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TECHNICAL REPORT

INTENSIVE ARCHAEOLOGICAL SURVEY
WELLS 3 & 4 WATER TREATMENT PLANT

Medfield, Massachusetts

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MANAGEMENT ABSTRACT

The Public Archaeology Laboratory, Inc. (PAL) conducted an intensive (locational) archaeological survey for the proposed Medfield Wells 3 & 4 Water Treatment Plant (the Project) in Medfield, Massachusetts. The sensitivity of the proposed Project area for containing pre-contact Native American archaeological resources is defined primarily by its location within a core area of pre-contact settlement and resource use in the middle section of the Charles River basin; its proximity to wetlands along Mine Brook, a tributary stream within the upper Neponset River drainage; and its proximity to several recorded pre-contact archaeological sites.

The sensitivity of the Project area for post-contact archaeological resources is defined by its location between Elm and High streets, local roadways forming linear zones of settlement in Medfield since the early eighteenth century. No known post-contact sites are in or near the Project area. Mid-to-late nineteenth-century maps show that the vicinity of the Project area was primarily open land likely used for agricultural fields, pasture, and woodlots. Any post-contact cultural resources in the Project area were expected to reflect this past land use. In the early twentieth century, land use included a tree nursery and a small airstrip west to northwest of the Project area. Athletic fields for the Wheelock School northwest of the Project area were constructed after about 1969.

A walkover survey confirmed that most of the Project area is a wooded knoll sloping toward wetlands along Mine Brook and has high archaeological sensitivity. Zones of low sensitivity include existing asphalt paved access roadways to Wells 3 & 4 and small areas of previous disturbance where soil test pits recently had been excavated for site engineering. Subsurface testing during the intensive survey consisted of a total of thirty-four 50-x-50-centimeter test pits along four judgmental linear transects, in two array patterns, and in three judgmentally selected locations. The recovered pre-contact cultural material assemblage consists of 1 broken small stemmed projectile point of rhyolite, 35 pieces of chipping debris (quartz and gray-green volcanic rock), and 1 piece of burned rock designated as the Town Wells 3 & 4 Site. A small bar-shaped fragment of ferrous (iron or steel) metal represents an isolated post-contact artifact not associated with a specific archaeological site.

The Town Wells 3 & 4 Site is within the proposed location of the water treatment plant and other components (access road/driveway, stormwater detention basins, grading, and landscaping) of this facility. Although a portion of the site has been altered by construction of the existing paved access road to Well 4, the remainder (where most of the pre-contact cultural material was recovered from intact subsoil horizons) has good integrity. The Town Wells 3 & 4 Site adds some new information to what is known about pre-contact Native American settlement along the Mine Brook drainage and a watershed between the Charles and Neponset River drainages. The site appears to represent a small, temporary encampment where chipped-stone tools were made from quartz and a gray-green volcanic rock interpreted as rhyolite or a similar rock type from a nearby section of the Mattapan volcanic complex. The site has the potential to yield additional information about pre-contact use of this lithic resource. A fragment of burned rock indicates there may be a hearth or fire pit feature within the site. The small stemmed projectile point fragment suggests the site was created about 4,000–2,500 years ago during the Late to Transitional Archaic periods or the Early Woodland Period.

The Town Wells 3 & 4 Site is considered to be a potentially significant cultural resource. Additional archaeological investigation with a site examination is recommended to determine its horizontal and vertical boundaries, assess its contents (i.e., cultural material and features), temporal/cultural affiliation, and potential eligibility for listing in the National Register of Historic Places. Delineation

of the site's boundaries can assist in developing a plan to avoid and protect the Town Wells 3 & 4 Site through re-design of the proposed water treatment facility, if feasible.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER ONE

INTRODUCTION

This report presents the results of an intensive (locational) archaeological survey conducted by The Public Archaeology Laboratory, Inc. (PAL) for the proposed Wells 3 & 4 Water Treatment Plant Project at 43 Elm Street in Medfield, Norfolk County, Massachusetts (Figure 1-1) under contract with Environmental Partners Group (EP).

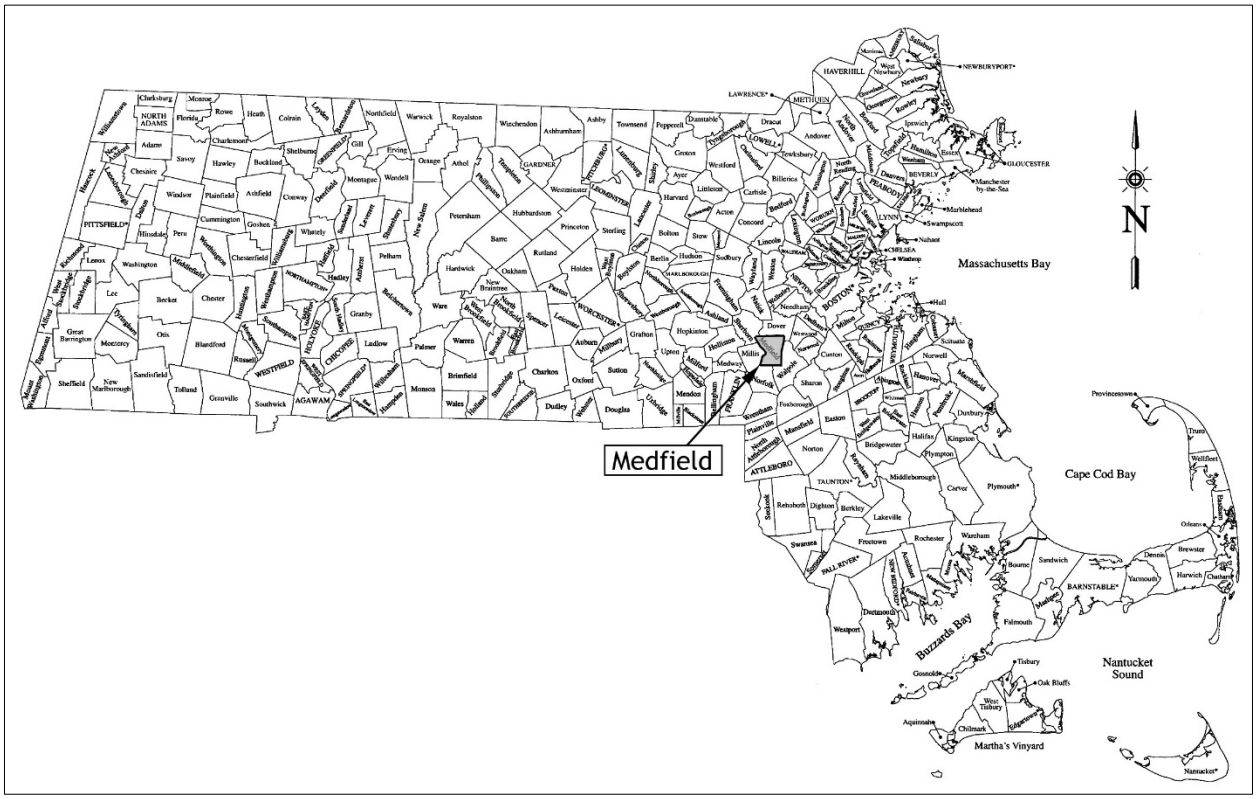

Figure 1-1. Map of Massachusetts showing the location of Medfield.

Project Description

The Town of Medfield is planning to construct a water treatment plant. The proposed Wells 3 & 4 Water Treatment Plant Project (the Project) also involves well replacement and improvements to two existing well stations. The new water treatment plant is to be between two existing groundwater wells within a 21.8-acre parcel owned by the Town of Medfield about 750 meters (2,460 feet) southeast of Elm Street and the Wheelock School. The approximately 1.25-acre treatment plant site forming the Project area is bounded on the south and west by existing paved access roads and on the north and east by undeveloped wooded land (Figure 1-2).

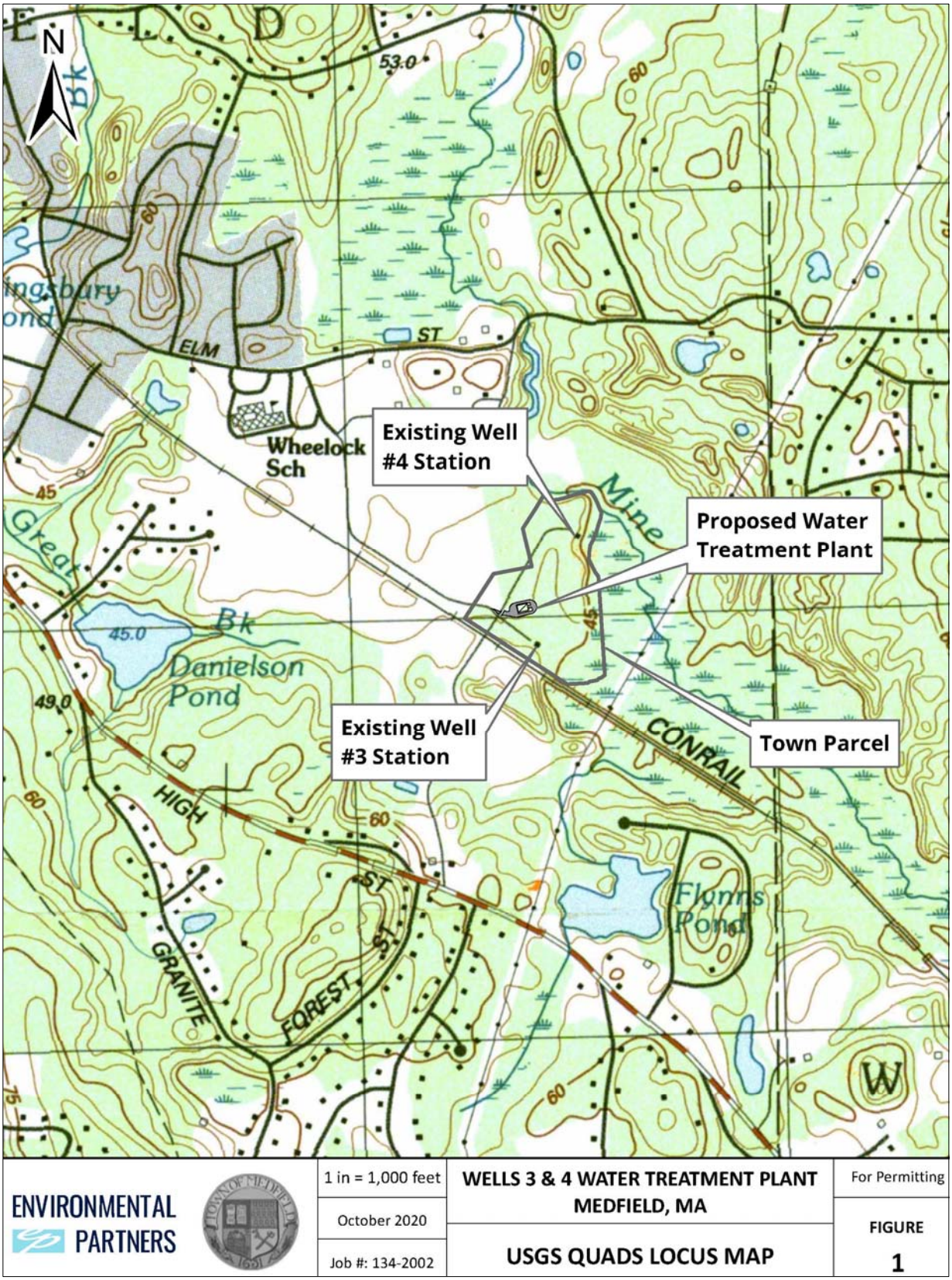

Figure 1-2. Location of Medfield Wells 3 & 4 Water Treatment Plant Project area on the USGS Medfield, Massachusetts, 7.5-minute USGS topographic quadrangle map.

The new treatment plant building will be a 4,421-square foot (sq ft) pre-engineered metal structure with associated driveway, stormwater detention basins, grading, landscaping and a perimeter fence. The water treatment plant will remove iron and manganese from water withdrawn from two groundwater wells (Wells 3 & 4) that supply the Medfield water system. The Project includes selective demolition of an existing generator, propane tank, chemical storage tank, and chain-link fences at the well stations. Selective demolition inside the well stations includes the existing chemical feed systems, monitoring equipment, piping, and appurtenances. Rehabilitation of the existing well station buildings will include roof replacement, hazardous material removal (if found), heating and ventilation modifications, and electrical improvements.

Project Authority

The Massachusetts Historical Commission (MHC) reviewed a Project Notification Form (PNF) and Environmental Notification Form (ENF) for the Wells 3 & 4 Project prepared by EPG. The MHC noted that the Project will use Revolving Funds administered by the Massachusetts Department of Environmental Protection (DEP) and would be reviewed pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (54 USC 306108), and its implementing regulations (36 CFR 800), and in accordance with Massachusetts General Laws, Chapter 9, Sections 26–27C. The MHC requested that an intensive (locational) archaeological survey (950 CMR 70) be conducted for archaeologically sensitive portions of the Project area (MHC letter to Town of Medfield dated November 30, 2020). The MHC also noted that multiple ancient Native American archaeological sites have been recorded in proximity to the Project area and that its environmental attributes (sandy, well-drained soils, and wetland and stream setting) are favorable for ancient and historic period archaeological sites.

PAL Scope

The goal of the intensive (locational) archaeological survey was to identify any potentially significant archaeological resources that may be affected by the Project and to provide recommendation regarding the need for any avoidance and protection measures and any additional archaeological testing. PAL conducted the survey under State Archaeologist's Permit No. 4058, issued by the MHC on February 4, 2021 (Appendix B). All tasks associated with the survey were undertaken in accordance with the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (63 FR 20496) and the MHC's (1979) *Public Planning and Environmental Review: Archaeology and Historic Preservation.* This report follows the guidelines established by 63 FR 20496 and by the MHC. Key PAL personnel involved in the survey meet the *Secretary of the Interior's Professional Qualifications Standards* (36 CFR Appendix A to Part 61) and the MHC's Professional Qualifications (950 CMR 70.10).

Personnel

PAL staff involved in the intensive survey were Duncan Ritchie (principal investigator), John Campbell (Project archaeologist), and Ted Datillo and Andrew Polta (archaeologists). Fieldwork for the survey was conducted in March 2021.

Disposition of PAL Project Materials

All documentation and materials for the intensive survey, including cultural materials, field forms, maps, and photographs, are stored at PAL, 26 Main Street, Pawtucket, Rhode Island. PAL serves as a temporary curation facility until the Commonwealth of Massachusetts designates a permanent repository.

CHAPTER TWO

RESEARCH DESIGN AND FIELDWORK METHODS

The goal of the intensive archaeological survey for the proposed Medfield Wells 3 & 4 Water Treatment Plant Project area was to identify any pre-contact and/or post-contact archaeological resources that may be potentially eligible for listing in the State and/or National Registers of Historic Places (State/National Registers). Three research strategies were used:

- archival research, including a review of historical literature and maps;
- field investigations, consisting of a "walkover" assessment survey and subsurface archaeological testing; and
- laboratory processing and analyses of recovered cultural materials.

The archival research and walkover survey provided the information necessary to develop environmental and historic contexts for the Project area and a predictive model for archaeological sensitivity. Archaeological sensitivity is defined as the likelihood for belowground cultural resources to be present and is based on the following:

- geographical, functional, and temporal characteristics of previously identified cultural resources in the study area and its vicinity; and
- local and regional environmental data reviewed in conjunction with existing study area conditions documented during the walkover survey, and archival research about the study area's land use history.

Subsurface archaeological testing was conducted in areas with high sensitivity for containing archaeological deposits. Some testing of areas considered to have low sensitivity was also done to confirm this ranking. Cultural materials recovered during the survey were processed in the laboratory and analyzed to interpret the nature of past human activities they represent. The artifact analyses were correlated with the subsurface testing and other field survey data and the resulting information was interpreted within the environmental and historic contexts developed for the Project area. The result was an assessment of potentially significant archaeological resources and their eligibility for listing in the National Register, the official federal list of properties that have been studied and found worthy of preservation.

Significance and Historic Contexts

The different phases of archaeological investigation (reconnaissance survey, intensive [locational] survey, site examination, and data recovery) reflect preservation planning standards for the identification, evaluation, registration, and treatment of archaeological resources (NPS 1983). An essential component of this planning structure is the identification of archaeological and traditional cultural properties that are eligible for inclusion in the National Register. Archaeological properties can be a district, site, building, structure, or object, but are most often sites and districts (Little et al. 2000). Traditional cultural properties are defined generally as ones that are eligible for inclusion in the National Register because of their association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community (Parker and King 1998). The results of professional surveys and consultation with Native American or other ethnic

communities are used to make recommendations about the significance and eligibility of archaeological and traditional cultural properties.

An archaeological property may be pre-contact, post-contact, or contain components from both periods. Pre-contact (or what is often termed "prehistoric") archaeology focuses on the remains of indigenous American societies as they existed before substantial contact with Europeans and the resulting written records (Little et al. 2000). In accordance with the NPS guidelines, "pre-contact" is used, unless directly quoting materials that use "prehistoric." No single year marks the transition from pre-contact to post-contact.

Post-contact (or what is often termed "historical") archaeology is the archaeology of sites and structures dating from time periods since significant contact between Native Americans and Europeans. Documentary records and oral traditions can be used to better understand these properties and their inhabitants (Little et al. 2000). Again, for reasons of consistency with the NPS guidelines, "post-contact" is used when referring to archaeology of this period, unless directly quoting materials that use "historical."

The NPS has established four criteria for listing significant cultural properties in the National Register (36 CFR 60). The criteria are broadly defined to include the wide range of properties that are significant in American history, architecture, archaeology, engineering, and culture. The quality of significance may be present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. The criteria (known by the letters A–D) allow for the listing of properties

A. that are associated with events that have made a significant contribution to the broad patterns of our history; or
B. that are associated with the lives of persons significant in our past; or
C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. that have yielded, or may be likely to yield, information important to prehistory or history.

Archaeological and traditional cultural properties can be determined eligible for listing in the National Register under all four criteria, but must meet at least one (Little et al. 2000; Parker and King 1998). Archaeological properties listed under Criterion A or B must have a demonstrated ability to convey their associations with events, persons, or patterns significant to our history. Criterion C is intended to recognize properties that are significant expressions of culture or technology (especially architecture, artistic value, landscape architecture, and engineering) (Little et al. 2000:26). Under Criterion C, an archaeological property must have remains that are well-preserved and clearly illustrate the design and construction of a building or structure (Little et al. 2000:27).

For Criterion D, under which most archaeological properties are determined eligible for listing in the National Register, only the potential to yield important information is required (Little et al. 2000:22). However, it is important to consider whether the data derived from a site are unique or redundant, and how they relate to the current state of knowledge relating to the research topic(s). A defensible argument must establish that a property "has important legitimate associations and/or information value based upon existing knowledge and interpretations that have been made, evaluated, and accepted" (McManamon 1990:15).

Another critical component in assessing the significance of a historic property is an evaluation of its integrity. Historic properties either retain integrity (i.e., convey their significance) or they do not. The

National Register criteria recognize seven aspects or qualities that, in various combinations, define integrity:

- *location*, the place where the historic property was constructed or the place where the historic event occurred;
- *design*, the combination of elements that create the form, plan, space, structure, and style of a property;
- *setting*, the physical environment of a historic property;
- materials, the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property;
- *workmanship*, the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory;
- *feeling*, a property's expression of the aesthetic or historic sense of a particular period of time; and
- *association*, the direct link between an important historic event or person and a historic property.

To retain historic integrity, a property will always possess several, and usually most, of these qualities. The retention of specific aspects of integrity is paramount for a property to convey its significance. Determining which of these aspects or qualities are most important to a particular property requires knowing why, where, and when the property is significant (NPS 2002).

The criteria are applied in relation to the historic contexts, defined as

> a body of thematically, geographically, and temporally linked information. For an archaeological property, the historic context is the analytical framework within which the property's importance can be understood and to which an archaeological study is likely to contribute important information (Little et al. 2000).

For traditional cultural properties, a historic context is further defined as

> an organization of available information about, among other things, the cultural history of the area to be investigated, that identifies 'the broad patterns of development in an area that may be represented by historic properties' (48 FR 44717). The traditions and lifeways of a planning area may represent such 'broad patterns,' so information about them should be used as a basis for historic context development. Based on federal standards and guidelines, groups that may ascribe traditional cultural values to an area's historic properties should be contacted and asked to assist in organizing information on the area (Parker and King 1998).

The formulation of historic contexts is a logical first step in the design of an archaeological investigation and is crucial to the evaluation of archaeological and traditional cultural properties in the absence of a comprehensive survey of a region (NPS 1983). Historic contexts provide an organizational framework that groups information about related historic properties based on a theme, geographic limits, and chronological periods. A historic context should identify gaps in data and knowledge to help determine what significant information may be obtained from the resource. Each historic context is related to the developmental history of an area, region, or theme (e.g., agriculture, transportation, and waterpower), and identifies the significant patterns of which a particular resource may be an element. Only those contexts important to understanding and justifying the significance of the property need be discussed.

Historic contexts are developed by

- identifying the concept, time period, and geographic limits for the context;
- collecting and assessing existing information about these time periods;
- identifying locational patterns and current conditions of the associated property types;
- synthesizing the information in a written narrative; and
- identifying information needs.

"Property types" are groupings of individual sites or properties based on common physical and associative characteristics. They serve to link the concepts presented in the historic contexts with properties illustrating those ideas (NPS 1983, 48 FR 44719).

The following historic research contexts have been developed to organize the data relating to the archaeological resources identified within the Project area:

1. Pre-contact Native American land use and settlement in the upper Neponset and Charles River drainages, circa (ca.) 12,500–450 years before present (B.P.) and
2. Post-contact land use and settlement patterns in Medfield and Walpole, Massachusetts, ca. A.D. 1620–present.

Archival Research

The development of a cultural context and a predictive model of expected property types and densities within the Project area began with archival research, consisting of an examination of primary and secondary documentary sources. These sources include written and cartographic documents relating both to past and present environmental conditions and documented/recorded sites in the general Project area.

State Site Files, Artifact Collection Reports, and Town Reconnaissance Surveys

PAL reviewed state site files at the MHC, including the Massachusetts Cultural Resource Information System (MACRIS) to learn of any recorded archaeological sites in or close to the Project area. MHC inventories include archaeological resources listed or eligible for listing in the National Register and reconnaissance surveys of every Massachusetts city and town, including Medfield (MHC 1980b) and adjacent Walpole (MHC 1980a). Reports and publications describing artifact collections made by avocational archaeologists were also examined for information about the archaeological record of the middle and upper Charles and Neponset river drainages (Chapin 1970; Dincauze 1973; 1975; Keighley 1951; Strauss 1990; Willoughby 1935).

Cultural Resource Management Reports

Reports documenting cultural resource management (CRM) investigations in Medfield and adjacent towns were reviewed, including studies by PAL in Medway, Norfolk, and parts of Walpole (Cherau et al 2000; Flynn and Doucette 2017; Doucette and Flynn 2019; Rainey 1990; Ritchie 1977, 1997; Waller and Ritchie 2004). Other investigations in the vicinity of the Project area also were reviewed for relevant information (Clements 1995; Hoffman 1980; Strauss 1996, 1997).

Histories and Maps

Primary and secondary histories and historical maps and atlases were examined to assess changes in land use, to locate any documented structures, and to trace the development of post-contact settlement patterns and transportation networks (an important variable in the location of post-contact archaeological sites), such as the railroad line (Conrail) south of the Project area; High Street (Route 27), and local routes such as South and Elm streets in Medfield (Hales 1830; Beers 1876; Tilden 1887; Town of Medfield 1976; Tritsch 1982; 1996; USGS 1946; Walling 1858). PAL also examined the online Massachusetts state archives and planning reports by town boards and commissions for any relevant information about the section of Medfield forming the vicinity of the Project area (e.g., Medfield Townwide Master Plan 2020).

Environmental Studies

Studies of the bedrock and surficial geology provided information about the region's physical structure and about geological resources near the Project area (Clapp 1902; Volckmann 1975; Zen et al. 1983). The U.S. Department of Agriculture (USDA) Soil Conservation Service soil survey supplied information about soil types and surficial deposits within the Project area (USDA 1989).

Coordination and Consultation

In March 2021, PAL notified the tribal historic preservation office (THPO) of federally recognized Native American tribes to seek input about areas of concern to Native American groups. No response was received from the Wampanoag Tribe of Gay Head/Aquinnah and Mashpee Wampanoag Tribe THPOs.

Walkover Survey

PAL conducted a walkover survey of the Project area to document and to assess present environmental conditions. Environmental information documented on Project maps during the walkover included the presence, types, and extent of fresh water; drainage characteristics; presence of bedrock outcrops and level terraces; and the angle of any slopes.

The current physical condition of an area is largely defined by the absence or degree of natural or human disturbances to the landscape. Typically encountered disturbances within a given area may include those resulting from agricultural plowing, gravel or soil mining, or previous construction and site preparation activities. Extensive survey experience indicates that such disturbances can reduce the probability for encountering contextually intact archaeological sites. However, plowing (which can move artifacts from their primary vertical and horizontal contexts and is the most common type of disturbance in New England) does not necessarily compromise the physical integrity of all cultural deposits.

Another purpose of the walkover survey was to document surface indications of archaeological sites. While pre-contact sites in New England are most often found belowground, artifact scatters are sometimes exposed on the surface through cultural agents such as pedestrian and vehicular traffic and by natural processes such as erosion. Post-contact archaeological site types that might be visible include stone foundations, stone walls, and trash deposits. If the remains of a built resource such as a farmstead are present within a given area, it is likely that a cellar hole and associated landscape features such as stone walls, overgrown orchards and fields, and ornamental plantings may be visible on or above the ground's surface.

Archaeological Sensitivity Assessment

Information collected during the archival research and walkover survey was used to develop a predictive model of potential site types and their cultural and temporal affiliations. The development of predictive models for locating archaeological resources has become an increasingly important aspect of CRM planning.

The predictive model considers various criteria to rank the potential for the Medfield Wells 3 & 4 Project area to contain terrestrial archaeological sites: proximity of recorded and documented sites, local land use history, environmental data, and existing conditions. The Project area was stratified into zones of expected archaeological sensitivity (low and high) to determine which areas would be tested.

Pre-Contact Period Archaeological Sensitivity

Archaeologists have documented nearly 12,000 years of pre-contact Native American occupation of the region. Before 7,000 years ago, peoples focused primarily on inland-based resources and on hunting and collecting along the Northeast's waterways. After 7,000 years ago, settlement became more concentrated within the region's major river drainages. By 3,000 years ago, concurrent with a focus on coastal and riverine settlement, large populations lived in nucleated settlements and developed complex social ties, with language, kinship, ideology, and trade linking peoples across the Northeast. During the centuries before European contact, these groups began to coalesce into the peoples known as Pocumtuck, Nipmuck, Massachusett, Wampanoag, Pokanoket, Mohegan, Pequot, and Narragansett.

Predictive modeling for large-scale site location in southern New England has its roots in academic research, including Dincauze's (1974) study of reported sites in the Boston Basin and Mulholland's (1984) research about regional patterns of change in pre-contact southern New England. Peter Thorbahn and others (Thorbahn et al. 1980) applied ecological modeling and quantitative spatial analysis to synthesize data from several hundred sites in southeastern New England and demonstrated that the highest concentration of pre-contact sites occurred within 300 meters (m) of low-ranking streams and large wetlands. The distribution of sites found along a 14-mile I-495 highway corridor in the same area reinforced the strong correlations between proximity to water and site locations (Thorbahn 1982). These studies and other large-scale projects provided data for developing models of Native American locational and temporal land use (MHC 1982a, 1982b, 1984; RIHPC 1982) that became the foundation for site predictive modeling used during CRM surveys.

Today, assessment of archaeological sensitivity within a given area, and the sampling strategy applied to it, takes existing physiographic conditions into consideration, including bedrock geology, river drainages, and microenvironmental characteristics. These categories of data are used to establish the diversity of possible resources through time, the land use patterns of particular cultures, and the degree to which the landscape has been altered since being occupied (Leveillee 1999). Increasingly, social, and cultural perspectives, as reflected in both the archaeological and historical records (Johnson 1999), and as expressed by representatives of existing Native American communities (Kerber 2006), are considered when assessing archaeological sensitivity. Archaeological sampling strategies have also been evaluated and refined through applications of quantitative analyses (Kintigh 1992).

Geologic data provide information about lithic resources and current and past environmental settings and climates. Bedrock geology helps to identify where pre-contact Native Americans obtained raw materials for stone tools and indicates how far from their origin lithic materials may have been transported or traded. The variety and amount of available natural resources depend on soil composition and drainage, which also play a significant role in determining wildlife habitats and forest and plant communities.

Geomorphology assists in reconstructing the paleoenvironment of an area and is particularly useful for early Holocene (PaleoIndian and Early Archaic) sites in areas that are different physically from 10,000 years ago (Simon 1991). Recent landscape changes, such as drainage impoundments for highways and railroads, the creation of artificial wetlands to replace wetlands affected by construction, or wetlands drained for agricultural use, can make it difficult to assess an area's original configuration and current archaeological potential (Hasenstab 1991:57).

Beyond predicting where sites are located, archaeologists attempt to associate cultural and temporal groups with changes in the environmental settings of sites. Changes in the way pre-contact Native Americans used the landscape can be investigated through formal multivariates such as site location, intensity of land use, and specificity of land use (Nicholas 1991:76). However, distinguishing the difference between repeated short-term, roughly contemporaneous occupations and long-term settlements is difficult, and can make interpreting land use patterns and their evolution problematic (Nicholas 1991:86).

Contact Period Archaeological Sensitivity

The Contact Period in New England dates from about A.D. 1500–1620 and predates most of the permanent Euro-American settlements in the region. This period encompasses a time when Native and non-Native groups interacted with one another through trade, exploration of the coastal region, and sometimes conflict. While Contact Period sites are usually associated with Native American activity, they can also include sites such as trading posts used by Native and non-Native groups.

Native settlement patterns during the Contact Period are generally thought to follow Late Woodland traditions, but with an increased tendency toward the fortification of village settlements. Larger village settlements frequently occurred along coastal and riverine settings, often at confluences. Inland villages were focused near swamp systems, which were exploited both as resource areas and as places of refuge in the event of attack. Such sites would likely contain material remnants reflecting the dynamics of daily life, trade, and defense preparedness.

The identification of Contact Period deposits is most frequently tied to the types of artifacts within archaeological sites. Unfortunately, the majority of the archaeological data for this period in southern New England come from the analysis of grave goods within identified Native American burial grounds, rather than from habitation sites and/or activity areas (Gibson 1980; Robinson et al. 1985; Simmons 1970). The available data suggest that sites dating to this period often contain traditionally pre-contact features and artifacts (e.g., storage pits and chipped-stone tools) and non-Native trade goods and objects (e.g., glass beads, iron kettles, and hoes) (Bragdon 1996). The earliest Contact Period sites are often at or near the coast and estuarine margin, because Europeans travelled to New England by ship. Non-Native artifacts passed from the coastal region to the interior through trade and/or seasonal travel.

Post-Contact Period Archaeological Sensitivity

The landscape of a given area is used to predict the types of post-contact archaeological sites likely to be present. Major locational attributes differ according to site type. Domestic and agrarian sites (houses and farms) are characteristically near water sources, arable lands, and transportation networks. Industrial sites (e.g., mills, tanneries, forges, and blacksmith shops) established before the late nineteenth century are typically close to waterpower sources and transportation networks. Commercial, public, and institutional sites (e.g., stores, taverns, inns, schools, and churches) are usually near settlement concentrations with access to local and regional road systems (Ritchie et al. 1988).

Written and cartographic documents aid in determining post-contact archaeological sensitivity. Historical maps are particularly useful for locating sites in a given area, determining a period of occupation,

establishing the names of past owners, and providing indications of past use(s) of the property. Town histories often provide information, including previous functions, ownership, local socioeconomic conditions, and political evolution, which is used to develop a historic context and to assess the relative significance of a post-contact site.

The written historic record, however, tends to be biased toward the representation of Euro-American cultural practices and resources, particularly those of prominent individuals and families. Archival materials generally are less sensitive to the depiction of cultural resources and activities associated with socioeconomically or politically "marginalized" communities (McGuire and Paynter 1991; Scott 1994), including, but not limited to, Native Americans, African Americans, and "middling" farming or working-class Euro-Americans. Several archaeological studies conducted throughout New England have demonstrated the methodological pitfalls of relying exclusively on documentary and cartographic materials to identify potential site locations associated with these types of communities. A large-scale archaeological study by King (1988) showed that in rural areas, only 63 percent of the sites discovered were identifiable through documentary research. This suggests that approximately one-third of New England's rural Euro-American archaeological sites may not appear on historical maps or in town and regional histories.

Other archaeological and ethnohistoric studies in the region have focused on identifying other historically "invisible" communities, notably post-contact Native American communities. Several townwide surveys in southeastern Massachusetts have compiled archaeological and historical data about eighteenth- and nineteenth-century Native American and African American communities that are poorly represented or are altogether absent in written town histories (Herbster and Cox 2002; Herbster and Heitert 2004). In central Massachusetts, active and influential Native Americans have been identified through archival research, despite the recorded "disappearance" of this group in the early eighteenth century (Doughton 1997, 1999). The cultural continuity of groups such as the Aquinnah Wampanoag is more thoroughly documented in archival sources, but until recently, archaeologists focused their attention on pre-contact archaeological deposits. More recent studies include predictive models for distinctly Native American post-contact sites and interpretations of eighteenth- to twentieth-century archaeological sites (Cherau 2001; Herbster and Cherau 2002).

Other archaeological investigations have focused on worker housing and landscape organization within mixed cultural mining communities in northern New England (Cherau et al. 2003); the social and spatial organization of a mixed racial community in western Connecticut (Feder 1994); and material culture and architectural patterns among nineteenth-century mixed African American and Native American households in central Massachusetts (Baron et al. 1996).

Information about post-contact land use within a given area can also be collected through written and oral histories passed through family members and descendant communities. These types of information sources can often fill gaps in the documentary record and provide details unavailable through more conventional archival sources. Although informants, other oral sources, and the documentary record can contradict each other, this type of information can also provide important data for identifying and interpreting archaeological sites. However, the sole use of and reliance on the written and oral historical records during archival research can underestimate the full range of post-contact sites in any given region. Therefore, walkover surveys and subsurface testing, in conjunction with the critical evaluation of available documentary and cartographic resources, are required to locate and identify underdocumented post-contact sites.

Archaeological Sensitivity Ranking

The Medfield Wells 3 & 4 Water Treatment Plant Project area was ranked according to the potential for the presence of archaeological resources based on information collected during the archival research and

walkover survey. Subsurface testing was planned for areas assigned high sensitivity where Project impacts will occur and in some areas with low sensitivity to confirm that ranking. Table 2-1 is a summary of the factors used to develop the archaeological sensitivity rankings.

Subsurface Testing

A total of thirty-four 50-x-50-centimeter (cm) test pits were excavated in the Project area: 23 along four judgmental linear transects, 8 in two array patterns, and 3 judgmental test pits. The transects, with 50-x-50-cm test pits at 10-m intervals, were placed within areas of high archaeological sensitivity.

Table 2-1. Archaeological Sensitivity Ranking Used for the Medfield Wells 3 & 4 Water Treatment Plant Project Area.

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
	•		•		•			Moderate
	•		•			•		Moderate
	•		•				•	Low
	•			•	•			Moderate
	•			•		•		Low
	•			•			•	Low

Test pits in the arrays were placed at 2.5-m intervals perpendicular from an initial find spot of pre-contact cultural material in a transect test pit (Figure 2-1). The judgmental test pits were used to investigate small zones of high sensitivity within proposed locations of development in the Project area.

All test pits were excavated by shovel in 10-cm levels to a maximum of 90 cm below surface (cmbs) or to C horizon subsoils, whichever came first. Excavated soil was hand-screened through ¼-inch hardware cloth. Soil profiles, including depths of soil horizons, colors, and textures, were recorded for each test pit. After excavation, all test pits were filled and the ground surface was restored to its original contour. Digital photographs were taken to document the general Project area and representative test pit profiles. A record of digital images was maintained on standard PAL Photograph Log forms, and a daily record of observations and procedures was maintained by the project archaeologist.

Laboratory Processing and Analyses

Processing

All cultural materials recovered from the Medfield Wells 3 & 4 Water Treatment Plant Project area during the archaeological investigations were organized by site and provenience, recorded, and checked in on a daily basis. Cultural materials were sorted by type and either dry brushed or cleaned with tap water depending on the material or artifact type and condition.

Cataloging and Analyses

All cultural materials were cataloged using a customized relational database, which provides the flexibility needed when cataloging archaeological collections that often contain disparate cultural materials such as stone, ceramics, and/or glass. Artifacts with similar morphological attributes were grouped into lots, which allows for efficient cataloging. The artifacts were placed in 2-mil-thick polyethylene resealable bags with acid-free tags containing provenience identification information. These bags were placed in acid-free boxes that are labeled and stored in PAL's curatorial facility in accordance with current state and federal curation standards.

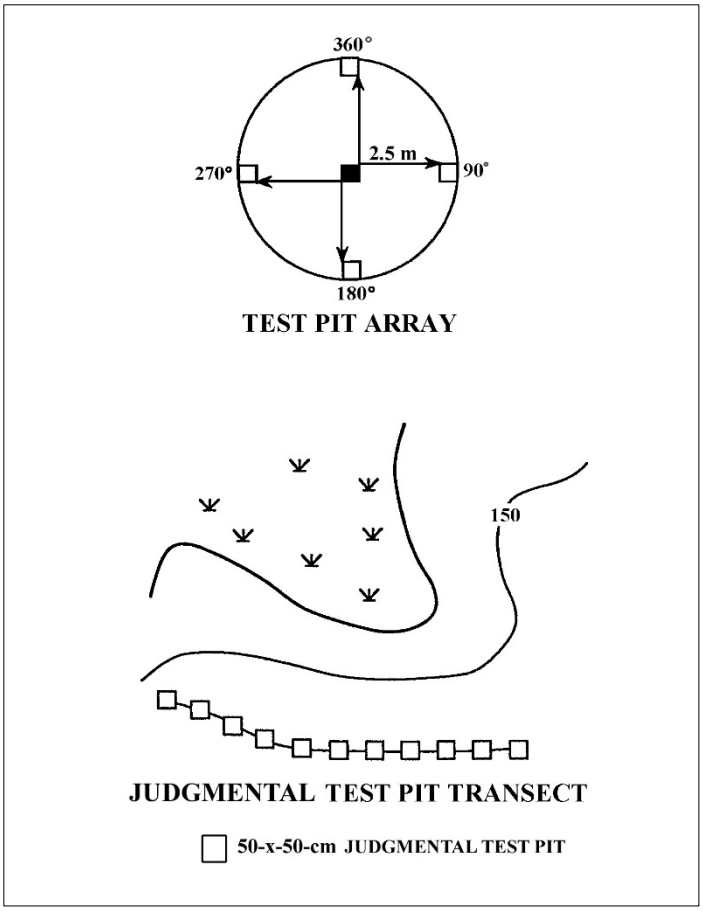

Figure 2-1. Subsurface testing strategies used in the intensive survey.

Culturally modified lithic materials, such as stone tools and chipping debris, were identified in terms of material, size (0–1 cm, 1–3 cm, 3–5 cm, etc.), and color. A lithic-type collection, maintained at PAL and containing materials from various source areas in New England and nearby regions such as New York and Pennsylvania, was used to identify all lithic materials. Chipping debris was classified as either flakes or shatter. Pieces of debitage showing evidence of a striking platform, bulbs of percussion, or identifiable dorsal or ventral surfaces were called flakes. Debitage without these attributes, and exhibiting angular or blocky forms, were classified as shatter. Lithic debris was examined for edges that had been modified by use wear or intentional retouch.

Curation

Following laboratory processing, cataloging, and analyses, all recovered cultural materials were stored in acid-free Hollinger boxes with box content lists and labels printed on acid-free paper. The cataloged artifacts and associated documentation are stored at PAL, 26 Main Street, Pawtucket, Rhode Island, in accordance with the Secretary of the Interior's *Curation of Federally-Owned and Administered Archeological Collections* (36 CFR 79) and the MHC's *State Archaeologist's Permit Regulations* (950 CMR 70), until the Commonwealth of Massachusetts designates a permanent repository.

CHAPTER THREE

ENVIRONMENTAL CONTEXT

Geomorphology

Medfield is in a section of eastern Massachusetts that forms a gradual transition from the Seaboard Lowland province to elevated highlands in central Massachusetts (Figure 3-1; Fenneman 1938). The topography in the immediate vicinity of the Project area consists of slightly sloping to level terrain bordering the west side of the Mine Brook drainage and associated wetlands. Elevations range from about 147 feet above sea level (ft asl) on the margin of wetlands bordering Mine Brook to 150 ft asl on a low knoll in the center of the Project area. The large level terrace north of the Project area near the Wheelock School has a maximum elevation of about 159 ft asl. More elevated terrain with maximum elevations of 300–310 ft asl is east and northeast of the Project area in Medfield and Walpole.

Bedrock Geology

The primary bedrock formation underlying Medfield is Dedham granite and diorite. The Dedham granite is a light gray pink to green-gray equigranular to slightly porphyritic rock. The diorite is a medium-grained hornblende diorite metamorphosed in part to amphibolite and hornblende gneiss (Zen et al. 1983). Outcrops are primarily on the sides and crests of hills in upland areas across the northern part of the town. The Rocky Woods section of Medfield and Dover contains numerous bedrock outcrops. Another large area of scattered outcrops is on Noon and Indian Hills. Other outcrops in the southeast corner of Medfield are near Rocky Lane and the intersection of Forest and Granite streets. No bedrock outcrops are in or near the Project area.

The bedrock in the adjacent towns of Dover and Westwood is predominantly Westwood granite. This light pinkish-gray granite contains small rhyolite dikes and flows associated with the Mattapan volcanic complex (Chute 1966:14, 15, 25; Thompson and Hermes 1990). The rhyolite was an important source of lithic material for pre-contact Native Americans in the Neponset and Charles River drainages; it was used it to manufacture chipped-stone tools. Small quarries and associated workshop areas, such as the Noanet Quarry Site in Dover, were along exposures of rhyolite flows within the Westwood granite used during the Middle and Late Archaic periods. Continued use of some quarries in the Woodland Period is likely.

In the Post-Contact Period, granite was quarried from outcrops in the Rocky Woods section of Medfield. Small-scale quarrying at a location in Rocky Woods known as “Courthouse Ledge” apparently began in the early nineteenth century. Granite from this quarry was used locally for one public building in Dedham and probably on several nearby estates and mill sites (Tritsch 1996:12–14).

Surficial Geology and Soils

During the postglacial period more than 13,000 years ago, the middle section of the Charles River basin in what are now Medfield, Millis, Norfolk, and Walpole was occupied by glacial Lake Medfield. This large, ice-dammed freshwater lake was fed by meltwater streams that deposited sediments in delta formations

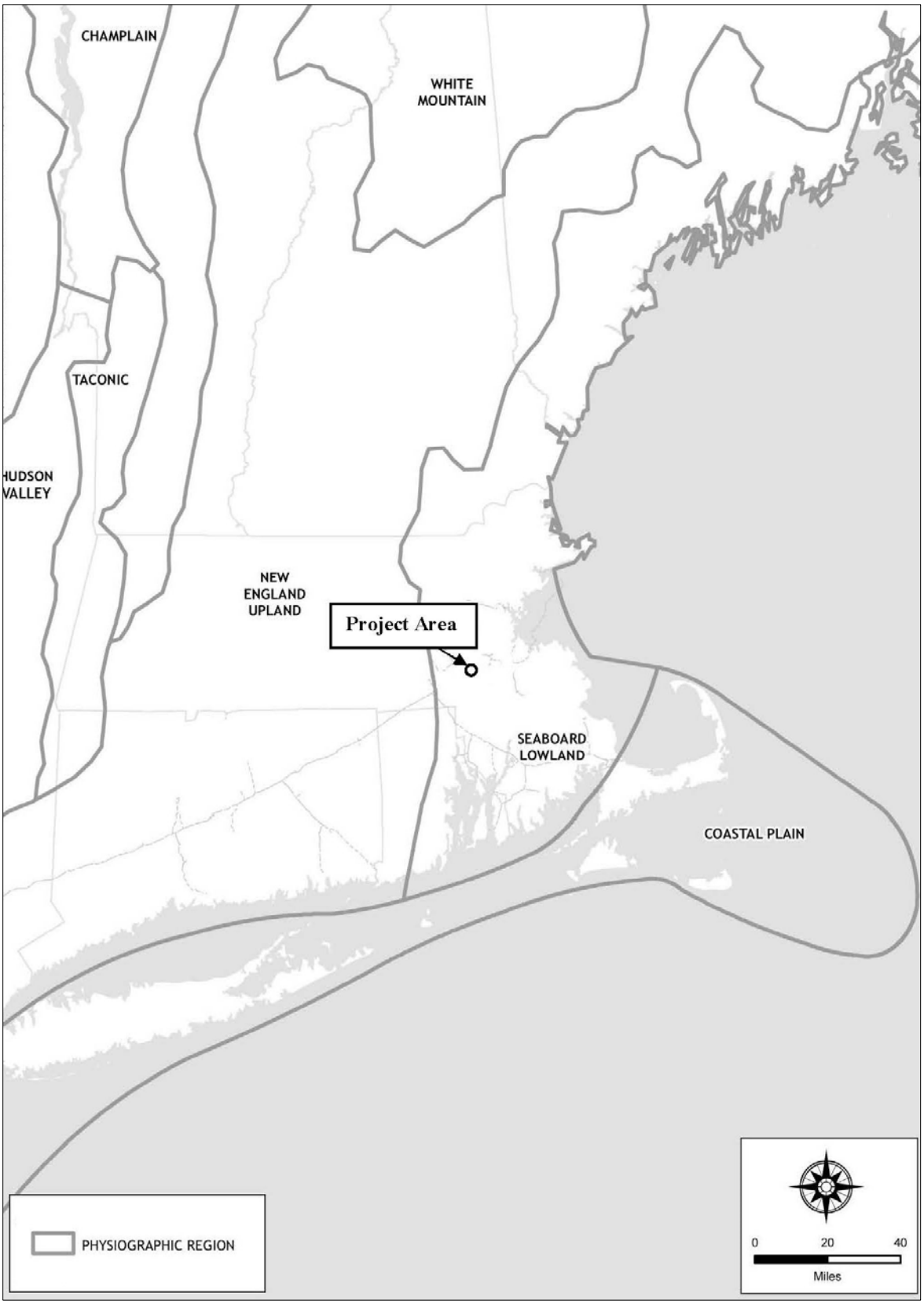

Figure 3-1. Physiographic regions of southern New England showing the approximate location of the Medfield Wells 3 & 4 Water Treatment Plant Project area (Fenneman 1938).

along the lake margin. The Medfield delta is a large feature created by glacial meltwater streams flowing into the lake. It expanded into glacial Lake Medfield, moving south toward uplands and hills covered with glacial till. After the lake drained, Horse, or Nantasket, Brook cut a deep channel through the sand and gravel delta deposits. Some aeolian (wind–blown) deposits formed a cap on the upper surface of the delta, and fine sediment and sand were transported by post-glacial winds (Strauss 1996; Volckmann 1975).

The center of Medfield and an area of flat or slightly sloping terrain extending southeast to the Wheelock School property is within extensive delta deposits consisting of boulders, cobbles, pebbles, and sand in stratified beds that were graded to the level of glacial Lake Medfield. The Project area is on the southeast edge of this outwash delta feature and includes a low knoll sloping toward the margin of wetlands bordering Mine Brook.

The primary soil types in areas of glacial outwash are the Merrimack and Hinckley series, well-drained, fine sandy loams that are well suited for settlement and agriculture. Most of the known pre-contact archaeological sites in Medfield are in areas with Merrimack and Hinckley series soils. Soils in the Project area have been classified as Merrimac fine sandy loam on 3 to 8 percent slopes. This soil type consists of very deep subsoil strata of loamy sand and very gravelly coarse sand that are excessively drained and occur on gently sloping terrain and broad plains and terraces that often follow major streams (USDA 1989:36).

Hydrology and Drainage Patterns

Medfield is in the middle section of the Charles River drainage (Figure 3-2). This drainage basin covers an area of 300 square miles that extends from the elevated upland terrain of the southern Worcester Plateau to Boston Harbor. Millis and Medfield have large areas of open marsh and meadow more than one mile in maximum width on both sides of the Charles River (Clapp 1902:218–222). Walpole is within the upper Neponset River drainage. From headwaters in Foxborough, the Neponset River flows in a southwest to northeast direction through Walpole and extensive marshes in Fowl Meadow in Norwood and Canton before entering an estuary and salt marsh zone in Milton and Dorchester on the southern edge of Boston Harbor (Bickford and Dymon 1990).

A narrow watershed or divide between the Charles and Neponset drainages is in the southeast corner of Medfield along Mine Brook. Wooded wetlands in upland areas serve as the source for several tributary streams flowing into the Charles River, including Sewall, Vine, Mill, and Nantasket brooks. These streams are oriented in a northeast to southwest direction. Stop River is the largest tributary entering the floodplain in this section of the Charles River drainage (see Figure 3-2). Nantasket and Great brooks drain from Kingsbury and Danielson ponds into the Charles River in Medfield. Mine Brook flows southeast into the upper Neponset River in Walpole. The Project area is near Mine Brook along the boundary of the Charles and Neponset River drainage basins.

Existing Conditions

Most of the Project area is within a wooded parcel bounded on the west and south by existing asphalt paved access roads to Wells 3 & 4 (Figure 3-3). In the southwestern part of the Project area, a small area of the proposed improvement is at the intersection of the primary access road to these wells from the Wheelock School and the road extending north to Well 4 (Figure 3-4). The access roads form linear zones of previous disturbance and are bordered by graded shoulders vegetated with grass and small white pine saplings (Figure 3-5). The only evidence of previous disturbance noted during a walkover inspection of the wooded portion of the Project area are the locations of three recently excavated soil engineering test pits within proposed stormwater detention basins. The current vegetation consists of a second growth forest dominated by white pine with some oak trees (Figure 3-6).

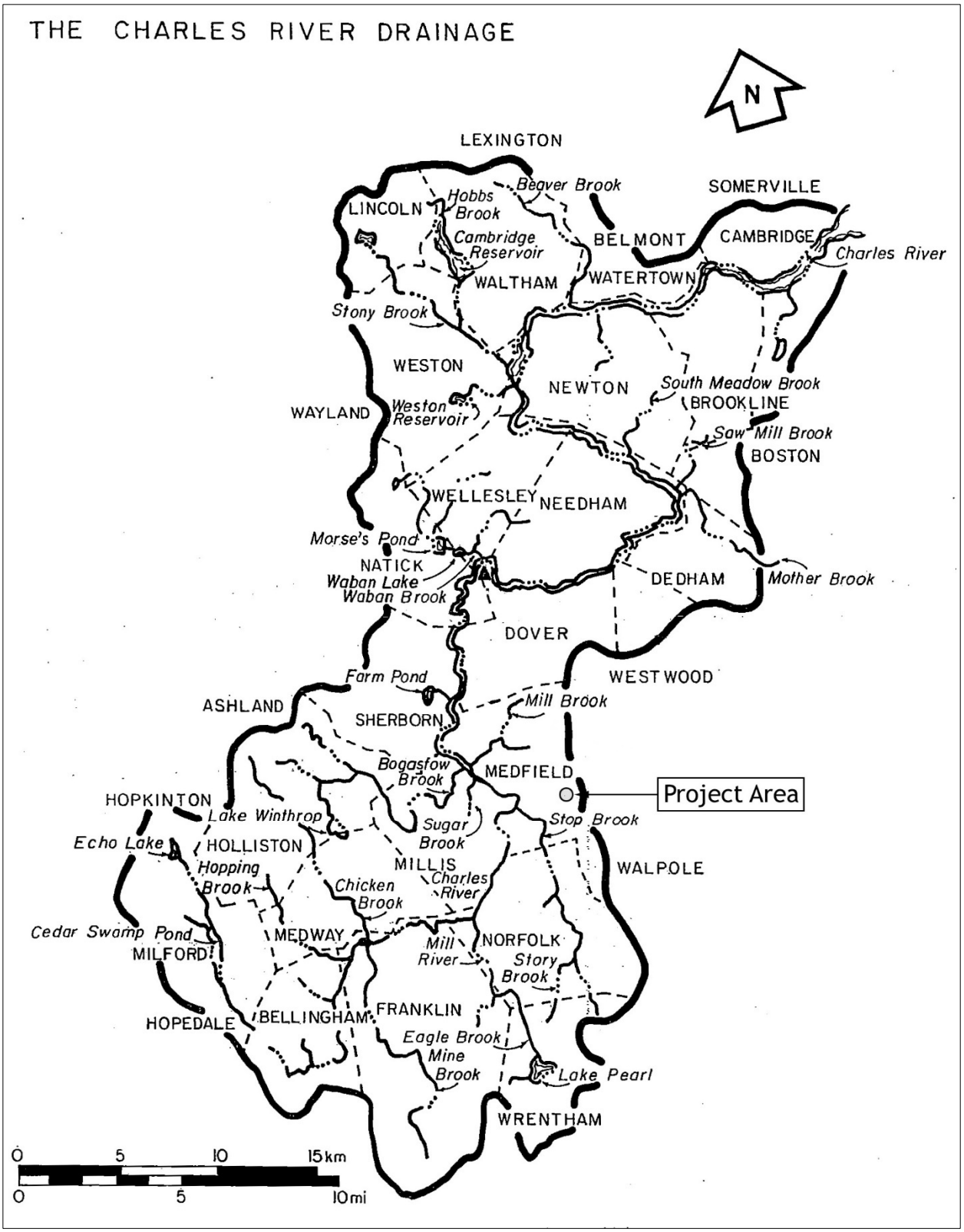

Figure 3-2. Charles River drainage with the approximate location of the Project area.

Figure 3-3. Existing conditions in the southern portion of the Project area, view south toward Well 3 structure and access road.

Figure 3-4. Intersecting access roads in the southwest portion of the Project area, view south.

Figure 3-5. Existing conditions along the western boundary of the Project area, view north.

Figure 3-6. Existing conditions in the central portion of the Project area, view east.

CHAPTER FOUR

CULTURAL CONTEXTS

Pre-Contact Period

Information about pre-contact Native American settlement and land use in the upper and middle Charles and Neponset River drainages is derived from three primary sources: artifact collecting by landowners and informal excavation by avocational archaeologists beginning in the mid-to-late nineteenth century; a survey conducted by the Massachusetts Archaeological Society (MAS) in the 1940s; and more recent CRM surveys by professional archaeologists. Only a few of the early collections are described in contemporaneous town histories (Morse 1856; Tilden 1887).

A core area of Native American settlement within the middle Charles River in and around Medfield contains evidence of occupation during the Early Archaic through Late Woodland periods, including 5- to 10-acre multicomponent base camps on glacial outwash terraces near the Charles River, wetlands, and tributary streams and small temporary campsites in upland locations (Ritchie 1997).

PaleoIndian Period (12,500–10,000 Before Present [B.P.[1]])

The retreat of the Laurentide Ice Sheet occurred about 14,000 years ago and by 11,500 years ago southern New England was populated by migratory bands collectively referred to as PaleoIndians. In what is now southern New England demonstrates, tundra-like environmental conditions followed the retreat of the ice sheet. PaleoIndians likely were generalized in their subsistence strategies, hunting a wide variety of animals and gathering numerous plant species (Dincauze 1993).

No PaleoIndian sites have been identified in the Charles River drainage. However, Medfield contains environmental settings similar to known locations of other PaleoIndian sites in southern New England. The large kame delta associated with glacial Lake Medfield extending across the western half of the town is analogous to outwash features in other major drainage basins that contain PaleoIndian sites and fluted point find spots.

The Neponset Site in Canton was a small base camp established by PaleoIndian groups (Carty and Spiess 1992; Ritchie 1994). Another possible PaleoIndian component in the Canton area is represented by an isolated Eden-like projectile point recovered from the Ponkapoag Pond Site (19-NF-39) on the grounds of Camp Dorchester, north of the Ponkapoag Golf Course.

Early Archaic Period (10,000–8000 B.P.)

A shift to warmer and drier conditions led to replacement of boreal vegetation by pine and oak forest (Ogden 1977). In the middle and upper Charles River drainage, diagnostic bifurcate-base projectile points have been found at large, multicomponent sites, including sites near Beaver Pond in Franklin (Strauss 1990). Investigation of the Medfield South Plain Site (19–NF–52) in Medfield confirmed this very large multicomponent site was used in the Early Archaic Period, (Strauss 1996, 1997). In the middle to lower

[1] Pre-Contact Period date ranges represent radiocarbon years before present (B.P.), with the present defined as A.D. 1950.

Neponset drainage bifurcate-base projectile points were recorded at the multicomponent Ponkapoag and Green Hill sites in Canton.

Middle Archaic Period (8000–5000 B.P)

Information from known Middle Archaic Period sites in the middle and upper Charles drainage indicates settlement patterns in this area were similar to those in other river basins in eastern and southeastern Massachusetts. During this period, an increase in the spatial distribution and intensity of settlement appears to coincide with the spread of an oak dominant forest type across southern New England. The location and density of Middle Archaic Period occupations in major river basins has been interpreted as evidence for Native American adaptation to specific group territories (Dincauze 1974). Riverine marsh/floodplain environmental settings were a focus of Middle Archaic settlement in the Sudbury/Concord, Charles, Neponset, and Taunton drainages (Dincauze and Mulholland 1977; Ritchie 1983a). Middle Archaic sites also appear to be concentrated along the margins of marshes and wooded wetlands in the section of the Charles River drainage between Franklin and Medfield.

Middle Archaic base camps repeatedly used on a seasonal basis were likely near the largest ponds connected to the Charles River by tributary streams and on terraces of sandy glacial outwash bordering the floodplain. Beaver Pond in Franklin is one focus of settlement, and artifact collections contain at least 56 Neville, Neville Variant, and Stark points of quartzite, argillite, and rhyolite.

Middle Archaic components in the Medfield area are at sites within riverine environmental settings, especially terraces of sandy glacial outwash. Site 19-NF-294 was in a floodplain setting formed by low terraces of glacial outwash adjacent to the Charles River. A section of Site 19-NF-52 threatened by residential development was investigated and found to contain a potentially significant Middle Archaic component containing Neville points of quartzite and rhyolite, bifacial tool blades, unifacial tools, scrapers, and cores of quartz, quartzite, and various rhyolites (gray, black, and Attleboro Red). Faunal remains were limited to small fragments of calcined bone identified as white-tailed deer and turtle. Site 19-NF-52 appears to have been a locus of intense Middle Archaic habitation where stone tool manufacture, hide processing, and cooking were done (Strauss 1996, 1997).

The Green Hill and Ponkapoag sites contained Middle Archaic components with tools and debitage of Braintree Slate obtained at nearby quarries in the Blue Hills. The Ponkapoag Site yielded more than 300 preforms for semilunar knives (ulus) of this material (Ritchie and Feighner 1990). The Green Hill Site contained both preforms and finished ground-stone tools, axes, and gouges of Braintree slate (Martin 1977; Rosser et al. 1980). These large base camps were at significant bodies of water, Green Hill along the Neponset River and Ponkapoag on the banks of the pond of the same name. The Neponset/Wamsutta Site contained several loci where Middle Archaic groups worked on chipped/pecked preforms for ground-stone tools (adzes gouges, semilunar knives) of Braintree Slate. In the upper Neponset drainage, large Middle Archaic components have been found at the Bird School and Oak Terrace sites near riverine wetlands and stream drainages in Walpole and Norwood.

Late Archaic Period (5000–3000 B.P.)

Like other sections of southeastern New England, the upper and middle Charles River drainage contains many Late Archaic sites that may have been used for the procurement of a wide range of natural resources. These sites have been found in a range of environmental settings, reflecting an expansion of settlement locations across the region during this period (Dincauze 1974). Use of major riverine, pond, and lakeside locations and smaller upland zone sites intensified during this period.

The largest known sites with Late Archaic components in the middle and upper Charles River drainage are base camps at ponds and wetlands. These sites typically have evidence of use by people affiliated with three major cultural traditions (Laurentian, Small Stemmed, and Susquehanna). At Beaver Pond in Franklin, intensive Late Archaic use of several sites was determined by the recovery of 390 diagnostic Late Archaic projectile points. Ground-stone woodworking tools such as adzes, gouges, and a full grooved axe from several Beaver Pond loci also indicate it was a frequently used base camp area where large, heavy implements were left for seasonal use.

The large area covered by the South Plain Site (19-NF-52) in Medfield was probably occupied at varying levels of intensity during the Late Archaic Period. Some of the numerous examples of ground-stone tools, e.g., full grooved axes, gouges, and adzes in the collection of the Medfield Historical Society, likely date to the period.

The details of Laurentian tradition settlement patterns in the middle and upper Charles drainage are not well known. The large pond/lakeside base camps were used ca. 5500–4000 B.P. based on recovered diagnostic Vosburg and Brewerton series projectile points near Beaver Pond and near Eagle Dam in Wrentham (Keighley 1951; Strauss 1990). Laurentian tradition settlement likely involved many more small sites in a pattern similar to that in the uplands of Worcester County west of the upper Charles River basin. In Medfield, the Woodcliff II Site (19-NF-306) may be an example of this type of small site, where a Brewerton-like projectile point was found along Vine Brook. A Late Archaic component of Site 19-NF-52 contained a Brewerton Eared-Notched point (Strauss 1997:50, 62).

In the Neponset drainage, Late Archaic sites on the margins of Fowl Meadow were frequently used based on the high frequency of identified hearth/fire pit or refuse pit features and discarded stone tools. Excavations at the Meadowlands Site in Canton recovered Squibnocket Triangle and Small Stemmed projectile points in association with features such as hearths or pits containing burnt rock or oxidized soils (Ritchie 1983b). A radiocarbon date of 4410 ± 100 B.P. from a feature in the northern section of the Neponset/Wamsutta Site in Canton may indicate a Laurentian tradition occupation. (Ritchie 1987).

The many examples of Squibnocket Triangle and Small Stemmed projectile points from base camp sites such as Beaver Pond and Eagle Dam are strong evidence of recurrent Small Stemmed tradition occupation of places next to ponds and larger wetlands. The most intensive use of loci at Beaver Pond during the Late Archaic period about 4500–3000 years ago was likely by Small Stem Point tradition groups based on the many recovered Squibnocket Triangle and Small Stemmed points of quartz, quartzite, argillite, and rhyolite. One riverine wetland/marsh zone site with evidence of use by Small Stemmed tradition groups is Locus 2 of the East Terrace Site on the upper Charles River in Bellingham (Waller and Leveillee 1998).

In Medfield, sites with Small Stemmed components are 19-NF-108 near Kingsbury Pond and North End Sauer Orchard (19-NF-294) on the margins of the Charles River floodplain. Untyped stemmed and triangular projectile points were found at Site 19-NF-108. Site 19-NF-294 was probably a large multicomponent site; Site 19-NF-108 could have been a smaller temporary camp. Site 19-NF-52, a very large multicomponent site, has a Small Stemmed Point component. Several small triangular and stemmed projectile points were found in a small, low density deposit of artifacts and chipping debris overlying an older Middle Archaic component (Strauss 1997: 50, 61).

Atlantic, Wayland Notched, and Coburn type projectile points and Mansion Inn bifacial tool blades are c hipped-stone tools diagnostic of the Susquehanna tradition. These point and tool blade types were manufactured from lithic materials such as rhyolite, quartzite, argillite, and non-local cherts. The Susquehanna tradition was also characterized by extensive trade or exchange networks and the development of lithic technologies such as the manufacture of large chipped-stone tool blades and steatite (soapstone) cooking vessels.

Susquehanna tradition activity in parts of east and central Massachusetts is best known from cremation cemetery complexes (Dincauze 1968; Leveillee 1998). Evidence of Susquehanna tradition activity at sites in the upper and middle Charles drainage is sparse compared to that of Small Stemmed components. The Beaver Pond area in Franklin was used by Susquehanna tradition groups. Other evidence of low-intensity Susquehanna tradition activity along the upper Charles River in Bellingham is an isolated Wayland Notched point from Locus 2 of the East Terrace Site and Locus 2 of the West Terrace Site, which represents a lithic workshop (Waller and Leveillee 1998). Diagnostic artifacts include sherds from steatite (soapstone) cooking vessels and chipped-stone tools such as Mansion Inn bifaces, Atlantic, Wayland Notched, and Coburn type projectile points.

In Medfield, two sites with diagnostic Susquehanna tradition chipped-stone and ground-stone tools are in the riverine floodplain margin and kame plain setting. Site 19-NF-107 is a small site near Sewall Brook that contained a Mansion Inn scraper. A set of bifacial tool blades, an Atlantic-like point, and a full grooved axe were found at Site 19-NF-300. Several Late Archaic Susquehanna tradition (Coburn Phase) cremation burials were reported at Site 19-NF-52 near Danielson Pond in Medfield (Ritchie 1977, 1997).

One example of a Susquehanna tradition small temporary sites in upland zone settings is a cache of 11 Mansion Inn blades of rhyolite on Mount Misery near Farm Pond in Sherborn. Site E-1/19-NF-230 in Bellingham contained Small Stemmed and Susquehanna tradition components as indicated by diagnostic projectile points. Two distinct concentrations of quartz, rhyolite, and quartzite debitage at the site marked stone tool-making areas associated with the Small Stemmed (quartz) and Susquehanna tradition (rhyolite) components (Edens 1994).

Late Archaic groups extracted lithic resources, including rhyolite and Braintree Slate at quarries in the Blue Hills and other surrounding areas (Chute 1969; Macpherson and Ritchie 1997; Naylor and Sayer 1976). Use of upland locations by Late Archaic groups included quarrying of rhyolite (Mattapan Volcanic Complex) from small intrusive dikes in granite outcrops. Quarry sites along the Charles/Neponset River watershed in Dover and Westwood were used by Susquehanna tradition groups. In the uplands west of the Neponset River, several loci of rhyolite quarrying have been identified (Chute 1966; Ritchie and Leveillee 1981). The Cat Rock Site was a talus quarry. The Noanet Quarry was a rhyolite dike in a granite boulder that was almost entirely removed by hammering out pieces of raw material; a diagnostic Wayland Notched projectile point was excavated from workshop debris at this quarry site (Chapin 1970; Strauss and Hermes 1996). Other rhyolite quarries in a section of the Mattapan volcanic complex along the lower Neponset River were also sources of lithic material (Bowman 1982).

The Powissett Rockshelter yielded indirect evidence of Late to Transitional Archaic occupation and may have been used by people visiting nearby rhyolite quarries (Dincauze and Gramly 1973:55–57). The Crescent Site, a small temporary encampment on the east side of Mine Brook in Walpole, contained a Susquehanna tradition component with Mansion Inn bifacial preforms, scrapers, and hammerstones. The rhyolites used to make most of these tools likely came from sources in the Lynn and Mattapan volcanic complexes (Waller and Ritchie 2004).

Transitional Archaic Period (3600–2500 B.P.)

During the Transitional Archaic Period some of the large riverine zone and pond or lake margin base camps in the Charles drainage were still elements of the settlement system with evidence often limited to isolated Orient Fishtail or untyped side notched points. In Medfield, Coburn phase burials dating to about 3200–2700 B.P. were found near Danielson Pond (MHC site files). Although generally rare in upland sections of east and central Massachusetts, a few Orient-like projectile points were recovered from Locus 2 of the West Terrace Site in Bellingham and other sites on Beaver Pond in Franklin (Strauss 1990; Waller and Leveillee 1998, 2000).

Early Woodland Period (3000–2000 B.P.)

Sites with known Early Woodland components in the upper and middle Charles River drainage are limited. Early Woodland assemblages have been identified from Meadowood, Lagoon or Rossville projectile points and thick, cord-marked Vinette I ceramics, usually found at large multicomponent sites. A few examples of diagnostic artifacts were in the Caterina collection from Beaver Pond (Strauss 1990). A few Meadowood points of non-local cherts in the Elwyn Chick collection were likely from sites in the upper and middle Charles drainage. As in many parts of southern New England, some Small Stemmed point types may also be indicators of Early Woodland activity at sites in the upper Charles River basin. (Ritchie 1983a,1985; Thorbahn 1982).

Some of the best evidence of sporadic Early and Middle Woodland activity along the upper Charles River wetlands is from two separate loci on the East Terrace Site in Bellingham. A radiocarbon date of 2530 ± 60 B.P. was obtained from a hearth feature at Locus 2 of the East Terrace Site; a few charred grape and huckleberry seeds from this feature indicated a late summer occupation during the Early Woodland Period. A hearth feature at Locus 1 of the East Terrace Site dated to 2000 ± 70 years B.P. and was associated with sherds of cord-marked pottery (Rainey et al. 1998; Waller and Leveillee 1998). In the Neponset drainage, the Orchard Cove site near Pequid Brook in Canton contained hearth and pit features, and activity areas radiocarbon dated to about 2700–2500 B.P. indicated some use of this site during the Early Woodland Period (Doucette and Davin 1993).

Middle Woodland Period (2000–1000 B.P.)

During the Middle Woodland Period, horticulture involving maize and other domesticated plants may have been introduced to southern New England to supplement an existing subsistence pattern of hunting and gathering (Snow 1980; McBride and Dewar 1987). Use of locations in riverine, wetland/pond margin and upland environmental settings is evident in the upper and middle Charles drainage. Several of the larger multicomponent sites have Middle Woodland components; lanceolate Fox Creek-like points were found at the Chelsea Drum and American Felt Sites near Beaver Pond in Franklin (Strauss 1990). At Eagle Dam in Wrentham, another Middle Woodland component had Jack's Reef Corner Notched points and ceramic sherds (Dincauze 1975).

The Middle Woodland Period coincided with widespread exchange networks moving lithic materials and probably information about ceramic technology and horticulture across broad areas of the Northeast. Occupations at sites in east and central Massachusetts are frequently marked by stone tools and chipping debris of jasper and chert from sources outside southern New England and hornfels from the Blue Hills near Boston (Ritchie and Gould 1985; Luedtke 1987). An example of this lithic resource use pattern was found at the H-1 Site in Bellingham, which contained chert, jasper, and hornfels chipping debris and at least two features with Middle Woodland radiocarbon-dated features (Edens 1994). The Blue Flag Site along the Charles River in Bellingham also produced a concentration of hornfels chipping debris. A feature at this site yielded a radiocarbon age of 2000 ± 70 B.P. (Rainey et al. 1998).

Another small site near Beaver Pond in Milford is likely to be of Middle Woodland affiliation based on the presence of hornfels chipping debris. The Andrews Knoll Site yielded more than 40 pieces of hornfels chipping debris that could be from a tool-making event in which a projectile point, bifacial tool blade, or other item needed for some task (e.g., hunting, butchering, and plant food processing) was made (Leveillee and Davin 1987b). The multicomponent Longshadow Site in Bellingham yielded an assemblage including a Jack's Reef projectile point reworked into a drill and lithic materials (hornfels and chert) typical of the Middle Woodland Period (Waller et al. 1999). The Howie Site in Millis contained a significant Middle Woodland component based on 5 Fox Creek and 1 Jack's Reef Corner-Notched point. Hornfels chipping

debris is likely associated with Middle Woodland activity at two sites (19-WR-483 and 19-WR-484) in Milford.

Middle Woodland settlement patterns in the Charles River basin also included small encampments along tributary stream and wetland settings. In Holliston, these include a Fox Creek point from the Black/Tan Site near Lake Winthrop and two small Middle Woodland sites (the Bullard Street Site [19-MD-712] and Dirty Meadow Brook 2 Site [19-MD-711]) (Rainey et al. 1993).

During the Transitional Archaic Period and again in the Middle Woodland Period, the Ant Hill Site East in Sherborn was a very small encampment probably occupied during the Transitional Archaic Period by a few individuals while hunting or collecting other resources along an upland stream and wetland corridor. The assemblage from the site contained a broken Fox Creek type projectile point and a low to moderate density of quartz and rhyolite chipping debris suggesting brief manufacture or maintenance of stone tool kits for hunting or other resource collection. Some processing of foodstuffs (animal carcasses, plant food) or other materials from the wetlands along Dopping Brook and nearby uplands may have also taken place at this small campsite (Waller and Ritchie 2006). At a small upland zone site with a Middle Woodland component near Noanet Pond in Dover, a Fox Creek point, ceramic vessel sherds and an ungrooved axe blade of hornfels were found. This site was also close to several quarries and rhyolite chipping debris that indicates it was used as a temporary workshop (Leveillee and Ritchie 1981).

Middle Woodland components in the Neponset drainage are known from moderate to large sites along the edges of Fowl Meadow. There was increasing use of Braintree hornfels from the Massachusetts Hill lithic source area in the Blue Hills (Bowman and Zeoli 1978). Hornfels quarried from this source area was transported over a large section of eastern, southern, and central Massachusetts and Rhode Island (Ritchie 1981). Small Middle Woodland components are known from a few sites (the Oak Terrace Site in Norwood and the Meadowlands Site in Canton) near the Neponset River wetlands that were also used during the Late and Transitional Archaic periods. Two loci within the Neponset/Wamsutta Site in Canton yielded bifacial tool blades or projectile points of hornfels. A few small ceramic sherds were recovered and a radiocarbon date of 1270 ± 110 B.P. was obtained (Ritchie and Feigner 1990).

Late Woodland Period (1000–450 B.P.)

Increased population and sedentism and village formation may have followed the expansion of horticulture during the Late Woodland Period. Aggregated settlements such as villages could have occurred independently of the adoption of horticulture, especially in coastal or estuarine environments that supported subsistence based on marine resources (McBride and Dewar 1987). Social complexity and the formation of political alliances appear to have developed (Mulholland 1988).

Diagnostic artifacts include large and small triangular Levanna and Madison-style projectile points and cord-wrapped, stick-impressed, and incised ceramic vessels. This period coincided with an increased reliance on locally available lithic materials (quartz, quartzite, and rhyolite), which suggests the formation of ancestral territories.

In the upper Charles River basin, a few sites have been identified with Late Woodland components (Dincauze 1973, 1975). Levanna projectile points and ceramic sherds from sites in the Beaver Pond district in Franklin and at Eagle Dam in Wrentham are some of the only evidence of Late Woodland settlement (Strauss 1990). Late Woodland Levanna points have been found at the multicomponent Cutler-Morse Site on Lake Winthrop in Holliston. These small Late Woodland components suggest some continuity in the use of pond and wetland locations. The Medway 3 Site near Chicken Brook in Medway is an example of a site with two Levanna points near upland tributary streams and wetlands that may have been a camp used for hunting (Rainey 1990).

Late Woodland settlement in the middle Neponset drainage likely was centered at large estuary base camps near Boston harbor. Late Woodland components in the Fowl Meadow area include the Meadowlands, Neponset/Wamsutta, and Red Leaf sites (Leveillee and Davin 1987a; Ritchie 1983b, 1994). Hornfels from the Blue Hill source continued to be used, but rhyolite and quartz were the primary materials for chipped-stone tools (Bowman and Zeoli 1978; Ritchie 1981).

A significant Late Woodland component was at a section of the Neponset/Wamsutta Site in Canton. The density of cultural material (chipped-stone tools, ceramic sherds, and debitage) and features at this section of the site indicates that this location was intensively used. The section of the site on level terraces on the west side of Signal Hill could have been an inland base camp within a large group territory including the lower Neponset River drainage (Ritchie and Feighner 1990). Some large Late Woodland base camps probably were at estuary heads and fall-lines along major rivers (the Charles, Mystic, and Neponset) entering Boston Harbor and may have been occupied during cold months when the focus of settlement was away from the Boston Harbor district (Luedtke 1980). In the upper Neponset drainage, an isolated find spot of a Levanna point (19-NF-152) near Mine Brook in Medfield probably marks the location of a small temporary encampment.

Contact Period (A.D. 1500–1620)

During the Contact Period, the locations of present-day Medfield and Walpole were near the southwestern boundary of the territory occupied by the Massachusett, a Native American tribal group with a territory centered at Boston harbor and the Neponset, Charles, and Mystic river drainages. Trails extending north from Narragansett Bay and the Taunton drainage crossed the upper and middle Neponset drainage. Another network of trails extended around the Neponset Cedar Swamp in what is now South Walpole and crossed uplands to the Charles River (MHC 1980a, 1980b).

The Charles River could have separated Massachusetts territory from lands used by other inland groups such as the Nipmuck. The area now within Medfield was crossed by several trails fording the Charles River. The narrow necks in the floodplain on the present-day route of West Street, and farther north where Route 27 crosses the Charles, likely were locations for fording places along Native American trails. A trail from the Dedham-Walpole area followed the present-day route of Foundry Street around Mount Nebo to Main Street and then divided into two branches leading to Natick (North Farm Street) and Sherborn (Harding Street) (MHC 1980a, 1980b). Another trail leading south toward the Wrentham area probably followed the present-day route of South Street; a ford across the Stop River may have been where Noon Hill Street now crosses it.

The Powissett Rockshelter in Dover appears to have been used as temporary camp during the Contact Period. An interpretation of the material excavated from this site is that it was used by small groups traveling between the Neponset estuary and Charles River (in Natick). Preparation of food over small fires at the rockshelter and consumption is indicated by recovered ceramic vessel sherds and discarded bone and shell fragments (deer, raccoon, porcupine, bird, turtle, fish, marine, and freshwater clam) dating to the Contact Period (Dincauze and Gramly 1973; Dincauze 1975). The broad, level plain south of present-day Medfield town center bounded by Mine Brook, Danielson Pond, Mount Nebo, and the Charles River floodplain would have been well suited for Native American habitation and horticulture. Mucksquit, a local core area of settlement was at Lake Winthrop in Holliston (Reese 1973), but no Contact Period sites are known in Medfield.

Post-Contact Period

Plantation Period (1620–1675)

During the Plantation Period, Medfield was part of the Dedham Grant along with land now in the adjacent towns of Dover, Sherborn, Ashland, Holliston, Medway, Walpole, and Norfolk. The Dedham Grant was established in 1636 to include lands on the east and south side of the Charles River that had not been already granted to any town or person. By 1637, 30 English families had settled in the grant. Early English settlement in the Medfield area began by 1643 when land at "Boggestow" on the west side of the Charles River was granted to Reverend John Allen by the General Court. Six years later, the General Court granted land on the west side of the river to the town of Dedham. In October 1649, Dedham allocated part of this large tract for a new town. The area about 3 miles wide from east to west and 4 miles long from north to south. Ensign Phillips, John Dwight, and Daniel Fisher of Dedham set the bounds of what was to become Medfield in 1650 (Tilden 1887:33, 35). In May 1651, Medfield was incorporated by an act of the General Court as the 43rd town in Massachusetts.

The location of Medfield was selected because of the extensive river meadows that were well suited for grazing livestock. English settlement also may have taken advantage of cleared land from prior Native American settlement in the "South Plain" area. Early house lots were near the present-day Phillip and Spring streets. Other lots were along Bridge Street; 10 families apparently settled in this area in 1652. This cluster of settlement in the "Bridge Street Plain" was close to river meadow and good agricultural land. A village center oriented along Vine Brook contained a meetinghouse, a cemetery, and 13 house lots. In 1650–1670, house lots were also along North and South streets. By the mid-to-late seventeenth century, Medfield's town center was established. Settlement was oriented to the town center and river meadow in a pattern similar to other seventeenth-century towns in eastern Massachusetts such as Sudbury and Concord (Ritchie 1997; Tilden 1887).

Tributary streams were important sources of waterpower, and the first small industrial sites were a mill on Mill/Mine Brook in 1652 and a tannery near what is now Harding Street by 1669. Other mills were near Medfield Junction and on the Charles River (MHC 1980b; Tilden 1887:49; Town of Medfield 1976:38). In 1650, English missionary John Eliot established the Ponkapoag Praying Indian settlement near the pond of the same name in Canton. Documents from this period mention that the Ponkapoag, a Massachusett sub-tribe, retained hunting and fishing rights and continued their traditional seasonal occupation of some locations along the upper Neponset River (Carlson 1986; Gookin 1792). In 1685, a reservation for the Neponset sub-tribe was established along Bird Pond and Washington Street (DeLue 1925:13–16).

After 1660, Walpole was a small English settlement referred to as "Sawmill" or "Sawmill Hamlet" consisting of scattered farmsteads, mostly between the Neponset River and Spring Brook. A fortified garrison house was also constructed as protection from Native American attacks. In addition to farming, the primary economic activity was use of local timber resources, particularly cedar. The first sawmill was built on the upper Neponset River in 1659 by Eleazer Lusher and Joshua Fisher and became the center for further settlement in the early stages of the hamlet. Other activities included extraction of bog iron ore from Spring and Mine brooks (MHC 1980a:2; West 1997).

Colonial Period (1675–1775)

Following the destruction of parts of Medfield during King Philip's War (1675–1676), houses and farmsteads in the outlying sections of town were rebuilt. The village center remained intact and began to expand along North and South streets during the early eighteenth century. The network of primary roads was improved and extended. Major roads through the central part of town were the Dedham (Route 109)

and Taunton (Route 27) highways. Several taverns were in operation along these major corridors, including one on North Street in 1725 (Tilden 1887:127).

North Street was established as a primary road leading to Dover, and other roads were laid out to provide access to key locations within the town such as mills, the river, or meadow. Roads leading to mills were Elm, Phillip, Green, and Pine streets. Causeway and Grove streets allowed access to meadow land along the Charles River. Other roadways established during this period were Rocky Lane and part of Granite Street in 1723, Pound Street in 1736, and Noon Hill Street in 1742 (Tilden 1887:126, 132, and 134). Farm Road was built from Sherborn Center to Medfield by 1720, passing near Farm Pond, the town's largest body of water. The Farm Road area was a focus of settlement during the Colonial Period, as farmsteads were established along this locally important road.

Agriculture and livestock husbandry were the primary activities at farmsteads in the town. The few mills were used to process timber, grains, and woolen goods for local residents. Saw, grist, and fulling mills were active at suitable locations on all the largest upland stream drainages. The first fulling mill was built in 1706 on Mill Brook at a location that later was used for other industries (Tilden 1887:114).

In 1705, the Dedham Grant common lands between the Neponset River and the Dorchester town line were divided into lots, opening the area for increased settlement. Through the remainder of the Colonial Period, new small rural industrial sites along the Neponset and other tributary streams increased settlement in the area that would become the town of Walpole. Extraction of bog iron deposits from local wetlands, including those along Mine Brook, continued with forges and smelters built to process this raw material (MHC 1980a:4). Walpole was incorporated as a separate town out of Dedham Grant lands in 1724.

Federal Period (1775–1830)

Throughout the Federal Period, settlement in Medfield was similar to that of the preceding period with a small nucleus in the town center on Main and North streets. A few stores were near Main and Pleasant streets. New public buildings included several meetinghouses and three wood-frame and brick schoolhouses after the North, Center, and South districts were established (Figure 4-1). A parcel of Town-owned land at the corner of South and Phillips streets was used as a military training field (MHC 1980b; Tilden 1887). An important change in local transportation was the improvement of Main Street as part of the Boston and Hartford Turnpike.

The local economy was still based primarily on agriculture but began to include more specialized trades and small cottage industries. Medfield was well situated for this development because the center of town was at the intersection of the Boston and Hartford Turnpike (Route 109) and the Sherborn to Walpole Road (Route 27). Examples of these cottage industries were straw goods and brush-making, which continued to expand in Medfield during the remainder of the period. Small-scale manufacture of bonnets began in 1801 using locally produced straw braid. A pond created on Vine Brook provided waterpower for a small brush and furniture enterprise in the town center. This impoundment was in the current location of Meetinghouse Pond on North Street (Tritsch 1982:23, 24, 27).

Upland areas at the periphery of settlement in Medfield were woodlot used as sources of firewood and timber for construction. Some small-scale granite quarrying took place in the Rocky Woods section of town. The "Courthouse Ledge" quarry provided stone to construct a courthouse in Dedham in 1826. The northeastern corner of the town near Rocky Woods also contained grazing land used on a seasonal basis for sheep and cattle (Tritsch 1996:6, 12–13).

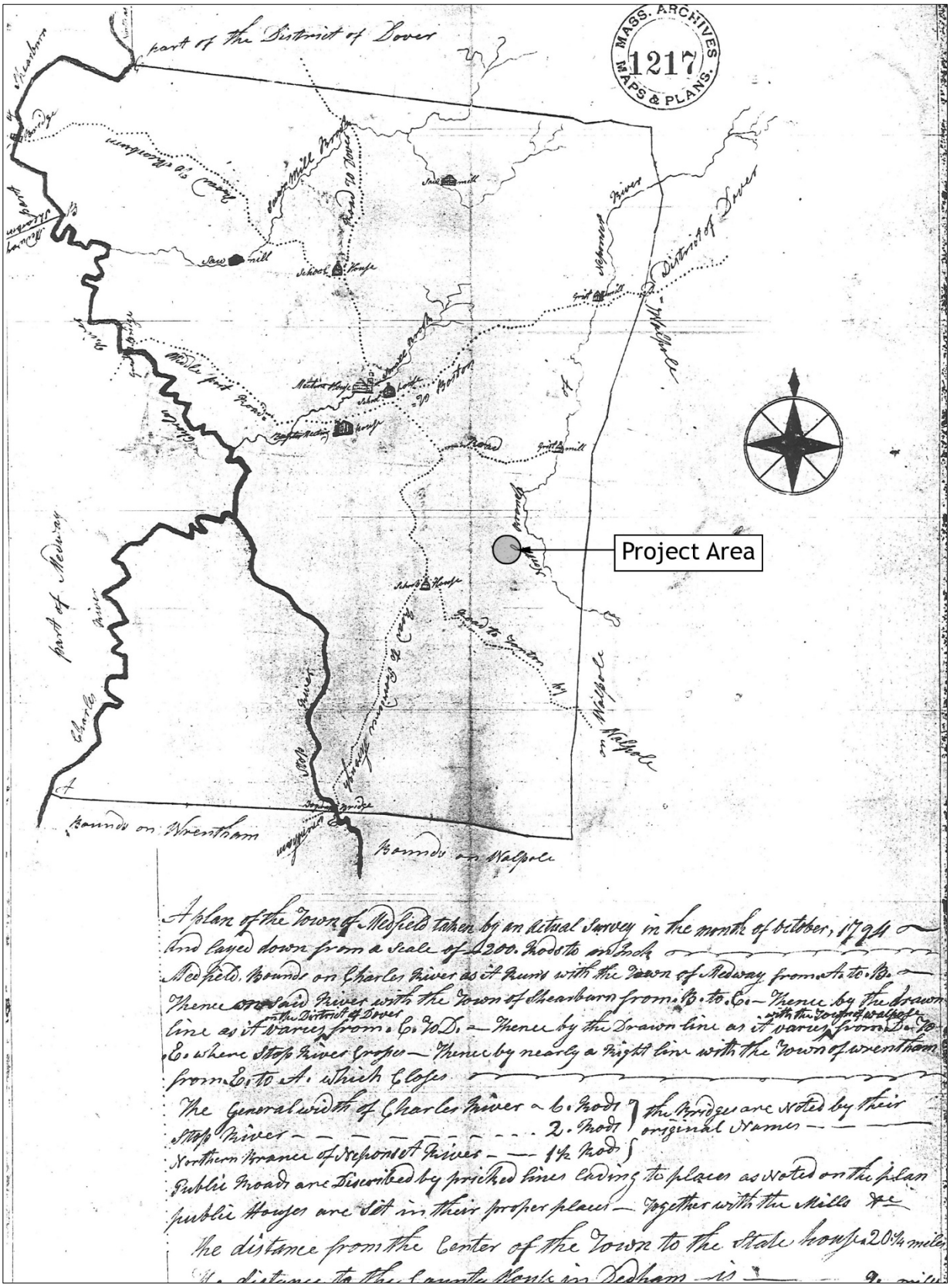

Figure 4-1. 1794 (Anonymous) map of Medfield with the approximate location of the Medfield Wells 3 & 4 Water Treatment Plant Project area.

Early Industrial Period (1830–1870)

During the Early Industrial Period, settlement expanded in the center of Medfield with new construction along primary roads such as Main, North, and South streets. Other sections of the town contained a network of roads that generally radiated outward from the town center (Figure 4-2). In the mid-nineteenth century, the town center included many small craftsmen shops, including a wheelwright, tinsmith, blacksmith, and a paint shop. An important trend that began during this period was the expansion of local craft enterprises from cottage industries to small factories. Local farms provided raw material for making brushes and straw goods.

Factories for the manufacture of straw goods, boots and shoes, and carriages were built in the center of Medfield. Carriage manufacture began in 1835; in 1857, the Cushman and Baker Company built a factory on a former mill site on Frairy Street. Warren Chenery and Son manufactured straw goods in a three-story factory built in 1857. In 1858, several other companies in town were involved in straw goods manufacture (Tilden 1887:249). Medfield was first connected to Boston by railroad in 1861 and depots were built at the town center and at Medfield Junction. In upland areas, various mills produced nails, wire, boxes, and hay forks. Mill privileges in these areas that had been in use since the eighteenth century were adapted to newer purposes. A large granite mill was built along Mill Brook in the Rocky Woods area that had been previously used for a gristmill. Construction of a railroad line connecting Needham and Medfield through Dover Center in the 1850s provided an important transportation corridor.

Late Industrial Period (1870–1915)

A general increase in population and an expansion of residential areas in the center of Medfield occurred during the Late Industrial Period. A few roads were added to the landscape in other sections of town. The town center contained commercial blocks with wood-frame buildings. The most important local industry was straw goods manufacturing; two large factories were active in during the third quarter of the nineteenth century (Figure 4-3). Older mill locations on upland streams continued to be put to new uses at Mill Brook near North Street, where the American Steam Packing Company began operation in 1877, and Main Street near Rocky Woods, the location of the B. F. Crehore Paper Cutter Company after 1871 (Tilden 1887:264; Tritsch 1996:20).

Some of the population increase during the period may have been related to the opening of the Medfield State Hospital after 1895 (MHC 1980b). This large facility near the border of Medfield and Dover consisted of a campus-style complex of institutional buildings and a substantial amount of farmland that remained in agricultural/pastoral use. A portion of the property between Hospital Street and the New York, New Haven, and Hartford Railroad line was farmed to supply the hospital. Some related housing was built along Hospital Road. A town almshouse consisting of several buildings was on the east side of the Charles River near the intersection of West and Bridge streets. Other land used for municipal purposes was northwest of Dale Street, where sewers constructed in the town center during the mid-1880s entered a filtering basin (Tilden 1887:268). A second railroad line, the Old Colony/Northern Division crossing the northern section of Medfield, had begun operation in the 1870s. More land around the intersection of two railroad lines in the Medfield Junction/Harding district in the northern part of Medfield was used for various commercial uses, including a lumberyard, mill pond, ice houses, and hotels near a railroad depot.

Early (1915–1940) and Mid-Century Modern (1940–1970) Periods

After World War I, there was a slight increase in the population of Medfield. Most new construction was in the town center and at the Medfield State Hospital complex. Outside the town center, land use was still somewhat rural. Routes 27 and 109 were improved as paved highways to accommodate automobile use (Figure 4-4). In the early 1930s, an airfield suitable for use by small privately owned planes was constructed

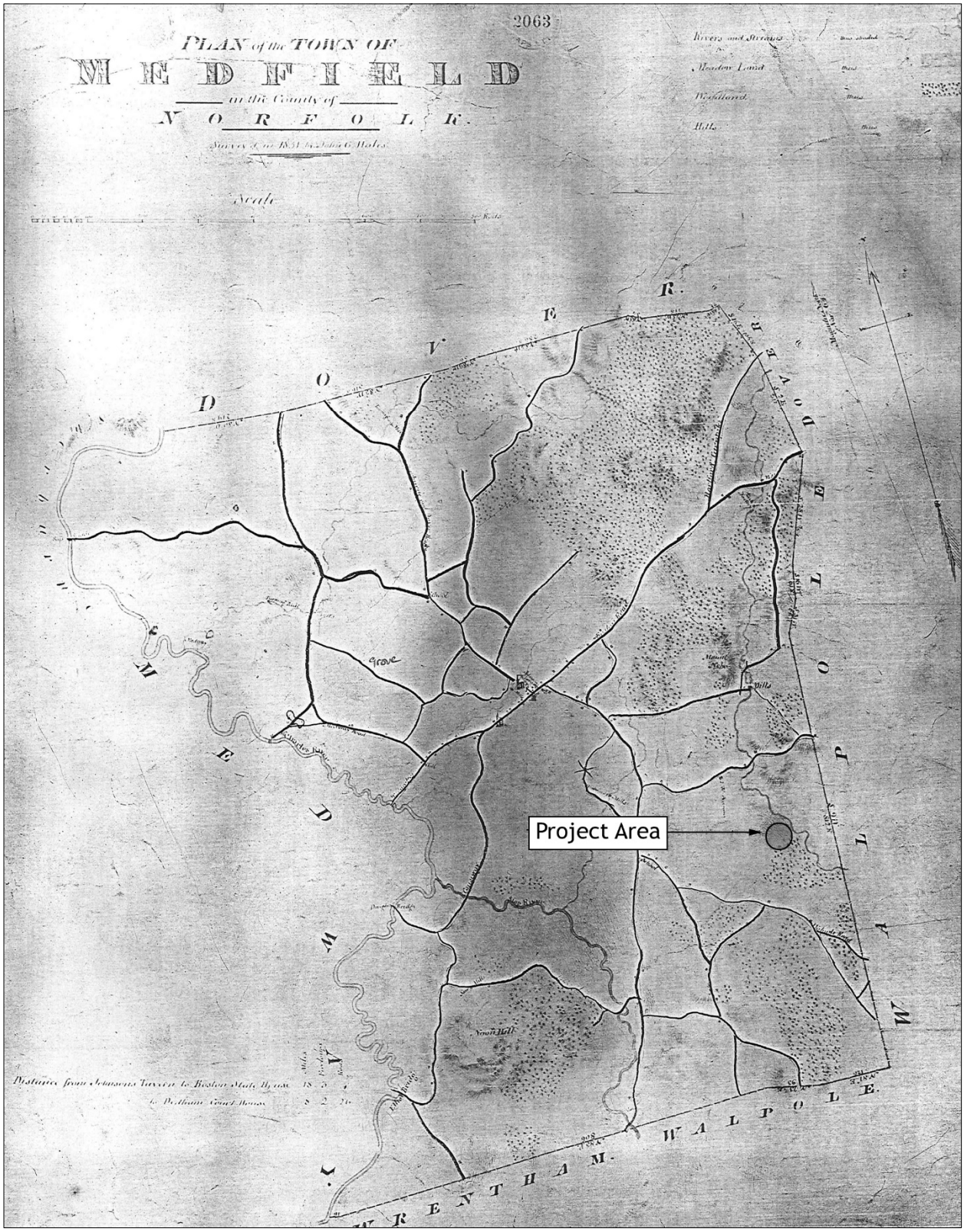

Figure 4-2. 1830 (Hales) map of Medfield with the approximate location of the Medfield Wells 3 & 4 Water Treatment Plant Project area.

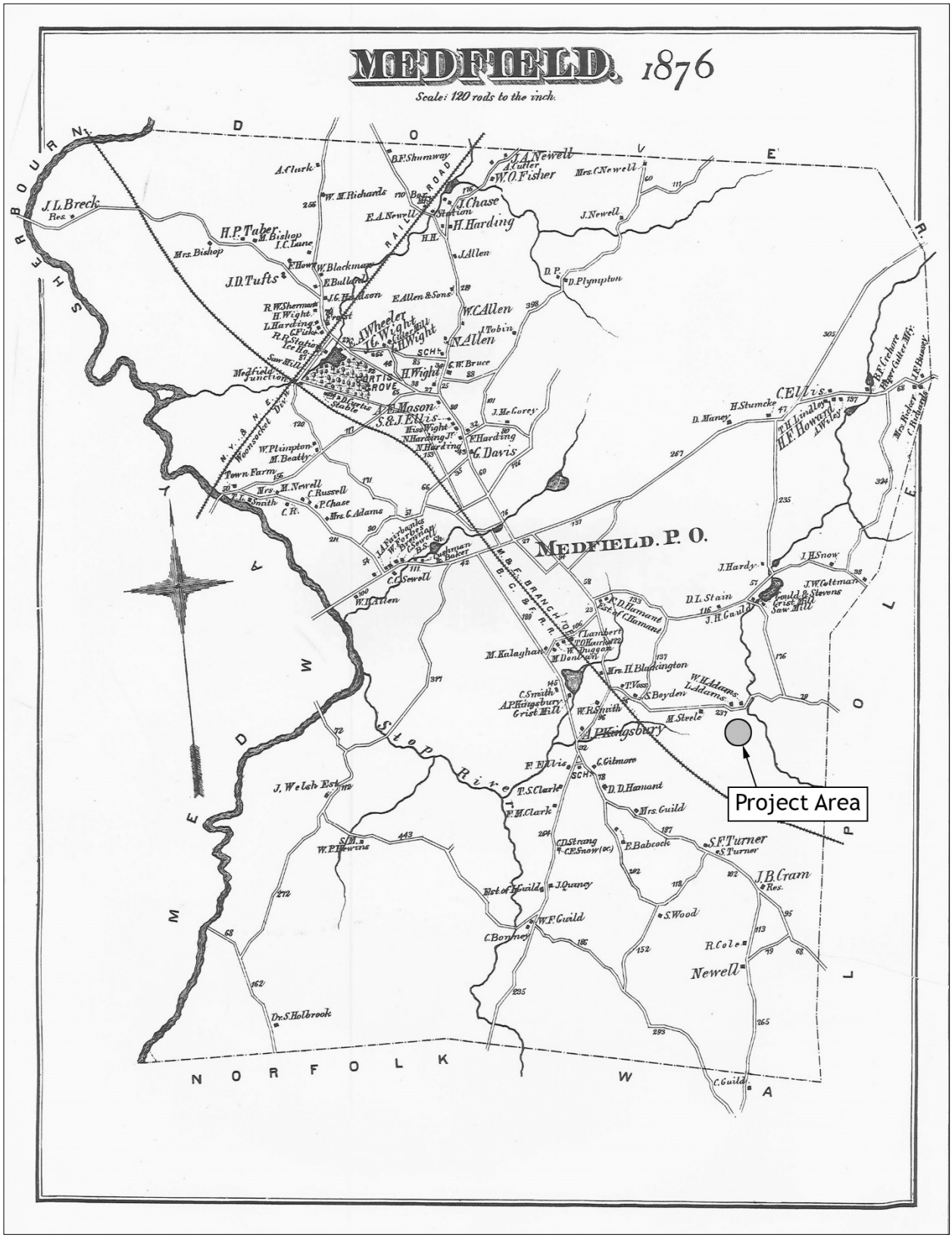

Figure 4-3. 1876 (Beers) map of Medfield with the approximate location of the Medfield Wells 3 & 4 Water Treatment Plant Project area.

Figure 4-4. 1946 (USGS) Medfield quadrangle topographic map with the approximate location of the Medfield Wells 3 & 4 Water Treatment Plant Project area..

in the broad, level plain now occupied by playing fields for the Wheelock School and protected open space owned by the Town. Fairacres Field was off Elm Street one mile southeast of the town center and north of the railroad line (now Conrail). Two of the four runways at an elevation of 160 ft asl were 2,100 ft, one was 1,100 ft, and one was 1,000 ft. There were no aircraft service facilities and air traffic was controlled through two radio towers 2.5 miles northwest of the airfield (New England Aviation History 2017).

After World War II, land use in Medfield began to change. By the 1950s, there was a significant shift in land use to suburban residential development. Residential neighborhoods began to fill in spaces between some of the streets forming the older, primary road network. With increased population, new school buildings were constructed, including the Junior High and High School complex and the Wheelock School. Another modification to the landscape near the town center and Medfield State Hospital property occurred when Route 27 was shifted to a new alignment near the former route of Grove Street in 1963 (Clements 1995:35).

Contemporary Period (1970–Present)

Over the last 50 years, commercial development has expanded along sections of the Route 27 and 109 corridors. The former Medfield Town Farm or almshouse property on West Street, which was purchased by the Atlantic Brick Company before World War II, was used for sand/gravel pits in the 1970s (Richard and Barbara Palson, personal communications to D. Ritchie, 1996). Population growth in the town was stable from 1970 to 1990. Residential development has continued and, by 2010, the town's population was 12,024 (Town of Medfield 2020).

In 2014, the Town of Medfield acquired 128 of the 241 acres of the former Medfield State Hospital complex: the 88-acre core campus and 40 acres south of Hospital Road. Most of the buildings and campus are listed in the National Historical Register. Of the 9,337.6 acres of land in Medfield, approximately one-third (3,066.5 acres) is open space protected in perpetuity from development (Town of Medfield 2020).

CHAPTER FIVE

RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

The intensive (locational) archaeological survey for the Medfield Wells 3 & 4 Water Treatment Plant Project consisted of archival research, a walkover survey, subsurface testing, and laboratory analyses. The results of these four tasks are described below.

Archival Research and Expected Cultural Resources

Pre-Contact Period

The sensitivity of the Project area for pre-contact Native American archaeological resources is defined primarily by its proximity to wetlands along Mine Brook, a tributary stream within the upper Neponset River drainage. The Project area is also within a core area of pre-contact Native American settlement and resource use in the middle section of the Charles River basin in the towns of Medway, Medfield, Dover, Millis, and Sherborn. Known pre-contact sites in the vicinity of the Project area were occupied over an approximately 8,000-year span from the Early Archaic to Late Woodland periods: 19-NF-52 (South Plain Site); 19-NF-107 (Sewall Brook Site); 19-NF-108 (Kingsbury Pond Site); and 19-NF-152 (ROW 447-8 Site) in Medfield and the Crescent Site in Walpole. These sites were identified by avocational archaeologists in the nineteenth and twentieth centuries and during more recent CRM studies (Davin and Willan 1994; Hoffman 1980; Ritchie 1977; Waller and Ritchie 2004). The Medfield Historical Society collection contains three ground-stone pestles from the Silas Boyden property. An 1876 (Beers) map of Medfield shows the Boyden property was at the intersection of Cross and Elm streets close to the Wheelock School. (see Figure 4-3). The Boyden property is also near Site 19-NF-52, a very large multicomponent Archaic and Woodland Period site north of the Project area.

Pre-contact cultural resources in the Project area were expected to range from find spots of isolated chipped-stone tools (projectile points, bifacial tool blades, etc.), pieces of chipping debris, to small (50–300 sq m) or moderate-sized (400–750 sq m) sites with deposits of cultural material (stone tools, chipping debris, and burnt rock fragments) in activity areas or around features (hearth/fire pit, refuse pit, lithic workshops, etc.). Any pre-contact sites could date to the Middle (ca. 8,000–5,000 years ago) and Late Archaic (ca. 5,000–3,000 years ago) to Late Woodland (ca. 1,000–450 years ago) periods.

Post-Contact Period

The sensitivity of the Project area for post-contact archaeological resources is defined by its location between Elm and High streets, two primary local roadways forming linear zones of settlement in Medfield since the early eighteenth century. Mid-to-late nineteenth-century maps of Medfield depict the vicinity of the Project area as primarily open land most likely used for agricultural fields, pasture, and woodlots for farms along Elm and High streets. In the early twentieth century, land use included a tree nursery and a small airstrip west to northwest of the Project area. By 1969, the Wheelock School was built to the northwest of the Project area and its athletic fields have been enlarged to their current extent.

No known post-contact sites are in or near the Project area. Any post-contact cultural resources within the Project area were likely to reflect past agricultural/pastoral activities associated with farmsteads or residences. Possible evidence of this type of activity could include stone walls, cart paths, and low-density

deposits of household refuse (brick, nails, ceramics, bottle glass, animal bone, etc.). Other possible evidence included landscape modifications (grading, filling, roadway construction, etc.) from the addition of the two existing town wells and associated access roadways.

Walkover Survey

A walkover survey and systematic surface inspection confirmed that most of the Project area is a wooded knoll surrounded by gradual slopes on the south, east, and north to northeast and has high archaeological sensitivity. Within the wooded portion of the Project area evidence of previous disturbance was limited to small areas of exposed sand and gravel subsoils where soil test pits for site engineering had recently been excavated within two proposed stormwater detention basins (Figure 5-1).

The southwestern portion of the Project area has been modified by construction of three asphalt paved roadways that intersect in that location. A paved roadway with a graded, landscaped shoulder extending north to existing Well 4 forms a zone of previous disturbance and low archaeological sensitivity along the western boundary of the Project area (see Figure 5-1).

Subsurface Testing

A total of thirty-four 50-x-50-cm test pits were excavated within the area of high archaeological sensitivity: 23 test pits placed at 10-m intervals along four judgmental linear transects (Transects A–D); 8 test pits in two close-interval (2.5-m) array patterns (AR-01 and AR-02); and three judgmentally placed test pits (JTP-01, JTP-02, and JTP-03) (Figure 5-2).

Transects A–D were oriented east to west and extended through the proposed locations of the water treatment plant, stormwater detention basins, grading or landscaping, and a perimeter fence. Transect A was placed near the northern boundary of the Project area where a stormwater detention basin, grading, and landscaping are proposed (see Figure 5-2). Of the five test pits along Transect A, TA-01 was near the landscaped shoulder of the access road leading to Well 4 and contained a mottled dark gray brown (10YR 4/2) to dark yellow brown (10YR 4/4) silty fine sand with gravel forming the upper 27 cm. Below this deposit of mixed A and B horizon soils was a mottled brown (10YR 4/6) to yellow brown (10YR 4/3) altered B_1 subsoil horizon to 44 cmbs. From 44 to 65 cmbs was an intact B_2 subsoil horizon of yellow brown (10YR 5/6) silty fine to medium sand with gravel. The base of the profile (from 65 to 78 cmbs) was a C subsoil horizon of light olive brown (2.5Y 5/4) fine to medium sand with gravel (Figure 5-3).

The four other test pits on Transect A (TA-02 to TA-05) exposed soil profiles with intact horizons and no evidence of previous disturbance. These profiles consisted of a 5-cm-thick forest duff (A_o) layer covering a plow zone (A_{pz}) of dark gray brown (10 YR 4/2) silty fine sand with gravel to about 21 cmbs. The underlying B_1 subsoil horizon from about 21 to 32 cmbs was dark yellow brown (10YR 4/6) fine to medium sand with silt and gravel. The B_2 and C subsoil horizons from about 32 cmbs to at least 70 cmbs were similar to those described above for test pit TA-01 (see Figure 5-3).

Transects B, C, and D extended through the proposed locations of a paved driveway and the 4,421-sq ft water treatment plant building. Test pits TD-05 and TD-06, at the eastern end of Transect D. were within the proposed location of a stormwater detention basin and grading and landscaping. Test pits TB-01, TC-01, and TD-01 were in the landscaped shoulder of the existing access roadway to Well 4 and contained the same mottled dark gray brown (10YR 4/2) to dark yellow brown (10YR 4/4) silty fine sand with gravel first noted

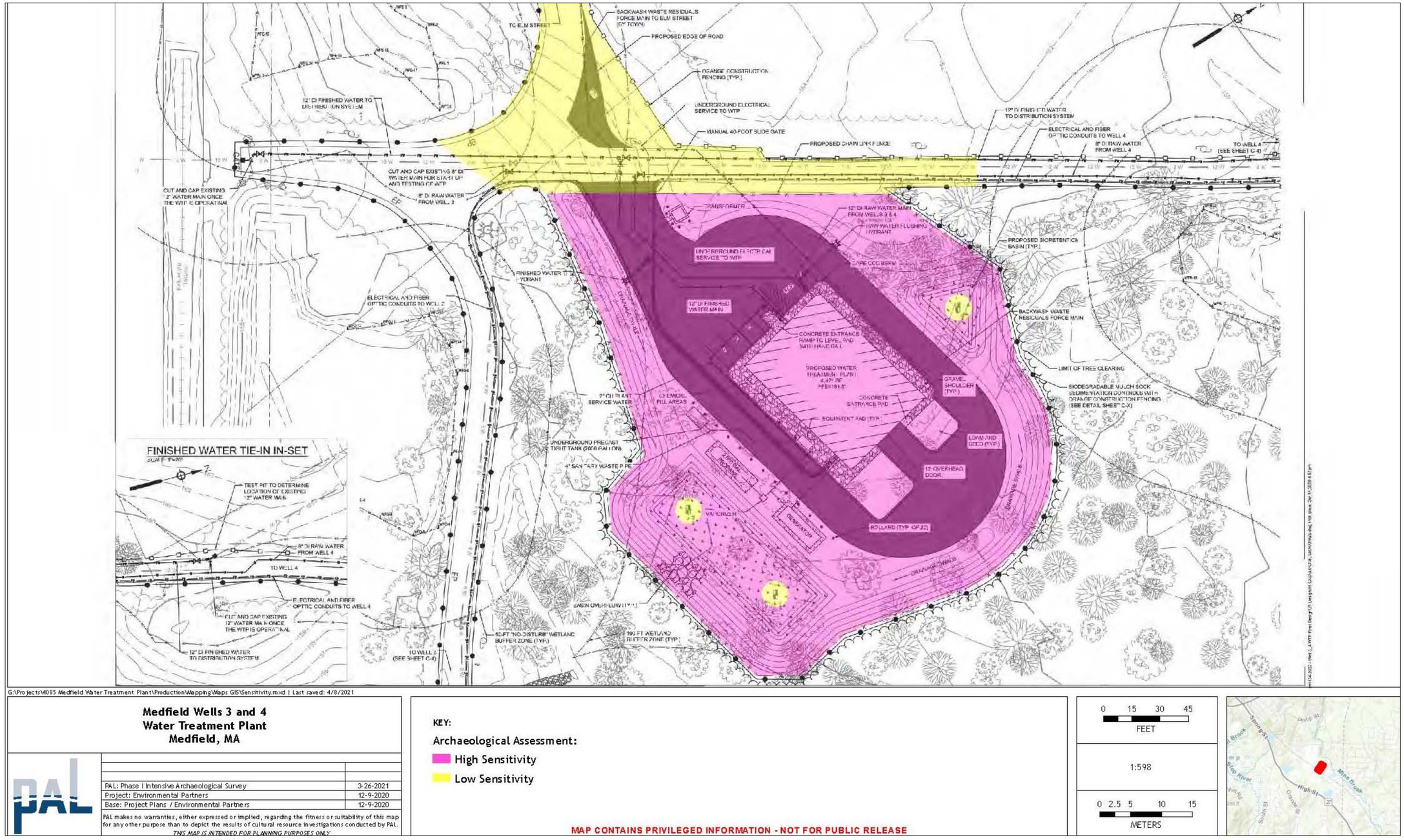

Figure 5-1. Wells 3 & 4 Water Treatment Plant Project Area with zones of archaeological sensitivity.

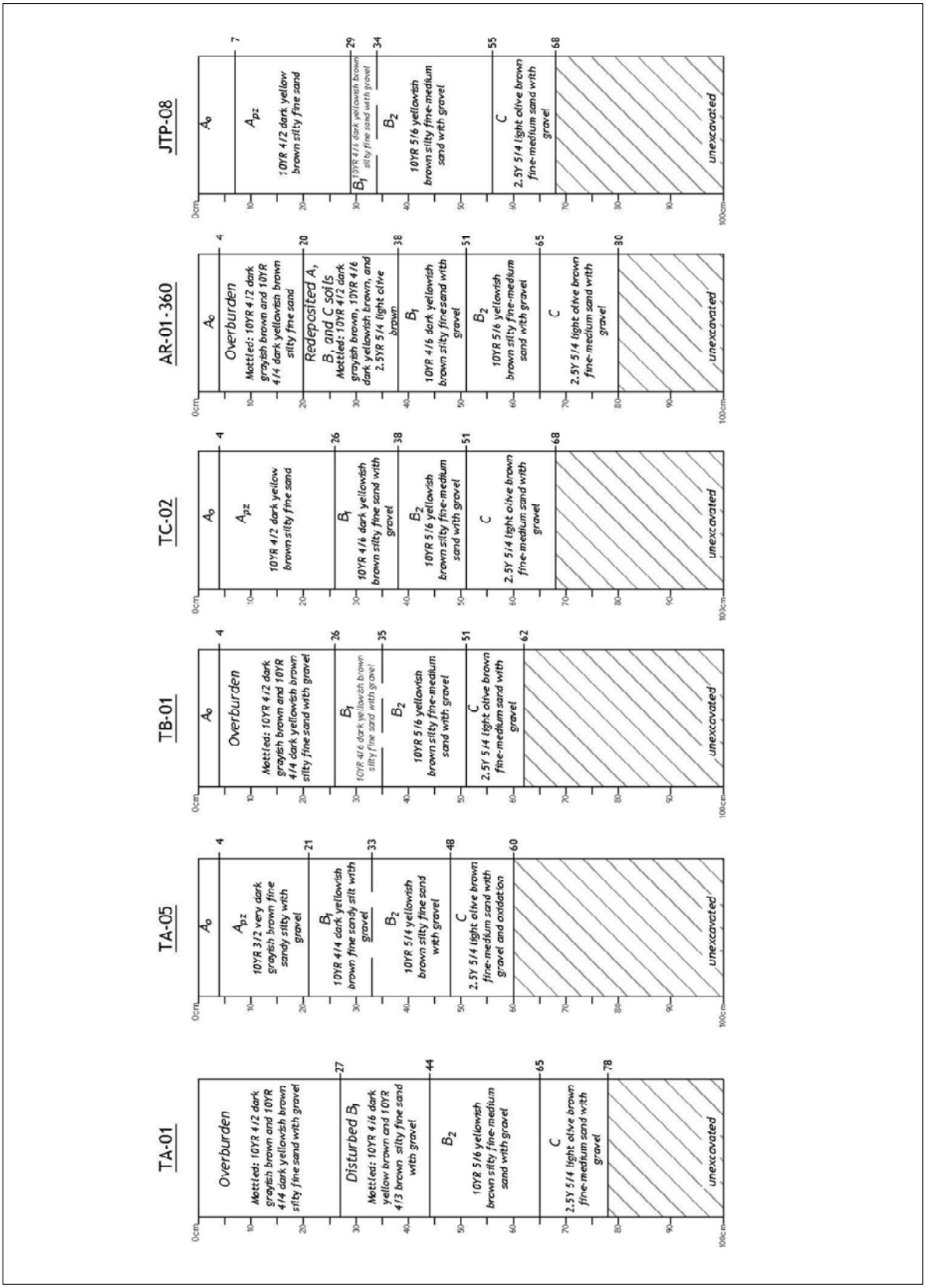

Figure 5-3. Representative soil profiles from test pits in the Wells 3 & 4 Water Treatment Plant Project area.

in test pit TA-01. In TB-01 and TC-01, this modified soil or overburden extended to a maximum of about 26–34 cmbs; in TD-01 it was shallow and extended to about 12 cmbs. Below it was an intact B_1 subsoil horizon of dark yellow brown (10YR 4/6) silty fine sand with gravel to about 35 cmbs. Intact B_2 and C subsoil horizons of yellow brown (10YR 5/6 silty fine to medium sand with gravel and light olive brown (2.5Y 5/4) fine to medium and with gravel formed the base of the soil profiles from about 35 to 74 cmbs (see Figures 5-2 and 5-3).

The other test pits on Transects B, C, and D exposed similar soil profiles with a forest duff (A_o) layer covering a plow zone (A_{pz}) at a maximum of about 18–33 cmbs. Below the plow zone were intact B_1, B_2, and C subsoil horizons to at least 70 cmbs. In test pits TB-02, TB-03 and TC-03, the B_1 horizon was absent and may have been incorporated into the plow zone. A truncated B_2 subsoil horizon was found under the plow zone at about 16–26 cmbs.

The three judgmental test pits (JTP-01, JTP-02, and JTP-03) were placed to investigate a stormwater detention basin and drainage swale along the southern edge of the Project area. The soil profiles were intact and consisted of a forest duff layer (A_o) about 6–7 cm thick covering a plow zone (A_{pz}) of dark gray brown (10YR 4/2) silty fine sand and gravel to a maximum of about 20–27 cmbs. The B_1 subsoil horizon was a dark yellow brown (10YR 4/6), silty fine sand with gravel to a maximum of about 29–47 cmbs. The B_2 horizon was yellow brown (10YR 5/6) sand with gravel from about 47 to 60 cmbs, and the C subsoil horizon was light olive brown (2.5Y 5/4), fine to medium sand with gravel to at least 70 cmbs (see Figure 5-3).

The upper 20–35 cm of soil profiles in test pits AR-01-360 and AR-01-270 contained the mottled dark gray brown (10YR 4/2) to dark yellow brown (10YR 4/4) silty fine sand with gravel first noted in test pit TA-01 as evidence of past grading and landscaping along the access road to Well 4. Test pit AR-01-360 also had a zone of redeposited A, B, and C horizon soils from about 20 to 30 cmbs over intact B_1 and B_2 subsoil horizons. Test pits AR-01-90 and AR-01-180 had profiles with a plow zone (A_{pz}) but no other evidence of past modification. The four test pits in Array 02 had soil profiles with a plow zone (A_{pz}) over intact B_1, B_2, and C horizon subsoils (see Figure 5-3).

Pre-Contact Cultural Material

Subsurface testing in the western portion of the Project area yielded 37 pieces of pre-contact cultural material: 35 pieces of chipping debris, 1 broken projectile point, and 1 piece of burned rock. First identified from a piece of quartz chipping debris found in test pit TA-01 at 30–40 cmbs in a disturbed B_1 subsoil horizon, this pre-contact Native American archaeological site was designated as the Town Wells 3 & 4 Site. In test pit TC-01, single pieces of quartz chipping debris and burned rock were found at 0–10 cmbs and 20–30 cmbs in the altered soil/overburden deposit. Another piece of quartz was found in the B_1 subsoil horizon at 30–40 cmbs. In test pit TC-02, two pieces of chipping debris of a fine grained, gray-green volcanic rock or rhyolite were found in the B_1 (20–30 cmbs) and B_2 (40–50 cmbs) subsoil horizons (see Figure 5-2; Appendix A).

Array 01 was placed around TA-01 and two of the test pits yielded 4 pieces of pre-contact cultural material: one piece of quartz chipping debris from the B_1 subsoil horizon at 20–30 cmbs in test pit AR-01-90 and three other pieces of quartz chipping debris in the altered soil/overburden at 10–20 cmbs in test pit AR-01-360 (see Figure 5-2). Array 02 was placed around test pit TC-02; two of the test pits yielded 27 pieces of pre-contact cultural material, mostly chipping debris. A single piece of quartz was recovered from test pit AR-02-270 at 10–20 cmbs in the plow zone (A_{pz}). Test pit AR-02-360 yielded 25 pieces of quartz and gray-green rhyolite chipping debris and the single chipped-stone tool (small stemmed projectile point fragment); nine of the pieces of chipping debris and the projectile point were recovered from the plow zone (A_{pz}) at 0–10 cmbs and 10–20 cmbs, respectively. However, most of the chipping debris (16 pieces) was recovered

from the B_1 and B_2 subsoil horizons at 20–30 cmbs and 30–40 cmbs in AR-02-360 (see Figure 5-2; Appendix A).

The midsection fragment of a small stemmed projectile point recovered from test pit AR-02-360 is made of mottled gray-brown rhyolite that may be from a nearby source area in the Westwood and Dover section of the Mattapan volcanic complex. It is similar in morphology to points made about 4,000–2,500 years ago during the Late to Transitional Archaic periods and Early Woodland Period (Figure 5-4).

Figure 5-4. Midsection fragment of small stemmed projectile point of rhyolite from test pit AR-02-360 at 10–20 cmbs, Town Wells 3 & 4 Site.

Of the 35 pieces of chipping debris, 12 pieces are quartz and 23 are of gray-green rhyolite or similar volcanic rock. The quartz is derived from either cobbles collected from glacial outwash deposits or a nearby bedrock vein source. The source of the gray-green volcanic rock is not known but may be a section of the Mattapan volcanic complex outcropping in the towns of Sherborn and Natick. The size ranges of the chipping debris (0–1 cm, 1–3 cm, and 3–5 cm) are typical of a reduction sequence using partially shaped lithic material to manufacture chipped-stone tools such as bifacial tool blades and projectile points.

Post-Contact Cultural Material

The one piece of recovered post-contact cultural material is a small bar-shaped fragment of ferrous (iron or steel) metal. From test pit TC-01 at 0–10 cmbs, it was in the mottled dark gray brown (10YR 4/2) to dark yellow brown (10YR 4/4) silty fine sand with gravel formed by past disturbance along the existing paved access road to Well 4 (see Figure 5-2). The fragment is an isolated artifact and not associated with a specific post-contact archaeological site.

Conclusions and Recommendations

The intensive archaeological survey of the Wells 3 & 4 Project area identified a pre-contact Native American site within the proposed location of the water treatment plant and other components (access road/driveway, stormwater detention basins, grading, and landscaping) of this facility. Although a portion of the site has been altered by past construction of the existing paved access road to Well 4, the remainder of the site (where most of the pre-contact cultural material was recovered from intact subsoil horizons) has good integrity.

The Town Wells 3 & 4 Site adds some new information to what is known about pre-contact Native American settlement along Mine Brook and a watershed between the Charles and Neponset River drainages. This site appears to be represent a small, temporary encampment where chipped-stone tools were made from quartz and a gray-green volcanic rock. The recovered fragment of burned rock indicates there may be a hearth or fire pit feature within the site. The gray-green volcanic material is interpreted as a rhyolite or similar rock type from a nearby section of the Mattapan volcanic complex. The site has the potential to yield additional information about pre-contact Native American use of this lithic resource. The recovered Small Stemmed projectile point fragment suggests the site was created about 4,000–2,500 years ago during the Late to Transitional Archaic periods or the Early Woodland Period.

The Town Wells 3 & 4 Site is considered a potentially significant cultural resource. Additional archaeological investigation with a site examination is recommended to determine its horizontal and vertical boundaries, assess its contents (i.e., cultural material and features), temporal/cultural affiliation, and potential eligibility for listing in the National Register). Delineation of horizontal boundaries can assist in developing a plan to avoid and protect the Town Wells 3 & 4 Site through re-design of the proposed water treatment facility, if feasible.

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APPENDIX A

CATALOG OF CULTURAL MATERIALS

Appendix A. Catalog of Cultural Materials, Medfield Water Treatment Plant, Intensive Survey.

Provenience	Material	Object	Size	Attributes	Color(s)	Manufacture Date	Makers Mark	Count
Town Wells 3 and 4								
AR-01-090 20-30, B1	Quartz	Chipping Debris Flake	1-3cm	Complete	White		☐	1
AR-01-360 10-20, Overburden	Quartz	Chipping Debris Flake	1-3cm	Complete	Clear, Gray		☐	1
	Quartz	Chipping Debris Flake	1-3cm	Complete Cortex	Clear, Gray		☐	2
AR-02-270 10-20, Apz	Quartz	Chipping Debris Shatter	3-5cm	Complete	White		☐	1
AR-02-360 0-10, Apz	Quartz	Chipping Debris Flake	1-3cm	Complete	White		☐	2
	Rhyolite	Chipping Debris Flake	1-3cm	Complete	Gray, Green		☐	1
AR-02-360 10-20, Apz	Quartz	Chipping Debris Flake	1-3cm	Complete	Red, White		☐	1
	Quartz	Chipping Debris Flake	3-5cm	Complete	White		☐	1
	Rhyolite	Chipping Debris Flake	3-5cm	Complete	Gray, Green		☐	1
	Rhyolite	Projectile Point Small Stemmed	2.48x1.47x0.79	Midsection	Banded, Cream, Gray, Speckled		☐	1
	Rhyolite	Chipping Debris Flake	1-3cm	Complete	Gray, Green		☐	3
AR-02-360 20-30, B1	Rhyolite	Chipping Debris Flake	1-3cm	Complete	Gray, Green		☐	9
	Rhyolite	Chipping Debris Flake	0-1cm	Complete	Gray, Green		☐	2
AR-02-360 30-40, B2	Rhyolite	Chipping Debris Flake	1-3cm	Complete	Gray, Green		☐	5
TA-01 30-40, Dist. B1	Quartz	Chipping Debris Flake	1-3cm	Complete	White		☐	1
TC-01 0-10, Overburden	Ferrous	Miscellaneous Hardware		Fragment			☐	1
	Quartz	Chipping Debris Flake	1-3cm	Complete	White		☐	1
TC-01 20-30, Overburden	Unid. Igneous	Fire-Cracked Rock		Complete	Black, Speckled, Tan		☐	1
TC-01 30-40, B1	Quartz	Chipping Debris Flake	1-3cm	Complete	White		☐	1
TC-02 20-30, B1	Rhyolite	Chipping Debris Flake	1-3cm	Complete	Gray, Green		☐	1
TC-02 40-50, B2	Rhyolite	Chipping Debris Flake	3-5cm	Complete	Gray, Green		☐	1
							Total:	**38**

APPENDIX B

PROJECT CORRESPONDENCE

Public Archaeology Laboratory

January 22, 2021

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

Re: Medfield Wells 3 & 4 Water Treatment Plant, 43 Elm Street, Medfield, Massachusetts
Intensive Archaeological Survey
MHC # RC. 68914, EEA # 16293, PAL # 4085

Dear Ms. Simon:

Enclosed please find an application for a permit to conduct an intensive (locational) archaeological survey within the Medfield Wells 3 & 4 Water Treatment Plant project area at 43 Elm Street in Medfield, Massachusetts. The project area is located on the Medfield, MA quadrangle. We would like to begin investigations as soon as possible, weather permitting. Thank you in advance for your time and attention to this matter.

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

Sincerely,

Deborah C. Cox

Deborah C. Cox, RPA
President

Enclosure

cc: Eric Kelley, Environmental Partners Group, Inc. (w/encl. - via email)

26 Main Street Pawtucket, RI 02860 | 401.728.8780 Main | 401.728.8784 Fax
palinc.com

The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

PERMIT TO CONDUCT ARCHAEOLOGICAL FIELD INVESTIGATION

Permit Number 4058 Date of Issue February 4, 2021

Expiration Date February 4, 2022

PAL is hereby authorized to conduct an archaeological field investigation pursuant to Section 27C of Chapter 9 of General Laws and according to the regulations outlined in 950 CMR 70.00.

Medfield Wells 3 & 4, Water Treatment Plant, 43 Elm Street, Medfield
Project Location

Brona Simon

Brona Simon, State Archaeologist
Massachusetts Historical Commission

220 Morrissey Boulevard, Boston, Massachusetts 02125
(617) 727-8470 • Fax: (617) 727-5128
www.sec.state.ma.us/mhc

950 CMR: DEPARTMENT OF THE STATE SECRETARY

APPENDIX B
COMMONWEALTH OF MASSACHUSETTS

SECRETARY OF STATE: MASSACHUSETTS HISTORICAL COMMISSION

PERMIT APPLICATION: ARCHAEOLOGICAL FIELD INVESTIGATION

A. General Information

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

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

   Address: 26 Main Street
   Pawtucket, Rhode Island 02860

3. Project Location: Wells 3 and 4 Water Treatment Plant

   see attached proposal

4. Town(s): Medfield

5. Attach a copy of a USGS quadrangle with the project area clearly marked.

   see attached

6. Property Owner(s): Town of Medfield

7. The applicant affirms that the owner has been notified and has agreed that the applicant may perform the proposed field investigation.

8. The proposed field investigation is for a(n):

   a. Reconnaissance Survey
   b. Intensive Survey
   c. Site Examination
   d. Data Recovery

B. Professional Qualifications

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

a. Personnel

Principal Investigator(s): Duncan Ritchie
Project Archaeologist(s): Sean Luttge

Field Crew: Kirk Van Dyke

b. Schedule

Fieldwork:	March 2021
Laboratory:	April 2021
Report:	April – May 2021

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

C. Research Design

1. Attach a narrative description of the proposed Research Design according to the requirements of 950 CMR 70.11.

2. The Applicant agrees to perform the field investigations according to the standards outlined in 950 CMR 70.13.

3. The Applicant agrees to submit a Summary Report, prepared according to the standards outlined in 950 CMR 70.14 by: June 2021

4. The specimens recovered during performance of the proposed field investigation will be curated at:

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

SIGNATURE Duncan Ritchie
APPLICANT(S)

1/25/2021
DATE

APPENDIX C

MHC SITE FORM

FORM D ARCHAEOLOGICAL SURVEY
PREHISTORIC ARCHAEOLOGICAL SITES

Massachusetts Historical Commission
Office of the Secretary
State House, Boston

FOR MHC OFFICE USE ONLY

Town
MHC NO.
UTM
QUAD
NR ☐ ACT ☐ ELIG. ☐ NO DISTRICT ☐ YES ☐ NO

IDENTIFICATION

1. SITE NAME(S) Town Wells 3 & 4 | MAS NO. | OTHER NO.

2. TOWN/CITY Medfield | COUNTY Norfolk

3. STREET AND NUMBER (IF NOT AVAILABLE, GIVE DETAILED DESCRIPTION OF HOW TO REACH SITE)
located about 2500 feet south of Elm Street and Wheelock School, about 300 feet east of railroad corridor (Conrail) near access road to town wells.

4. OWNER(S) AND ADDRESS(ES) Town of Medfield Water and Sewer Division 450 Main Street, Medfield, MA 02052 ☑ Public ☐ Private

5. SITE LOCATED BY
☑ CRM Survey ☐ Avocational Collector ☐ Field School ☐ Other (Specify)
Describe Sampling Strategy used to Locate Site 50 x 50 cm test pits at 10m interval on judgmental transects and in 2.5m interval array patterns.

DESCRIPTION

6a. PERIOD(S) (Check all applicable boxes)
☐ Paleo ☑ Early Woodland ☐ Contact
☐ Early Archaic ☐ Middle Woodland ☐ Unknown
☐ Middle Archaic ☐ Late Woodland ☐ Other (Specify)
☑ Late Archaic

☐ Single Component ☐ Multi-Component
Specify All Components
Small Stem Point

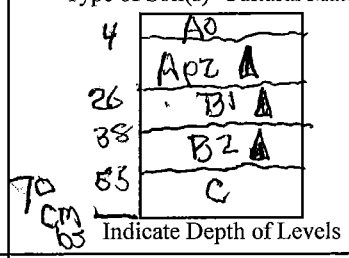
6b. Estimated Occupation Range about 4000 to 2500 years ago

7. DATING METHODS
C-14 ☑ Intuition ☑ Other (specify) small stemmed projectile point
Comparative Materials

8. DESCRIBE SITE TYPE / FUNCTION Small temporary encampmnet where chipped stone tools were made of local quartz and a gray -green volcanic rock..

9. DESCRIBE SIZE AND HORIZONTAL AND VERTICAL BOUNDARIES
Horizontal extent estimated to be about 900 sq m. Vertical extent is from about 10 to 50 cm below surface.

10. GENERALIZED SITE PROFILE
Type of Soil(s) Cultural Material



Indicate Depth of Levels

ENVIRONMENT

11. SOIL
USDA Soil Series: Merrimac
Contour Elevation: 140 feet asl
% Slope of Ground: ☑ 0 - 5 ☑ 5 - 15 ☐ 15 - 25 ☐ Over 25
Acidity: 1 ——— 7 ——— 14 (Acid) (Base) 5 (?)

12. TOPOGRAPHY
☑ Flat ☑ Gentle undulation ☐ Other
☐ Rolling Hills ☐ Mountains

13. WATER
NEAREST WATER SOURCE: Mine Brook
SIZE AND SPEED: small, slow
DISTANCE FROM SITE: about 700 feet
SEASONAL AVAILABILITY: year round

14. VEGETATION
PRESENT: second growth white pine and oak forest
PAST: open oasture in 18 th to 19th century ?

CONDITION

15. SITE INTEGRITY
☐ Undisturbed ☑ Good ☐ Fair ☐ Destroyed

IF DISTURBED, DESCRIBE DISTURBANCE
minor alteration of A and B soil horizons near road on western edge of site

16. SURROUNDING ENVIRONMENT
☑ Open Land ☑ Woodland ☐ Eroded Soils ☐ Residential ☑ Scattered Buildings Visible from Site
☐ Commercial ☐ Industrial ☐ Rural
☐ Coastal ☑ Isolated

17. ANY THREATS TO SITE ☑ Yes ☐ No
DESCRIBE POTENTIAL THREATS
proposed construction of Town of Medfield Wells 3 and 4 water treatment facility

18. ACCESSIBILITY TO PUBLIC
☐ Free Access ☑ Need Owner Permission ☐ Restricted ☐ No Access

RESEARCH STATUS

19. PREVIOUS WORK		
☐ Surface Collected	By Whom / Affiliation	Date
☐ "Pot hunted"	By Whom / Affiliation	Date
☑ Tested	By Whom / Affiliation PAL Inc staff	Date 3/2021
☐ Excavation	By Whom / Affiliation	Date

20. PRESENT LOCATION OF MATERIALS (INCLUDE ADDRESS)
Public Archaeology Laboratory,Inc. 26 Main Street, Pawtucket RI 02860

21. REFERENCES / REPORTS Ritchie, Duncan 2021 Intensive Archaeological Survey IWells 3 & 4 Water Treatment Plant Medfield, Massachusetts. Public Archaeology Laboratory,Inc report 4085. submitted to Environmental Partners Group, Woburn, MA 01801

SIGNIFICANCE

22. RECOVERED DATA (identify in DETAIL, including features, pits, burials, faunal material, etc.)

Thirtu seven (37) pieces of pre-contact cultural material consisting of a midsection fragment of a small stemmed projectilepoint of rhyolite, 23 pieces of gray-green volcanic rock (rhyolite?) chipping debris, 12 pieces of quartz chipping debris and one piece of burned rock. One piece of post-contact material (unidntified object of ferrous metal)..

23. ARCHAEOLOGICAL OR HISTORICAL SIGNIFICANCE

The Town Wells 3 & 4 Site is considered to be a potentially significant cultural resource.. This site adds new information to what is known about pre-contact Native American settlement along Mine Brook and a watershed between the Charles and Neponset River drainages. This site appears to be a small, encampment where chipped stone tools were made from quartz and a grey-green volcanic rock. A fragment of burned rock indicates there may be a hearth or firepit feature within the site. The gray-green volcanic material may be from a nearby section of the Mattapan volcanic complex. The Town Wells 3 & 4 Site has the potential to yield additional information about pre-contact Native American use of this lithic resource. A small stemmed projectile point fragment suggests this site was created about 4000 to 2500 years ago in the Late to Transitional Archaic or Early Woodland Period.

SITE PLAN

24. ATTACH PORTION OF USGS QUAD WITH SITE AREA MARKED TO THIS FORM

25. SKETCH PLAN OF SITE

See Attached Map

Scale:

26. PHOTOS: Attach if available
Label each with: Date of photo, photographer, view shown, name of site

REPORTED BY:	NAME Duncan Ritchie	ADDRESS 26 Main Street, Pawtucket RI 02860
	ORGANIZATION Public Archaeology Laboratory,Inc.	DATE 4/6/2021

FOR OFFICE USE ONLY

FIELD EVALUATION

COMMENTS

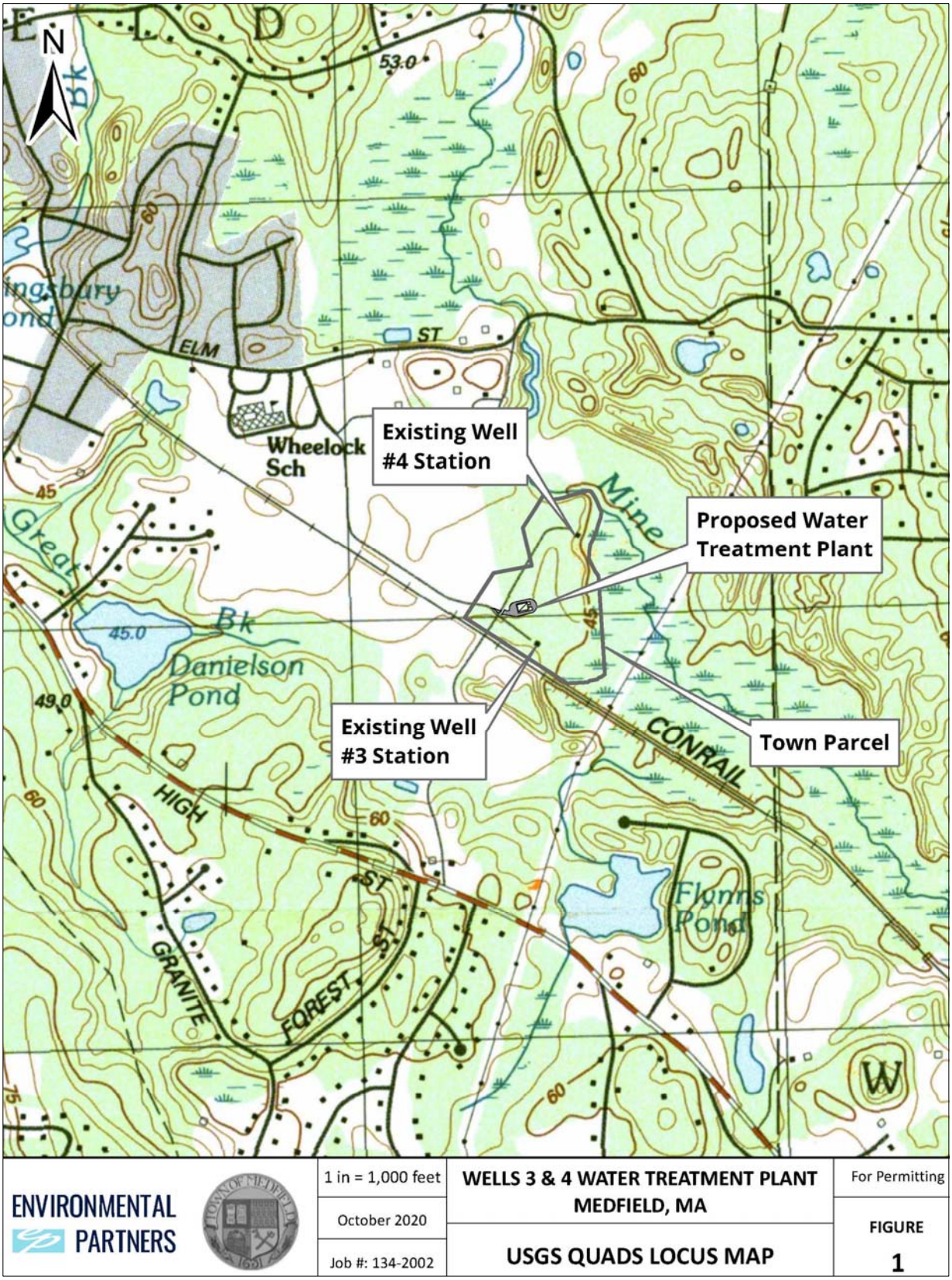


Figure 1. Location of Medfield Wells 3 & 4 Water Treatment Plant Project area on the USGS Medfield, Massachusetts, 7.5-minute USGS topographic quadrangle map.

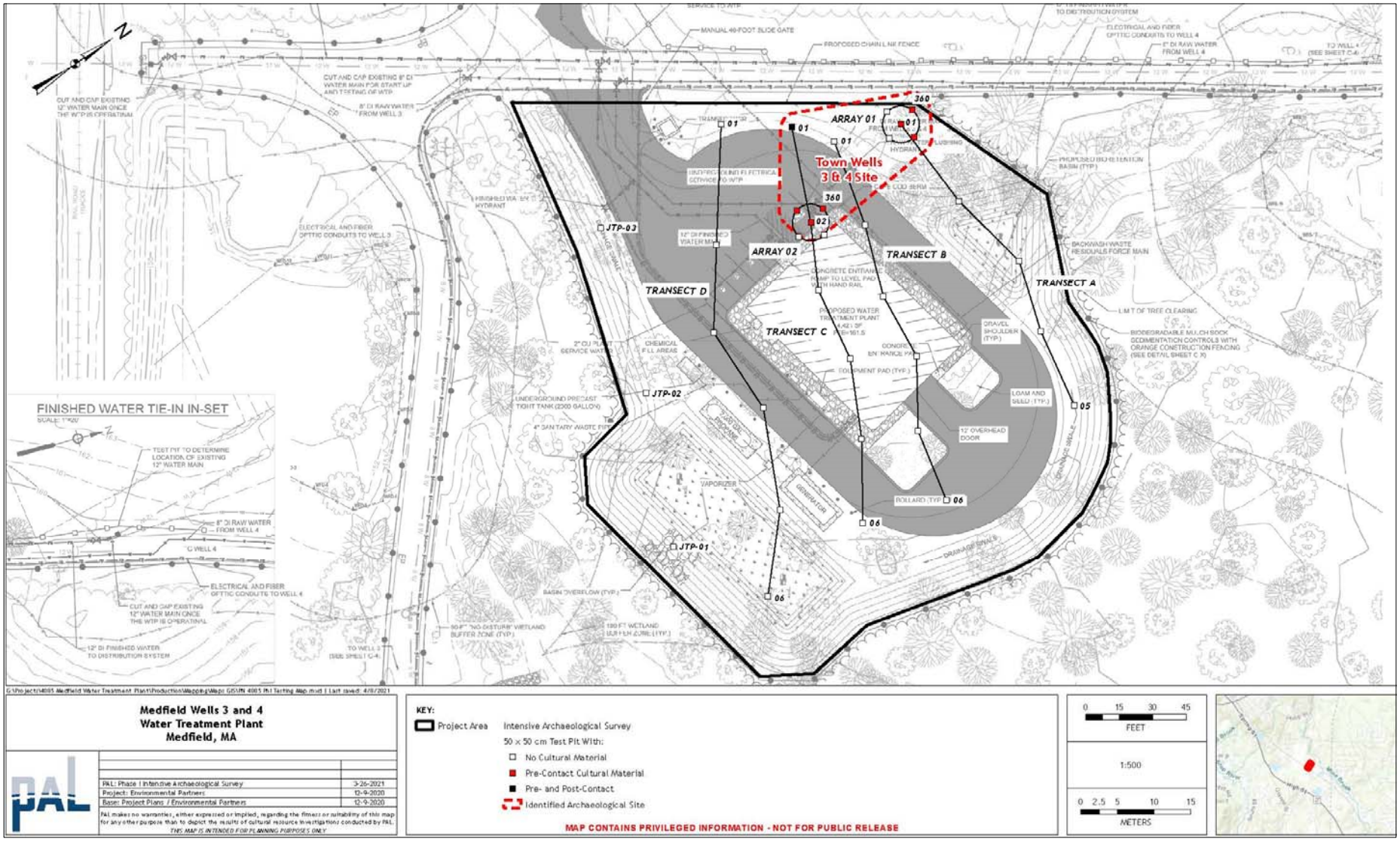


Figure 2. Location of subsurface testing within the Wells 3 & 4 Water Treatment Plant Project area.