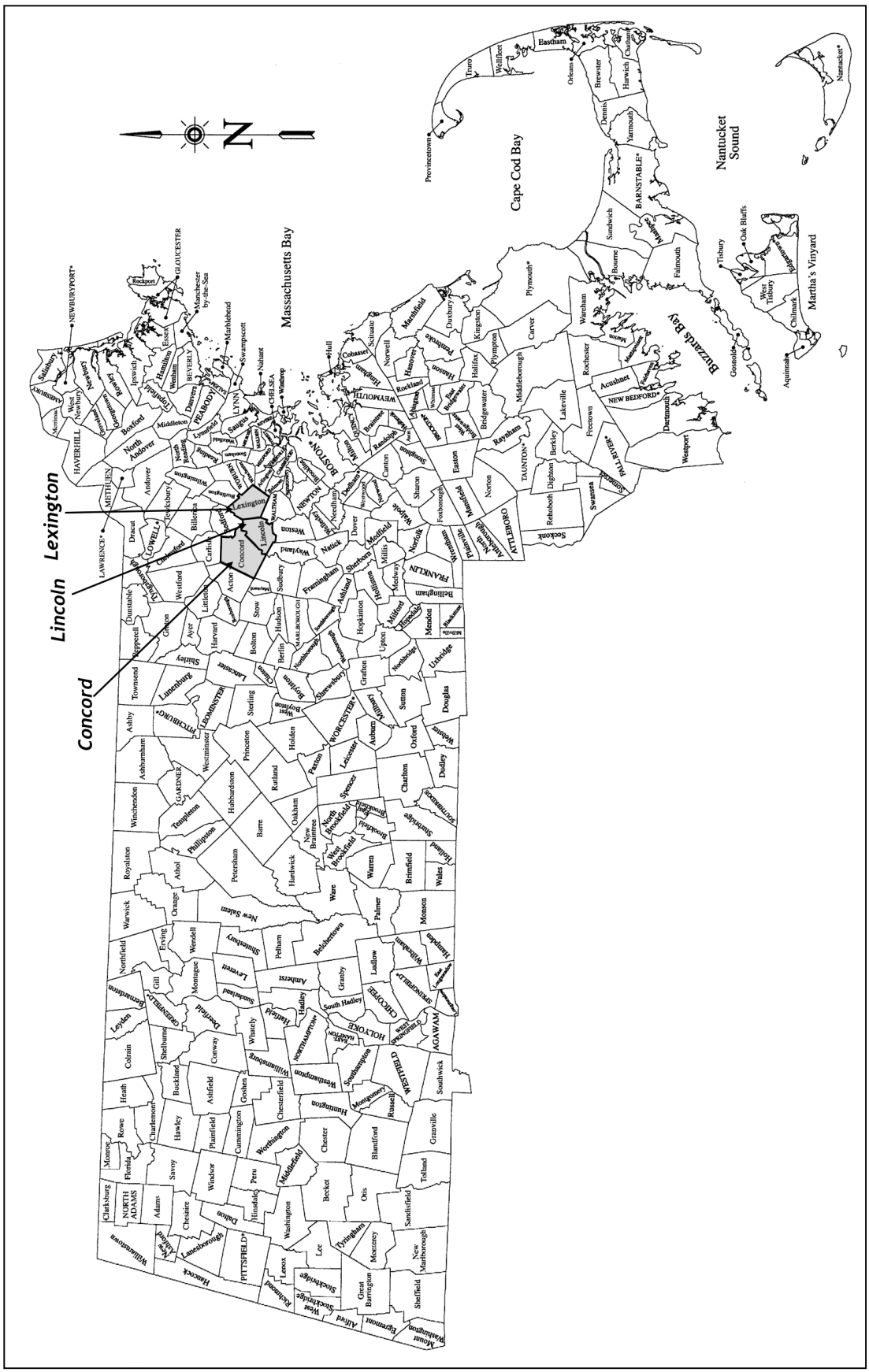
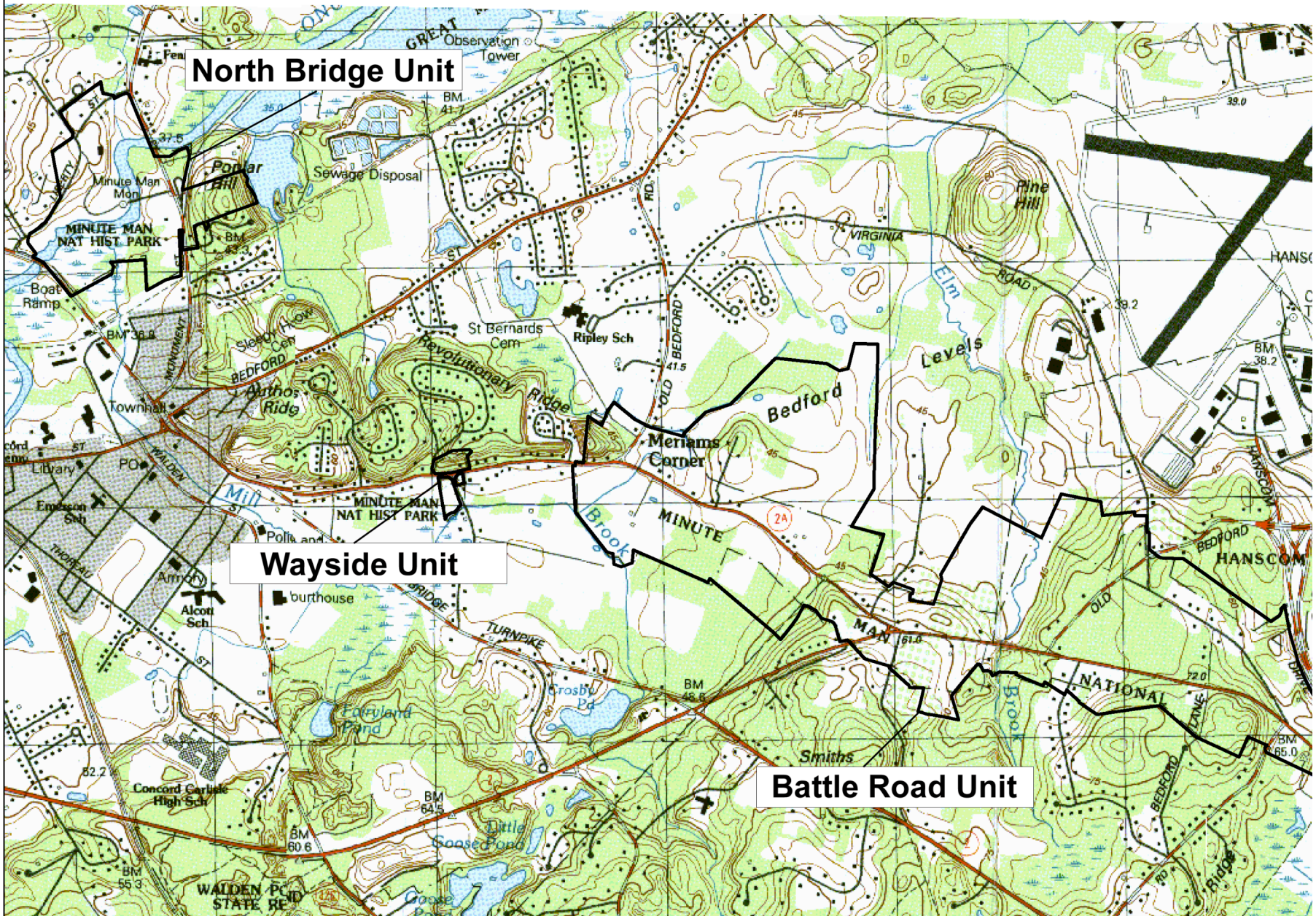


Figure 1-1. Map of Massachusetts showing the towns of Concord, Lincoln and Lexington.


North Bridge Unit
Wayside Unit
Battle Road Unit
Observation Tower
Sewage Disposal
Minute Man Mon
MINUTE MAN NAT HIST PARK
Boat Ramp
Poplar Hill
Pine Hill
St Bernards Cem
Ripley Sch
Revolutionary Ridge
Authors Ridge
Townhall
Library
PO
Emerson Sch
Alcott Sch
Concord Carlisle High Sch
Meriams Corner
Bedford Levels
Elm Brook
Mill Brook
Fairyland Pond
Crosby Pd
Smiths
Little Goosed Pond
WALDEN POND STATE RE
OLD BEDFORD RD
VIRGINIA ROAD
MINUTE MAN NAT HIST PARK
BEDFORD
HANSCOM
TURNPIKE
THOREAU
MALDEN
BRIDGE
OLD BEDFORD RD
NATIONAL
LANE
Ridge
BM 41.7
BM 43.3
BM 38.9
BM 41.5
BM 38.2
BM 48.6
BM 64.5
BM 60.6
BM 55.3
BM 65.0

Scope and Authority

The timely identification, evaluation and nomination of sites to the National Register of Historic Places is required of National Park units under the National Historic Preservation Act of 1966 (as amended) (NHPA), Section 110a(2). The current project was designed to assess and evaluate the large volume of archaeological data that the Park has compiled since the 1980 (Baker) AOA was completed. The goal of the AOA project is to evaluate the archaeological compliance projects and site and collections reports that have been conducted between 1980 and the present, and to use this information to identify the general level of significance of known archaeological resources. Although all three park subunits (North Bridge, Wayside and Battle Road) were included in the scope of work, the AOA research was focused on the Battle Road Unit.

The focus of the AOA was a synthesis of the archaeological data collected over the past 24 years. Information sources included published NPS volumes detailing site reports and comprehensive collections research, Section 106 compliance projects completed by the NPS and private contractors, and the recently completed National Register nomination.

The AOA included background information about the location and general condition of archaeological resources including archaeological sites, artifacts and associated documentation. The project was also designed to summarize, in tabular form, the history of excavations at each site and an evaluation of the success of each excavation relative to the identified objectives. The results of these evaluations were used to identify the general level of significance of additional sites (those not currently listed in the Archaeological Sites Management Information System [ASMIS]) and make recommendations as to whether National Register listing should be sought.

Prior to the start of the current project, 38 archaeological sites identified in the 2002 National Register nomination had been listed in the NPS ASMIS database. ASMIS is the "Park Service's database for the basic registration and management of park prehistoric and historic archaeological resources" and includes "data on site locations, description, significance, condition, threats to, and management requirements for known park archaeological sites" (http://www.cr.nps.gov/mwac/aim_pages/asmis1.htm). The ASMIS project is ongoing and at present includes 70 archaeological sites located within the Park. The results of the AOA are expected to provide additional information that can be linked to the comprehensive ASMIS database. The data generated by the AOA project will also be used by the Park to update Massachusetts Historical Commission (MHC) archaeological site forms.

The archaeological investigations were undertaken in accordance with Sections 106 and 110 of the NHPA (36 CFR 800).

Project Personnel

Deborah C. Cox (Project Manager), Suzanne G. Cherau (Principal Investigator) and Holly Herbster (Project Archaeologist) served as the lead Public Archaeology Laboratory, Inc. (PAL) personnel for the project. Stephen Olausen (Executive Director and Senior Architectural Historian) designed the database used to organize information about previous archaeological investigations. Jen Macpherson (Laboratory Manager and Global Information Systems [GIS] Specialist) was responsible for the organization of ASMIS GIS data provided by NPS and production of PAL's GIS data and maps.

Disposition of Project Materials

All project information (field recording forms, database files, maps, photographs) is currently on file at PAL, 210 Lonsdale Avenue, Pawtucket, Rhode Island. PAL serves as a temporary curation facility. All project information will be permanently curated at Minute Man NHP.

Project Methodology

PAL's approach to completing the AOA was to collect and analyze existing cultural resources data using a series of computer-assisted database and mapping programs. The technical methodology focused on seven principal and interrelated tasks: 1) consultation; 2) archival research; 3) collections research; 4) natural and cultural context development; 5) critical evaluation of prior studies, site inventory and archaeological sensitivity assessment; 6) ranking of site research value; and 7) report production that may include GIS mapping overlays. Each task is described in detail below.

Consultation

Consultation with NPS staff was an important part of the project and occurred on a regular basis throughout the course of the assessment. Dr. Terrie Wallace (Minute Man NHP Curator and Project Supervisor) and Dr. Steven R. Pendery (Northeast Region Archaeology Program Senior Archaeologist and Contracting Officer's Technical Representative) served as the main NPS contacts for the research project. Dr. Pendery also provided access to and assistance with the archaeological project files maintained at the NPS Lowell facility and reviewed progress of cultural resource contexts and research themes. Dr. Wallace provided access to and assistance with archived data, including archaeological and collections reports maintained at the Park and filed in the research library. William Cooney (Senior Archaeological Technician) was consulted for updated information about the ASMIS database and ASMIS-related GIS data. Christopher Davis (Resource Management Specialist) provided park-wide GIS data and metadata files for PAL's use as well as comments on the draft report.

Archival Research

The development of research contexts and a predictive model of expected archaeological resources and densities within the Park began with archival research, consisting of an examination of primary and secondary documentary sources. The research completed as part of the project included the review of environmental and cultural publications, manuscripts, reports, notes, maps, databases, and photographs that were used to develop the contextual chapters of the AOA. These sources include written and cartographic documents relating both to past and present environmental conditions as well as documented/recorded sites in the general project area.

Much of the data described above was collected as part of the original AOA (Baker 1980), through park-wide archaeological surveys (Ritchie et al. 1990; Synenki 1990), and Minute Man NHP archaeological collections reports (Towle and MacMahon 1986a, 1986b, 1986c, 1987). The preparation of the 2002 National Register Nomination resulted in the collection and review of many historic and archaeological park documents, survey reports and maps, inventories of reports and archaeological sites, the development of historic themes and contexts, and an inventory and evaluation of contributing and non-contributing resources.

As a result, the current project focused on synthesizing the primary and secondary background research from these sources and collecting new and/or updated contextual data from more recent archaeological projects. Research contexts prepared by PAL and others as part of previous studies were reviewed in order to assess their content and accuracy. Archival research also included a review of materials housed at the Park Research Library that were not collected or reviewed during the NR Nomination, and that were considered relevant to the project goals. Research was also conducted at the Northeast Region Archaeology Program offices in Lowell, Massachusetts and at the Northeast Museum Services Center central files at the Charlestown Navy Yard. The goal of this research was to identify documentation of any archaeological sites or collections not currently on file at the Park and not previously inventoried or considered during the NR Nomination.

The archival research resulted in an accurate inventory of all known archaeological resources, a compilation of the necessary data for evaluating the relative success and contributions of previous investigations, and the production of a database used to organize information about the potential research and interpretive value of all known archaeological sites within the Park.

Specific sources reviewed as part of the archival research for the Park AOA project include:

State Site Files and Town Reconnaissance Surveys

The state site files maintained at the MHC were reviewed to collect information about previously identified archaeological sites within and in close proximity to the Park. These files contain information about the location, temporal affiliation and other data on sites recorded by academic and avocational archaeologists, NPS staff, and cultural resource management (CRM) professionals. The MHC site files for the Park were cross-referenced with the ASMIS database to identify research gaps and/or inconsistencies that the NPS archaeological staff can address. The MHC files also contain listings of National Register-eligible or listed properties. The files were reviewed for any updated information about archaeological sites within or near the Park boundaries.

CRM and NPS Compliance Studies

Information on archaeological sites located within and in the vicinity of the Park was collected from published and unpublished CRM reports. The MHC annually updates a comprehensive listing of all cultural resource reports conducted under its jurisdiction entitled *Bibliography of Archaeological Survey and Mitigation Reports* (MHC 1990). The survey reports are indexed by town and an abstract of each project is attached. Several recently completed CRM projects in the Park vicinity are listed in the bibliography. These include projects at nearby Hanscom Air Force Base (Abell et al. 1998), along Route 2 in Concord and Lincoln (Binzen and Donta 2001; Donta 2001; Donta et al. 1999), and at nearby historic properties including the Old Manse (Mohler et al. 2001) and Orchard House (Mohler et al. 2000; Smith and Landon 2002). These reports were reviewed for data about recently identified archaeological sites as well as updated environmental and cultural context information.

Reports completed by CRM contractors working within the Park boundaries were also included in the AOA. These include standard archaeological projects (McDonald 2004), geophysical surveys (Jones et al. 1995), and projects that combine both types of investigation (Barosh and Donta 1999). The information contained in these reports includes new data about natural and cultural resources that were used to help update the AOA research contexts.

NPS archaeologists have completed more than two dozen Section 106 compliance projects within the Park over the past two decades. Field notes, memoranda, and reports on file at various NPS facilities were reviewed for archival data collected as part of individual projects. These documents contain information about existing conditions within specific project areas and often contain recent updates about the condition of previously identified archaeological sites within the park.

Environmental Studies

The research used to update the environmental context included a review and synthesis of data relating to local geology, hydrology, biology, topography, soils, vegetation, and wildlife communities. Paleoenvironmental, historic, and contemporary land-use studies were also reviewed to identify patterns of human interaction with and manipulation of the natural landscape.

Bedrock and surficial geological studies provided information about the region's physical structure and about geological resources near the park (Barosh 1976; Fenneman 1938; Nelson 1975; Zen et al. 1983).

The United States Department of Agriculture (USDA) Soil Conservation Service soil survey of Middlesex County supplied information about soil types and surficial deposits within the Park and the general categories of flora and fauna that these soil types support (USDA 1986). Data about drainage and wetlands resources associated with the Concord, Shawsheen, and Charles River basins was reviewed for information that could be applied to patterns of human land use (Alvord et al. 1976: Clapp 1902; League of Women Voters 1963).

Paleoenvironmental studies completed over the past few decades contributed to an understanding of the early postglacial landscape in the park vicinity, and its possible uses by human populations (Gaudreau and Webb 1985; Newby et al. 1987; Newby et al. 1986; Sneddon and Kaplan 1987). Historic period land use studies were reviewed for information about more recent environmental changes in the Park vicinity (Donahue 1984, 2004; Nelson 1984; Whitney and Davis 1986). Several recently completed and ongoing cultural landscape studies for park subunits are available and these documents were reviewed for information that could help identify potential historic archaeological landscape features such as battlegrounds, stone wall networks, and agricultural fields (Dietrich-Smith 2002; Dietrich-Smith et al. 2004; Donahue and Hohmann 1994).

Collections Research

This task consisted of a systematic review of the archaeological collections associated with all previously completed surveys within the Park, including artifact assemblages, artifact cataloges, photographs, field notes, survey data, drawings, and reports. The organization of this diverse research material was facilitated with a customized Access database designed by PAL. The database allowed for the computerized recordation of evaluation criteria for all relevant aspects of the Park collections. The criteria selected for input to the database were those considered important to assessing the research and interpretive value of the existing archaeological resources within the Park. The database was also designed for use by NPS staff, if desired, to compile and organize data about future archaeological collections in the Park.

The database was constructed in a hierarchical system organized at the highest level by site or specific property/project area. Basic information about each collection/project area (location, size, site name/numbers) was entered into the database to create individual records. Other categories of information including the presence or absence of general information classes (Native American artifacts, historic artifacts, field notes, photographs, etc.) associated with a given collection/project/site were entered and quantified in relative terms. Each site was keyed in the database to one or more of four historic themes within which its research value was determined: 1) prehistory; 2) April 19, 1775; 3) the colonial period; and 4) nineteenth-century agricultural history and daily life. Mid-level data included details about each site drawn from the collections. For example, details for archaeological sites included level(s) of investigation, presence of features, diagnostic artifacts, floral and faunal remains, level of integrity, and existence or potential for radiocarbon-dates. Bibliographic entries for archival research sources, technical analyses and the reports themselves were also included in the database fields. A final tier in the database was used to define specific questions or aspects of the four historic themes that could be addressed by the archaeological data contained within the collections or in unexcavated portions of the sites. This database tier was also used to assess research potential and address questions of National Register significance. The information collected and organized in the database formed the primary resource from which the evaluation of previous archaeological and collections work was drawn.

Natural and Cultural Context Development

This project task involved compiling Chapters 2 (Natural Setting), 3 (Prehistory and Ethnographic Occupation), and 4 (Historic Period Summary) of the AOA report. The environmental chapter was organized chronologically from pre-Wisconsin geomorphology through contemporary land-use, and drew

from the information sources listed above. The environmental context described the physiology and natural resources present within the Park over the entire period of human occupation. This information was used to help identify patterns of land use at known archaeological sites, and to predict the locations and types of unknown archaeological resources based on these patterns. The documentation of environmental variables within the Park was also a defining factor in assessing each site's existing conditions, significant cultural landscape elements, and landscape integrity. The discussions were built upon landscape descriptions prepared by PAL for the 2002 NR nomination and environmental contexts previously developed by PAL and others for projects conducted in the region.

The information presented in Chapters 3 and 4 was updated from chronological cultural contexts developed by PAL for the 2002 NR Nomination. New information about prehistoric land use within and in the vicinity of the Park was drawn from recently completed archaeological investigations and was paired with environmental data to identify patterns in site selection and activities across different temporal periods. The historic period summary was based largely on the broad patterns of land use associated with the Park (including the colonial period, Revolutionary War, and nineteenth-century agriculture and farming) but also provide a cultural continuum within which to view key places and events. The nature of actual or potential ethnographic occupation of archaeological properties was considered in light of both local and regional cultural contexts and current research priorities in history and archaeology. The actual archaeological sensitivity assessment was included in Chapter 6.

Evaluation of Previous Studies and Collections

PAL's approach to the critical evaluation of previous archaeological studies began by considering each project's individual goals and/or research designs, methodologies, and end results. The range of post-1980 investigations includes archival research projects, collections summaries, reconnaissance surveys, impact area testing, large-scale excavations, and archaeological monitoring. The scope of each project was carefully considered as a first step to evaluating its outcome. A narrative discussion was used to assess the success of various types of projects in meeting research goals, and included a consideration of the values and shortcomings of various field methods and techniques. The critique also considered the contributions of the projects toward the clarification and understanding of the four Park historic themes. The evaluation of collections considered the quality and thoroughness of documentation, as well as the volume, condition, and value of existing material culture assemblages.

Archaeological Site Summary and Sensitivity Assessment

Chapter 6 of the AOA report consists of a summary of known archaeological sites within the Park and an assessment of archaeological sensitivity for each cultural period. The summary was created in a printable Excel spreadsheet format, with separate data sheets for each site or group of sites. The summary information was used to facilitate the production of sensitivity maps for each period of significance within the four park themes, and for each unit of the Park, with special emphasis on the Battle Road Unit since it will be the subject of the new GMP. The sensitivity assessment discussion provided a rationale for predictive statements, and was drawn specifically from the local and regional environmental contexts (Chapter 2) and cultural contexts (Chapters 3 and 4).

CHAPTER TWO

ENVIRONMENTAL CONTEXT

Environmental settings, conditions, and natural resources are important factors to consider when assessing the potential for the presence of prehistoric and historic period sites, and for identifying elements of the natural and built landscape that were selected as activity areas over the past 10,000 years.

Prior archaeological research in the region and elsewhere in southern New England has determined that prehistoric and historic period land use patterns are closely tied to the proximity and availability of certain environmental resources. For example, the selection of activity, habitation, and ceremonial sites by Native Americans is often influenced by soil conditions, slope of land, and proximity to fresh water. Historic settlement and land use are often linked to transportation corridors and available raw materials. The presence or absence of certain combinations of these and other environmental elements can be used to predict a wide variety of archaeological sites, from short-term resource collection or activity areas to long-term settlement areas.

Physical Description

The three discontiguous units of the Park comprise an area of approximately 967 acres of land in the towns of Concord, Lincoln, and Lexington in Middlesex County (see Figure 1-2). The Park is located approximately 16 miles northwest of Boston and is spread out along Route 2A. The Park is surrounded by a suburban/commercial landscape and is immediately adjacent to Hanscom Air Force Base (AFB). The setting of the Park is characterized by low-density residential development set within a landscape of open fields and pastures, interspersed with woodland and an occasional marshy area. Immediately adjoining the boundaries of the Park are several areas of intensive residential development. Most roads within the Park have been paved for modern use, with the exception of portions of the Battle Road in Lexington and Lincoln that were abandoned during a circa (ca.) 1920 road realignment.

The landscape today is markedly different from the landscape at the time of the Revolutionary War. In 1775, small farms with open fields characterized the general area. At the Park's inception, the area was part of the suburban landscape, containing residences and commercial development. The land that became the Park experienced similar residential development throughout the late nineteenth and early to mid-twentieth centuries as nearby towns expanded. This resulted in a landscape that did not conform to or reflect that found at the time of the battle. The Park landscape has been manipulated through the removal of intrusive buildings and landscape elements to match, to the greatest extent possible at selected locations, the landscape of 1775. Since the 1960s, the NPS has removed more than 300 structures and nearly 100 percent of the commercial development within the Park.

The **North Bridge Unit** is an irregularly shaped area located one-half mile north of Concord Center. The parcel is bisected by the Concord River, which flows northeast to southwest on its winding path through the district. The river is flanked on its sides by a relatively narrow strip of flat marshland. The land begins a steady rise west of the flat land on the west bank of the river and ultimately ascends to a height of approximately 55 feet at what is known as the Muster Field on the west side of Liberty Street. The land east of the river is relatively flat, except for a hill, which rises to a height of about 50 feet on the east side of Monument Street. The boundaries of the North Bridge Unit are generally defined by roads, including Monument Street, which runs north-south along the eastern edges; Liberty Street, which runs northeast to southwest, marking the northern edges of the unit; and Lowell Road, which runs northwest to southeast, marking the western edges of the unit. The North Bridge Unit can be further characterized by its stone-lined streets and wooded landscape. Liberty Street, its southwest boundary, is comprised of a

paved road bordered by high, dry-laid stone walls and mature trees. Monument Street, to the north, is similarly landscaped.

The **Wayside Unit** is the smallest park segment and is located at the junction of Lexington Road and Hawthorne Lane in Concord. It consists of three parcels of land associated with the Samuel Whitney House (Wayside), a National Historic Landmark property that served as the residence for a series of significant nineteenth-century American authors, including Nathaniel Hawthorne, the Alcotts, and Margaret Sidney. The Alcotts historically used a vacant lot at the southeast corner of Lexington Road and Hawthorne Lane as a garden plot. The lot at the southwest corner of Lexington Road and Hawthorne Lane has been graded and is used as the Wayside's visitor parking area.

The **Battle Road Unit** is the largest park segment and stretches 4 miles from Meriam's Corner in Concord, through the town of Lincoln, to Fiske Hill in Lexington. The Battle Road Unit is the easternmost section of the Park and is comprised of five smaller segments defined by the Park based in part on their historic use and occupancy (Meriam's Corner, Bedford Road, Virginia Road, Nelson Road and Fiske Hill). The unit is named for the running battle that was waged along Concord Road between the British forces and the Colonial militiamen on April 19, 1775. The road makes up the spine of the district in this area, running in an asymmetrical, linear route along portions of present-day Lexington Road (Concord), North Great Road (Lincoln), and Massachusetts Avenue (Lexington) as well as along remnant sections that are no longer active roadways. While the land contained within the boundaries of the Battle Road Unit has been altered to recreate its historic low-density, agricultural appearance, some areas immediately surrounding the Park have been heavily developed. Hanscom Air Force Base, and its associated military housing developments, abuts most of the north boundary of the district in the eastern half of the Battle Road Unit. An area to the south between Bedford Road on the east and Route 2A on the west has been intensively developed with modern residential housing. The eastern boundary of the unit is formed by Interstate 95, which serves to divide the district from Lexington Center on the east side of the interstate.

Geomorphology and Geology

The Park is located within the Seaboard Lowland physiographic province of eastern Massachusetts (Figure 2-1). The Park is within a general area where the landform is a reflection of a strong southwest to northeast trending fault complex between the Clinton-Newbury and Bloody Bluff fault zones. The Clinton-Newbury fault zone is located just west of the present alignment of Route I-495 and extends from southern Worcester County to the Merrimack River estuary in northeastern Massachusetts. The Bloody Bluff fault extends from the Blackstone Valley area south of Worcester, northeast along the west edge of the Boston Basin near the alignment of Route 128. This fault passes through the eastern end of the Park and is named after the rocky knoll located at the intersection of Massachusetts Avenue, Marrett Road, and Nelson Road (Barosh 1976:311–313).

The surficial geology of southern New England is attributed to Pleistocene glacial effects. The final Pleistocene glacial advance and retreat during the Wisconsin period eroded and displaced bedrock, realigned drainages, and deposited till, erratics, and glacial moraine. Evidence of these effects is widespread. The landscape was covered by glacial till, a "heterogenous mixture of rock particles ranging in size from clay to fine silt to boulders [erratics]" deposited directly by the retreating ice, and by sand and gravel outwash, deposited by meltwater streams (Power 1957). The resulting landscape consists of kame terraces, outwash plains, and ground moraine. Other glacially formed landscape features occur in localized areas and include swamp deposits of partially decomposed organic material mixed with sand, gravel, and alluvium, and pockets of sorted sand, gravel, and silt (Power 1957).

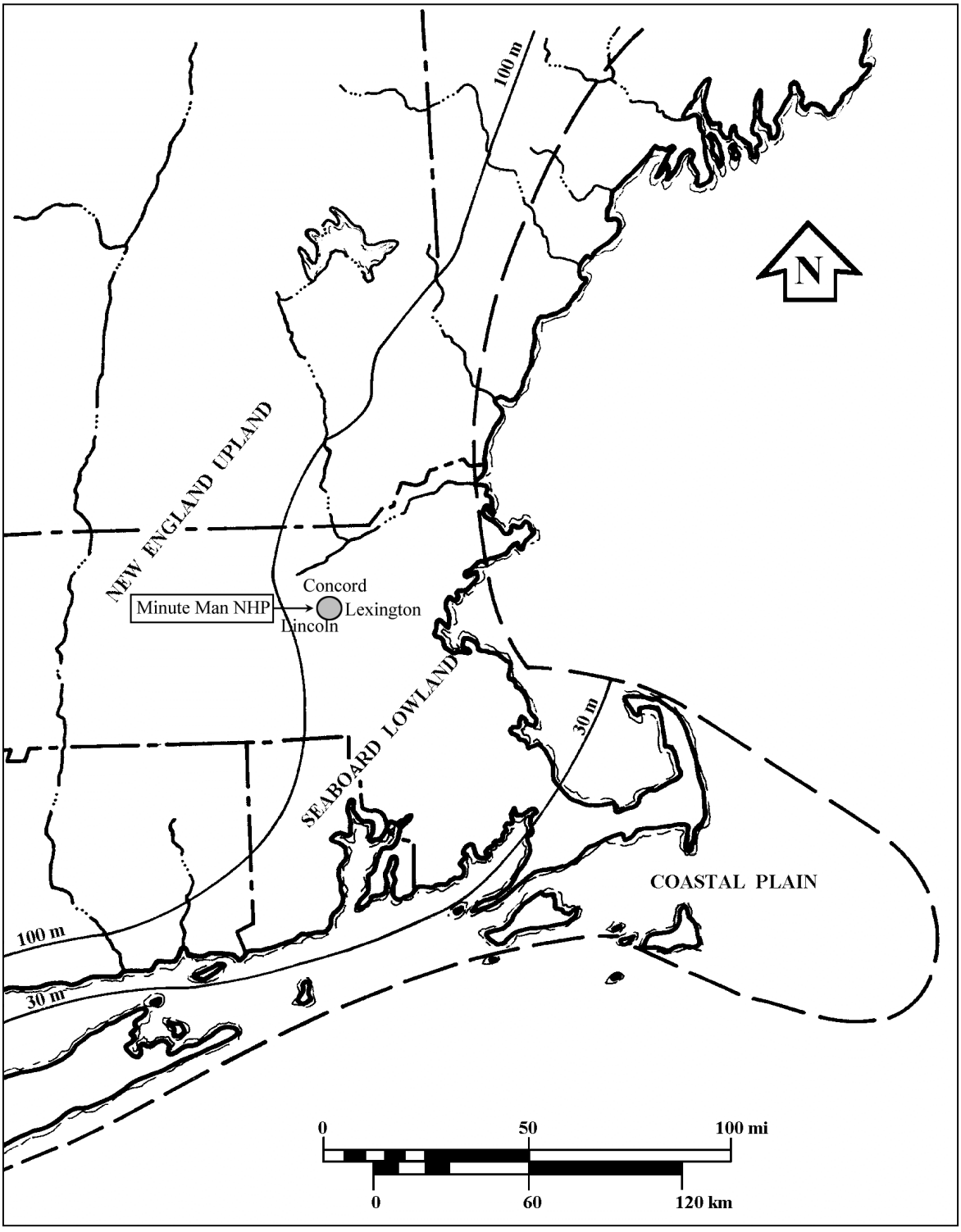


Figure 2-1. Physiographic zones of southern New England, showing the location of Minute Man NHP (source: Fenneman 1938).

The surficial deposits within the Park consist primarily of material associated with several stages or levels of Glacial Lake Concord and till. Glacial Lake Concord was formed when large delta deposits of sand/gravel at the northern end of another postglacial lake (Lake Sudbury) blocked the flow of meltwater to the south. The total extent of Glacial Lake Concord is not clear since the north edge of the lake was marked by a retreating ice front. Along the Concord River in the North Bridge section of the Park a set of low terraces ranging from about 120 to 150 feet in elevation consist of deposits of sand, gravel, silt, and clay associated with the low stage of Glacial Lake Concord. A more elevated set of terraces including the large kame delta known as Authors Ridge and Revolutionary Ridge are deposits associated with an earlier, high water stage of this glacial lake. Lake bottom deposits of fine sand, silt, and clay cover a large area of low terraces ranging from 120 to about 140 feet in elevation extending east from the center of Concord along the drainages of Mill and Elm brooks to Meriam's Corner and the Bedford Levels (Koteff 1963).

In the Hardy Hill, Old Bedford/Virginia Road, and Nelson Road sections of the Park, elevated hilly areas consist of deposits of till, a light gray to greenish gray poorly sorted mixture of sand, gravel, and boulders with some clay and silt. These areas containing till are generally uplands with elevations ranging from 150 to 270 feet above sea level. Along the west side of upper Elm Brook are high terrace-like deposits of gravel, sand, and silt. Similar deposits form a flat plain marked with kettle hole features between Virginia and Nelson roads in the Folly Pond area and extending from there to Fiske Hill. These outwash deposits extend from about 150 to 200 feet in elevation (Koteff 1964).

The bedrock formations in the area extend in bands oriented southwest to northeast following the alignment of the fault zones (Clinton-Newbury, Assabet River, Bloody Bluff) crossing central and eastern Massachusetts. The northeast trend of the Bloody Bluff fault can be seen in the orientation of the series of small ridge-like hills between Sandy Pond and Katahdin Hill. The bedrock units underlying the vicinity of the Park are igneous and metamorphic rocks that are primarily diorites, granite, gneiss, and amphibolite. The North Bridge and Concord center areas contain sections of the Shawsheen Gneiss, Straw Hollow Diorite, and Assabet Quartz Diorite. The Shawsheen Gneiss is a medium-grained, locally sillimanitic muscovite, biotite, oligoclase quartz gneiss with some lenticular bodies of bedded and massive amphibolite. The Straw Hollow and Assabet Quartz diorites are gray, medium-grained, slightly foliated, biotite hornblende diorite, and quartz diorite. The primary bedrock unit in the central portion of the Park (from Concord center to the vicinity of Elm Brook) is Andover Granite, a light or medium gray medium- to coarse-grained muscovite-biotite granite with pegmatite masses. Thin lenses of the Marlboro formation (Sandy Pond member) and Sharpners Pond Diorite are located in the area northeast of Sandy Pond near Nelson Road. These formations consist of a medium-grained equigranular biotite-hornblende tonalite and diorite. The Sandy Pond member of the Marlboro formation is a thinly layered, very fine grained amphibolite, biotite schist and gneiss with minor calc-silicate granofels and felsic granofels.

Bedrock outcrops within or near the Park are few in number and concentrated mostly at the end of the Park near Fiske Hill. In the North Bridge section of the Park a few small outcrops are present on the hill between Lowell Road and Barnes Hill Road north of the confluence of the Assabet and Sudbury rivers. Several other very small exposures of bedrock appear to be located near the North Bridge. The Nelson Road area contains a large bedrock exposure that extends south from Massachusetts Avenue along the eastern slope of a rocky knoll. Another nearby knoll in front of Minuteman Vocational Technical School has a bedrock core that is exposed in an outcrop on its southern slope. The large outcrop on the southern end of Bloody Bluff, located at the intersection of Massachusetts Avenue and Marrett Road, is a contact between the Dedham Granodiorite and Andover Granite. The eastern half of Fiske Hill is an area of numerous bedrock outcrops and thin deposits of glacial outwash.

The formations of coarse-textured granitic and gneissic rocks within or near the Park were not likely to have been sources of lithic raw material used by prehistoric hunter-gatherer groups for chipped- or ground-stone tools (Ritchie et al. 1990). Other volcanic and metamorphic rocks suitable for the

manufacture of stone tools outcrop in the northern Boston Basin and middle/upper Sudbury and Assabet River drainages and were important sources of lithic raw material. Sections of the Lynn Volcanic Complex located to the northeast of the Park in Wakefield and the Salem/Marblehead area were the closest sources of felsite. Several varieties of gray and black felsite from the Lynn Volcanic were used throughout the prehistoric period for the manufacture of chipped-stone tools (MHC 1981:16–24). Another important source of raw material was the Cambridge Argillite outcropping in the northern half of the Boston Basin (Belmont, Waltham, Arlington, etc.). This gray-green to blue-gray argillite was used primarily in the Middle Archaic Period by groups occupying the Sudbury-Assabet/Concord and Shawsheen River drainages. A distinctive translucent, light green to gray material tentatively identified by several geologists as a mylonite or lithic tuff was available from outcrops along several sections of the Bloody Bluff fault zone (Ritchie 1983a). The primary source area appears to be in the Lexington/Woburn area. In the Sudbury/Assabet/Concord drainage this material was almost exclusively used during the Middle Archaic Period and to a limited degree in the Late Archaic Period (Small Stemmed tradition) (Ritchie 1979) (see Chapter 3). Other local lithic materials include the Westborough Quartzite and amphibolite associated with the Marlboro formation. Source areas for these two rock types are located in the middle and upper sections of the Sudbury and Assabet River drainages (Nelson 1975).

Soils

The distribution of various soil types within the Park is related to the type of surficial deposits present in and the physical characteristics (texture, drainage, slope) of these deposits. The areas of outwash deposits of sand and gravel associated with the high and low stages of Glacial Lake Concord contain soils classified as the Windsor loamy sand (3–8 percent, 8–15 percent slope), Hinckley loamy sand (3–8 percent, 8–15 percent, 15–25 percent slope), Paxton fine sandy loam (8–15 percent, 15–25 percent slope), Deerfield loamy sand (0–3 percent, 3–8 percent slope), and Wareham loamy sand (0–5 percent slope). The terrace-like deposits of undifferentiated sand/gravel such as those near Elm Brook and from Folly Pond to Fiske Hill also contain these soils series. The Hinckley and Windsor series soils are excessively drained, sandy and gravelly soils that form on glacial outwash plains, terraces, kames, and eskers. Paxton series soils are well-drained sandy loam soils that form in compact glacial till on drumlins. These soils also contain numerous stones at and below the surface. The Deerfield and Wareham soil series are moderately and poorly drained sandy loam soils formed on glacial outwash plains, terraces, and deltas. Deerfield soils are better drained with only seasonally high water table while Wareham soils tend to have a high water table for most of the year (USDA 1986).

The low terraces and plains of glacial lake bottom deposits contain soils of the Boxford silt loam (3–6 percent) in addition to Deerfield and Wareham loamy sands. The Boxford series consists of silty loam or clay loam soils that form on deep silt and clay lacustrine sediments. Boxford soils tend to have a seasonal high water table and are moderately well drained. Sections of the Park with glacial till deposits contain soils of the Canton fine sandy loam (3–8 percent, 8–15 percent slope), Montauk fine sandy loam (3–8 percent slope), and Woodbridge fine sandy loam (3–8 percent slope) series. All three of these soil series are moderately well drained or well drained sand loam and loamy coarse sand that form on glacial till, ground moraine, or ice-contact stratified drift in uplands or on hills. These soil series typically have very stony surfaces and subsoil horizons. Canton series soils have moderate to rapid drainage or permeability while Montauk and Woodbridge soils display poor drainage characteristics (USDA 1986).

Other soil series present within the Park include the Charlton-Hollis-Rock outcrop complex on hills and other areas with thin deposits of soil covering bedrock. Wetlands along the Concord River, stream drainages (Elm, Mill Brook, etc.), and in more upland locations contain poorly drained soils such as the Scarboro loamy sand, Saco mucky silt loam, and Freetown muck series (USDA 1986).

Drainage Patterns

The Park lies within sections of several major river drainage basins. An important feature of the drainage patterns in and around the Park is the general east/west orientation of the Park along the boundaries of the Concord, Shawsheen, and Charles River basins (Figure 2-2). The western portion of the Park lies within the southern end of the Merrimack River basin, which is formed by the combined drainages of the Sudbury, Assabet, Concord, and Shawsheen rivers in east/central Massachusetts. The general southwest to northeast orientation of these drainages conforms to a broad regional fault system (Clinton-Newbury) that extends across this part of the commonwealth (Alvord et al. 1976).

The Sudbury River has a total length of 36 miles and drains an area covering 165 square miles. From its source in Cedar Swamp Pond in Westborough, it flows east and north through upland terrain with large hills. Wetlands and marsh along most of the upper Sudbury drainage are restricted to a narrow zone along the main river channel. Broad marshes/river meadows up to 2 miles in width occur along the lower section of this drainage in the towns of Sudbury and Wayland. The Sudbury/Concord River system has a very low gradient dropping only 2 feet in a distance of 23 miles from the small fall line in Saxonville to North Billerica. The headwaters of the Assabet River are at the base of an elevated hill zone near the Grafton/Westborough town line. The Assabet River extends for 31 miles draining an area of 176 square miles. The Assabet River flows through slightly more elevated terrain than the Sudbury River, has a steeper gradient (7 feet per mile) and is flanked by narrow marsh/wetland zones and hilly uplands (League of Women Voters 1963:4).

The Sudbury and Assabet rivers join at Nashawtuc Hill in Concord to form the Concord River, which then flows north to enter the Merrimack in Lowell. From just north of the Sudbury/Assabet River confluence, the Concord River is bordered by a wide marsh or river meadow for a distance of about 3 miles. This section of the river has been known historically as the Great Meadows. Within the Park, drainage into the Concord River is primarily through Mill Brook, an important tributary stream. Mill Brook originates from several small feeder streams in wooded wetlands in the Meriam's Corner area and two streams draining from Fairyland and Crosby Ponds just north of Route 2A. Mill Brook runs from a fairly large area of marsh and wooded wetlands south of Meriam's Corner and east of Concord Center in a northwest direction across low terraces of glacial lake bottom sediment toward the Concord River. Another unnamed tributary stream enters the Concord River about 750 feet (225 m) northeast of the Park headquarters flowing from wetlands at the base of Punkatasset Hill and crossing under Liberty Street. This stream is one of several small tributaries that drain wetlands in the more elevated upland terrain bordering the Concord River on the northwest.

The central and eastern portions of the Park, spanning the intersection of Lexington Road and the Concord Turnpike cut-off (Hardy Hill area) to Fiske Hill, contains wetlands and streams that flow into both the Shawsheen and Charles River drainages. The Shawsheen River drainage has a total length of about 20 miles and forms the southeastern edge of the Merrimack basin running roughly parallel to the Concord River. The headwaters of the Shawsheen are located just north of Massachusetts Avenue (Route 2A) and northeast of Virginia Road and Hanscom Drive. In its original configuration, the upper Shawsheen River began in a small pond and drained to the north through the Great Swamp a large wetland located in what is now Hanscom Field. The Shawsheen River flows northeast from the northern boundary of the Park near Hanscom Drive and is joined by two other tributary streams, Kiln Brook and Elm Brook in the town of Bedford. Elm Brook flows north from its origin in a wetland north of Route 2 and west of Bedford Road in the town of Lincoln through the Park near the intersection of Massachusetts Avenue (Route 2A) and Old Bedford Road. The upper section of Elm Brook is located in the vicinity of

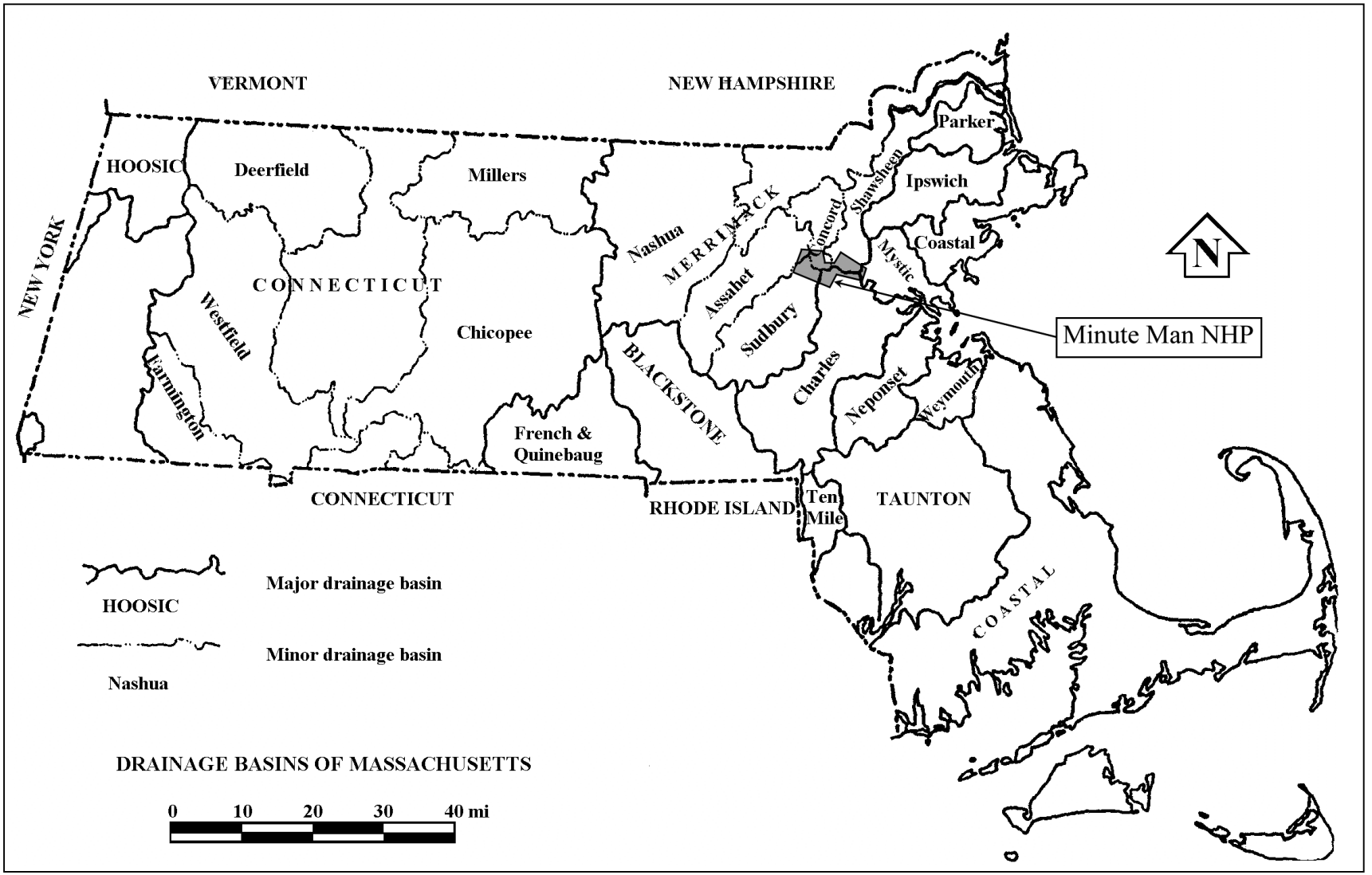


Figure 2-2. Location of Minute Man NHP in relation to major river drainages in eastern Massachusetts.

the Park and is bordered by wooded wetlands and sloping hillsides of rocky ground moraine or till. Elm Brook crosses low terraces of glacial lake bottom deposits north of the Park boundary in the Bedford Levels area and west of Pine and Hartwell Hills. The alignment of Massachusetts Avenue in the area between Bedford Road and Nelson Road follows a narrow divide between the upper Shawsheen and Charles River drainages.

The Charles River drainage includes an area of 300 square miles extending from the elevated uplands of the southern Worcester Plateau to Boston Harbor (Clapp 1902:218). The northern boundary of the Charles River basin is defined by the Hobbs Brook drainage in Lincoln. Hobbs Brook begins in the extensive wetlands south of Folly Pond and east of Juniper Ridge and flows southeast into Cambridge Reservoir before joining Stony Brook in the town of Weston. The small, unnamed stream that drains the wetlands south of Nelson Road and the Battle Road Visitors Center flows into Hobbs Brook.

A number of modifications to the original drainage patterns in and around the Park have been made during the historic period. A series of dams was built for mills on the Concord River at North Billerica beginning in the early/mid-eighteenth century (MHC 1980a). In 1798, a dam was constructed at North Billerica to supply water for the Middlesex Canal. This dam was increased in height several times until a stone dam was built at this location in 1828. Sections of river meadow as far upstream as Wayland and Sudbury were inundated by periodic flooding that destroyed valuable cranberry and hay crops. Construction of another dam (Talbot Dam) at North Billerica for a woolen mill in the 1850s also led to the flooding of river meadows in the upstream towns and changes in the configuration of wetlands and their vegetation (League of Women Voters 1963:7–8). Wetland shrubs and sedge replaced the various types of meadow grasses that had been present in these areas. In 1859, farmers in the upstream towns of Concord, Carlisle, Bedford, Wayland, and Sudbury petitioned the State Legislature claiming that the Billerica dam was responsible for a decline in the condition of hay meadows along the Concord and Sudbury rivers. Investigations by legislative committees in 1859–1860 concluded that the Billerica dam was responsible for flooding upstream meadow areas. Several years later, other studies indicated that lowering the dam by 16 1/2 inches would lower the river a few inches in Concord but have little or no effect further upstream in Sudbury and the Billerica dam remained in place.

The rapid rate of deforestation and land clearing in the Concord area during the early/mid-nineteenth century has also been cited as a factor contributing to the severe periodic flooding that damaged river meadows. Clearing of upland areas adjacent to the Concord River for agricultural land use appears to have increased runoff into the river meadow particularly during episodes of heavy precipitation (Donahue 1984:46–53). Portions of the North Billerica dam remain and the present limits of wetlands along the Sudbury and Concord rivers may be slightly larger than during the prehistoric period. The drainages of the three primary tributary streams (Elm, Mill, Hobbs brooks) within the Park were altered during periods of intensive agricultural land use, particularly during the nineteenth century. Sections of these streams were modified by converting their original channels into linear ditches. Other ditches were also excavated through wetlands along these streams to drain areas converted to pasture or cultivated fields. The clearing and ditching of wooded wetlands to provide new pasture and plowland was related to the larger process of extensive farming in Concord (Donahue 1984:39). More recently, the headwaters of the Shawsheen River were filled and modified during the construction of Hanscom Field in the 1940s and subsequent expansion.

Past Environmental Settings

Over the last 12,000 years, vegetation patterns in the area of eastern Massachusetts surrounding the Park have changed in response to larger climatic trends and the gradual spread of various species during the postglacial period. This long sequence of changes in the regional forest cover provides a broad environmental context or background for the different settlement and resource use strategies developed by prehistoric hunter-gatherer populations. The brief paleoenvironmental reconstruction presented in this

section is a synthesis of data obtained from palynological analysis of sediment cores collected at several locations in central, eastern, and southeastern Massachusetts. These locations include Cedar Swamp Pond, Westborough (Sneddon and Kaplan 1987), Houghton's Pond, Canton (Newby et al. 1986), Winneconnet Pond, Norton (Suter 1985), and Nipmuck Pond in Mendon (Newby et al. 1987) (Table 2-1). The Cedar Swamp core is the most complete and current source of information about prehistoric period vegetation patterns for the area within the combined Sudbury/Assabet/Concord River drainages. The

Table 2–1. General Chronology of Vegetation Patterns in Eastern Massachusetts, ca. 14,000 to 1000 B.P.

Years Before Present	Forest Types and Major Trends
14,000–12,000	Sedges and other herbaceous plants continuing with appearance of spruce marking transition from open parkland to closed forest. Birch and alder important within assemblages. Low annual precipitation, but high soil moisture at 12,000 B.P. suggest cold temperatures to explain high water levels.
12,000–9000	Closed boreal forest with northern pine dominant in central and coastal southern New England with jack pine, red pine, and later white pine. Birch (white) important as sedge declines. Low annual precipitation and soil moisture values by 9000 B.P. suggest increased evaporation related to warm temperatures and high summer insolation.
9000–6000	More mesophytic pine dominant forest with white pine, hemlock, and white birch. Major shift to moister conditions between 9000 – 6000 B.P. Reach near modern levels of precipitation by 6000 B.P.
6000–3000	Oak forest established along major east/west ecotone crossing central Massachusetts. Mixed conifer/hardwood forest north of this boundary and in coastal areas. Dramatic hemlock decline at ca. 4700 B.P. Levels of precipitation consistently near modern rates.
3000–450	Hemlock and beech increase north of central Massachusetts ecotone. Oak dominant mixed deciduous forest with hickory, beech, yellow birch and white pine to south of ecotone and remained fairly stable. Period of maximum diversity in regional deciduous forests. Levels of precipitation consistently near modern rates.

(Source: Gaudreau and Webb 1985; Suter 1985; Newby et al. 1986; Newby et al. 1987).

chronology of forest types reconstructed from these cores is generally similar, reflecting broad regional trends. Important regional trends in the forest vegetation of southern New England described by Gaudreau and Webb (1985) have also been included. The general chronology of vegetation patterns and contemporary prehistoric settlement/land use discussed here is considered to be applicable to the southern Merrimack basin and useful as part of a larger interpretive context for cultural resources identified within the Park.

The lower portion of the Cedar Swamp core contained evidence of an open spruce woodland with jack or red pine, larch, fir, alder, and hornbeam in the area around 12,000 to 11,000 years ago. Small amounts of oak, ash, elm, and chestnut pollen in the lower zone suggest the presence of these deciduous species at very low densities in the subregional forest cover. At Winneconnet Pond in the Taunton basin, pollen from jack or red pine made up about 70 percent of the total assemblage, indicating the dominance of jack/red pine in forests after 12,000 years ago (Sneddon and Kaplan 1987; Suter 1985).

During the PaleoIndian Period (11,000 to 10,000 years before present [B.P.]), a pine-dominant forest developed in the eastern Massachusetts region as the earlier, boreal forest of spruce, fir, and larch declined. White pine was the major species in the forest with lesser amounts of birch and oak. By this time oak had increased and other temperate deciduous trees such as maple, elm, and ash were established as a consequence of climatic warming.

After 10,000 B.P. pine decreased in abundance within regional forests and a transition from a primarily coniferous to a mixed coniferous/deciduous forest occurred. Hemlock replaced pine as the major coniferous tree. By about 8000 to 7500 B.P., the warm, dry climate of the Hypsithermal episode was marked by the expansion of temperate deciduous species such as oak, maple, ash, elm, and birch. Beech first appeared during this general episode and made up a significant portion of the deciduous element of forests in east/central Massachusetts. This temperate forest expansion corresponds well with the spread of the Early Archaic bifurcate base point tradition in southern New England (Dincauze and Mulholland 1977).

Between about 8000 and 6000 B.P. oak forests became established in an ecotone or boundary zone that crossed the southern New England region in a southwest to northeast direction. This boundary extended from the southern coast of Maine across north-central Massachusetts and the Worcester Plateau forming the southern boundary of a mixed conifer/hardwood forest. This ecotone also marked the northern boundary of the oak dominant forest covering southern New England (Gaudreau and Webb 1985). This important environmental shift took place during the general span of the Middle Archaic Period when prehistoric populations appear to have settled into group territories within major river drainage basins in eastern/southeastern Massachusetts (Dincauze and Mulholland 1977). This more sedentary pattern of settlement and resource use may have developed in response to stabilizing forest ecosystems.

Hemlock and beech increased to the north of the ecotone as elements of the mixed hardwood deciduous forest after about 6000 B.P. In southeastern Massachusetts, beech may have been present in significant amounts by 6700 B.P. Hickory became established by around 5000 B.P. as part of the deciduous forest and pollen cores from throughout the southern New England region show that hemlock rapidly declined ca. 4700 B.P. possibly as a result of disease (Gaudreau and Webb 1985; Suter 1985). Around 4500 to 3000 B.P. the upland interior of central Massachusetts was covered by an oak dominant forest with hickory, beech, yellow birch, white pine, and some other species (maple, elm, basswood, walnut, sycamore, ironwood, chestnut) (Newby et al. 1987). The hemlock decline reached its maximum about 3000 B.P. At about this same time, evidence of eutrophication (algae bloom) in ponds and changes in wetland structure (bog formation) and vegetation has been noted in several pollen cores taken from different locations in southeastern New England (Nelson 1984).

The Cedar Swamp Pond core in the upper Sudbury River drainage contained evidence of eutrophication that has been attributed to the decline in hemlock and an increase in nutrient rich run-off from the deciduous forest. The occupation of upland areas adjacent to wetlands and ponds by prehistoric hunter-gatherer groups has also been suggested as a possible source of nutrients responsible for eutrophication (Sneddon and Kaplan 1987). At the regional scale there was a shift to cooler, moist climatic conditions across the entire Northeast after about 4000 B.P. At higher altitudes spruce increased in frequency in both northern and southern New England forests and this species moved further south. Chestnut entered southern New England during this period of cool, moist climate and remained as a minor component of the oak-chestnut forest even at peak abundance. The syntheses of palynological and archeological data from southeastern Massachusetts and Rhode Island have suggested that changes in wetlands (size, structure, vegetation types) during this period because of eutrophication and the climatic cooling trend were factors influencing prehistoric settlement and resource use (Bradshaw et al. 1981; Cox et al. 1983, Thorbahn et al. 1983).

From about 3500 to 2000 B.P., there was a slight decline in the percentage of oak in the forests of central Massachusetts and birch, beech, ash, elm, and maple were also present along with low densities of spruce and white pine. Hemlock was still present in low numbers even 1,000 years after its decline in the region. The regional hemlock decline took place over a span of 600 years and this event may have been more obvious in northern New England. It is not clear what effect the hemlock decline would have had on prehistoric hunter-gatherer groups (Newby et al. 1987). The interior uplands were still part of established settlement patterns as shown by the numerous Late/Terminal Archaic Period sites located in this general physiographic zone.

The exact nature of changes in prehistoric settlement and resource use are not clear, however upland forest environments may have been used differently in the Terminal Archaic/Early Woodland Period (ca. 3500–2500 B.P.) when there was apparently an intensified use of riverine and coastal zones. Evidence of a local dry phase possibly affecting the size of ponds and wetlands and the vegetation communities associated with them was observed in a pollen core taken from Titicut Swamp in the Taunton basin of southeastern Massachusetts. This local environmental event took place between 4200 and 3150 B.P. and may have affected prehistoric settlement and resource use (Nelson 1984). The pollen records of wetlands in eastern/southeastern Massachusetts indicate that by around 2500 B.P. cedar first became established in this area (Sneddon and Kaplan 1987).

Some indications of forest clearance or alteration about 1000 B.P. have been observed in pollen diagrams from wetlands in southern Rhode Island and southeastern Massachusetts. A significant increase in herbaceous plant pollen (Ambrosia, Tubuliflorae etc.) at that time suggests that there were openings in the forest vegetation cover that provided suitable habitat for these weedy plants (Bernabo 1977:87–88). During the late prehistoric period, forests in eastern/southeastern Massachusetts consisted of an oak-chestnut type with hemlock, hickory, beech, birch, pine, and maple.

At the regional level, the effects of early historic period forest clearing are evident in pollen cores taken from wetlands and ponds in southeastern New England. Decreases in tree pollen are matched by strong increases in pollen from weedy plants such as sheep sorrel (Rumex), plantain (Plantago), ragweed (Ambrosia), and grass (Graminae) (Newby et al. 1986; Nelson 1984).

At the local level, historic period documentary sources provide a record of fairly rapid changes in the forest vegetation in the vicinity of the Park. The earliest descriptions of the site of initial English settlement in Concord (ca. 1635) indicate that it was an open plain covered with shrubs and sweet fern. This early succession stage vegetation probably marked land cleared earlier and then abandoned by Native American occupants of the area. Other contemporary accounts suggest the presence of extensive areas of pine forest. Pitch pine was apparently the dominant species covering the "pine plains" described in seventeenth-century deeds. A large, 400-acre stand of mature, second growth forest studied by Henry

David Thoreau in 1860 consisted mostly of white oak with lesser amounts of black, red, and scarlet oak, white pine, and chestnut. This mixed oak, chestnut, pine wood was probably similar to the original forest type covering the area in the seventeenth century (Whitney and Davis 1986:71,73–74).

The amount of area in the town of Concord that was covered by woodland declined rapidly in the eighteenth and early nineteenth centuries. Wood lots were important sources of fuel and timber with oak, chestnut, and white pine being most frequently exploited. It has been estimated based on a variety of documentary sources that by the mid-nineteenth century only about 10 percent of the town of Concord supported woodlands. The species composition of local forests had been modified by sequential cutting and clearing. Farmland in sandy soils allowed to become fallow for a few years was taken over by pitch pine and then white pine. Red maple and gray birch saplings covered other abandoned fields that had been recently plowed. With the abandonment of more upland pastureland in the late nineteenth century, second growth forests dominated by white pine and red maple developed (Whitney and Davis 1986:75–76, 81).

The eighteenth-century landscape within the the Park combined three elements; open agricultural land (fields, meadows, pastures), natural land (woodland, scrub and marsh) and developed land (including areas with structures) (Donahue and Hohmann 1994:12). The events of April 19, 1775 occurred within this environmental landscape, which likely played a role in the battle. The local militiamen had an intimate knowledge of their surroundings and would have taken every advantage to improve their positions against the British. Cultural landscape features such as stone walls would have provided cover for the colonists and allowed them to move along the course of Battle Road with less danger of detection by the British soldiers. Several of the known skirmish sites are located near steep hills covered with bedrock outcrops and erratics. Unlike the wide expanses of exposed open farmland, these areas were not cultivated and would have provided not only a superior vantage point above the roadway but the added protection of boulder and rock cover.

Remnants of the area's agricultural past are found in the form of field patterns, stone walls, hedgerows, farmhouses, and barns. These landscape features play an important role in the continuing effort to selectively replicate the 1775 landscape of the Park.

CHAPTER THREE

NATIVE AMERICAN CULTURAL CONTEXT

The Native American presence in eastern Massachusetts has been well documented in general, but the locations, numbers and types of archaeological sites vary greatly from one location to the next. The body of data about pre-contact period (10,000–450 B.P.) land use in the Park and its vicinity is drawn from a combination of avocational and professional excavations completed over the past century. The information about known archaeological sites is used to infer patterns of land use and resource selection and to develop predictive models for identifying the types and locations of unknown prehistoric resources likely to be present in the same settings.

Archaeologists have identified the combined Sudbury/Assabet/Concord river drainage as a core of prehistoric Native American settlement in eastern Massachusetts. This region supported a range of ecosystems and diverse floral and faunal resources that attracted human populations over the past 10,000 years. Identified sites in the area span the entire period of prehistoric occupation in New England and include small, isolated activity areas as well as larger semipermanent habitation areas.

River drainages and related topographic features were strategic units of Native American resource collection territories and settlement systems. Rivers and streams served as important transportation routes, hunting/collecting/gathering catchment areas, and territorial boundary markers for Native Americans long before and following the arrival of Europeans. The Sudbury, Assabet and Concord rivers were numerous links in the interlacing system of streams and rivers that flow northeast and eventually meet the Merrimack River where it turns east near the present Massachusetts/New Hampshire border. Prehistoric Native Americans, either as small task-specific groups or nuclear or extended families, set up base camps, moved along the waterways extracting resources, and processed these resources for both immediate consumption and later use. Activities carried out at various locations within the combined Sudbury/Assabet/Concord drainage included procurement of lithic materials for manufacturing chipped- and ground-stone tools, making ceramic cooking vessels, hunting, trapping, and the collection and processing of economically useful plant species.

This chapter provides an overview of the broad processes of change in settlement and land use patterns in the region as well as a summary of identified prehistoric temporal/cultural periods. A discussion of the types and locations of currently identified sites archaeological sites within the Park is presented in Chapter 6.

Previous Prehistoric Archaeological Research

The combined Sudbury/Concord River drainage and the lower end of the Assabet River has been and still remains as one of the most intensely investigated Massachusetts river basins in terms of known prehistoric site locations and general land use patterns. A lengthy history of more than 100 years of antiquarian, avocational and professional archaeological interest has resulted in a substantial amount of data, mostly in the form of large artifact collections, and a small body of published material. Sources of information about prehistoric period land use and settlement can be divided into three general categories. These are extant artifact collections assembled by avocational archaeologists since about 1880, previous surveys and information about site locations/settlement patterns published before about 1965, and more recent site-specific excavations and surveys conducted by both avocational and professional archaeologists. While the quantity of available data is large, the quality of this data is variable. There are many known sites but not much detail about the actual size, content, or depositional/occupational histories of these sites.

The current archaeological database contains many sites first investigated and recorded by avocational archaeologists. Concord's long history of agricultural land use, especially plowing and cultivation, resulted in the identification of many site areas through artifacts that were exposed on the ground surface. Some of the most avid collectors were able to assemble collections of several thousand artifacts by concentrating on the larger, riverine zone sites that were under active plowing and cultivation well into the twentieth century. One of the earliest collectors was Henry David Thoreau, whose writings described artifact finds and local prehistoric sites such as the Clam Shell Bluff Site (19-MD-388). His collection is currently archived at the Peabody Museum at Harvard University and at the Fruitlands Museum. Thoreau's accounts attracted the interest of other antiquarians, and amateur collecting activity increased through the late nineteenth century. Other early collectors from Concord included Adams Tolman, Alfred Hosmer, Benjamin Smith, Warren Moorehead, and Joseph Bartolomeo. Some of these individuals were able to assemble collections of several thousand artifacts by concentrating on the larger sites along the Concord and lower Assabet rivers. Hosmer, Tolman, and Smith visited sites located within the Park in the North Bridge, Wayside, and Meriam's Corner sections of the Park. These artifact collections have been a valuable source of information for reconstructing the prehistoric settlement patterns of the area (Johnson and Mahlstedt 1982).

Archaeologist Warren Moorehead of the Robert S. Peabody Foundation completed a survey of the greater Merrimack River basin in 1930–1931 (Moorhead 1931). The area of study included portions of the Sudbury/Assabet and Concord drainages. Benjamin Smith, the leading avocational archaeologist in Concord at the time, contributed to the survey by preparing an overview of the prehistory of the Concord area based on his observations from many sites in the Southern Merrimack basin (Smith 1931). After conducting subsurface testing on some of the larger sites, Moorehead concluded that the prehistoric sites in this area had limited research potential. Previous, intensive collecting at the larger, multicomponent riverine sites was cited as one of the reasons for the low densities of artifacts found in subsurface testing (Moorehead 1931). Smith (1931) reported that more than 25,000 artifacts were in private collections from the Concord area at the time of the survey.

The first attempt to record prehistoric sites in this area was undertaken by members of the Massachusetts Archaeological Society (MAS), including Smith and Tolman, as part of a statewide survey in the 1940s. More than 100 sites were recorded in the area encompassed by the Concord USGS quadrangle alone, forming one of the largest concentrations of known prehistoric cultural resources in Massachusetts. Smith (1944) used some of the general patterns in the distribution of prehistoric sites observed during the course of the MAS survey to describe settlement/site selection criteria displayed by the known sites. In the early 1940s, a local chapter of the MAS carried out limited excavation at a large multicomponent site on the Sudbury River well known to local avocational archaeologists (Movius 1941). Information recorded from this site included a possible house floor outlined by post molds. A survey of prehistoric sites in the nearby Shawsheen River drainage completed by Ripley Bullen (1949) did not extend to the headwaters area near the present location of Hanscom Air Force Base and the Virginia Road section of the Park, but the data generated helped identify broader regional settlement patterns.

During the 1950s and 1960s, a dramatic increase in residential development in the outer Boston suburbs including Concord, Bedford, Sudbury, and Wayland resulted in the damage or destruction of many prehistoric sites and a loss of important information. Activity by avocational and professional archaeologists has increased since the 1970s, partly in response to increasing development pressures that threatened archaeological sites. The Ekblaw Chapter of the MAS, the Wayland Archaeology Group, and Concord Historical Commission have conducted a wide range of investigations including townwide reconnaissance surveys and excavations of specific sites (Blancke 1978, 1981, 1987, 1988, 1995a, 1995b; Hoffman 1979; Kerber 1985; Robinson 1980; Wayland Archaeology Group 1981).

A catchments analysis of prehistoric settlement patterns in the town of Concord evaluated the relationship between various environmental/locational characteristics and site locations (Casjens 1978). This study

used sites that had been located in the MAS survey of 1940–1941 and reached the same conclusions about site selection criteria outlined by Smith (1944). Other relatively recent evaluations have attempted to identify the range of historical/modern land use patterns that have destroyed or impacted many prehistoric sites, assess the research potential of the remaining prehistoric sites, and point out sources of data to counteract the bias in the currently available information (Ritchie 1980, 1983a).

CRM surveys completed in the last two decades have contributed important new regional information about the density and structural characteristics of prehistoric sites in both riverine (Bolian et al. 1982; Ritchie 1983b, 1985a; Towle 1984a) and upland settings (Mowchan 1988; Mowchan et al. 1987; Mowchan et al. 1989).

Prehistoric Settlement and Land Use in the Sudbury/Assabet/Concord River Basin, ca. 10,000 to 400 B.P.

The relatively large body of data available from the sources described above, together with paleoenvironmental data (see Chapter 2) can be used to document nearly 10,000 years of prehistoric Native American settlement patterns and resource uses in the lower Sudbury and Assabet and upper Concord River drainage. Table 3-1 presents a general outline of prehistoric cultural periods in the region and examples of known sites with temporally diagnostic components.

PaleoIndian Period (12,500–10,000 B.P.)

Following the retreat of glacial ice, which had covered nearly all of the northeastern United States, southern New England was populated by migratory bands of people collectively referred to as PaleoIndians. The early environment underwent various and rapid transformations as mean annual temperatures rose and the ice sheet retreated northward. Palynological research for southern New England demonstrates environmental conditions somewhat similar to those of the modern tundra followed the retreat of the glaciers. Tundra-like conditions were subsequently replaced by an open spruce woodland environment as early as 10,000 years ago (Thorson and McBride 1988). Spruce woodlands with red pine, larch, fir, alder and hornbeam formed the primary forest type in the region. Pollen grains recovered from soil sediment columns in Connecticut demonstrate the PaleoIndian landscape was populated by jack or red pine as well as birch and oak tree species in addition to tundra grasses and shrubs (Schoonmaker and Foster 1991).

The PaleoIndian populace of the region may have been socially organized in small bands, and equipped with a sophisticated and specialized lithic technology. Artifacts associated with this period include fluted Clovis projectile points, Eden points, scraping tools, gravers, and drills. Occupying the formative landscapes of postglacial New England, the highly mobile PaleoIndians practiced a diversified seasonal hunting and gathering subsistence, and ranged over great distances to exploit emergent floral and faunal resources associated with glacial lake margins (Nicholas 1988). PaleoIndian subsistence was based on these resources and likely included megafauna, medium-sized and small game, marine resources, and plant species (Dragoo 1976).

A few isolated diagnostic PaleoIndian projectile points are known from artifact collections in the region but no definite components or sites belonging to this temporal period have been identified to date. Examples include the Dakin Farm Site, where an avocational archaeologist found a Clovis-like point of red jasper. This site is located near the North Bridge section of the Park on the lower Assabet just above its confluence with the Sudbury River. A possible basal fragment of a fluted PaleoIndian point was collected from the Heard Pond Site in Wayland, and several other fluted points have been identified at sites in Concord (Blancke 1982; Wayland Archaeology Group 1981). It seems likely that sites of this earliest prehistoric time period are present, but have not been identified. Spiess and Wilson (1987) note

Table 3-1. Identified Prehistoric Sites Within the Sudbury, Assabet and Concord River Drainages in Massachusetts.

General Period	Site Name	Town	Drainage	Ecozone	Site Size	Site Type	Cultural Material/Diagnostics
PaleoIndian 12,500–10,000 B.P. (10,000–8000 B.C.)	Dakin Farm (19–MD–94)	Concord	Assabet	Riverine	Large	Base Camp	Clovis – like point
	Heard Pond	Wayland	Sudbury	Riverine /Wetland	Large	Multi–Comp	Basal Fragment of possible fluted point
	19–MD–77	Bedford	Concord	Riverine/ Meadow	?	Find Spot	Clovis–type fluted point
	Find Spot	Northboro	Assabet	Upland/ Wetland	?	Find Spot	Large flint knife (Paleo?)
Early Archaic 10,000–7500 B.P. (8000–5500 B.C.)	Heard Pond	Wayland	Sudbury	Riverine/ Upland	Large	Multi–Comp	Bifurcate – Base Point
	Davis Farm	Sudbury	Sudbury	Riverine	Large	Multi–Comp Base Camp	Bifurcate – Base Point
	Morse Farm	Wayland	Sudbury	Upland	Small	Temp Camp	Bifurcate – Base Point
	Hosmer's Rocks	Concord	confl. A,C & S	Riverine	Small?	Multi–Comp	Bifurcate – Base Point
Middle Archaic 7500–5000 B.P. (5500–3000 B.C.)	Charlestown Meadows	Westboro	Assabet	Upland/ Stream	Large	Multi–Comp Base Camp	Neville, Stark Points
	Hocomonco Pond 3	Westboro	Assabet	Upland/ Pond	Small	Multi–Comp	Neville, Stark Points
	Clam Shell Bluff (19–MD–103)	Concord	Sudbury	Riverine	Large	Multi–Comp Base Camp	Neville Points
	Castle Hill	Wayland	Sudbury	Riverine	Large	Multi–Comp Base Camp	Neville, Stark Points

Table 3-1. Identified Prehistoric Sites Within the Sudbury, Assabet and Concord River Drainages in Massachusetts.

General Period	Site Name	Town	Drainage	Ecozone	Site Size	Site Type	Cultural Material/Diagnostics
	Cedar Swamp 3	Westboro	Sudbury	Upland/ Wetland	Large	Multi–Comp Base Camp	Neville, Stark Points
	Hosmer's Rock	Concord	Confl. A, C & S	Riverine	Small	Multi–Comp Temp Camp	Neville Points
	Egg Rock (19–MD–104)	Concord	Concord	Riverine	Medium	Temp Camp	Neville Points
Late Archaic 5000–3000 B.P. (3000–1000 B.C.)	Vincent	Sudbury	Sudbury	Upland	Small	Burial	Susquehanna/Mansion Inn C_{14}3470 + 135 B.P.
	Mansion Inn	Wayland	Sudbury	Upland/ Pond	Large	Cemetery	Susquehanna/Mansion Inn
	Robin Hill	Marlboro	Assabet	riverine	Small	Multi–Comp Temp Camp	Brewerton, Point
	Charlestown Meadows	Westboro	Assabet	Upland/ Stream	Large	Multi–Comp Base Camp	Brewerton, Vosburg Points C_{14}4365 + 4290 + 280 B.P.
	Hocomonco Pond	Westboro	Assabet	Upland/ Pond	Small	Multi–Comp	Susquehanna, Atlantic
	Flagg Swamp Rockshelter	Marlboro	Assabet	Upland	Small	Multi–Comp Rockshelter	Vosbury, Brewerton–eared Points C_{14}4220 + 80 & 4070+ 60 B.P.
	Heard Pond	Wayland	Sudbury	Riverine/ Wetland	Large	Multi–Comp	Brewerton, Vosburg
	Cedar Swamp 3	Westboro	Sudbury	Upland/ Wetland	Large	Multi–Comp	Small Stem
	Davis Farm	Sudbury	Sudbury	Riverine	Large	Multi–Comp	Small Stem

Table 3-1. Identified Prehistoric Sites Within the Sudbury, Assabet and Concord River Drainages in Massachusetts.

General Period	Site Name	Town	Drainage	Ecozone	Site Size	Site Type	Cultural Material/Diagnostics
	Cold Brook	Sudbury	Sudbury	Upland/ Wetland	Small	Temp Camp	Small Stem
Terminal Archaic/Transitional 3600–2500 B.P. (1600–500 B.C.)	Weir Hill 3	Sudbury	Sudbury	Riverine	Small	Temp Camp	Orient Fishtail Points
	Hocomonco Pond	Westboro	Assabet	Upland/ Pond	Small	Multi–Comp	Steatite Vessel Fragments
	Cedar Swamp #3	Westboro	Sudbury	Upland/ Wetland	Large	Multi–Comp Fishing Camp (?)	Orient Fistail Points
Early Woodland 3000–1600 B.P. (100 B.C. 300 A.D.)	Clam Shell Bluff	Concord	Sudbury	Riverine	Large	Shell Mid	Meadowood Point
	Lobelia Beach	Wayland	Sudbury	Riverine	Medium	Temp Camp	Meadowood, Ceramics
	Hocomonco Pond 1	Westboro	Assabet	Upland/ Pond	Small	Multi–Comp Fish Camp	Ceramics Points
Middle Woodland 1650–1000 B.P. (300–950 A.D.)	Staiano	Wayland	Sudbury	Riverine	Medium	Fish Camp	Fox Creek Points, Dentate Ceramics, Burnt Rock Features
	Hocomonco Pond 1	Westboro	Assabet	Upland/ Pond	Small	Multi–Comp Fish Camp	Ceramics, Burnt Rock Features
	Mantatucket Rock (19–MD–105)	Concord	Confl. A, C & S	Riverine	Medium	Temp Camp	Ceramics
Late Woodland 1000–4500 B.P. (950–1500 A.D.)	Flagg Swamp Rockshelter	Marlboro	Assabet	Upland	Small	Multi–Comp Rockshelter	C_{14} 1270 + 100 B.P.
	Bartell's Farm (19–MD–120)	Concord	Concord	Upland/ Stream	Small	Temp Camp	Levanna

Table 3-1. Identified Prehistoric Sites Within the Sudbury, Assabet and Concord River Drainages in Massachusetts.

General Period	Site Name	Town	Drainage	Ecozone	Site Size	Site Type	Cultural Material/Diagnostics
	Heard Pond	Wayland	Sudbury	Riverine/ Wetland	Large	Multi–Comp	Levanna Points, Ceramic
	Weir Hill 2	Sudbury	Sudbury	Riverine	Medium	Temp Camp	Levanna Points
ProtoHistoric/ Contact 450–300 B.P. (1500–1650 A.D.)	Flagg Swamp Rockshelter	Marlboro	Assabet	Upland	Small	Multi–Comp Rockshelter	C_{14} 230 + 70 B.P.
	Okommakamesit Praying Indian Village	Marlboro	Assabet	Upland	?	Village	
	Dorchester Burial Ground	Marlboro	Assabet	Upland	Small	Cemetery	Human Skeletal Remains
	Mill Brook Weir	Concord	Concord	Upland/ Stream	Small	Fish Weir	
ProtoHistoric/ Contact 450–300 B.P. (1500–1650 A.D.)	Burial (19–MD–106)	Concord	Confl. A, C & S	Riverine	Small	Burial	Human Skeletal Remains, Pestle
	Hocomonco Pond 3	Westboro	Assabet	Upland/	Small	Multi–Comp	Cut Copper Point

that identified PaleoIndian sites in the Northeast tend to be located on sandy, well-drained soils in association with natural bogs and wetlands.

Early Archaic Period (10,000–7500 B.P.)

The Early Archaic Period was also characterized by changing environmental landscapes as sea levels rose and inundated coastal plains that may have been occupied during the PaleoIndian Period. The climate was becoming warmer and drier and was dominated by a mixed pine-hardwood forest. By about 8,000 years ago, an expansion of a temperate deciduous forest type composed of oak, maple, ash, birch and beech was present. Research indicates that Early Archaic social groups moved within established territories, practicing an increasingly generalized subsistence strategy based on river and lake systems and other physiographic zones (Nicholas 1987; Tuck 1974). Diagnostic tools for this period include the bifurcate-base projectile point.

The Sudbury, Concord, and Shawsheen drainages appear to have been core areas of Early Archaic activity in southeastern New England, although current information is limited to the distribution of diagnostic bifurcate base projectile points (mainly in artifact collections) and a few radiocarbon-dated features. Early Archaic bifurcate base projectile points showing a range of stylistic (and possibly temporal) differences have been found at several of the largest, multicomponent Archaic/Woodland Period sites in the riverine environmental zone. In particular, artifact collections from the Heard Pond Site in Wayland and the Davis Farm Site in Sudbury each contain several bifurcate base points chipped from both local quartzite and rhyolite or felsite from source areas in eastern Massachusetts. At least 16 bifurcate base or Kirk-like points are known from 10 find spots or sites located in the middle and lower section of the Sudbury drainage and the upper Concord River just below the confluence of the Sudbury/Assabet River. Most of these Early Archaic points were found by avocational archeologists; the Benjamin Smith collection contained half of the known bifurcate base projectile points (Ritchie 1984). It is still unclear whether the bifurcate base points surface collected from large sites near the Sudbury River represent Early Archaic depositions on those sites or isolated, discarded items.

Morse's Farm, a small site in Wayland that reportedly yielded a bifurcate base point is located outside the riverine environmental zone on an elevated kame delta. Some variation in the location of Early Archaic activities/potential site areas is suggested by this find spot and with additional information it should be possible to outline a basic settlement pattern for this time period.

Reconstruction of Early Archaic settlement at the largest sites in this core area is restricted to limited information derived from a few systematic excavations. However, it is apparent that Early Archaic groups left behind small, low-density depositions of cultural material and pit features that form the oldest components on some riverine sites. Two deep pit features radiocarbon dated to 8,460 ± 60 B.P. and 8,360 ± 80 B.P. were associated with a single bifurcate base projectile point and quartz and purple rhyolite debitage at the Heath Brook Site along the lower Shawsheen drainage (Glover and Doucette 1992:101). This small deposition may be typical of Early Archaic components on other large multicomponent sites in the southern Merrimack River basin.

Middle Archaic Period (7500–5000 B.P.)

The much larger number of known Middle Archaic sites relative to those of earlier time periods provides evidence of extensive use of the Sudbury/Concord drainage basin by 7000 B.P. and indicates that this area was a major focus of Middle Archaic activity in eastern Massachusetts. This drainage has been identified as one of several important concentrations within the southeastern New England region (Dincauze and Mulholland 1977:440–441).

A major ecotonal boundary was established in central Massachusetts between about 8,000 and 6,000 B.P. marking the northern limit of the oak dominant forest of southern New England and the northern hardwood/coniferous forest. This boundary was located in proximity to the headwaters of the Nashua, Assabet, and Sudbury rivers, which form the southern limit of the greater Merrimack basin (Gaudreau and Webb 1985). Many riverine zone sites in the middle/lower Sudbury, upper Concord, and Shawsheen drainages contain evidence of intensive or repeated occupation beginning in the Middle Archaic Period. Settlements appear to have been focused along the broad river meadow/marshes and other wetland environments that developed in former postglacial lake basins in these drainages. Middle Archaic sites are common around falls, rapids, major river drainages, wetlands, and even coastal settings (Bunker 1992; Dincauze 1976; Doucette and Cross 1997; Maymon and Bolian 1992). The clustering or focus of Middle Archaic settlement in the riverine zone with wetlands and marsh areas may be related in some way to the onset of warm, dry (Hypsithermal) climatic conditions after about 7,500 B.P. The river meadow/marsh environment may have provided a more diverse and predictable resource base (waterfowl, anadromous fish, plants) in contrast to upland areas.

Indications of a fairly intricate settlement pattern are emerging from the distribution of Middle Archaic components in a variety of riverine and upland environmental settings and they range in site size and internal complexity. Several small, possibly single component sites identified in the past two decades in upland settings contrast sharply with the previously known larger riverine zone sites (Ritchie 1982). The functional diversity evident in probable Middle Archaic tool assemblages from both large and small sites in various settings may be evidence of the development of seasonal rounds within river drainage territories that has been described in other drainage systems in eastern Massachusetts (Dincauze 1976:136–137; McManamon 1978:30–31).

Chipped- and ground-stone tools such as gouges, semilunar knives, whetstones, biface preforms, choppers and plummets, in addition to Neville, Stark and Neville variant projectile points, have been recorded from avocational excavations at several sites in the Sudbury drainage (Carlson 1964; Fowler 1950). Neville and Stark projectiles comprise the most frequent point types collected from the Watertown Dairy Site in Wayland (Largy 1983; Ritchie 1995). A total of 188 Neville and Stark points was collected from the Heard Pond Site, also located in Wayland (Anthony et al. 1980:27–28). Another large assemblage of 63 Neville and 23 Stark points were recorded in a private collection from the Heath Brook Site in Tewksbury (Glover and Doucette 1992:57–60). The Asparagus Experimental Station (19-MD-86) and Hosmer's Rock (19-MD-103) sites are good examples of riverine zone sites with Middle Archaic components located in close proximity to the Park. The group of 21 Neville and Stark points from the Asparagus Experimental Station Site in the Ben Smith collection is one of the largest known assemblages of Middle Archaic material in the region. The Bartell's Farm Site (19-MD-20) along upper Elm Brook is one of the few upland zone sites with evidence of Middle Archaic activity.

Identified Middle Archaic chipped-stone tools were made primarily from local lithic materials such as Westboro formation quartzite, amphibolite schist, and crystal tuff as well as argillite and rhyolite from the northern Boston basin and Middlesex Fells area (Ritchie 1979). Some of these materials were quarried from local bedrock outcrops in upland sections of the Sudbury/Assabet drainage and demonstrate that Middle Archaic populations were making extensive use of local resources. Many ground stone tools such as gouges were made from Braintree Slate, a hornfels obtained from a source area in the Blue Hills. The functionally diverse assemblages of chipped- and ground-stone tools, including bifaces, scrapers, drills, gouges, and semilunar knives collected at some riverine sites suggest they were central points of core settlement areas. Adjacent uplands also provided numerous resources used during the Middle Archaic Period.

The known distribution of Middle Archaic sites in a variety of riverine and upland environmental settings suggests the settlement pattern was fairly complex (Ritchie 1982). Despite intensive activity, features such as hearths and pits dating to the Middle Archaic Period are relatively infrequent at large riverine

settlements. A radiocarbon date of 6680 ± 170 B.P. obtained from a small feature at the Watertown Dairy Site in Wayland is one of the few associated with Middle Archaic activity (Ritchie 1995).

Many of the large and complex multicomponent sites in the Sudbury, Assabet, and Concord River drainages appear to contain evidence of recurrent occupation that began during the Middle Archaic Period. Locations near riverine wetlands such as the Davis Farm and Weir Hill 5 sites in Sudbury, Watertown Dairy and Sand Hill sites in Wayland, Pine Hawk Site in Acton, and the Sewer Bed and Clamshell Bluff sites in Concord contained evidence of significant Middle Archaic occupation in the combined Sudbury/Concord/Assabet drainage (MHC site files, Ritchie 1985b). Data recovery excavations at the Pine Hawk Site documented multiple short-term occupations during the Middle Archaic Period and lithic assemblages similar to those identified at the Watertown Dairy Site (Waller and Ritchie 2001).

Late (5000–3000 B.P.) and Transitional (3600–2500 B.P.) Archaic Periods

There was a gradual change in the composition of the southeastern New England forests approximately 4700 to 3000 B.P., as hemlock declined and a diverse, oak dominant forest with hickory, beech, yellow birch, and a number of other deciduous tree species developed (Gaudreau and Webb 1985). A period of gradual climatic cooling commenced after about 4000 B.P. and continued for the next millennium. This period may have been a general episode of environmental stabilization when hunter-gatherer populations in southern New England developed settlement and subsistence strategies based on intensive, localized resource use within defined group territories (Dincauze 1980).

Prehistoric sites that can be affiliated with various Late Archaic cultural complexes show the greatest frequency and widest distribution in different environmental zones than sites of any other time period. Surface collections from the larger, multicomponent sites along the Sudbury River drainage invariably contain projectile points considered to be diagnostic of the three major cultural traditions (Laurentian/Brewerton-Vosburg, Small Stem Point, Susquehanna) within the Late Archaic Period. The Ben Smith collection contained Late Archaic projectile points of various types from 73 sites in the Sudbury/Assabet/Concord River drainage. More than 80 percent of the sites investigated by Smith that could be placed in any temporal period contained Late Archaic components (Johnson and Mahlstedt 1982:11).

Settlement and resource use patterns of the local cultural complexes representing the Laurentian tradition are poorly known. Characteristic Otter Creek, Vosburg, and Brewerton series projectile points tend to appear mostly on sites also used by earlier Middle Archaic hunter-gatherer groups for exploiting the riverine wetland environmental zone. More substantial depositions of Laurentian affiliated cultural material have been found on sites in the headwaters area of the Sudbury and Assabet River drainages. At the Charlestown Meadows site in Westborough, radiocarbon dates ranging from 5225 ± 195 to 4305 ± 165 years B.P. have been obtained from depositions containing both Middle Archaic (Neville and Laurentian tradition (Vosburg, Brewerton series) projectile points (Hoffman 1984). A similar radiocarbon date of 5130 ± 70 B.P. was returned from feature charcoal from the Heath Brook Site indicating a possible Middle to Late Archaic origin (Glover and Doucette 1992).

Recent excavations at the Pine Hawk Site in Sudbury provided additional documentation of Laurentian tradition components in the region. The site contained several Brewerton Eared projectiles, two lithic workshops, and fire pits and other features that were dated between 4440 and 4170 B.P. (Waller and Ritchie 2001).

The most diversified patterns of settlement and resource use are illustrated by the frequency and spatial distribution of Late Archaic Small Stemmed tradition sites and components. Some large, riverine zone locations also used by earlier groups (Neville/Stark, Brewerton). The Heard Pond Site in Wayland and

the Davis Farm Site in Sudbury were probably base camps judging from the large numbers of diagnostic projectile points (Squibnocket Triangle, Small Stemmed) picked up there by collectors. The Ben Smith collection contained more than 60 Small Stemmed points from the Davis Farm Site (Johnson and Mahlstedt 1982:11). Riverine wetland zone resources were also exploited from many other smaller site locations oriented to tributary streams and wooded wetlands.

An early date of 4600 B.P., likely associated with a Laurentian or Small Stemmed Point occupation, was recorded at the Clam Shell Bluff Site in Concord (Blancke 1995b). Other Late Archaic features in the middle Sudbury drainage have been radiocarbon dated to 4,480 ± 110 B.P. and 4,100 ± 155 B.P. and between 4,520 and 4,100 B.P. at the Castle Hill and Sand Hill sites, respectively (Dimmick and Gardescu 1991). The Sand Hill Site also contained features from a second, somewhat later episode of Late Archaic occupation radiocarbon dated to between 3,720 and 3,600 years ago.

Radiocarbon dates from the Pine Hawk Site on the Assabet River in Acton, clustered between about 5,000 and 3,900 years ago, indicates episodes of brief, but recurrent occupation during the Late Archaic Period (Waller and Ritchie 2001). At the Heath Brook Site in the Shawsheen drainage, a similar pattern of frequent reuse of riverine and wetland margin locations was suggested by hearth/fire pit features, deposits of burnt rock fragments, and oxidized subsoils that were dated to 3,840 ± 100 B.P. and 3,290 ± 60 B.P. (Glover and Doucette 1992).

Some potential single component sites recently identified in the area between the Sudbury and Assabet River drainages also show that small groups of Native Americans were exploiting upland zone resources. Utilization of many different plant/animal species is suggested by the distribution of small, resource extraction type sites along the edges of streams, bogs, and kettle hole swamps (Ritchie 1983a:89). Upland zone resource exploitation was clearly documented at the Flagg Swamp Rockshelter in the nearby Assabet River drainage (Huntington 1982). The association of an Atlantic point from a feature with a radiocarbon date of 4,200 ± 120 B.P. suggests an early use of this site during the Susquehanna tradition. A slightly later occupation is indicated by dates of 3500 ± 70 B.P. and 3490 ± 90 B.P. from contexts with both Atlantic and Susquehanna Broad/Wayland Notched points. Use of this rockshelter may have occurred in the fall/winter based on faunal remains (deer, fish) present in the deposition containing Susquehanna tradition artifacts (Huntington 1982:158).

In general, the distribution of Small Stem Point components seems to correspond well with some models of Late Archaic settlement systems that suggest hunter-gatherer groups occupying relatively small territories developed subsistence strategies based on exploitation of a broad spectrum of resources. Microenvironments within these territories not used by earlier and later cultural groups appear to have been important to Small Stemmed tradition hunter-gatherers for the resources they contained. An extended period of gradual environmental change affecting the size, structure, and vegetation pattern in wetlands in the southern New England region from about 4,000 to 3,000 years ago may have affected Late Archaic settlement/subsistence systems (Dincauze 1980; Ritchie 1983a:89–91; Thorbahn 1982:6–21).

Three sites in the Sudbury/Concord River drainage containing Late Archaic cremation burials, the Mansion Inn cemetery (Wayland), the Vincent Site (Sudbury), and the Call Site (Billerica) were used to help define the Susquehanna tradition in southern New England. The Vincent Site was a single, isolated example of the cremation burial pits that were identified at the much larger Mansion Inn cemetery; a radiocarbon date of 3470 ± 125 years B.P. was associated with the Vincent cremation burial feature. The Call Site contained a group of cremation burial features belonging to an early Susquehanna tradition phase (Atlantic phase). Burned artifacts recovered from cremation burials on these sites show that Susquehanna tradition hunter-gatherers were using a diversified tool kit of hunting (projectile points, bifacial knives), woodworking (full grooved axes, adzes, gouges, whetstones), and processing (pestles, scrapers, hammerstones, soapstone cooking vessels) equipment. More recent archaeological

investigations at the Millbury III Site near Worcester have provided additional data about the complex mortuary rituals associated with this period (Leveillee 1998).

From a review of various artifact collections, it is obvious that Susquehanna tradition groups concentrated their resource exploitation activities in the riverine wetland environmental zones. Several sites containing bifacial preforms and Wayland Notched points like those from the Mansion Inn cemetery have been found in upland areas between the Sudbury and Assabet Rivers (Gallagher et al. 1985). The Black Rabbit Site (19-MD-587) is a moderate sized (ca. 1,100 sq m) Susquehanna tradition camp probably created during a single seasonal hunting/collecting episode in the headwaters of the Shawsheen River. This site is located north of the Virginia Road section of the Park (Mowchan et al. 1987). The Hartwell Farm Site (19-MD-119), located a short distance north of the Park on Elm Brook contained a Susquehanna tradition component marked by Atlantic and Susquehanna Broad-like projectile points.

Many of the same riverine site locations with Susquehanna tradition components were also used by Terminal Archaic/Early Woodland Period hunter-gatherers for the next six or seven hundred years, ca. 3200 to 2500 B.P. Diagnostic Orient Fishtail and some Early Woodland Meadowood projectile points have been recorded in collections from some of the large riverine zone multicomponent sites in the Sudbury/Concord River drainage. The most intensive occupations were at sites that were utilized as fishing stations during the Middle to Late Woodland periods. Terminal Archaic activity is indicated by a small group of Orient-like points at the Concord Shell Heap Site (19-MD-388) (Blancke 1995b:41, 52).

While most of the known Terminal Archaic components are in the riverine zone, a few find spots of Coburn-like or Orient Fishtail projectile points along the upper sections of various tributary streams suggest that there is an upland aspect of Terminal Archaic settlement/resource use that has not been recognized (Ritchie et al. 1990).

Early Woodland Period (3000–1600 B.P.)

The Woodland Period (3000–450 B.P.) was a time of continued dynamic development for Native Americans. The archaeological data suggest that during this period a distinct but gradual diversification of food sources persisted, along with an increased reliance on shellfish and domestic plant cultivation, the refinement of pottery manufacturing, and eventually semipermanent coastal and near-interior settlement. Like the Archaic Period, the Woodland Period can be subdivided into Early, Middle, and Late periods.

The Early Woodland Period in southern New England is generally underrepresented in the regional archaeological record, which has been interpreted by some archeologists as a possible indicator of population decline (Dincauze 1974; Lavin 1988). However, a suspected decrease in Early Woodland population based solely on the perceived archaeological evidence, may be more apparent than real. Positive identification of Small Stemmed projectile point forms in archaeological depositions yielding radiocarbon dates falling within the span of the Woodland Period indicates that Early Woodland archaeological assemblages are likely being misidentified as Late Archaic assemblages.

The identification of Early Woodland site locations has traditionally relied on the presence of diagnostic Meadowood, Lagoon, and Rossville projectile points and Vinette I type ceramics. The earliest ceramic vessels consisting of thick bodied wares with cord-marked exterior surfaces and burnt-rock temper (Vinette I type) apparently were in use during the Terminal Archaic to Early Woodland transition. A radiocarbon date of 3315 ± 90 B.P. associated with Vinette I sherds from the Eddy Site in Manchester, New Hampshire provided good evidence for early ceramic manufacture in the Merrimack River basin (Kenyon 1986).

Given the problems inherent in using projectile points alone as temporal indicators of Early Woodland sites, the presence of early ceramics in conjunction with point styles is used to determine Early Woodland

Period occupation in the absence of radiocarbon assays. For example, a large pit feature with quartz and rhyolite chipping debris on the Weir Hill #1 Site in Sudbury, first assumed to be of Late Archaic provenience based on artifact types, was radiocarbon dated to 2,950 ± 100 B.P. placing its construction and use within the Terminal Archaic/Early Woodland Period (Ritchie 1985b).

The apparent low frequency of Terminal Archaic/Early Woodland Period sites in interior areas like the Sudbury/Assabet/Concord drainage is also probably because of the traditional reliance on certain projectile point types as indicators of sites dating to this period. The small sample of four Meadowood and four Rossville points within the collection assembled by Ben Smith from numerous sites is a good example of the relative scarcity of these artifact types (Johnson and Mahlstedt 1982). Avocational archaeologists have collected transitional Archaic Orient Fishtail and Early Woodland Meadowood type projectile points from some large, riverine sites such as the Heard Pond, Rice Farm and Weir Hill 3 sites in Wayland and Sudbury. Early Woodland depositions containing Orient Fishtail, Small Stemmed points and small amounts of ceramic sherds at the Cedar Swamp #3 Site in Westborough have been dated between 2650 and 2170 B.P. (Hoffman 1985, 1986:10). Similar deposits have been identified at the Sand Hill Site in Wayland (Dimmick and Gardescu 1991).

Middle Woodland Period (1650–1000 B.P.)

An expansion of settlement patterns throughout the Merrimack River basin, relative to the preceding Early Woodland Period, is evident from the number and distribution of Middle Woodland site components. Consistent with patterns recognized throughout New England, this was a period of apparently increasing population and intensive long-distance interaction. A study of Merrimack Valley Middle Woodland ceramics indicated that the drainage became a single, homogeneous interaction unit toward the end of the Middle Woodland Period (Kenyon 1983). Studies have shown that late Middle Woodland components are marked by a high percentage of exotic lithics, and that the distribution of these lithics (particularly Pennsylvania Jasper) is directly associated with Jack's Reef components dated between 500 and 800 A.D. (Goodby 1988; Luedtke 1987; Mahlstedt 1985).

In the middle and lower Sudbury River drainage, most of the site locations used during the Terminal Archaic/Early Woodland Period continued to be staging points for Middle Woodland resource exploitation, however, there was also a significant reuse of other sites that had been occupied during the Middle and Late Archaic. The Watertown Dairy Site in Wayland seems to be an example of this pattern; evidence for Terminal Archaic/Early Woodland occupation is minimal, but a definite Middle Woodland activity area containing ceramic sherds, turtle bone, and chipping debris has been identified (Largy 1983:104).

At the Staiano Site in Wayland, evidence of intensive resource processing activity by Middle Woodland groups has been documented. Three large circular burnt rock features about 2 to 3 meters (m) in diameter appear to have been used for smoking and/or drying fish. The site is situated in a section of the Sudbury River known historically as the location of fishing weirs (Weir Hill, Weir Meadows) (Hudson 1889:45–49). Diagnostic Middle Woodland or early Late Woodland material associated with these features included dentate-stamped ceramic sherds, a Fox Creek-like biface/knife, and a Levanna point. Four radiocarbon dates ranging from 1610 to 640 B.P. were obtained on charcoal from these features (Blancke 1978:176–177). The Hocomonco Pond #1 Site in Westboro contained several large (ca. 2 m), circular burnt rock features with ceramic sherds and some non-local lithic material (chert) that also appear to have been used by Middle Woodland groups for intensive resource processing such as smoking or drying fish. Similar large, burnt rock features have been reported in Middle and Late Woodland contexts at the Wheeler's, Shattuck Farm, and Garvin's Falls sites on the Merrimack River (Barber 1983; Luedtke 1985; Starbuck 1985). The location of all of these sites suggests that these features were directly related to the harvesting and processing of anadromous fish.

Middle Woodland components on several sites in the Cedar Swamp Archaeological District (Westborough) are radiocarbon dated to between 1230 and 970 B.P. (Hoffman 1987). These components provide evidence of activity in elevated, upland terrain as well as the riverine floodplain environmental zone along the lower Sudbury River drainage. A few small Middle Woodland sites have been found near tributary streams in upland settings between the Sudbury and Assabet rivers and settlement patterns were probably more diversified than generally indicated by the available site inventory (Gallagher et al. 1985). Known Middle Woodland components in the upper Concord River drainage are mostly restricted to the riverine zone and include the Punkatasset Field (19-MD-81), Poplar Hill (19-MD-88), and Old Manse (19-MD-89) sites that are in or near the North Bridge section of the Park.

Late Woodland Period (1000–450 B.P.)

The Late Woodland Period is associated with an increase in ceramic production following improvements in ceramic technology. Traditional views hold that population growth, increased sedentism, and village formation followed the adoption of horticulture, however increased sedentism and aggregated settlements such as villages could have occurred independently of the adoption of horticulture, especially in coastal or estuarine environments that support a reliable fish and shellfish subsistence base (McBride and Dewar 1987). Other researchers believe that village formation and intensive maize horticulture were essentially riverine developments during the Late Woodland Period (Bendremer and Dewar 1993). Artifacts diagnostic of the Late Woodland Period include large and small triangular Levanna and Madison style projectile points and cord-wrapped, stick-impressed, and incised ceramic vessels. Diagnostic Levanna projectile points were most often made of quartz and quartzite, with lesser amounts of Boston Basin-derived materials.

Middle and Late Woodland settlement patterns in the Sudbury drainage appear to be fundamentally similar, with a possible reduction in resource exploitation territories during the Late Woodland Period. Some of the same Middle Woodland riverine zone site locations along the Sudbury drainage such as Baldwin Pond (Wayland Golf Course, loci 1 and 2), Weir Hill #3 (Sudbury), and several areas around Heard Pond (Wayland) were probably used as Late Woodland fishing stations. The confluence of the Sudbury and Assabet rivers seems to have been a focal point of Late Woodland activity; possibly for fishing at shallow rifts or narrows suitable for the construction of weirs or other fish traps. There may be a concentration of Late Woodland components on sites at the confluence and downstream from this area near the North Bridge section of the Park.

Diagnostic Levanna points in several collections were made of local quartzite and quartz with lesser amounts of Boston Basin derived felsite, rhyolite, and hornfels. A similar shift to more use of local lithic material from the Middle to Late Woodland has also been recognized as a subregional pattern and was interpreted as evidence of increasing emphasis on local resources during the Late Woodland (Dincauze 1974:51; Goodby 1988).

No substantial Late Woodland components are known from large riverine zone sites in the middle to lower Sudbury, Assabet, and upper Concord drainages. A possible exception is the Heard Pond Site in Wayland, which was well situated for fishing near the outlet of this pond to the Sudbury River. A few Levanna type projectile points or ceramic sherds usually represent late Woodland activity at large riverine sites. These limited depositions of Late Woodland artifacts indicate brief occupations of these sites by small groups of people.

Upland zone sites from the late Native American period are rare and only a few have been identified in Sudbury and Concord (Ritchie et al. 1990). A good example of a small upland zone camp was identified at the headwaters of Elm Brook in Concord. The Bartell's Farm Site contained 13 Levanna points, one of the largest known assemblages of Late Woodland points from any non-riverine location in the region (Johnson and Mahlstedt 1982). Another small upland zone camp possibly associated with a planting field

may have been identified near Bateman's Pond. At the Blue Salamander Site a small area with surviving remnants of what may be Late Woodland or contact period corn hill features and a Levanna point were found on a hilltop overlooking the pond (Garman et al. 1996).

A human burial with a stone pestle at Site 19-MD-106, and two other burials from Site 19-MD-107 are likely to be of Late Woodland period origin. Both sites were on Nashawtuc Hill at the confluence of the Sudbury and Assabet rivers. The Poplar Hill Site (19-MD-88) contained a complex of hearth features possibly representing a house floor or dwelling and four burials that could belong to the late prehistoric period. The Mill Brook Site (19-MD-135) in Concord center was a fishweir known to have been in use during the contact period, it was most likely a focus of Native American activity in the preceding Late Woodland Period (MHC site files).

Contact Period (450–300 B.P., 1500–1650 A.D.)

The contact period is defined by the initial arrival of Europeans and the earliest period of Euro-American settlement, as well as by the increased interaction between Native and non-Native groups. The Sudbury/Concord River drainage was a traditional territorial boundary between the more coastal lowland oriented Massachusett Indians and the Nipmuc, a group that occupied the upland interior areas between this drainage and the Connecticut River valley. The lower Concord drainage around the Merrimack confluence appears to have been the southern end of a territory occupied by the Pennacook-Pawtucket Indians or under their influence (Leavenworth 1999; Stewart-Smith 1998).

In spite of reasonably good evidence for Late Woodland activity in most of the Sudbury River drainage, contact period archaeological components or sites have not been identified. Several traditional land holdings, including one on the fall line on the Sudbury River at Saxonville described in a mid-seventeenth-century deed, were being used for spring fishing and for planting fields (Temple 1887). Several locations including Nashawtuc Hill (Assabet/Sudbury River confluence) and a fishing weir on Mill Brook (Concord center) have been cited as locations of contact period settlements. Burials identified by avocational archeologists in the Nashawtuc Hill area and on Poplar Hill (North Bridge area) may be late prehistoric or contact period interments.

Post-contact Period Native American Settlement and Land Use

Descriptions of early to mid-seventeenth century Native American groups in the region come primarily from Euro-American observers and secondary sources such as town histories. The most complete documentary information about the Massachusett and Nipmuc people who occupied the areas west and south of Boston during this period comes from Christian missionary John Eliot and his supporters. Eliot became actively involved in attempts to organize Native Americans into residential settlements to encourage the abandonment of Native lifeways and the adoption of English culture. The Massachusetts General Court encouraged the mission as a mechanism to control Indian land tenure and supported Eliot's efforts by granting tracts of land for Indian plantation, also known as "praying towns." Native people were encouraged to live in these settlements, located away from growing colonial towns, and were considered subject to government regulation.

The Native people who lived in the area of the current Park referred to it as Musketaquid, an Algonquin name translated as "grass-ground river" or "meadow river." Once the missionary movement was established in the region, Native people were encouraged to live in the "praying town" settlements at Wamesit (present-day Lowell), Nahoba and elsewhere.

Eroding relations between the English settlers and the Native residents erupted into armed conflict in 1675 with the outbreak of King Philip's War. Violent attacks caused colonists to fear unprotected settlements, and those Native people living in the "praying towns" were subject to attack as well. The

perpetual fear of Indian attacks prompted the Massachusetts government to force the "Christianized" Indians to Deer Island in Boston Harbor, where they spent a terrible winter with few resources.

By the end of King Philip's War in 1676, most of the Native American groups in eastern Massachusetts had been dispossessed of their ancestral homelands, contributing to the myth of Indian "disappearance" that survives today. In fact, Native people continued to live in the region and to maintain kin connections, while operating within larger sociopolitical systems dominated by non-Natives.

CHAPTER FOUR

HISTORIC PERIOD CULTURAL CONTEXTS

The Park stretches across the towns of Concord, Lincoln, and Lexington and while linked by regionally and national significant events, these communities also have their own unique history. The first sections of this chapter present a brief historic period chronology for each town. Broader historic contexts, including those related to the start of the Revolutionary War, the colonial period, and nineteenth-century agriculture are presented after the town-specific contexts.

Historic Period Development

Concord

The area now known as Concord, Massachusetts was originally a 6-mile square tract of land known as Musketaquid (Table 4-1). Purchased by a group of English proprietors in 1635, the original settlement consisted of only 10 to 12 families. This early seventeenth-century plantation became a frontier town, the first of its kind that was not located along the coast (Barber 1839). Colonists initially occupied the area along Mill brook north of the Commons and along the Concord River as a clustered settlement with outlying fields and common lands (MHC 1980a). Early farmsteads were located on level to slightly sloping ground composed of rich glacial outwash soils (Koteff 1963).

Economic activities during the seventeenth and eighteenth centuries focused on agricultural and small-scale industries. A large portion of Concord's land next to rivers was meadowland suitable for conversion to farmland (Gross 1982) (Figure 4-1). Agricultural pursuits consisted of farming, cattle raising, the production of dairy products, as well as the establishment of orchards.

A few major roads were established in the seventeenth and early eighteenth centuries, providing connections with the developing urban core of Boston. A radial system of roadways extending to the north (Carlisle, Lowell), east (Bedford, Lincoln), south and west (Acton, Sudbury) originated in the center of Concord. A distinct nucleus of settlement formed at the town center. A mix of residential and commercial structures, including taverns, banks, and merchant or artisan/craftsmen's shops were located here. A courthouse was established in the town by 1721. Saw- and gristmills were established to provide lumber and process grain for local use. Brick, tar, and iron were also produced in Concord. As a result of this steady economic growth, the population grew through the eighteenth century (MHC 1980a).

The town of Concord was a center of activity during the Revolutionary War (see discussion below). It was the site of one of the first battles between British regulars, and militiamen from Concord and adjoining towns. Concord was also the site of a meeting of the provincial congress in 1774 (Barber 1839).

Throughout the Revolutionary War, Concord played an integral role in many aspects of the Colony’s defense. It first experienced a major population boom when townspeople evacuated from Boston and fire-ravaged Charlestown sought refuge in Concord. The town also received the students and faculty of Harvard College in 1775–1776, while soldiers used their school as barracks. By mid-March 1776, the population of Concord had increased by more than 25 percent in just more than a year. All of this put a severe strain on the town’s economy and available supplies. When the war was over, the population of the town of Concord had been reduced by 25 percent.

Table 4-1. Historical Cultural Chronology for Concord, Lincoln, and Lexington, Massachusetts.

General Period*	Cultural Aspects/Diagnostic Cultural Materials
Contact & Plantation 1500–1675	Initial European exploration and contact with Native American population. Native core areas established along major river drainages (e.g., Concord, Assabet, Sudbury, and Shawsheen) connected by extensive overland trail system. Major native trail network intersected at confluences of Concord and Sudbury (Concord) and Charles and Sudbury (Lincoln) rivers, with branches extending in many directions. Local rivers provided seasonal fishing, diverse terrain offered hunting, gathering, and agricultural opportunities for the dense aboriginal settlements in this area. Extensive immigration of Puritan settlers to newly established permanent settlements beginning with coastal towns (e.g., Plymouth 1620 and Boston 1630) then moving inland to establish plantations (e.g., Mustketequid, including Concord and Lincoln, in 1635). Increasing interaction introduced European diseases and material culture, altered native culture and society, and lead to encroachment on native lands. Agriculture, seasonal fishing, and small local industry formed basis of colonial economy. Waterways and native trails provided major transportation routes. Colonial settlement pattern expanded from concentrated at meeting houses to include scattered farms and mills. Majolica, early tin-glaze earthenware, Rhennish and Bellarmine stonewares predominate ceramic assemblage. Pipestems with mean bore diameter of 7-9/64ths inch. Handwrought nails only. Freeblown glass bottles, pontil scar, no mold mark.
Colonial 1675–1775	European settlement and expansion in area virtually unaffected by King Philip's War (1675-76), continued. Agriculture and raw material collection remains principal economic activity in the towns. Industrial pursuits, including grist, saw, and fulling mills, and briefly an iron works, processed and produced goods for local consumption. Concord developed from a frontier town into a regional center. Lexington, once part of the north precinct of Cambridge, was established as a separate town in 1713. Lincoln split off from Concord as new town in 1754. The Census of 1765 listed 1,664 residents of Concord, 646 in Lincoln, and approximately 900 in Lexington. Massachusetts colonists, angered by British economic restrictions (e.g., Stamp Act 1770, Townshend Acts 1767), rebelled in Boston Massacre (1770), Boston Tea Party (1773), and finally started fighting at Lexington and Concord (April 19, 1775). Imported tin-glaze earthenware, white salt-glaze, English brown, Westerwald and scratch-blue stonewares. Imported and domestic redwares. Mean pipestem bore diameter of 4-6/64 inch. Handwrought nails only. Freeblown and molded glass bottles.
Federal 1775–1830	Following the Peace of Paris (1783) ending Revolutionary War, population in Concord and Lexington grew slowly, while that of Lincoln declined slightly. The economic base of all three towns remained primarily agricultural, with an emphasis on corn, flax, hay, and livestock. Industries included: lumbering and sawmills, quarrying, and a small glass factory in Lincoln, a cotton and a lead pipe factory in Concord, and manufacture of fur garments and footwear in Lexington. Colonial highways remain, with improvements in form of Cambridge (Route 2A) and Concord (Route 2) turnpikes. Creamware and pearlware predominate ceramic assemblage. Handpainted and transfer print decorated. Small bore diameter (4/64 in.) pipestems. Both handwrought and machine cut nails. Post 1810 3-piece molded bottles introduced. First tin cans (post 1819).

Table 4-1. Historical cultural chronology for Concord, Lincoln, and Lexington, Massachusetts (continued).

General Period*	Cultural Aspects/Diagnostic Cultural Materials
Early Industrial 1830–1870	Introduction of railroads (1844, the Fitchburg railroad from Boston in Concord and Lincoln; 1846, a commuter railroad in Lexington) revolutionized regional transportation network. With the arrival of the railroad came a change from production of agricultural products solely for local markets to exportation of these products to Boston and other markets. Milk and fruit (in Concord Bull developed the Concord grape) were the major agricultural products exported. Unlike many Massachusetts communities, these three towns did not experience the full impact of changes brought by the Industrial Revolution. Concord and Lexington both experienced an increase in population, primarily due to Irish immigrants, while Lincoln's population remained relatively stable through the period. A prominent group of writers and transcendentalists (Emerson, Thoreau, Hawthorne, Alcott, etc.) were attracted to Concord beginning in the 1830s. Pearlware, hard white earthenware, yellow ware, and domestic stoneware most common. Transfer print design technique predominates. Machine-cut nails predominate. Two-piece mold bottles replace 3-piece mold bottles (post 1840). Snap-case bottle bottom finish, no pontil scar (post 1857). Mason jar patented 1858. 1867 lettered panel bottles introduced. Pressed or sandwich-type glass (post 1827). Condensed milk can patented 1856. Vulcanization process patented by Goodyear (1839) resulted in increased production of rubber products.
Late Industrial 1870–1915	Technological developments resulted in major changes (e.g., steam power, electrification, gas lighting, etc.). Development of urban and interurban mass transportation, street railways (i.e., streetcar routes in Concord and Lexington by early 1900s). Country estates and some suburban development began in all three towns by the end of this period. Arrival of large numbers of immigrants, especially from Ireland, Italy, Norway, and Nova Scotia. There was a gradual increase in population in all three towns with minor fluctuations. By 1915 the population of Lexington exceeded 5,000. Market gardening and greenhouses were present in all three towns, forming an important part of Lincoln's economy. West Concord developed as an industrial village around the freight depot and pail factory. A paint factory, leather factory, and gas works were located in Lexington. Hard white earthenware predominates ceramic assemblage with yellow ware and domestic stoneware. Machine-made bottles most common. Semi-automatic bottling machine (post 1881); replaced by fully automatic machine made bottles (post 1903). Hutchinson stopper (post 1872/9); canning jar closure (post 1875); crown bottle cap (post 1892). In 1904 the double-seamed tin can was introduced.
Modern 1915–present	Introduction of automobile and major improvements in automobile transportation network (e.g., Routes 2, 2A, 117, 126, and 128). Agriculture remains important in town economies with market gardens and dairies shipping produce to urban areas. Bedford Airport (Hanscom Air Force Base) created in 1940s with growth of associated industrial zone. Development, both commercial and residential, along improved transportation corridors. New industries located in West Concord, including a foundry, garnett mills, manufacturer of elastic webbing, and Allen Chair Company. Hard white earthenware, stoneware, porcelains, and melamine (post WWII). All bottles fully automatic machine-made. Purple manganese glass. Beer can introduced 1935. Pull-tab can opening introduced 1962. Plastic products (post 1900).

*Source: MHC 1980a, 1980b, 1980c

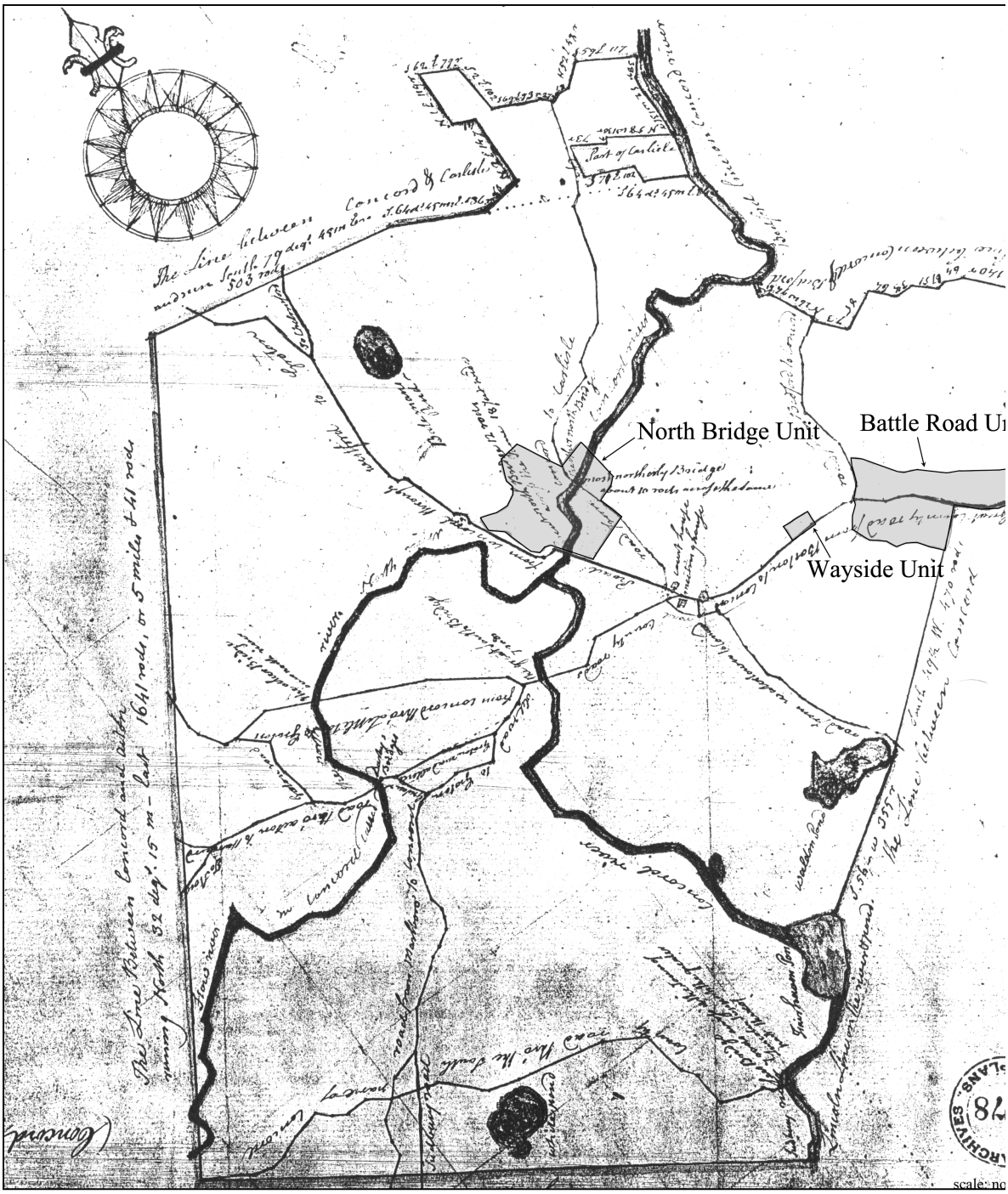


Figure 4-1. 1795 map of Concord showing approximate locations of North Bridge and Way Units, and Meriam's Corner section of Battle Road Unit, Minute Man NHP (Wood 1795).

From the mid-eighteenth century through the first half of the nineteenth century Concord retained a stable, primarily agriculturally based economy, with relative prosperity (Gross 1976). Crop yields, which had declined gradually during the later eighteenth century, began a slow but steady increase after 1790 (Donahue 1984:31).

Concord's major settlement concentrated around Monument Square, Lexington Street, and Main Street (MHC 1980a) (Figure 4-2). During the nineteenth century Concord was characterized by the expansion of the village at Damon's Mill (West Concord) and the establishment of a new village along Commonwealth Avenue. Industrial development from this point on was minimal because of the lack of significant sources of waterpower. By ca. 1839, there was only one textile manufacturer (cotton factory), a lead sheet/pipe factory, and one company producing lead pencils within the town boundaries (Barber 1839). Improvements in the transportation network, primarily improved roads and railroad connections, led to closer ties between Concord and the urban core of Boston. Concord Center continued as the focus of commercial activity while country estates were built in the northern and eastern sections of the town (MHC 1980a).

The pattern of predominantly agricultural and pastoral land use established early in Concord continued into the late nineteenth and early twentieth century (Figure 4-3). Dairying, which had become an important economic activity with the arrival of the railroad, continued. Commercial production of fruits (including the Concord grape developed in the town by Ephraim Bull) and vegetables (especially asparagus) for the Boston markets became an important part of the local economy (Gross 1982:42). Intensive market gardening and truck farming probably reached a peak in the early 1900s in Concord and surrounding towns such as Bedford and Carlisle. In the post-World War II years, both population and residential development have expanded in Concord as part of a larger pattern of suburban growth around Boston, especially in the area between Routes 128 and I-495.

Lincoln

The town of Lincoln, formerly a precinct of Concord, was incorporated as a separate town in 1754 (see Table 4-1). However, settlement of this area dates back to the seventeenth century when towns like Sudbury and Concord, English frontier towns, were at the perimeter of the colonial settlement.

The town, located on intermediate highland between the Charles and Concord rivers, has had a primarily agriculturally based economy throughout its history. Much of Lincoln has been continuously plowed historically, and some areas were reportedly mined for clay used in brick-making activities (Mowchan et al. 1987). A number of sawmills were erected after 1690 to support growing demands for lumber. By the late eighteenth century, a number of saw- and gristmills were located on area brooks.

In 1721, the town of Concord officially laid out the road that is now named "Old Bedford Road" (Malcolm 1985). It was designed to be an "open driftway" for driving cattle and was two rods wide, beginning at the main highway in the area known as Concord or Bay Road. It extended to the land owned by John Fassett located near the northeast corner of the town, in an area known as the Shawshine Corner. The road enabled Bedford residents to reach the Concord Road, and opened the way for farmers to access their back fields in the Rocky Meadow area. Old Bedford Road was part of a network of radial highways originating at the Lincoln meetinghouse.

In 1728, Virginia Road was laid out to facilitate travel to the new road, around the wetlands. It is speculated that at the time of European Contact, Old Virginia Road was part of a network of trails Native Americans utilized to link the Charles and Sudbury River valleys (MHC 1980b). Paths along the upland area, known as Virginia, were connected to Concord's main roads. The highland was so surrounded by water that it was referred to as "The Great Island." Joseph Wheat's farm was the closest to the Old

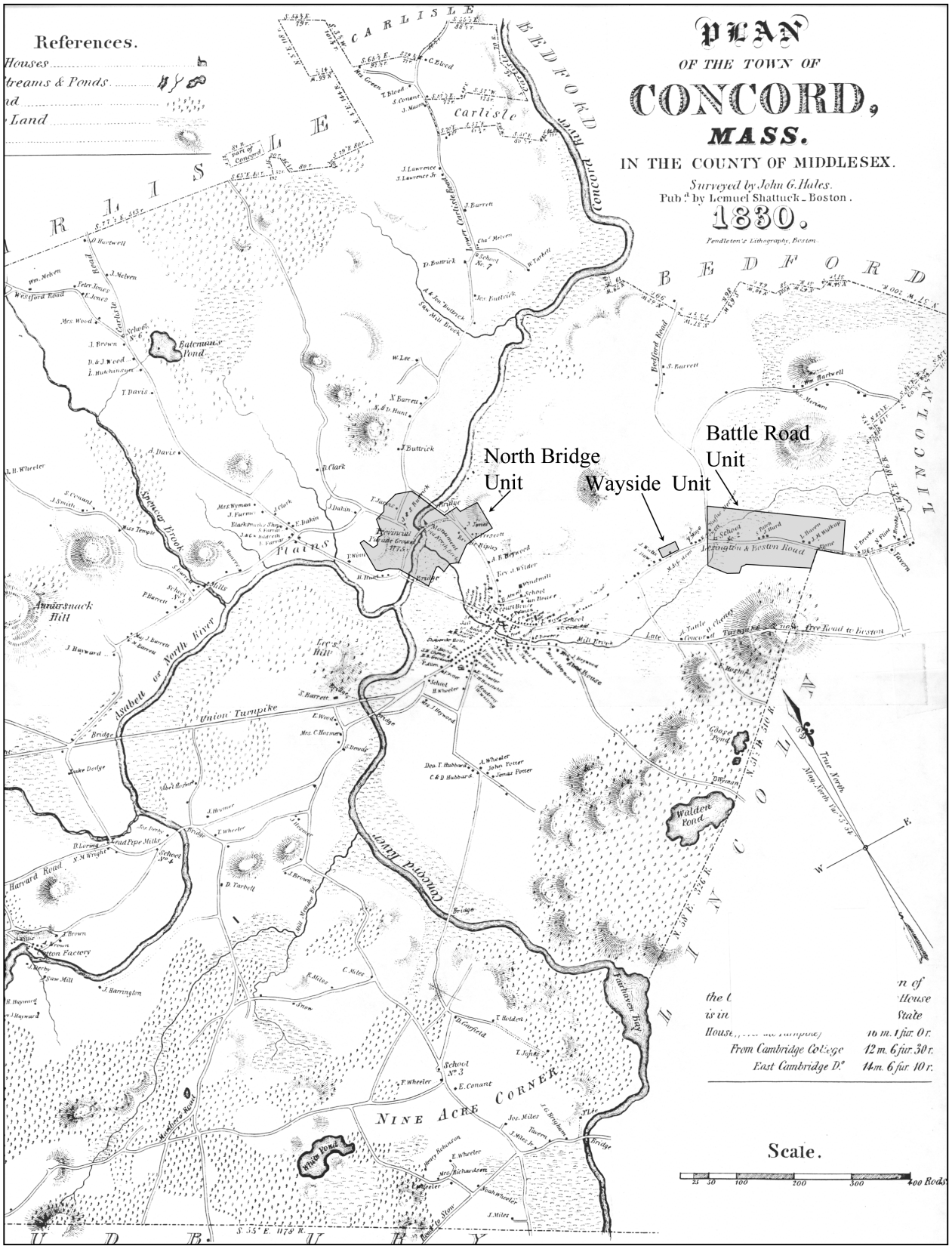


Figure 4-2. Plan of the Town of Concord showing approximate locations of North Bridge and Wayside Units, and Meriam's Corner section of Battle Road Unit area, Minute Man NHP (Hales 1830a).

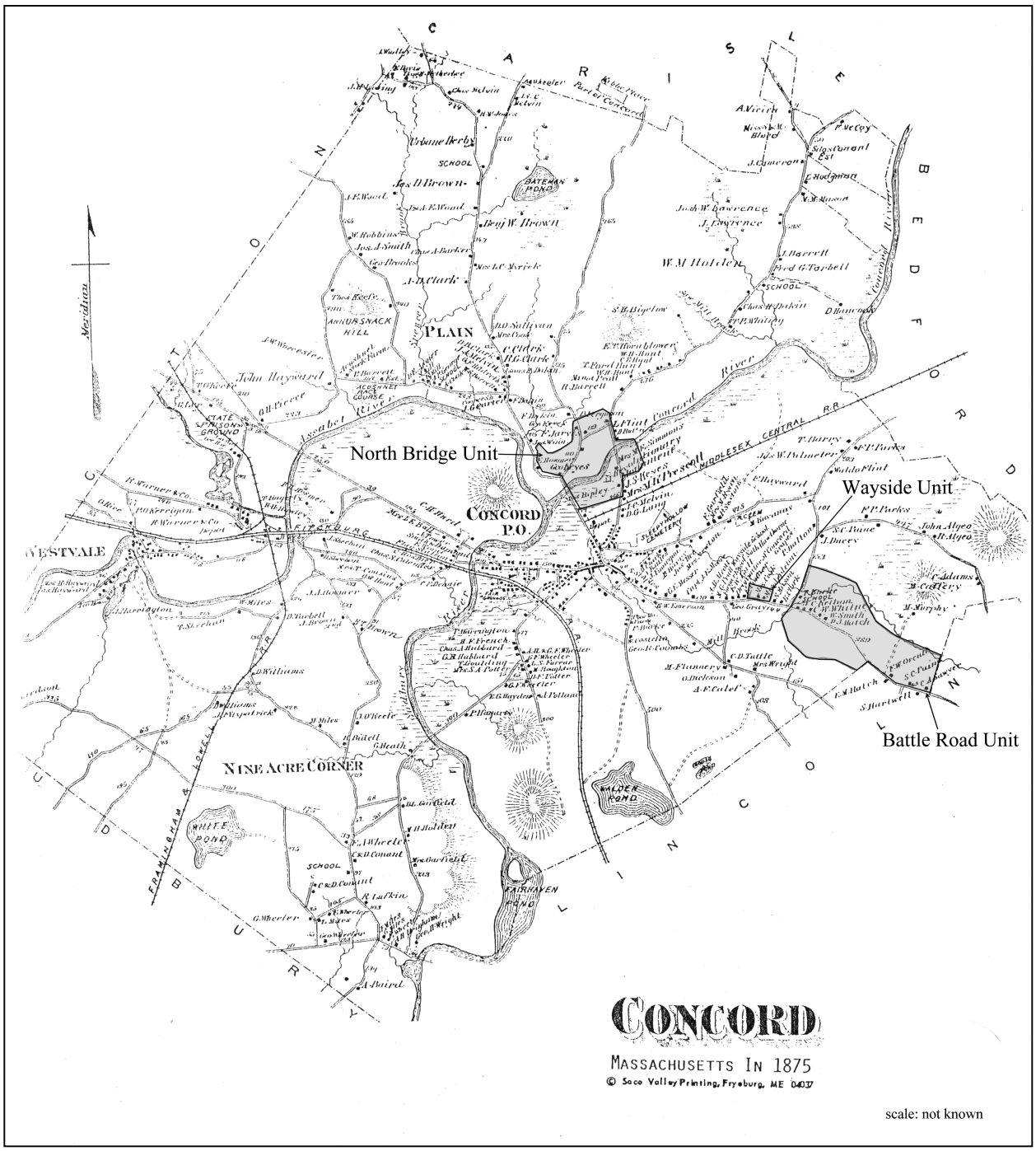


Figure 4-3. Concord, Massachusetts in 1875 showing approximate locations of North Bridge and Wayside Units, and Meriam's Corner section of Battle Road Unit area, Minute Man NHP (Beers 1875).

Bedford Road. A new road was laid out connecting the Bedford Road, 20 to 30 rods north of its intersection with the Concord Road. The original road was only one and a half rods wide and was widened to two rods in 1732 (Malcolm 1985).

By the end of the Colonial Period, there were five new saw/gristmills located along Elm Brook, Stony Brook, and Hobb's Brook (Figure 4-4). Taverns were scattered in unspecified locations along North Great Road, a road that had been improved upon during this time period (MHC 1980b). Although the town of Lincoln has primarily had an agriculturally based economy, some quarrying of marble and lime production took place in the area south of Sandy Pond (Gross 1982). The early nineteenth century saw the introduction of a small industry in boots and shoes. Two tanneries were present, and the mills that were already extant continued to operate.

The population grew gradually through the early and mid-nineteenth century. Improvements in the transportation network linking the town to Boston and surrounding towns, most notably the arrival of the railroad in 1844, resulted in increased markets for Lincoln's agricultural products. Agriculture heavily supported the economy (MHC 1980b).

In the late nineteenth century, wealthy Bostonians increased the population of Lincoln as they left Boston for suburban homes and country estates (MHC 1980b). During this period the economy remained primarily agricultural (Figure 4-5). The turn of the century saw an expansion of the transportation network with improved roads for automobile traffic, including the upgrading of Routes 2, 117, and 126. Hanscom Airfield was built in the 1940s in Elm Brook meadow. Lincoln experienced little expansion of its industrial base, and only a slow and steady population increase during the later twentieth century. It remains today a relatively affluent Boston suburb.

Lexington

Lexington was once part of the northern precinct of the town of Cambridge. It was established as a separate town in 1713, with a section later annexed to Lincoln in 1754, and another to Bedford in 1768 (see Table 4-1). Lexington's economic and land-use history closely resembles that of Concord and Lincoln. An agricultural town, it became famous as the site of the attack by British Regulars on Colonial militiamen on the morning of April 19, 1775. On the Town Green, in a half-hour engagement, eight colonists were killed by royal troops before the British column proceeded on to Concord. During this confrontation Lexington suffered the equivalent of £1,700 worth of damage while Concord lost only £275 (Gross 1976).

The portion of Lexington that is encompassed by the Park was primarily dedicated to agriculture in the colonial period. Both Ebenezer Fiske and Amos Marrett who lived in the Fiske Hill area used their land for farming and apple orchards to produce cider (Malcolm 1985). It is unclear where this cider was used, but presumably it went to Ebenezer Fiske himself (who was licensed as an innkeeper in 1772) or to the nearby Bull Tavern (Malcolm 1985). Concord Road (now known as Massachusetts Avenue) was an important corridor connecting Concord to Lexington and eventually to the waterfront. Perhaps this is why both an inn and a tavern were located in such close proximity along this road.

During the late eighteenth and early nineteenth century, the town's population remained well under 2,000 inhabitants. Aside from agriculture, which was the primary economic base of the town, a few workshops and factories produced footwear, garments, and printed calico (Barber 1839:397) (Figure 4-6).

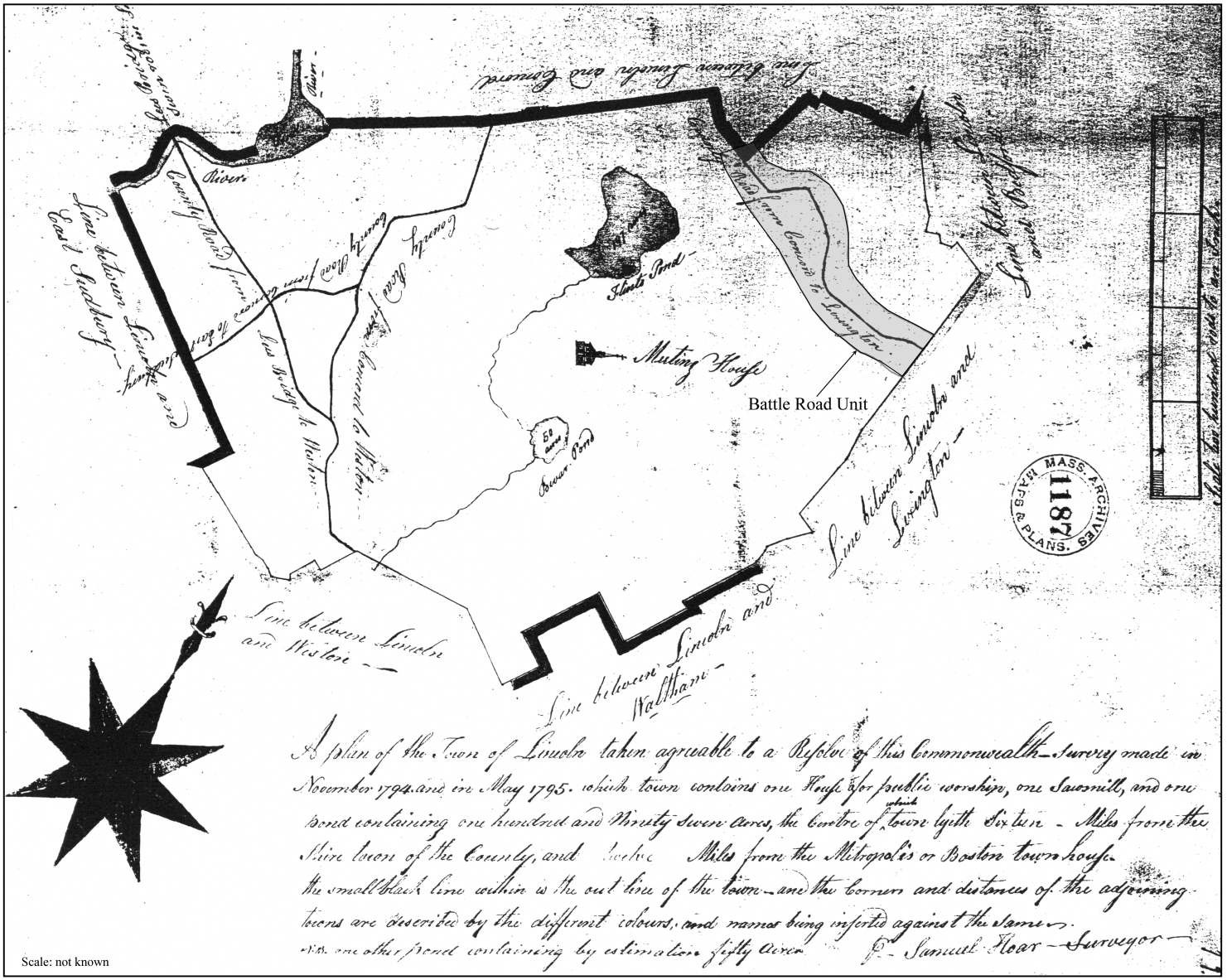


Figure 4-4. 1795 map of Lincoln showing approximate location of Battle Road Unit, Minute Man NHP (Hoar 1795).

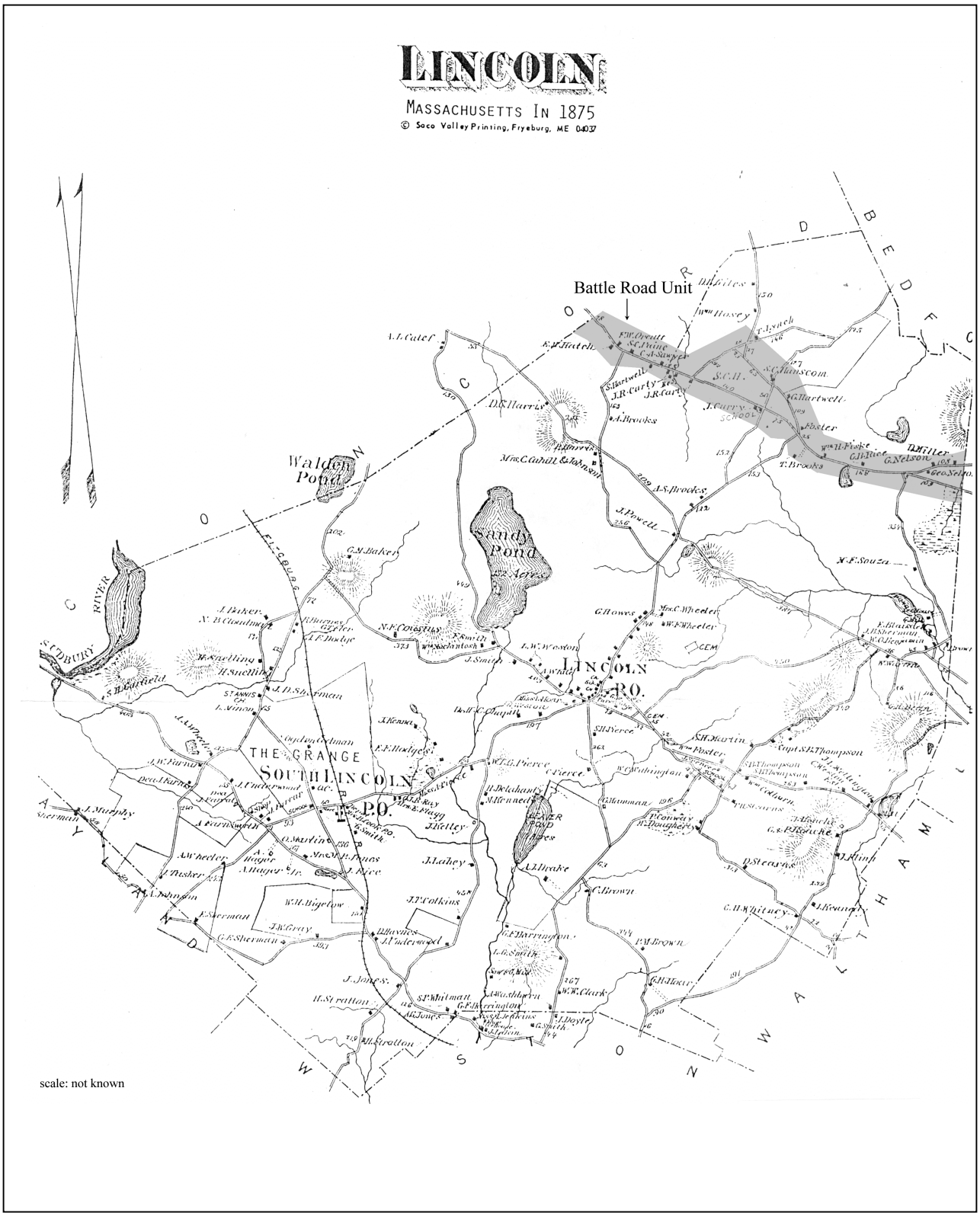


Figure 4-5. Lincoln, Massachusetts in 1875 showing approximate location of Battle Road Unit, Minute Man NHP (Beers 1875).

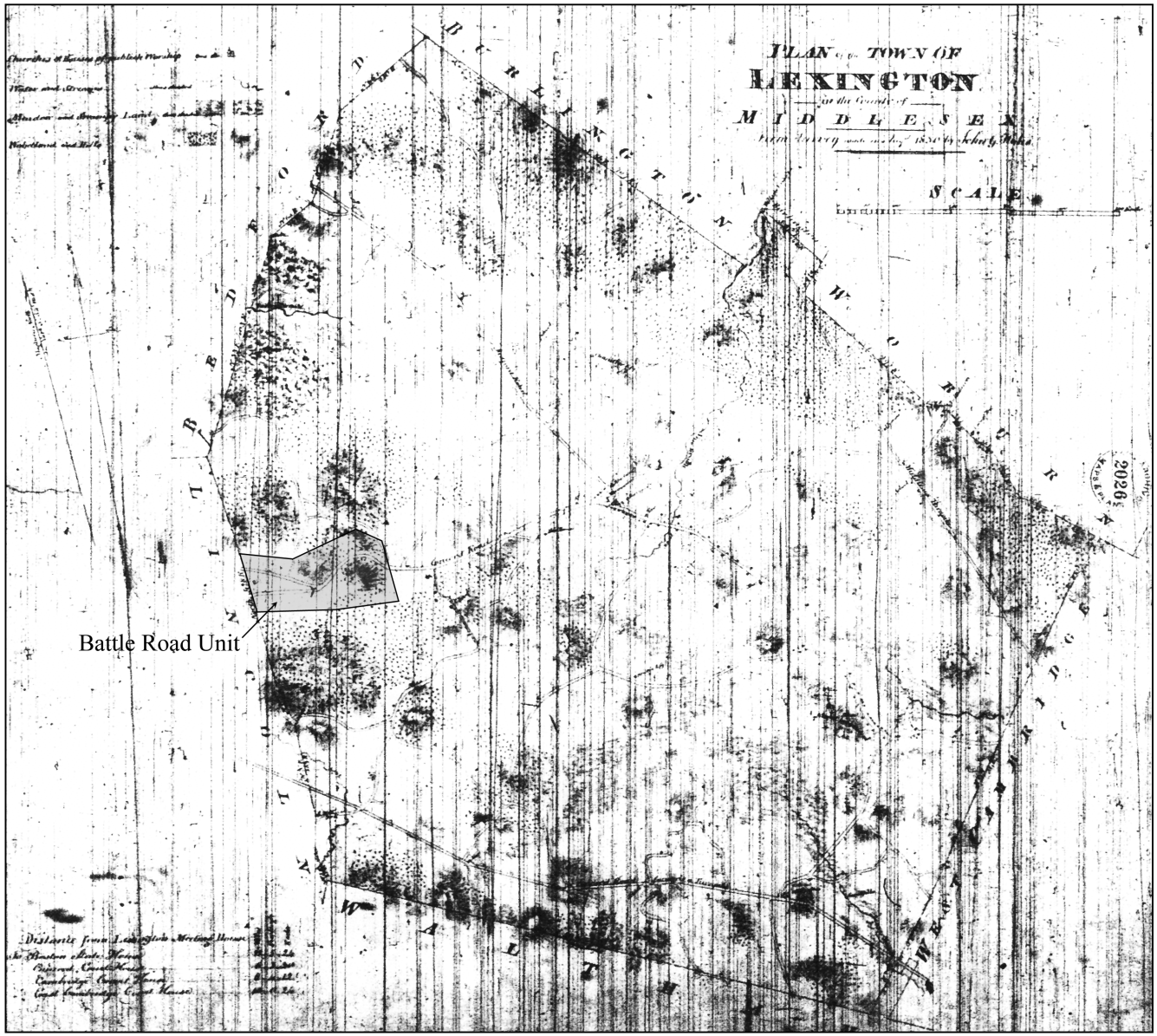


Figure 4-6. Map of Lexington in 1830 showing approximate location of Battle Road Unit, Minute Man NHP (Hales 1830b).

While some reorientation of the settlement pattern occurred in the town with the introduction of the Middlesex Central Railroad in the 1840s, most land use continued to be consistent with that of a peripheral area supplying produce to Boston and suburban markets throughout the nineteenth century (MHC 1982:76). Neither major population growth nor industrial development was a factor in Lexington's late-nineteenth-century development (Figure 4-7).

The town was more closely linked to the Boston core by the early twentieth century with the expansion of electrified trolley lines. Improvements in automobile roads provided better access to towns such as Lexington, which gradually became suburban rather than rural communities. This trend continued through the modern period, with the town now occupied primarily by affluent suburban developments and a few remaining open spaces. Some commercial and light industrial development has taken place along the major highways crossing the town, especially Route 128.

Revolutionary War Context

The Minute Man NHP Historic District derives its primary significance as the site of the Battle of Lexington and Concord. The battle, which marked the beginning of the Revolutionary War, ranks among the most significant events in American history. The following historic context for Revolutionary War events in and around the project area was compiled for the Minute Man NHP National Register documentation (Harrington et al. 2002) and is drawn primarily from *Paul Revere's Ride* (Fischer 1994), a report on the Battle Road prepared by the Boston National Historic Sites Commission (1958), and an unpublished (1997) narrative by Minute Man NHP Chief of Interpretation Lou Sideris.

The Battle of Lexington and Concord occurred on April 19, 1775, but was preceded by a series of events that fostered support for the insurrection within the American colonies. The enactment in 1767 of the Townshend Acts, which imposed a number of arbitrary taxes on the colonies, sparked earnest protests and violence against the Crown's agents sent to enforce the acts. The bustling port city of Boston was the center of the most serious agitation. In response, a large contingent of British troops was sent to Boston in 1768 to enforce the laws and quell rebellious rumblings. The presence of the troops only served to incite greater unrest, culminating in the Boston Massacre on March 5, 1770. In the aftermath of the massacre, which resulted in the deaths of six colonists, the British troops were withdrawn and the Townshend duties, with the exception of a small tax on tea, were repealed. The colonies, however, were by that time unwilling to accept any act by the Crown they judged as an infringement on liberty, and when a subsequent shipment of tea arrived in 1773 the ships were turned away from numerous ports. In Boston, the ships were allowed to enter port, but were ransacked in a night raid and the tea thrown overboard during what became forever known as the "Boston Tea Party."

The British Parliament's response to the Tea Party was the enactment of punitive measures designed to snuff out seditious acts. The port of Boston was closed, the charter of Massachusetts abrogated, and a new court system was created. Troops again were sent to Boston to enforce the measures, which were named the Coercive Laws by Parliament, but became known throughout the colonies as the "Intolerable Acts." Parliament sent General Thomas Gage, who was considered the foremost expert on colonial military affairs, to act as commander in chief of the troops in Boston and serve as the governor of Massachusetts. In the wake of the Tea Party, Boston patriots took the lead in organizing resistance throughout the colonies by creating a network of committees and congresses to oversee the raising of local militias and prepare for an impending fight. Organization efforts were redoubled after the imposition of the Intolerable Acts and recruiting for local militia companies increased.

Gage believed the best way to ensure against revolt was to remove existing caches of weapons from the hands of the colonists. He proposed a series of quick strikes designed to seize known arsenals and powder houses. His first target was the Provincial Powder House in Cambridge, which held the largest

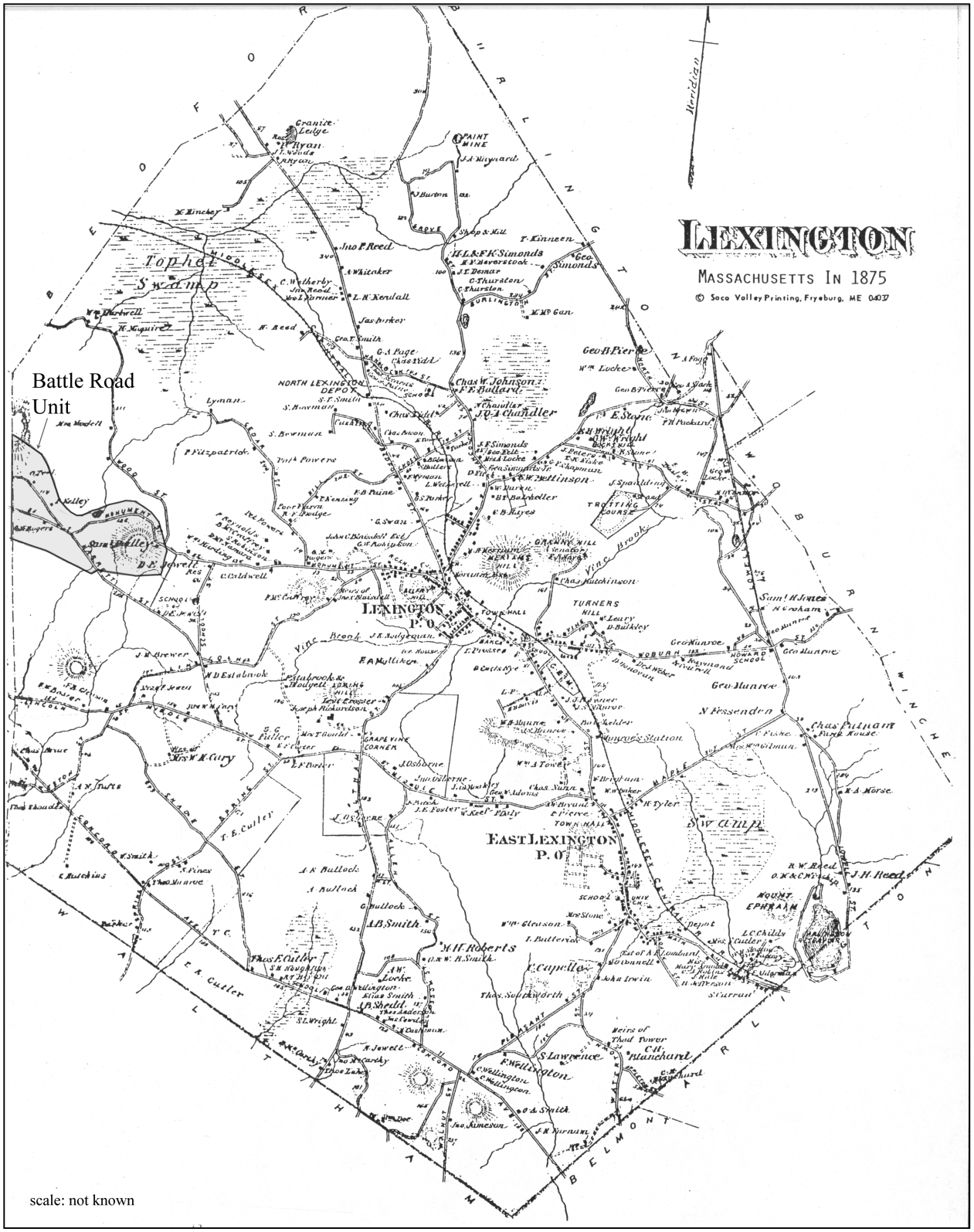


Figure 4-7. Lexington, Massachusetts in 1875 showing approximate location of Battle Road Unit, Minute Man National Park (Beers 1875).

store of gunpowder in Massachusetts. Early in the morning of September 1, 1774, a force of 260 men under the direction of Lieutenant Colonel George Maddison accomplished the mission, carting off some 250 barrels to the security of Castle William in Boston Harbor. Carried out in secrecy, the raid was a complete success and was accomplished without firing a shot. Rumors and exaggerated accounts of the raid spread throughout the countryside causing panic that the colony was at war. By the morning of September 2, 4,000 angry men had assembled on Cambridge Common. Colonial leaders persuaded them to store their arms before marching on known Tory sympathizers who had aided the British. Some were chased from their homes to the safety of British lines before the highly charged episode was diffused. The event proved to be a trial run for the rapid assemblage of large numbers of militia troops.

News of what became known as the Powder Alarm, traveled rapidly throughout the colonies and served to strengthen the resolve of colonial organizations. In late September 1774, the Massachusetts General Court created a Committee of Safety, began collecting stocks of arms, and requested that all men between the ages of 16 and 66 enlist in the militia. Towns were asked to form one-third of their militia into "minuteman" companies, which would be prepared to respond immediately to any further actions by the British military. In September 1774, the Massachusetts General Court was reorganized as the Provincial Congress and moved to Concord's meetinghouse. This illegal body served as the government of Massachusetts outside of British-controlled Boston.

Gage continued to plan maneuvers against weapon stockpiles. In February 1775 he sent one of his most trusted officers, Lieutenant Colonel Alexander Leslie, to raid a stash of cannon at Salem. While the initial landing of the force on a beach in Marblehead occurred in secrecy, the troops were discovered early during their 5-mile march to Salem. Towns throughout Essex County were alerted to the impending trouble and the cannon were put on the move from their hiding place in Salem. The British were greeted at Salem by an angry mob, which was able to halt the advance by raising a drawbridge over the North River. Stranded on the south bank, Leslie was forced to abandon the mission and ultimately returned empty-handed to Boston. The event sparked enthusiasm among the colonists, who rejoiced at the victory.

Gage did not give up, however, and immediately began planning a new operation into the interior towns of Massachusetts. He sent two spies, Captain William Browne, 52nd Regiment, and Ensign Henry De Berniere of the 10th Foot Regiment, to map the country and gather information about the whereabouts of military. Unsuccessfully disguised as locals, the two men were discovered as spies early on in their mission, but were able to get as far as Worcester, where a large arsenal was stockpiled, before turning back for Boston in fear of their lives. They were able to make maps of some of the areas they visited and gathered a good deal of useful information, including news of an arsenal located at Concord. While Worcester's arsenal was a tempting target, Gage deemed it too distant to affect any kind of surprise raid. Instead, he settled on the arsenal at Concord, which was about half as far from Boston, and began to collect intelligence about the location of the military stores from Tory loyalists living in the town.

Battle of Lexington and Concord, April 19, 1775

Gage selected senior officer Lieutenant Colonel Francis Smith to lead the mission. His orders to Smith were to march "with utmost expedition and secrecy to Concord, where you will seize and destroy all the Artillery, Ammunition, Provisions, Tents, Small Arms, and all Military stores whatever." Although his superiors in England had suggested it, Gage mentioned nothing about capturing patriot leaders John Hancock and Samuel Adams. He reasoned that such action would only serve to incite further agitation and that new leaders would quickly take their place. He also stated in his orders that care should be taken not to "plunder the inhabitants, or hurt private property."

Preparations for the movement of the large contingent of troops from Boston to Concord were impossible to hide. Admiral Graves, the senior naval officer present, was given orders to prepare boats to transfer the troops across the Back Bay to Cambridge. On April 7, 1775, Graves' ships launched their longboats, and

tethered them under their sterns in full view of the town. The colonists of Boston observed the activity, and were informed that a scouting party had been detected on the road to Concord. Piecing together this information, the colonists determined that Concord was in danger of being raided. Upon receiving the news of the impending raid, locals began moving the military stores to hiding spots outside of Concord. On April 15, the Grenadier and Light Infantry companies of the British Regulars were taken off their normal duties in preparation for the advance. The Provincial Congress, which was in session at Concord, adjourned for a period of three weeks and its members hurried out of town.

Paul Revere and his patrol noticed the activity and sent word to Warren who in turn notified the Committee of Safety. On his way home from Concord that evening, Revere also discussed with several compatriots how to establish an early warning system that could be implemented in the middle of the night when it would be difficult to travel roads for fear of capture by British forces. They devised the famous scheme of hanging two lanterns in the steeple of the Old North Church if the British went out by water and one if they traveled overland.

The warnings received by Concord colonists had seriously compromised the mission. On April 18, Gage was informed by a loyalist that most of the military equipment had been removed from the town, but that large stocks of provisions, some powder, and two 24-pound cannon were still there. Gage determined that if the mission was to succeed at all, he must stop any colonial messengers from spreading the news. Toward this end, he sent out an advance guard of some 20 mounted troops with specific orders to find and detain anyone on the road that night. The patrol had the affect of further alarming the countryside about the potential for attack. In Lexington, militiamen began to gather at Buckman's Tavern. A contingent was assigned to guard Adams and Hancock, and another group of three was sent out to scout the movements of the British patrols. Within an hour of setting out, the three scouts were captured in Lincoln, and were held under guard in a pasture on the north side of the Concord Road.

At about the same time, Revere was making arrangements with Robert Newman to hang two lanterns in the steeple of the Old North Church to warn that the British were going to leave Boston by boat. The British detachment, consisting of about 700 troops, assembled at the foot of Boston Common, and prepared to embark on the longboats across the Back Bay. Revere was rowed across the harbor to Charlestown by two friends, and arrived on the Charlestown side at about 11:00 p.m. He was met by Richard Devens of the Committee of Safety, who procured a horse for Revere and sent him off to warn of the British advance. Revere arrived at the Hancock-Clarke House in Lexington a little after midnight April 19. Another rider, William Dawes, Jr., joined him there. After the arrival of the two messengers, the alarm calling the Lexington Militiamen to arms was sounded. Dr. Samuel Prescott soon joined Revere and Dawes and together they started west toward Concord. Prescott and Dawes were riding behind Revere when two British officers surprised Dawes. The soldiers were waiting at the same opening to the pasture where the three Lexington scouts had been captured earlier. Dawes immediately turned his horse and headed back down the road to Lexington. Prescott managed to escape by jumping his horse over a stone wall and went on to carry the alarm to Concord and beyond. Revere, however, was not as fortunate. Trying to escape he ran into six British officers holding the three Lexington men and was forced to surrender at gunpoint.

British forces arrived at Menotomy (present-day Arlington) about 3:00 a.m. on April 19, and began the advance on Lexington. Meanwhile, the Lexington Company, numbering about 125 men, plus some volunteers from Woburn, had assembled on Lexington Green under Captain John Parker's command. When no British showed up, they were told to return to their homes or await further orders at the tavern. When they reassembled on the Green that morning, 38 men were counted, with more joining. British troops later mentioned a great number of colonial militia had gathered off the Green. Traditionally, most secondary accounts of the battle suggest 77 as the number Parker assembled. Lt. Col. Francis Smith and Major John Pitcairn led the British force that included six light companies, numbering about 200 men. At the approach of the British vanguard, Parker ordered his men to disperse, but some were unwilling to

back down. A shot from an unknown source was fired, and the Regulars let loose several volleys into the militia lines. A few of the militiamen stood their ground and returned fire, but most retreated. The brief clash resulted in the first American bloodshed of the Revolution as eight militiamen were killed and 10 were wounded.

After Lt. Col. Smith recovered control of the Regulars and formed them back into ranks, the march on Concord resumed. At about 7:00 a.m. the British, with light infantry leading the way and grenadiers bringing up the rear, approached the center of Concord. The militiamen of Concord had been notified of the British advance early in the morning and had assembled to discuss strategy at the Wright Tavern. Two militia companies from Concord and at least one or two companies from Lincoln had at Meriam's Corner, and upon witnessing the British troops descending Brooks Hill the militiamen marched ahead to Concord along the ridge that bordered the north side of the road. In the town center all the colonists assembled and marched up to what is now Monument Street where they were met by Colonel John Barrett, leader of the Concord militia. After a brief council of war they crossed the bridge and went on to Punkatasset Hill, about one mile north of the town center.

With the town center secured, Smith ordered troops to seize and control the two bridges in town over the Concord River. One company of light infantry was sufficient to secure the South Bridge, but Smith knew that the militiamen were assembling north of town and sent a total of seven companies to the North Bridge and Barrett's farm. A company of the 43rd Foot held the bridge, while two companies from the 4th and 10th Foot regiments were placed on higher ground to guard their flank. The four other companies proceeded two miles past the bridge to Colonel Barrett's house and mill, where Tory informants had reported that a large quantity of munitions were stored. The grenadiers remained in the town center and set about finding hidden military supplies. With the exception of three cannons found at the South Bridge, neither of the raiding parties found much, as Paul Revere's warnings of the previous week had enabled the removal of most military supplies.

While the British 4th, 10th, and 43rd Light companies guarded the bridge and awaited the return of the troops that went to Barrett's house, the militiamen, whose ranks were steadily increasing as men from neighboring towns arrived, moved down off Punkatasset Hill to take up positions on the hill west of North Bridge. Barrett ordered the men to form a long line on the face of the hill. Smoke, caused by the burning of gun carriages and the spread, by accident, of the fire to the town house, was seen rising from the town center. After seeing the smoke, there was indecision amongst the colonists. An apparently hesitant Barrett ordered a portion of his force under Major John Buttrick to cross North Bridge and make a demonstration in the town center. A combined force of about 150 militiamen and militia with strict orders not to fire unless fired upon advanced toward the bridge, which was guarded by approximately 96 British troops under the command of Captain Walter Laurie.

Although the advance, which was led by a company of Acton troops, was not well organized, it served to surprise the regulars. Laurie apparently ordered his men to prepare to retire back toward Concord Center under cover of an alternating fire from companies arranged in ranks on the street, while his company skirmished on either side of the street. It is not known for certain which side fired the first shot, but is generally believed that one of Laurie's men fired without orders and that was followed by the discharge of several other pieces. It is possible that in this first volley, two militiamen were killed. Buttrick's men continued to advance and when they were within about 50 yards of the British, Major Buttrick gave the order to fire. The volley resulted in two to ten British casualties. Seeing that they were out-matched and had no hope of holding their position, the Regulars turned and ran back toward Concord Center to join the main force.

While Colonel Smith was overseeing the search for weapons in Concord Center, he received an urgent plea from Laurie for reinforcements. He then heard the sound of the exchanges between the forces at North Bridge and ordered two companies' grenadiers to form and march in the direction of the battle. On

the road to North Bridge the reinforcements were met by the disordered remnants of Laurie's light infantry. Concern that the line of retreat for the companies that had gone on to search Barrett's property was closed, prompted Smith to order the troops forward with the intent of recapturing the bridge. Meanwhile, Colonel Barrett struggled to recover control of the scattered militiamen. He decided to divide the force, sending a portion back up the hill on the west side of the bridge to a field now known as the Muster Field. The forces under Major Buttrick advanced a short distance toward Concord and were deployed behind a stone wall on a hill overlooking the road to the North Bridge.

While the Regulars were regrouping and tending to their wounded, the militia began to move east threatening to cut off the British retreat. At about 12:00 p.m., Smith ordered his column forward, and sent out several companies of light infantry to the ridge extending east from Concord Center on the north side of the road to guard his flank. Other flankers were sent to the low meadow on the south side of the road opposite Deacon Minot's house (not extant). The move was successful and no fighting occurred until the column reached Meriam's Corner.

The ridge on the north side of the road where the flankers were deployed ends abruptly at Meriam's Corner, where Old Bedford Road intersects with Lexington Road. The place gets its name from the Meriam House, which is located on the northeast corner of the road junction. At the time of the battle, several other country lanes intersected with Lexington Road at this point. Militia from surrounding towns, including Billerica, Tewksbury, Chelmsford, Reading, Framingham, and Sudbury, had been assembling at the crossroads during the morning hours. The Middlesex regiments that had fought at North Bridge advanced the area through the "Great Fields" that lay north of the ridge and took up positions at Meriam's Corner. By this time the militia forces in the field amounted to about 1,200 troops, although only a few were at Meriam's Corner. Those that had been at the bridge were up the road near the foot of Brooks Hill. The only colonial troops at Meriam's Corner were Captain Batchalder's militiamen from Reading who were under the direction of Major John Brooks. Brooks placed his company, numbering about 60 men, around the outbuildings and stone walls at the Meriam House.

When the British reached Meriam's Corner, the flankers on the north side of the road descended the ridge to join the main force in crossing a small bridge that led over a stream southeast of the Meriam House. A shot, probably fired by one of the militia troops, was fired. It is probable that the British returned fire. In the firing that ensued several Regulars were wounded before the column moved out of range.

The next skirmish occurred at Brooks Hill, a small patch of high ground located on the south side of Lexington Road about one-half mile east of Meriam's Corner. Named for the Brooks family, which owned much of the surrounding property and a tavern in the area, the hill was occupied by one or two companies of militia from Sudbury and a signal company from Framingham. The British discovered the ambush before they were within range of the guns and were able to mount an attack on the hill. The fighting was intense, especially in the immediate vicinity of Brooks Tavern. Smith ultimately disengaged and drove his column through the ambush.

After Brooks Hill the road dipped, crossed Tanners (Elm) Brook, and then rose again. A short distance after the brook the road took a sharp turn toward the north. The militia had taken up sheltered positions behind trees and stone walls along the south side of the road leading north from the bend. When the British column reached the curve and made the turn north, Major Laommi Baldwin of the Woburn militia ordered his men to fire. After an unsuccessful attempt to send out flankers to dislodge the militia, the British drove through the ambush, suffering heavy casualties both in foot soldiers and officers.

Five hundred yards up the road at another sharp curve; the British column was met by an even more savage attack, which came from all directions. The desperate British quickened their pace and, despite sustaining heavy losses, were able to get clear of the trap. The convergence of the pursuing forces of American troops on the road resulted in entangling of the regiments. The lack of good cover in the area

resulted in a weakening of firing from the colonists, allowing the British to put distance between them and the main body of the militia. In all, the British suffered about 30 casualties along the stretch of road between the two curves. The fighting at the northernmost curve, which later became known as the Bloody Angle, resulted in the deaths of eight British soldiers and was the second bloodiest clash, next to the battle at Menotomy, of the running battle of April 19, 1775.

The British remained under constant threat from long-range firing as they made their way east of Bloody Angle. At the farms of Ephraim and Samuel Hartwell on Virginia Road, militia companies from Bedford, Woburn, Sudbury, and Billerica met them. The men had taken up positions behind the Hartwell houses and outbuildings and were able to fire with deadly effect straight into the British column. A party of light infantry flankers mounted an attack from the rear, and several militiamen were killed.

The next engagement occurred near the Lincoln-Lexington town line. A low hill rises on the north side of the road on the Lexington side of the line. There Captain John Parker and his Lexington company, which had suffered the first casualties of the war, waited to exact their revenge (the site of the clash later became known as Parker's Revenge). Some of the men had taken advanced positions in a rocky pasture on the north side of the road, harassing the approaching column with sniper fire before being driven from the field by a flanking party. Parker ordered his men to hold their fire until the British were very near. The volley tore into the British column, which was at that moment headed by Colonel Smith himself. The shock of the attack caused the British column to halt momentarily. Major Pitcairn came forward and ordered the infantry to charge the hill. The charge, which resulted in more casualties on both sides, was effective in clearing the militia off the hill.

Again the British regrouped and continued their retreat. A few hundred yards beyond lay a steep, thickly wooded hill known as "The Bluff." A small force of militia had taken position there. This time, Pitcairn sent one or two companies to secure the hill in advance of the column. The British won a hard fought action over difficult terrain, driving the militia from the hill.

One more obstacle awaited the British after securing The Bluff. Fiske's Hill, which is located near the eastern boundary of the Park, was held by another New England regiment. When the British came into range, the militia fired, knocking Pitcairn from his horse and killing several more British Regulars. At this point, the British column began to come apart. Those who were not wounded were completely exhausted and were being fired upon from all sides. The Regulars began to run forward in a desperate attempt to escape. Flanking parties were unable to keep up and became separated from the main unit. Some of the stragglers were taken prisoner by the militia. Officers attempted to block the road to reform the column for a more orderly retreat, but most of the soldiers kept running toward Lexington.

When the remaining British officers reached Lexington, the welcome site of a line of reinforcements greeted them. Hugh, Lord Percy's 1st Brigade, which consisted of the 4th (King's Own) regiment, 23rd (Royal Welch Fusiliers) regiment, 4th regiment, and a battalion of Marines, had been ordered to advance to Lexington to reinforce Colonel Smith's command early in the morning of April 19. Gage's initial orders, however, did not reach Captain Thomas Moncrieffe, who commanded the 1st Brigade infantry. At about 5:00 a.m. Gage was awakened by a messenger sent by Colonel Smith asking for reinforcements. Moncrieffe was immediately summoned to Gage's quarters and ordered to assemble the brigade for immediate departure. By about 7:30, the 1st Brigade was ready to march, but the marines were absent. Gage's sealed orders to the marines had been sent to Major Pitcairn, who had accompanied the initial force. It was not until nearly five hours after the force was supposed to have left that the reinforcements were ready to move. The delay was a critical factor in the outcome of the Battle of Lexington and Concord.

By the time the British were readying to depart Lexington, they had approximately 1,700 well-trained troops, including reinforcements. As they marched toward Menotomy, the colonists surrounded the

British forces in a wide ring that would move with the British column and attack when circumstances were favorable. The first attacks were on the rearguard of Percy's forces and exacted heavy casualties. The 23rd started as the rearguard but were relieved after about 7 miles by a reserve of marines, who also suffered heavy casualties. Although there was no colonial command of troops, the colonists waged a series of successful attacks that severely impeded the British retreat. At Menotomy, the British were subjected to almost continuous fire from houses and outbuildings over a one- and one-half-mile stretch of road. The battle at Menotomy often devolved into close-quarter, hand-to-hand combat, as the British troops were forced to enter and clear the buildings. Harried by whizzing sniper bullets and frustrated over the events of the day, the British began entering houses and killed some colonists found bearing arms. The skirmish in Menotomy was the bloodiest of the day, resulting in the deaths of about 40 British soldiers and 25 Americans.

Upon entering Cambridge and finding the only bridge across the Charles River there partly destroyed and held by American forces, Percy made an unexpected move to a secondary road to Charlestown. The move caught the militia by surprise and broke the circle of fire that they had effectively kept up since the British left Lexington. At about 7:00 p.m., the British column crossed Charlestown Neck and then across Charlestown Common to Bunker's Hill, still harassed on their rear by militia forces. Percy directed the force to take a strong defensive position on high ground. The H.M.S. Somerset, which was already in position to cover that town, provided additional protection.

During the night, the British ferried their many wounded across the Charles River and then replaced the weary soldiers of the light infantry and grenadiers with fresh ones from Gage's 2nd Brigade. All during the night militiamen from the surrounding countryside continued to arrive. In the morning the British awoke to find they were completely surrounded. Even after they were transported to the relative safety of the garrison at Boston, the British troops were isolated. They still controlled Boston, but a state of siege existed as militia took up positions on high ground surrounding the city.

In the wake of the battle, the Committee of Safety concentrated on raising and supplying an army. The first call for enlistments was sent out to neighboring states in hopes of raising a force of 10,000 for the siege of Boston. On May 10, 1775, the Second Continental Congress convened in Philadelphia, and by June had voted to form the Continental Army. George Washington was chosen commander in chief and was sent to Cambridge to take command of the army. The forces that had assembled voluntarily to fight the British at Lexington and Concord formed the backbone of the army that ultimately secured American independence.

Agricultural Context

The history of the Park is inextricably tied to agriculture, which was the primary economic activity carried on there throughout the eighteenth and nineteenth centuries. While the landscape of many of the historic farmsteads has changed dramatically, some retain sufficient integrity to be considered for listing on the National Register of Historic Places (Harrington et al. 2002). The agricultural context for the Park extends from the earliest period of Euro-American settlement (ca. 1635) through 1951, in order to encompass farm properties that were involved in market gardening and dairying during the early and mid-twentieth century. The following agricultural context was developed as part of the Minute Man National Register documentation (Harrington et al. 2002).

Agriculture in Concord, Lincoln, and Lexington (ca. 1635–1949)

In the early seventeenth century the area now within Concord was known as Musketaquid, a Native American place name referring to the extensive grassy, river meadows bordering the Concord River. Following the purchase of land from Native Americans, initial English settlement in 1635 was within a six-mile square tract known as Musketaquid plantation. Concord was the first town established in the

interior section of the Massachusetts Bay Colony. The first settlers were mostly from Watertown and Cambridge.

Plantation period settlement and agricultural land use in Concord conformed to a pattern like other seventeenth-century frontier towns in eastern Massachusetts such as Sudbury, Dedham, and Medfield, where the settlement and field systems were oriented to floodplain and river meadows. The former locations of Native American settlement including planting fields and a fishweir along Mill Brook were reused. Native trails served as the first roadways and some bridges were placed at river and stream crossings. The area between the confluence of the Sudbury and Assabet rivers and "Great Fields" south and east of the Concord River were the primary locations of Native American planting fields maintained by burning and cultivation (Shattuck 1835:3). The earliest accounts describe abandoned Native American fields seen by the first settlers in the Musketaquid plantation that were covered with shrubs, sweet fern, and pitch pine (Johnson 1654).

By the 1640s, the area along Mill Brook north of the Commons contained a small nucleated village with a meetinghouse surrounded by fields and common lands. The earliest farmsteads were situated on level to slightly sloping land on low terraces of glacial lake bottom deposits where there were well-drained, sandy loam soils. One of the first farmsteads in Concord may have been established on the site of the Captain David Brown House in the 1640s. Concord's first Euro-American residents replicated an open field system brought from England. In this land use system, each landowner was allotted a strip of plowland on former Native American planting fields, a section of meadow near the Concord River, or a stream, and a house lot in the village. Large tracts in upland areas were left as common land used for grazing cattle and wood lot that served as a source of timber for construction (MHC 1980a; Powell 1963).

During the first period of settlement, about 1650, the majority of the landscape now within the Battle Road Unit was about 80 percent wooded with large common fields for tillage. The common field system was not completely successful in supporting the settlement during the first few decades. In 1652, the plantation in Concord was subdivided into quarters to facilitate the granting of the remaining open land. The areas now within the North Bridge and Meriam's Corner sections of the Park were in the North, East, and South Quarters (Whitney and Davis 1986:71–72). Over the next 10 years, common land was divided among proprietors, based on their original allotments. Land use shifted from the common field system to large individual land holdings (Donahue 1984:25–27). There was some limited settlement in peripheral areas of town further away from the river meadows. One of these outlying farms was owned by Joshua Brooks in the 1660s and consisted of a house and barn located in the eastern section of Concord near Elm Brook. The area was one of the earliest areas to be settled outside of the original village. Although land holdings were still quite scattered, the pieces were somewhat larger and more consolidated than in the First Division village (Garvin et al. 1993:169). Joshua, Caleb, and Gershom Brooks, the three sons of Thomas Brooks, were all granted land in the area in the seventeenth century. Over the next generation, more homesteads were created as land passed to Gershom's and Joshua's sons. This farmstead stayed in the Brooks family for almost 200 years, until the mid-nineteenth century (Job Brooks Site) (Towle and MacMahon 1986:145–146). Joseph Meriam's house lot, apparently at the east end of Concord Village, was part of this first generation of settlement. The Eliphalet Fox House was also one of Concord's mid/late-seventeenth-century farmsteads and was located in proximity to fields and pasture along Mill Brook.

Concord's economy in the early/mid-seventeenth century was based on agriculture and cattle grazing. River meadows provided enough pastureland to support cattle from Concord and livestock taken in from surrounding towns. Rotation of crops was practiced with fields periodically left fallow and pasturing of livestock on plowland so that manure could fertilize fields. Land clearing also provided timber and other forest products such as barrel staves, clapboards and shingles for sale and export.

By the end of the seventeenth century, settlement in Concord was reaching more remote areas such as the uplands east of Elm Brook. The Hartwell family settled in Concord as early as 1636, having received land grants throughout the general fields and meadows. More land was granted during the Second Division on Elm Brook Hill. As was the custom at the time, elder sons were set up with homesteads near the father's house lot, while the youngest son inherited the father's homestead and cared for the parents. This pattern resulted in the establishment of several farms close to the original family homestead as well as the retention of the family homestead. In the Hartwell family this common colonial pattern of farm inheritance is repeated several times. Older sons established farms on fresh ground while the youngest son inherited the homestead and the responsibility of caring for the aging parents. Through this repeated process, Second Division lands were taken up and assembled into working farms (Garvin et al. 1993:170).

In the early seventeenth century, land now within the town of Lincoln was a peripheral precinct or district of the Musketaquid plantation. Some smaller sections were also within the Cambridge and Watertown grants. A few farmsteads may have been located along the north and south branches of the primary road system connecting the plantation with Watertown and Boston. By the 1680s, there were a few farmsteads around Sandy and Beaver ponds in proximity to the town center. Settlement eventually increased along the north and south branches of Great Road. Most of the farms in this period were small holdings of about 30 acres producing corn and other grains, apples, flax and herds of cattle and sheep (MHC 1980b).

Lexington was an outer precinct for an earlier focus of settlement in Cambridge. Many of the first settlers were from the west Cambridge district, now within the town of Arlington. In the early seventeenth century, a few large farmsteads were developed along Vine Brook, including the Herlarkeden-Pelham farm established in 1636. Early farmsteads were also located along the Watertown and Concord paths that correspond to the present alignments of Massachusetts Avenue/Route 2A. The area within the town of Lexington formed an agricultural district for Cambridge where livestock grazing and farming were the major activities. In the seventeenth century, this area was known as Cambridge Farms.

Settlement in the section of Lexington now within the Park was probably minimal. For example, land near the present Lexington/Lincoln town line did not have any buildings on it until the first quarter of the eighteenth century. An early farmstead with a house, barn, and outbuildings was established on the Lt. David Fiske Site in the 1650s on the east side of Fiske Hill. It was located in proximity to several primary roadways leading from Concord to Cambridge, Woburn, and Salem.

In the early/mid-eighteenth century Concord formed part of a rural periphery supplying agricultural products to both the Boston urban core and local population. More land was brought into active use on many small farms. Orchards were established and animal husbandry/cattle raising and dairying continued to be primary activities on farms. Local artisans (weavers, wheelwrights etc.) relied on local forest and farm products (wood, hides, wool, flax). For example, hides from cattle raised on the Job Brooks farm and other farms were used to supply a small tannery operated nearby by leather worker Joshua Brooks. In the Wayside section of the Park, the Wayside Barn and Eliphalet Fox House were elements of farmsteads near Mill Brook. Some of the early owners of these properties were craftsmen such as housewrights, weavers, and cordwainers.

In the 1720s to 1730s there was some out-migration of Concord farm families to recently established towns in central Massachusetts, as land in town for new farmsteads became scarce. By 1750, the number of farms in Concord had stabilized at about 200. The farms varied in size, the average landholding was about 60 acres and contained about 28 acres of "improved land" used for cultivation, pasture, and meadow (Gross 1976). This pattern remained relatively unchanged until the mid-nineteenth century. In the mid-eighteenth century, the size of an average farm in Concord was much less than it had been in the prior century. Gross (1976) has calculated that a farm family of six persons would have required 8 to 10 acres of grain (corn, rye), 14 to 16 acres of meadow for grazing cattle, and two acres of tilled land to feed

hogs and supply vegetables and potatoes. A minimum of 28 acres would have been necessary to support a family of six, which was the average household size in Concord in 1765 (Gross 1976:213–214).

Just prior to the outbreak of the Revolution, the 100 acres owned by David Brown was a relatively large estate. His lands included a 20-acre homestead near the North Bridge and 80 acres in several parcels in the North Quarter of Concord (Gross 1976:84–85).

Lincoln was a second precinct of Concord until its incorporation as a town in 1754. In the mid/late eighteenth century, the town contained a rural settlement pattern with scattered small farms. Some of these, such as the Josiah Nelson and Thomas Nelson Jr. homesteads were located along Great Road (Route 2A) and Nelson Road. Forest products were a source of income to Lincoln farmers with firewood and lumber sold to the Boston market.

In 1712, Lexington was officially created from a rural section of Cambridge known as Cambridge Farms Parish. The local economy was based on agriculture and livestock grazing; supplemented by lumbering and some peat mining in local bogs. Malcolm's reconstruction of the late-eighteenth-century landscape along the section of Battle Road in Lexington indicates that two farms, a tavern, and a small rural industry were located on Concord Road (Marrett Street). They include from west to east; the Tabitha Nelson (Thomas Nelson Sr.) House, a barn and cider mill on the Jacob Whittemore Farm, the Bull Tavern, and a blacksmith shop (Malcolm 1985). The 114-acre farm inherited by Jacob Whittemore in 1754 contained a mosaic of pasture, meadow, uplands and orchard. It was probably typical of farms in rural areas outside the town center. A house lot, barn, stockyard and various outbuildings surrounded by pasture formed the nearby Fiske farm complex with the Lt. David Fiske and Ebenezer Fiske houses. This farmstead expanded through the early to mid-eighteenth century as members of the Fiske family acquired land for raising livestock and crops (Towle and MacMahon 1987). The landscape began to be defined by houses and outbuildings set close to the road with their farms extending behind them. Farms were often set up in the form of several detached parcels interspersed with lots belonging to neighbors. Compact, nucleated farms were not as common throughout the period.

During the mid-eighteenth century, an integrated system of land use in towns such as Concord and Lexington reached its fullest development. Although local farmers did have some connections with Boston markets for some commodities, overall the agrarian economy was overwhelmingly subsistence oriented. Residents within the park maintained this economy through a lively local exchange of goods and services. In order to encourage this system, every part of the landscape was involved in this system of local production and consumption (Garvin et al. 1993:171–172). By the mid-eighteenth century, the area now within the Park contained a landscape of farmsteads with plowland, pasture and orchards defined by walls built of local fieldstone. The system of stone walls within the Park consists of significant examples of the fieldstone walls that are features of this former agricultural landscape. Stone walls were used throughout the landscape not only to mark property boundaries, but also to define internal divisions based on land use. For instance, stone walls are found within the Park marking the transition from upland to meadow. The Ox Pasture Stone Bridge is an example of a small fieldstone bridge built on an unimproved cart path or farm road. It appears to have been built before 1775 and could be a source of information on rural land use and the system of secondary roads and cart paths.

The primary agricultural products from eighteenth century farms in the towns of Concord, Lincoln, and Lexington were grains like corn, wheat, rye, and barley. Flax and hemp were grown for use in local linen textile production. Orchards yielded apples used for the large amounts of cider consumed in households and taverns (MHC 1980a, 1980b, 1980c). Cider was the local beverage, and small orchards had proliferated across the landscape by this period. At the Hartwell Tavern, for instance, Ephraim Hartwell reported 40 barrels of cider in 1749. Cider vinegar also appears in a later Hartwell inventory. Cider was already being made in Concord during the seventeenth century, but during the eighteenth century it became the leading beverage throughout rural New England, replacing beer. This ecological shift

allowed for a more efficient use of the land because apples could be grown on marginal upland soils less suitable for grain (Garvin et al. 1993:173). A number of orchards were located along Virginia Road during the Colonial period.

Each parcel within the Park was used for one purpose or another. Meadows were fully utilized, and farmers had begun in the late eighteenth century to expand their hay production by converting some of their drier meadows to higher quality "English hay." Pasture that provided grazing for cattle were the most prominent agricultural feature of the uplands. Cattle tied this agrarian economy together providing butter, cheese, meat, tallow, hides, locomotion, and manure (Garvin et al. 1993:172). The Wayside Barn is a surviving example of a barn constructed in the eighteenth century to keep livestock and store agricultural products such as hay.

During this period there were several thriving substantial farms within the Park, including those belonging to Job and Asa Brooks, Thomas and Noah Brooks, Joshua Brooks, Ephraim Hartwell, and Samuel Hartwell. Although these farms were thriving, the period that followed witnessed the decline and stagnation of several because of a number of factors. In the two decades from 1749 to 1771, there was a 20 percent increase in the number of cattle and pastures were often over-grazed. Farmers had difficulty producing enough hay to support herds because of the decreased pasture productivity. Yields of both grains and meadow hay decreased during this period because of a loss of soil and pasture fertility. Some Concord farmers were able to find pasture in other towns to graze their cattle (Merchant 1989:186–187). Eventually, the intensity of agricultural land use and livestock production resulted in depletion of farmland and pasture. Population increases and intense farming created a system that was beginning to press against its environmental limits (Garvin et al. 1993:172). The amount of land placed in active cultivation increased and less was devoted to pasture needed to support cattle and sheep. The number of livestock being raised decreased as grazing land became eroded and depleted. Yields of grain, fruit and other produce on area farms also declined in the mid-eighteenth century because of repeated planting of the same crops and reduced fallow periods.

In the Great Meadows district along the Concord River, David Brown raised a large herd of dairy cows, steers, heifers, oxen, and sheep using hay from 45 acres of pasture that were depleted from overgrazing. The beef, mutton and wool derived from those livestock were a valuable source of income needed to support his large extended family, which has been estimated to have included 13 individuals (Gross 1976: 86–87).

In the late eighteenth/early nineteenth century, Concord was a rural town outside the Boston core area, in proximity to the developing industrial core further down the Concord River at Lowell. In the third quarter of the eighteenth century, only 20 percent of land in Concord was being tilled, meadow and pastures formed the remaining 80 percent (Gross 1976: 213). New practices such as crop rotation, improved farm equipment, and regular fertilization with manure were introduced in the 1770s, but not effectively implemented until the post-Revolution period. There was also diversification in the types of crops grown on farms; an important addition was the potato that soon became a staple on local farms (Donahue 1984; Kimenker 1984:146–147; Merchant 1989:187).

The amount of land in agricultural use declined during the post-Revolution period. In the 1780s wood lot and unimproved areas made up 40 percent of the total land in Concord. By 1791, land in active agricultural use had been reduced to only 13 percent of all improved lands (Gross 1976:196). In the late eighteenth to early nineteenth century there was an increase in "unimproved" land such as abandoned pasture. Formerly productive river meadow, hay fields, and upland pasture yielded smaller crops. Wooded areas were heavily exploited as sources of fuel and construction material. Some of the areas cleared of trees were converted to pasturage. Wood cut from these areas not needed for local use was sold as fuel in the Boston market. Former woodlands were plowed and planted with English hay (clover,

timothy, herd grass) (Donahue 1984:32; Kimenker 1984; Whitney and Davis 1986:75). Through this period, farming and livestock grazing remained as the primary components of Concord's economy.

At the time of his death in 1794, Job Brooks was one of the more prosperous farmers in Concord. His large landholding of almost 200 acres included property in the towns of Acton and Littleton that was a mix of plowland, orchard, pasture, and woodlot. Produce stored at his farm included grain, beef, and pork (Sullivan 1963a; Towle and MacMahon 1986:165–169).

In the early nineteenth century, yields from Concord farms increased and improvements to the transportation system (roads) also helped to bring agricultural products to larger urban markets. Agricultural production in terms of tons of grain and hay obtained from Concord farmland improved in this period. Donahue (1984:33–34) and Kimenker (1984:153) have suggested that this improved production was because of changes in farming practices such as crop rotation, better plowing, and the use of livestock manure and composted household organic refuse as fertilizer. Muck soils from swamps and other wetlands were also spread on fields to increase the level of available nutrients. The regular spreading of manure, swamp muck, and domestic refuse on fields became a standard practice and was promoted by contemporary agricultural journals, manuals and books published in the 1830s and 1840s (Benes 1988; Russell 1982; Stilgoe 1982). Another practice in use during the early nineteenth century was the reclamation of wetlands and other poorly drained areas for farmland through forest clearing and draining with ditch systems (Donahue 1984:52–53).

Throughout the early nineteenth century, farmers began to alter their practices in response to the limitations they had encountered in their subsistence system and to take advantage of increasing commercial opportunities. Among the many complex changes they made over a period of more than half a century were a decrease in subsistence production of grain, and an increase in market production of beef and dairy cattle (Garvin et al. 1993:174). The introduction of English hay and conversion of many pastures to this type of grass by the mid-nineteenth century also helped to raise the productivity of agricultural land use. Asa Brooks, who occupied the Job Brooks House in the first decade of the nineteenth century, devoted some land to growing grains (wheat, barley, rye) and English hay. He also cut wood for his own use and sale including "ship timber." The Brooks farm was well endowed with English hay and the family responded by keeping large herds of cattle. Brooks also pastured cattle on land in the central Massachusetts town of Princeton (Towle and MacMahon 1986:179–181). In the 1840s, the farm passed into the ownership of Emelius Leppelman from Denmark who kept a substantial dairy herd. It was around this same time that milk farming took off in Concord as a result of the new railroad connection to Boston.

In the late eighteenth to early nineteenth century the town of Lincoln formed part of the rural periphery outside the Boston urban core area. It was located along an important east/west turnpike corridor (Concord Turnpike/Route 2). Most residents outside the small nucleated town center lived on farmsteads like those along Massachusetts Avenue (Route 2A). Some farm products (corn, grain, wool, hides) were processed at local mills and tanneries. Agricultural products also found use in local taverns. With a total of 186 acres, the property owned by farmer and tavern keeper Ephraim Hartwell was one of the largest land holdings in Lincoln during the post-Revolution period of the 1780s (Towle and MacMahon 1986:19).

During this period, Lexington was also a primarily rural town on the perimeter of the Boston core area. Despite an increase in industry, agriculture was a major element in the local economy. Its position on the Concord and Middlesex turnpike routes was advantageous for transporting agricultural and dairy products from local farms to the Boston market. By the 1780s, Lexington had already been involved in supplying dairy products to this urban area. Farmers from the town were bringing milk into the city at the beginning of the nineteenth century. By the 1820s, buyers or middlemen acted as intermediaries between farms and the Boston market (MHC 1980c). The Fiske Hill area remained in active agricultural land use with

pasture and orchards associated with several farmsteads such as the one owned by Ebenezer Fiske. Farm products (meat, vegetables, cider, hides) also supplied local taverns such as the Bull Tavern and a cottage industry producing boots and shoes.

In the mid-nineteenth century, Concord was a center of agricultural innovation and the development of the Concord grape was the most widely known product of this activity (Hurd 1890:590). As in many other towns in Middlesex County, intensive vegetable gardening for Boston and overseas markets changed the nature of farming in Concord, Lincoln, and Lexington (Merchant 1989:235). Commercial production of fruit, vegetables and dairy products soon became a mainstay of the town's economy at farms such as the Buttrick Farm. Concord's link to the regional rail transportation system in the mid-nineteenth century was an essential part of this change from production of agricultural and dairy products for strictly local use to the supply of larger markets in urban areas like Boston and Lowell.

Gross (1982:43) has described this process as the "great transition to modern agricultural capitalism" where farms no longer supported just family or local needs but produced a surplus for sale in the market system. Concord resident Henry D. Thoreau advocated the preservation of subsistence farming and was critical of the new focus on market-driven production taking place on local farms (Merchant 1989:256). Although many farms were thriving in the new agricultural economy, the farm of Joshua Brooks did not. Deacon Joshua Brooks had been a prosperous farmer and tanner but had been hard-pressed to provide family farmlands in Concord and Lincoln for his children. When he died in 1790, the bulk of his farm and tannery passed to his son Joshua. Several of his other children had established themselves elsewhere. The younger Joshua Brooks had 14 children and appears to have been wealthy enough to engage in a number of land deals. However, by the time of his death in 1825, he was in debt. His son Isaac inherited the farm and later acquired the neighboring Noah Brook's Tavern. In 1844, Isaac went bankrupt and both farms then passed to Isaac's brother Nathan, a prominent Concord lawyer. The Joshua Brooks estate was sold to Nathan's nephew Joshua in 1859, and was then sold out of the family in 1862. The farm failed to adapt and thrive in the new commercial environment. By the late nineteenth century much of it had already returned to forest (Garvin et al. 1993:175). In fact, throughout the Park the landscape began to revert back to forest as a result of decreased agricultural activity.

The towns of Lincoln and Lexington were connected to Boston by railroad in 1844 and farms such as those of Thomas Nelson Jr. and Josiah Nelson engaged in less general, subsistence production and more truck or market gardening. Some of the produce from these towns such as the milk from Lexington dairy farms was shipped by rail to places well outside the Boston metropolitan area such as northern Massachusetts, New Hampshire, and Vermont. Through the end of the nineteenth century, Lexington farms focused on commercial production of milk and other produce, particularly in locations along highways. By 1875, Lexington was one of the largest milk producing towns in eastern and central Massachusetts (MHC 1980c). The barn at the Whittemore House and the Bashian Barn are examples of barns associated with farms in the Fiske Hill section of Lexington. The Bashian Barn was constructed on the former Ebenezer Fiske farmstead between 1872 and 1875.

In the early to mid-twentieth century the towns of Concord, Lincoln and Lexington all became an outer suburb for the Boston metropolitan area and there was an increase in residential development. Throughout the period, farmers in the region continued their concentration on commercial markets. The influx of cheap meat and grain from the Midwest led local farmers to specialize in market gardening, orchards, and dairy. Imported grain provided a cheap high-protein feed for local cows. In the early 1900s many orchards were replanted with trees bearing varieties of dessert apples to sell to the expanding Boston market. Donahue (2004) has stated that although agriculture boomed economically, it began to contract geographically onto the better soils, and to rely less on local resources. As a result, worn out upland pastures reverted to pine (Garvin et al. 1993:177).

In Concord and Lincoln, suburban expansion led to the development of some older farms as rural estates, as exemplified by the Buttrick Mansion and grounds. Some of the original eighteenth-century Hartwell Farm was developed for residential use and several houses were built. Residential development increased following Lexington's connection to the Boston urban core by street railway. Improved road systems for automobiles in the early modern period also contributed to this trend. Farmland was frequently used for residential development and several golf courses, however, some farms continued to be sources of dairy and agricultural products (MHC 1980a, 1980b, 1980c).

The incorporation of these towns into the Boston metropolitan area triggered a change in overall land use. Local agriculture was affected, with market gardening becoming the most important activity on farms in Concord and Lincoln. In Concord, pastures in upland areas formerly used for grazing livestock were abandoned and overgrown, gradually becoming wooded (Whitney and Davis 1986:78). There was an intensified use of fields in the terraces flanking the Concord River and along streams like Mill and Elm Brook.

As farmers continued the commercialization of their farms, they began hiring more wage laborers. These laborers were Yankees, Nova Scotians, and after 1840, Irish immigrants. By the second half of the nineteenth century, a few Irish farm laborers were able to purchase farms of their own. During the 1870s, the McHugh and Dee families acquired the old Hartwell homesteads on Virginia Road and carried on dairy and orchard operations (Garvin et al. 1993:177).

In the first quarter of the twentieth century, there was a decrease in agriculture on local farms, but market gardening was still carried out. The Albano Produce Stand, D. Inferrara House and Farm Stand, and the Farwell Jones Dairy Barn and Silo are examples of farm properties in Concord that were involved in market gardening and dairying during the modern period. Following World War I, major marketed crops from the region came under increasing competitive pressure. Refrigerated shipments of produce from other parts of the country began to cut into the local production and distribution of these goods. Dairy shifted to larger, mechanized operations of cheaper land. The hay market declined with the advent of the automobile. The automobile was also responsible for increased suburban and commercial development of the region, resulting in higher real estate prices. Increased land prices and expanding suburbanization as well as competition from more distant producers led to a decline in the amount of acreage in active agricultural use. For the most part, local farmers could not afford to maintain their farms, and the local agricultural economy shrank, while forests, residences, and roads began to dominate the landscape (Garvin et al. 1993:178). During this period, recent immigrants who actively participated in market gardening acquired some farms. Twentieth-century farming practices incorporated technological innovations such as tractors for deep plowing, hay balers and combines, newly developed crops or hybrid strains of older crops to meet changing market conditions. Farm stands were in seasonal operation along major roads and highways in the three towns such as Massachusetts Avenue and Route 2.

Farms that continued through the period included the McHugh farm on the Hartwell Tavern Site, which contained a piggery and produced poultry, vegetables, and fruit (corn, apples) by 1930 (Towle and McMahon 1986b:115–116). The McHugh Barn is a modern period structure built to replace an older barn. The nineteenth-century barn, built in 1830, that originally stood on this site was destroyed in the 1938 hurricane. The Rogers Barn is an example of another twentieth-century structure built on the foundation of an earlier barn that stood on the site. This structure is located south of the Noah Brooks house along North Great Road in an area that remained in agricultural land use through the nineteenth century.

In the post-World War II period, commercial agriculture survived at a few places with the best soils. The Palumbo family continued to play a major role in keeping agriculture alive in the twentieth century. By the mid-twentieth century, the Hartwell Tavern Farm area, which had been taken over by the McHughs and Dees, had succumbed completely to forest and development, including Hanscom Field.

CHAPTER FIVE

EVALUATION OF PREVIOUS ARCHAEOLOGICAL WORK AND COLLECTIONS

One of the stated goals of the AOA was a summary and evaluation of the previous archaeological research conducted within the Park boundaries. This includes archaeological investigations and collections research completed between 1980 and 2004. Archaeological projects completed prior to 1980 were included in Baker's (1980) *Overview and Evaluation* and an updated synopsis of archaeological work at the Park was included in the 2001 National Register nomination (Harrington et al. 2002). This chapter evaluates all the Park archaeological projects and collections analyses completed between 1980 and 2003. Projects that are ongoing, or for which final documentation was not available, are identified and described as such.

History of Archaeological Investigations at Minute Man NHP (1960–1980)

This summary is drawn from Baker's (1980) *Overview and Evaluation* and Synenki's (1987) "History of Archaeology at Minute Man NHP" as well as the 2002 National Register nomination. These sources include detailed chronological descriptions of pre-1980 archaeological investigations and should be consulted for more specific data on these older projects. Former NPS archaeologist Leslie Mead's (2000) master's thesis examines the history of archaeological investigations at the Park and also provides a thorough context for archaeological investigations throughout the Park.

Archaeological research has served an important role in the Park from its creation in 1959. The earliest organized effort consisted of a 1960 NPS assessment of the archaeological potential of the Park that was focused on sites that would help support the documentary record of Revolutionary War-era events. The objectives of the survey were to determine what physical evidence was present to increase knowledge of site identity, structures and artifacts on historic properties. Archaeological investigation was considered to be a useful approach to verifying the location of historic landscape features like stone walls and roads. While archaeology was given an important place in the early development of the Park, it was placed in a subsidiary role to historic grounds research and documentary evidence.

The first series of subsurface excavations at the Park were conducted between 1963 and 1964 under the direction of Vincent P. Foley. The primary objectives were to relate surface indications of archaeological sites in the Fiske Hill section of the Battle Road Unit to extant historical data (Foley 1963a, 1964a). Supervision of stabilization work on the Ebenezer Fiske house following limited excavation was also a component of the project. Foley completed an assessment of several sites on Nelson Road and in the area west of North Bridge. Further study of the North Bridge area to identify roads, causeways, and walls was recommended (Foley 1963b, 1964a, 1964b). The results of this first stage of archaeological investigation contributed to the development of a Master Plan for the Park.

Over a three-year period from 1964 to 1967, archaeologist Leland Abel investigated 13 house sites, historic roadways, and the alleged locations of the graves of several British soldiers (Abel 1965, 1966a, 1966b; Synenki 1987:68–73). Investigations conducted at the Park between 1967 and 1969 were directed by Cordelia Snow who had been the laboratory supervisor for Leland Abel during his earlier work. Snow investigated the Buttrick farmstead (occupied by Ephraim, Jonathan and Willard Buttrick) complex in the North Bridge section of the Park, and continued excavations at the Wayside that had been initiated by Abel (Abel and Snow 1966). Snow also edited and printed several of Abel's unfinished site reports, including revised interpretations of several historic sites that had been identified earlier (C. Snow 1968, 1969a, 1969b).

David Snow conducted another series of archaeological investigations in the Fiske Hill and Nelson Road sections of the Park during the summer of 1968 (D. Snow 1969a, 1969b, 1969c, 1973). The objective of these studies was to assist with the stabilization, restoration and interpretation of four eighteenth-century house sites, and to add to the archaeological data collected by Abel and Cordelia Snow (Synenki 1987:74).

A third episode of archaeological studies was initiated when Charles W. Tremer of Muhlenburg College was contracted by NPS in 1970. Between 1970 and 1974, Tremer excavated at four house sites, the reported Bull Tavern site and four sections of the Battle Road. The goals of these investigations were similar to previous work and intended to assist the Park with the restoration and interpretation of sites extant in 1775. Tremer prepared several site reports (1972, 1973a, 1973b, 1974), although his 1973 and 1974 excavations were not well documented (Synenki 1987:78–79).

No professional archaeological investigations were carried out within the Park between 1975 and 1978, but artifact collections continued to grow. A garden-planting project for Concord public school students resulted in the identification of historic features and artifacts that became part of the Park's growing collections (Synenki 1987:80). These materials were analyzed as part of the 1980s Archaeological Collections Management Project described in detail below (Towle and MacMahon 1987:80).

Stabilization measures were developed and implemented by NPS's Denver Service Center in 1979 for foundation features at five of the known historic house sites. Since this work involved only the removal of vegetation and masonry repair of features (fireplaces, wells) there was a minimal amount of archaeological excavation (Bleacher 1979).

A handful of compliance-related archaeological projects were completed prior to 1980 and reviewed in Baker's (1980) *Overview*. These investigations were conducted in compliance with Section 106 of the National Historic Preservation Act (36 CFR 800) to assess the potential impact of proposed construction within the Park. Thomas Mahlstedt completed projects at the Elisha Jones house and Hartwell Tavern in advance of proposed landscaping and installation of underground utilities (Mahlstedt 1979a, 1979b). Although impact assessment studies have since become the standard type of archaeological fieldwork conducted within the Park, they were still relatively rare when Baker completed his evaluation.

Vernon Baker's (1980) *Archaeological Overview and Evaluation* examined the published reports; unpublished manuscripts, letters and notes, and artifact collections associated with the above projects and evaluated the strengths and weaknesses of each research effort. Many of the cultural materials had been collected by general provenience (structure or feature) rather than by stratigraphic layer, so Baker assessed the value of most of the collected artifacts to be highest as educational materials and/or display objects and for specialized analyses (e.g., faunal remains). He also noted that even the historic sites that had been most intensively tested before 1980 still had a high potential to contain additional intact features and archaeological deposits.

The principal goals of the 1980 *Overview and Evaluation* were the "summation of past investigations, the assessment of known and potential resources, and the identification of needed work" (Baker 1980:1). Prior to the 1980 study, only historic sites associated with the April 19, 1775 Battle of Lexington and Concord had been investigated, in keeping with the Park's stated mission. None of the data related to pre-1980 excavations had been published, so the Baker report was also designed to make this information more accessible to researchers.

At the time Baker completed his report, 14 historic home sites and several road features within the Park had been investigated, although 32 additional historic sites and structures were known to exist within the Park (Baker 1980:89–91). No Native American (prehistoric or historic period) archaeological sites had been documented through professional excavation, although Baker identified five previously identified

prehistoric sites within the Park boundaries and seven more in close proximity (1980:92–93). These sites had all been identified primarily by avocational archaeologists or collectors and were listed in the MHC's inventory, but limited information about the temporal association or boundaries of these sites was available. Baker's recommendations for future work at the Park included a need for a complete inventory and assessment of all known and potential archaeological properties within the Park (1980:103).

Archaeological Investigations and Collections: 1980-present

A tremendous amount of archaeological data has been collected within the Park since 1980, including a number of comprehensive studies that have analyzed and evaluated earlier (pre-1980) testing results. The post-1980 studies can be categorized into six general categories that reflect different types of research, all related to the archaeological resources contained within the Park. These general categories are described below, and detailed in subsequent sections of the chapter.

- The Archaeological Collections Management Program (ACMP) completed in the 1980s resulted in a four-volume publication of data about the Park's archaeological resources (Towle and MacMahon 1986a, 1986b, 1986c, 1987). This comprehensive project included a review of much of the data collected between 1960 and 1980 and resulted in new analyses and interpretations for a number of historic sites. No subsurface testing was completed as part of the ACMP project.

- The Minute Man (MIMA) Archaeological Project was initiated by the NPS in the 1980s to locate, identify and document specific types of archaeological resources within the Park. The two-part *Archaeological Investigations of Minute Man NHP* series included archival research, predictive modeling, subsurface testing, and site and artifact analyses. Volume I of the series (Synenki 1990) was focused on historic period archaeological resources while Volume II (Ritchie et al. 1990) addressed prehistoric archaeological sensitivity and site locations.

- Two projects specifically related to the 1775 Battle of Lexington and Concord provided information about known and potential archaeological resources within the Park. Archaeological and cultural resources in Massachusetts associated with the Revolutionary War and the War of 1812 were identified and mapped in 2001–2002 as part of the NPS's American Battlefield Protection Program. This thematic study included Revolutionary War-era resources located within and adjacent to the Park (Ford 2002). Project tasks included archival research, photodocumentation, context development, and GIS mapping. A NPS Historic Grounds Report entitled *The Scene of the Battle; 1775* (Malcolm 1985) included detailed information about the Park's 1775 physical and cultural landscape.

  A related set of landscape reports have been completed for the North Bridge Unit and sections of the Battle Road Unit. The NPS has undertaken cultural landscape inventories within the Park.

- PAL completed the National Register of Historic Places documentation for the entire Park in 2002. The project included a comprehensive listing of all contributing and non-contributing buildings, sites, structures, and objects within the Park. The National Register documentation included narrative discussions and listings of previously identified archaeological resources within the Park.

- The Minute Man NHP *Collection Management Plan* (CMP), updated in 2003, was designed to help identify and prioritize curatorial needs at the Park (NPS 2004). This document addresses the entire range of collections, including those associated with archaeological investigations and surface finds. A narrative section of the CMP includes discussions of previously accessed artifact collections as well as those associated with recently completed and ongoing archaeological projects.

- The final category of archaeological research is also the broadest. Compliance-driven archaeological investigations have generated the largest volume of data about the Park since 1980, and will continue to be the most likely source of information about previously identified and unknown archaeological sites. Almost all of these studies have been completed within proposed impact areas as part of Section 106 compliance within the Park. Projects include those conducted by NPS staff archaeologists as well as professional contractors, and range from sensitivity assessments and geophysical investigations to large-scale excavations.

Archaeological Collections Management Program (ACMP)

The NPS's North Atlantic Regional Office initiated the ACMP at the Park in 1983–1984. The study, which had been completed for several other parks in the region, was designed to inventory and analyze (and/or reanalyze) existing archaeological collections and associated documentary materials. This reorganization was necessary to make collections accessible to Park staff for management and educational purposes. The program was also designed to make the archaeological collections accessible for research by archaeologists, historians, and other interested persons.

Secondary goals of the ACMP were to develop recommendations for Park staff relative to the management of the materials in the collection, and identify artifacts that could be used in interpretive exhibits and educational programs. Analysis of the information and artifact assemblages from all previously excavated sites, re-drafting of site maps, and creation of a records database were other elements added to the ACMP (Towle and MacMahon 1987:19–21).

As part of the ACMP project, two basic types of maps were constructed. They consisted of a set of base maps depicting the topography, modern features and archaeological sites for each of the seven sections in the Park, and maps of individual sites. Sources of data used to construct the base map set were Fairchild topographic maps, USGS topographic maps, NPS segment maps developed by the Office of Land Acquisition and Water Resources, and aerial photographs. The individual site maps were developed from sources including original excavator's reports, excavation photographs, aerial photographs, and historic maps (Towle and MacMahon 1987:114–115).

Linda Towle and Darcie MacMahon served as editors of the four volume series published in 1986 (Volumes 2–4) and 1987 (Volume 1). Towle, MacMahon and other regional archaeologists wrote the individual chapters to serve as stand-alone reports on various sites and collections within the Park. In addition to Synenki's (1987) history of archaeological investigations at the Park, the volumes included detailed site reports and analyses of much of the work completed prior to 1980.

The ACMP project resulted in the inventory of 120,997 artifacts from previous excavations within the Park (Towle 1987:30). This inventory was the first comprehensive effort to identify the archaeological collections from earlier excavations, and in many cases the materials themselves had never been cleaned or cataloged. The material assemblage was dominated by ceramics, which comprised nearly half of the artifact total. Nails, window and vessel glass, and clay pipe fragments comprised the largest remainder of the historic assemblage. Many of these artifacts were collected from general rather than specific proveniences within site areas, and some materials could not even be associated with a particular historic

site area. Towle (1987:39–40) also noted a scarcity of eighteenth-century materials within the inventoried collections, a factor she attributed to various factors including low visibility in the archaeological record and reuse in later periods. The report also indicated that as many as 10,000 artifacts that had been reported by excavators were missing from the Park collections (Towle 1987:31). Volume 4 of the ACMP included summaries of several miscellaneous Park artifact collections that could not be associated with any academic or professional excavation. These collections include artifacts from the John Buttrick House, Monument Square, and the Paul Revere Capture Site (Towle and MacMahon 1986c).

Despite identified problems with site sampling and provenience, the ACMP artifact inventory served as the first comprehensive database of archaeological materials collected within and archived by the Park. Prior to 1987, the majority of these materials had never been cataloged, let alone analyzed in any capacity. The project goals were met with regard to historic period artifacts, which dominated the assemblages of previous archaeological projects. Towle noted that only 11 prehistoric period artifacts were included in the ACMP inventory, including eight chipped-stone and three ground-stone tools (1987:39, 60). All of the more than 6,000 cataloged floral and faunal materials were assigned to the historic temporal period, as were 23 unworked lithics and 10 ground-stone tools. It certainly seems possible that, given the serious provenience problems inherent in many of the site-specific collections, at least a percentage of these materials could be associated with pre-or post-contact period Native American land use in the Park. The relative disparity of prehistoric versus historic materials highlights the bias in the Park archaeological collections well into the 1980s.

Towle noted that the former Buttrick family gardener holds a private collection of prehistoric artifacts from the area around the mansion (currently the North Bridge Visitor Center), and she referenced the 1,185 prehistoric artifacts collected as part of her North Bridge Site excavations (Towle 1984a; see discussion below), which were not included in the ACMP inventory. These materials indicate the overall sensitivity of the North Bridge area for prehistoric sites to be present, and by extension point to the prehistoric sensitivity of the Park in general. The lack of prehistoric materials within existing artifact collections represents a clear and problematical gap in the research.

The ACMP series included detailed site summaries, archival documentation, subsurface testing results, and artifact and feature analyses for 19 previously excavated historic period sites within the Park. These sites and their locations within the Park are listed in Table 5-1.

The site reports were produced after the initial site collection identification phase of the ACMP project had been completed. The project archaeologists collected all archival research, field notes, site maps, photographs, existing artifact catalogs and any other supporting documentation that was available for each of the sites listed above. Each site report also discussed the limitations of the data, based largely on the quality and accuracy of the original documentation. Recommendations included at the end of each site report addressed the overall success of previous investigations, the value of the collected materials, and the potential for additional archaeological investigations to supplement the existing database.

The individual site reports were designed to document, as accurately as possible, the field methodologies, research designs, and results of the original excavations. This was often a difficult task, especially for sites where multiple excavations had occurred. The Ebenezer Fiske Site serves as a good example: six different episodes of subsurface testing occurred at this property between 1960 and 1980. The ACMP report not only detailed each of the excavation projects, but also assessed the subsequent analyses performed by Cordelia Snow and discussed unprovenienced surface collections associated with this site (Towle and MacMahon 1987). As records of previous research at these sites, the ACMP volumes address many of the concerns raised in Baker's 1980 *Overview*.

Table 5-1. Historic archaeological sites analyzed in the Archeological Collections Management Program (ACMP) series, 1986-1987, Minute Man NHP.

Site Name	Park Location
Ebenezer Fiske David Fiske Battle Road-Fiske Hill	Battle Road- Fiske Hill
Bull Tavern Jacob Whittemore Thomas Nelson Sr. Thomas Nelson Jr. Site 24 Josiah Nelson Sites 22 and 23	Battle Road- Nelson Road
Hartwell Tavern	Battle Road- Virginia Road
Job Brooks	Battle Road- Old Bedford Road
The Wayside Eliphelet Fox	Wayside
Ephraim & Willard Buttrick Roads West of North Bridge David Brown Elisha Jones John Flint	North Bridge

The information contained in the ACMP volumes is the result of a tremendous effort to collect, organize and present detailed documentary and archaeological data for the sites listed above. These reports should be consulted as a first step in any planning or impact assessment projects at these sites, since they synthesize archaeological data from many different sources. The artifact inventories and analyses provide a baseline for the Park's archaeological collections and may be useful, particularly in the case of poorly provenienced materials, as components of educational and/or display programs. The authors indicated that the large volume of collected materials is also useful as a database for future research questions relating to material culture. For example, future researchers who utilize the Park data would be able to address biases in collection methodologies and differential preservation of material types.

Overall, the Park ACMP series represents an important archaeological research tool that is still relevant nearly 20 years after its completion. Although additional data has been collected from some of the sites since the report's completion, this reference still provides the best documentation of the earliest periods of archaeological research at historic sites within the Park. The series' shortcomings relative to prehistoric period resources have already been discussed, and are largely a factor of the Park mission and its focus on Revolutionary War-era cultural resources.

MIMA Archaeological Project

The two-volume *Archaeological Investigations* series was initiated in 1984 as an "identification and evaluation" study under the MIMA Archaeological Project. The project was designed to help fill information gaps in the existing archaeological database and to more effectively manage the Park's cultural resources. The primary goal of the project was to "answer certain site-specific and Park-wide interpretive questions as they related to the events of 1775 and the cultural landscape in which these events were played out" (Synenki 1990:1). The previous research conducted within the Park, including the ACMP project discussed above, had focused on known Revolutionary War-era historic sites. While

these sites were considered important for the MIMA Archaeological Project, there was also an acknowledgement that large areas of the Park contained underdocumented or unknown resources. The project attempted to connect landscapes, both natural and cultural, to human activities in the prehistoric and historic past. By understanding the ways in which humans utilized and changed the natural landscape, it would be possible to more accurately predict the types and locations of archaeological sites likely to be present within the Park. The results of the project were expected to produce a more comprehensive inventory of the numbers and types of cultural resources within the Park and to more effectively manage these resources.

The project adopted an interdisciplinary approach to help identify modifications and changes to the cultural landscape that occurred before, at the time of, and after the Revolutionary War. The first volume of the series dealt with historic period resources within the Park, specifically those components of the historic landscape that had not been identified or documented archaeologically (Synenki 1990). Previous studies had focused almost exclusively on eighteenth-century houses, with little regard for associated structures (barns, outbuildings) or features (wells, stone wall networks, fields) that could be expected within an agricultural landscape. There had also been no organized attempt to identify the archaeological remains of community support networks, including those associated with artisans and industries.

The MIMA Archaeological Project included archival research, pedestrian survey, and subsurface testing as well as laboratory processing and analyses of recovered cultural materials. Limited geophysical survey was also conducted at the David Brown Site prior to subsurface testing (Synenki 1990:59–60). Specialized studies at the historic period sites included botanical and pollen analysis; limited lithic analysis was completed for materials collected from prehistoric sites.

The sites selected for the historic archaeological study were identified as either farmsteads or industrial/artisan areas. The David Fiske and Daniel Brown farmsteads were selected as sites that were occupied for relatively short periods of time in the late seventeenth and early to mid eighteenth century. The Joseph Mason, David Brown and Jonas Bateman farmsteads all date to the Revolutionary period and after, and were selected based on the Park's interpretive needs and the expectation that they could contain undocumented archaeological components. The investigations at these sites were also expected to help identify changing patterns in agricultural land use over time.

The focus on seventeenth- and eighteenth-century rural industrial and artisan-related (commercial) sites and features within the Park was considered important to an overall understanding of the historic cultural landscape. The Jacob Whittemore, Joshua Brooks, and John Nelson sites were selected for this portion of the project based on the association of each property with some commercial operation. The documentary record indicated that a blacksmith shop was located on the Whittemore property, although no archaeological data had been collected to suggest its location, temporal association or configuration. Investigations at the Brooks property were centered on a tanyard reportedly in operation between 1725 and 1829. The Nelson property was selected as the location of a possible late-eighteenth-century hop house.

The investigations at the selected historic period sites provided answers to most of the research questions posed for the project. The interdisciplinary studies at the farmstead sites collected data about changes in the location, construction materials, and structure of seventeenth- and eighteenth-century house sites. Landscape alterations including road and stone wall construction and large-scale earthmoving were also identified. The configuration of space within individual farmsteads was also documented through the archaeological identification of outbuildings, pasture and tilled fields, and yard areas (Synenki 1990:395–397).

The project resulted in the archaeological documentation of the blacksmith shop and hop house identified in archival sources. The identification and analysis of these two sites provided new information about non-residential resources located in the Park and these data can be used to address broader regional questions relating to the development of commercial and industrial interests in the pre- and post-Revolutionary period. Although no archaeological indications of the tanyard were identified within the designated project area, the lack of structural remains suggested that the complex might have been located closer to an existing waterpower source (Elm Brook) and was misidentified in the documentary record. This information in turn helped the researchers understand commercial/industrial site selection processes relative to the natural environment within the Park.

Prehistoric period resources within the Park were also documented as part of the MIMA Archaeological Project (Ritchie et al. 1990). The primary goals of the study were to develop a predictive model for locating and identifying prehistoric sites within the Park, and to test the accuracy of the model through probabilistic and judgmental field testing at a sample of locations within the Park. The project was expected to produce "a reasonably accurate estimate of the frequencies and distribution of different types of prehistoric sites within the archaeologically sensitive strata defined for MIMA" (Ritchie et al. 1990:59). Like the historic sites study, the prehistoric survey utilized information about the natural and cultural environments within the Park as a baseline for identifying unknown or underdocumented archaeological resources.

The MIMA Archaeological Project represented the first comprehensive attempt to locate and identify prehistoric (Native American) archaeological resources within the Park. Despite more than 20 years of archaeological investigation within the Park, only one previous study had focused on a known prehistoric site in the Park (Towle 1984a, discussed below).

The prehistoric predictive model encompassed approximately 746 acres within the Battle Road and North Bridge units of the Park. Information about the past and present environment was collected in the early stages of the project, as was locational data about known prehistoric sites within and in proximity to the Park. The predictive model developed for the Park relied on previously tested sensitivity models that link environmental and cultural variables to site selection criteria. This information was modified with Park-specific environmental variables and documented historic and modern land use, including previous belowground disturbance.

Ritchie et al.'s (1990) report included a detailed paleoenvironmental reconstruction and information about the natural setting of the Park including topography, geology, drainage patterns, and soil types. The environmental context development also included a discussion of historic period land use and alteration and modern period changes to both the natural and historic landscape. This information was used extensively in the present study, and is presented in detail in Chapter 2 of this report.

The review of limited available information about the known prehistoric period resources within the Park boundaries was another important element of the predictive modeling. The study was broadened by including the functional, temporal, and environmental attributes of known sites outside the Park and applying recognized patterns to the predictive model. In general, the model identified the areas of highest sensitivity to be located around wetlands (streams, ponds, marshes) and in proximity to previously identified prehistoric sites within and just outside the Park boundaries.

The predictive model developed through the above data was used to produce archaeological sensitivity maps of the Park. These maps identified areas of high and moderate prehistoric sensitivity within the North Bridge and Battle Road park units (Ritchie et al. 1990:77–82). The maps also depicted areas that were previously disturbed or where no access was allowed as part of the survey. The archaeological sensitivity of these areas was not assessed during the project. The lack of differentiation between "disturbed" and "no access" areas on the resulting sensitivity maps led to some confusion regarding the

actual levels of disturbance in these areas, and made it difficult to estimate the archaeological sensitivity in the no access areas.

The second major activity associated with the prehistoric sites study was the implementation of a subsurface testing program within the Park boundaries. Available funding influenced the testing methodology and required that only a sample of the Park be surveyed. No subsurface testing was conducted in the North Bridge Unit because of the density of previously known prehistoric sites in this area in proximity to the Concord River, a zone of high sensitivity. As a result, the entire subsurface phase of the project was confined to the Battle Road Unit. A pre-fieldwork pilot study also determined that testing would need to be more intensive in upland environments because of the expected smaller size and more ephemeral nature of sites in this microenvironment versus those in riverine settings.

The Park project area was divided into grids and 15, 30-x-30-m testing blocks (each containing 13, 50-x-50-centimeter [cm] test pits) were randomly placed within areas of moderate and high sensitivity. The resulting sample of Park lands provided some baseline data about environmental conditions but was not considered statistically viable for predicting prehistoric site location. A second random sample consisting of nine 30-x-30-m testing blocks was confined to the Fiske Hill, Nelson Road, and Elm Brook areas that were assessed as having high sensitivity and the Bedford Road/Folly Pond and Nelson Road/Visitors Center Parking Lot areas that were assessed as having moderate sensitivity. A third and final random sample consisted of 24, 30-x-30-m testing blocks placed within the Fiske Hill, Nelson Road, Folly Pond, Hardy Hill and Massachusetts Avenue/Marrett Road areas. Limited judgmental subsurface testing consisted of seven 30-x-30-m testing blocks placed in high and moderate sensitivity areas.

Fourteen previously unknown prehistoric sites were identified as the result of the subsurface testing (Table 5-2). Half of these sites were identified in randomly chosen testing areas, although the random sample was limited to areas of high and moderate sensitivity. The survey documented prehistoric sites in four of the five sections of the Battle Road Unit (Meriam's Corner, Old Bedford Road, Virginia Road, and Nelson Road).

Table 5-2. Prehistoric archaeological sites identified by the MIMA Archaeological Project, 1990.

Site Name	Park Location
No sites identified	Battle Road- Fiske Hill
Whittemore Farm P1 Thomas Nelson Jr. Farm P1 Thomas Nelson Jr. Farm P2 Jacob Foster	Battle Road- Nelson Road
Ephraim Hartwell Farm P1 Ephraim Hartwell Farm P2 Ephraim Hartwell Farm P3 Ephraim Hartwell Farm P4 Aaron Brooks Farm P1 William Smith Farm P1 William Smith Farm P2	Battle Road- Virginia Road
Joshua Brooks Farm P1 Holt Pasture	Battle Road- Old Bedford Road
Ox Pasture	Battle Road- Meriam's Corner
Not Tested	Wayside
Not Tested	North Bridge

Ten of the identified sites were classified as "find spots"; low density artifact deposits recovered in a horizontal area of less than 56 square (sq) m. Three sites (William Smith Farm P2, Ephraim Hartwell Farm P4, and Whittemore Farm P1) were classified as small temporary camps (250–500 sq m) and the Aaron Brooks Farm P1 Site was classified as an approximately 1,500 sq m moderate-sized camp based on collected archaeological data (Ritchie et al. 1990:76–94). None of the identified sites appeared to have been utilized for more than one period of activity. No cultural features were identified and the material assemblage was limited to chipping debris, except for a single uniface and biface collected at the Thomas Nelson Jr. P1 and William Smith Farm P2 sites, respectively.

The fieldwork portion of the prehistoric survey also resulted in the identification of six historic period archaeological sites in the Meriam's Corner, Old Bedford Road and Virginia Road sections of the Battle Road Unit (Table 5-3). The analysis of historic cultural material was focused on basic information categories including temporal association, density and proximity to historic structures or features. The recovery of historic "field trash" in areas not directly associated with structures also provided data about patterns in agricultural land and plowing.

Table 5-3. Historic archaeological sites identified by the MIMA Archaeological Project, 1990.

Site Name	Park Location
No sites identified	Battle Road- Fiske Hill
No sites identified	Battle Road- Nelson Road
Ephraim Hartwell Farm Foundation Ephraim Hartwell Farm 20th C. Foundation William Smith Farm Foundation Samuel Hartwell Farm Cellar Hole	Battle Road- Virginia Road
Thomas Brooks Farm Barn/Outbuilding	Battle Road- Old Bedford Road
Ox Pasture Cartpath and Stone Bridge	Battle Road- Meriam's Corner
Not Tested	Wayside
Not Tested	North Bridge

Several historic research contexts were developed to organize and evaluate the data collected during the prehistoric survey. These contexts addressed prehistoric site location and lithic resource patterns in the interior river basin setting. The survey results appeared to support the regional model of prehistoric land use characterized by small, short-term activity areas in interior uplands and larger, multiuse site areas and base camps in riverine settings. The limited sample of lithic artifacts collected during the survey indicated that non-local stone from the Boston Basin area was much more common than locally available quartz. This pattern had also been observed at other upland interior sites in the general project vicinity. The identified historic period site components, including structural features and domestic and agricultural refuse, were considered in light of their ability to help answer questions relating to eighteenth- through twentieth-century rural/peripheral land use and seventeenth- through twentieth-century transportation networks.

The overall success of the MIMA Archaeological Project is derived primarily from the identification of previously unknown prehistoric and historic archaeological sites within the Park, and the interpretation of these sites within regional patterns of site selection and land use that extend well beyond the Revolutionary War period. The stated project goal to better understand the 1775 landscape was met by constructing a much more thorough context for evaluating changes in land use over time. The study also developed a number of research themes that can be used to help interpret the identified prehistoric and historic sites in the Park. These research themes should be considered when planning future

archaeological studies in the Park, as they provide testable hypotheses that can be addressed through collections and archaeological research.

Both studies clearly stated that additional investigation of all of the newly identified archaeological sites would be necessary to define the basic site attributes and determine National Register eligibility. The historic sites study focused on eight historic properties, although the results and interpretations of the research were applied to the Park as a whole. The prehistoric study was limited to a sample of areas within the Battle Road Unit, and subsurface testing was confined to areas that were assessed as having a moderate or high potential for sites to be present. While some unexpected historic period resources were identified through the prehistoric testing model, both studies generally focused testing efforts in the areas that were most likely to contain the types of resources that had been predicted.

These investigations resulted in the identification of the types of resources and corresponding locations (i.e. small lithic scatters and stone tool finds located in proximity to freshwater wetlands) expected prior to the project. The study, which relied heavily on complicated statistical equations, essentially confirmed the more simple predictive model that evaluates the presence or absence of various environmental and cultural criteria.

While the predictive model has been generally supported by the results of Section 106 investigations within the Park over the past decade, it is difficult to construct meaningful interpretations of the majority of the prehistoric sites that have been identified within the Park. As noted elsewhere in this report, the North Bridge Site remains the only prehistoric site that has been thoroughly investigated through archaeological testing. Neither the spatial extent nor the full range of activities represented at the majority of the Park's prehistoric sites have been determined.

The identification of a number of previously undocumented or under documented historic period sites as part of the MIMA Archaeological Project indicates the potential for additional historic period resources to be present at and/or below the present ground surface. While archival research can likely provide information on the probable locations of as-yet unidentified archaeological features, the archaeological predictive model employed by PAL may prove useful for identifying sites that are less "visible" in the documentary record.

Battle of Lexington and Concord

The Park's mission to identify, preserve, and interpret resources associated with the 1775 Battle of Lexington and Concord has been largely accomplished through the documentation of standing structures and landscapes that were present during the conflict. Archaeological studies have generally followed this pattern (see above) and have been focused on individual homes/farmsteads and human interaction with the natural and built environment. Archaeological investigations related to the military aspects of the Battle have not, however, been undertaken within the Park. Although archaeological studies are lacking, two NPS research projects were utilized as part of the current AOA to help identify the types and locations of battle-related archaeological sites that may be present within the Park.

The NPS's American Battlefield Protection Program (ABPP) is a multistate program designed to "promote the preservation of significant historic battlefields associated with wars on American soil" (www.cr.nps.gov/hps/abpp/). In 2001–2002, PAL completed a survey of Revolutionary War and War of 1812 battlefields within Massachusetts (Ford 2002) under the auspices of the ABPP program. This project included archival research and GPS/GIS data collection. The fieldwork portion of the project included an assessment of each site's defining features, existing condition, and identifiable threats to preservation.

The ABPP project in and around the Park involved the identification and documentation of sites related to the Revolutionary War, and specifically to the Battle of Lexington and Concord. The project resulted in the identification and mapping of 16 Revolutionary War sites within the Park boundaries (Table 5-4). The ABPP "site" categories include a variety of resources such as structures, ruins, and topographic features. While the designated "sites" have not all been verified as archaeological sites, they all have the potential to be associated with archaeological resources. For example, terrain features such as Arrowhead Ridge and the Bluff have been documented as Battle of Lexington and Concord activity areas, and may contain military artifacts such as gunflints or musket balls. The data collected as part of the project is available in narrative form and within a GIS format and could be particularly useful for future archaeological locational or thematic studies within the Park.

Table 5-4. Sites associated with the Battle of Lexington and Concord, Minute Man NHP (ABPP project, 2002).

PARK UNIT	SITE NAME	SITE TYPE	INTEGRITY
North Bridge	Muster Field	Placename/Location	Ruins/Remains
	Hill	Terrain Feature	Original Intact
	North Bridge	Stream/Crossing	Rebuilt
Battle Road-Meriam's Corner	Meriam's Corner	Road/Intersection	Original Intact
	Arrowhead Ridge	Terrain Feature	Original Intact
Battle Road-Bedford Road	Brook's Hill	Terrain Feature	Original Intact
	Brook House	Structure	Original Intact
	Brook Tavern	Structure	Rebuilt
	Elm Brook	Stream/Crossing	Rebuilt
	Bloody Angle	Road/Intersection	Rebuilt
Battle Road-Virginia Road	Hartwell Tavern	Structure	Original Intact
	Hartwell House	Structure	Ruins/Remains
Battle Road-Nelson Road	Paul Revere Capture Site	Placename/Location	Probable Location
	Town Line	Terrain Feature	Original Intact
	Parker's Revenge	Placename/Location	Probable Location
Battle Road-Fiske Hill	Bluff	Terrain Feature	Original Intact
	Fiske's Hill	Terrain Feature	Original Intact

Joyce Malcolm's *The Scene of the Battle, 1775* was prepared as an NPS Historic Grounds Report in 1985. This study did not incorporate archaeological research, but it can be used in conjunction with the ABPP to help identify battle-related sites within the Park. The thoroughly researched report attempted to "relate, in as great detail as surviving historical materials permit, what the landscape looked like . . . where the roads, houses and barns were located, how the surrounding land was divided and used" (Malcolm 1985:ix). Malcolm utilized primary and secondary source materials to reconstruct the landscape along the Battle Road and at the North Bridge, and presented this information in narrative form and in detailed maps. The scaled maps depict the locations of structures (including homes, outbuildings and industries); landscape features such as stone walls and field divisions; and transportation corridors including roads, cartpaths, and bridges. Some of the features included in this report have been identified and/or documented archaeologically, and/or documented archaeologically, but many more of them have not. Since the report is organized around accounts of what happened on April 19, 1775, the information it contains can be used by NPS archaeologists to help locate probable sites where engagements occurred or where troops mustered. The map reconstructions provide details about the 1775 landscape that can be used to design testing strategies for locating battle-related sites such as lookout and firing positions behind stone walls.

Minute Man National Register Documentation

The Minute Man NHP National Register Historic District documentation completed in 2002 represents the most complete park-wide study of cultural resources conducted to date. The documentation includes an extensive narrative that describes the setting and physical appearance of the Park units and properties and presents interpretive contexts for the Park's military, commemorative, architectural, literary, agricultural and archaeological significance. The information contained in this documentation was utilized extensively for the current AOA study.

The National Register documentation identified a total of 133 properties within the Park, including 105 classified as contributing and 28 as non-contributing properties (PAL 2002). These property types included buildings, sites, structures, and objects. Thirty-five historic period archaeological sites were identified as contributing properties within the Minute Man NHP Historic District (Table 5-5).

Although 24 prehistoric period sites were identified in the archaeology narrative section, the North Bridge Site (19-MD-487) was the only one that had been documented sufficiently to determine that it was eligible for listing on the National Register of Historic Places (PAL 2002, Section 8:63) (Table 5-6). Avocational archaeologists identified nine of the prehistoric sites prior to the creation of the national park (19-MD-88, -89, -90, -91, -102, -111, 112, -180, -397). Two sites were identified through Park archaeological projects in 1984 (19-MD-487 and -397), and the remaining 14 sites were identified during the MIMA Archaeological Project (see Table 5-2). At the time the National Register documentation was prepared, the available information on these 23 sites was generally limited and was not considered sufficient to determine eligibility. The completed report stated that additional archaeological investigations would be required to determine whether any of these prehistoric sites were eligible for listing in the National Register.

The exclusion of prehistoric sites from the Minute Man NHP Historic District listing was due in large part to the scope of the nomination project. The text states that, "The period of significance for Archaeology extends from ca. 1665 when the John Meriam House was constructed to 1951" (PAL 2002, Section 8, page 1). This focus on post-1665 sites was agreed upon prior to the start of the project, since it was known that only one of the prehistoric sites had been evaluated. It is likely that many of the previously identified prehistoric sites could, in fact, be considered for listing on the National Register, but the necessary information had not been collected in 2002.

A National Register Supplementary Listing Record (SLR) was accepted by the Keeper of the National Register on December 12, 2002. The SLR included several amendments to the original documentation that addressed the exclusion of prehistoric archaeological sites. Specifically, the SLR added "Prehistoric" and "Archaeology- Historic-Non-Aboriginal" to the Areas of Significance; added "7500 to 500 Years Ago" to the Period of Significance; added "Late Archaic, Middle Archaic, and Late Woodland" under Cultural Affiliation; and added the North Bridge prehistoric site as a contributing National Register site.

The SLR expanded the National Register nomination to allow for the inclusion of prehistoric archaeological sites, and if, in the future, other prehistoric sites are determined to be National Register-eligible they can be included within the Minute Man NR District.

Table 5-5. Contributing historic archaeological sites, Minute Man NHP Historic District (PAL 2002).

PARK UNIT	SITE NAME
North Bridge	Battle Road/North Bridge
	Ephraim & Willard Buttrick House Site
	Jonas Bateman Site
	Capt. David Brown House Foundation
	John Buttrick House Foundation
	Thomas Flint Site
	Elisha Jones Site
Wayside	Wayside Site
	Eliphelet Fox House Foundation
Battle Road-Meriam's Corner	(First) East Quarter School House Site
	Gowing-Clark Barn Foundation
Battle Road-Bedford Road	Thomas Brooks Farm Foundation
	Joshua Brooks Tanyard Site
	Brooks House Site
	Hastings Barn Foundation (name changed to Sawyer Barn Foundation)
	Joseph Mason House Site
	Sgt. Samuel Hartwell House Site
Battle Road-Virginia Road	Samuel Hartwell Farm Cellar Hole
	Ephraim Hartwell Site
	Captain William Smith Site
Battle Road-Nelson Road	Battle Road/Nelson Road
	Jacob Whittemore Blacksmith Shop
	(Tabitha Nelson House) Thomas Nelson, Sr. Site
	Barn Foundation Site
	Josiah Nelson, Jr. Hop House Foundation
	Unidentified Cut Stone Foundation
	Site 22, 23
	Site 24
	Daniel Brown House and Shop Site
	Josiah Nelson House Foundation
	Thomas Nelson, Jr. House Foundation
Battle Road-Fiske Hill	Battle Road/Fiske Hill
	Lt. David Fiske Site
	Ebeneezer Fiske House Foundation
	Bashian Barn Foundation

Table 5-6. Listing of Prehistoric Archaeological Sites and National Register eligibility, Minute Man NHP National Register documentation (PAL 2002).

PARK UNIT	SITE NAME (MHC NUMBER)	NATIONAL REGISTER ELIGIBLITY
North Bridge	Poplar Hill 19-MD-88)	Has not been evaluated
	Old Manse Land (19-MD-89)	Has not been evaluated
	Battle Lawn (19-MD-90)	Has not been evaluated
	Liberty Hill (19-MD-91)	Has not been evaluated
	Prescott (19-MD-102)	Has not been evaluated
	North Bridge (19-MD-487)	Eligible
Wayside	19-MD-111	Has not been evaluated
	19-MD-112	Has not been evaluated
	Revolutionary Ridge (19-MD-180)	Has not been evaluated
	19-MD-387	Has not been evaluated
Battle Road-Meriam's Corner	Ox Pasture (19-MD-687)	Has not been evaluated
Battle Road-Bedford Road	Joshua Brooks Farm P1 (19-MD-677)	Has not been evaluated
	Holt Pasture(19-MD-686)	Has not been evaluated
Battle Road-Virginia Road	Ephraim Hartwell Farm P1 (19-MD-683)	Has not been evaluated
	Ephraim Hartwell Farm P2 (19-MD-682)	Has not been evaluated
	Ephraim Hartwell Farm P3 (19-MD-679)	Has not been evaluated
	Ephraim Hartwell Farm P4 (19-MD-678)	Has not been evaluated
	Aaron Brooks Farm P1 (19-MD-681)	Has not been evaluated
	William Smith Farm P1 (19-MD-680)	Has not been evaluated
	William Smith Farm P2 (19-MD-676)	Has not been evaluated
Battle Road-Nelson Road	Whittemore Farm P1 (19-MD-688)	Has not been evaluated
	Thomas Nelson Jr. Farm P1 (19-MD-685)	Has not been evaluated
	Thomas Nelson Jr. Farm P2 (19-MD-684)	Has not been evaluated
	Jacob Foster (19-MD-675)	Has not been evaluated

Minute Man Collections Management Plan (CMP)

The Park CMP was recently updated (July 2004) and serves as a tool to "assist park personn prioritizing the needs of its curatorial program" (NPS 2004). The last CMP was completed in 199 current report summarized information about Park collections as of approximately 2003 (Terrie Wa personal communication 2004). The CMP addressed all areas of collections management within the including use and access, storage, security, and funding. The report also included a sectio specifically addresses archaeology, and included two appendices that list the archaeological colle archived at the Park and the NPS Northeast Region facility in Lowell.

With only a few exceptions, all Park archaeological materials and their associated documentatic archived at one of the two NPS facilities listed above. The CMP report listed 132 archaeol collections that had been accessioned and an additional 18 collections that had been identified but unaccessioned at the time the report was completed (NPS 2004:23). At least 13 more collections been given accession numbers since the report was completed (Terrie Wallace, personal communi 2004).

The 2004 CMP noted that one of its main goals, to catalog all pre-1987 archaeological collectior associated documentation, had been met. The task of cataloging "backlog" Minute Man NHP pr was initiated in the mid-1980s ACMP (discussed above). Cataloging of the backlog archaeol collections did not begin until 1996 (FY 1997) and has only recently been completed. Park pers also attempted to improve storage and access by completing a rehabilitation of the Job Brooks H allowing for better organization of the archaeological collections. The completion of these task provided a comprehensive database about previous archaeological research conducted within the Par has the potential to contribute to future archaeological research questions.

The updated CMP also included a detailed listing of the organization and condition of the a collections and reported this information in tabular form in the report appendices (NPS 2004, Appe E and F). This information was reviewed as part of the current project, and should be consulted most thorough and complete assessment of the Park's current archaeological holdings.

The CMP also addressed existing research gaps and problems with the Park's archaeological collec One of the most notable problems is the lack of archived associated documentation. The report note much of the post-1987 project documentation (e.g., field notes, maps, laboratory records, photograp not curated with the associated artifact collection(s) but is maintained at the NPS Lowell facility. physical separation of artifacts and documentation significantly limits the research value of the colle themselves.

The report noted problems with consistency relative to the ANCS+ database, used to organize acc records for every archaeological project completed within the Park. While the database is extr useful as a single source of information about all archaeological collections, some of the records incomplete or outdated information, or provide vague rather than specific information about the sta a particular collection. Some accession numbers apply to multiple collections, making it diffic identify a specific site or phase of investigation. Similarly, collections from a single site or proje sometimes cataloged under two different numbers. Changing site designations and/or names hav resulted in some overlap. A final issue pertains to accession numbers that have been assigned for pr for which no ANCS+ catalog has been completed. Many of these are recent compliance-related pr that are still housed at the Northeast Region Archaeology Program offices in Lowell. All of potential problems were addressed as either short- or long-term goals of the CMP program, indicati Park's interest in improving the conditions of its collections.

The Park's archaeological collections represent a significant resource for future research and interpretation. The CMP report is an important document that outlines the various information sources available to archaeologists and others, and should be utilized as a tool to identify the location, status, and condition of all existing artifacts and associated materials.

Compliance-Related Archaeological Projects

Investigations that have been conducted under Section 106 of the NHPA comprise the bulk of the post-1980 research about archaeological resources within the Park. The projects discussed below represent the full range of archaeological investigations and include geophysical studies, subsurface sampling, large-scale excavation, and monitoring of construction-related activities. They include projects completed within a small portion of a single property as well as those that extended across a large section of the Park. NPS staff archaeologists have conducted the majority of the compliance-driven projects, although professional CRM contractors have completed several projects. Although there are a few exceptions, these investigations were generally limited to specific areas where subsurface impacts were planned. The primary purpose of compliance-driven archaeological investigation is to locate and identify resources that may be impacted by actions such as new construction, landscaping, and utility upgrades.

The projects discussed in this section represent those for which some documentation was collected during the archival research phase of this AOA, completed in the fall and winter of 2004, and includes 50 separate projects or phases of work (Table 5-7). Project documentation generally consisted of a formatted report or letter memorandum, but several projects included here were identified through field notes or other unformatted documents. Every attempt was made to include as many ongoing compliance-related archaeological projects as possible in this report. The format of the text is designed to evaluate these projects by type, thereby allowing ongoing and future studies to be considered within the same criteria. The compliance-related projects can be subdivided into several distinct types.

Geophysical Studies

In general, geophysical studies involve little or no subsurface disturbance and rely upon electronic equipment to identify anomalies that could indicate belowground archaeological deposits including foundations and other features. The earliest of these projects, at the Hartwell Tavern, was completed in 1980 and included electrical resistivity (remote sensing) testing to identify the possible locations of refuse deposits, wells, privies, paths or roadways and a barnyard that were known through archival sources (Weston Geophysical Corp 1980:2). The results of the geophysical survey were used to guide subsurface testing at the site, conducted in part to compare the effectiveness of electrical resistivity versus more traditional sampling methodologies. Two foundation features, a sheet refuse deposit and roadbed section were identified in remote sensing anomaly areas (Pratt 1981). This two-phase approach to locating and identifying archaeological resources appears to have been successful at identifying features with limited subsurface testing.

Remote Sensing was also conducted in the Meriam's Corner section of the Park as part of the multiphase Visitor Access Trail Project (discussed below) (Pendery et al. 1996). The NPS teamed with Boston University's Office of Public Archaeology and subcontracted to Bruce Bevan to complete a geophysical survey in conjunction with subsurface testing (Jones et al. 1995). The project was an attempt by Park archaeologists to use a multi-disciplinary approach to the study of one of the key parcels within the Battle Road Unit (Steven Pendery, personal communication 2005). Despite a documented history of land use that spanned many thousands of years, this area had not previously been investigated archaeologically. It remains one of the only portions of the Park that has been examined using a full range of geological, geophysical, documentary and subsurface research strategies, and would be a good candidate to have

Table 5-7. Compliance-driven archaeological investigations within Minute Man NHP, 1980-2003.

INVESTIGATION TYPE	PROJECT AREA/SITE NAME	INVESTIGATED BY WHOM/AFFILIATION	DATE OF INVESTIGATION	REPORT REFERENCE
Geophysical	Ephraim Hartwell Tavern	Weston Geophysical Corporation	1980	Weston Geophysical Corporation 1980
	Meriam's Corner	Boston University- Office of Public Archaeology	1995	Jones et al. 1995
	Meriam's Corner	University of Massachusetts Archaeological Service	1999	Barosh and Donta 1999
	North Bridge Unit	Hager GeoScience, Inc	2002-2003	Hager GeoScience, Inc. 2004
Tested	Ephraim Hartwell Tavern	NPS	1979	Mahlstedt 1979a
	Elisha Jones House	NPS	1979	Mahlstedt 1979b
	Ephraim Hartwell Tavern	Pratt & Pratt Archaeological Consultants	1980	Pratt 1981
	Captain William Smith House	NPS	1983	Towle and Hsu 1984
	Route 2A Widening	NPS	1983	Towle 1983
	Perry Field	NPS	1984	Towle 1984b
	Nelson Road	NPS	1984	Synenki 1984
	Samuel Hartwell Site	NPS	1985	MacMahon 1985
	Job Brooks House	NPS	1993	Mead 1993
	Job Brooks House	NPS	1994	Mead 1994a
	Rogers Property	NPS	1993	Mead 1994b
	Rogers Property	NPS	1994	Mead 1994c
	Buttrick Mansion/North Bridge Visitor Center	NPS	1995	Mead 1995
	Visitor Access Trail Phase 1: Meriam's Corner; Smith House; Palumbo House; Stow; Elm Brook; Paul Revere Capture Site, Hanscom Field Entrance	NPS	1995	Pendery et al. 1996
	Burke House	NPS	1995	Notes and forms on file, NPS Lowell.
	Perry House	NPS	1995	Notes and forms on file, NPS Lowell.
	Wayside Barn	NPS	1996	Griswold 1996a

Table 5-7. Compliance-driven archaeological investigations within Minute Man NHP, 1980-2003.

INVESTIGATION TYPE	PROJECT AREA/SITE NAME	INVESTIGATED BY WHOM/AFFILIATION	DATE OF INVESTIGATION	REPORT REFERENCE
Tested	Visitor Access Trail Phase 2: Meriam's Corner; Beatteay House; Bloody Angle; Bedford Lane; Paul Revere Capture Site; Willow Pond Diner; Perry House; Elm Brook; Fiske House	NPS	1996	Griswold 1996c
	Buttrick Mansion/North Bridge Visitor Center	NPS	1997	Mead 1997a
	Hardy's Hill	NPS	1997	Mead 1997d
	Package 170A-Visitor Access Trail: Whittemore House field; Marrett Street fields; Hartwell Tavern field; Noah Brooks yard; Job Brooks/Sam Brooks field; Brooks Corner	NPS	1997	Mead 1999b
	Bedford Lane	NPS	1998	Pendery 1998
	North Bridge Visitor Center	NPS	1998	Mead 1998
	Meriam House Garage	NPS	1999	Griswold 2000
	Joshua Brooks House	NPS	2000	No author cited; Memo on file, NPS Lowell.
	Meriam House Foundation	NPS	2000	Wilson 2000
	Elisha Jones House	NPS	2000	Haynie 2000
	Job Brooks Field	NPS	2000	Wilson et al. 2000
	Samuel Brooks septic system	NPS	1999	Mead 1999a
	Samuel Brooks septic system	NPS	2001	Notes and forms on file, NPS Lowell.
	Meriam House septic system	NPS	2001	Notes and forms on file, NPS Lowell.
	Whittemore House	NPS	2002	Griswold and Cooney 2002
	John (Josiah Jr.) Nelson House	NPS	2002-2003	Pendery and Cooney 2003
	Whittemore House	NPS	2003	Cooney et al. 2003
	North Bridge Visitor's Center Area; John Buttrick House Area; Muster Field; Battleground Allee	Gray & Pape, Inc.	2004	McDonald 2004
Monitored	William Smith House	NPS	1983	Towle and Hsu 1984
	Samuel Hartwell Site	NPS	1985	MacMahon 1985
	Job Brooks House	NPS	1994	Mead 1994a
	Elisha Jones House	NPS	1995	Griswold 1995

Table 5-7. Compliance-driven archaeological investigations within Minute Man NHP, 1980-2003.

INVESTIGATION TYPE	PROJECT AREA/SITE NAME	INVESTIGATED BY WHOM/AFFILIATION	DATE OF INVESTIGATION	REPORT REFERENCE
Monitored	Daniel Taylor House	NPS	1996	Griswold 1996b
	Buttrick Mansion/North Bridge Visitor Center	NPS	1996	Mead 1996
	Perry House and Fields	NPS	1997	Mead 1997b
	Palumbo Farm	NPS	1997	Mead 1997c
	North Bridge- Visitor's Center	NPS	1997	Mead 1997b
	Joshua Brooks House	NPS	2001	Field notes, profile drawings, on file, NPS, Lowell.
Excavated	North Bridge Site	NPS	1983	Towle 1984a

its archaeological resources delineated through landscape treatments for interpretive purposes.

The study utilized ground-penetrating radar (GPR) and a magnetometer to identify possible feature objects within the proposed project area. The parcel was gridded and both geophysical tests completed at regular intervals. The use of GPR, which detects changes in soil density and te resulted in the identification of a U-shaped anomaly that was interpreted as a possible filled stru depression. The magnetometer survey identified several belowground iron concentrations. In ge the results of the survey were considered somewhat useful. The complex history of land us alteration in this section of the Park (including filling, grading, and road and utility construction) app to hamper the GPR and make the identification of possible features more difficult. The magneto survey was designed to identify very specific feature types that contained metal (specifically concentrations. While the survey was used to help guide subsequent subsurface testing, it appeared less effective in this area than in other sections of the Park (see discussion of North Bridge Unit, belo

A second Meriam's Corner survey combined geophysical analysis with an archaeological sens assessment and focused on identifying past and present environmental features in order to predi locations of archaeological sites (Barosh and Donta 1999). The University of Massach Archaeological Services completed the multidisciplinary study within the Meriam's Corner section Park. The location was chosen in part because of the array of documentary and environmental dat was available for this area, including topographic, vegetation and aerial maps, trenching profiles, hi property boundary surveys and construction plans. This location is also significant as a long agricultural complex, for its association with the Battle of Lexington and Concord, and because it contained a major branch of the Concord River.

The Meriam's Corner study resulted in a detailed reconstruction of the natural topography of this s of the Park, which helped to interpret the cluster of previously identified prehistoric sites in the Significant changes to the course and flow of the Mill Brook wetlands has occurred over time, pa through natural processes such as flooding and partially through manmade alterations including dit and damming. Additional belowground disturbance associated with eighteenth- through twen century agricultural land use, residential development and road construction has resulted in subst cutting and filling across portions of Meriam's Corner.

The main success of this study was the extensive use of available documentary and environmental d reconstruct complex physical changes that occurred in the Meriam's Corner area. The collectio analysis of this data allowed the archaeologists to develop a very accurate archaeological sensitivity that was used to predict the possible locations of prehistoric resources and to discuss areas that may once contained these resources but have been altered so extensively that the likelihood is now low study also helped to identify the locations of agricultural and historic period landscape modifica some of which have already been documented archaeologically. This type of research may be espe useful in other areas of the Park (including much of the Battle Road Unit) where intensive manipu of the landscape has occurred over several centuries.

The most recent geophysical survey was conducted in 2002–2003 within the North Bridge Unit (GeoScience 2004). The objective of the survey was to use GPR and electromagnetic (EM) t conductivity profiling to identify the locations of potential buried archaeological features incl foundations, human burials and other pits, roads, and large buried objects. The EM testing measur conductivity of soil to electromagnetic frequencies, and color maps produced from the res measurements indicate the location and shape of possible features. The testing was designed to anomalies that were present within the top 2 m of the ground. The project area included three p within the North Bridge Unit totaling approximately 18 acres. The tested areas included a larg south of the Visitor Center and east of Liberty Street, a parcel between Monument Street and the Co River, and a small parcel southeast of the Old Manse.

The survey resulted in the identification of a number of possible archaeological features. The EM terrain conductivity testing located a possible buried foundation, several sections of possible roadway, and possible plow scars in the area east of Liberty Street. A number of small and large circular and elliptical anomalies were interpreted as possible archaeological features of some type, although some of these were also interpreted as possible boulders or other natural objects. The GPR testing identified a possible buried road section east of Liberty Street, but in a different area than those located by the EM testing and several anomalies in the general area of the Grave of the British Soldiers that may suggest the actual location of one or more graves. All of the locations identified as possible archaeological features were depicted on large-scale color maps that were included with the final report.

The main drawback of the Hager GeoScience survey was its limitation to areas within the top two meters of the current ground surface. The report authors noted that potential features or deposits located below two meters would not be identified, somewhat limiting the effectiveness of these techniques in areas of deep filling. Another drawback of this survey was the lack of overlap in the use of different geophysical testing techniques within the same areas of the North Bridge unit. The results of the survey were also potentially affected by the presence of large boulders and shallow bedrock in the North Bridge project area. Subsurface testing would be necessary to determine if many of the anomalies were produced by natural or cultural activities.

The EM terrain conductivity testing appeared to clearly identify the location of a rectangular foundation or cellar hole that is not visible on the surface. The combined results of the two techniques were also quite effective at identifying the possible locations of corridors, which when mapped do appear to represent former cart paths or roads. Possible parallel plowscars were identified in one area. The identification of the possible locations of human burials in the vicinity of the British Soldiers grave marker also suggests the applicability of GPR technology to other areas of the Park where these types of features are expected to be present.

EM and GPR testing could be used as effective tools to help identify potential features in other sections of the Park, especially where filling and/or grading activities have been somewhat limited. The North Bridge and Meriam's Corner survey results indicate that buried foundations, remnant roadways and cartpaths, and pit features can be identified using this technology, and examples of these feature types are most certainly present in areas of the Park that have not been archaeologically investigated. Magnetometer testing may have more limited applications in areas where concentrations of metals could be expected, for example in the area of a blacksmith shop or foundry. In general, geophysical studies have a great potential to help Park archaeologists identify specific areas of archaeological sensitivity, and to help focus limited excavation time on areas with the greatest likelihood to contain certain resource types.

Impact Area Surveys

The majority of the compliance-driven archaeology conducted in the Park falls into this category and projects are grouped under the heading "Tested" in Table 5-7. In general, this type of survey involves limited subsurface testing within specific belowground impact areas such as utility easements, walkways and roads, or landscaping. Hand testing (usually 50-x-50-cm test pits) in these impact areas is often followed by archaeological monitoring during the construction phase of the project (discussed below). NPS personnel have conducted the majority of these surveys, although a few projects have been completed by contracted archaeologists (see Table 5-7). These identification-level surveys are designed to locate and identify any potentially significant archaeological resources that may be affected by the proposed undertaking. At least 35 separate identification surveys have been completed between 1980 and 2004 (see Table 5-7). Another 10 projects are listed under the heading "Monitored" and indicate the presence of an archaeologist at an active construction site. Little or no cultural material is collected

during the monitoring phase of a project and reported data is usually limited to visual observations and occasionally profiles of machine excavated trenches.

Each of the surveys reported in this AOA have been described in some form of text, although the type of document varies from project to project. The majority of these survey projects are reported in the form of a memorandum that is filed in the Park reference library after being reviewed by the appropriate supervisors. The memoranda usually include an introductory section that states the project objectives, a summary of the subsurface testing and any other research completed as part of the project, and a description of the results and recommendations. Artifact catalogs are sometimes included but often the memorandum is completed before processing and cataloging occurred. Site plans and/or testing maps are usually included in these memoranda, but sometimes are referenced and not attached. Very few of the NPS survey projects result in the production of a technical report, and as a result very few documents contain environmental or cultural research contexts. Some of the survey memoranda reference earlier archaeological testing in the general project area, for example at house sites that have been excavated numerous times, but generally there is little discussion of previous research within the larger site area.

Five of the identification testing documents are designated as "Trip Reports" and consist of a one or two page summary of limited subsurface testing within an impact area. While figures accompany some of these trip reports, they contain limited information about the testing methodology or collected materials and instead focus on brief discussions of results.

The level of reporting for these generally small-scale surveys may be appropriate to the scope of individual projects, which are often completed on short notice and with little advance preparation time. Some of the individual projects reviewed for the AOA study consist of two or three shovel test pits along a proposed water line, so the level of required documentation should be relative to the scope of the study. Some of the more recent memoranda reviewed for the AOA may also preliminary documents that will be augmented by more detailed reports. For those projects that are complete, however, there are some gaps in the archived record — most notably project area maps showing the locations of test units and catalogs of recovered materials.

There are several larger NPS survey projects for which complete technical reports have been completed. The recently completed Visitor Access Trail and Package 170A projects included several phases of subsurface testing at multiple impact areas within the Battle Road Unit (Griswold 1996c; Mead 1999b; Pendery et al. 1996). The Visitor Access Trail project focused on the impact areas associated with the construction of the Battle Road Trail. Package 170A was titled "Save Historic Structures and Cultural Landscapes" and was focused on the rehabilitation of seven historic structures and their landscapes (Steven Pendery, personal communication 2005). The documentation for these projects included a summary of the research context, discussion of the various project areas, detailed maps showing the locations of testing and identified site areas, and interpretations and recommendations for identified resources. Other examples of more broad-based studies within the Park include the Route 2A widening project (Towle 1983), at the Samuel Hartwell House (MacMahon 1985), Meriam's Corner (Griswold 2000), and Bedford Lane archaeological survey (Pendery 1998). A survey of several impact areas within the North Bridge Unit was documented in a technical report produced in 2004 by archaeological consultants Gray and Pape, Inc.

The current trend of compliance-driven archaeology within the Park will undoubtedly necessitate many more of the small-scale testing projects that are described above. The NPS archaeological staff seems to have been able to keep up with the demands of impact-related studies in advance of utility upgrades and maintenance projects at many of the Park's historic properties, but this has also resulted in a wide range of documentation types and a backlog in artifact processing and report production. Perhaps future archaeology programs can attempt to develop more consistent reporting standards and devote more resources to post-excavation tasks including laboratory processing and analysis and report preparation.

Site Excavation

To date, only one large-scale prehistoric excavation project has been conducted within the Park as part of an impact assessment study. The North Bridge Site was identified in 1983 during an intensive survey of the proposed location of a new comfort station at the Old North Bridge parking lot (Towle 1984a). Although no previously identified site was located within the immediate project area, the high density of known prehistoric sites in the general vicinity and the proximity of the Concord River contributed to the overall high sensitivity of the parcel. A series of 2 to 3 foot square excavation units were initially placed at regular intervals within nine specific impact areas in the project parcel. After the first phase of testing, additional testing at closer intervals was conducted within three of the areas that contained high densities of materials and features, as well as in one additional area that was added to the project. The combined totals of the two phases of subsurface testing resulted in 90 excavation units and as much as a 42 percent excavation sample of several of the impact areas.

Towle's report on the excavations included the results of the testing as well as detailed research contexts, analyses and interpretations, and scaled project maps. A total of 4,399 artifacts was collected (1,185 prehistoric, 3,214 historic) and nine possible features were identified within the site area. The historic period materials were interpreted as generally associated with a structure located just outside the project area. The prehistoric site components documented Middle and Late Archaic and Late Woodland Period campsite use and suggested that food processing, including cooking of turtle and other mammals, likely occurred on the site. Lithic workshop areas were also identified by dense concentrations of quartz chipping debris. Tonya Largy analyzed floral and faunal materials, and Russell Barber analyzed shellfish remains. The results of these specialized analyses were included as appendices in Towle's published report, and contribute to the overall research value of the study. The report also included recommendations for site prep and construction work within the final project area, including ways to avoid potential unnecessary impacts to portions of the site located outside of direct impact areas.

The North Bridge Site report, although 10 years old, should still be considered a major resource for future studies within the Park and in similar environmental settings. It includes detailed discussions of predictive modeling, testing methodologies, results and analyses of artifacts and features that can contribute to the study of other prehistoric sites in the region, and can be utilized to help develop research questions for other sites where excavation is utilized as a mitigation measure.

Summary

The information presented above demonstrates the wide array of documentary and archaeological research that has been collected since the completion of the last Park AOA. The combined efforts of NPS personnel, professional archaeologists, and historians has resulted in the identification of prehistoric and historic archaeological sites, the construction of numerous interpretive research contexts, and the production of Park-wide and parcel-specific archaeological sensitivity maps.

Each of the research types discussed above can be used to help identify, document and interpret the archaeological resources that are located within the Park. Previously collected archival research combined with geophysical studies can be used to help locate belowground historic and prehistoric deposits within the Park, and may be especially useful for focusing limited subsurface testing efforts in the areas most likely to yield new archaeological data. The Park's extensive cultural material collections, representing more than 30 years of excavation, have been organized, cataloged and inventoried as recently as 2003, and cataloging continues to the present day. This information, combined with the in-depth analysis of various site assemblages, can be used as a comparative reference database for future artifact analyses. The existing collections represent a valuable resource on their own, and can be utilized for a variety of Park-wide or site-specific quantitative analyses, as educational materials, and in interpretive programs. Numerous research contexts have been developed for different Park projects and

include those related to the natural and built environment, prehistoric land use and settlement patterns, the Battle of Lexington and Concord, colonial settlement patterns, and agricultural land use. Archaeologists can use the information contained in these contexts to help develop testing strategies within the Park that are designed to collect specific types of information about cultural resources.

All of the existing archival, archaeological and collections data build on the earliest periods of archaeological investigation conducted within the Park and should serve as a base upon which future archaeological research programs can be built. It has also been used in the context of the current study to describe known and potential archaeological resources within the Park (Chapter 6), discuss the research value of known sites (Chapter 7) and make recommendations for future research (Chapter 8).

CHAPTER 6

KNOWN AND POTENTIAL ARCHAEOLOGICAL RESOURCES

The combined results of more than 40 years of professional, academic and avocational archaeological investigations and collections research have documented a total of 116 archaeological sites within and immediately adjacent to the Park. This chapter presents a summary of these resources, grouped by Park Unit (North Bridge, Wayside, Battle Road) and site type (prehistoric and historic). Previously identified archaeological sites include all of those documented by NPS staff through the ASMIS database as well as a number of additional sites that have been designated in the MHC's archaeological site files but are not currently included in the ASMIS database. These sites are listed in tabular form and depicted in Appendix A on aerial maps of the Park. The predictive model for potential cultural resources is represented by the prehistoric and historic archaeological sensitivity maps of the Park, included in Appendix B.

Archaeological Sensitivity

The locational, environmental, and cultural data that was gathered about previously identified sites was used to predict the types and locations of unknown and/or undocumented archaeological sites that may be present within the Park. The development of predictive models for locating archaeological resources has become an increasingly important aspect of cultural resource management and planning.

The predictive model considers various criteria to rank the potential for the project area to contain archaeological sites. The criteria include the proximity of recorded and documented sites, local land use history, environmental data, and existing conditions (Table 6-1). These criteria were used to divide the Minute Man NHP into zones of expected prehistoric and historic archaeological sensitivity, as presented in Appendix B. The types and temporal range of expected archaeological resources within each Park Unit are discussed below.

North Bridge Unit

Known Archaeological Resources

A total of 27 archaeological sites have been recorded within and/or immediately adjacent to the North Bridge Unit boundaries (Table 6-2; Appendix A-1 and A-2). Eight of the sites are designated as prehistoric sites while the remaining 19 are designated as historic sites. The Minute Man Statue and 1836 Battle Monument are both designated in the ASMIS database as historic sites. Both of these monuments are more than 50 years old and the area surrounding them could contain archaeological deposits associated with their construction and use within the Park as commemorative places. Three of the identified archaeological sites listed in the ASMIS database are located on the Old Manse property, which is not owned by the Park or included within its boundaries.

Prehistoric Sites

The identified prehistoric sites within the North Bridge Unit were identified by avocational archaeologists as well as through excavations at designated historic sites. The Old North Bridge prehistoric site is also the only Native American archaeological site in the Park that has been subjected to professional site examination-level investigations and whose physical boundaries and internal configuration have been defined. Linda Towle's (1984a) excavations at this multi-component site area documented lithic debitage and tools as well as floral and faunal remains and features.

The Poplar Hill, Old Manse Land, and Liberty Hill sites were all identified through the collections of early twentieth century avocational archaeologist Ben Smith and others (MHC site files). Most of the site areas were broadly defined by the fields across which artifacts were collected over several decades. The Poplar Hill Site included several hundred artifacts and reportedly contained two "skeletons" that were turned over to the Concord Public Library. The 1981 MHC site form notes "The Library says they were discarded some years ago". An undated sketch map of the site area by Mr. Smith indicates the presence of four graves along with large charcoal-filled fire pits. The Old Manse Land Site was initially identified around the knoll north of the building on the basis of approximately 100 artifacts within several avocational collections (MHC site files). The Liberty Hill Site contained approximately 150 artifacts in Ben Smith's collection as well as 98 gunflints thought to be discarded during the Battle of Lexington and Concord (MHC site files).

Table 6-1. General criteria used to rank archaeological sensitivity within the Minute Man NHP.

Presence of Sites		Proximity to Favorable Cultural/Environmental Characteristics			Degree of Disturbance			Sensitivity Ranking
Known	Unknown	< 150 m	≥ 150 ≤ 500 m	> 500 m	None/Minimal	Moderate	Extensive	
·		·			·			High
·		·				·		High
·		·					·	Low
·			·		·			High
·			·			·		High
·			·				·	Low
·				·	·			High
·				·		·		High
·				·			·	Low
	·	·			·			High
	·	·				·		Moderate
	·	·					·	Low
	·		·		·			High
	·		·			·		Moderate
	·		·				·	Low
	·			·	·			Moderate
	·			·		·		Low
	·			·			·	Low

Table 6-2. All previously recorded archaeological sites in the North Bridge Unit, Minute Man NHP.

ASMIS SITE NAME (OTHER DESIGNATION)	SITE TYPE	ASMIS NO.	MHC SITE NUMBER
Poplar Hill Prehistoric Site	Prehistoric	MIMA00002.00	19-MD-88
Old Manse Land Prehistoric Site	Prehistoric	MIMA00003.00	19-MD-89
Battle Lawn Prehistoric Site (Edwin Barrett Estate)	Prehistoric	MIMA00004.00	19-MD-90
Liberty Hill Prehistoric Site	Prehistoric	MIMA00005.00	19-MD-91
Old North Bridge Prehistoric Site (North Bridge)	Prehistoric	MIMA00008.00	19-MD-487
Ephraim Buttrick House	Prehistoric	N/A	19-MD-1002
Roads West of North Bridge	Prehistoric	N/A	19-MD-1003
Jonas Bateman/David Brown	Prehistoric	N/A	19-MD-1004
Ephraim & Willard Buttrick Foundation	Historic	MIMA00032.00	CON-HA-8 (Ephraim) CON-HA-11 (Willard)
David Brown Foundation (Capt. David Brown)	Historic	MIMA00033.00	CON-HA-7
Flint Site (John/Thomas Flint)	Historic	MIMA00045.00	CON-HA-13
Buttrick Mansion (North Bridge Visitor Center)	Historic	MIMA00046.00	
Buttrick Carriage House	Historic	MIMA00046.01	
Buttrick Caretaker's Cottage	Historic	MIMA00046.02	
Buttrick Mansion Estate Garden	Historic	MIMA00046.03	
Major John Buttrick House (John Buttrick Homestead)	Historic	MIMA00047.00	CON-HA-20
Elisha Jones House	Historic	MIMA00048.00	CON-HA-6
Muster Field (David Brown Pasture)	Historic	MIMA00063.00	
Old Manse (Rev. William Emerson House)	Historic	MIMA00049.00	CON-HA-20
Old Manse Boathouse	Historic	MIMA00049.01	CON-HA-20
Keyes Barn Foundation	Historic	MIMA00067.00	
Grave of the British Soldiers	Historic	MIMA00068.00	
Minute Man Statue	Historic	MIMA00069.00	
1836 Battle Monument	Historic	MIMA00070.00	
Roads West of North Bridge	Historic	N/A	CON-HA-12
Blacksmith Shop	Historic	N/A	CON-HA-28
John Buttrick Homestead	Historic	N/A	CON-HA-32

The Battle Lawn prehistoric site was reportedly identified by Charles Tremer who conducted excavations at the estate in the 1970s. Notes and other data from his fieldwork indicate that prehistoric materials were encountered but not collected during the excavations to recover Revolutionary War materials associated with the fighting at the North Bridge (MHC site files).

The Ephraim Buttrick House, Roads West of North Bridge, and Jonas Bateman/David Brown prehistoric sites were designated by the MHC based on the presence of prehistoric materials in artifact inventories presented in the ACMP volumes (Towle and MacMahon 1986a, 1986b, 1986c, 1987). The recorded Buttrick House assemblage consisted of two chipped stone tools in the kitchen garden area and the Roads West of North Bridge Site contained two projectile point fragments. The Jonas Bateman/David Brown Site consisted of a much larger assemblage of several hundred pieces of chipping debris, several dozen bifacial tools and projectiles, and six pottery sherds (Synenki 1990).

Several other areas of prehistoric artifact finds have been recently identified within the North Bridge Unit, in the area around the Buttrick Mansion/North Bridge Visitor's Center and the Battleground Alleé west of the Old North Bridge Site (McDonald 2004). Recovered materials include chipping debris, projectile fragments, and pottery sherds. To date, these prehistoric site areas have not been recorded in the ASMIS database or MHC inventory.

Historic Sites

The 19 identified historic period sites within the North Bridge Unit fall into two basic categories related to the colonial/Revolutionary War period or to the nineteenth/twentieth century (see Table 6-1). The Ephraim & Willard Buttrick, David Brown, Flint, Major John Buttrick, and Elisha Jones sites have all been documented as homestead sites that were present on April 19, 1775. These sites are associated with the Battle of Lexington and Concord based on their proximity to the fighting as well as the involvement of their owners. The sites also document eighteenth- (and for some, seventeenth-) century residential farmsteads that include archaeological evidence of houses and outbuildings, refuse middens and agricultural features. Each of these sites was investigated by archaeologists in the early period of the Park, and most of this work was documented and evaluated in the ACMP volumes (Towle and MacMahon 1986a, 1986b, 1986c, 1987). More recent compliance-related archaeological testing has occurred at the Elisha Jones House Site (Griswold 1995; Haynie 2000).

Several other archaeological resources associated with the Revolutionary War period have been identified within the North Bridge Unit. The Muster Field, part of the David Brown farmstead, was utilized on April 19, 1775 and was included in a recent CRM investigation of the North Bridge Unit (McDonald 2004). Some of the archaeological deposits on the Old Manse property, which dates to approximately 1769, are also associated with the Revolutionary War period, although the site derives much of its significance from its association with Ralph Waldo Emerson and the nineteenth-century literary movement (ASMIS database; Mohler et al. 2001). The Grave of the British Soldiers Site is designated by a stone marker on the east side of the Concord River and marks the area where several British regulars were reportedly buried (Abel 1965, 1966a, 1966b; Synenki 1987:68–73). Recently completed geophysical investigations in the area of the monument identified several anomalies north of the marker that may represent the actual location of the graves (Hager GeoScience, Inc. 2004).

Many of the colonial-era residential sites in the North Bridge were occupied into the nineteenth century and contain deposits associated with this period as well as earlier ones. An example includes the circa 1800 Keyes Barn Foundation Site, located adjacent to the Elisha Jones House Site (ASMIS database). The Minute Man Statue and 1836 Battle Monument also date to the nineteenth century. These commemorative sites may contain archaeological deposits associated with their construction and maintenance.

Four of the designated North Bridge sites are associated with the circa 1910 Buttrick Mansion (Mansion, Carriage House, Caretaker's Cottage and Garden sites). Archaeological deposits and landscape features related to this period of occupation have been documented by compliance-related investigations in the North Bridge Unit (e.g. Hager GeoScience, Inc. 2004; Mead 1995, 1996, 1997a; McDonald 2004).

Several other historic period sites have been recorded in MHC's files. These include the Roads West of North Bridge Site, identified through subsurface investigations and discussed in the ACMP series (Towle and MacMahon 1986c). Additional evidence of buried road and/or path segments in the North Bridge Unit has been recorded through geophysical survey (Hager GeoScience, Inc. 2004). The site of a blacksmith shop (CON-HA-28) was reported in Baker's (1980) AOA, but no additional information on the exact location and/or temporal association of this site is currently available.

A number of compliance-driven archaeological investigations in the North Bridge Unit have resulted in the identification of additional historic archaeological deposits that have not yet been recorded in the ASMIS database or MHC files. As discussed above relative to prehistoric resources, testing in the area around the Buttrick Mansion/North Bridge Visitor's Center and the Battleground Alleé also identified historic period artifacts and/or possible subsurface features (Hager GeoScience, Inc. 2004; Mead 1995, 1996, 1997a; McDonald 2004).

Archaeological Sensitivity Assessment

Prehistoric Archaeological Sensitivity

The prehistoric archaeological sensitivity of the North Bridge Unit is generally considered to be high given its environmental setting along the Concord River (Appendix B-1). The area surrounding the river is characterized by high, broad sandy terraces that slope gently toward the waterline. This type of natural setting is often associated with prehistoric habitation, and combined with the information collected from excavations and collections research, the North Bridge area appears to have been extensively utilized by Native American populations.

A wide range of site types and temporal periods are represented by the documented North Bridge Unit prehistoric sites. They range from isolated finds to complex, multi-use sites occupied between the Middle Archaic and Late Woodland periods. The undocumented presence of human burials within the Park Unit suggests the probability that the area was utilized for sacred/ceremonial purposes in addition to habitation. Little specific information is available regarding the content or physical boundaries of any of the prehistoric sites in this unit (Old North Bridge Site excepted), so it is possible that additional unmarked human burials could be present in the vicinity of the Poplar Hill Site or elsewhere in the North Bridge Unit.

Areas of moderate prehistoric sensitivity include sections of the Unit that contain historic structures and/or have been subjected to limited previous archaeological testing or other ground disturbance. Many of these very small areas do not appear on Appendix B-1 due to the scale of the map. Low sensitivity areas are limited to areas of extensive ground disturbance (including the excavated Old North Bridge Site), the locations of standing historic and structures (but not necessarily their surrounding yard areas), and/or small areas such as underground utility corridors.

Historic Archaeological Sensitivity

The historic period sensitivity of the North Bridge Unit is closely tied to the known seventeenth- through twentieth-century occupants of this area, and to events relating to the 1775 Battle of Lexington and Concord (Appendix B-2). Previously documented resources include the structural remains of houses and outbuildings, household refuse pits, landscape features including fields and gardens, and transportation

corridors such as roads and paths. Archaeological deposits associated with these large farmsteads could extend well beyond the known locations of structures, as represented in the sensitivity assessment. Other documented site types include commemorative locations and a probable burial site. Few if any of the previously investigated sites have been completely excavated or disturbed, so all have a high potential to contain additional archaeological deposits.

The North Bridge Unit is also closely associated with the events of April 19, 1775. In addition to the various homesteads whose residents participated in and/or witnessed the fighting at the North Bridge, the Muster Field Site represents the only other documented "military" site within this unit. The site of the original North Bridge may still have the potential to contain materials such as musket balls and/or gunflints, although the river crossing has been substantially altered and landscaped over time. The area around Poplar Hill has also been identified as a possible Revolutionary War site area (Ford 2002). Artifacts collected/reported at the Battle Lawn and Liberty Hill prehistoric sites also indicate their potential to contain deposits associated with the Battle of Lexington and Concord.

The archaeological sensitivity of the North Bridge area is also based on the results of the recent Unit-wide geophysical survey that identified the possible locations of a number of features that likely date to the historic period (see maps in Hager GeoScience, Inc. 2004). These possible features include roadway segments, foundations and other dense deposits that are not presently visible on the ground surface. The identification of these areas as high sensitivity zones suggests additional applications across the rest of the Park (see Chapter 8).

Areas of moderate sensitivity include peripheral sections of the Unit for which there is currently no clear documentation of historic period land use. While these areas do not appear to have contained houses or other visible features, they could contain belowground evidence of these types of features and/or could have been utilized for other purposes (e.g. agriculture, commerce/industry). Additional documentary and/or subsurface testing would be necessary to identify possible site areas.

Areas of low historic sensitivity are limited to extensively disturbed areas (e.g. utility corridors, deep foundations) and to other small portions of the unit that do not appear on the sensitivity map. The mapped low sensitivity areas include the excavated North Bridge Site area and a large parking area off Monument Street (see Appendix B-2).

Wayside Unit

Known Archaeological Resources

The Wayside Unit contains seven previously identified archaeological sites, three of which are prehistoric sites and four of which are historic sites (Table 6-3; Appendix A-3 and A-4). All seven sites have been recorded in MHC's inventory. The Wayside and Eliphelet Fox House prehistoric sites have not been designated with separate ASMIS numbers, although both are recorded as ASMIS historic sites.

Prehistoric Sites

The unnamed prehistoric site (Wayside 1) was identified across several agricultural fields south of Lexington Road in the area just south of the current Wayside parking lot (see Appendix A-3). Avocational archaeologists collected several hundred lithic flakes, Middle and Late Archaic Period projectiles and Woodland Period ceramic sherds in and around this area in the 1930s and 1940s (MHC site files). The Wayside and Eliphelet Fox prehistoric sites were designated by MHC staff based on the presence of Native American artifacts in Cordelia Snow's collections from excavations at the two historic structures (C. Snow 1969a, 1969b; Towle and MacMahon 1986b). The Wayside prehistoric site was identified by a single Middle Archaic Neville projectile point collected by Snow, while the Eliphelet Fox

Table 6-3. All previously recorded archaeological sites in the Wayside Unit, Minute Man NHP.

ASMIS SITE NAME (OTHER DESIGNATION)	SITE TYPE	ASMIS NO.	MHC SITE NUMBER
Unnamed Prehistoric Site (Wayside 1)	Prehistoric	MIMA00006.00	19-MD-112
Wayside	Prehistoric		19-MD-1000
Eliphelet Fox House Site	Prehistoric		19-MD-1001
Eliphelet Fox House Site (Casey's House)	Historic	MIMA00031.00	CON-HA-14
The Wayside	Historic	MIMA00062.00	CON-HA-15
The Wayside Barn	Historic	MIMA00062.01	CON-HA-15
The Wayside Terrace	Historic	MIMA00062.02	CON-HA-15

prehistoric site was comprised of several ground and chipped stone tools and fragments, suggested a possible campsite area. No *in situ* prehistoric cultural features were identified within Snow's excavation areas or in the fields collected by avocational archaeologists.

Historic Sites

The historic period Eliphelet Fox House site dates to the Revolutionary War period, and is reportedly associated with a slave named Casey who fought in the Revolutionary War (see Appendix A-4). Elements of the site may include an earlier (circa mid-seventeenth century) component and the site was occupied until approximately 1849 (ASMIS database). The Wayside historic archaeological site includes the standing residence, an extant barn, and a landscaped terrace to the north and west of the complex. Like the Eliphelet Fox House site, artifacts and documentary research suggest that this area may have been occupied as early as the mid-seventeenth century. The current Wayside structure was renovated and expanded during the eighteenth and nineteenth centuries, and is associated with Concord's Revolutionary War Muster Master as well as the more well-known mid-nineteenth century literary figures, Margaret Sidney, Nathaniel Hawthorne and the Alcott family.

Archaeological Sensitivity Assessment

Prehistoric Archaeological Sensitivity

The prehistoric archaeological sensitivity of the Wayside Unit is primarily defined by the presence of known prehistoric resources within this unit and by the degree of previous historic and modern ground disturbance. The undeveloped southern portions of the Wayside Unit, located south of Lexington Road and on the west and east sides of Hawthorne Road, have the highest potential to contain intact prehistoric period deposits (Appendix B-3). The presence of a wetland network just south of this area combined with level well-drained soils in the Park parcels suggests that long-term habitation and/or multi-use activity areas could be expected. The northern portion of the Wayside parcel also contains documented prehistoric materials, but these have all been collected together with historic artifacts and/or features. This area has been altered by seventeenth- through twentieth-century domestic construction and land use, as well as by numerous episodes of archaeological excavation and historic renovation/restoration. The previously excavated portions of the Eliphelet Fox House and Wayside sites have a low archaeological sensitivity because these areas are unlikely to contain intact potentially significant prehistoric deposits (see Appendix B-3). The areas surrounding the buildings have a moderate sensitivity; they also could have been impacted by historic land use and alteration, and a steep slope is located behind the Wayside buildings.

Expected prehistoric resources could range from single artifact finds, such as chipped stone tools, to a more substantial occupation area in the southern portion of the unit. Documented prehistoric deposits span the Middle Archaic through Woodland periods, so almost any period of prehistoric site use could be expected ranging from 9,000 to 450 B.P.

Historic Archaeological Sensitivity

The historic period sensitivity of the Wayside Unit is defined primarily by the documented use of the property on the north side of Lexington Road. The main block of the existing house was built prior to 1717. Although The Wayside was occupied during the Colonial (and possibly the Plantation) Period (known during earlier periods as the Samuel Whitney House), its association with literary figures did not begin until the mid-nineteenth century (Harrington et al. 2002). One of the most significant additions to the property was the barn, which was moved from across the street in 1847/48. It was in this barn that the Alcott girls performed original plays and where Louisa May Alcott later tutored local children. The terraced landscape to the north of the structure is attributed to Amos Bronson Alcott who created the terraces in an attempt to provide food for his family and create a bucolic setting at his home. Under Alcott's ownership, the residence was known as "Hillside". Alcott began the construction of 12 terraces on the hillside in 1845 and finished them in July 1847. The level terraces were planted with fruit trees and vegetables, while clover and timothy provided grass on the slopes in between. Alcott's enthusiasm waned as he found he was unable to feed his entire family from his own crops, and the terraces were eventually left to decline (Harrington et al. 2002). Nathaniel Hawthorne's family took over the property in 1852 and renamed it "The Wayside." The Hawthorne's made many substantial changes to the property, including the addition of a three-story tower that served as Nathaniel's private study.

The Wayside parcel has a high archaeological sensitivity, excluding those limited portions of the parcel that have been previously excavated into sterile subsoil (Appendix B-4). Elements of site use could span the mid-seventeenth through mid-nineteenth centuries, and be associated with residential use, the Revolutionary War, and/or African American themes. The remaining portions of the Wayside Unit, excluding the paved parking area, have a moderate archaeological sensitivity. Expected historic period resources in these areas would likely be associated with eighteenth- and nineteenth-century agricultural land use, landscaping and gardening, and possibly with undocumented events related to Battle of Lexington and Concord/Revolutionary War period.

Battle Road Unit

Known Archaeological Resources

The Battle Road Unit is the largest Park parcel and contains the greatest number of previously identified archaeological sites. For purposes of mapping clarity, the Battle Road Unit has been subdivided into a western section (Meriam's Corner and Virginia Road) and an eastern section (Nelson Road and Fiske Hill). This division follows that made for the ASMIS database maps and provides a convenient east-to-west break in this linear unit. The division is arbitrary, however, and does not represent any distinct cultural or temporal distinctions between the archaeological resources contained in the Battle Road unit.

A total of 81 archaeological sites have been identified within the Battle Road Unit (Table 6-4). This total includes 58 sites that have been listed in the NPS ASMIS database and 23 additional sites that have been recorded in the MHC site files. The Battle Road sites are comprised of 24 prehistoric and 57 historic period site areas (Appendix A5-A8).

Table 6-4. All previously recorded archaeological sites in the Battle Road Unit, Minute Man NHP.

ASMIS SITE NAME (OTHER DESIGNATION)	ASMIS NO.	TOWN	SITE TYPE	MHC SITE NUMBER
Meriams Corner to Virginia Road				
Ox Pasture Prehistoric Site	MIMA00001.00	Lincoln	Prehistoric	19-MD-687
Revolutionary Ridge Prehistoric Site	MIMA00007.00	Concord	Prehistoric	19-MD-180
William Smith Farm P2 Prehistoric Site	MIMA00010.00	Lincoln	Prehistoric	19-MD-676
Joshua Brooks Farm Prehistoric Site	MIMA00011.00	Lincoln	Prehistoric	19-MD-677 19-MD-1008
Ephram Hartwell Farm P4 Prehistoric Site	MIMA00012.00	Lincoln	Prehistoric	19-MD-678
Ephram Hartwell Farm P3 Prehistoric Site	MIMA00013.00	Lincoln	Prehistoric	19-MD-679
William Smith Farm P1 Prehistoric Site	MIMA00014.00	Lincoln	Prehistoric	19-MD-680
Aaron Brooks Farm Prehistoric Site	MIMA00015.00	Lincoln	Prehistoric	19-MD-681
Ephram Hartwell Farm P2 Prehistoric Site	MIMA00016.00	Lincoln	Prehistoric	19-MD-682
Ephram Hartwell Farm P1 Prehistoric Site	MIMA00017.00	Lincoln	Prehistoric	19-MD-683
Holt Pasture Prehistoric Site	MIMA00020.00	Lexington	Prehistoric	19-MD-686
Merriam's Corner Prehistoric Site	MIMA00072.00	Concord	Prehistoric	19-MD-111
Job Brooks Prehistoric Site Number 1	MIMA00064.00	Concord	Prehistoric	
Job Brooks Prehistoric Site Number 2	MIMA00065.00	Concord	Prehistoric	
Job Brooks Prehistoric Site Number 3	MIMA00066.00	Concord	Prehistoric	
Joseph Mason Site	N/A	Lincoln	Prehistoric	19-MD-1006
Capt. W. Smith Findspot 1	N/A	Lincoln	Prehistoric	19-MD-996
Rogers Property	N/A	Lincoln	Prehistoric	19-MD-997
Hartwell Tavern	MIMA00025.00	Lincoln	Historic	LIN-HA-4
Hartwell Tavern Barn	MIMA00025.01	Lincoln	Historic	LIN-HA-4
Thomas Brooks Farm Outbuilding	MIMA00034.00	Lincoln	Historic	LIN-HA-52
Ephraim Hartwell Farm Foundation	MIMA00036.00	Lincoln	Historic	
Samuel Hartwell Farm Cellar Hole Samuel Hartwell Site	MIMA00037.00	Lincoln	Historic	LIN-HA-54 LIN-HA-13
Captain William Smith House William Smith Farm Foundation	MIMA00035.00 MIMA00051.00	Lexington	Historic	
Joseph Mason House Site	MIMA00052.00	Lincoln	Historic	LIN-HA-22
Bloody Angle	MIMA00053.00	Lincoln	Historic	
Samuel Brooks House	MIMA00054.00	Lincoln	Historic	
Job Brooks House	MIMA00055.00	Concord	Historic	CON-HA-19
Joshua Brooks Farm Site	MIMA00056.00	Lincoln	Historic	CON-HA-39
Noah Brooks Tavern	MIMA00057.00	Lincoln	Historic	
Brooks Hill Fight Site	MIMA00058.00	Concord	Historic	
John Meriam House (Joseph Meriam House)	MIMA00059.00	Concord	Historic	CON-HA-26
Josiah Meriam House Site	MIMA00038.00 MIMA00071.00	Concord	Historic	
Josiah Meriam Barn	MIMA00071.01	Concord	Historic	
Merriam's Corner School House Site (First East Quarter School House)	MIMA00073.00	Concord	Historic	LIN-HA-51
George Minot Homestead		Concord	Historic	CON-HA-25
Abraham Taylor Homestead		Concord	Historic	CON-HA-27
Mary Ingall Site		Concord	Historic	CON-HA-30
Daniel Taylor Homestead		Concord	Historic	CON-HA-31
Albano Barn Foundation		Concord	Historic	CON-HA-33

Table 6-4. All previously recorded archaeological sites in the Battle Road Unit, Minute Man NHP.

ASMIS SITE NAME (OTHER DESIGNATION)	ASMIS NO.	TOWN	SITE TYPE	MHC SITE NUMBER
Hastings Barn Foundation (Charles Sawyer Barn Foundation)		Concord	Historic	CON-HA-34
Rogers Property		Lincoln	Historic	LIN-HA-23
Brooks Tannery		Lincoln	Historic	LIN-HA-39
Jacob Foster Homestead		Lincoln	Historic	LIN-HA-49
Ebenezer Lameson Homestead 2		Lincoln	Historic	LIN-HA-50
Schoolhouse		Lincoln	Historic	LIN-HA-51.
Nelson Road to Fiske Hill				
Thomas Nelson Jr. Farm P2 Prehistoric Site	MIMA00018.00	Lincoln	Prehistoric	19-MD-684
Jacob Foster Farm Prehistoric Camp (Jacob Foster Farm P1)	MIMA00009.00	Lincoln	Prehistoric	19-MD-675
Thomas Nelson Jr. Farm P1 Prehistoric Site	MIMA00019.00	Lincoln	Prehistoric	19-MD-685
Jacob Whittemore Farm Prehistoric Site (Jacob Whittemore Farm P1)	MIMA00021.00	Lexington	Prehistoric	19-MD-688
David Fiske Site	N/A	Lexington	Prehistoric	19-MD-1005
Daniel Brown Site	N/A	Lincoln	Prehistoric	19-MD-1007
Left. David Fiske	MIMA00022.00	Lexington	Historic	LEX-HA-8
Ebenezer Fiske Homestead	MIMA00023.00	Lexington	Historic	LEX-HA-7
Ebeneezer Fiske Homestead Barn	MIMA00023.01	Lincoln	Historic	LEX-HA-7 (no separate site no.)
Thomas Nelson Sr. Farm Site (Tabitha Nelson)	MIMA00024.00	Lincoln	Historic	LEX-HA-6
Site 23	MIMA00027.00	Lincoln	Historic	LIN-HA-7
Josiah Nelson House	MIMA00028.00	Lincoln	Historic	LIN-HA-8
Site 22	MIMA00029.00	Lincoln	Historic	LIN-HA-9
Bull Tavern Site	MIMA00030.00	Lexington	Historic	LEX-HA-12
John Nelson House	MIMA00039.00	Lincoln	Historic	
John Nelson House Barn	MIMA00039.01	Lincoln	Historic	
John Nelson Hop House	MIMA00039.02	Lincoln	Historic	LIN-HA-21
Jacob Whittemore House Site	MIMA00040.0	Lexington	Historic	LEX-HA-11
Concord Road Section 1 (Battle Road on Fiske Hill)	MIMA00041.00	Lexington	Historic	LEX-HA-13
Concord Road Section 2 (Battle Road on Marrett Street)	MIMA00042.00	Lexington	Historic	
Concord Road Section 3 (Battle Road on Nelson Road)	MIMA00043.00	Lincoln	Historic	
Whittemore Barn (Hargrove Barn)	MIMA00044.00	Lexington	Historic	
Paul Revere Capture Site	MIMA00050.00	Lincoln	Historic	
Parker's Revenge	MIMA00060.00	Lexington	Historic	
Blacksmith Shop on Whittemore Property	MIMA00061.00	Lexington	Historic	LEX-HA-14
Site 24		Lincoln	Historic	LIN-HA-16
Ebenezer Lameson Homestead		Lincoln	Historic	LIN-HA-47
Nathan Whittemore Homestead		Lincoln	Historic	LIN-HA-48
Joseph Brown Homestead		Lexington	Historic	LEX-HA-15
Bashian Barn Foundation		Lexington	Historic	LEX-HA-16

Prehistoric Sites

At least 20 of the identified prehistoric sites consist of Native American materials and/or features located at designated historic house sites (e.g. Job Brooks, William Smith) (Appendix A-5 and A-6). Fourteen of the twenty-five recorded prehistoric sites in the Battle Road Unit were documented as part of the 1984-1990 MIMA Archaeological Project (Ritchie et al. 1990; see Chapter 5). These include the Ox Pasture, William Smith Farm (1-2), Joshua Brooks, Ephram Hartwell (1-4), Aaron Brooks Farm, Holt Pasture, Thomas Nelson Jr. Farm (1-2), Jacob Foster Farm, and Jacob Whittemore Farm sites. These sites were documented through shovel test pit sampling across archaeologically sensitive portions of the Battle Road Unit. The sites are generally characterized by a range of 1 to 8 pieces of chipping debris suggestive of small activity areas. The Jacob Whittemore Farm Site contained 38 pieces of lithic chipping debris and was the highest density deposit identified during the survey.

The Revolutionary Ridge and Merriam's Corner sites were identified by avocational archaeologist Ben Smith and documented through his artifact collections. The temporal affiliation of the Revolutionary Ridge Site is not known, but the site is described in the MHC inventory as small and consisting of "a few arrowheads" along the moraine. The Merriam's Corner Site included seven Middle and Late Archaic period projectiles and 24 ceramic sherds, in addition to more than 150 other artifacts (MHC site form). The site area was described as extending from the Mill Brook to Lexington Road. The David Fiske and Joseph Mason prehistoric sites were recorded in 2003 by MHC staff (MHC site files). The David Fiske Site consists of five flakes that were included in the artifact inventory at the Fiske historic house site, while the Joseph Mason Site contained 15 flakes, 2 projectile points and 2 ceramic sherds (Synenki 1990).

The remaining Battle Road prehistoric sites were documented through compliance-driven investigations. The three site areas were identified around the house and fields that surround it and included two deposits ranging from 100 to 200 lithic flakes and artifacts (Mead 1993, 1994a; Wilson et al. 2000). One of the deposits in the field surrounding the house also contained a hearth feature filled with fire-cracked rock and charcoal. The Captain William Smith Findspot 1 and Rogers Property sites were recorded by MHC staff based on materials recovered during NPS investigations. The Smith Findspot 1 represents a single biface collected in a backdirt pile (Towle and Hsu 1984) while the Rogers Site consists of two flakes and a Merrimack-style projectile collected during subsurface testing (Mead 1994b).

Several other prehistoric site areas have been identified recently as a result of NPS archaeological projects including a single projectile point tip collected at the Meriam House Garage (Griswold 2000) and moderate densities of lithic chipping debris were recovered at three sites as part of the Visitor Access Trail project (Smith House, Elm Brook and Paul Revere Capture Site). These sites have not yet been recorded in the ASMIS database or MHC inventory.

Historic Sites

The majority of the identified historic sites in the Battle Road Unit are associated with eighteenth and nineteenth century home and farmsteads (see Table 6-4; Appendix A-7 and A-8). Many of these sites include a variety of cultural components including standing structures, cellarholes and ruins, stone wall networks, trash middens, gardens and landscape features. These sites have also been the most extensively excavated and/or documented, beginning with the early 1960s investigations at the Ebenezer Fiske homestead at Fiske Hill and continuing to the present day with compliance-related studies associated with utility upgrades and restoration projects at the Job Brooks and Whittemore sites, among others. In some cases, individual sites have been subjected to several different episodes of mapping, excavation and analysis.

The pre-1986 investigations were conducted at known historic site locations, usually where standing structures were still located or where building ruins were visible on the ground surface. The historic Battle Road sites in this group include the Job and Joshua Brooks; Bull Tavern; David and Ebenezer Fiske Hartwell Tavern; Samuel Hartwell; Joseph Mason; Josiah, Thomas Jr., and Thomas Nelson Sr.; William Smith and Jacob Whittemore sites along with Sites 22, 23 and 24. Excavations at these sites were usually limited to the areas immediately adjacent to known or suspected foundations and were generally designed to assist in the restoration, reconstruction and/or interpretation of the home and farmsteads. The earliest investigations were not always well-documented and subsequent NPS studies such as the ACMP project were designed to analyze and interpret the collections from these projects (Towle and MacMahon 1986a, 1986b, 1986c, 1987; see Chapter 5).

The 1990 MIMA project examined several Battle Road sites from a wider perspective, including an assessment of the range of activities that occurred within individual farmsteads and across multiple temporal periods and site areas. This study examined the archaeological and documentary evidence for a blacksmith shop (Jacob Whittemore site), tanyard (Joshua Brooks Site) and hop house (John Nelson Site) that would have served the Battle-Road area residents, and examined changes in site use over several generations at the David Fiske, Daniel Brown, Joseph Mason, David Brown and Jonas Bateman sites (Synenki 1990). The results of this project indicate the range of archaeological deposits that are associated with the Battle Road historic sites, as well as the likelihood that additional site areas and types are present along the various roadway corridors.

A number of archaeological studies have also focused on specific socio-geographic sections of the Battle Road Unit. The Meriam's Corner area has been investigated by subsurface and geophysical testing, both of which indicate that historic period site use was not confined to the immediate vicinity of known structures (Barosh and Donta 1999; Griswold 2000; Jones et al. 1995). Area studies have also been conducted with the Fiske Hill and Nelson Road areas (e.g. Synenki 1984).

The earliest identified home/farmstead sites date from the mid-seventeenth century and some of the sites were occupied well into the mid-twentieth century. Almost all of these sites contain residential deposits as well as a range of agricultural features and/or materials. As describe above, several of the sites also contain documented special-purpose activity areas related to industry, and sites such as the Bull, Hartwell and Brooks taverns also contain deposits and features associated with their commercial use.

Collections research and previous subsurface testing has also resulted in the documentation of a number of other residential sites, most of them dating the nineteenth and/or early twentieth century. MHC historic site numbers have been assigned to the Ebenezer Peirce, George Minot, Abraham Taylor, Mary Ingall, Daniel Taylor, Ebenezer Lameson 1 and 2, Nathan Whittemore, Jacob Foster, and Joseph Brown homesteads as well as the Bashian, Albano and Hastings barn foundations (MHC site files; see Table 6-4).

The Battle Road Unit also contains a number of non-residential sites. Nineteenth-century school sites have been identified at Meriam's Corner and Virginia Road, although there is currently limited archaeological data on these institutional sites. The Brooks Hill, Parker's Revenge and Bloody Angle sites have been documented as locations of fighting on April 19, 1775, and the commemorative site of Paul Revere's Capture may also be indicative of a 1776 activity area. Three sections of the actual Battle Road corridor have also been archaeologically documented in this unit; at Fiske Hill, Marrett Street and Nelson Road. These sites contain belowground portions of the actual roadbed as it existed in the Revolutionary period, as well as earlier and later deposits associated with its construction, maintenance and use.

The Battle Road Unit has been included in numerous recent upgrades, new construction projects, and rehabilitations that have necessitated archaeological studies. The Visitor Access Trail project was one of the largest of these projects and covered several different segments of the Battle Road Unit. Historic archaeological deposits were documented at several locations, including some documentation of intact buried land surfaces and plow scars (Griswold 1996c; Pendery et al. 1996). Utility upgrades and improvements at the Rogers, Job Brooks, Joshua Brooks, Samuel Brooks and John Nelson sites have all contributed additional information about land use and existing conditions at these previously investigated sites.

Archaeological Sensitivity Assessment

Prehistoric Archaeological Sensitivity

The prehistoric archaeological sensitivity of the Battle Road Unit is based in part on the presence of previously identified sites, but primarily on the environmental setting of the corridor (Appendix B-5 and B-6). The majority of the Battle Road Unit sits across broad, level, sandy terraces and knolls. Freshwater resources are located within or in close proximity to all sections of the Battle Road and include the Concord River, Great Meadow, and numerous ponds, brooks and streams. Although the favorable natural environment of some areas has been altered in the historic and/or modern periods (e.g. Meriam's Corner), these areas still have the potential to contain buried intact prehistoric deposits. Areas with these favorable environmental characteristics are generally considered to possess a high to moderate prehistoric archaeological sensitivity (see Table 6-1).

Unlike the North Bridge Unit, which contains the same general environmental variables, large portions of the Battle Road Unit have not been investigated through archaeological subsurface testing. As seen on Appendix A-5 and A-6, almost all of the recorded sites are located along or close to the historic roadways that pass through the Unit. This locational bias, due largely to the presence of investigated historic period archaeological sites in these same areas, is represented by a lack of documented sites across many of the wooded areas and fields to the north and south of Route 2A.

While the majority of the Battle road sites consist of low or moderate densities of lithic chipping debris and/or tool fragments, it is likely that these materials are representative of larger, more complex activity areas and habitation sites. To date, none of the identified Battle Road prehistoric site boundaries have been archaeologically delineated, nor have any of the sites been subjected to evaluation or data recovery-level investigations.

The predictive model ranks areas within 150 m of known archaeological sites and wetlands that have either minimal or moderate disturbance as highly sensitive to contain prehistoric cultural resources. As shown on Appendix B-5 and B-6 maps, the majority of the Battle Road Unit falls into this sensitivity category. Areas of moderate sensitivity are located at a greater distance to known sites and/or favorable environments such as wetlands. The only mapped areas of low prehistoric sensitivity are the large parking lot near the Visitor Center and a modified wetland area south of Meriam's Corner. Smaller areas of low archaeological sensitivity are present within the Battle Road Unit and would include utility trenches, modern construction areas (e.g. foundations, sand/gravel extraction areas), and possibly some sections of paved roadways. These low sensitivity areas would need to be defined on a project-specific basis if belowground impacts were proposed, as even areas of modern development could still contain intact prehistoric cultural deposits.

Historic Archaeological Sensitivity

The historic archaeological sensitivity of the Battle Road Unit is closely tied to documented seventeenth- through twentieth-century land use by Concord, Lincoln and Lexington residents (Appendix B-7 and B-8). As discussed above, many of the identified historic period site areas are closely tied to the known locations of buildings and roadways. Of the documented Battle Road historic period sites recorded in the ASMIS database, only the Thomas Nelson Sr. site is considered to have a low potential to yield additional significant archaeological deposits. The remaining site areas, whether subjected to archaeological testing or not, all have a high sensitivity and could contain archaeological materials and/or features dating from the seventeenth through early twentieth centuries.

One of the major research questions for the numerous farmsteads along the Battle Road is the identification of site boundaries. While a number of the archaeological site areas have been identified through subsurface testing and/or historic research, the physical limits of cultural deposits and associated landscape features have not been determined for large portions of the Unit located away from the main roadways. These deposits and features could include extended field systems and remnant plow scarring, stone wall networks and enclosures, undocumented outbuildings and other structures, orchards and gardens, wetland modifications, woodlots, pastures and refuse and sheet midden deposits, all of which could be associated with the residential and agricultural use of any of the previously identified farmsteads. As discussed by Donahue (2004), many of these land use areas can be partially identified through deeds and other documents in much the same way house locations have been located. Areas of high sensitivity include known site areas and the land immediately surrounding them; moderate sensitivity areas are located in proximity to known agricultural complexes but in areas where no previous archeological deposits have yet been located.

Other high sensitivity areas include documented historic roadway corridors, whether extant or not. Although portions of the Battle Road (e.g. Route 2A) and other transportation features such as Virginia and Nelson roads have been in constant use since they were built, the potential still exists for archaeological components of them to be present. Small areas of extensive disturbance, such as utility trenches and grading/filling areas are certainly present, especially along Route 2A. There is, however, the potential for buried components of the earlier roadways to be present below or alongside these modern disturbances, especially in proximity to the front yards of historic home sites that sit along these routes.

The length of the historic Battle Road is also closely associated with April 19, 1775 as the path of the British regulars as they marched to Concord and then retreated back to Boston. Several site areas, such as the Bloody Angle, have been identified along this route based on eyewitness accounts of the event. Other site areas, such as Brooks Hill are located at strategic points of the Battle Road from which the colonial militia took shelter and fired at the British columns. Potential Battle Road site areas identified with the Revolutionary War period include Fiske Hill, the Lexington/Lincoln town line, Elm Brook, and Arrowhead Ridge (Ford 2002). Archaeological deposits associated with the Revolutionary War could include musket balls, gunflints and other equipment that would have been utilized during the battle. Although campsites would not be expected given the relatively short period of the fighting, indications of small, short-term activity areas where colonists gathered as the British marched into or out of Concord could be present.

The limited research on non-residential site areas, including commercial/industrial and institutional sites, indicates the probability that additional resources of this type could be located within the Battle Road Unit. Individual examples of a possible blacksmith shop, tanyard and hop house have been identified through documentary research and/or archaeological testing within the Battle Road Unit, and it is probable that similar industrial/artisan site types such as saw and grist mills, harness and carriage shops, foundries or other sites could be expected as components of residential sites or as solitary sites. Similarly,

institutional sites related to seventeenth- through nineteenth-century communal activities such as education or worship could also be present in portions of the Park that have not yet been documented.

The only mapped areas of low historic archaeological sensitivity include the Visitor Center parking lot and modified wetland near Meriam's Corner, and a small heavily developed area near the Minute Man Regional High School.

CHAPTER 7

RESEARCH AND INTERPRETIVE VALUE OF KNOWN ARCHAEOLOGICAL RESOURCES

The body of archaeological data that has been collected for the Minute Man NHP provides documentation of Park use over a period that spans the past 9,000 years. Many areas within the Park contain cultural deposits from more than one period of site use, ranging in some cases from the prehistoric past through the modern period. Similarly, some site areas document more than one type of activity; a farmstead that was occupied throughout the eighteenth and nineteenth centuries may also have played an important role as a gathering spot or lookout point during the Battle of Lexington and Concord.

This chapter discusses the different archaeological sites that are present within the Park relative to their potential to contribute to identified research themes, including prehistory; April 19, 1775; the colonial period; and nineteenth-century agricultural history and daily life. Some of the information included in the following sections was derived from the Minute Man NHP National Register Nomination documentation (Harrington et al. 2002).

A number of previously identified sites fall into several of these categories, and some sites may not have been sufficiently documented to categorize as to research theme. The research potential of previously recorded and newly identified sites may change as additional archaeological and documentary data is collected within the Park.

Prehistoric Archaeological Research Potential

A total of 35 prehistoric period sites has been identified within Minute Man NHP, but only one of these sites (Old North Bridge) has been completely delineated and excavated (Table 7-1). The remaining 34 sites have either never been tested by professional archaeologists (e.g. Poplar Hill, Wayside 1, Revolutionary Ridge sites), were designated following excavation through artifact collections analysis (e.g. Roads West of North Bridge, Eliphelet Fox, David Fiske sites), or were identified through limited subsurface testing (e.g. Ox Pasture, Joshua Brooks, Rogers Property).

The North Bridge Site serves as an example of the type of complex, multi-component prehistoric site area that could be present across many sections of the Park. Archaeological testing at the site documented intact and partially intact cultural deposits and features despite several hundred years of subsequent historic and modern period land use, suggesting the likelihood that similar intact prehistoric sites (or portions thereof) could be present even in areas known to have been utilized in later periods.

The majority of the identified prehistoric sites, especially those located in the Battle Road Unit, were identified as “activity areas” on the basis of low density deposits of lithic chipping debris and/or tools collected during limited subsurface testing. The full physical and temporal range of these site areas has not been determined, and based on their locations across the Park units; it is possible that two or more activity areas identified in close proximity to one another (e.g. Ephram Hartwell P1-P4 sites) may represent components of a single larger site complex.

The 1990 MIMA archeological project was designed to locate prehistoric sites within the Battle Road Unit of the Park using a predictive model and various sampling strategies. The survey was successful in identifying sites but the limited scope of the subsurface testing prevented site boundaries or other detailed information about the full range of deposits at these individual sites to be collected. While some of the identified sites may represent isolated deposits, others may be components of larger, more complex sites

Table 7-1. All Previously Identified Prehistoric Sites, Minute Man NHP (as of June 2005).

SITE NAME (ASMIS/MHC NO.)	SITE TYPE	TEMPORAL ASSOCIATION	LOCATION
Poplar Hill MIMA00002.00/19-MD-88	Habitation/camp Possible burial site	Unknown	North Bridge
Old Manse Land MIMA00003.00/19-MD-89	Habitation/camp	Middle Archaic- Late Woodland	North Bridge
Battle Lawn/Edwin Barrett Estate) MIMA00004.00/19-MD-90	Unknown	Unknown	North Bridge
Liberty Hill MIMA00005.00/19-MD-91	Habitation/camp	Middle Archaic- Late Woodland	North Bridge
Old North Bridge MIMA00008.00/19-MD-487	Habitation/camp	Middle Archaic- Late Woodland	North Bridge
Ephraim Buttrick House 19-MD-1002	Isolated Find	Unknown	North Bridge
Roads West of North Bridge 19-MD-1003	Isolated Find	Unknown	North Bridge
Jonas Bateman/David Brown 19-MD-1004	Habitation/camp	Late Archaic-Woodland	North Bridge
Unnamed Prehistoric/ Wayside 1 MIMA00006.00/19-MD-112	Habitation/camp	Middle Archaic- Woodland	Wayside
Wayside 19-MD-1000	Isolated Find	Middle Archaic	Wayside
Eliphelet Fox House Site 19-MD-1001	Unknown	Unknown	Wayside
Ox Pasture MIMA00001.00/19-MD-687	Isolated Find	Unknown	Battle Road
Revolutionary Ridge MIMA00007.00/19-MD-180	Unknown	Unknown	Battle Road
William Smith Farm P2 MIMA00010.00/19-MD-676	Activity Area	Unknown	Battle Road
Joshua Brooks Farm MIMA00011.00/19-MD-677	Activity Area	Unknown	Battle Road
Ephraim Hartwell Farm P4 MIMA00012.00/19-MD-678	Activity Area	Unknown	Battle Road
Ephraim Hartwell Farm P3 MIMA00013.00/19-MD-679	Isolated Find	Unknown	Battle Road
William Smith Farm P1 MIMA00014.00/19-MD-680	Isolated Find	Unknown	Battle Road
Aaron Brooks Farm	Activity Area	Unknown	Battle Road

Table 7-1. All Previously Identified Prehistoric Sites, Minute Man NHP (as of June 2005).

SITE NAME (ASMIS/MHC NO.)	SITE TYPE	TEMPORAL ASSOCIATION	LOCATION
MIMA00015.00/19-MD-681			
Ephram Hartwell Farm P2 MIMA00016.00/19-MD-682	Isolated Find	Unknown	Battle Road
Ephram Hartwell Farm P1 MIMA00017.00/19-MD-683	Isolated Find	Unknown	Battle Road
Holt Pasture MIMA00020.00/19-MD-686	Isolated Find	Unknown	Battle Road
Merriam's Corner MIMA00072.00/19-MD-111	Habitation/camp	Middle-Late Archaic	Battle Road
Job Brooks Number 1 MIMA00064.00	Activity Area/Camp	Unknown	Battle Road
Job Brooks Number 2 MIMA00065.00	Activity Area/Camp	Unknown	Battle Road
Job Brooks Number 3 MIMA00066.00	Activity Area/Camp	Unknown	Battle Road
Joseph Mason Site 19-MD-1006	Habitation/camp	Archaic?-Woodland	Battle Road
Capt. W. Smith Findspot 1 19-MD-996	Isolated Find	Unknown	Battle Road
Rogers Property 19-MD-997	Activity Area	Middle-Late Archaic	Battle Road
Thomas Nelson Jr. Farm P2 MIMA00018.00/19-MD-684	Activity Area	Unknown	Battle Road
Jacob Foster Farm Camp (Jacob Foster Farm P1) MIMA00009.00/19-MD-675	Isolated Find	Unknown	Battle Road
Thomas Nelson Jr. Farm P1 MIMA00019.00/19-MD-685	Activity Area	Unknown	Battle Road
Jacob Whittemore Farm (Jacob Whittemore Farm P1) MIMA00021.00/19-MD-688	Activity Area/Camp	Unknown	Battle Road
David Fiske Site 19-MD-1005	Activity Area	Unknown	Battle Road
Daniel Brown 19-MD-1007	Activity Area	Unknown	Battle Road

located in the Battle Road Unit. Similar low to moderate density prehistoric deposits were identified at several locations in the Battle Road Unit as part of the NPS Visitor Access Trail Project. Like the MIMA project, subsurface testing was limited by the scope of the proposed impacts, so the full range of deposits at sites including the Paul Revere Capture Site, Smith House and Elm Brook project areas has not been determined. These sites have the potential to contribute new information about site selection, resource and raw material types, and general patterns of prehistoric land use within the Park.

The information collected from several identified Minute Man NHP site areas suggests that they represent larger and/or multi-purpose prehistoric sites. These include the Poplar Hill, Liberty Hill and Old Manse Land sites in the North Bridge Unit, the Wayside I Site in the Wayside Unit, and the Merriam's Corner and Joseph Mason sites in the Battle Road Unit. Professional excavation at these sites has either been limited or has not occurred, so documentation related to the full range of site use is incomplete. A number of these sites contain diagnostic Middle Archaic through Late Woodland artifacts, indicating a range of site use that spans as much as 8,000 years. In addition, human burials were reportedly excavated at the Poplar Hill Site in the North Bridge Unit (see Chapter 6). The recordation of sacred/ceremonial features at this site indicates the possibility for additional burial features to be present at the site, as well as at other sites within the Park. Based on information available at the time of the survey, all of these sites have the potential to contribute new information about prehistoric habitation, subsistence and/or special purpose activity areas. The ASMIS database records the Wayside 1 (Unnamed Prehistoric) Site as being destroyed, however the full extent of prehistoric deposits outside the identified site area has not been determined. Therefore it is possible that additional deposits could be present within the Park boundaries.

Recent environmental and geophysical investigations in the Meriam's Corner section of the Battle Road Unit suggest the likelihood that additional, unrecorded prehistoric deposits could be present in this area. Several individual site areas have been identified in and around Meriam's Corner, documenting several thousand years of Native American land use. The recent studies indicate that the natural environment of this area, including the Mill Brook, would have been highly favorable for the location of prehistoric sites. Although the Mill Brook has been significantly altered in the historic and modern periods, the Meriam's corner area still has a high potential to contain significant prehistoric archaeological deposits.

April 19, 1775 Archaeological Research Potential

Identifying and interpreting Revolutionary-War era resources has been a priority of much of the archaeological research conducted within Minute Man NHP. The bulk of this research, however, has focused on home and farmstead sites that were present on April 19, 1775 and whose residents participated in the activities that occurred on that day. This research has helped to recreate the eighteenth-century physical setting of the Battle Road and North Bridge areas, and has provided material data to support the documentary record and eyewitness accounts.

Twenty-five of the previously identified Minute Man NHP archaeological sites can be associated with April 19, 1775 (Table 7-2). This total includes 13 residential home/farmstead sites, 4 sections of the Battle Road, 3 military sites, 2 monuments and the probable British Soldiers grave site. Sites associated with this research theme have been identified in all three Park units.

The residential sites comprise the bulk of the associated sites and, as discussed above, primarily document places and people that were present on April 19, 1775. The Ephraim and Willard Buttrick house sites were both located on the knoll above the western end of the North Bridge. The Ephraim and Willard Buttrick houses were prominent structures on the landscape when the first skirmish of the American Revolution took place at the nearby North Bridge. The Flint house was another one of the four structures

Table 7-2. Previously Identified Archaeological Sites associated with April 19, 1775, Minute Man NHP.

SITE NAME (ASMIS/MHC NO.)	SITE TYPE	POTENTIAL RESEARCH THEME(S)	LOCATION
Ephraim & Willard Buttrick Foundation MIMA00032.00/CON-HA-8, -11	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	North Bridge
David Brown Foundation (Capt. David Brown) MIMA00033.00/CON-HA-7	Residential	April 19, 1775 Colonial Period	North Bridge
Flint Site (John/Thomas Flint) MIMA00045.00/CON-HA-13	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	North Bridge
Major John Buttrick House (John Buttrick Homestead) MIMA00047.00/CON-HA-20	Residential	April 19, 1775 Colonial Period	North Bridge
Elisha Jones House MIMA00048.00/CON-HA-6	Residential	April 19, 1775 Colonial Period	North Bridge
Muster Field (David Brown Pasture) MIMA00063.00	Military	April 19, 1775 Agriculture	North Bridge
Old Manse (Rev. William Emerson House) MIMA00049.00/CON-HA-20	Residential	April 19, 1775 19th C. Agriculture & Life Literature	North Bridge
Grave of the British Soldiers MIMA00068.00	Burial/Monument	April 19, 1775 Commemorative	North Bridge
Minute Man Statue MIMA00069.00	Monument	April 19, 1775 Commemorative	North Bridge
Roads West of North Bridge CON-HA-12	Transportation Corridor	April 19, 1775 19th C. Agriculture & Life	North Bridge
John Buttrick Homestead CON-HA-32	Residential	April 19, 1775 19th C. Agriculture & Life	North Bridge
Eliphelet Fox House Site (Casey's House) MIMA00031.00/CON-HA-14	Residential	African-Americans April 19, 1775 Colonial Period 19th C. Agriculture & Life	Wayside
The Wayside MIMA00062.00/CON-HA-15	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life Literature	Wayside
Captain William Smith House MIMA00035.00 MIMA00051.00	Residential	April 19, 1775 Colonial Period	Battle Road
Bloody Angle MIMA00053.00	Military	April 19, 1775	Battle Road
Job Brooks House MIMA00055.00/CON-HA-19	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Brooks Hill Fight Site MIMA00058.00	Military	April 19, 1775	Battle Road

Table 7-2. Previously Identified Archaeological Sites associated with April 19, 1775, Minute Man NHP.

SITE NAME (ASMIS/MHC NO.)	SITE TYPE	POTENTIAL RESEARCH THEME(S)	LOCATION
Josiah Nelson House MIMA00028.00/LIN-HA-8	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Jacob Whittemore House Site MIMA00040.0/LEX-HA-11	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Concord Road Section 1 (Battle Road on Fiske Hill) MIMA00041.00/LEX-HA-13	Transportation Corridor	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Concord Road Section 2 (Battle Road on Marrett Street MIMA00042.00)	Transportation Corridor	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Concord Road Section 3 (Battle Road on Nelson Road) MIMA00043.00	Transportation Corridor	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Paul Revere Capture Site MIMA00050.00	Monument	April 19, 1775	Battle Road
Parker's Revenge MIMA00060.00	Military	April 19, 1775	Battle Road
Bull Tavern Site MIMA00030.00/LEX-HA-12	Residential/Commercial	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road

in proximity to the North Bridge on April 19, 1775. This farmstead was an important element of both seventeenth-century settlement along the Concord River and the 1775 landscape. Captain David Brown was a leader in the militia company involved in the skirmish at the North Bridge on April 19, 1775, and his homestead site and the farm field where residents gathered before the fighting has been documented archaeologically (Harrington et al. 2002).

The Eliphelet Fox House was constructed by 1666, but the person or family that occupied the house in 1775 is not known. Based on a description by Thoreau, the Fox house was the home of Casey, an African slave of Samuel Whitney, who owned the Wayside property from 1769 to 1788. During the Revolutionary War, Casey joined a militia company to escape his master (Harrington et al. 2002). Casey's occupancy of the house has not been confirmed since he is not mentioned in contemporary documents such as deeds, but his association with the structure places the site as a potential contributor to the Revolutionary War research theme.

At least four of the identified residential complexes within the Battle Road Unit (William Smith, Job Brooks, Josiah Nelson, Jacob Whittemore) have been associated with the April 19, 1775 research theme, and it is likely that many more of the recorded historic homesteads along the historic route of the Battle Road and the surrounding roadways played a role in the day-long battle. Colonial residents watched the British march to Concord along the roadway, and shots were fired all along the corridor as the regulars retreated back to Boston after the North Bridge conflict. The entire landscape of the roadway corridor, including the topography, existing tree cover, stone wall networks and field and pasture configurations figured into the events that unfolded on April 19. As a result, a more complete understanding of not only the structural remains and cultural features associated with these homesteads, but also the remnant agricultural and landscape features could contribute to the April 19, 1775 research theme. The documentary evidence indicates that the colonial militia relied on a thorough understanding of the natural

and built landscape of the Battle Road in order to move along the roadway undetected and gain advantageous positions for firing weapons at the British columns. The identification of specific shelters, lookouts, firing positions and other strategic sites along the Battle Road could be used to locate archeological deposits such as ammunition, gunflints, water jugs and other materials associated with these short-term activity areas.

The presumed location of the Bull Tavern Site was investigated by Charles Tremer in 1974 to confirm that this eighteenth-century structure was situated at the intersection of Concord Road and Massachusetts Avenue. This tavern was allegedly looted for food and drink by British soldiers during their retreat to Boston on the afternoon of April 19, 1775. Documentary research has indicated that there is some evidence a tavern could have existed on this location in 1775, but its association with the Revolutionary War appears to be tentative (Harrington et al. 2002). If confirmed archaeologically, this site would represent an important resource that could be used as an interpretive site at the Park.

Archaeological testing in and around the suspected location of the Groton Road (Roads West of North Bridge), an eighteenth-century route, was also designed to confirm the existence and location of eighteenth- and nineteenth-century structures and features in the North Bridge area (Hager GeoScience 2004, Synenki 1990). A number of features were identified, including possible roadbed segments and terraces or planting beds made by filling and modifying the original topography at the base of Buttrick Hill, west of the North Bridge. The cobblestone roadbed and an associated causeway are significant as two of the few examples of early roadways in New England that have been subjected to archaeological investigation. The Groton Road and west branch which led to the town of Acton were also routes taken by colonists on April 19, 1775 when they converged on the North Bridge to encounter British troops. They formed important elements of the landscape near the North Bridge in 1775 (Harrington et al. 2002).

The testing provided information about the 1775 landscape in the North Bridge area, and suggests the types of data that could be gathered from archaeological and geophysical testing in other sections of the Park, as well as the potential significance of landscape features and other non-structural archaeological resources to contribute to the April 19, 1775 research theme (Harrington et al. 2002). Three other sections of the Battle Road have been identified through buried archaeological features near Nelson Road, Marrett Street and Fiske Hill. These resources can help to recreate the condition and exact route of the Battle Road at the time of the fighting, and could also yield artifacts lost or discarded by the British troops and colonial militia.

The most under-represented site type associated with this research theme is that related to the actual fighting that occurred on April 19, 1775. To date, four site areas have been archaeologically linked to the conflict (ASMIS database). These include the Muster Field at the North Bridge, and the Bloody Angle, Brooks Hill, and Parker's Revenge sites in the Battle Road Unit. These sites have all been documented as the locations of skirmishes during the British advance and/or retreat, and have a high potential to contain the archaeological deposits described above. Other site areas have the potential to contain these same types of deposits, such as the Meriam's Corner area, where fighting also occurred. In general, military-related deposits could be expected in almost any section of the Park, but would likely be small and very ephemeral, represented by possibly just a few artifacts and/or features.

Colonial Period and Nineteenth-Century Agricultural History and Life Archaeological Research Potential

The research themes associated with seventeenth- through nineteenth-century settlement and land use patterns are interconnected and comprise the largest number of potentially significant archaeological sites. It is difficult to separate out many of the residential sites that were continuously occupied and/or were occupied, abandoned and reoccupied during over nearly three centuries. The majority of these sites are

home and/or farmstead complexes occupied by successive generations of the Buttrick, Hartwell, Meriam, Brooks, Fiske, and Nelson families among others.

The Ephraim and Willard Buttrick site serves as an example of multi-generational land use. The Ephraim Buttrick house was a single story structure built in the seventeenth century and demolished in 1814. After obtaining land from his brother, Willard Buttrick constructed a second house on the knoll between 1771 and 1775. Construction of the Stedman Buttrick house in 1850 used the site of one of these earlier structures, most likely the Willard Buttrick house. Three Buttrick homesteads were located in the same general location on the hill overlooking the North Bridge (Harrington et al. 2002). These sites also have the potential to contain information on seventeenth- and eighteenth-century domestic architecture and the arrangement of outbuildings within farmsteads, as well as property transfer, and construction and demolition techniques over time.

The David Brown house also represents a significant example of a family farmstead that underwent a sequence of changes in size and appearance during a lengthy occupancy from the mid-seventeenth to late eighteenth century. These changes reflect the increased financial prosperity and social standing acquired by the Brown family through this period. Archaeological testing in and around the site has documented some of these components, but the site has the potential to contribute new information about status as represented through material goods and architectural elements.

Forty-six of the identified historic sites have been identified as containing seventeenth- and/or eighteenth-century deposits associated with colonial period occupation within Minute Man NHP (Table 7-3). These sites encompass all three Park units but the largest percentage of sites is located in the Battle Road Unit. Among the more notable seventeenth-century sites is the Flint house, constructed some time before 1655 and used as a garrison during King Phillip's War (1675-1676) (Harrington et al. 2002). Within the Battle Road Unit, members of the Meriam family occupied the Meriam's corner area in the seventeenth century, and the Joseph Mason House site was occupied by circa 1691, confirmed through the identification of a probable cellar dating to this period.

Sites 22 and 23 are located north of Nelson Road and west of the Josiah Nelson House site. Archaeological investigations at Site 22 identified a house foundation consisting of a cellar hole, chimney base and possible root cellar. Site 23 consists of a single cellar hole with no associated features. Documentary research has indicated that one house was located on this site by 1722. Site 22 appears to be the remains of a small house occupied during the eighteenth century; it was either moved or salvaged by 1770. Artifacts suggest the cellar hole and foundation was filled in the late eighteenth to early nineteenth century. The temporal affiliation/construction date and probable function of Site 23 is unclear, but it has been interpreted as the remains of an outbuilding (Towle and MacMahon 1986:334). These sites may have been occupied for a relatively short period in the eighteenth century; they are a potential source of information about an early/mid eighteenth-century rural household, refuse disposal patterns, site abandonment and other research problems (Harrington et al. 2002).

The Thomas Nelson Jr. House Foundation is located on the north side of Nelson Road between the Thomas Nelson Jr. and Josiah Nelson house sites. In the eighteenth century members of the Nelson family occupied houses along the Country Road in Lexington and Lincoln; it was later renamed Nelson Road. This house was probably built in the 1750s by Thomas Nelson Jr. and Thomas Nelson Sr. The original house was probably a one room structure with a cellar and kitchen ell attached to the rear. In 1778, when his sister Tabitha died, Thomas Jr. attached her two room dwelling to his small house. The enlarged structure stood until the late nineteenth century when it was demolished. This site is a potential source of additional information on eighteenth-century farm layout, including the placement of outbuildings, wells and other facilities (Harrington et al. 2002).

The Ebenezer Fiske and Lt. David Fiske sites are located on the east slope of Fiske Hill at the intersection of Old Massachusetts Avenue, Massachusetts Avenue, and Wood Street. This complex of two adjacent

Table 7-3. Previously Identified Archaeological Sites associated with the Colonial Period, Minute Man NHP.

SITE NAME (ASMIS/MHC NO.)	SITE TYPE	POTENTIAL RESEARCH THEME(S)	LOCATION
Ephraim & Willard Buttrick Foundation MIMA00032.00/CON-HA-8, -11	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	North Bridge
David Brown Foundation (Capt. David Brown) MIMA00033.00/CON-HA-7	Residential	April 19, 1775 Colonial Period	North Bridge
Flint Site (John/Thomas Flint) MIMA00045.00/CON-HA-13	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	North Bridge
Major John Buttrick House (John Buttrick Homestead) MIMA00047.00/CON-HA-20	Residential	April 19, 1775 Colonial Period	North Bridge
Elisha Jones House MIMA00048.00/CON-HA-6	Residential	April 19, 1775 Colonial Period	North Bridge
Muster Field (David Brown Pasture) MIMA00063.00	Military	April 19, 1775 Colonial Period Agriculture	North Bridge
Old Manse (Rev. William Emerson House) MIMA00049.00/CON-HA-20	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life Literature	North Bridge
Roads West of North Bridge CON-HA-12	Transportation Corridor	April 19, 1775 Colonial Period 19th C. Agriculture & Life	North Bridge
Blacksmith Shop CON-HA-28	Commercial/Industrial	Colonial Period 19th C. Agriculture & Life	North Bridge
John Buttrick Homestead CON-HA-32	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	North Bridge
Eliphelet Fox House Site (Casey's House) MIMA00031.00/CON-HA-14	Residential	African-Americans April 19, 1775 Colonial Period 19th C. Agriculture & Life	Wayside
The Wayside MIMA00062.00/CON-HA-15	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life Literature	Wayside
Hartwell Tavern MIMA00025.00/LIN-HA-4	Residential/Commercial	Colonial Period 19th C. Agriculture & Life	Battle Road
Hartwell Tavern Barn MIMA00025.01/LIN-HA-4	Outbuilding	Colonial Period 19th C. Agriculture & Life	Battle Road
Ephraim Hartwell Farm Foundation	Residential	Colonial Period	Battle Road

Table 7-3. Previously Identified Archaeological Sites associated with the Colonial Period, Minute Man NHP.

SITE NAME (ASMIS/MHC NO.)	SITE TYPE	POTENTIAL RESEARCH THEME(S)	LOCATION
MIMA00036.00			
Samuel Hartwell Farm Cellar Hole MIMA00037.00/LIN-HA-54	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Captain William Smith House MIMA00035.00 MIMA00051.00	Residential	April 19, 1775 Colonial Period	Battle Road
Joseph Mason House Site MIMA00052.00/LIN-HA-22	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Samuel Brooks House MIMA00054.00	Residential	Colonial Period	Battle Road
Job Brooks House MIMA00055.00/CON-HA-19	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Joshua Brooks Farm Site MIMA00056.00/CON-HA-39	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Noah Brooks Tavern MIMA00057.00	Residential/Commercial	Colonial Period 19th C. Agriculture & Life	Battle Road
John Meriam House (Joseph Meriam House) MIMA00059.00/CON-HA-26	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Josiah Merriam House Site MIMA00038.00 MIMA00071.00	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Josiah Merriam Barn MIMA00071.01	Outbuilding	Colonial Period 19th C. Agriculture & Life	Battle Road
Samuel Hartwell Site LIN-HA-13	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Rogers Property LIN-HA-23	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Brooks Tannery LIN-HA-39	Industrial	Colonial Period	Battle Road
Left. David Fiske MIMA00022.00/LEX-HA-8	Residential	Colonial Period	Battle Road
Ebenezer Fiske Homestead MIMA00023.00/LEX-HA-7	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Ebeneezer Fiske Homestead Barn MIMA00023.01/LEX-HA-7	Outbuilding	Colonial Period 19th C. Agriculture & Life	Battle Road
Thomas Nelson Sr. Farm Site (Tabitha Nelson) MIMA00024.00/LEX-HA-6	Residential	Colonial Period	Battle Road
Thomas Nelson Jr. House Site	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road

Table 7-3. Previously Identified Archaeological Sites associated with the Colonial Period, Minute Man NHP.

SITE NAME (ASMIS/MHC NO.)	SITE TYPE	POTENTIAL RESEARCH THEME(S)	LOCATION
MIMA00026.00/LIN-HA-6			
Site 23 MIMA00027.00/LIN-HA-7	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Josiah Nelson House MIMA00028.00/LIN-HA-8	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Site 22 MIMA00029.00/LIN-HA-9	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Bull Tavern Site MIMA00030.00/LEX-HA-12	Residential/Commercial	Colonial Period 19th C. Agriculture & Life	Battle Road
John Nelson House MIMA00039.00	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
John Nelson House Barn MIMA00039.01	Outbuilding	Colonial Period 19th C. Agriculture & Life	Battle Road
John Nelson Hop House MIMA00039.02/LIN-HA-21	Commercial/Industrial	Colonial Period 19th C. Agriculture & Life	Battle Road
Jacob Whittemore House Site MIMA00040.0/LEX-HA-11	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Concord Road Section 1 (Battle Road on Fiske Hill) MIMA00041.00/LEX-HA-13	Transportation Corridor	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Concord Road Section 2 (Battle Road on Marrett Street MIMA00042.00)	Transportation Corridor	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Concord Road Section 3 (Battle Road on Nelson Road) MIMA00043.00	Transportation Corridor	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Blacksmith Shop on Whittemore Property MIMA00061.00/LEX-HA-14	Commerical/Industrial	Colonial Period	Battle Road
Site 24 LIN-HA-16	Residential	Colonial Period	Battle Road

farmsteads evolved through the seventeenth and eighteenth centuries from land first acquired in the 1640s. Five generations of the Fiske family owned land on Fiske Hill through 1847. David Fiske was the first owner of land on this site by around 1655. By 1684, he had acquired an estate of 68 acres with a house, barn and outbuildings. The David Fiske house was torn down by 1721 and its location used for crops or pasture. Archaeological investigations at this site yielded a significant assemblage of seventeenth- and eighteenth-century artifacts, forming the largest collection of material of this type from any site within Minute Man NHP. The David Fiske Site is a significant example of a well preserved seventeenth-century farmstead (Harrington et al. 2002).

In 1712, David Fiske III purchased a house and barn from his second son, Jonathan. This farmstead was located across the county road from his property. Ebenezer Fiske inherited the former Jonathan Fiske farmstead from his father in 1715. Ebenezer occupied this farm until 1729 when he bought his father's property. Archaeological testing has shown that the Ebenezer Fiske Site consists of a house foundation or cellar hole, three wells, an outbuilding, possible fence line marked with pebbles, post molds and a trash pit. Deeds and probate records indicate the farmstead contained a house, barn, hog house, corn shed, cow yard, stockyard and two gardens. The house, constructed between 1674 and 1694 was probably a two story structure, rectangular in plan with a cellar and garret. It may have been removed or remodeled in the 1850s and at least a portion of it stood until 1955. The nineteenth- and twentieth-century occupation of this site has resulted in some disturbance and modification. However, the Ebenezer Fiske Homestead is significant as an example of a seventeenth- and eighteenth-century farmstead which was continuously occupied.

Colonial-era resources in Minute Man NHP are not limited to residential sites. The cobblestone roadbed identified as a portion of the Groton Road crosses wetlands west of the North Bridge and was probably constructed in the early to mid-seventeenth century (ca. 1635– 1650). This 16-foot wide roadway was built of granite cobbles and sharp, angular granite fragments embedded into a raised bed of black, sandy clay probably excavated from nearby wetlands. The upper surface of this cobblestone road was probably covered with coarse yellow gravel (Harrington et al. 2002).

Archaeological investigations on the Jacob Whittemore property revealed clear evidence of a blacksmithing operation, the remains of a shop foundation and superstructure, a forge, charcoal storage area, possible workbench, cobbled work area and two refuse deposits. The Blacksmith Shop on the Whittemore Property is important as an example of a rural blacksmith shop. Since it was located along a transportation route connecting Lincoln, Concord and Lexington with Boston the shop was probably also used for shoeing of livestock, repair of wagons and other wheeled vehicles (Harrington et al. 2002).

Recent compliance-driven investigations within a proposed septic system impact area resulted in the documentation of at least one potentially significant feature at the Whittemore site. An extensive refuse midden identified on the property was determined to be potentially eligible for listing on the National Register of Historic Places as an archaeological deposit that could help answer questions about changes in foodways, disposal and general site use from the late eighteenth through twentieth centuries. Recommendations from the investigations included re-use of an existing utility easement, thereby avoiding and preserving this important historic feature (Cooney et al. 2003).

The Brooks Tannery Site is located on land that was part of the Brooks family holdings in the area. The tanyard was operated by members of the Brooks family for over 100 years from the early seventeenth to first quarter of the nineteenth century. The complex consisted of a tan house and tan vats, currier's shop and probably a bark mill. The large amounts of water required for tanning process were supplied by Elm Brook. The tanyard complex on the Brooks property may have also included a slaughterhouse. Although archaeological investigation did not reveal any remains of facilities such as tan vats, the Brooks Tannery Site is significant as a well documented and preserved example of a rural industrial site. Tanning was an important industry in the town of Lincoln, as a place to process hides from local cattle and provide employment for leather workers who lived along Lexington Road. Individuals associated with the Brooks tanyard may have included Daniel Brown, Joseph Mason and Ephraim Hartwell. The tanyard produced leather for other small scale industries such as shoe/boot, saddle and harness making carried out by local craftsmen (Harrington et al. 2002).

The Joseph Mason House Site was part of a farmstead occupied by various artisans from about 1691 to 1802. In the mid-late eighteenth century it was owned by Joseph Mason, a currier or leatherworker and part-time school teacher in the northern district of Lincoln. Mason was probably related to the Brooks family who owned the neighboring tanyard. It is possible that Mason was employed by the Brooks

family as a currier or tanner. During its use as a farmstead, the property reportedly contained a house, barn, weaver's shop and schoolhouse. Archaeological investigations in 1986 identified a fieldstone cellar for the Joseph Mason House with associated deposits of artifacts in a "sheet refuse" deposit. The cellar appeared to be of seventeenth-century (ca 1691) construction. The cellar hole was probably filled around 1820–1830 so this site is also an example of an early farmstead abandoned in the beginning of the nineteenth century. Other identified components of the site included yard areas defined by stone walls and the probable location of a pasture. The Joseph Mason House Site is significant as an example of an eighteenth-century farmstead whose occupants were artisan/craftsmen (leather currier, weaver, cooper) (Harrington et al. 2002).

Some of the seventeenth- and the majority of the eighteenth-century sites were probably occupied into the nineteenth century (Table 7-4). Existing structures were either torn down and replaced or renovated with new additions. Extended family compounds were created by clustering several houses together in one area with shared outbuildings and/or field systems, such as at Meriam's Corner, the Brooks area, along Nelson Road and at Fiske Hill.

Like colonial sites, identified archaeological sites that date to the nineteenth century are overwhelmingly comprised of home and farmsteads (see Table 7-4). These sites are, however, are generally represented by a wider range of archaeological deposits and features and are more thoroughly documented than sites dating to earlier historic periods. In addition to homesteads and transportation corridors, sites dating to this period document Concord's prominent literary figures (Old Manse, Wayside) and institutional activities (two schoolhouse sites). A wider range of features is represented at identified nineteenth-century sites, including a number of barn and outbuilding locations, a terraced landscape at the Wayside, and a boathouse associated with the Old Manse.

The John and Joseph Meriam House Sites, located at Meriam's Corner, contained a sequence of family farmsteads dating from the seventeenth century through the modern period. The core area of the Meriam property was composed of houses, barns, outbuildings, a lock/blacksmith shop, cowyards and gardens surrounded by farmland. One section of the core contains about an acre and a half of land east of Bedford Road with two house lots (Donahue and Hohmann 1994). These sites are a potential source of information on continuity and change in land use, how space forming the core of the farmstead complex was organized and used, and the evolution of agricultural practices from mostly self-sufficient family farms in the seventeenth and eighteenth centuries to market gardening/commercial agricultural in the nineteenth and twentieth centuries (Harrington et al. 2002). The information gathered from numerous archaeological investigations in the Meriam's Corner area coupled with the results of geophysical testing and predictive modeling indicate the high potential for this area of the Battle Road Unit to contain a variety of significant residential, commercial/industrial and agricultural deposits spanning the seventeenth through twentieth centuries.

The Thomas Brooks Farm Outbuilding is located near the junction of Old Bedford Road and Massachusetts Avenue in the Battle Road Unit. It consists of a fieldstone foundation open on one side and built into a sloping hillside, and its five masonry walls formed a foundation for a barn. A stone lined well is also located about 50 feet west of this foundation. These features are located on land that appears to have been used as pasture land through the eighteenth and nineteenth century. It is a potential source of information on land use practices, particularly in regard to farming activity on property owned by the Brooks family in the eighteenth and nineteenth centuries.

The Samuel Hartwell Farm Cellar Hole is located south of the intersection of Bedford Road and Massachusetts Avenue and consists of a rectangular foundation of mortared fieldstone with an opening in the southeastern corner. In the late eighteenth century, this site area was owned by Samuel Hartwell and was used as pasture. Late nineteenth-century maps indicate no structures were located here, although

artifacts recovered from the site indicate a nineteenth-century construction and occupation date (Harrington et al. 2002).

The Josiah Nelson House Site is located on the north side of Nelson Road, which was known as the County Road in 1775. The house originally standing on this foundation was a half-house consisting of a chimney, cellar and east room built ca. 1755. The western half of the house was added later, possibly

Table 7-4. Previously Identified Archaeological Sites associated with Nineteenth-Century Agriculture and Daily Life, Minute Man NHP.

SITE NAME (ASMIS/MHC NO.)	SITE TYPE	POTENTIAL RESEARCH THEME(S)	LOCATION
Ephraim & Willard Buttrick Foundation MIMA00032.00/CON-HA-8, -11	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	North Bridge
Flint Site (John/Thomas Flint) MIMA00045.00/CON-HA-13	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	North Bridge
Old Manse (Rev. William Emerson House) MIMA00049.00/CON-HA-20	Residential	April 19, 1775 19th C. Agriculture & Life Literature	North Bridge
Old Manse Boathouse MIMA00049.01/CON-HA-20	Outbuilding	19th C. Agriculture & Life	North Bridge
Keyes Barn Foundation MIMA00067.00	Outbuilding	19th C. Agriculture & Life	North Bridge
Roads West of North Bridge CON-HA-12	Transportation Corridor	April 19, 1775 19th C. Agriculture & Life	North Bridge
Blacksmith Shop CON-HA-28	Commercial/Industrial	Colonial 19th C. Agriculture & Life	North Bridge
John Buttrick Homestead CON-HA-32	Residential	April 19, 1775 19th C. Agriculture & Life	North Bridge
Eliphelet Fox House Site (Casey's House) MIMA00031.00/CON-HA-14	Residential	African-Americans April 19, 1775 Colonial Period 19th C. Agriculture & Life	Wayside
The Wayside MIMA00062.00/CON-HA-15	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life Literature	Wayside
The Wayside Barn MIMA00062.01/CON-HA-15	Outbuilding	19th C. Agriculture & Life	Wayside
The Wayside Terrace MIMA00062.02/CON-HA-15	Archaeological Landscape	19th C. Agriculture & Life	Wayside
Hartwell Tavern MIMA00025.00/LIN-HA-4	Residential/Commercial	Colonial Period 19th C. Agriculture & Life	Battle Road
Hartwell Tavern Barn MIMA00025.01/LIN-HA-4	Outbuilding	Colonial Period 19th C. Agriculture & Life	Battle Road
Thomas Brooks Farm Outbuilding MIMA00034.00/LIN-HA-52	Outbuilding	19th C. Agriculture & Life	Battle Road
Samuel Hartwell Farm Cellar Hole MIMA00037.00/LIN-HA-54	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Joseph Mason House Site MIMA00052.00/LIN-HA-22	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Job Brooks House MIMA00055.00/CON-HA-19	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road

Table 7-4. Previously Identified Archaeological Sites associated with Nineteenth-Century Agriculture and Daily Life, Minute Man NHP.

SITE NAME (ASMIS/MHC NO.)	SITE TYPE	POTENTIAL RESEARCH THEME(S)	LOCATION
Joshua Brooks Farm Site MIMA00056.00/CON-HA-39	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Noah Brooks Tavern MIMA00057.00	Residential/Commercial	Colonial Period 19th C. Agriculture & Life	Battle Road
John Meriam House (Joseph Meriam House) MIMA00059.00/CON-HA-26	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Josiah Merriam House Site MIMA00038.00 MIMA00071.00	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Josiah Merriam Barn MIMA00071.01	Outbuilding	Colonial Period 19th C. Agriculture & Life	Battle Road
Merriam's Corner School House Site (First East Quarter School House) MIMA00073.00/LIN-HA-51	Institutional	19th C. Agriculture & Life	Battle Road
Ebenezer Peirce Homestead CON-HA-24	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
George Minot Homestead CON-HA-25	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Abraham Taylor Homestead CON-HA-27	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Mary Ingall Site CON-HA-30	Residential	19th C. Agriculture & Life	Battle Road
Daniel Taylor Homestead CON-HA-31	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Hastings Barn Foundation CON-HA-34	Outbuilding	19th C. Agriculture & Life	Battle Road
Samuel Hartwell Site LIN-HA-13	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Rogers Property LIN-HA-23	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Schoolhouse LIN-HA-51	Institutional	19th C. Agriculture & Life	Battle Road
Ebenezer Fiske Homestead MIMA00023.00/LEX-HA-7	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Ebeneezer Fiske Homestead Barn MIMA00023.01/LEX-HA-7	Outbuilding	Colonial Period 19th C. Agriculture & Life	Battle Road
Thomas Nelson Jr. House Site MIMA00026.00/LIN-HA-6	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Site 23 MIMA00027.00/LIN-HA-7	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Josiah Nelson House MIMA00028.00/LIN-HA-8	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Site 22 MIMA00029.00/LIN-HA-9	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road

Table 7-4. Previously Identified Archaeological Sites associated with Nineteenth-Century Agriculture and Daily Life, Minute Man NHP.

SITE NAME (ASMIS/MHC NO.)	SITE TYPE	POTENTIAL RESEARCH THEME(S)	LOCATION
Bull Tavern Site MIMA00030.00/LEX-HA-12	Residential/Commercial	Colonial Period 19th C. Agriculture & Life	Battle Road
John Nelson House MIMA00039.00	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
John Nelson House Barn MIMA00039.01	Outbuilding	Colonial Period 19th C. Agriculture & Life	Battle Road
John Nelson Hop House MIMA00039.02/LIN-HA-21	Commercial/Industrial	Colonial Period 19th C. Agriculture & Life	Battle Road
Jacob Whittemore House Site MIMA00040.0/LEX-HA-11	Residential	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Concord Road Section 1 (Battle Road on Fiske Hill) MIMA00041.00/LEX-HA-13	Transportation Corridor	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Concord Road Section 2 (Battle Road on Marrett Street MIMA00042.00)	Transportation Corridor	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Concord Road Section 3 (Battle Road on Nelson Road) MIMA00043.00	Transportation Corridor	April 19, 1775 Colonial Period 19th C. Agriculture & Life	Battle Road
Ebenezer Lameson Homestead LIN-HA-47	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Nathan Whittemore Homestead LIN-HA-48	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Jacob Foster Homestead LIN-HA-49	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Ebenezer Lameson Homestead 2 LIN-HA-50	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Joseph Brown Homestead LEX-HA-15	Residential	Colonial Period 19th C. Agriculture & Life	Battle Road
Bashian Barn Foundation LEX-HA-16	Outbuilding	19th C. Agriculture & Life	Battle Road

before 1800 based on artifacts recovered from the site. A buttery known to have been part of this house was probably added at the same time as construction of the western half of the structure took place. It was removed later in the nineteenth or early twentieth century. The Josiah Nelson farmstead also contains the remains of a barn, small outbuildings, and a well and refuse area to the rear of the house. This site also contains the John Nelson Hop House. This small foundation for an outbuilding has been interpreted as a shed used to dry and store hops for use in brewing beverages such as beer or ale. It is an example of an outbuilding constructed and used in the early nineteenth century, probably between 1810 and 1820. Taken as a whole, the site area is significant as an intact example of an eighteenth- and nineteenth-century farmstead in the town of Lincoln (Harrington et al. 2002).

A number of probable nineteenth-century sites in the Battle Road Unit have recently been recorded by the MHC. These include homesteads associated with Ebenezer Peirce, George Minot, Abraham Taylor,

Mary Ingall, Daniel Taylor, Ebenezer Lameson, Nathan Whittemore, Jacob Foster, and Joseph Brown. The majority of these sites were recorded from limited locational information contained in Baker's (1980) report. To date, it is unknown if any of these sites has been verified archaeologically or if, in fact, they all date to the nineteenth century. Their potential research value is unknown.

CHAPTER 8

RECOMMENDATIONS FOR FUTURE RESEARCH

The Minute Man NHP contains documented archaeological resources that date from approximately 9,000 B.P. to the early twentieth century. The archaeological sensitivity model presented in Chapter 7 indicates the likelihood that additional unidentified or underdocumented archaeological sites are present within all sections of the Park. To date, very few of the known archaeological sites in the Park have been destroyed through complete excavation or land alteration. As a result, the research potential for both known and expected archaeological sites at Minute Man NHP is extremely high.

The recommendations for future research within Minute Man NHP are based on the review of the archaeological data that has already been gathered from previous studies, the results of non-excavation surveys and environmental assessments, and discussions with NPS archaeologists and Minute Man NHP staff. The specific scope and focus of any future archaeological research project will need to be developed in consultation with these individuals, and as Park development needs and financial resources allow.

Existing Collections Research

The nearly 50 year history of archaeological excavation at Minute Man NHP has generated a tremendous amount of cultural material, much of it associated with historic period residential sites. A number of NPS projects in the 1980s and 1990s were designed to organize, catalog and interpret artifacts and excavation documentation that had been accumulated over several decades (e.g. ACMP, MIMA Archaeological Project; see Chapter 5). Several projects focused on analysis at the site level, while others looked at a number of sites linked together by one or more research themes.

These earlier collections reports resulted in recommendations to use the existing Minute Man NHP cultural material assemblages in interpretive displays and/or as educational materials, and indicated the potential for some of these collections to help answer questions about a wide variety of topics related to domestic, architectural and agricultural themes as well as settlement and subsistence.

Since 1990, additional compliance-related archaeological testing has occurred at some of the sites examined by these earlier projects. The collection of information about previously recorded and newly identified archaeological site areas is likely to continue as construction and renovation projects occur in the future. Many of the compliance-related archaeological projects consist of limited testing in small impact areas and do not result in the completion of a full research report. The data generated by these small projects could be used by future researchers and/or NPS archaeologists to compile additional artifact and/or site reports related to a particular site area or research theme. This new information could be combined with that collected in the past to produce periodic updated assessments of individual sites, especially historic residential sites, which incorporate all archaeological investigations completed to date.

Park-Wide Thematic Research

The current study has provided baseline information about the locations of known and suspected archaeological resources associated with each of the identified Park research themes: prehistory; April 19, 1775; and nineteenth century agriculture and daily life. The results of the AOA project indicate that a large number of previously identified sites have the potential to address one or more of these research themes.

To date, no thematic study has taken a Park-wide approach to the analysis and interpretation of archaeological resources. The 1990 prehistoric survey (Ritchie et al. 1990) focused on the Battle Road Unit but did not consider resources located in the other two Park units. Access to certain sections of the Battle Road Unit was not available during the 1990 survey, so the resulting sensitivity assessment excluded large portions of the Unit. The archaeological potential of the entire North Bridge Unit was assessed as part of a recent geophysical survey and sensitivity assessment, but this type of non-intrusive testing technique has not been applied broadly to the Wayside or especially the Battle Road Unit, where it was limited to the Meriam's Corner area. By viewing particular types of archaeological resources at the Park-wide level, it may be possible to identify units where research gaps exist. For example, the identification and investigation of prehistoric sites has been fairly complete within the North Bridge Unit, but no evaluation or survey of known prehistoric sites in the Wayside Unit has been conducted. Park-wide assessments, where practical, may help to identify site-type research priorities across all three units.

Future thematic research projects at the Park could include, for example, an in-depth assessment of all identified prehistoric sites and an analysis of their size, internal configuration, and components. This assessment could in turn be used to identify patterns in lithic resource preferences and source areas, changes in land use patterns through the Archaic and Woodland periods, and seasonality. A number of the Park's prehistoric sites have never been professionally surveyed or excavated, so this research theme presents an important focal point in the assessment and management of this resource type. Future development projects within or in the vicinity of these undefined prehistoric site areas should be carefully assessed by NPS archaeologists for their potential to affect significant cultural resources.

The documentation of April 19, 1775 has been a top priority at Minute Man NHP for most of its existence. As discussed in preceding chapters, archaeological investigations related to this research theme have tended to focus almost exclusively on identifying, documenting and interpreting historic structures that were present on that day in order to recreate the 1775 landscape. By and large, this effort has been successful. Recently, attention has turned to the identification of other archaeological resources that may document Revolutionary War activity areas and sites. The data collected as part of the APPB project on the Battle of Lexington and Concord identified a number of potential archaeological sites within the Park that could have been used on April 19, 1775 and may contain cultural resources and/or features associated with this research theme. A number of additional sites have been documented and recorded in the ASMIS database. Since these sites may have been created through very short-term use; perhaps for an hour or so as a colonial militia member waited for the British column to pass or as shots were fired by marching troops; the physical components of these sites may be very ephemeral.

Future investigations related to this research theme should be focused on identifying possible or known strategic militia positions along the Battle Road and at the North Bridge, including boulders and erratics, ridges and knolls, stone wall networks and other defensive features that can be identified on the ground today. Similarly, the entire corridor including and surrounding the Battle Road has the potential to contain deposits associated with the fighting that occurred as the British retreated. The identification of short-term military activity areas, and the artifacts and features that they could contain, would be of tremendous importance to the Parks' central mission of interpreting April 19, 1775.

The complementary research themes relating to the colonial period and nineteenth-century agricultural history and life can be viewed through the continuum of residential and agricultural land use and changes over time. Specific research related to the colonial period should focus on the identification and interpretation of early historic period sites, an area in which there appears to be a large data gap. Little information related to the interaction between the Native and EuroAmerican residents of the Concord/Lexington/Lincoln area has been collected within the Park, and no identifiable archaeological components have been associated with seventeenth or eighteenth-century Native American land use or occupation. These sites may exist within the Park, based on documentary research completed in the Concord area (Donahue 2004) and the identification of a possible garrison house utilized during King

Philip's War. Several seventeenth-century EuroAmerican sites have been identified in the Park, represented by cultural material assemblages and possible structural remains. These sites indicate the potential for others to be present, especially in the North Bridge and Battle Road Units. Since almost all of the identified historic sites were occupied over more than one generation through the eighteenth and nineteenth centuries, identifying sites that date only to the seventeenth century would provide a very important link in the Park's land use history.

Many of the farmstead complexes present in the nineteenth century were first occupied in the eighteenth century by some of the area's first colonists. A number of eighteenth-century historic homesteads have been identified within the Park, some as individual site areas and others as components of earlier and/or later occupations. One of the main benefits of an overarching agricultural theme at Minute Man NHP is the ability to document and interpret changes in the natural and built landscape over a period of more than three hundred years. The physical configuration and components of colonial-era farms was somewhat different from that of nineteenth-century farmsteads, based in part on alterations to the natural landscape that had occurred in the earlier period. As Brian Donahue detailed in his recent in-depth study of eighteenth-century farms in Concord, the techniques and methods adopted by area residents to produce and harvest sustainable crops were carefully designed around the existing natural environment. As land use patterns changed over time, so to did agricultural practices. The changes that Donohue described using documentary records and environmental data can be supplemented by archaeological data contained with the Park's sites and artifact collections. Archaeological research projects aimed at tracing the entire agricultural history of one farm complex or perhaps of a particular section of the Park could provide a wide range of data that could be used in interpretive programs or special publications.

Perhaps the largest number of identified sites within the Park can contribute to the nineteenth century agricultural history and daily life research theme. These sites are located in every section of the Park but are most concentrated in the Battle Road Unit, where smaller clusters of family farmsteads are located. Much of the existing research on these sites has focused on identifying structural remains and features, although documentary research has also helped to locate historic property boundaries, identify chain-of-title sequences and recreate field systems and stone wall networks.

Archaeological research has the potential to contribute a great deal of new information to the existing body of data related to nineteenth-century agricultural practices. Although many of the home and barn sites have been identified, smaller outbuildings, sheds, shops, wells, cisterns and privies have not been located at many site areas. Recent compliance-related investigations in yard areas surrounding rehabilitated historic buildings have identified a number of these features as well as refuse deposits, drainage systems and other improvements associated with nineteenth-century land use. Subsurface testing and geophysical studies have also identified remnant plow scars and field divisions, suggesting the potential for additional features of this type to be located within the Park. Other landscape features such as orchards, gardens, terraces, and yards could be identified archaeologically at nineteenth-century sites. Stone fences and walls were recognized as an important aspect of the eighteenth- and nineteenth-century cultural landscape, and the identification of former divisions through subsurface features is another area in which archaeological research can contribute to this research theme.

Archaeological Site Identification

The primary method by which new archaeological sites are identified within the Park is through subsurface testing related to proposed new construction projects or belowground disturbance activities. These projects, discussed in Chapter 5, have been conducted across the entire Park and have produced new data on previously identified sites as well as located previously unknown cultural resources.

While most of these projects have been limited to a single project area with a very small area of potential effect (e.g. a new water line at the Whittemore House), projects such as the Visitor Access Trail spanned

several sections of the Park and included subsurface testing across long, linear corridors. These larger-scale projects have the potential to investigate areas of the Park where little archaeological information has been gathered and provide a unique opportunity to sample areas that may be peripheral to documented historic activity. When possible, the Park should seek funding to complete thematic and/or multi-site archaeological projects, especially in areas that have not been previously investigated, as a way to locate and identify archaeological sites and to link newly identified sites to known patterns of land use within Minute Man NHP. Cultural Landscape Reports prepared for the Park, including the soon to be finalized Battle Road Unit Cultural Landscape Report (Deitrich-Smith 2005), can be utilized by Park archaeologists as important tools to correlate archaeological deposits to documented prehistoric and historic period land use. These comprehensive reports contain detailed historic and environmental documentation of the Park that can be used to help interpret isolated archaeological deposits and identify temporal and functional associations with known episodes of land use.

Efforts should be made to maintain and update databases that include information about these small compliance surveys and monitoring projects. A database of digitized testing maps would be especially useful for Park sections where as many as five to ten different episodes of archaeological testing have occurred. These maps could also be used to help update the archaeological sensitivity maps to change areas of subsurface excavation or machine trenching to low sensitivity. Current archaeological mapping databases could also be used in the planning stages of a potential project to identify areas that may be less likely to contain significant resources, and to suggest areas of avoidance, if possible.

The contributions of geophysical testing and mapping have been outlined in previous chapters, and the potential benefits of this form of archaeological investigation should be explored by Park personnel. The results of GPR and EM survey at the North Bridge identified possible foundations, road surfaces, and plow scars that are not visible on the ground surface, as well as anomalies that may represent the British Soldier Graves. While this testing did not positively identify any of these features, it provided specific locational data that has been mapped and can be targeted for subsurface testing in the future if impacts are proposed for these areas. This form of testing does not require any ground disturbance, so could be conducted in any area within the Park without impacting known or potential archaeological features. This type of survey has great potential as a research and mapping tool for future archaeological assessment projects, especially in large areas of the Park where subsurface sampling may cover only a small percentage of a project area.

Archaeological Sensitivity Maps

The archaeological sensitivity maps are intended to accommodate changing land use patterns and development in the Park. The GIS maps depicting prehistoric and historic resource sensitivity areas will need to be periodically updated as cultural resource surveys occur and new sites are located and added to the Park's ASMIS database.

The sensitivity maps presented in this report are somewhat generalized due to the scale that is used on the Park-wide aerial maps. The digitized GIS maps can be used as layers in conjunction with other NPS maps or databases such as ASMIS. The micro-environmental setting and physical conditions of a proposed project area must be evaluated on a case-by-case basis in order to determine the exact archaeological sensitivity. In proximity to residential structures, for example, there may be undisturbed yard areas interspersed among landscaped properties and buildings; these yard areas could contain different levels of sensitivity based on degree of modern disturbances. Conversely, large areas designated as high sensitivity undoubtedly contain some smaller areas of development or other ground disturbance (e.g. clearing, grubbing), wetlands, or other conditions that lower the archaeological sensitivity of that particular area. The aim of the sensitivity maps is to guide project review and to suggest general areas that are most likely to contain archaeological resources. As mentioned above, these sensitivity areas may change over time and the maps should be routinely updated to reflect actual conditions within the Park.

National Register Documentation

Although most of the Park's prehistoric and historic archaeological resources that were identified prior to 2002 were included in the Minute Man National Register nomination and supplemental listing, only one site (Old North Bridge) has been archaeologically delineated and individually-listed. Future archaeological investigations within the Park should be designed to collect the information needed to determine the eligibility of individual resources. Many of the small compliance-driven projects have identified archaeological deposits that are not eligible for listing on the National Register, based on the limited information collected. These deposits may, however, be elements of larger site areas that are significant. As recommended above, efforts should be made to incorporate the results of previous archaeological testing within a given area into a comprehensive database. By evaluating the results of several small compliance projects within a single area, it may be possible to make National Register eligibility determinations for archaeological sites that may not otherwise appear eligible.

Individual archaeological sites within the Park that were not identified prior to the 2002 National Register documentation should be evaluated in order to determine if they should be listed as contributing elements to the Minute Man NHP. These include historic sites listed in the MHC site files but not presently included in the ASMIS database, prehistoric sites identified through NPS compliance projects such as the Visitor Access Trail project, and artifact surface find areas located by Park personnel. The Park should undertake periodic review (e.g. on an annual basis) of completed archaeological projects and identified cultural resources in order to assess the need for additional research and/or National Register determinations.

Summary

The assessment of archaeological resources within Minute Man NHP must be an ongoing process. The current project was most useful for compiling information relating to archaeological sites and sensitivity that can grow with the needs of the Park. Included in this report are research contexts, site and survey tables, and predictive statements that can guide planning projects. In order for the AOA to be effective for the future management of archaeological resources, new and updated information must be added. This information includes the recordation of new archaeological sites identified through excavation or accidental discovery; the collection of additional information from Park employees, local residents and historians, avocational archaeologists, and Native groups; and the documentation of activities that generally affect archaeological sensitivity (e.g., development, erosion). By viewing the AOA report as a resource to be utilized and improved upon, the NPS can continue to successfully identify, manage and interpret the archaeological deposits within Minute Man NHP.

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