REPORT
INTENSIVE (LOCATIONAL) ARCHAEOLOGICAL SURVEY, SITE EXAMINATION,
AND EXPANDED SITE EXAMINATION
INTERSECTION IMPROVEMENTS:
NORTH KING STREET (ROUTES 5/10) AND HATFIELD STREET
NORTHAMPTON, MASSACHUSETTS
MASSDOT PROJECT # #606555

CONTRACT NO. 92060, STATEWIDE OPEN SERVICES

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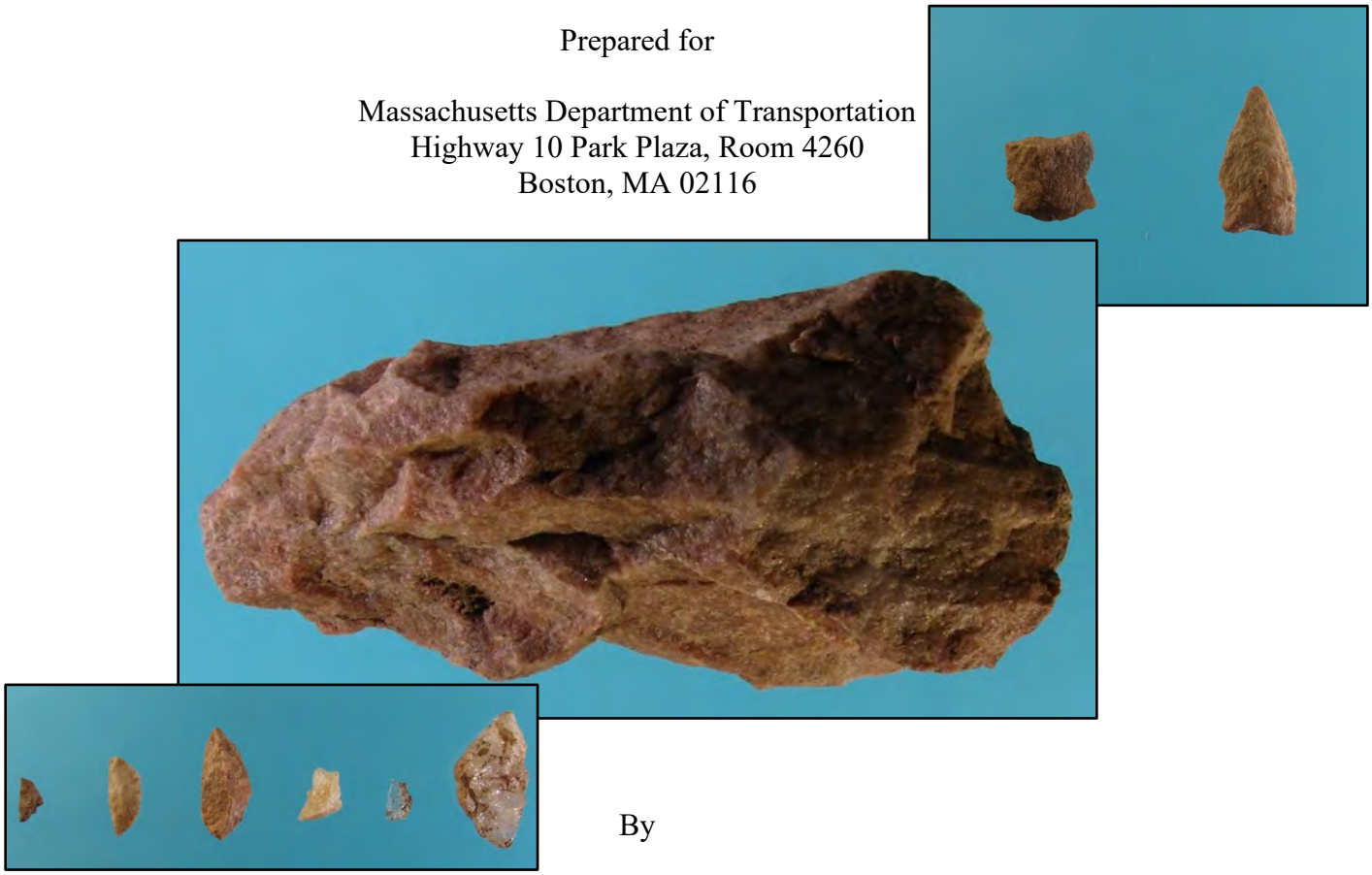

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ABSTRACT

Testing along the roadside on the western floodplain of the Connecticut River included 61 50x50-centimeter shovel test pits, which produced a small assemblage of ancient Native American quartz and quartzite flakes, including a Parallel Stemmed projectile point and backed microlith, as well as unrelated historical-period field scatter. Expanded testing included an additional 51 shovel test pits and eight 1x1-meter excavation units, delineating two discrete loci of artifact reduction and tool maintenance, as well as additional microliths, formal, and expedient tools, and a deep soil feature or ancient tree throw; both loci were likely occupied during the Early Archaic. A total of 566 pre-colonial Native American artifacts were recovered, as well as 209 historical-period artifacts. The Early Archaic site is eligible for listing in the National Register of Historic Places, but the historical-period site is not. Mitigation in the form of Data Recovery is recommended at the Early Archaic site, if it cannot be avoided by project actions.

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MANAGEMENT SUMMARY

The Massachusetts Department of Transportation, Highway Division (MassDOT), is planning intersection improvements, including the construction of a roundabout, at the North King Street (Routes 5/10)/Hatfield Street intersection in the town of Northampton. The project includes a right-of-way (ROW) taking of the John Skibiski residential property west of the intersection. Because the project will receive federal funding, it must comply with Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800). The act requires that agencies take into account the effects of their activities on historic properties listed in or eligible for listing in the National Register of Historic Places (NRHP).

The MassDOT Cultural Resources Unit (CRU) conducted a walkover assessment of the Area of Potential Effect (APE) and determined that an intensive (locational) archaeological survey of the Skibiski ROW property-taking was warranted. The remainder of the project area was determined to lack archaeological sensitivity due to the impacts of previous roadway, drainage, utility construction, and roadside development. In the intensive (locational) survey, Archaeological and Historical Services, Inc. (AHS) excavated a total of 61 shovel test pits (STPs), including 49 transect STPs placed at 10-meter intervals, plus 12 array or bracket pits. One pre-European contact Native American archaeological site (the Skibiski Site) was identified in the southeastern part of the APE along Transect 3, as was historical-period field scatter.

AHS then conducted a site examination of the identified site to determine the nature and distribution of the archaeological deposits and collect sufficient information to assess its NRHP eligibility. In the site examination, AHS identified two separate loci within the site. A total of 47 STPs were placed at five-meter intervals and two 1x1-meter excavation units were placed adjacent to the highest concentrations of artifacts at each locus. Site examination testing revealed that the site is complicated: it is possibly a rare Early Archaic site, or it may be a more common Late Archaic site. AHS thus recommended an expanded site examination survey to gather additional data to permit a conclusive determination of the site's age and NRHP eligibility. MassDOT concurred with this recommendation and requested that AHS undertake an expanded site examination of the site area.

The expanded site examination included four STPs spaced at 2-meter intervals from positive STPs and six 1x1-meter excavation units placed centrally at both loci. The testing revealed that the site is likely a rare Early Archaic site, with two contemporaneous loci of activity. The boundaries of the site are completely encapsulated within the APE, and no historical or modern-period disturbances were noted during any phase of the survey.

AHS recommends that the likely NRHP-eligible Skibiski Site be avoided by project activities. If avoidance is neither prudent nor feasible, impact mitigation in the form of a Data Recovery Program (DRP) is recommended to remove portions of the site affected by the project.

I. INTRODUCTION AND SCOPE OF WORK

A. Introduction

The Massachusetts Department of Transportation, Highway Division (MassDOT), is planning intersection improvements, including the construction of a roundabout, at the North King Street (Routes 5/10)/Hatfield Street intersection in the town of Northampton. The project Area of Potential Effect (APE) is shown on Figures 1 and 2 (Appendix A). The project includes a right-of-way (ROW) taking of the Skibiski residential property west of the intersection (Figure 3).

Because the project will receive federal funding, it must comply with Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800). The act requires that agencies take into account the effects of their activities on historic properties listed in or eligible for listing in the National Register of Historic Places (NRHP). Historic properties include structures such as bridges, buildings, landscapes, and archaeological sites, among other resource types.

The project area is located just west of a large bend in the Connecticut River. The MassDOT Cultural Resources Unit (CRU) conducted a walkover assessment of the APE and determined that an intensive (locational) archaeological survey of the John Skibiski ROW property-taking was warranted. The remainder of the project area was determined to lack archaeological sensitivity due to the impacts of previous roadway, drainage, utility construction, and roadside development (Harwood 2018). Archaeological and Historical Services, Inc. (AHS) conducted an intensive (locational) survey as Assignment #9 under its Statewide Open Services Contract with MassDOT (#92060), under Massachusetts Historical Commission (MHC) Permit No. 3840.

In the intensive (locational) survey, AHS excavated a total of 61 shovel test pits (STPs), including 49 transect STPs placed at 10-meter intervals, plus 12 array pits (Sportman 2018). One pre-colonial Native American archaeological site was identified in the southeastern part of the APE along Transect 3.[1] A total of 58 lithic artifacts, including quartz and quartzite flakes, a possible utilized quartz flake, and a granite hammerstone, were recovered from plowzone and B_1-horizon soils in STPs T3-2, T3-5, and T3-7 and several of the associated array pits. The recovered

[1] AHS uses the term pre-colonial to refer to the period of time in what is now southern New England before the widespread effects of European colonization beginning c.1620. Colonial, as part of the term pre-colonial used in this report, refers to the period of colonization that began when Europeans, primarily from England and Holland, began to settle, meaning to establish permanent colonies, such as Plimouth Plantation and Providence Plantation, not the Colonial Period, as defined by MHC (1984). The devastating impacts of European-introduced diseases, cultural conflict, warfare, and loss of land have been well-documented. Schmidt and Mrozowski (2013), among others, have advocated for disregarding the term prehistoric, because of the historical context associated with the term; namely, that it has been used hegemonically to portray the history of non-European (and in some cases disadvantaged European societies) as somehow less important than European histories. We agree with this view and also that the historical representations of people are contingent upon past and future events, which are best not viewed in a vacuum divorced from modern descendent communities' interpretations of the past (Gould 2013). In a literal sense, prehistory simply means "before writing" as Europeans understand writing, but it has become too problematic to use. We also agree with Gould (2013) that simply substituting one term (prehistoric) for another, such as, pre-contact, pre-colonial, or ancient, misses the broader argument about the political ramifications of archaeological reconstructions, particularly those that are not done in consultation with descendent communities. We do think, however, that there are significant differences between the material archaeological record of peoples living in North America prior to widespread European Contact, and that it is worthwhile, from a historical perspective, to separate time periods into larger categories for a broader discussion of the past (Flannery 1982a). To this end, we use pre-colonial as an umbrella term to refer to all Native American archaeological time periods prior to widespread European contact and settlement, while also discussing the historical context of Native Americans during the MHC (1984) accepted historical periods.

flakes and hammerstone are characteristic of tool production and maintenance, while the large utilized flake suggests that additional processing activities were carried out at the site. The relatively high density of artifacts, particularly in T3-7, suggested the potential for cultural features and/or diagnostic artifacts to be present in the APE, and for the site to be potentially eligible for listing in the NRHP.

AHS therefore recommended a site examination of the identified site, named the Skibiski Site, to determine the nature and distribution of pre-colonial-period archaeological deposits and collect sufficient information to assess its NRHP eligibility. This survey was Assignment #11 and was also conducted under MHC Permit No. 3840. In the site examination, AHS identified two separate loci within the site (Leslie 2018). A total of 47 STPs were placed at five-meter intervals and two 1x1-meter excavation units were placed adjacent to the highest concentrations of artifacts at each locus. Site examination testing revealed that the pre-colonial site is complicated: it is possibly a rare Early Archaic site, or it may be a more common Late Archaic site: both loci contain projectile points that may be temporally diagnostic to the Early or Late Archaic, although one of the loci also contained a microlithic crescent, and the overall flake reduction technique is consistent with an earlier microcore reduction technology. The artifact concentrations at the loci indicate small, single-component occupations. The boundaries of the archaeological site, roughly identified during the intensive (locational) survey, decreased in size and appears to be completely encapsulated within the APE. Based on the site examination, the site was assessed as potentially eligible for listing in the NRHP under Criterion D, but due to the somewhat ambiguous nature of the site examination results, AHS recommended an expanded site examination survey to gather additional data to permit a conclusive determination of the site's NRHP eligibility. MassDOT concurred with this recommendation and requested that AHS undertake an expanded site examination of the pre-colonial site area. AHS conducted the expanded site examination, under its Statewide Open Services Contract; it was Assignment #12 and was also conducted under MHC Permit No. 3840**.**

The expanded site examination included four STPs spaced at two-meter intervals from positive STPs and six 1x1-meter excavation units placed centrally at both loci (Leslie 2019). A total of 566 pre-colonial lithic artifacts were recovered from both loci. Expanded site examination testing revealed that the pre-colonial site is likely a rare Early Archaic site, with two contemporary loci of activity. Both loci contain projectile points, formal bifacial crescent tools, and evidence of biface manufacture and maintenance, as well as decortication of large and small quartz and quartzite cobbles. Activities at the site appear to have been focused on raw-material acquisition, as well as the production and replacement of formal tools, and the production of informal tools for animal- and plant-processing. Although no discernable hearth features were found during the expanded site examination, it is highly likely that hearths are preserved at both loci, based on recovered charcoal and heat altered lithics, but were outside the bounds of the shovel testing and excavation plan. Charred ecofacts were recovered from Locus 1 in the upper layer of Feature 1, but these may date to the tree-throw event, not the cultural occupation. The boundaries of the Skibiski site were determined to be completely encapsulated within the APE, and no historical or modern-period disturbances were noted during any phase of the survey.

The results and recommendations associated with the original intensive (locational) survey, site examination survey, and expanded site examination survey are presented in detail in this report.

B. Scope of Work

B1. Intensive (Locational) Survey

An intensive (locational) survey is defined as "a systematic and detailed archaeological field investigation for the purpose of locating and identifying the sites which exist in a given area" (950 CMR 70.04). The tasks of an intensive survey include preparation of a detailed research design and application for a permit from the MHC; background research in archaeological, environmental, and historical sources to locate and/or interpret archaeological sites or cultural resources within the APE, if any; consultation with federally-recognized Native American tribal groups and the local historic commissions about the APE's possible historical or cultural significance; walkover visual inspection to refine estimates of archaeological sensitivity based upon the background research and consultation; manual subsurface testing, laboratory processing and curation of any recovered artifacts; preparation of an end-of-fieldwork memorandum and preparation of a full project report.

950 CRM 70 requires that an archaeological plan of research be developed which takes into account previous relevant research bearing on the probable archaeological sensitivity of the APE and employs a suitable methodology for locating expected site types. AHS's testing strategy for the intensive (locational) and site examination surveys followed the specific testing format requested for the project by MassDOT (Harwood 2018).

B2. Site Examination Survey

A site examination is designed to collect sufficient data to determine whether a site meets one or more of the eligibility criteria of the NRHP. Site examination testing, ideally, establishes vertical and horizontal boundaries and collects an adequate sample of a site to ascertain its significance relative to the National Register criteria.

In order to qualify for listing in the National Register, a site must possess integrity and meet at least one of the following criteria:

A. Association with events that have made a significant contribution to the broad patterns of our history;

B. Association with the lives of persons significant in our past;

C. Distinctive design or physical characteristics, including representation of a significant entity whose individual components may lack distinction;

D. Demonstrated ability, or potential to yield important information about prehistory or history.

Most archaeological sites that are NRHP-eligible qualify under Criterion D, although some sites qualify under one or more of the other criteria.

C. Project Personnel

Mary G. Harper served as Principal Investigator and oversaw all aspects of the surveys, including Native American coordination. Archaeologists William Sikorski, Stephanie Scialo, Emma Wink, Quinlan Harper, Katie Reinhart, Dawn Beamer, and Jordan Tabolt conducted the

archaeological fieldwork under the direction of crew chiefs James Poetzinger and Daniel Zoto and also cleaned the recovered artifacts. David Leslie (Senior Archaeologist) directed the site examination and expanded site examination fieldwork and wrote the report. Leslie analyzed the artifacts, interpreted the archaeological data, authored the technical report, and created the maps and figures. Poetzinger completed the artifact catalogue and Robyn Beausoleil served as report editor.

II. RESEARCH DESIGN AND METHODOLOGY

The tasks of the intensive (locational), site examination, and expanded site examination surveys are outlined below.

A. Background Research – Intensive (Locational) Survey

AHS conducted background research in the MHC's MACRIS database of documented archaeological sites and reviewed cultural resource management reports from Northampton (Strauss and Cook 1987; Keene 1989; Macomber et al. 1990; Holmes et al. 1995; Donta and Mulholland 1996; Donta and Wendt 2006; Harper et al 2012; Sportman and Harper 2018; Harper and Sportman 2018) as well as published articles and environmental sources relevant to predicting archaeological site potential and interpreting identified pre-colonial sites in an appropriate context. MHC town and regional contextual reports on historical resources were also examined (MHC 1982, 1984), along with historical maps (Hale 1831; Walling 1860; Beers 1873; USGS 1895, 1939), town and county histories (Trumbull 1898; Lockwood 1926), and primary sources, to establish a historical-period context and help identify possible historical-period archaeological site potential and interpret any historical-period archaeological resources identified in the APE.

B. Consultation with Interested Parties

B1. Intensive (locational) Survey

AHS contacted by letter on May 17, 2018 the Tribal Historic Preservation Offices (THPOs) of the Wampanoag Tribe of Gay Head (Aquinnah), the Mashpee Wampanoag Tribe, the Stockbridge-Munsee Mohican Tribe, and the Narragansett Indian Tribe, as well as the Executive Director of the Massachusetts Commission on Indian Affairs and the Northampton Historical Commission (NHC). These entities were informed of the archaeological survey and invited to share information pertinent to areas of historical or cultural concern within the APE. The Mashpee responded that they have concerns about the cultural sensitivity of the area, but that due to staff issues were not be able to send a cultural resources monitor. The Stockbridge-Munsee responded that they would not be sending a monitor. No tribal cultural resource monitors were on site for the intensive (locational) survey.

B2. Site Examination Survey

AHS contacted by letter on July 25, 2018 the THPOs of the Wampanoag Tribe of Gay Head (Aquinnah), the Mashpee Wampanoag Tribe, the Stockbridge-Munsee Mohican Tribe, and the Narragansett Indian Tribe, as well as the Executive Director of the Massachusetts Commission on Indian Affairs and the NHC. These entities were informed of the archaeological survey and invited to share information pertinent to areas of historical or cultural concern within the APE. The Mashpee responded that they have concerns about the cultural sensitivity of the area, but that due to staff issues were not be able to send a cultural resources monitor. The Stockbridge-Munsee responded that they would not be sending a monitor. The Wampanoag Tribe of Gay Head (Aquinnah) responded that they would like to monitor the investigations, and Mashpee cultural resource monitor Mark Andrews was present during all of the fieldwork associated with the site examination.

B3. Expanded Site Examination Survey

AHS contacted by letter on November 7, 2018 the THPOs of the Wampanoag Tribe of Gay Head (Aquinnah), the Mashpee Wampanoag Tribe, the Stockbridge-Munsee Mohican Tribe, and the Narragansett Indian Tribe, as well as the Executive Director of the Massachusetts Commission on Indian Affairs and the NHC. These entities were informed of the archaeological survey and invited to share information pertinent to areas of historical or cultural concern within the APE. On November 14, 2018 AHS contacted the THPOs via e-mail to notify them of our planned fieldwork start date of November 26, 2018. On November 25, 2018, we emailed the THPOs that the start of fieldwork was delayed by one day due to rain. The Mashpee Wampanoag and Stockbridge-Munsee tribes responded that they would not be sending a monitor, but that they were interested in the results of the survey. The Wampanoag Tribe of Gay Head (Aquinnah) responded that they would like to monitor the investigations and monitored all of the fieldwork associated with the expanded site examination. During the expanded site examination survey, Mark Andrews of the Wampanoag Tribe of Gay Head (Aquinnah), a very experienced cultural resource monitor, noted that he had never encountered crescent tools or Parallel Stemmed points, and was concerned that the finds indicated a rare site of concern. Bettina Washington, the THPO for the Wampanoag Tribe of Gay Head (Aquinnah), requested photographs of the crescent tools because of their rarity, for internal tribal evaluation. With MassDOT's permission, AHS provided the photographs to the Mashpee via email. After viewing the crescent tools and Parallel Stemmed points, as well as monitoring the excavations, Andrews characterized the suite of tools as rare and expressed his hope that further investigations would be conducted at the site, including a Data Recovery Program (DRP) and machine-assisted stripping of the plowzone and topsoil in the APE to identify any cultural features (Andrews 2019).

C. Intensive (Locational) Survey

C1. Field Survey

The project area is located in the town of Northampton, just west of a bend in the Connecticut River. The survey area delineated by the CRU is west of the proposed roundabout and includes an existing driveway and some drainage features along Hatfield Road (Figure 3). Much of the survey area is planted in manicured lawn or wooded, and it measures 800 feet long (244 meters) and 130 feet wide (40 meters), or approximately 2.4 acres. AHS proposed to excavate shovel test pits (STPs) at 10-meter intervals within the survey area and estimated that 85 STPs would be necessary to test the survey area. A block of 16 additional pits was reserved for array or expansion pits in areas which yielded potentially significant artifacts or features, for a maximum of 101 STPs.

The STPs measured 50 x 50 cm square and were dug until sterile soil or impenetrable rocks or roots was reached. All pits were excavated into the C Horizon when physically possible. All of the test pits were backfilled immediately upon completion and the surface areas were restored. The pits were dug by hand with shovel and trowel, in 10-centimeter levels and by natural stratigraphy, with all soil screened through ¼-inch hardware mesh. Stratigraphic profiles of each pit were drawn, the soils were recorded with a Munsell soil classification, and the provenience of every recovered artifact and ecofact was recorded on test pit profile sheets. Modern materials (i.e., soda-bottle glass, plastic, asphalt, and so forth) were noted on the forms by their provenience and discarded. Some artifacts that have limited applicability for dating and are ubiquitous to the New

England landscape, such as brick, slag, coal, and coal ash from mixed fill deposits, were sampled or noted and discarded and recorded on the pit profile form as such.

In accordance with MHC guidelines, the Massachusetts Unmarked Burial Law, and MassDOT standard Special Provisions, Subsection 7.23, in the event that an apparent or possible human burial is discovered in the subsurface testing, the survey would stop immediately and MassDOT and MHC would be notified without delay. MHC and MassDOT, in consultation with interested parties, would then determine an appropriate plan of action.

C2. Artifact Processing, Inventory and Curation

All recovered artifacts and associated food remains (ecofacts) were bagged in the field and delivered to AHS's laboratory facilities, along with all of the appropriate field paperwork, immediately following the subsurface testing. Processing of artifacts and ecofacts followed MHC guidelines (950 CMR 70.13) and the Secretary of Interior's Guidelines for Curation (36 CFR 79).

Strict data control was established by cataloguing every bag that is brought in from the field and placing the bagged artifacts in a separate storage location. In the "wet lab" employees removed the artifacts from the field bags, and retained the provenience information by placing the cultural material and bags in custom compartmentalized screens. Each artifact was washed, and then replaced in the screens to dry. The artifacts were then rebagged into plastic envelopes, into which are placed acid-free tags on which the site name and number and provenience information were recorded. The artifacts then went to the "dry lab" in which they were identified by a staff expert in pre-colonial-period or historical-period material culture and assigned unique numbers. The identification and provenience data were entered into our artifact inventory database program.

Upon completion of the laboratory processing, all of the artifacts and ecofacts, bagged into archival envelopes with acid-free identification tags, were placed in numerical order by artifact number into a polypropylene box for permanent curation. Acid-free copies of the artifact inventory list and associated site paperwork were included, and the box was labeled clearly. Any artifact in the artifact inventory list can be readily retrieved from the box, making access for future analysis or exhibit use easy. AHS will store the box indefinitely in a safe and secure environment.

D. Site Examination Survey

The site examination was confined to the southern portion of the project area, centered around the southern part of the T3 transect line from the intensive (locational) survey. AHS proposed to excavate STPs at 5-meter intervals within the survey area and estimated that 50 STPs would be necessary to test the sensitive area. A block of three 1x1-meter excavation units was also reserved to explore further the National Register eligibility of the site.

A five-meter testing interval was used to "fill in" the previous ten-meter grid to systematically delineate the boundaries of the pre-colonial site identified in the intensive (locational) survey. Small areas that were determined to be unsuitable for testing in the intensive (locational) survey, such as a small wetland, were avoided in the site examination. The grid-testing aided in collecting a systematic sample of the site contents, permitting the identification of meaningful artifact distribution patterns, as well as patterns in soil stratigraphy. Such data is necessary for identifying activity areas, separate loci, and for defining the spatial limits of the site, which is necessary for establishing NRHP eligibility. Site boundaries were established based on two consecutive negative STPs within the APE in cardinal directions.

The field methodology for the site examination STPs followed those outlined in section C1 above. The site examination excavation units (EUs) measured 1 x 1 meters in plan and were

excavated in quadrants for maximum spatial artifact-patterning identification, until C-Horizon sterile soil or impenetrable rocks or water were encountered. The EUs were excavated by hand with shovel and trowel, in 10-centimeter levels, with all soil screened through 1/4-inch hardware cloth. Stratigraphic profiles of each EU were drawn and the provenience of every recovered artifact and ecofact was recorded by quadrant and depth. All recovered cultural material was bagged and transported to AHS's laboratory for cleaning, identification, inventory, cataloguing and curation (as outlined in section C2 above). All EUs were mapped on project plans, using the grid established during the site examination. Each EU was backfilled immediately upon completion.

Features were mapped and photographed, and if cultural, were explored with expansion EUs. All features were excavated by hand in the same manner as the EUs, but using ⅛-inch mesh for screening. Feature-soil samples were bagged for water flotation in AHS's laboratory in order to recover very small artifacts and small botanical and faunal items.

Upon completion of the laboratory processing, all of the artifacts and ecofacts, bagged into archival envelopes with acid-free identification tags, were placed in numerical order by artifact number into a polypropylene box for permanent curation. Acid-free copies of the artifact inventory list and associated site paperwork were included, and the box was labeled clearly. Any artifact in the artifact inventory list can be readily retrieved from the box, making access for future analysis or exhibit use easy. AHS will store the box indefinitely in a safe and secure environment.

D1. Site Examination Research Questions

In addition to assessing further the site's integrity and defining the site boundaries, the following research questions were proposed in the original site examination:

Question 1: Are there any temporally diagnostic artifacts or features present at the site, and, if so, what time periods do they represent?

Question 2: Are features, such as hearths, middens, storage pits, or post holes present? Do any of the lithic artifacts recovered display heat-related potlid fractures or crazing, which are indicative of hearths?

Question 3: What type of activities occurred at the site? The presence of a large utilized flake and granite hammerstone suggest that plant- and/or or animal-processing, as well as tool production/maintenance, took place.

Question 4: The site is on a floodplain above the Connecticut River. Is there evidence of fishing or shellfishing, such as fish bone, bone fish hooks, bone spear points, stone plummets, net-sinkers, or shell middens? Are there any tool types at the site that may indicate the production or maintenance of watercraft (groundstone tools, drills, etc.).

Question 5: Lithic raw material in the intensive (locational) survey was limited to quartz and quartzite. Where were these materials obtained? Is there evidence for other raw material types? Might the nearby talus have been a source?

E. Expanded Site Examination Survey

The expanded site examination was proposed to incorporate the area surrounding two loci identified during the initial site examination survey. As specified by the CRU, AHS placed four 1x1-meter excavation units at Loci 1 and 2, to recover additional artifacts and cultural features associated with each locus. Two meters were placed at Locus 2 to explore artifact concentrations and two were placed at Locus 1 to explore the possible tree-throw soil anomaly previously encountered (specifically the deep soil feature from N100E100), as well as artifact and tool concentrations identified during the previous surveys. The CRU also specified that six additional STPs be placed between positive and negative STPs, that is, spaced at two-meter intervals from positive array bracket pits in the cardinal direction of negative grid STPs, to explore further the horizontal boundaries of the site. After initially exposing the deep soil feature with two 1x1-meter excavation units excavated to the plowzone and feature interface, AHS was allocated an additional 1.5 1x1-meter excavation units from the CRU to more fully explore the feature.

The field methodology for the expanded site examination STPs and EUs followed that outlined in sections C1 and D above. All recovered cultural material was bagged and transported to AHS's laboratory for cleaning, identification, inventory, cataloguing and curation (as outlined in section C2 above).

E1. Expanded Site Examination Research Questions

In addition to assessing further the site's integrity and defining the site boundaries, as well as continuing to assess the research questions from the site examination, research questions that the expanded site examination was designed to answer include the following:

Question 1: Are the projectile points recovered during the site examination representative of the Early Archaic, Late Archaic, or some other time period? Are both loci single-component occupations (and concurrent), or are other occupations represented at the site?

Question 2: Is the deep soil feature identified in N100E100 a tree throw, or some other type of feature? Are there remnant cultural features preserved within this soil feature, as suggested by Ives (2010, 2012)? Are other features present within either locus? Are there any ecofacts at either loci that are suitable for radiocarbon-dating?

Question 3: Lithic reduction of small fluvially weathered quartz and quartzite, as well as bedrock quartz took place on site, including tool production and maintenance. The presence of a utilized flake, a biface fragment, and a backed microlith indicates that other activities took place on site. Are these activities limited to animal and plant processing, or were there other activities (e.g., are the microliths hafted)?

F. Data Analysis and Report Preparation

On June 25, 2018, AHS produced a field completion report on the initial intensive (locational) survey; this was revised on July 12, 2018 (Sportman 2018). AHS submitted a field completion report for the site examination survey on September 19, 2018 (Leslie 2018). On January 8, 2019, AHS submitted a final fieldwork completion memorandum (Leslie 2019), presenting the conclusions and recommendations regarding the expanded site examination survey.

In accordance with MHC regulations (950 CMR 70.14), MassDOT Cultural Resources Research/Documentation Standards, and the Secretary of Interior's Guidelines (36 CFR Part 66, App. A), AHS produced a full report of all facets of each survey (this document). The report includes a full description of the survey research design, methods and results, in narrative and graphic form, and addresses MHC comments, dated July 2, 2019 (Simon 2019), on an earlier draft submitted on May 2, 2019.

III. ENVIRONMENTAL AND CULTURAL CONTEXTS

A. Environmental Context

By interpreting the distinct hydrology, geology, and geography of the project area within a broader environmental and cultural context, general predictions can be formulated regarding the age and character of pre-colonial archaeological resources that may be anticipated therein.

A1. Geology and Topography

Northampton is situated in the Connecticut River Valley portion of the New England upland physiographic zone (Fenneman 1938). Bedrock here is composed of Bronson Hill formation polymetamorphic rock, while Northampton Center lies within the Mesozoic Valley sedimentary basin. Though the retreat of the Laurentide Ice Sheet exposed central Massachusetts at ca. 16-14,000 ^{14}C BP (Davis and Jacobsen 1985; Uchupi et al. 2001), most of Northampton was submerged beneath proglacial Lake Hitchcock. Massachusetts portions of the lake drained at ca. 12,000 ^{14}C BP (Stone and DiGiacomo-Cohen 2010), exposing the modern valley floor consisting of glacial lake-bottom deposits surrounded by ice-contact features and deltaic bluffs.

The project area is situated within the Connecticut River Valley region, which comprises a broad central valley flanked on the east and west by highlands. The broad lowland of the Connecticut Valley contains several important topographic features, including basalt ridges, floodplains, and lake and shore deposits of glacial Lake Hitchcock. Lands to the east of the project area are characterized by a milder climate, longer growing season, and level to gently rolling topography. Areas to the west generally experience colder winters, have shorter growing seasons and are characterized by the often-rugged foothills of the Berkshire Range. The Connecticut River is the longest river in New England, originating north of the Canadian border and emptying into Long Island Sound at Old Saybrook, Connecticut. It is the principal drainage for this area and the river and its tributaries served as major transportation corridors in the pre-colonial and historical periods (MHC 1984).

A2. Soils

The archaeologically sensitive portion of the APE falls within a single mapped soil type: Ridgebury fine sandy loam soil, very stony, 3-8% slopes (USDA-NRCS Web Soil Survey 2018). These poorly drained soils form in depressions from friable, loamy, aeolian deposits over dense loamy lodgment till derived from granite and gneiss.

B. Pre-Colonial/Native American Cultural Context

The following subsections, organized by cultural-historical periods, briefly characterize the Middle Connecticut Valley's pre-colonial archaeological record to further inform predictions regarding pre-colonial archaeological site potential within the APE.

B1. Paleoindian Period (11,000 – 9,500 B.P.)

In the Northeast, the Paleoindian Period dates from 11,000 to 9,500 BP (Bradley et al. 2008), a period marking the end of the last glaciation and encompassing the earliest and most dramatic ecological adjustments to the Holocene climate. The oldest known Paleoindian sites in the Northeast appear on the landscape during an abrupt cold phase in the post-glacial climate known as the Younger Dryas. This was a time marked by a return to severe glacial conditions after a brief warming phase (McWeeney 1999). The earliest archaeological evidence for human

occupation in the New England region dates to approximately 11,000 BP (Spiess et al. 1998; Bradley et al. 2008).

The exploitation of a wide range of food resources, including small and large game, fish, wild plant foods, and perhaps extinct megafauna, is assumed but poorly documented (e.g., Dincauze and Curran 1984; Meltzer 1988; Curran 1994; Jones 1998). Most archaeologists believe that caribou played a significant, if seasonal, role in Paleoindian subsistence. The archaeological record suggests a settlement system based on small, highly mobile social groups exploiting dispersed seasonally available resources. Sites from this period are characterized by distinctive fluted points and flaked stone assemblages dominated by unifacial tools. The high-quality stone materials used by Paleoindian people to manufacture their tools was often collected from distant sources. This suggests a highly fluid settlement pattern and regular interaction between small groups of people spread out over the entire region. Large gatherings could have been formed on a seasonal basis for communal hunts if the herd sizes allowed for an aggregation of people to gather in one location. These locations would be dependent upon an interception point as well as being situated in proximity to other resources that could be exploited. This theory has been applied to sites like the Vail Site in Maine and the Bull Brook Site in Massachusetts (Gramly 1982; Spiess et al. 1998; Robinson et al. 2009). Some of the better-known and best-dated Paleoindian sites (Haynes et al. 1984; Meltzer 1988; Levine 1990) include the Vail Site in northwestern Maine, with dates averaging 10,500 +/- 300 years B.P. (Haynes et al. 1984); Shawnee-Minisink Site in Pennsylvania, 10,590 +/- 300 B.P. (McNett 1985); the Templeton Site in northwestern Connecticut, 10,190 +/- 300 B.P. (Moeller 1980; Singer 2017); the Debert Site in Nova Scotia, with a tight cluster of dates around 10,600 years B.P. (Stuckenrath 1966); and the newly discovered Early Paleoindian site in Avon, Connecticut, the Brian D. Jones Site, which has been preliminarily dated to 10,520 +/- 30 (Leslie et al. 2020).

Despite the existence of the sites noted above, data reflecting Paleoindian land-use patterns and subsistence activities in the Northeast remains relatively scarce and generally ambiguous (Spiess et al. 1998), and much of what archaeologists think about the social patterns, daily life, and spiritual beliefs of Paleoindian people is based on ethnographic analogy and/or speculation. The dearth of physical evidence associated with Paleoindian occupations in the Northeast is likely due to a combination of factors, including the great age of these sites, which contributes to the decay of organic remains and increases the chances of site disturbance and destruction, the low population density at this early stage of human settlement in the region, inundation of the coastal areas available for occupation during this period, and until recently, a limited number of archaeological investigations specifically targeting these resources (Jones 1998). The number of reported sites is now rapidly increasing (Bradley et al. 2008), and it is likely that significant new information concerning the region's earliest settlers will continue to develop.

Locally, highly mobile foragers associated with the Paleoindian Tradition exploited the Connecticut River Valley in Massachusetts, as revealed by the identification of sites and findspots (MHC 1984: 25). While no fluted points are officially recorded from Northampton, William Young (1969) wrote that fluted points were said to have been found on the property of the Hampshire County Jail and Correctional Facility (Site 19-HS-322). Two fluted points are reported from Westover Field in Chicopee (Young 1969: 38). A Paleoindian site in Hadley and a findspot at Mt. Toby have also been reported (Curran and Dincauze 1977: 334-336). Better-documented Paleoindian sites in central Massachusetts include the DEDIC (South Deerfield, Chilton et al. 2005) and Turners Falls sites (Binzen 2005). The majority of New England's Paleoindian sites are located on excessively drained glacial outwash formations, usually overlooking large wetlands

(Speiss et al. 1998: 230). The rich artifact data sets from the Brian D. Jones and the Templeton sites suggest that models for Paleoindian site identification in the glaciated Northeast should account for the possibility of deeply buried alluvial sites. The Farmington and Shepaug rivers of northwestern Connecticut that flow alongside these sites are not unique in the region, nor are the circumstance which protected their floodplains from active erosion. Based on these findings, other alluvially buried Paleoindian sites in the Northeast likely await discovery

B2. Archaic Period (9,500-3,000 B.P.)

The Archaic Period dates from 9,500 to 3,000 B.P. in the Northeast and is characterized by generalist hunter-gatherer cultures (e.g., Petersen 1995). This cultural shift also coincides with the close of the Younger Dryas Period and the later onset of the Hypsithermal Climate Optimum (geologically, the end of the Pleistocene Epoch and the beginning of the Holocene Epoch), with a general warming and mean annual temperatures higher than the present day (Deevey and Flint 1957: 182). This change in climate is also characterized by an increase in seasonality, the extinction of the megafauna, and the northward migration of other cold-loving fauna like caribou. This meant that subsistence strategies also had to change with the environment, as game previously hunted was no longer a viable resource that could be scheduled into seasonal hunting. This brought a shift to subsistence patterns that relied more on locally available resources (Stoltman et. al. 1978: 714). The Archaic is subdivided into the Early, Middle, Late and Terminal periods on the basis of associated changes in projectile point styles, ceremonialism and inferred subsistence adaptations (Snow 1980; McBride 1984). Each sub-period is discussed below.

B2.1 Early Archaic Period (9,500 – 8,000 B.P.)

Pollen evidence indicates a rapid shift toward a warmer climate beginning around 10,000 B.P. at the end of the Pleistocene (Gaudreau and Webb 1985). As the climate warmed, temperate forest species such as deer, turkey and beaver became more abundant (e.g., Spiess 1992) and seasonally available resources became more predictable. This climatic shift also created an expanse of wetland mosaics with diverse and predictable resources for hunter-gatherers in the Early Archaic period (Nicholas 1987: 105; Jones and Forrest 2003). A change in climate precipitated a comparable shift in forest type and composition, and in flora and fauna. This in turn resulted in a shift in social systems, subsistence strategies and settlement patterns, and after 8,000 B.P., exploitation of anadromous fish, freshwater fish, and coastal and ocean resources (Nicholas 1988: 258). This is evidenced by a shift from the highly formal, curated tool kit utilized by Paleoindians to more expedient tool forms made from lower-quality lithic materials (Forrest 1999; Anderson 2001: 157). This abandonment of a highly formal tool kit for one that relied on expedient tool forms is thought to be a response to the changing climate of the Early Holocene. As the climate was stabilizing during this period, resources were becoming more reliable, whereas before, the unpredictability of resources, due to the unstable climate of the Late Pleistocene, required a tool kit that was adaptable to any subsistence strategy (Anderson 2001: 157).

Recent excavations in northern New England indicate that two separate cultural groups may have been present in the area during this time period (Petersen and Putnam 1992). The first cultural tradition is characterized by projectile points which show strong stylistic affinities with materials recovered in the Southeast/Atlantic Coastal region. These include stemmed and corner-notched points such as Palmer/Kirk, and bifurcate-based styles such as MacCorkle, St. Albans, LeCroy, and Kanawha. These point styles are well-dated in the Southeast between 9,500 and 8,000 years B.P. (Sassaman and Anderson 1996). The Gulf of Maine Archaic (GMAT) is characterized

by a quartz lithic industry in which small polyhedral cores are common and bifacial projectile points are extremely rare, while the presence of a well-developed groundstone technology indicates a greater emphasis on plant-food processing and woodworking within this tradition (Robinson et al. 1992; Robinson and Ort 2011). The early occurrence of the Gulf of Maine Archaic tradition is reinforced by dates between 9,000 and 8,500 BP from Weirs Beach in New Hampshire (Maymon and Bolian 1992) and the Sandy Hill Site (Site 72-97) on the Mashantucket Pequot Reservation in Connecticut (Forrest 1999; Jones and Forrest 2003). Likely Gulf of Maine Archaic sites from Massachusetts include the Riverside Site in the Gill Archaeological District, which was dated to 8685 +/- 370 rcBP (Curran 2003) and the Edgewood Apartments Site in Plainville, Massachusetts, which returned dates of 8830+/-40 rcBP and 8600+/-40 rcBP on features recovered from separate loci (Jones and Leslie 2018).

Well-dated Early Archaic sites in the Northeast include the Richmond Hill Site in New York, dated to 9360 +/- 120 B.P. (Ritchie and Funk 1973), the Ward's Point Site in New York, dated to 8250 +/- 140 B.P. (Ritchie and Funk 1973), the Hollowell Site in New York, at 8160 B.P. (Ritchie and Funk 1973), and the Haviland Bifurcate Site in central New York, dated 8405 +/- 65 (Ferguson 1995). The rarity and small size of most Early Archaic sites indicate that between 9,500 and 8,000 years ago the population density of the Northeast remained very low. These known occupations are best accounted for by the presence of small and highly mobile groups. Floral evidence from the Sandy Hill Site suggests a heavy reliance on wetland tuber crops (Jones and Forrest 2003). Faunal evidence from other sites in the Northeast indicate the use of small game such as beaver, muskrat, deer, turtle, and fish (including anadromous shad and salmon) (Spiess 1992).

The Early Archaic Period concludes with the appearance of an apparently intrusive temperate forest-adapted culture utilizing bifurcate-based projectile points primarily manufactured from non-regional materials. Sites containing bifurcate-based projectile points typically date to about 8,500 years ago (Johnson 1993; Jones 1999). Bifurcate points in Massachusetts are commonly manufactured from rhyolite, with a probable Boston Basin source. Many are also made from chert that was likely acquired from the Normanskill Formation in eastern New York. Few bifurcate points are made from local lithic materials such as quartz and quartzite. Bifurcate points are documented throughout Massachusetts, though most appear to represent isolated finds (Dincauze and Mulholland 1977: 440; Johnson 1993: 49). An exception to the isolated bifurcate point finds is a concentration of bifurcate points reported from the Taunton River basin in southeastern Massachusetts (Taylor 1976).

B2.2 Middle Archaic Period (8,000 – 6,000 B.P.)

The Middle Archaic Period in the Northeast dates from 8,000 to 6,000 B.P. Middle Archaic environmental dynamics included an increase in precipitation and an increased seasonality, more so than the preceding and succeeding climatic periods. Paleoenvironmental reconstructions from the Middle Holocene suggest warmer and drier conditions in New England when compared to the Early Holocene (McWeeney 1999: 9). The warming and drying trend, known as the Hypsithermal Interval (Deevey and Flint 1957), caused water levels to drop throughout southern New England, shrinking lakes and turning shallow ponds into swamps or meadows (McWeeney 1999). Pollen data suggest that the Hypsithermal caused an increase in herbaceous plants accompanied by a decline in forest trees for southern New England (McWeeney 1999), which probably reduced the accessibility of woodland resources to Middle Archaic foragers. Middle Archaic sites are typically recovered along the terraces of large rivers and streams and in upland terraces overlooking

wetlands. This time period also marks the slowing of sea-level rise that is suggestive of minimal ice-sheet melting (Stoltman et al. 1978: 714; Sandweiss et al. 1999). Forest composition and vegetation changed in response to the increased rainfall as the pine-dominated landscape was replaced by a deciduous forest and the deer populations expanded, likely becoming a major subsistence focus. The Middle Archaic, regionally, is also characterized by an increase in ceremonial mounds (made from either shell or earth), the beginning of long-distance trade networks, and the emergence of new tool forms, all of which suggest that there was a growth in the scale and complexity of cultures (Anderson 2001: 158). Projectile point types typical of the period include Neville, Stark and Merrimack varieties (Snow 1980). The best-documented Middle Archaic assemblage in New England is the Neville Site, located in Manchester, New Hampshire (Dincauze 1976). This is a multi-component Middle and Late Archaic occupation which has yielded radiocarbon dates ranging from 7740 to 7015 B.P. associated with the Middle Archaic components. The analysis of recovered lithic materials and subsistence remains indicates that this site may represent a series of successive seasonal camps, perhaps focused on fishing.

Middle Archaic data from the Northeast indicate a trend toward more special-purpose camps, reflecting more specialized seasonal activity in different resource zones. New tool classes during this period include grooved axes, implying woodworking tasks, and the presence of net-sinkers and plummets indicates the growing importance of marine resources such as fish (Dincauze 1976; Snow 1980). Dincauze (1971, 1976) envisioned "the entire Atlantic coastal area from North Carolina to New Hampshire" as a single culture area by the eighth millennium B.P, based largely on widespread similarities of stemmed projectile point styles. She referred to this geographically extended manifestation of the Piedmont Tradition as the Atlantic Slope Macrotradition, which is the dominant cultural signature in New England during the Middle Archaic Period. Archaeology at southern New Hampshire's Neville Site indicates that the Atlantic Slope Macrotradition persisted through the Middle Archaic (Dincauze 1976). Associated populations followed generalized subsistence strategies and concentrated their settlement around waterfalls, river rapids, major river drainages, wetlands, and coastal settings (Dincauze 1976; Bunker 1992; Doucette and Cross 1997). A pattern of seasonal rounds in fairly large territories has been proposed, with annual movements structured around seasonally abundant resources (Dincauze and Mulholland 1977). Net-sinkers and plummets appear in the region's archaeological record for the first time. This orientation toward aquatic resources has been interpreted to indicate that forests were of limited productivity. Foragers along the Lower Hudson River exploited shellfish during the Middle Archaic (Brennan 1974); however, this resource probably contributed little to daily dietary requirements prior to the Late Archaic (Lavin 1988).

In the Connecticut River Valley, Middle Archaic sites are found in many types of settings, but most commonly along the edges of large rivers, like the Connecticut River, and small streams in upland and lowland areas (MHC 1984: 28). It is possible that the remains of villages, as well as small, logistical sites or short-term camps associated with seasonal population dispersions (gathering wild plants, fishing, hunting and trapping), as well as burials, may be present within the project APE.

B2.3 Late and Terminal Archaic Periods (6,000 – 3,000 B.P.)

Late Archaic Period sites are among the most commonly encountered during archaeological surveys in the Northeast. This period has been characterized as one of "florescence" due to the apparent rise in population density, diversification of economies, and expansion of settlement areas (Dincauze 1975; Snow 1980; McBride 1984). The wide range of habitats in which

these sites are found, and variations in formal tools types identified at these sites, suggest to some archaeologists that territorial boundaries had developed by this period (Dincauze 1974; Ritchie 1980). During this period, mast-forest development became more pronounced across southern New England (Snow 1980) in response to a drop in temperature and gradual increases in moisture (Winkler 1985). Furthermore, the stabilization of the coastline is thought to have allowed the development of extensive marshlands that were highly productive for human exploitation (Lavin 1988). Consequently, Late Archaic populations significantly increased and dispersed seasonally throughout diverse environments by 4000 BP (Hoffman 1985; Snow 1980: 221, 230).

While the Laurentian, Small Stemmed, and Susquehanna traditions are all represented in the Connecticut River Valley in Massachusetts, sites associated with the Small Stemmed Tradition are most frequently reported (MHC 1984: 30). The APE is located not far from two major Late Archaic Period lithic sources - the Holyoke Basalt ridge, which was used for groundstone tool production, and steatite outcrops in Westfield, used for bowl manufacture (MHC 1984: 31-32).

The cultural relationships between these three archaeologically defined traditions have been the subject of debate for at least three decades, with no general consensus among Northeastern researchers. The earliest well-dated Late Archaic sites with substantial artifact assemblages are associated with the Laurentian tradition (Ritchie 1980) and contain broad-bladed notched Otter Creek and Vosburg type projectile points, ground slate projectile tips, and net-sinkers or fishing weights and groundstone gouges. These sites are broadly dated between 5,300 and 4,700 B.P. and are more abundant in the forested interior of the region than along the coastal zones (Snow 1980). Slightly later Brewerton-type points (4,700 to 4,400 B.P.), also associated with the Laurentian tradition, are more common, though they are less frequently associated with groundstone tools. The raw materials used to manufacture the stone tools of this tradition include many high-quality cherts, likely derived from Hudson Valley sources and possibly Lake Champlain quarries or secondary deposits (e.g. Ritchie 1980).

Sites of the Small Stemmed Late Archaic tradition typically include large numbers of stemmed projectile points with narrow blades. Many of these tools are quite small and thick in relation to other common stone projectile points found in the region. Locally collected stones were the most commonly exploited lithic resources during this period, again suggesting a constrained settlement pattern and the presence of territorial boundaries on the social landscape. Sites with Small Stemmed projectile points have yielded radiocarbon dates spanning at least 4,000 years, from roughly 5,500 to 1,200 B.P. (see McBride 1984; Filios 1989; Boudreau 2008), raising concerns about the use of these tools as temporal or cultural markers. Although there are dated associations much earlier and later than the traditionally defined age range for the Small Stemmed tradition (4,500 to 3,500) (Dincauze 1975; Ritchie 1980), the majority of dated associations fall within this narrower span, indicating that a distinctive Small Stemmed technological and cultural tradition likely developed during the Late Archaic Period; some, however, have been found in association with Woodland period sites, indicating the possible persistence of this point type in later times (see Lavin 1984; Lavin and Russell 1985; Cassedy 1997; Lavin 2013; and Boudreau 2016). Later associations may also be attributed to the continued use of the efficient lithic reduction strategy developed during this period, as it appears to have been a particularly effective means of exploiting common quartz cobbles (Boudreau 2008). These may indicate persistence of this tool type in later times, but it may also indicate overlap in site selection over long periods of time, and the creation of palimpsests of archaeological data sets. Early Archaic bifurcate points are sometimes found as isolates at later sites, but these are never associated with later time periods (see Boudreau 2016). Accordingly, the majority of Small Stemmed points, particularly Lamoka

styles, which have been subjected to many radiocarbon dates in southern New England (see Lavin 2013), are best interpreted as indicative of the Late Archaic period. Small Stemmed sites appear in almost every major habitat area within the region and it is probable that the people making these tools exploited a much broader range of plant and animal species than their predecessors.

Susquehanna tradition sites are associated with a distinctive mortuary pattern, the use of steatite ("soapstone"), and unusual broad-bladed knives and bifaces (Dincauze 1975; Snow 1980; Ritchie 1994). Susquehanna tradition sites are most abundant on well-drained river terraces overlooking major rivers, sites that would have been particularly attractive for use as fishing camps during spring fish runs (Dewar and McBride 1992). Cremation burials with elaborate grave goods and "killed" implements such as steatite bowls that were intentionally broken, have been found in throughout New England (Dincauze 1968; Pagoulatos 1990; Leveillee 1999). Steatite quarries, likely associated with Susquehanna tradition people, have been identified in Westfield and Wilbraham (Donta and Wendt 2006). Susquehanna tradition sites are more reliably dated than the other two major Late Archaic traditions, falling between 3,800 and 3,000 B.P.

B3. Woodland Period (3,000 – 450 B.P.)

There is also a moderate probability of encountering archaeological deposits in the project area dating to the subsequent Woodland Period, which is subdivided into the Early (3000-1600 BP), Middle (1650-1000 BP), and Late (1000-450 BP) Woodland periods. Woodland Period sites, in general, are well-represented in the Connecticut River Valley in Massachusetts, and reflect a wide variety of site types (MHC 1984: 32-33). For example, the Guida Farm Site, located in Westfield, features a large Middle to Late Woodland period site that may have served as a center for ceramic production (Byers and Rouse 1960).

The Woodland Period is characterized by technological developments including the diversification and increased use of clay pottery, the production of smoking pipes and ground-stone celts, the introduction of bow-and-arrow technology and horticulture, and the use exotic raw materials (Lavin 1984; Feder 1984, 1999). Increases in site size and complexity indicate a trend toward greater sedentism and social complexity during this period. This trend suggests that the population base was increasing, particularly in the later part of the period (McBride and Dewar 1987; Lavin 1988). The Woodland Period has been traditionally subdivided into Early, Middle, and Late periods on the basis of ceramic styles, settlement and subsistence patterns, and political and social developments (Ritchie 1969, 1994; Snow 1980; Lavin 1984). Despite these developments, some scholars see the Woodland as a period well-rooted in the traditions and lifeways of the preceding Archaic Period (Feder 1984, 1999).

B3.1 Early Woodland Period (3,000-2,000 BP)

Early Woodland occupation in the Northeast is potentially complex but poorly understood due to a paucity of data (Versaggi 1999). While archaeological sites from the Early Woodland period exhibit cultural continuity with Late Archaic sites (Concannan 1993), some archaeologists believe their sparse distribution reflects a population decline that may have resulted from environmental shifts (Fiedel 2001). This may also be the result of shifts in settlement which promoted the formation of larger, but fewer seasonal aggregation camps (Jones 2002) or from the misattribution of small stemmed points made during the Early Woodland period to the preceding Late Archaic period (Filios 1989). It is possible that incipient horticulture focused on native plant species such as goosefoot (*Chenopodium sp.*) had begun by this time (George 1997). The existence of stone pipes also suggests that tobacco was being traded into the region, if not locally produced,

by the Early Woodland period. The presence of tobacco in New England during the Early Woodland also is supported by evidence of nicotine decay products identified in a smoking pipe dated to 2,300 BP from the Boucher Site in Vermont (Rafferty 2006).

B3.2 Middle Woodland Period (2,000-1,200 B.P.)

The Middle Woodland period is characterized by increased diversity in ceramic style and form, continued examples of long-distance exchange (especially of jasper), and at its end, the introduction of tropical cultigens (Dragoo 1976; Snow 1980; Juli 1999). Much of the current knowledge of this period in southern New England is extrapolated from Ritchie's (1994) work in New York State. Ritchie noted an increased use of plant foods such as goosefoot, which he suggested had a substantial impact upon social and settlement patterns. George (1997) reiterated this hypothesis for the Middle Woodland of Connecticut. Ritchie also noted an increase in the frequency and size of storage facilities during the Middle Woodland period, which may reflect a growing trend toward sedentism (Snow 1980; Ritchie 1994). In southern New England, archaeological evidence of settlement patterns suggests an increased frequency of large sites adjacent to wetlands and tidal marshes along the major rivers, a decline in large upland occupations, and a corresponding increase in upland temporary camps (McBride 1984). This pattern may reflect a reduction in residential mobility that likely is related to the development, by 2,000 BP, of modern tidal marshes and estuaries in low-lying riverine areas. The tidal marshes would have supported a wide variety of terrestrial and aquatic animal and plant resources, allowing longer residential stays (McBride 1984). Diagnostic projectile point types include Jack's Reef and Fox Creek, and these are commonly made of non-local lithic materials. Jasper tool preforms appear to have been entering the region from eastern Pennsylvania at this time, suggesting broad, formalized exchange networks (Luedtke 1987).

B3.3 Late Woodland Period (1,200-450 B.P.)

The Late Woodland period marks the final temporal phase before initial contact between Native Americans in the Northeast and Europeans. The Late Woodland period is characterized by the increasingly intensive use of maize, beans, and squash; elaboration of ceramic technology, form, style, and function; population aggregation along coastal and riverine locales; the eventual establishment of year-round villages; and the use of the upland-interior areas by small, domestic units or organized task groups on a temporary and short-term basis. The settlement pattern suggests a trend toward fewer and larger villages near coasts and rivers. It has been hypothesized that these changes can be attributed to the introduction of maize, beans, and squash, but it is unclear how important cultigens were in the aboriginal diet of southern New England groups, especially those with access to coastal resources (Ceci 1980; McBride 1984; McBride and Dewar 1987; Bendremer 1993; Bendremer and Dewar 1993; Ritchie 1994; Chilton 1999). The extent to which New England's Native people were dependent on maize horticulture is actively debated (e.g., Bendremer 1993; Waller 2000; Chilton 2002). Although sites clearly demonstrate the use of tropical cultigens in the Connecticut River Valley, wild plant and animal resources were still a primary component of the indigenous diet (Mulholland 1988). The use of imported cherts increases over time in the Connecticut River valley, suggesting possible social, economic, and/or political ties to the Hudson Valley region. Ceramic style affinities in the lower Connecticut River Valley also suggest western ties at the end of this period (Feder 1999). Several large Late

Woodland period sites have been identified in the middle Connecticut River Valley, including the Pine Hill Site in Deerfield (Chilton et al. 2000), the Guida Farm Site in Westfield (Byers and Rouse 1960; Chilton 1999), and the Agawam Meadow Site, in Agawam (Donta 2002).

B4. Contact Period (1500–1620 AD)

Northampton falls within the Hadley-Northampton Core area of Native American Settlement in the Connecticut River Valley (MHC 1982). Locally, most Native settlement at this time was along the Connecticut River Valley, where fertile fields and abundant game and fish could be found. At this time, the area that today comprises Northampton and Hadley was known as Norwottuck and it was a core area of Contact Period indigenous settlement. Contact Period population centers in the Connecticut River Valley are generally thought to have been occupied by broadly related groups of "River Indians" with probable kinship ties southward to East Hartford (Podunk) and northward into New Hampshire (Squakheag). Scholars still debate when large sedentary villages developed in the region, though most agree that these became more common during the Contact Period and were more likely to be palisaded for defense (MHC 1984: 53).

There were several fortified villages in Norwottuck, including two located about 1.5 miles south of the project area: one on Fort Hill and the other on Northampton Meadows. The latter of these is known as the Bark Wigwams Site (19-HS-113), and it represents one of the largest and most important documented Contact Period Native sites in the region. It may be the location of the "Nawaas" or the village of Norwottock, occupied as late as 1653 (Keene 1989). The name "Bark Wigwams" came from the area's first English settlers (Trumbull 1898; Johnson and Bradley 1987). The site appears to indicate a large residential population core area during the Late Woodland and Contact periods, located between other population centers in South Hadley/Holyoke and Deerfield, probably occupied by a thousand individuals prior to the epidemic of 1634 (Keene 1989: 1). Twenty years later, when John Pynchon purchased the meadow, the Native American population was much reduced. Many of the surviving Norwottucks had likely relocated to Hadley.

The Bark Wigwams Site was first identified by a local collector, Walter S. Rodimon. He collected over 1500 artifacts from the site, primarily after severe flooding events in 1936 and 1938. In 1985, the site was investigated by the University of Massachusetts, Amherst, archaeological field school under the direction of Arthur Keene (Keene 1989), but the excavations were poorly documented. However, archaeologists Eric Johnson and James Bradley (1987) analyzed and published data from the Rodimon collection. The recovered artifacts spanned the Middle Archaic through Contact periods and included projectile points, Late Woodland-Contact period pottery, stone pendant and pipe fragments, agricultural implements, ground/pecked-stone artifacts, glass bead, bone, and metal artifacts including sheet copper or brass, axes, and lead shot or balls. The ceramics from the site are notable for the dominance of Iroquoian, rather than Connecticut Valley Windsor/Guida Tradition, stylistic traits. While Iroquoian pottery is found at other sites in the Connecticut River Valley, it generally comprises only a small component of assemblages. The large proportion of such pottery at the Bark Wigwams Site suggests that the residents of this area may have had more intensive relationships with the inhabitants of eastern New York State than some of the groups in the lower Connecticut River Valley (Johnson and Bradley 1987).

B5. Native American Site Potential

The proximity of the project area to the Connecticut River suggests that undisturbed portions of the APE are highly sensitive for pre-colonial Native American archaeological sites.

The APE was assessed as having the potential to contain archaeological remains extending back to the Paleoindian Period. The probability of encountering Paleoindian, Early Archaic, and Middle Archaic sites (ca. 12,000 – 5,000 BP) is relatively low according to the lower population densities that are projected to have existed; however, such sites would possess particularly high research value. There is a higher probability that the APE contains archaeological resources dating to the Late Archaic and Woodland periods (ca. 5,000 BP – 450 BP). These resources are likely to be associated with seasonal camps or habitations positioned to exploit riverine resources.

A review of the MACRIS database shows three pre-colonial archaeological sites within a mile of the APE (Figure 1). Site 19-HS-321, the Honey Pot Road Burial Site, is located immediately across the Connecticut River on the eastern side of the bend. Fragmented human remains were identified on the surface of an agricultural field there in 1990. The two other sites, 19-HS-34 and 19-HS-35, which were recorded by William Fowler in 1941, are documented as pre-colonial-period campsites. Site 19-HS-34, the Emery Place Site, is located about 800 meters north of the project area and was identified based on artifacts found by the property owner. Site 19-HS-35, the Old Canal Site, is situated about 600 meters southeast of the APE. The site comprises a small camp on a sandy bluff overlooking the Connecticut River north of Damon Road. No data regarding the temporal or cultural affiliation of the sites are available.

Several other Native American sites have been identified just over a mile from the APE, particularly north of the bend in the Connecticut River (Figure 1). Site 19-HS-30 is a small campsite identified in an area of dunes near Hatfield Road. It contained Native pottery, burnt bone fragments and a few stone tools. Site 19-HS-32 is another small campsite also located near Hatfield Road. The site reportedly produced a small grooved axe and a polisher or whetstone. Both sites were recorded in the late 1960s.

The proximity of the APE to the Connecticut River, as well as the number of previously recorded sites, suggests that undisturbed portions of the APE are highly sensitive for pre-colonial and contact-period Native American archaeological sites.

C. Historical Period Context

C1. Plantation Period (1620–1675 AD)

In September 1653, John Pynchon of Springfield purchased the land that became Northampton from "Chickwallopp, Alias Wawhillowa, Neessahalant, Nassicohee, Riants, Paquahalant, Assellaquompas and Awonusk, the wife of Wulluther all of Nanotuck, for the "consideration of one hundred fathum of Wampum by Tale and for Tenn Coates...." (Lockwood 1926: 232). As elsewhere in Massachusetts, indigenous peoples had been deeply affected by the incursion of the English, with populations depleted by European diseases, and survivors displaced from much of their land base. Throughout the 1650s, floodplain areas along the Connecticut River in Northampton, which had recently been the locus of much local Native settlement, were rapidly colonized by the English. By the early 1660s, most of the Connecticut River floodplain had been divided into individual lots. By 1661, 300 to 400 English individuals were recorded in the area. Ferry service across the Connecticut River was established at Hockanum meadow in 1658 and to Hadley Street in 1661. A temporary meetinghouse was built in the center of Northampton around 1655, followed by a more permanent building and a town cemetery in 1661, on Meetinghouse Hill.

Agriculture, including the raising of grain and livestock, was the basis of the livelihood of most of the English inhabitants. A sawmill and at least three gristmills were set up in this period, and brick-making, lumbering, and fur-trading occupied some of the English settlers. Northampton

shared the seat of the Hampshire County Court with Springfield (MHC 1982: 5-6). Indigenous settlement continued here in this period, including at the palisaded village at Fort Hill. Trade between local Native people and the English colonists remained an important part of the local economy. By the end of the Plantation Period, Northampton was one of the most important settlements in the Connecticut River Valley. It was well situated in relation to the major commercial centers of Springfield, Hartford, and New Haven (MHC 1982: 5-7).

C2. Colonial Period (1675-1775 AD)

King Philip's War, which was the result of decades of cultural disruption and loss of Native populations, decidedly shifted the balance of power in New England from Native to English. The war caused moderate damage to the English settlement of Northampton at the start of the Colonial Period and marked further decline in the population of Native Americans within the town's borders. Several houses were burned in the settlement's core and the threat of Indian attacks periodically resurfaced over the next several decades. Even as late as 1745 there were several fortified houses in Northampton. In the decades following the war, the English population steadily increased and the common lands were divided in response. Until the early 18th century, however, most population growth occurred within the core area of English settlement. In the 18th century settlement began to expand to the north and west, in areas that later became Westhampton, Easthampton, Southampton, and Williamsburg.

By 1765, Northampton was home to over 200 English families. Agriculture remained the focus of the local economy. Livestock production prospered in this period because of the Connecticut River market, and pigs and cattle were shipped east to Boston. The number of sheep raised by Northampton farmers increased as well. Local industries saw a moderate level of expansion in the Colonial period. Although Northampton village had an identity as an administrative and, to a lesser extent, commercial center, most of the outlying areas, including the location of the project, were almost entirely agricultural (MHC 1982: 7-8).

C3. Federal Period (1775-1830 AD)

The construction of the Third Massachusetts Turnpike from Northampton to the New York border probably aided commercial growth in the town center and benefited many of the town's farmers by allowing better access to markets, although the Connecticut River remained the town's main transportation resource. Hadley Bridge, built in 1809, improved transportation across the river. The New Haven and Northampton Canal, which was completed in 1835, provided a north-south route through Northampton.

Between 1790 and 1830, the population of Northampton grew rapidly. By 1830, the population topped 3,600 people. Northampton became the sole Hampshire County seat after the establishment of Hampden County surrounding Springfield. Local and international events dramatically effected the local Northampton economy. A post-Revolutionary War depression hit in the 1780s and Shay's Rebellion had deep local impacts. Trade flourished in Northampton between 1793 and 1807 and local prosperity attracted new residents, particularly from southern Connecticut River Valley towns. New settlers arrived in Northampton, particularly from the lower Connecticut River Valley, and a paper mill and sail duck factory were established, with tanning also an important industry. The Embargo in 1807, however, greatly reduced the prices of agricultural products and trade stagnated, sparking a need for new industrial ventures. In this period, small manufacturing enterprises diversified the town's economy, including a large tannery

in the center and a mill village around cotton and woolen mills in the Leeds section. By the early 19th century an important textile industry had developed (MHC 1982: 9-11).

C4. Early Industrial Period (1830-1870 AD)

The completion of the New Haven and Northampton Canal and railroad connections made in 1845, 1856, and 1868, gave Northampton exceptional transportation assets in this period. Florence joined Leeds as a center of textile and, for a time, sewing-machine production, and other manufacturing enterprises, including machine shops and hardware makers, contributed to the growth of Northampton Center, as did commercial expansion. The silk industry dominated the local economy in this period. The production of silk and mulberry trees exploded in the 1830s. Although the silk bubble burst in 1839, the local silk industry managed to survive. In the 1850s the invention of the "machine twist," a silk thread for sewing machines, resulted in a revival and silk thread manufacturers prospered. By 1875, Nonotuck Silk was valued at $1.1 million dollars (MHC 1982: 15).

The population of Northampton continued to grow during this period, particularly in the years following the Civil War. The ethnic makeup of the town also diversified; the rapid population growth in this period included the town's first substantial numbers of residents of European immigrant heritage, especially people from Ireland, Germany, and Holland. The Early Industrial Period also marked the beginning of clearly delineated neighborhoods in Northampton, based on class and ethnicity. Institutional development included the establishment of a mental-health facility, the Northampton State Hospital (MHC 1982: 13-17).

C5. Late Industrial Period (1870-1915 AD)

Northampton's commercial and industrial enterprises continued to grow in this period, and additional railroad routes radiated out from the center in 1871, 1872, and 1881, of which the Central Massachusetts Railroad was the most important, connecting Northampton and Amherst directly to Boston. Manufacturers of cutlery, silk fabrics, water filters, hosiery, baskets, and cellulose-based plastic became major employers, so the production of oil stoves replaced the manufacture of sewing machines in the Florence section. Smith College, which opened in 1875 as a pioneer in women's higher education, expanded substantially over the ensuing years, further adding to Northampton Center's prominence; the most densely-built part of the town was incorporated as a city in 1881. Streetcar routes connected Northampton center with Leeds, Florence, and other villages within the town and extended beyond Northampton to Hadley, Easthampton, Hatfield, and Holyoke (MHC 1982: 17-21).

Agriculture also changed in this period. Landowners immediately adjacent to the Connecticut River turned to tobacco production, while elsewhere in the town, marketable produce such as dairy products, apples, and poultry supplemented the generalized agriculture and livestock production that had characterized Northampton from its founding. Forest products also continued to be an important part of the economy; in the 1890s, Northampton rafted 25 times as much timber down the river than it had 30 years earlier.

C6. Early Modern Period (1915-1940 AD)

Northampton's economic and population growth slowed in the early 20th century. After a brief surge in manufacturing brought about by World War I, the silk companies declined and, despite a series of mergers, all were gone by 1932. Basket and paper-filter manufacturing also ceased, and because of changes in the Mill River brought about by flood-control measures, the

town's largest industrial employer, Prophylatic Brush (approximately 1,000 workers), ceased operations in 1940. Expansion at Smith College continued, and some commercial growth occurred in the downtown in the 1920s, prior to the onset of the Great Depression (MHC 1982: 22-24). In 1922 Northampton became the site of one of 12 new federal veterans' hospitals which, to some extent, offset the loss of industrial employment.

C7. Project Area-Specific Historic Background

The project area is located along Route 5, which follows the alignment of the primary pre-Colonial period north-south trail along the west bank of the Connecticut River, and connects Northampton and Hatfield. The 1831 map of Northampton shows the project area vicinity as sheep pasture, with no development in or around the APE (Figure 4). The location of the Native American fort north of the project area on Halfway Brook (NTH.1) is also shown on this map. A road following the alignment of present-day Route 5 is depicted. The 1860 map (Figure 5) shows an intersection similar in configuration to the present-day project area. By this time, there is some development, particularly south of the intersection, with several houses and a structure associated with G.F. Wright & Company arranged along the two roads south of the intersection. The 1873 Beers map of Northampton (Figure 6) shows a similar configuration of structures south of the intersection. By 1895, there was a structure, most likely a house, located immediately west of the intersection long what is now Hatfield Street (Figure 7). The Skibiski house, which is associated with the ROW property taking, does not appear on available maps until about 1935 (Figure 8).

C8. Historical-Period Archaeological Potential

In sum, there is moderate to high potential in the APE for Contact or Colonial Period Native American sites, based on its location along a major north-south trail and its and its proximity to a large bend in the Connecticut River, as well as the documented Colonial-period fortified Native settlement to the north. There is also potential for 19th-century historical-period archaeological resources related to the homes and businesses located in the project area vicinity.

IV. RESULTS OF THE ARCHAEOLOGICAL FIELDWORK

A. Intensive (Locational) Testing Results

AHS excavated a total of 61 shovel test pits in the APE, including 49 STPs excavated along four transects at 10-meter intervals and 12 array test pits placed at two-meter intervals around STPs T3-2, T3-5, and T3-7 (Figure 9). Several locations in the survey area were determined to be unsuitable for testing. A large borrow pit was identified in the northern portion of the survey area (Figure 9; Photographs 1 and 2, Appendix B) and an area of talus slope in the northeastern portion precluded testing in that area (Figure 9; Photograph 3). Two small, probably seasonal wetland areas were identified in the eastern part of the APE; no testing was conducted in those locations (Figure 9; Photographs 4 and 5). A section of stone wall was observed in the southeastern part of the survey area, just west of Hatfield Street, and it was photographed and recorded on project maps (Figure 9; Photograph 6).

A1. Soils

The majority of the test pits in the APE (n=42; 69%) contained a plowzone (Ap) over intact B- and C-horizon soils (Figure 10; Photographs 7 and 8). In most cases the plowzone consisted of dark brown (10YR 3/3) to very dark grayish brown (10YR 3/2) sandy loam with gravel, extending to depths ranging from about 17 to 34 centimeters below surface (cmbs). The plowzone generally sat atop a B_1 horizon consisting of brown (10YR 4/3) to dark yellowish brown (10YR 4/4) silty sand with gravel and cobbles. A distinct B_2 horizon was identified in 18 of the STPs, primarily in the southern part of the APE. In the 37 pits that reached the C horizon, it was encountered at depths ranging from 40 to 77 cmbs and generally consisted of olive brown (2.5Y 4/4) or strong brown (7.5YR 4/6) medium to coarse sand with gravel and cobbles. Several of the pits in the northern part of the APE (T2-11 through T2-15, T3-15 through T3-17, and T3-19; Figure 9) contained a shallow A horizon over talus. Three of the STPs, T2-9, T2-10, and T4-3 contained disturbed soils. The disturbance in STPs T2-9 and T2-10 is likely related to the existing driveway, while T4-3 contained a shallow layer of fill over asphalt, also possibly related to the driveway.

A2. Cultural Materials

A small pre-colonial Native American site was identified in the southeastern portion of APE on Transect 3. Lithic artifacts were recovered from plowzone and B-horizon soils in STPs T3-2, T3-5, and T3-7. STP T3-2 produced a single quartz flake, recovered from the B_1 horizon. Eight quartz flakes were collected from the Ap/B_1 interface in STP T3-5, and T3-7 contained 30 lithic artifacts recovered from the Ap, B_1, and B_2 horizons, including 14 quartz flakes, 15 quartzite flakes, and a granite hammerstone.[2]

Array pits were placed at 2-meter intervals in the cardinal directions around each of the three pits containing lithic artifacts. No additional cultural materials were found in the arrays around T3-2. Only one of the array pits around STP T3-5, T3-5-N, produced additional pre-

[2] We use standard nomenclature in general lithic analyses (i.e. Bordes 1961, Debénath and Dibble 1994, and Andrefsky 1998); as such, microflake refers to flakes less than 1 cm in length, small refers to lithic artifacts between 1 and 3 cm in length, medium refers to lithic artifacts between 3 and 5 cm in length, and large refers to lithic artifacts greater than 5 cm in length. Microliths refer to small blades (or bladelets) generally geometric (such as a crescent, triangle, or trapezoid) in form and used in compound tools. Backing (sensu Andrefsky 2005) refers to the intentional dulling of an edge so that the opposite edge of a tool can be easily used by hand or in a compound tool. For a richer description of paleolithic tool and debitage types, please see our glossary in Chapter VIII or Bordes (1961), Debénath and Dibble (1994), or Andrefsky (1998).

colonial artifacts; seven quartzite flakes that were found in the plowzone in this STP, along with historical-period artifacts (bottle glass, stoneware, iron, nails). Three of the arrays around STP T3-7, T3-7-N, T3-7-S, and T3-7-E, contained additional Native American cultural materials. The plowzone in STP T3-7-N yielded one quartz flake. STP T3-7-S contained one large, utilized quartz flake and one small quartz flake, also from the plowzone. Four quartzite flakes and three quartz flakes were recovered from Ap and B_1 soils in T3-7-E.

Eight of the STPs (T1-1, T1-3, T2-2, T2-11, T3-5W, T3-5N, T3-8, and T3-10) contained a small number of historical-period artifacts including ceramics, glass, a kaolin pipe stem, nails, unidentified metal, and a piece of coal ash. The densities of these materials were very light and not concentrated in any specific area; they are therefore interpreted as field scatter.

One pre-colonial-period Native American archaeological site was identified in the southeastern part of the APE along Transect 3. At total of 56 lithic artifacts, including quartz and quartzite flakes, a utilized quartz flake, and a granite hammerstone, were recovered from plowzone, B_1-, and B_2-horizon soils in STPs T2-3, T3-5, and T3-7 and several of the associated array pits. The recovered flakes and hammerstone are characteristic of tool production and maintenance, while the large utilized flake suggests that additional processing activities were carried out at the site. The relatively high density of artifacts, particularly in T3-7 (see artifact inventory catalogue in Appendix C), suggested the potential for cultural features and/or diagnostic artifacts to be present in the APE.

B. Site Examination Survey Results

AHS excavated a total of 47 STPs and two 1x1-meter excavation units along the grid, centered on the southern portion of the T3 transect line, identifying two separate loci: Locus 1 (N100E100) and Locus 2 (N120E100); the excavation units were placed adjacent to STPs T3-5 (centered on N100E100) and T3-7 (centered on N121E100) (Figures 11 and 12). AHS also investigated the talus slope identified during the intensive (locational) survey, to determine if any usable raw material was present at the slope; the talus slope consists entirely of metamorphic bedrock, likely granite, and is not suitable for lithic reduction (Photograph 9).

B1. Soils

The soils encountered within the site examination area did not differ dramatically from those encountered in the intensive (locational) survey. All of the test pits and units excavated in the site examination contained intact soil profiles, with a plowzone layer above B- and C-horizon soils (see Figure 13; Photographs 10 and 11). In most cases the plowzone consisted of dark brown (10YR 3/3) to very dark grayish brown (10YR 3/2) sandy loam with gravel, extending to depths ranging from about 20 to 46 cmbs. The plowzone generally sat atop a B_1 horizon consisting of brown (10YR 4/3) to dark yellowish brown (10YR 4/4) silty sand with gravel and cobbles. A distinct B_2 horizon was identified in 12 of the STPs, and generally contained more gravel and cobble content than the B_1. In the 24 STPs that reached the C horizon, it was encountered at depths ranging from 44 to 97 cmbs and generally consisted of olive brown (2.5Y 4/4) or strong brown (7.5YR 4/6) medium to coarse sand with gravel and cobbles.

In N100E100, a soil anomaly was identified in the western two quadrants, at the interface between the plowzone and subsoil horizons (hereafter referred to as a deep soil feature). This deep soil feature consisted of a very dark brown (7.5 YR 2.5/3) fine sandy loam parent soil, that was mottled with black (7.5 YR 2.5/1) loamy fine sand and brown (7.5 YR 4/4) silty fine sand. Gravels and cobbles were found throughout this soil anomaly (Figure 14 and Photograph 12). Similar

bioturbation was identified in the intensive (locational) STP T3-5-North, indicating that the anomaly is probably two meters in length and possibly one meter in diameter. No charcoal or artifacts were recovered from the soil anomaly. It is unclear what caused this soil disturbance, but one explanation may be an ancient tree-throw (an intact plowzone was found stratigraphically above the anomaly). The deep soil feature is basin-shaped in profile, and elongated in plan view, although the entire anomaly was not fully exposed because it extended outside of the tested area to the north, south and west.

Tree-throws are commonly identified in New England as simple soil anomalies, but they have also been identified as attractive areas for pre-colonial peoples to encamp and knap artifacts (Ives 2010, 2012). If this soil anomaly is a tree-throw, it is unlikely that it occurred after the site was occupied, because all of the artifacts were recovered from above the interface of the plowzone and soil anomaly: if the tree-throw did postdate the site occupation, artifacts would be expected throughout the soil anomaly stratigraphic profile. Ives (2010, 2012) indicates that tree-throws that were utilized by pre-colonial peoples for knapping or encampments often contain hearths at the top of these anomalies; a hearth was not encountered in this unit, but again, it was considered likely that this anomaly extended into four contiguous units described above.

B2. Cultural Materials

Historical-period artifacts were recovered in 10 STPs (including N59E103, N80E95, N80E103, N95E90, N95E100, N100E103, N105E103, N114E90, N125E90, and N130E90) and one excavation unit (N100E100). These artifacts included ceramics (red earthenware, porcelain, salt-glazed stoneware, and whiteware), glass (curved, window, bead, bottle, and flat), brick, coal, coal ash, slag, kaolin pipe fragments (one 5/64 stem), iron, and calcined and non-calcined bone (see artifact inventory list in Appendix C). As in the intensive (locational) survey, the densities of these artifacts are light, and there are no spatial concentrations associated with any significant structural remains. These were likely deposited as roadside dumping or field scatter associated with historical-period manuring activities.

Forty-six pre-colonial artifacts associated with the small site were recovered in both excavation units (N100E100 and N121E100); none of the STPs contained pre-colonial materials. These included 40 artifacts from N100E100, all collected in the plowzone and including 36 pieces of quartzite debitage (consisting of 10 primary reduction flakes, 23 flakes, and one large flake), one quartzite biface fragment with remnant cortex, one quartzite possible unifacial Parallel Stemmed projectile point base fragment (Photograph 13), and two quartz flakes (including one primary reduction flake and one flake). Six artifacts were recovered from N121E100, including four from the plowzone and two from the B_1 soil. These artifacts include two quartzite flakes (one with a cortical platform), one quartzite possible backed crescent (Photograph 14), one possible quartzite Parallel Stemmed projectile point (from the B_1 soil, Photograph 13), and two quartz flakes (including one primary reduction flake). In total, including the intensive (locational) and site examination surveys, 104 pre-colonial artifacts were recovered from the Skibiski Site (see Tables 1 and 2).

The recovered pre-colonial artifacts are consistent with those described by Fowler (1968a, 1968b, 1969) from central Rhode Island and eastern Massachusetts as being representative of the Parallel Stemmed flaking tradition, which is associated with the Early Archaic period. Awareness of this tradition is growing; Forrest (1999), Jones (1999), and Singer (2017) have more recently documented the Parallel Stemmed tradition in southeastern Connecticut. The majority of flaked artifacts recovered from the Skibiski Site consist of quartzite (63%), while the remaining 37% of

artifacts are made of quartz, two raw materials that have been associated with this tradition. Moreover, the lithic debitage suggests a tradition that is focused on reducing quartzite from flake blanks, which is also consistent with the Parallel Stemmed tradition. Boudreau (2016: 149) notes the rarity of Parallel Stemmed points, and suggests that given the lack of southeastern precursors, it may be more related to Paleoindian flaking technology (such as the "miniature" fluted points) and thus representative of a remnant of Paleoindians peoples in the region during the Early Archaic period.

The presence of a backed crescent or microlithic is intriguing, as these have not been associated with Parallel Stemmed assemblages before. To date, evidence for microlithic industries within the Northeast is limited to Inuit assemblages in the far north (i.e., Harp 1958), and GMAT assemblages (Forrest 1999; Jones and Leslie 2018), also from the Early Archaic period. GMAT was recently recognized in Massachusetts by finds in Plainville (Jones 2012; Jones and Leslie 2018), Riverside and Gill (Curran 2003), Dracut (Dudek 2005), and Medfield (Strauss 2017). The process of backing in microliths or crescents is well documented and is assumed to be intentionally designed to create additional surfaces of the microlith to adhere to a compound tool, most commonly in a shaft of a projectile armature (weapon) or spear (see Walker 2014). Lithic reduction at the Skibiski Site appears to be focused on a small core reduction strategy: no cores were recovered and only one large decortication flake was found, with the majority of the primary reduction flakes medium to small in size, suggesting a small flake reduction technique (possibly similar to other GMAT reduction techniques). Alternatively, small, rolled or weathered quartzite cores were preferentially selected for reduction. Without examples of cores, it is difficult to determine the flaking technique performed at both site loci.[3]

Parallel Stemmed assemblages have not been commonly found in the Northeast. Based on the intensive (locational) and site examination surveys, it may be that the points from the Skibiski site represent untyped Small-Stemmed projectile points or possibly narrow Squibnocket Triangles, and thus are representative of the Late Archaic period. It was therefore difficult to definitively assign these artifacts to either time period without expanded excavation at the site (see below).

In sum, after the original site examination, the Skibiski Site consisted of a relatively low density of artifacts, with two main concentrations or loci. These loci are themselves low in artifact density, although diagnostic materials from the Early or Late Archaic periods have been recovered from both loci. The loci are likely the result of two individual knapping events, likely centered on tool production and maintenance, although other activities may have occurred at each locus. Other investigations of low-density lithic scatters have demonstrated that archaeological sites containing only a few pieces of chipping debris are relatively rare (Binzen 2008). Low-density sites are not generally as visible as larger habitation and tool-production sites, and thus are less well-studied and represented in the archaeological record. Settlement patterns associated with such small lithic-scatter sites are different from larger habitation sites. Early Archaic sites are also relatively rare, particularly Parallel Stemmed sites; to date, no single-component Parallel Stemmed site has been reported. Late Archaic sites, however, have been well-documented within the archaeological record of the Northeast, although again, larger, multi-component sites are more commonly

[3] AHS is not suggesting that a GMAT assemblage is present at either of the loci in Northampton, although the presence cannot be ruled out until after the completion of a DRP. We are suggesting that lithic reduction strategies during the Early Archaic, not associated with bifurcated technology, were centered around microlithic reduction of locally available raw material, such as quartz and quartzite, with occasional bifacial technology (such as parallel stemmed points but very few steep sided scrapers). These activities were centered around plant or animal processing using low-grade tabular metamorphic rocks and high -grade metamorphic rock reduction, presumably for groundstone tool production (Robbins 1980; Robinson 1996; Forrest 1999; Sonnenburg et al. 2011; Jones and Leslie 2018).

investigated when compared to single-component, low-density lithic scatters. The study of low-density sites, such as the Skibiski Site, has the potential to provide information about the role of these sites within Early or Late Archaic settlement systems, illuminating settlement functions that may be presently unknown to archaeologists (Rieth 2008).

Table 1: Pre-colonial artifacts recovered from Locus 1 during intensive (locational) and site examination survey.[4]

Inventory	Unit	Type	Class	Variety	Soil	Sum
2	T3-5-N	quartzite	debitage	flake	Duff/Ap	1
3	T3-5-N	quartz	debitage	medium flake	Ap	1
4	T3-5-N	quartz	debitage	small angular debris	Ap	1
5	T3-5-N	quartzite	debitage	flake	Ap	4
6	T3-5-N	quartzite	debitage	small angular debris	Ap	1
7	T3-5-N	quartzite	debitage	primary reduction flake	Ap	1
32.01	T3-5	quartz	debitage	flake	Ap/B1	6
32.02	T3-5	quartz	debitage	shatter	Ap/B2	3
32.03	T3-5	crystal quartz	debitage	flake	Ap/B3	1
33	N100E100	quartz	debitage	possible primary reduction flake	Duff/Ap	1
34	N100E100	quartzite	flaked tool	biface	Ap	1
35	N100E100	quartzite	debitage	flake	Ap	1
36	N100E100	quartzite	debitage	primary reduction flake	Ap	2
37	N100E100	quartzite	debitage	large primary reduction debris	Ap	1
38	N100E100	quartzite	debitage	primary reduction flake	Ap	1
39	N100E100	quartzite	debitage	flake	Ap	1
40	N100E100	quartzite	debitage	primary reduction flake	Ap	1
41	N100E100	quartzite	debitage	bifacial retouch flake	Ap	1
42	N100E100	quartzite	debitage	flake	Ap	6
43	N100E100	quartzite	debitage	large flake	Ap	1
44	N100E100	quartz	debitage	flake	Ap	1
45	N100E100	quartzite	debitage	primary reduction flake	Ap	5
46	N100E100	quartzite	debitage	flake	Ap	14
47	N100E100	quartzite	flaked tool	unifacial projectile point	Ap	1
48	N100E100	quartzite	debitage	flake	Ap	1
49	N100E100	quartzite	debitage	flake	Ap	1

[4] For a listing of arbitrary levels for recovered artifacts, please see the Artifact Inventory Catalogue in Appendix C. Listing individual levels would make the table excessively long for an in-text table.

Table 2: Pre-colonial artifacts recovered from Locus 2 during intensive (locational) and original site examination survey.[5]

Inventory	Unit	Type	Class	Variety	Soil	Sum
8	T3-7	quartzite	debitage	flake	Ap	2
9	T3-7	quartz	debitage	shatter	Ap	1
10	T3-7	quartz	debitage	microflake	Ap	3
11	T3-7	quartz	debitage	microflake	Ap	4
12	T3-7	quartzite	debitage	flake	Ap	3
13	T3-7	quartzite	debitage	small angular debris	Ap	1
14	T3-7	unidentified lithic	cobble tool	hammerstone	Ap	1
15	T3-7	quartz	debitage	microflake	B1	3
16	T3-7	quartz	debitage	flake	B1	1
17	T3-7	quartz	debitage	primary reduction flake	B1	1
18	T3-7	quartzite	debitage	microflake	B1	3
19	T3-7	quartzite	debitage	flake	B1	2
20	T3-7	quartzite	debitage	primary reduction flake	B1	1
21	T3-7	quartzite	debitage	microflake	B1	2
22	T3-7	quartz	debitage	microflake	B1	2
23	T3-7-N	quartz	debitage	flake	Ap	1
24	T3-7-E	quartzite	debitage	flake	Duff/Ap	1
25	T3-7-E	quartzite	debitage	flake	Ap	1
26	T3-7-E	quartz	debitage	shatter	B1	2
27	T3-7-E	quartz	debitage	microflake	B1	1
28	T3-7-E	quartzite	debitage	bifacial retouch flake	B1	1
29	T3-7-E	quartzite	debitage	primary reduction flake	B1	1
30	T3-7-S	quartz	debitage	large flake	Ap	1
31	T3-7-S	quartz	debitage	flake	Ap	1
50	N121E100	quartzite	flaked tool	possible backed crescent	Ap	1
51	N121E100	quartz	debitage	flake	Ap	1
52	N121E100	quartzite	debitage	flake	Ap	1
53	N121E100	quartz	debitage	primary reduction flake	Ap	1
54	N121E100	quartzite	debitage	medium flake	B1	1
55	N121E100	quartzite	flaked tool	projectile point	B1	1

[5] Ibid.

C. Expanded Site Examination Survey Results

The results of the expanded site examination survey are discussed by locus.

C1. Locus 1

At Locus 1, AHS excavated a total of 3.5 1x1-meter excavation units and one STP in the expanded site examination. These excavation units included N99.5E99 (a half-meter), N100E99, N101E99, N99.5E100 (a half-meter), N100E100, and N101E100, the single STP was recorded as the southwest quad of N104E100 (Figures 15A and B). Two quadrants, one from N100E99 and N101E100, were previously excavated during the intensive (locational) survey, and the 1x1-meter unit of N100E100 was excavated during the original site examination (these quads and units were re-excavated, but not screened). The soils did not vary dramatically from those encountered during the previous phases of work, except that they were much wetter. In soil profiles that did not display portions of Feature 1, the plowzone consisted of a very dark grayish brown (10YR 3/2) fine sandy loam that extended to a maximum depth of 28 cmbs. The plowzone generally sat atop a B_1 horizon consisting of strong brown (7.5 YR 4/6) loamy sand with coarse sand, that generally extended to a maximum depth of 52 cmbs. The subsoil was underlain by a brown (7.5 Y 4/4) fine to medium sand with coarse sand C-horizon soil. The soils were wet throughout the survey, but the water table was below the glacial subsoil horizon.

C1.1 Feature 1

Feature 1 was exposed at the interface between the plowzone soil and the Feature1A interface in all of the units that were excavated at Locus 1, but not in the STP (Figure 16 and Photograph 15). This feature was bisected along the western wall of the East 100 line, including units N99.5E100, N100E100, and N101E100 (Photographs 16-18 and Figure 17). The bisect displayed a complicated mottled interface of four feature soils that were bowl-shaped in profile and included Feature 1A, 1B, 1C, and 1D soils, which were labeled for their stratigraphic provenience in descending order. The plowzone above this feature extended to an average depth of 30 cmbs, contained all the lithic artifacts recovered from this loci, and occasional flecks of charcoal; several large cobbles were also recovered from the interface between the plowzone and Feature 1A. Feature 1A consisted of a very dark brown (10YR 2/2) loamy sand that was wet and extended to a maximum depth of 60 cmbs and contained numerous charcoal fragments; Feature 1B sat directly below Feature 1A, was a strong brown (7.5YR 4/6) loamy sand that was mottled with Feature 1A soil that also displayed minor charcoal flecking, and extended to a maximum depth of 68 cmbs; Feature 1C lay below Feature 1B and Feature 1A, and was also exposed at the plowzone interface; this soil consisted of a very dark gray-brown (10YR 3/2) loamy sand with coarse sand that was wet and extended to a maximum depth of 90 cmbs; Feature 1D, which sat beneath Feature 1C, consisted of a very dark brown (10YR 2/2) loamy sand with coarse sand that was very wet and extended to a maximum depth of 93 cmbs. The maximum depths of Features 1C and 1D were not reached during the original bisection due to the water table at the time of bisection but were noted in plan view during the excavation of N100E100. A 10-liter flotation sample was collected after the bisection from Feature 1A (N100E99, 30-45 cmbs); this resulted in the identification of 64 unidentified charred wood fragments, one charred hazelnut (*Corylus sp.*) fragment, one unidentified charred nut fragment, two charred raspberry (*Rubus sp.*) seeds (whole), and one uncharred strawberry (*Fragaria sp.*) seed (whole).

Based on the profile view of Feature 1, as well as the plan view throughout the excavation, this feature is most likely an ancient tree-throw. The dipping profile of the deep soil feature best

aligns with a tree-throw (Figure 18), as described by Langohr (1993). Tree-throws are relatively common landscape features in New England, particularly on terraces in the Connecticut River Valley where tall trees may be exposed to strong wind conditions (see Lyford and MacLean 1966; Strauss 1978; Cremeans and Kalisz 1988; Shaetzel et al. 1990; Thorson and Tryon 2003; Šamonil et al. 2010; and Hellmer et al. 2015). Tree-throws are commonly associated with archaeological sites as attractors for site occupation, agents of palimpsest or lag-deposit creation, preservation of archaeological sites, and general bioturbation that may affect the stratigraphy of a site (see MacPhail and Goldberg 1990; Langhor 1993; Van Nest 2002; Thorson and Tryon 2003; Ives 2010, 2012; Norman 2013). All of the artifacts from Locus 1 were recovered from the plowzone soils and were most concentrated in the interface between Feature 1A and the plowzone soils. None of the lithic artifacts were recovered from the feature soils; only charred ecofacts were found. These charred ecofacts probably represent the remains of an ancient hearth or the tree-throw event, however, the modern tree root system may have slightly disturbed the stratigraphy of this possible hearth; no discernable pattern of charring was recognized in plan or profile view of Feature 1. The tree-throw feature must predate (although probably only by a few seasons) the occupation of Locus 1, because all of the artifacts were found above (but likely within the feature before plowing mottled the upper 30 cm of the soil column) the feature, and were not dispersed throughout it, as would be expected if the tree-throw postdated the occupation.

C1.2 Cultural Materials

A small number of late historical-period field scatter artifacts were recovered from Locus 1 including glass fragments, a kaolin fragment, and a whetstone. Charcoal was noted and collected from plowzone, Feature 1A, Feature 1B, and B_1 soils.

A total of 349 lithic artifacts were recovered from Locus 1 during the expanded site examination, including 105 from N101E100, 104 from N101E99, 79 from 100E99, 51 from N99.5E99, 10 from N99.5E100, and one from the STP (N104E100) (see Table 3). Of special note are the three backed crescents recovered from Locus 1, three utilized flakes, four cores, three exhausted cores, and two preforms. These tool types indicate the use of bifaces and the manufacture or use of crescents and expedient flakes were important functions at Locus 1. Biface manufacture was likely not an important part of site activities, as indicated by the absence of biface thinning flakes. The majority of the artifacts are indicative of decortication of quartzite cobbles and further reduction; primary reduction debris accounts for 19% of the assemblage, flakes account for 49%, and cores are abundant (n=8). All of the artifacts from the expanded site examination survey at Locus 1 were recovered from the plowzone and Feature 1 interface levels.

In total, 409 artifacts were recovered from Locus 1, including <u>all</u> phases of archaeological testing; four distinct raw materials were recovered in the following percentages: 89% quartzite (n=364), 9% quartz (n=36), 1% sandstone (n=4), and 1% quartzitic metamorphic lithic (n=4) (see Figures 19 – 21 and Appendix C). Artifact types recovered from Locus 1 inclusive of all phases of survey include 390 pieces of debitage, 12 flaked tools, two cobble tools, and three fire-cracked rock fragments. The following types of debitage were recovered: 207 flakes; 31 bifacial retouch flakes; 78 primary reduction debris flakes (small, medium and large); 24 pieces of angular debris (large, small, and shatter); 21 microflakes; 18 medium flakes; eight cores; and three large flakes. The 12 flaked tools included three biface fragments, three backed crescents, three utilized flakes, two preforms, and one unifacial point (Photographs 19-21). Several of the larger pieces of quartzite may have been heat-treated, they display reddening often associated with heat transformation (Photograph 22) (Domanski and Webb 2007). The presence of charcoal, charred

ecofacts, fire-cracked rock, and probable heat-treated artifacts likely indicates that a hearth is present at Locus 1, although it was not discovered during the expanded site examination. However, a hearth can easily be missed in interval testing and excavation units because they are often very ephemeral.

Site examination surveys of pre-colonial sites are generally centered on previous intensive (locational) findspots, or positive STPs. Archaeologists commonly employ either block testing, where a particular landscape or feature is sampled, or a stratified sampling strategy, where a grid is superimposed on the landscape, to provide a systematic way of testing a previously identified archaeological site (Orton 2000). Block testing generally results in discovering archaeological sites tied to particular landforms or features and the systematic method allows archaeologists to effectively sample a standardized portion of an archaeological site. Neither method, however, ensures that archaeological sites will be wholly and accurately represented by the standardized or block samples (Flannery 1982b). This is doubly true for most site examination and intensive (locational) surveys of pre-colonial sites, because the most common artifact type at these sites is lithic debitage and successive surveys generally radiate out from individual findspots of debitage. This provides archaeologists with an effective sample of lithic material and generally discarded tool types at a site after a site examination survey, but other artifact types that are generally rarer, such as charcoal, ecofacts, features, or pottery, can easily be missed by a 5-meter grid survey and a few excavation units placed near high concentrations of lithic artifacts. This is particularly true of features such as hearths and posts, which may be placed intentionally by people in the past away from high-refuse areas, as opposed to shell middens or storage pits, which are often placed coincident with high-refuse areas; this is also often true of pre-colonial pottery discard locations, which are often centered near hearths, houses, or traditional gendered spaces, and not necessarily at focused areas of intensive tool production and maintenance (Classen 1997; Hrynick and Betts 2014). Finally, it is even more unlikely that either sampling strategy will discover features or rare artifact types at small loci or archaeological sites, because they contain fewer artifacts in general and are spatially constrained so that even tight-interval surveys of 5 meters may miss significant portions of, or entire sites and their artifacts during field surveys.

How then, are archaeologists in cultural resource management contexts able to discover datable components of sites, such as features, that lend more credibility towards National Register eligibility criteria? With pre-colonial archaeological sites, we must use other means to determine if features existed at a site and are preserved, an important consideration because taphonomic processes such as soil erosion, weathering, and bioturbation can dramatically decrease the likelihood of feature preservation or identification, particularly during STP surveys. This is considerably easier for hearths than it is for posts, because hearths are generally large (over 50 cm in diameter) and may leave other, ephemeral signatures in the archaeological record. These signatures often include diffuse charcoal in subsoil contexts, charcoal present in localized bioturbations, thermal alterations to lithic debitage (including potlid fractures, crazing, and discoloration), patterns of debitage discard centered around negative space, and alterations to soil chemistry that may be identifiable through remote-sensing techniques, such as ground penetrating radar, soil resistivity, or changes in soil pH (Bevan 1983; Canti 2003; Conyers 2016). Posts and burial features are more difficult to discover, because they do not leave behind the same suite of signatures, although the latter should be discernible with similar geophysical techniques.

The only conclusive way to discover if features are present at an archaeological site is to excavate large portions of the site using 1x1-meter excavation units. Excavation is also necessary to ground-truth the geophysical feature identification methods. In the context of CRM

archaeology, the only sites that generally are known to contain archaeological features are those where either a feature was encountered in the intensive (locational) or site examination survey (often randomly, because of the grid survey), or where significant portions of a site are mitigated through DRP excavations if the site is deemed eligible for listing in the National Register. For the reasons listed above, this does not mean that other sites investigated at the intensive (locational) or site examination level, but not the DRP, are less likely to contain features, it simply means that archaeologists did not find those features, or they were winnowed away through taphonomic processes, or both. We therefore think that when signatures of possible features are identified during the intensive (locational) or site examination survey level, they lend credence to the idea that features are likely preserved at the site, but lay outside the areas that were tested in the field. Binzen (2008) came to the same conclusion for small, single-component lithic scatters, suggesting that these sites almost always contain hearth features, although their signatures are often ephemeral.

Table 3: Pre-colonial artifacts recovered during expanded site examination survey from Locus 1.[6]

Class	Variety	Sum
flaked tool	biface	2
debitage	bifacial retouch flake	30
cobble tool	cobble	1
debitage	core	4
flaked tool	crescent	3
debitage	exhausted core	3
other lithic	fire cracked rock	3
debitage	flake	170
debitage	large angular debris	7
debitage	large flake	2
debitage	large primary reduction debris	11
debitage	medium flake	21
debitage	microflake	21
cobble tool	modified pebble	1
debitage	possible core	1
flaked tool	preform	2
debitage	primary reduction flake	13
debitage	shatter	6
debitage	small angular debris	6
debitage	small primary reduction debris	42
flaked tool	utilized flake	3

C2. Locus 2

At Locus 2, AHS excavated a total of 2.5 1x1-meter excavation units and three STPs. These excavation units included N119.5E100 (a half-meter), N120E100, N120E101.5 (a half-

[6] Ibid.

meter), and N121E101.5 (a half-meter), the STPs were recorded as the southwest quads of N124E100 and N116E100 (Figures 15A and B); N120E102 was excavated in the southeast quad due to vegetation (tree) obstructions. A single quadrant from N120E100 (the southwest quad) had been previously excavated during the intensive (locational) survey, and N121E100 was excavated during the site examination; this quad and unit were re-excavated during the expanded site examination survey, but not screened. Soils at Locus 2 were similar to those encountered during the previous two phases of survey. The plowzone consisted of a very dark gray-brown (10YR 3/2) silty loam with gravels that extended to an average depth of 26 cmbs. Beneath the plowzone, a subsoil (B_1) was characterized as a brown (10YR 4/4) silty fine to very fine sand with gravels that extended to a maximum depth of 56 cmbs. Underneath the subsoil, lay an olive brown (2.5Y 4/3) silty fine to very fine sand C horizon that was mottled with a dark yellow-brown (10YR 3/4) fine to very fine sand with gravels (Photograph 23). As with Locus 1, the soils were wet throughout the survey, but the water table lay beneath the C horizon. A fill layer was encountered in the STP placed at N120E102, likely indicative of small-scale historical-period disturbances associated with the construction of the stone wall that abuts North King Street.

C2.1 Cultural Materials

At Locus 2, a single brick fragment was noted, but not collected from the plowzone of N120E100. No other historical-period artifacts were recovered from this locus.

A total of 111 lithic artifacts were recovered from Locus 2 during the expanded site examination survey, including 79 from N120E100, 15 from N120E101.5, 11 from N119.5E100, five from N121E101.5, and one from N124E100 (see Table 4). Two additional backed crescents were recovered from Locus 2 (one of these early-stage), as well as six cores, one early-stage biface (possibly an adze or chopper preform), a shale preform (with notching, possibly for a gorget), three utilized flakes, and one fragment of fire-cracked rock. As with Locus 1, tool types at Locus 2 appear focused on the use of biface and the manufacture or use of crescents and expedient flakes. Biface manufacture (at least late-stage), was also not an important activity at Locus 2, as evidenced by the small number (n=2) of biface thinning flakes. The majority of the artifacts recovered from Locus 2 during the expanded site examination survey are, as with Locus 1, indicative of decortication and further reduction on site; primary reduction flakes account for 21% of the expanded site examination assemblage, and flakes account for 38%, similar percentages when compared with Locus 1.

In total, 157 lithic artifacts were recovered from Locus 2, including <u>all</u> phases of archaeological survey, with six distinct types of lithic raw materials were recovered, including the following percentages: 59% quartzite (n=92), 29% quartz (n=45), 6% crystal quartz (n=9), 4% quartzitic metamorphic lithic (n=7), 1% shale (n=2), and 1% unidentified (n=2) (see Figure 22 – 24 and Appendix C). Artifact types recovered from Locus 2 include 143 pieces of debitage, nine flaked tools, four cobble tools, and one piece of fire-cracked rock. The following types of debitage were recovered from this locus: 56 flakes; 28 pieces of primary reduction debris (small and large flakes); 26 microflakes; 10 bifacial retouch flakes; seven pieces of angular debris (large, small, and shatter); six cores (including one possible blade core); six large flakes; and three medium flakes. The flaked tool assemblage includes three backed crescents, three utilized flakes, one parallel stemmed projectile point, one early-stage biface (possibly a preform for a chopper or adze), and one possible shale preform for a gorget (Photographs 20, 21, 24, and 25). Similar to Locus 1, several of the quartzite flakes display reddening, indicating possible heat treatment (Domanski and Webb 2007). This, teamed with the fire-cracked rock, likely indicates that a hearth is likely

preserved at Locus 2, but has not yet been discovered. No charcoal or feature discolorations were noted during any phase of work at this locus but as discussed above, these features may have lain outside the boundaries of the excavation units and 5-meter grid interval that was tested.

Table 4: Pre-colonial artifacts recovered during expanded site examination survey from Locus 2.[7]

Class	Variety	Sum
debitage	biface thinning flake	2
debitage	bifacial retouch flake	9
cobble tool	cobble	1
debitage	core	5
flaked tool	crescent	1
flaked tool	early stage biface	1
flaked tool	early stage crescent	1
other lithic	fire cracked rock	1
debitage	flake	42
debitage	large angular debris	2
debitage	large flake	5
debitage	large primary reduction debris	6
debitage	medium flake	2
debitage	microflake	8
cobble tool	modified cobble	1
cobble tool	modified pebble	1
debitage	possible core	1
flaked tool	possible knife	1
debitage	primary reduction flake	14
debitage	small angular debris	1
debitage	small primary reduction debris	3
flaked tool	utilized flake	2
flaked tool	utilized large flake	1

[7] Ibid.

V. DISCUSSION

Overall, the lithic reduction strategy at both Skibiski Site appears to be focused on decortication of quartzite and quartz cobbles, likely to "gear up" or replace worn-out flaked tools such as those that were discarded at the loci. These cobbles appear to have been part of the remnant glacial till that litters the landscape in this area. The tree-throws likely acted as beacons for pre-colonial peoples by exposing the quartz and quartzite on the ground surface or in the tree-throw root system. A freshwater spring and associated wetland are within the project area, likely an additional draw to the area. Finally, the Connecticut River was probably the biggest lure, and the site is situated on the third terrace above the river, making it relatively immune to flooding while still affording a clear view of the river and its transportation highway, and associated resources.

Biface manufacture and maintenance occurred on site, again likely as part of a strategy to replace or refashion tools. Site distribution maps from both loci support the contention that these are small, single component loci that are spatially constrained (Figures 21 and 24). A Parallel Stemmed point and a unifacial point were both recovered (one from each locus) and were probably discarded because they were at the end of their "use-life" (Frison 1968). It is likely, based on the recovery of several biface fragments, one projectile point preform and one chopper/adze preform, that quartzite and quartz cobbles were reduced with the intention of producing large flake blanks (Photographs 22 and 26). These flake blanks were then reduced to bifacial preforms, and further reduced to formal tools. One of the projectile point preforms recovered is reminiscent of a Parallel Stemmed point; it was made from a flake (not reduced from a cobble core as is common with small-stemmed points), and had begun to take the shape of a point, although it was abandoned before it was finished (Photograph 19). Non-formal tools also account for a significant component of the tool assemblage; six utilized flakes were recovered from both loci. The majority of the cores display reduction that is focused on the production of flake blanks or simple decortication. The shale artifact (possibly a preform for a gorget) and preform of the chopper from Locus 2 are intriguing; similar tools were found at the Sandy Hill Site in Connecticut, and the choppers at Sandy Hill were thought to be digging instruments for wetland resources and the shale tablets were proposed as working or grinding surfaces (Forrest 1999; personal communication, Brian Jones 2018). The shale artifact is more reminiscent of the notched stone slab production associated with Feature 206 at Wapanucket (Robbins 1980), which also contained choppers was dated to the Early Archaic Period by Robinson (1996). The presence of the freshwater spring adjacent to the site and the current wetland is suggestive of a possible wetland in the past as well, although modern drainage actions associated with the construction of commercial, residential, and government property have undoubtedly altered the landscape and may have created the current wetland environment.

Six backed crescents have now been recovered, three from each locus. These were likely used as hafted armatures, to increase the damage to animals or fish when used in spears or darts.[8] One of the most important qualities of microlithic hafted technology is that it is versatile and can be useful as an armature in many different settings (Walker 2014) (see Figures 25 and 26). Hafted microliths have been found in numerous paleolithic contexts, and their use dates back to the Middle Stone Age in Africa (Thackeray 1992; Villa et al. 2010). Elston and Brantingham (2002) have

[8] All compound tools used in hunting, warfare, or animal and plant processing are by nature hafted and used as an armature (after the Latin armare, or "to arm" as in warfare). Projectile points, hafted knives, and hafted axes thus can correctly be referred to in this way, although microliths are more commonly recorded in the archaeological literature as hafted armatures (i.e. Peterkin 1993; Shea 2006; Zipkin et al. 2014).

suggested that the use of hafted microliths is best explained as a "risk management" strategy: microliths provide the hunter with both a strong and durable spear or dart made from fire hardened wood or bone, that is also lethal, when the microliths are inserted. In fact, the insertion of several microliths can make the spear or dart more lethal than one tipped with a single projectile point. Furthermore, stone barbs may be particularly important for spearfishing; the microliths act as barbs that are similar to those found on bone harpoons, which are useful because the spear becomes difficult to dislodge from aquatic prey. One quartzite blade core was also recovered from the Skibiski Site. It displays cracking on one end and several long linear removals. This was likely first used as a hammerstone, and once its integrity failed, was used as a core for microlith manufacture (Photograph 27).

Fire-cracked rock and heat-treated quartzite was recovered from both loci, indicating that hearths were likely present while the site was occupied. Binzen (2008) has suggested that most small, single-component lithic sites likely contain hearth features, although these may sometimes be ephemeral. The charcoal recovered at Locus 1, along with the charred nut fragments and raspberry seeds, teamed with the heat-treated lithics, indicates that a hearth was almost certainly present during the site's occupation. There was no discernable stain in plan or profile view within Feature 1, however, and the association of the charred ecofacts cannot be divorced from the natural, tree-throw feature itself. These fragments are probably cultural, but may predate the occupation of the site; further complicating this is the presence of a very large oak tree near the center of the feature, which may have caused some bioturbation. The hearth at Locus 1 may lie outside the boundaries of the units that have been excavated. At Locus 2, although heat treatment was documented, no charcoal was recovered. This hearth may also lie outside the boundaries of the units that have been excavated at this locus.

VI. CONCLUSIONS AND RECOMMENDATIONS

A. Summary

The intensive (locational) survey of the APE included 61 STPS: 49 transect pits placed at 10-meter intervals along four transects, and 12 array pits placed around pre-colonial findspots at STPs T2-3, T3-5, and T3-7 (Figure 9). Archaeological testing revealed that most of the APE contained intact soils. The northeastern portion of the APE contained an area of talus slope, two small seasonal wetland areas were identified in the eastern part of the survey area, and a large borrow pit was identified in the northern part of the APE; these areas were not tested in the survey. A section of stone wall in the eastern part of the APE, along Hatfield Road, was mapped onto project plans and photographed.

The site examination included 47 STPs placed at 5-meter intervals and two 1x1-meter excavation units placed adjacent to intensive (locational) transect pits T3-5 and T3-7 (Figures 11 and 12). Site examination testing revealed that the pre-colonial site was possibly a rare Early Archaic, or a more common Late Archaic site, with two individual loci. Both loci contain projectile points that may be temporally diagnostic to the Early or Late Archaic, although one of the loci also contained a microlithic crescent and the overall flake reduction technique seems to be consistent with a microcore reduction technology. The artifact concentrations at the loci indicates small, single-component occupations.

The expanded site examination included four STPs spaced at 2-meter intervals from positive STPs and six 1x1-meter excavation units placed centrally at both loci (Figures 15A and B). A total of 566 pre-colonial lithic artifacts were recovered from both loci. Expanded site examination testing revealed that the pre-colonial site is likely a rare Early Archaic site, with two contemporary loci of activity. Both loci contain projectile points, formal bifacial crescent tools, and evidence of biface manufacture and maintenance, as well as decortication of large and small quartz and quartzite cobbles. Activities at the site appear to have been focused on raw material acquisition, as well as the production and replacement of formal tools, and the production of informal tools for animal- and plant-processing. Although no discernable hearth features were found during the expanded site examination, it is highly likely that these hearths are preserved at both loci, but were outside the bounds of the shovel testing and excavation units. Charred ecofacts were recovered from Locus 1 in the upper layer of Feature 1, but, these may date the tree-throw event, not the cultural occupation. The boundaries of the site are completely encapsulated within the APE, and no historical or modern-period disturbances were noted during any phase of the survey.

Early Archaic archaeological sites are rare, and to date no single-component Parallel Stemmed sites have been discovered in the Northeast. Boudreau (2016) has suggested that the Parallel Stemmed point may be indicative of remnant Paleoindian peoples during the Early Archaic period. Microlithic crescents have not been previously identified in the Northeast, although this tool type has been found commonly in arctic regions, and in other paleolithic contexts across the world. Given the rarity of Early Archaic sites, and the unique assemblage of formal tools at this site, we believe that the Skibiski Site is likely eligible for listing in the NRHP under Criteria A and D. It is likely eligible under Criterion A because the site may provide valuable information about the transition between the Paleoindian and Early Archaic periods. It is also likely eligible for listing under Criterion D, because it has demonstrated through the artifact assemblage, site integrity, and remaining portions of each loci that are unexcavated, that it has the potential to yield

important information about the Early Archaic period, a period that is understudied in New England due to the scarcity of sites.

B. Research Questions

As part of assessing the site's NRHP eligibility, research questions for the site examination included the following. Recovered data only permitted limited answers to the research questions, as discussed below.

Question 1: Are there any temporally diagnostic artifacts or features present at the site, and, if so, what time periods do they represent?

Question 2: Are features, such as hearths, middens, storage pits, or post holes present? Do any of the lithic artifacts recovered display potlid fractures or crazing, which are indicative of hearths?

Question 3: What type of activities occurred at the site? The presence of a large utilized flake and granite hammerstone suggest that plant- and/or or animal-processing, as well as tool production/maintenance, took place.

Question 4: The site is on a floodplain above the Connecticut River. Is there evidence of fishing or shellfishing, such as fish bone, bone fish hooks, bone spear points, stone plummets, net-sinkers, or shell middens? Are there any tool types at the site that may indicate the production or maintenance of watercraft (groundstone tools, drills, etc.).

Question 5: Lithic raw material in the intensive (locational) survey was limited to quartz and quartzite. From where were these materials obtained? Is there evidence for other raw material types? Might the nearby talus have been a source?

Although the results of the original site examination were not conclusive, some of these research questions can begin to be answered based on the combined results of the intensive (locational) and site examination, but more testing was necessary to address them. The questions are answered and refined below. The expanded site examination was therefore designed to answer them more fully (see below).

Answer 1 – Two projectile points were recovered from each loci, and although these points are not definitively diagnostic to a time period, they appear to most closely align with Parallel Stemmed points as described by Fowler (1968a, 1968b, 1969) and Hoffman (1991). More recent excavations (Forest 1999; Singer 2017) in southwestern Connecticut have also uncovered Parallel Stemmed points. A comparison of previously identified Parallel Stemmed points and those found at this site are shown in Figure 27 (see also Boudreau 2016: 149); in our opinion, this is the most likely type represented at the site. If this typology is appropriate for these point types, then the occupation of the site likely took place during the Early Archaic. It is possible, however, that these projectile points represent untyped Small-Stemmed points or narrow Squibnocket Triangles from the Late Archaic period, which is

more frequently identified in the Connecticut River Valley. Given the possibility of two disparate time periods being represented, it was difficult to make a temporal association of this site at this time, but it was hoped that the expanded site examination would resolve the issue.

Answer 2 - One possible tree-throw/bioturbation soil anomaly was identified in both western quadrants of N100E100. This feature manifests itself at the A_P/subsoil interface and extended below the C-horizon interface. No artifacts were recovered from within this feature soil; however, a high proportion of artifacts were recovered from these two quadrants (51%, n=21), in the layer above the plowzone and feature interface, including the possible Parallel Stemmed unifacial point from this unit. The soil anomaly did not contain artifacts or charcoal, but Ives (2010, 2012) has demonstrated that many tree-throws that were utilized for encampments or lithic reduction contain hearths. The full extent of this anomalous soil feature was not investigated in the site examination because exposing it in plan view would have exceeded the allotted number of 1x1-meter excavation units. It is possible, however, that remnants of a hearth are preserved in one of the four contiguous units into which the soil anomaly extends (N99E99, N100E99, N101E99, and N101E100). Definitive identification of this soil anomaly was therefore proposed for the expanded site examination survey. No other anomalies were identified in either loci.

Answer 3 - The following classes of artifacts were recovered from Loci 1 and 2. At Locus 1, 57 artifacts were found, including 12 quartz and 45 quartzite materials. Artifact classes at Locus 1 include small primary reduction flakes, medium flakes, small flakes, a biface fragment, a large primary reduction flake, a bifacial retouch flake, and a broken possible Parallel Stemmed point. The main activity at Locus 1 appears to be primary reduction (based on the large number of artifacts with cortex, n=13 or 23%), as well as tool production or rejuvenation. Based on the presence of a deep soil feature, which is likely a tree-throw, there may also be a hearth nearby. At Locus 2, 41 artifacts were recovered, including 18 quartz and 22 quartzite artifacts and one hammerstone. Artifact classes at this loci include microflakes, small flakes, small angular debris, small primary reduction flakes, a bifacial retouch flake, a large notched and utilized flake, a medium flake, a backed crescent, and a possible Parallel Stemmed point. The main activity at Locus 2 also appears to be primary reduction (cortical artifacts, n=5 or 12%) as well as tool production or rejuvenation, and tool use (likely plant or animal processing). The presence of a backed microlithic, as well as several microflakes (n=18 or 44%), indicates a preference for microlithic reduction and tool use. Large portions of both loci remain unexcavated, and other site activities may be preserved in these areas.

Answer 4 - No evidence of fishing or shellfishing was recovered during the original site examination; in fact, no ecofacts were recovered from either loci. The deep soil feature identified in Locus 1, however, may contain ecofacts if a hearth is preserved elsewhere within this feature. No evidence of watercraft production or maintenance

was recovered, and no groundstone tools, drills, awls, or axes were recovered during the initial site examination.

Answer 5 - The raw materials identified during the intensive (locational) survey included quartz and quartzite, as well as one unidentified hammerstone. Only quartz and quartzite artifacts were recovered during the site examination. At Locus 1, 21% of the artifacts were quartz, and 79% were quartzite, while at Locus 2, 44% of the artifacts were quartz and 54% were quartzite (the hammerstone made up 2% of the assemblage). Three cortical quartz flakes were recovered. Two from Locus 1 likely have remnant bedrock cortex, while one from Locus 2 is fluvially weathered. Fifteen cortical quartzite artifacts were recovered, including 12 from Locus 1 and three from Locus 2. All of the cortical quartzite artifacts have fluvially-weathered cortex. Based on the cortical artifacts, the quartzite artifacts from both loci and the quartz from Locus 2 are likely derived from small river cobbles from tributaries of the Connecticut River nearby region. The cortical quartz flakes from Locus 1, however, display bedrock cortex, likely representing a quartz vein or quarry source of raw material, not fluvial. As discussed above, the nearby talus slope consists of metamorphic bedrock talus, likely granite, and is not suitable for tool manufacture.

In addition to assessing further the site's integrity and defining the site boundaries, as well as continuing to assess the research questions from the original site examination, research questions that the expanded site examination was hoped to answer include the following:

Question 1: Are the projectile points recovered during the site examination representative of the Early Archaic, Late Archaic, or some other time period? Are both loci single-component occupations (and concurrent), or are other occupations represented at the site?

Question 2: Is the deep soil feature identified in N100E100 a tree-throw, or some other type of feature? Are there remnant cultural features preserved within this soil feature, as suggested by Ives (2010, 2012)? Are other features present within either locus? Are there any ecofacts at either loci that are suitable for radiocarbon dating?

Question 3: Lithic reduction of small fluvially-weathered quartz and quartzite, as well as bedrock quartz took place on site, including tool production and maintenance. The presence of a utilized flake, a biface fragment, and a backed microlith indicates that other activities took place on site. Are these activities limited to animal and plant processing, or were there other activities (e.g., are the microliths hafted)?

Because the expanded site examination only sampled a small portion of the site and other, significant portions remain unexcavated, it is difficult to fully answer these questions. The research questions posed during the original site examination and expanded site examination can begin to be answered, however.

Answer 1 - No additional projectile points were recovered during the expanded site examination survey, although two preforms were (one from each locus). Based on

the reduction strategy of the preforms and projectile points, which were produced from flake blanks and not from cores with remnant platform cortex (as is consistent with Late Archaic reduction strategies), these projectile points are likely representative of the Early Archaic period. This is based on the presence of the Parallel Stemmed point (Figure 27), as well as the co-occurrence of several lithic tool types at other Early Archaic sites, such as the chopper and shale preform. Both of the loci are also most likely concurrent, single-component occupations, based on the proximity, similarity in lithic reduction, heat-treatment of quartzite, presence of microlithic crescents, and overall similarity of tool types and raw materials. Diagnostic artifacts from other time periods were not recovered.

Answer 2 - The deep soil feature identified in N100E100 is an ancient tree-throw. The profile and plan view of the feature is most similar to tree-throws described by Langhor (1993), particularly those that occur on relatively level surfaces, such as river terraces (Figure 11). Charred ecofacts were recovered from the upper level of this feature, although the provenance of these ecofacts is in doubt. They may align with the cultural occupation of the tree-throw, or they may date the actual tree-throw event. These charred artifacts are suitable for radiocarbon dating, but they may not date the actual occupation. No other charred ecofacts were recovered from either locus.

Answer 3 - Contrary to the initial results of the site examination, lithic reduction does not appear to be focused solely on small fluvially-weathered cores. Instead, reduction seems to be focused on both small and large quartzite and quartz cores, which are likely derived from remnant glacial till or outwash. Tool production and maintenance is the most probable explanation for the occupation of the site. The tree-throw served as an attractor to the area, exposing previously buried raw material at the site. The main activity at both loci appears to be the production of formal and non-formal tools, such as points, choppers, bifaces, crescents, and utilized flakes. These tools were likely used to process animals or plants, similarly to the choppers and tablets recovered at Wapanucket and Sandy Hill (Robbins 1980; Forrest 1999). The points and the crescents, however, were most likely used as complex hafted armatures to hunt terrestrial or aquatic prey. In fact, the crescents may have been used as stone barbs to spear fish in the Connecticut River. Microscopic usewear and residue analyses of the crescents and points may corroborate these hypotheses.

C. Recommendations

Early Archaic sites are very rare, and Parallel Stemmed sites are exceptionally rare. To date, no single-occupation Parallel Stemmed sites have been identified, except for the Skibiski Site. The presence of possible hafted microlithic technology is also an incredibly rare archaeological discovery. AHS therefore recommends that this NRHP-eligible site be avoided by project activities. If avoidance is neither prudent nor feasible, impact mitigation in the form of a DRP is recommended to remove portions of the site affected by the project. A DRP that relies heavily on machine removal of topsoil and overburden to identify hearths and related features is likely the most economic, efficient and practical way to reveal a hearth that can provide a

conclusive date for this unique site. The Wampanoag Tribe of Gay Head (Aquinnah) has requested additional investigation and mitigation of impacts to the site.

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VIII. GLOSSARY OF TERMS

Common Lithic Material Types

Quartz	White to clear with large crystalline structure and fractures irregularly.
Quartzite	Varies in color from buff to grey brown. There are several light green to blue-green varieties. Medium to fine grained texture. Crystals should still be visible to the naked eye.
Chalcedony	Usually mottled grey and pink. Very fine grained, glassy material.
Chert	Blue, green, and dark grey in color. Very fine grained, glassy material.
Jasper	Yellow to red iron-rich cherts. Very fine grained, glassy material.
Hornfels	Metamorphosed parent materials (often shale), generally weathered, softer than chert
Argillite	Metamorphosed clays and silts, well-weathered and porous, grays, reds, greens depending on source and degree of weathering. May also be described as a siltstone or mudstone.
Rhyolite	Volcanic lithics with clear phenocryst or flow-banded structures, hard, dark grays, through buff-red to purple depending on source.

Debitage Categories or Terms

Angular Debris	Lithic fragments lacking evident ventral and dorsal surfaces, classed by size.
Bifacial Reduction Flake	Flake with extensive lip created during early stage reduction or tool rejuvenation.
Bifacial Thinning Flake	A long, thin flake with a remnant bifacial platform.
Bifacial Retouch Flake	A flake with a remnant bifacial platform, usually small or micro.
Backing	The intentional dulling of an edge so that the opposite edge of a tool can be easily used by hand or in a compound tool.
Bipolar Flake	A flake with evidence of being struck or crushed at both ends.

Blade	A flake at least twice as long as wide with parallel lateral margins.
Chunk	Angular debris that is greater than 5 cm in length.
Cobble	An unmodified stone, with 100% cortex, generally fluvially weathered.
Core	A raw material source of flakes, usually angular (or multi-directional). Other varieties may include bifacial, bipolar, blade, centripetal, discoidal, exhausted, polyhedral, and tested (cobble) cores. While many of these varieties are not mentioned in Northeastern Archaeological literature, they can be found commonly within archaeological data sets, although lithic knappers of the Northeast appear to have preferred to use bifacial tools or cobbles as a source for most lithic flakes.
Core Rejuvenation Flake	A lateral flake removed from core platform, to rework the core for additional flake removals.
Edge Damage	Reworking of a tool or flake edge through the use of the artifact, not intentionally reduced or reworked.
End Scraper Retouch Flake	A strongly curved thick unifacial retouch flake with edge damage.
Flake	Any piece of debitage with evident dorsal and ventral surface and is between 1 and 3 cm in length.
Large Angular Debris	Angular debris that is between 3 and 5 cm in length.
Large Flake	Any flake that is greater than 5 cm in length.
Large Primary Reduction Debris	Any angular debris with cortex covering greater than 50% of the dorsal surface and greater than 3 cm in length.
Medium Flake	Any debitage with evident dorsal and ventral surface that is between 3 and 5 cm in length.
Microdebitage	A flake fragment less than 1 cm in a maximum dimension.
Microflake	Any whole flake less than 1 cm in length.
Notching Flake	A fan-shaped flake with a clear U-shaped platform.

Potlid	A spall detached from a larger flake, tool, or core through direct heat, with a rough ventral surface and no striking platform.
Primary Reduction Flake	A flake between 1and 3 cm in length with cortex covering over 50% of the dorsal surface.
Primary Cobble Reduction Debris	A split cobble fragment produced during reduction.
Resharpening Flake	A bifacial retouch flake with use damage evident on proximal end.
Shatter	Angular debris less than 1 cm in length (usually quartz).
Side-Struck Flake	A flake with the striking platform on the long axis of the flake.
Small Angular Debris	Angular debris between 1 and 3 cm in length.
Small Primary Reduction Debris	Debris with cortex covering over 50% of the dorsal surface and between 1 and 3 cm in length.
Tablet	A flat lithic fragment with perpendicular edges and greater than 5 cm in length.
Thermally Altered	A flake or tool that has been altered through direct contact with heat, resulting in discoloration, potlidding, or crazing.
Thick Flake	A flake with evident dorsal and ventral surfaces and a cross section greater than the length.
Unidentified Debitage	A lithic form or fragment that is not recognized.
Unifacial Retouch Flake	A flake with a flat (unifacial) striking platform showing edge damage, usually small or micro.

Tool Types

Abrader	A piece with evidence of grinding or polishing.
Adze	A bifacially flaked or groundstone tool used for cutting with a beveled edge.
Anvil Stone	A groundstone tool used as a platform showing crushing damage.
Axe	A large bifacially flaked or groundstone worked cutting tool.

Banner-Stone	A groundstone atlatl weight that has been center drilled to slip over the shaft of an atlatl. They are often decorated and symmetrical.
Bowl	A stone vessel generally made from steatite.
Biface	A piece worked on both sides.
Bifacially Edged Flake	A bifacially reworked flake.
Burin	A pointed flake or tool with a chiseled edge.
Celt	A flaked or groundstone tool with a beveled edge, for cutting, shaping, or use as a weapon.
Chopper	A large bifacially worked cutting tool.
Core Scraper	A core with use damage on at least one edge.
Crescent	A unifacially or bifacially worked lunar shaped tool with a worked edge.
Drill	A slender unifacially or bifacially worked piece designed for perforation.
Early Stage Biface	A bifacially worked piece usually broken or discarded before completion.
End Scraper	A trapezoidal shaped unifacial scraper with the proximal end (or bit) hafted and the distal edge worked.
Flake Knife	A large unifacially or bifacially expediently worked flake, used for cutting.
Gorget	A polished groundstone with two symmetrical drilled holes, likely for personal adornment.
Groundstone	A method of tool production that differs from direct and indirect percussion. Tools are roughed out through chipping and then ground, using animal skins and sand, to the desired shape. They may also be created through direct use. Raw material types include very hard rocks, such as granite, rhyolite, or basalt.
Hammerstone	A cobble with damage from direct percussion tool production.

Hoe	A large unifacially or bifacially worked flake used as a digging implement.
Knife	A unifacially or bifacially worked piece used for cutting.
Microliths	A small blade (or bladelet) generally geometric (such as a crescent, triangle, or trapezoid) in form and used in compound tools.
Modified Cobble	A cobble that has at least one worked edge.
Modified Pebble	A pebble that has at least one worked edge.
Mortar	A large grinding tool used as a base or bowl to grind plant remains with a pestle.
Net sinker	A groundstone fishing net weight.
Notched Flake	A flake with a notch, likely a remnant scar from hafting in a compound tool.
Nutting Stone	A groundstone tool that displays damage from nut crushing.
Perforator	A slender and pointed unifacially or bifacially work tool used to puncture other materials.
Pestle	A long grinding tool generally used to grind plants in conjunction with a tablet or mortar.
Plummet	A tear-drop shaped groundstone tool, likely used as a net sinker.
Pièces Esquillée	A wedge with bipolar reduction scaring (through direct percussion use), unifacial or bifacial.
Preform	A nearly complete bifacial or unifacial worked tool.
Projectile Point	A unifacially or bifacially worked hafted armature for hunting or warfare.
Retouched Angular Debris	Unifacially or bifacially worked angular debris.
Retouched Flake	A unifacially or bifacially worked flake.
Scraper	A unifacially or bifacially worked piece with one or more edges.
Side Scraper	a scraper with a reworked edge on the lateral margin or margins.

Spokeshave	A scraper with a concave working edge, used to shape wood.
Steep Edged Scraper	A scraper with a steep edge usually with only one face.
Ulu	A semi-circular or lunate groundstone or flaked knife.
Unidentified Uniface	A unifacial tool with retouch on only one face.
Utilized Angular Debris	Angular debris with edge damage.
Utilized Core	A core with edge damage.
Utilized Flake	A flake with edge damage.
Wedge	A tool that has been used to split or break up other materials, often used bipolarly.

APPENDIX A: Figures

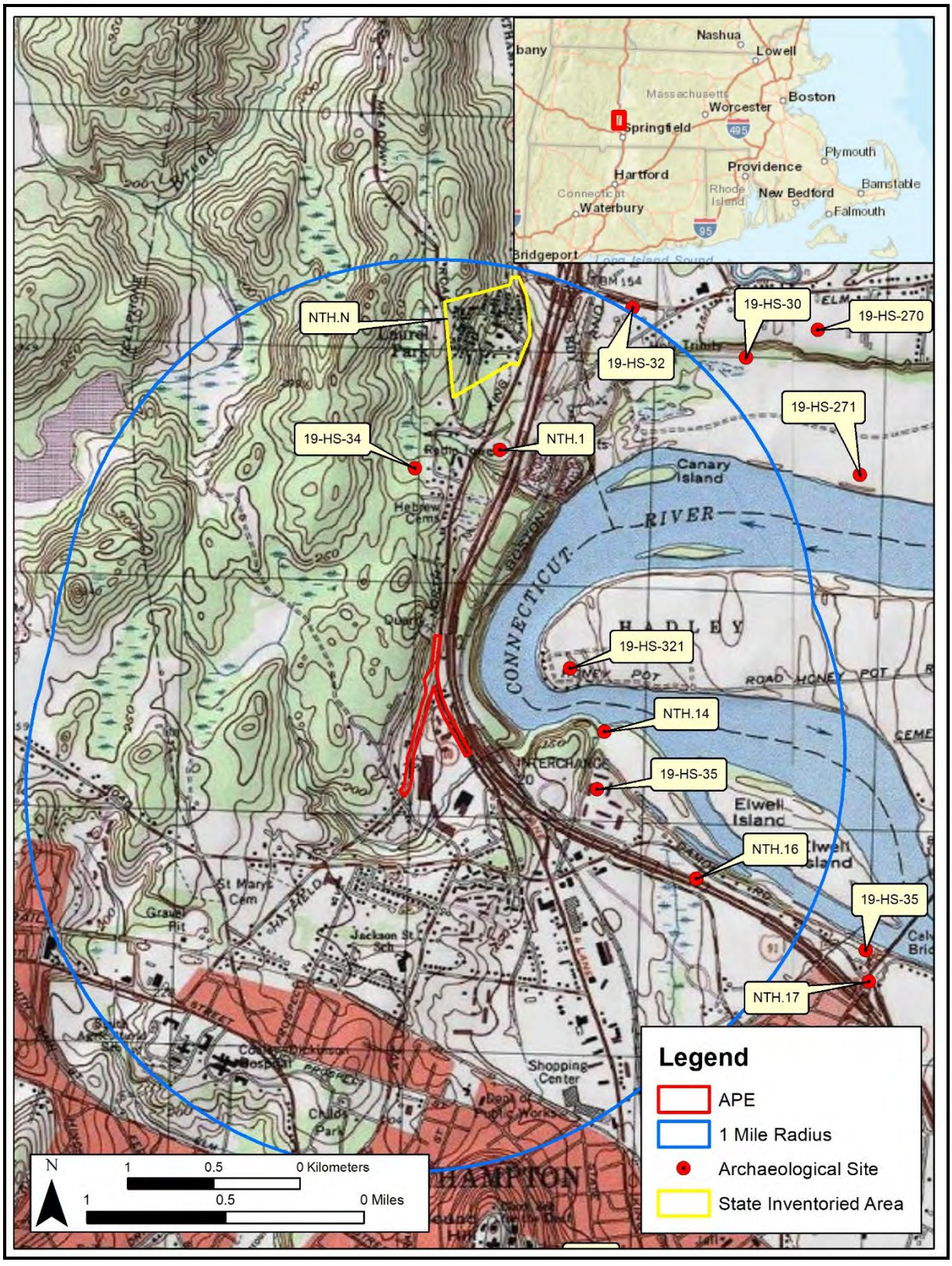


Figure 1: USGS topographic map of Northampton, showing the location of the project area and previously-recorded archaeological sites within one mile of the Area of Potential Effects.

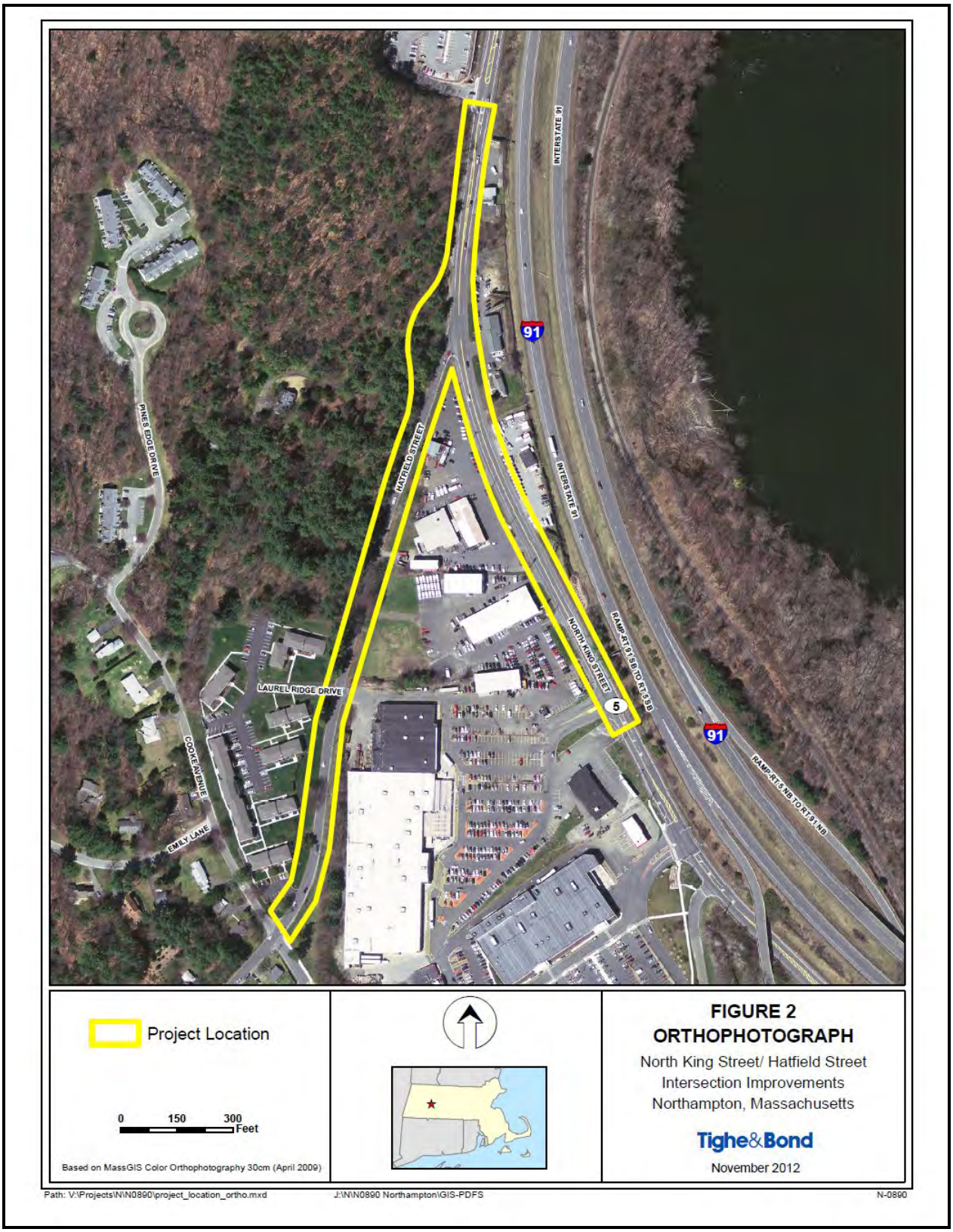
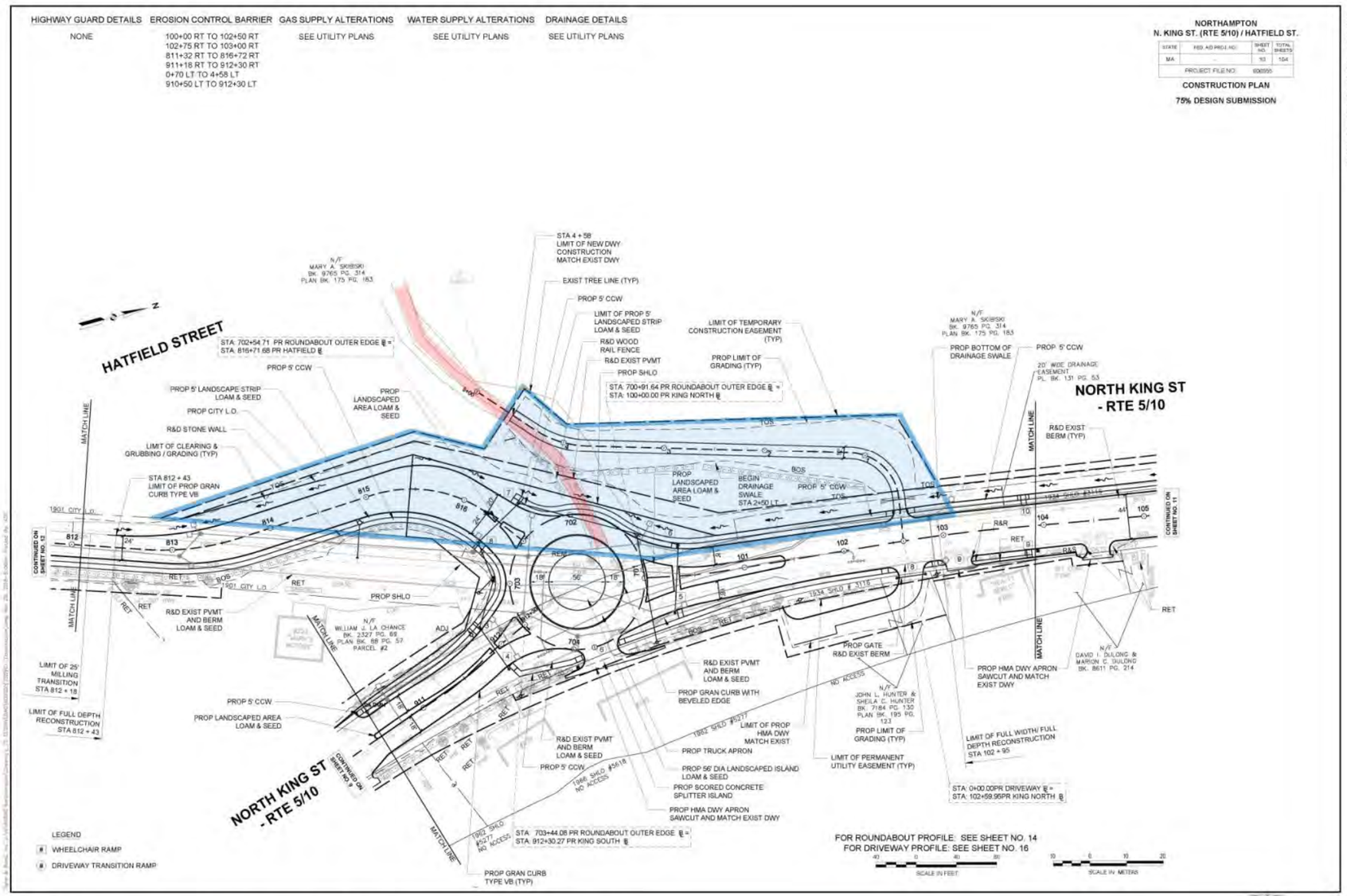


Figure 2: Aerial photograph showing the location of the project area.



Northampton (MassDOT Project #606555)

Proposed archaeological survey area

Existing driveway and rail fencing

Figure 3: Project plans, showing the right-of-way property-taking/archaeological survey area in blue.

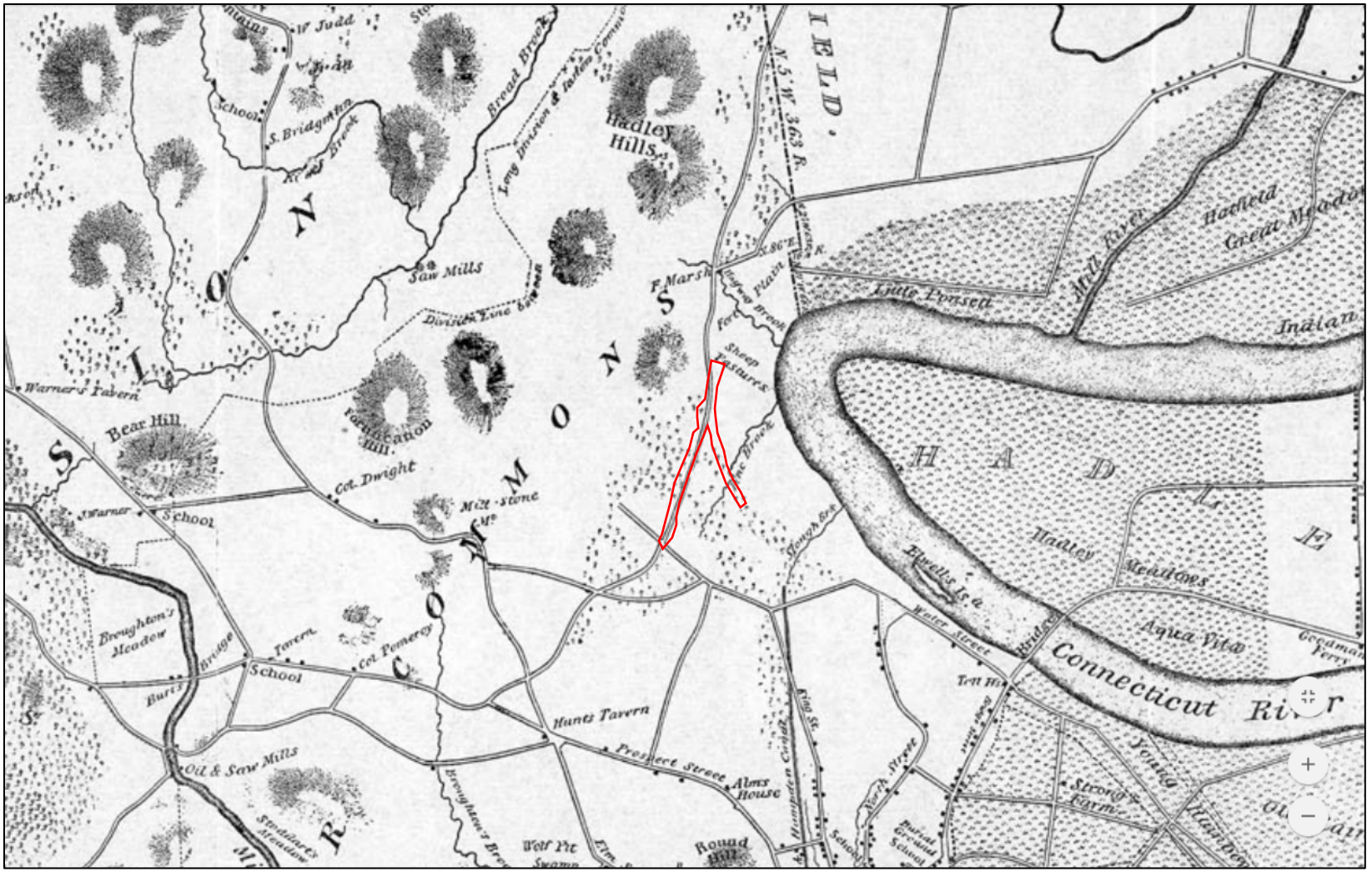


Figure 4: 1831 Hale map of Northampton, approximate project APE in red.[9]

[9] Please note that due to the deliberate distortions associated with modern map projections and datums, as well as the stylistic choices made by historical map makers, the boundaries of the APE should be viewed as a very approximate estimate, for this, and any historical map that displays an APE or other modern feature. While it is possible to georectify historical map images to modern imagery, this generally results in additional distortions to the display of the map and does not provide a more accurate display of an APE. It is best to view these historical maps and approximate APEs as tentatively aligned or connected with real coordinates.

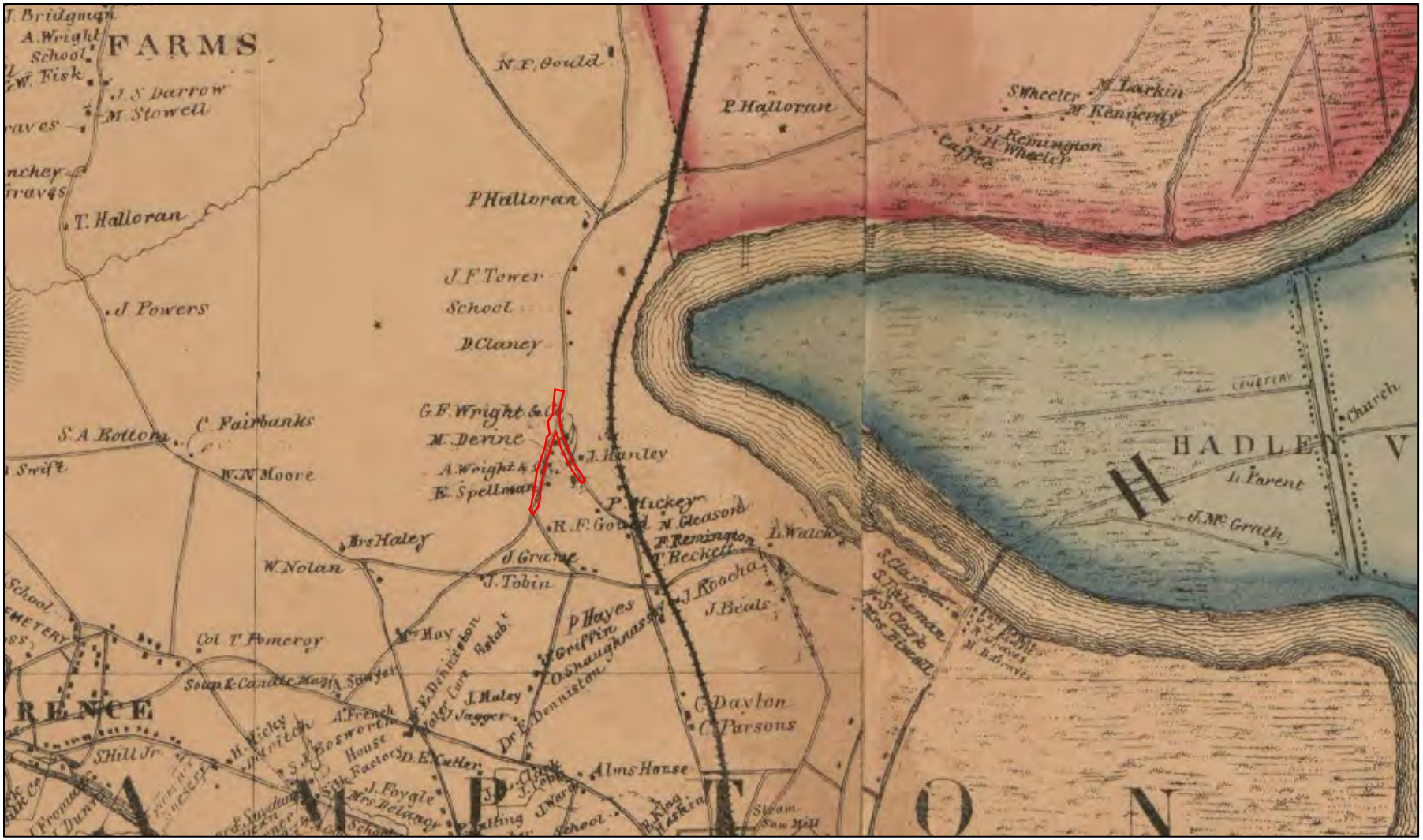


Figure 5: 1860 Walling map with approximate project APE in red.

Figure 6: 1873 Beers map, approximate project APE in red.

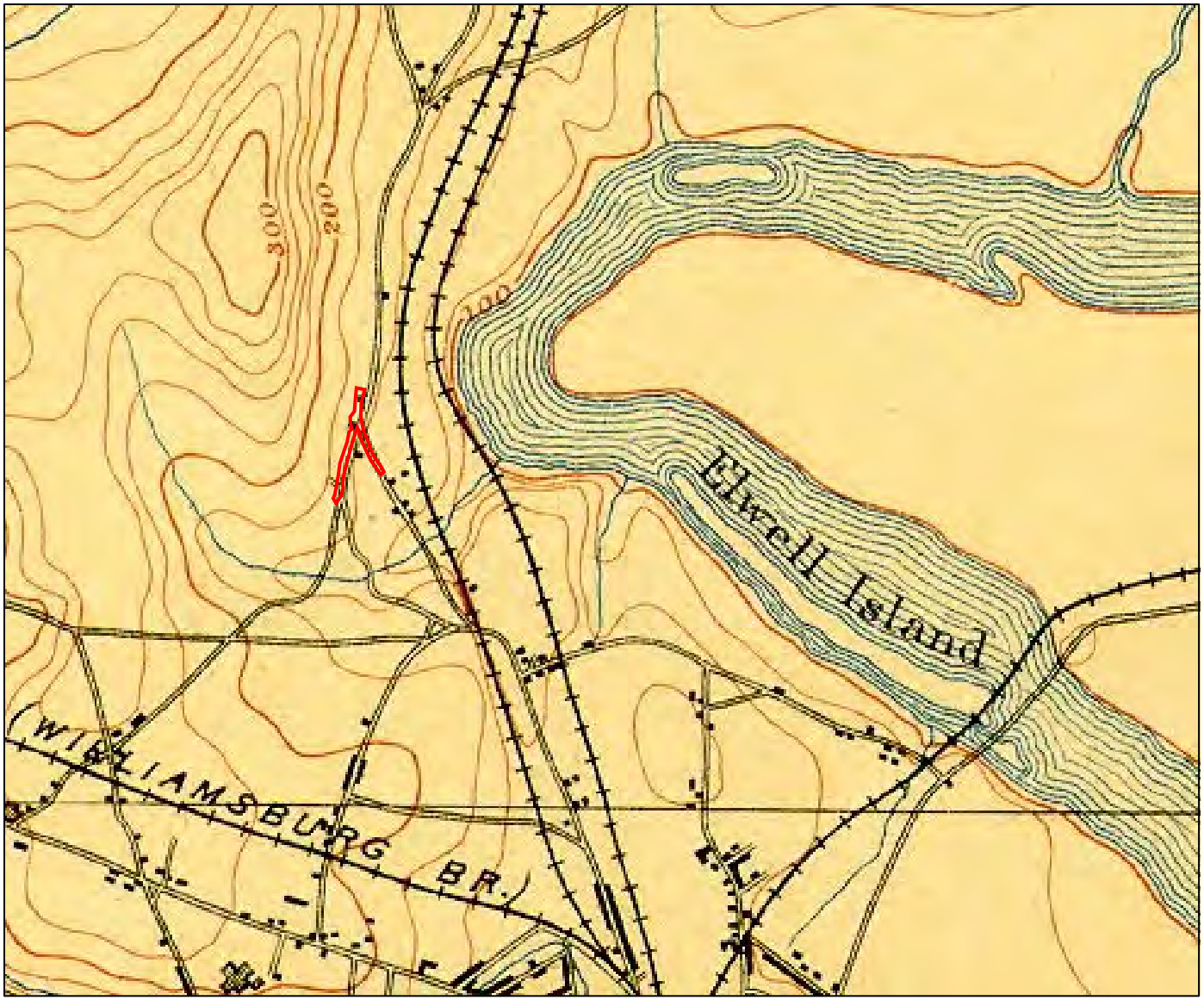


Figure 7: 1895 USGS topographic map, project area is shown in red.

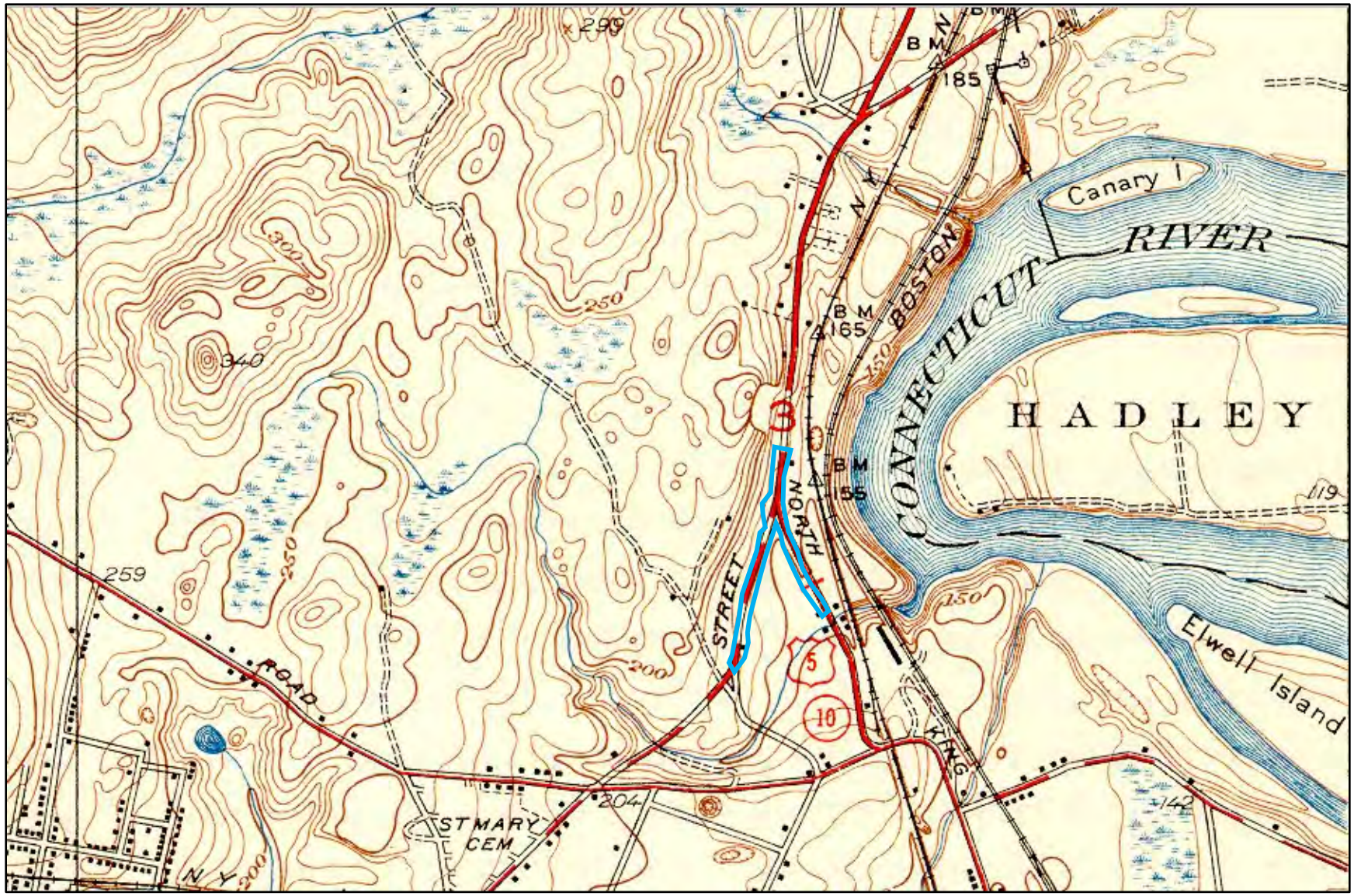


Figure 8: 1939 USGS topographic map, approximate project APE in blue.

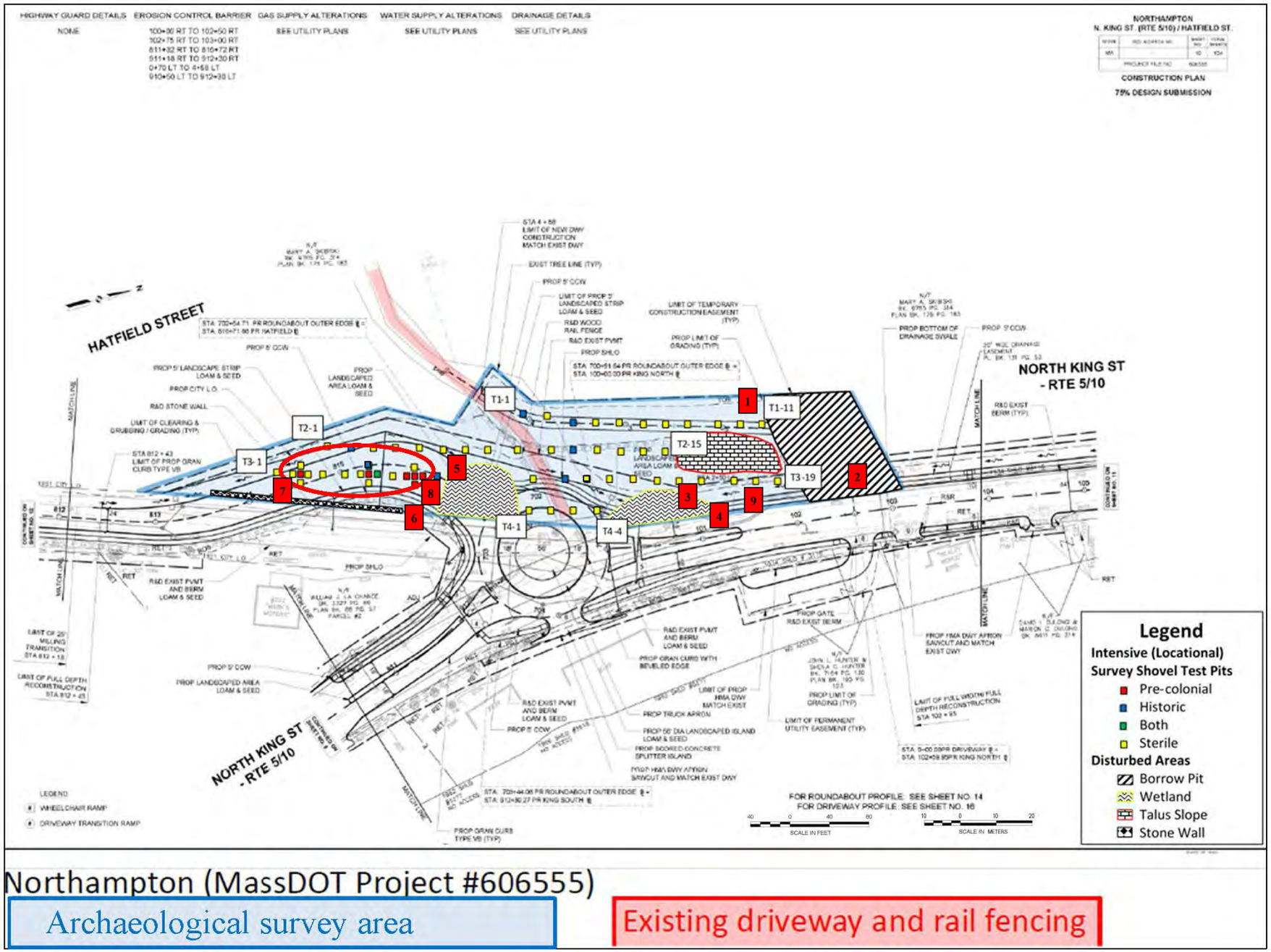


Figure 9: Project plans, showing the results of intensive (locational) archaeological survey. The approximate location of the identified pre-colonial site area is circled in red. Photograph key in red boxes.

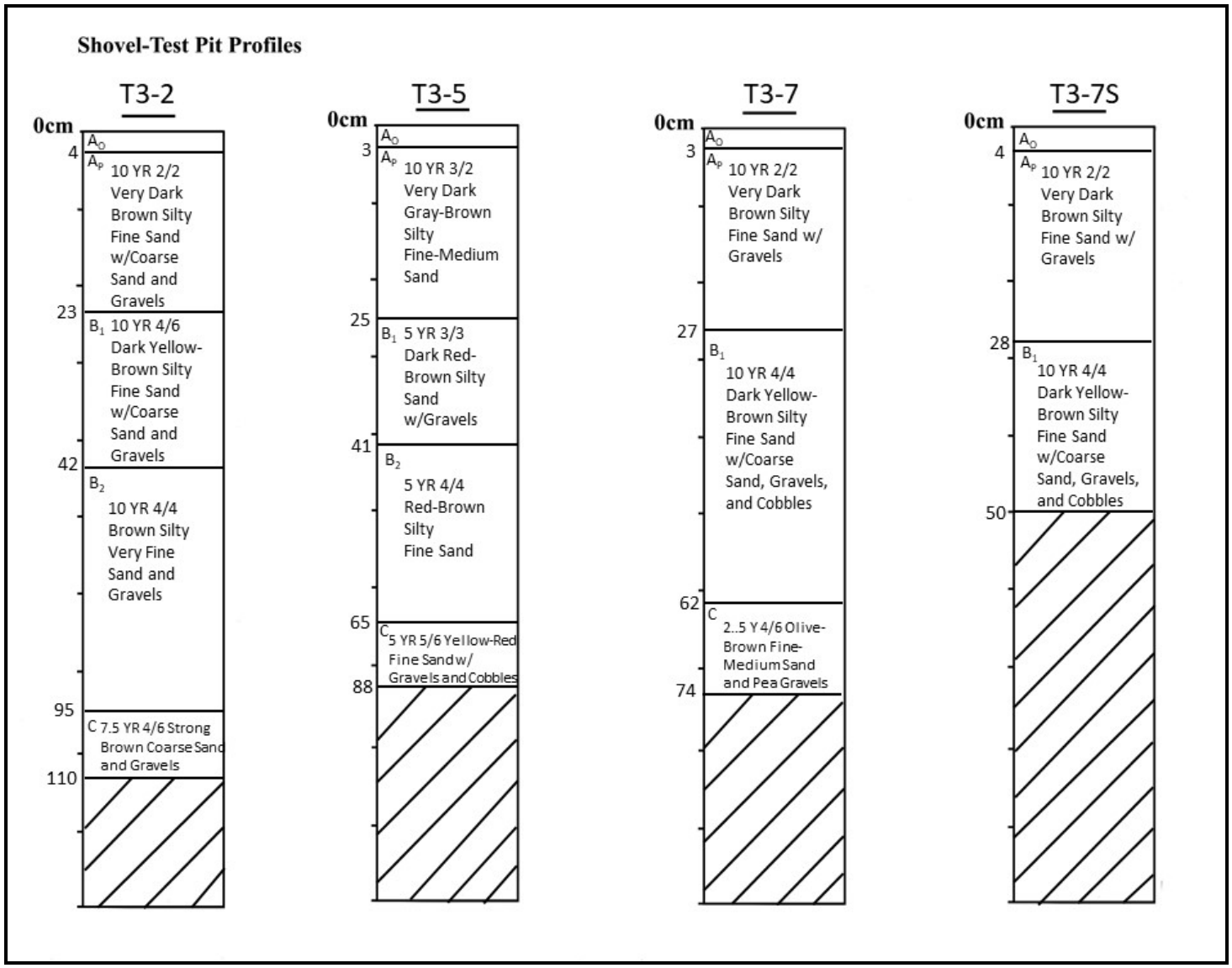


Figure 10: Sample of soil profiles from the intensive (locational) survey.

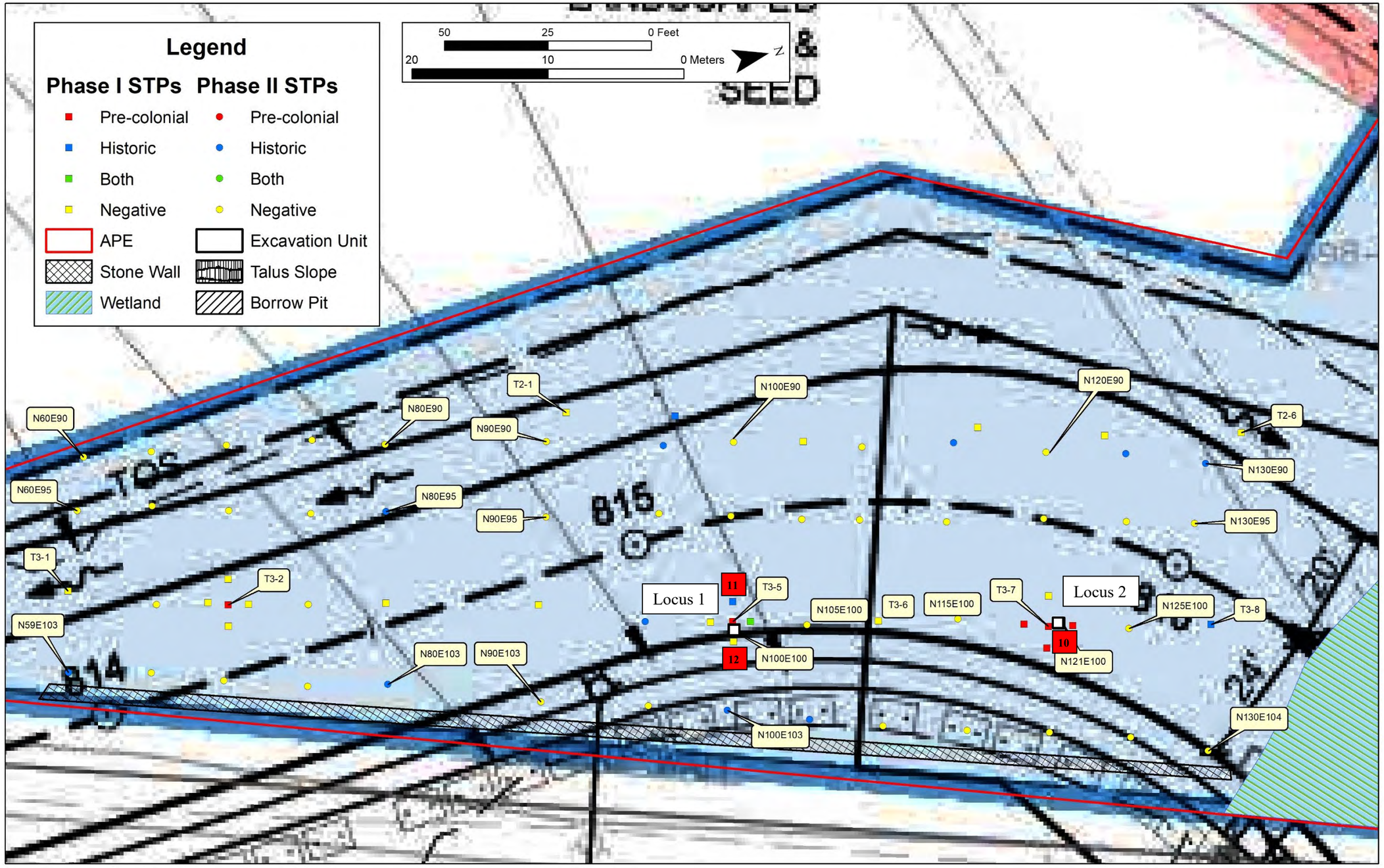


Figure 11: Results of site examination survey, shown on project plans. Photograph key shown in red boxes.

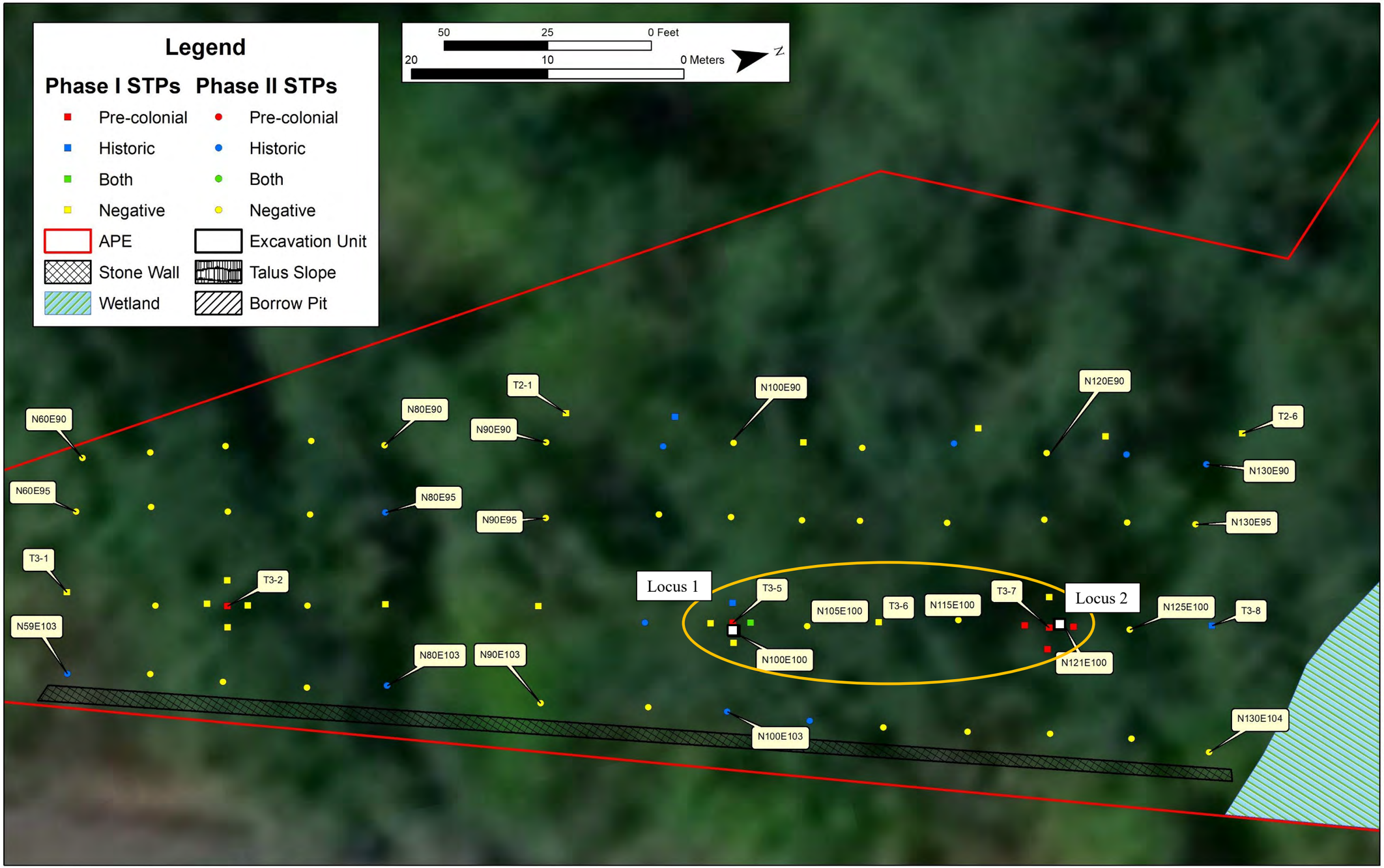


Figure 12: Results of site examination, shown on aerial. Limits of archaeological site are shown in orange.

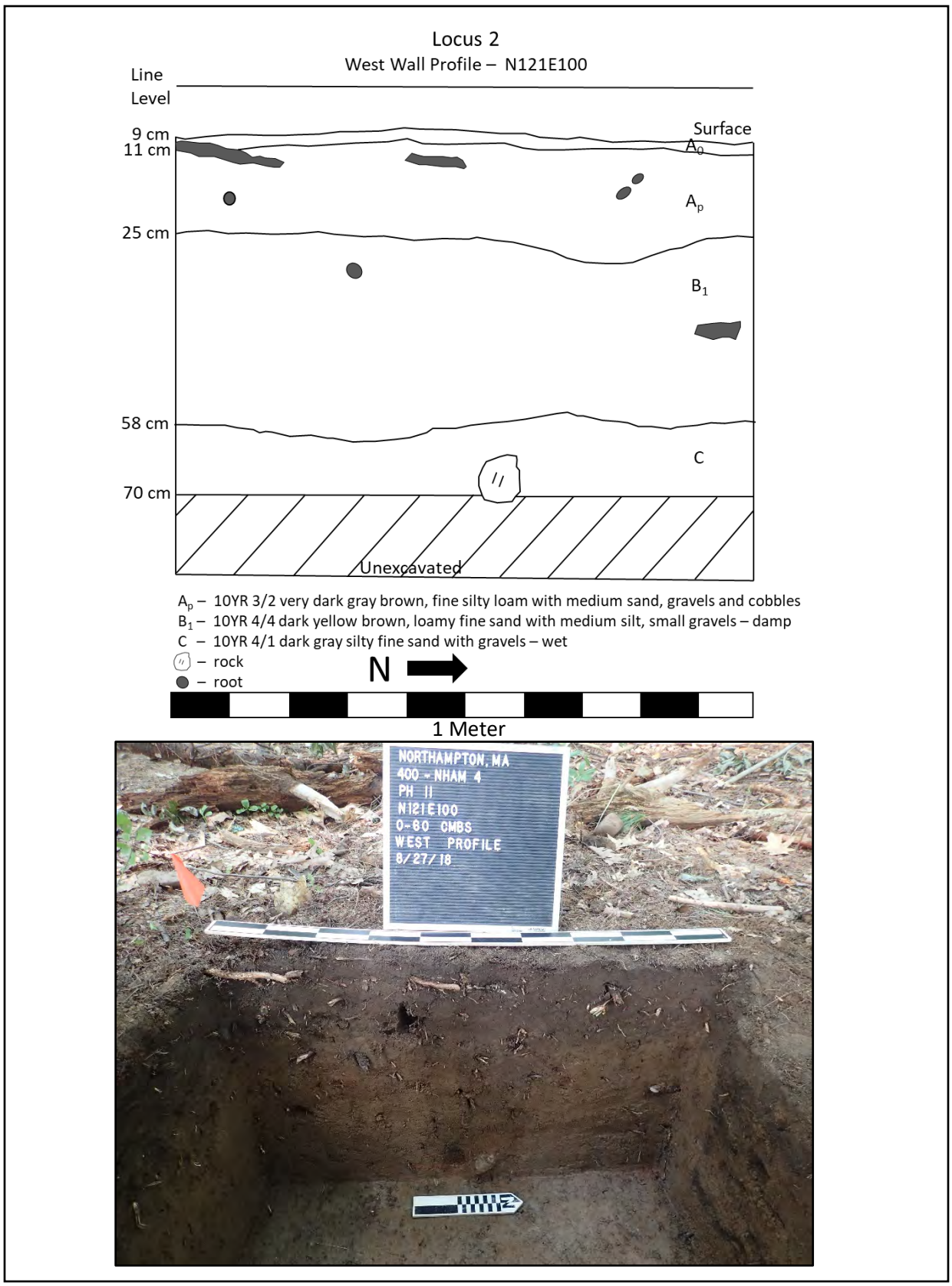


Figure 13: Profile view of Locus 2, West Wall of N121E100, all depths are below line level.

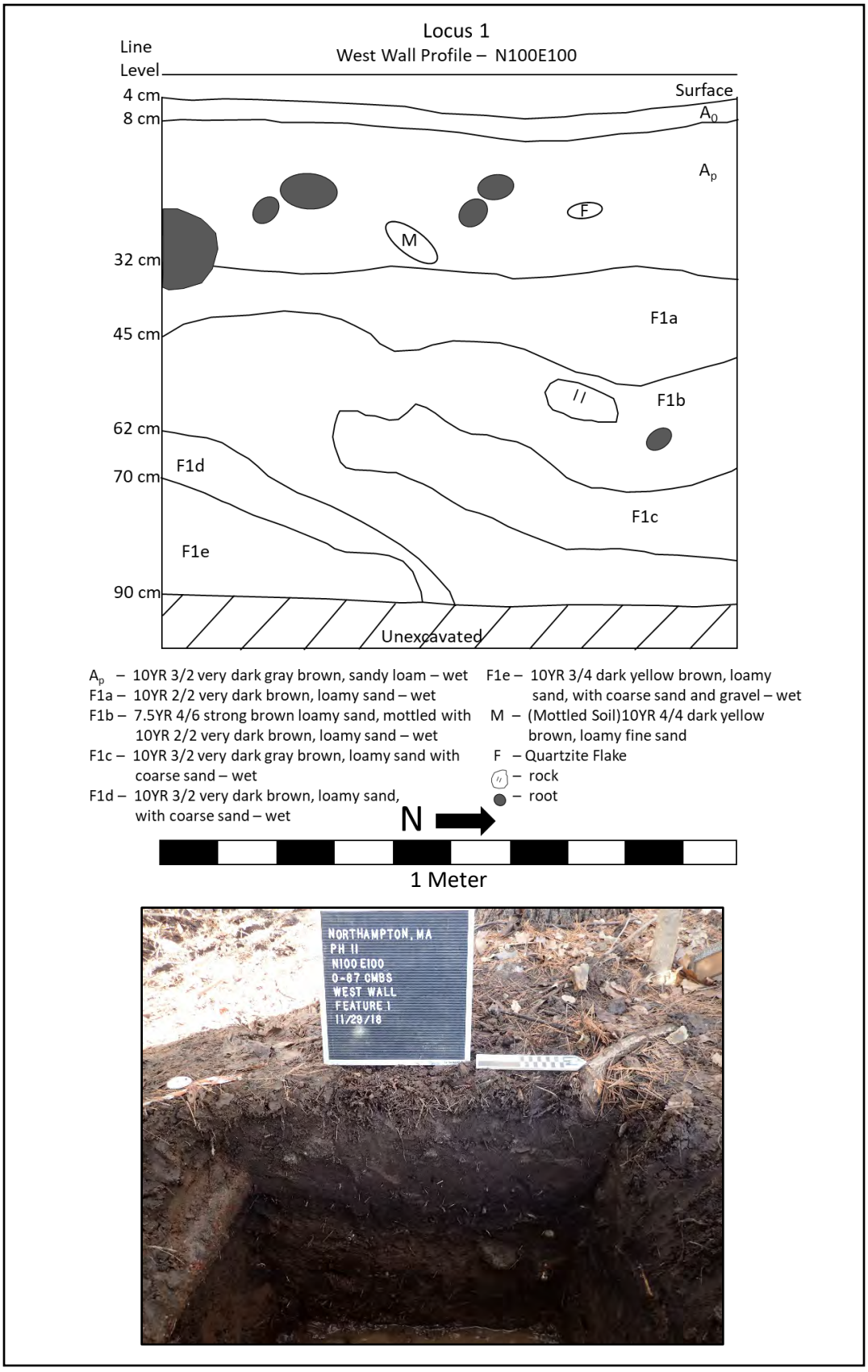


Figure 14: Profile view of soil anomaly at Locus 1, West Wall of N100E100, all depths are below line level.

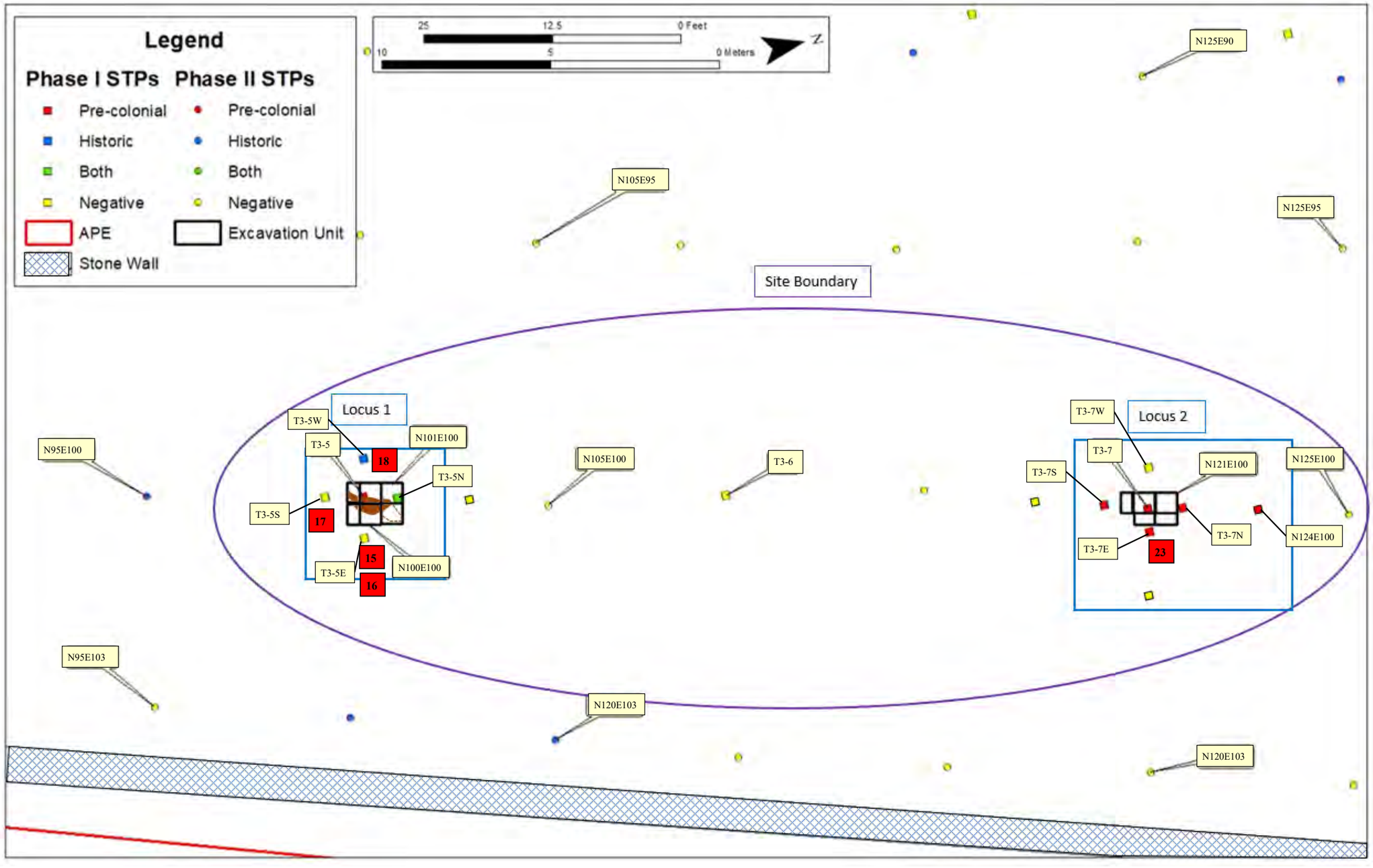


Figure 15A: Plan of expanded site examination excavation units and STPs. The approximate boundaries of Feature 1 are shown in plan as well (Feature 1 is brown and possible Feature 1 soil is shown in dashed). Grid coordinates are displayed on Figures 15B for both Loci. Photograph key shown in red boxes.

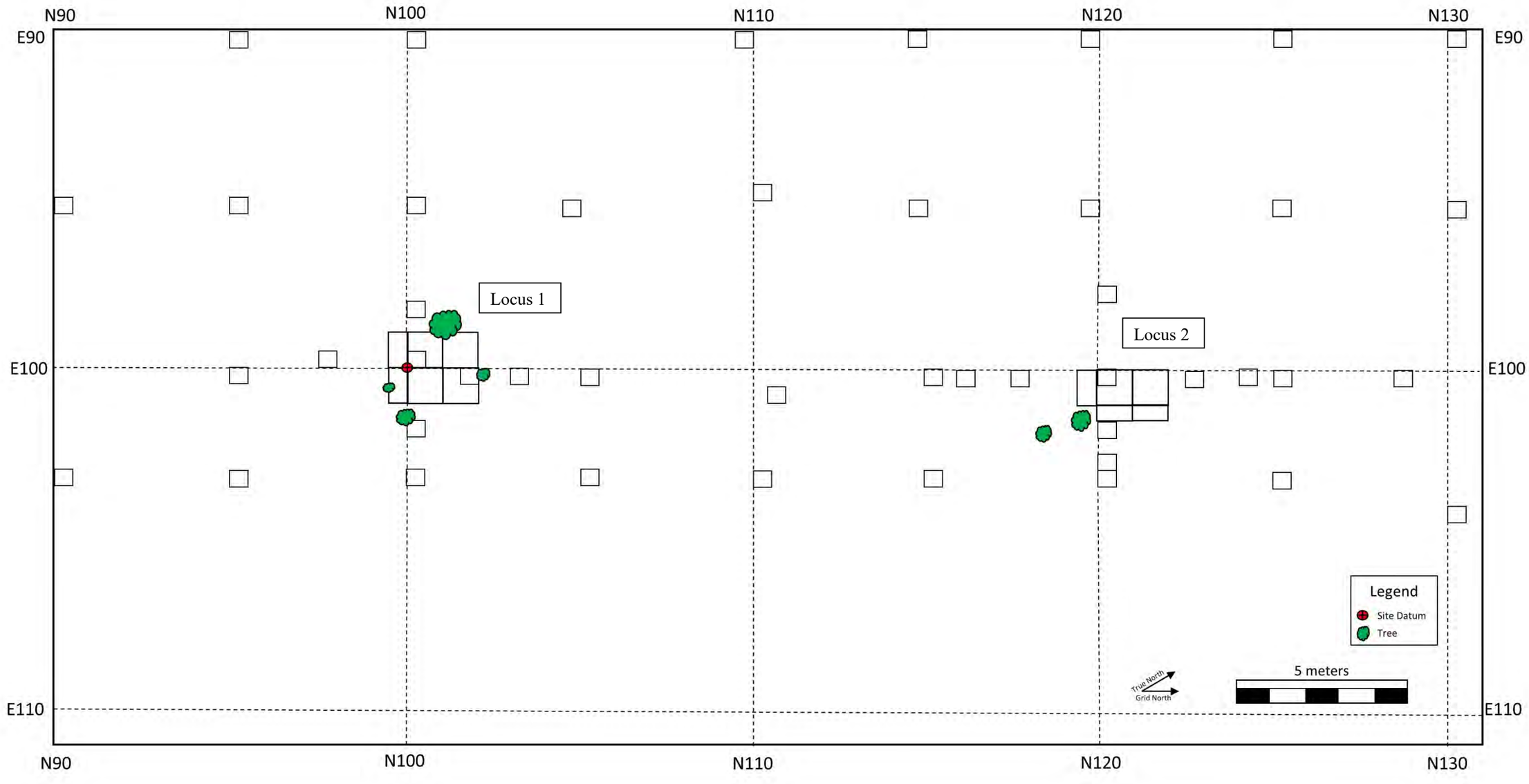


Figure 15B: Grid map of all excavation units and shovel test pits excavated during the expanded site examination survey. Artifact concentrations are displayed by locus in Figures 19 – 24.

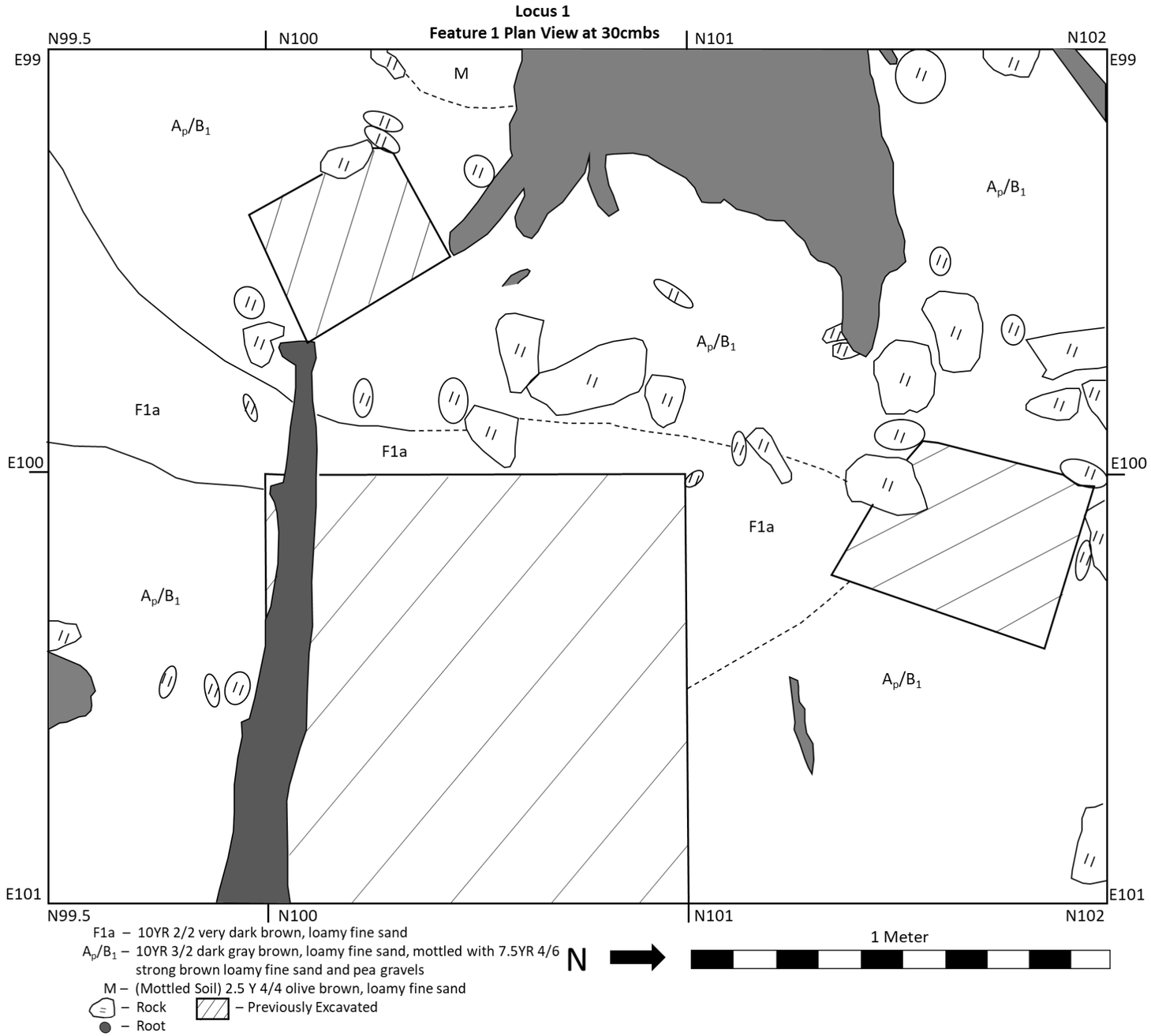


Figure 16: Plan view of Feature 1, shown at 30 cmbs.

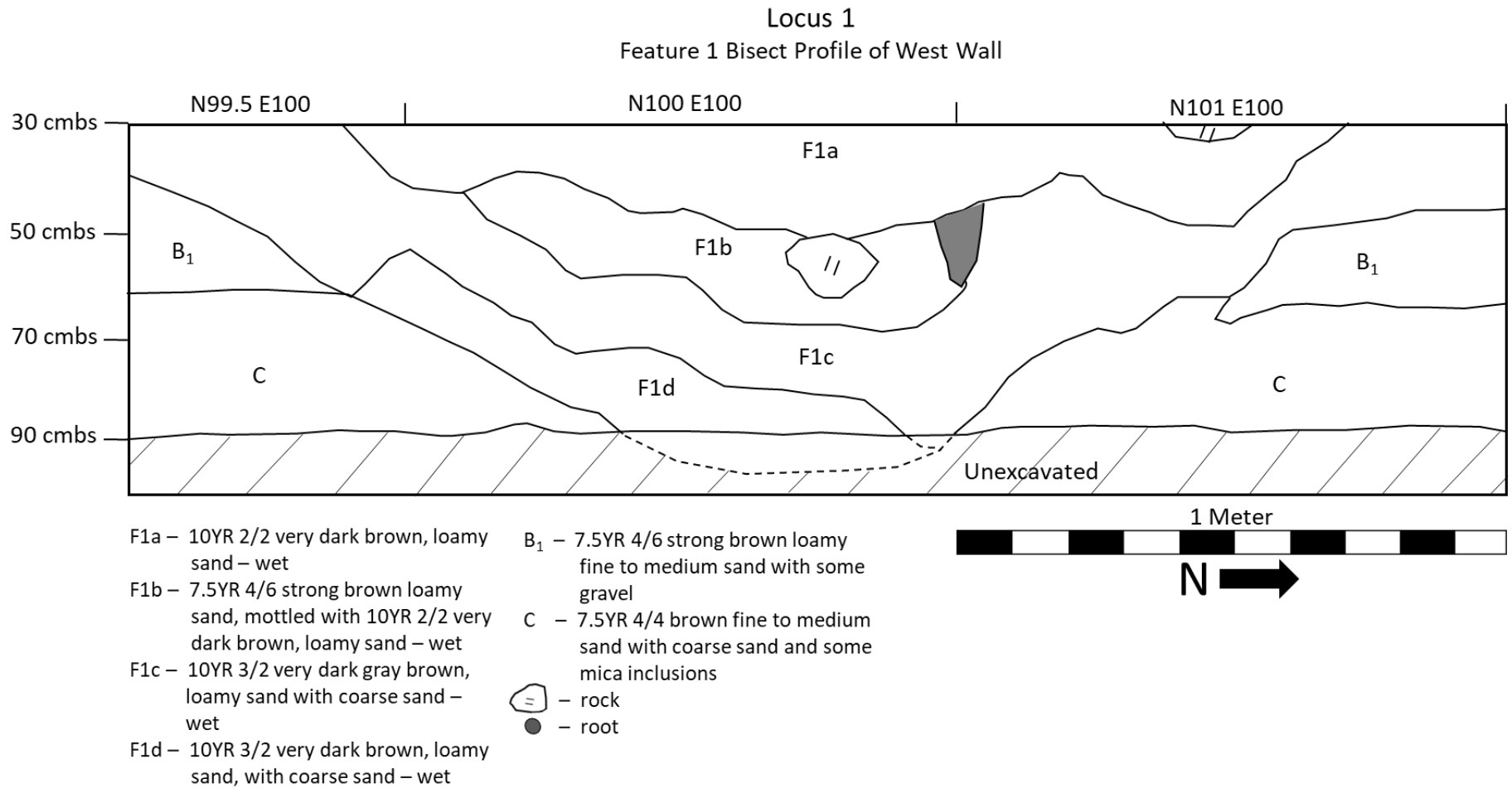
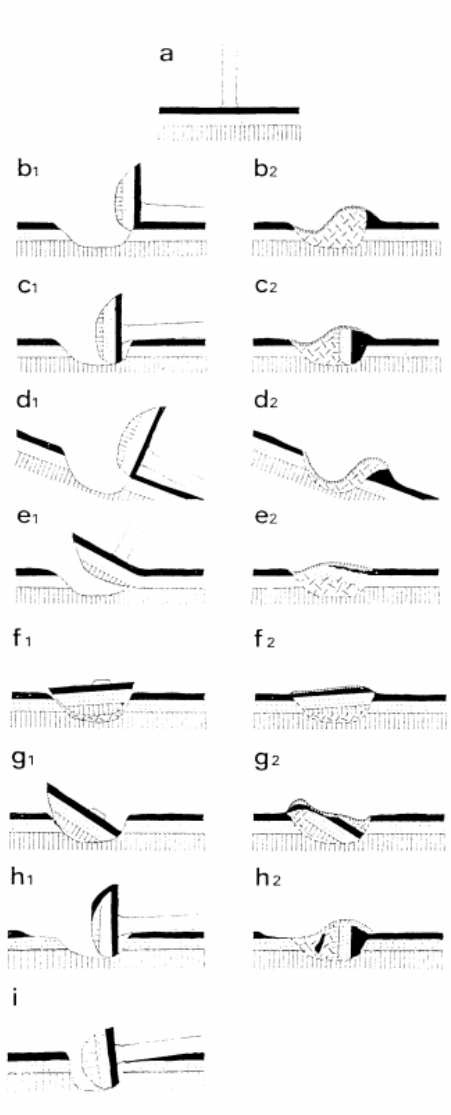
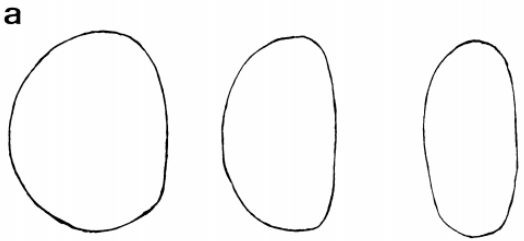


Figure 17: Profile of bisect of Feature 1, all depths are below surface. Dashed lines indicate boundaries that were determined following complete excavation of the feature.



1 : at the moment of the uprooting.
2 : after complete decay of the wood and stabilization of the soil surface.
The dimension of the soil structures is not indicated as it can vary considerably (depth of the original micro-depression : 3-4 dm up to 2 m ; length of the transversal axis : from 50 cm up to about 5 m.
a : soil horizonation before the event.
b : complete tree fall, when the roots opposite to the wind direction snap off close to the trunk (frequent for shallow-rooting trees).
c : complete tree fall, with the tree stump tilted vertically but completely situated within the original micro-depression (frequent when the roots were deep into the soil and in good health).
d : complete tree fall with, in the final stage, large part of the earth deposited beside the original micro-depression and a final pronounced microrelief (frequent on slopes).
e : incomplete tree fall but with a pronounced turbation of the original soil horizons.
f : complete tree fall but after the cutting of the trunc a nearly complete restauration of the original soil horizonation (frequent for a tree fall of the b1 type).
g : as in f, but with clear disturbance of the original soil horizons (frequent for a tree fall of the c1 type).
h : complete tree fall as in c1, but part of the surface horizon of the surrounding soil remains attached to the lifted tree stump and later falls down into the micro-depression towards the windward side of the tree fall.
i : uprooted tree with the side walls of the original microdepression that are nearly vertical ; often these turbations are among the deepest ones, sometimes up to 2 m (frequent when a healthy tree is struck down by another falling tree).



a. The usual shape of the horizontal section through a windthrow structure. The figure is nearly never circular.
The longitudinal axis can reach up to 5-7 m long, the transversal axis is mostly between 2-5 m wide.

Figure 18: Diagram of tree-throw scenarios in profile view (left) and plan view (bottom right), with associated text. Adapted from Langhor 1993.

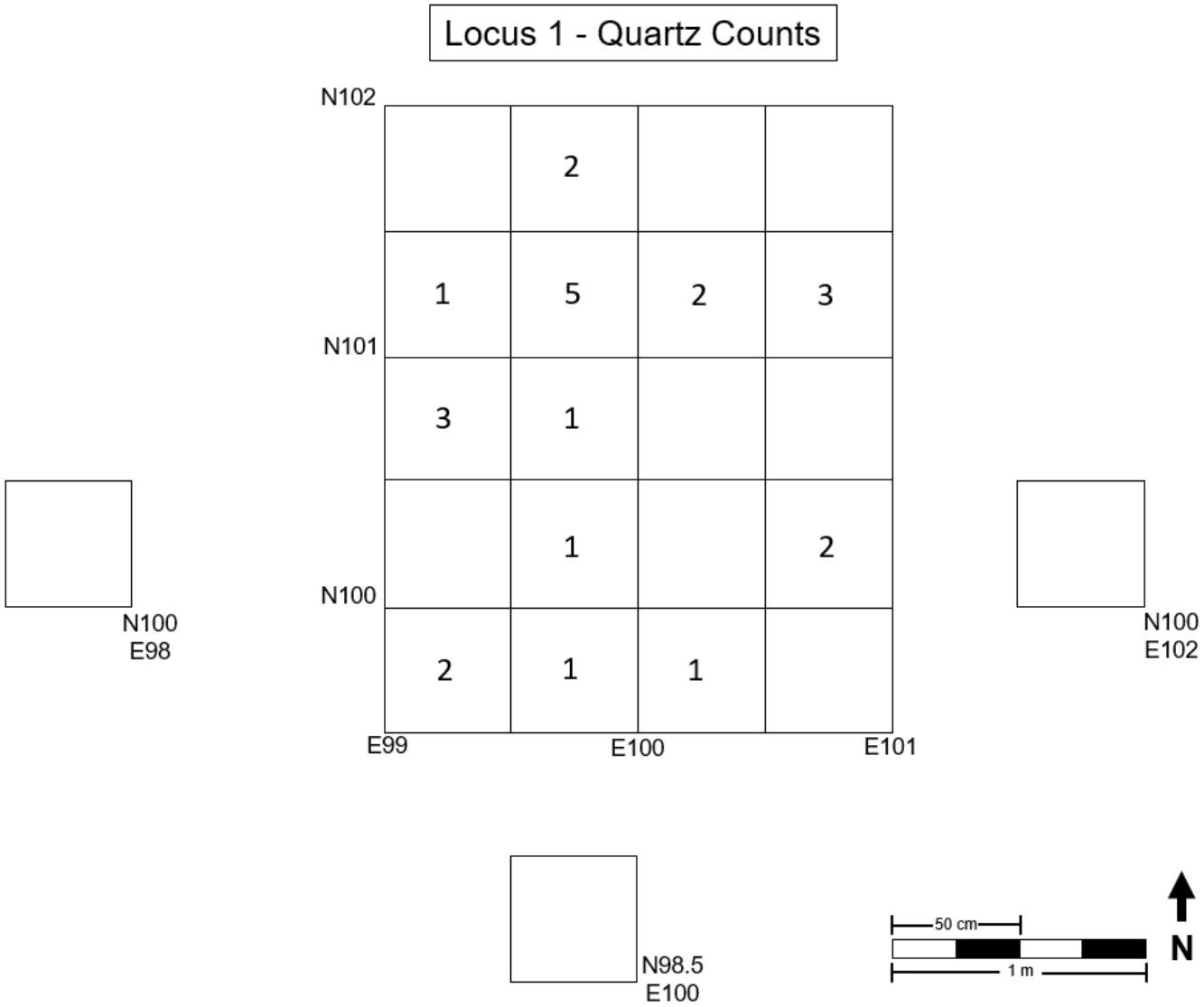


Figure 19: Spatial distribution map of quartz artifacts from recovered from Locus 1, by quadrant.

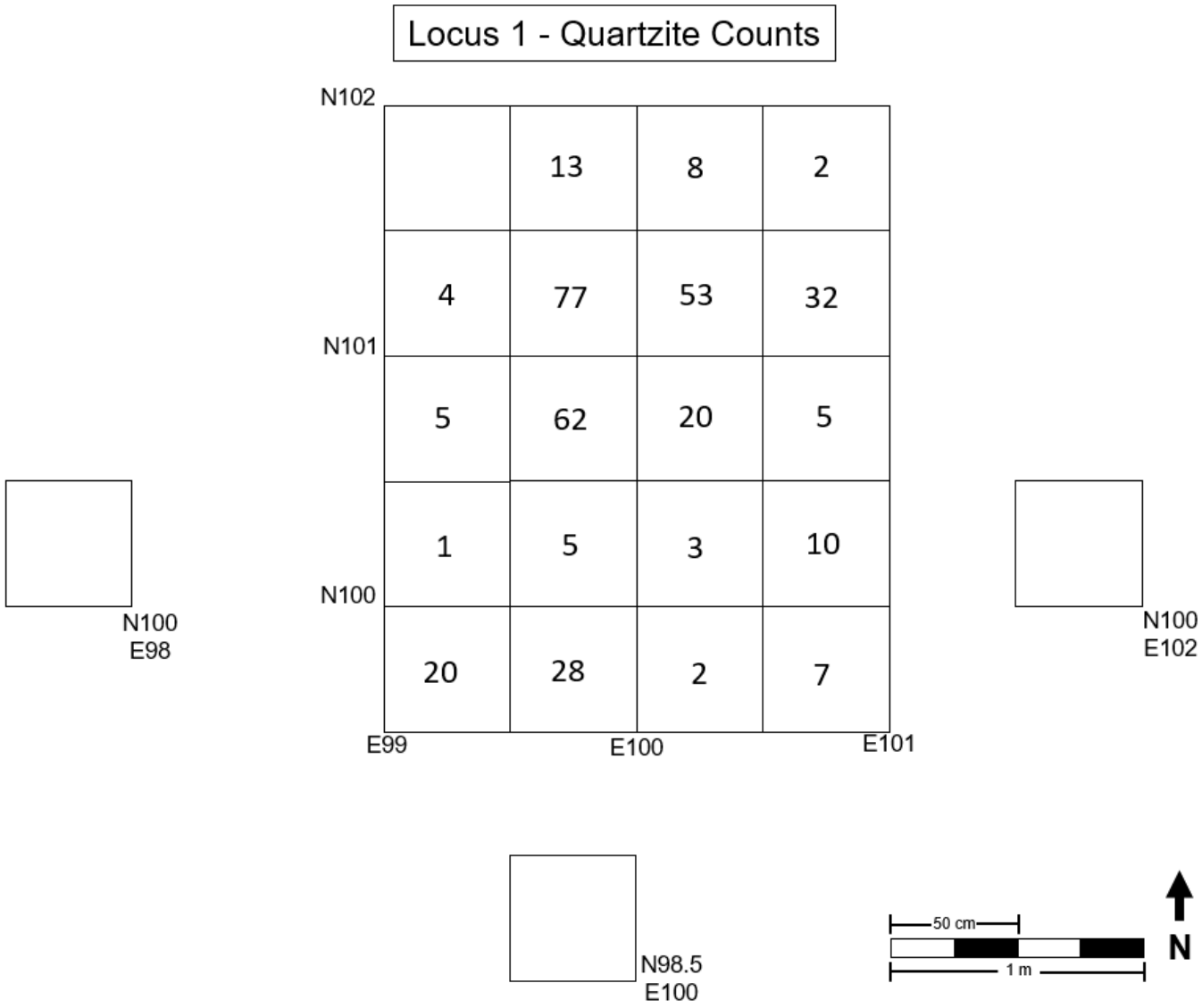


Figure 20: Spatial distribution map of quartzite artifacts recovered from Locus 1, by quadrant.

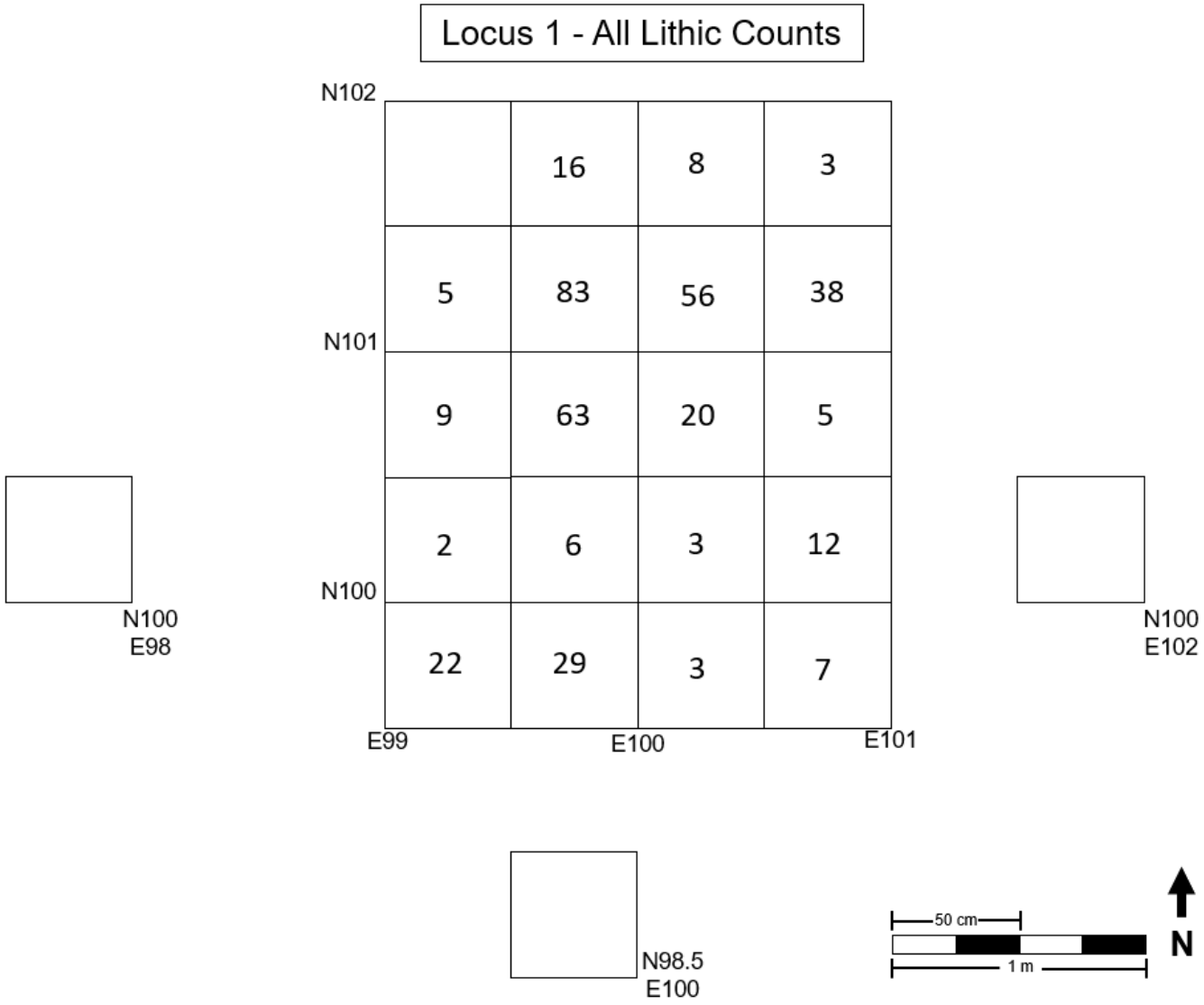


Figure 21: Spatial distribution map of all lithic artifacts recovered from Locus 1, by quadrant.

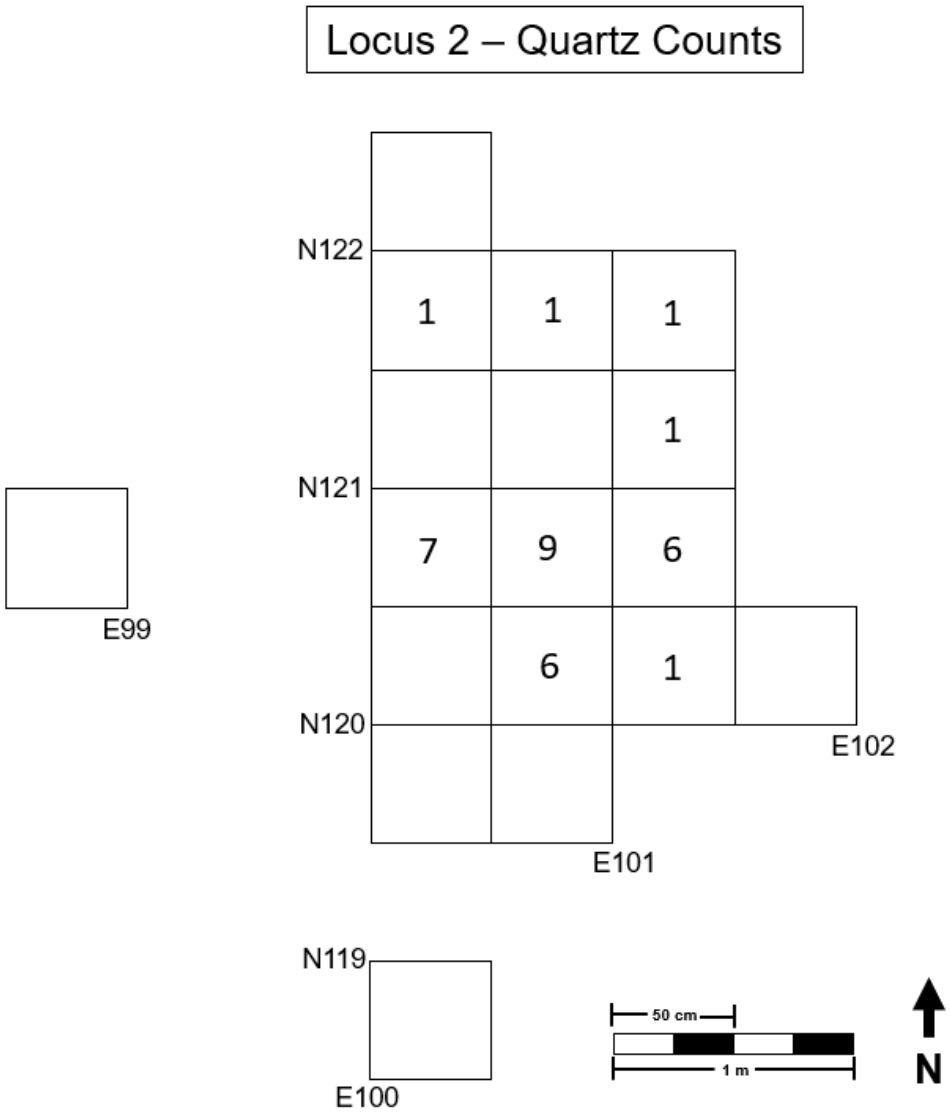


Figure 22: Spatial distribution map of all quartz artifacts recovered from Locus 2, by quadrant.

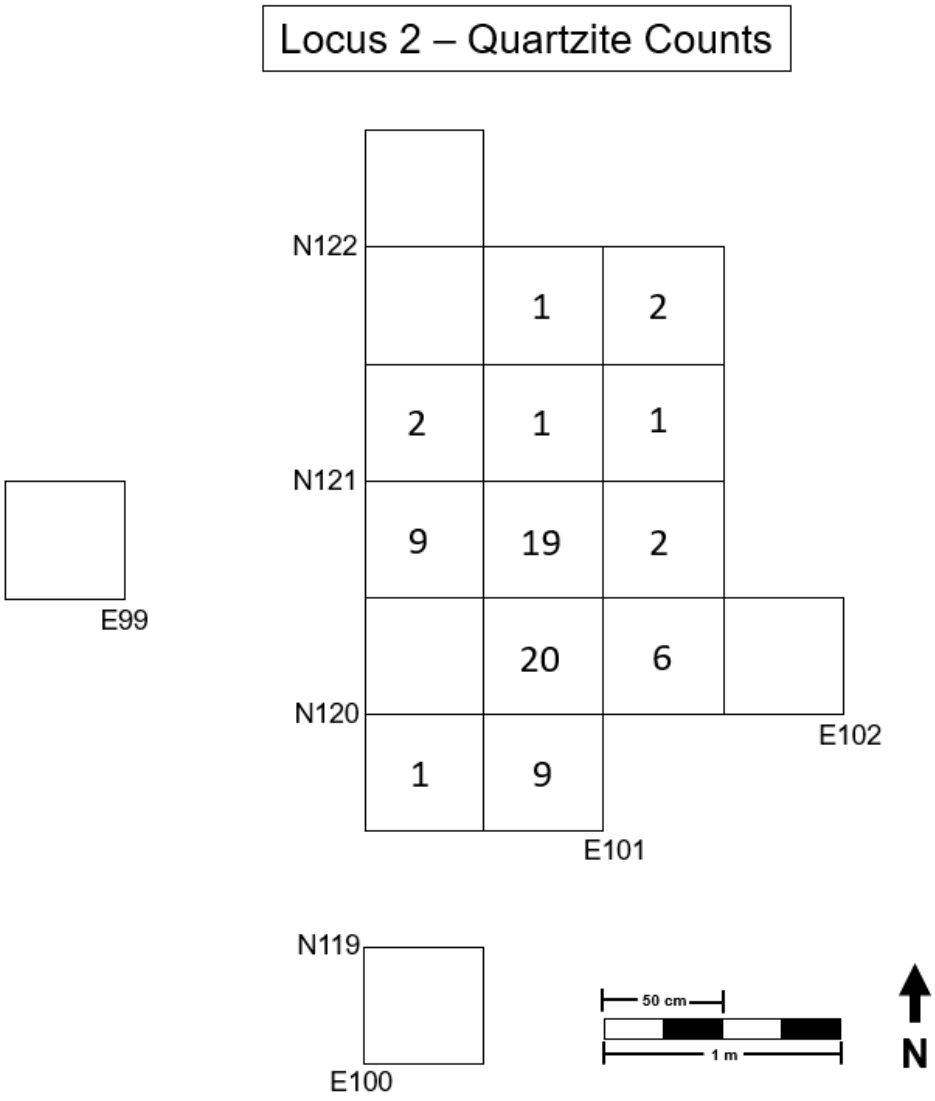


Figure 23: Spatial distribution map of all quartzite artifacts recovered from Locus 2, by quadrant.

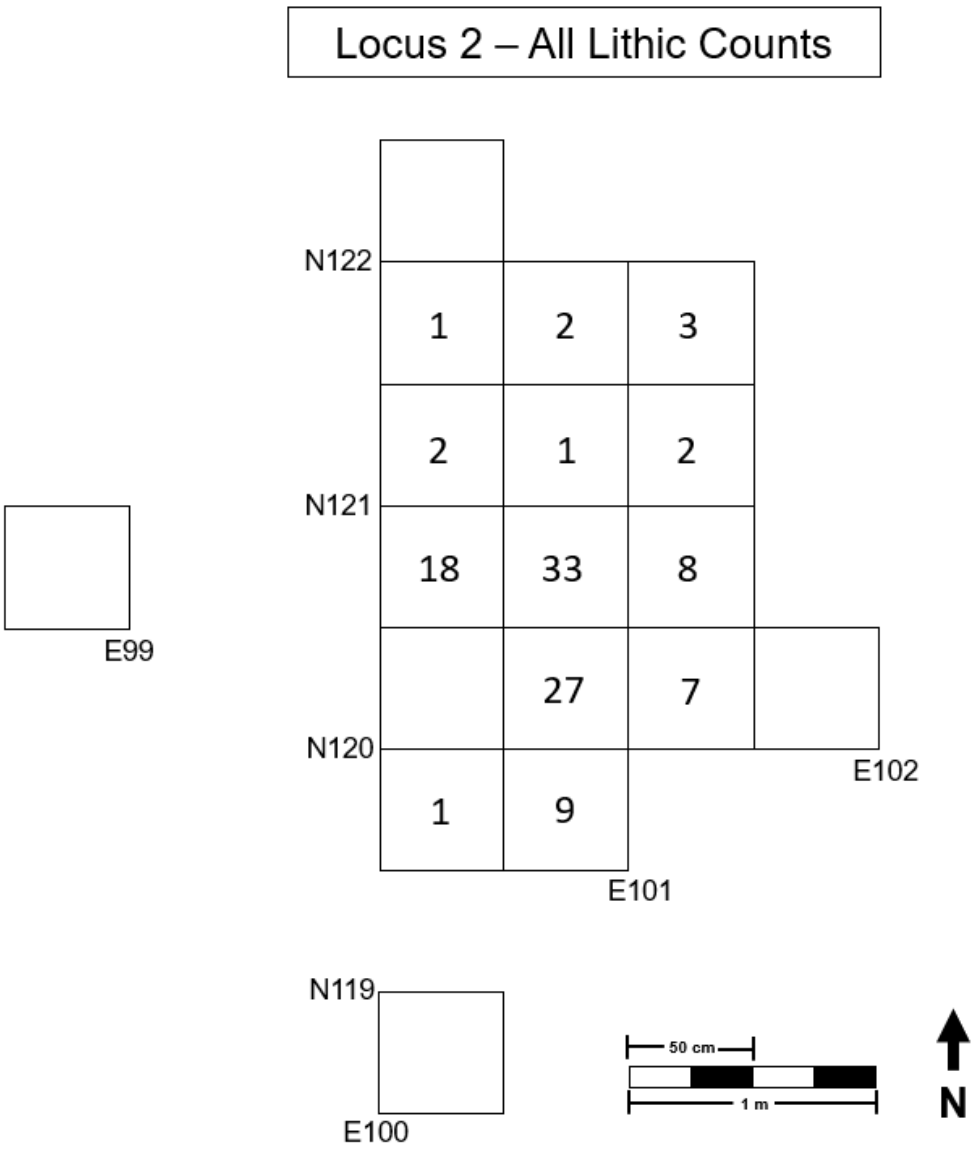
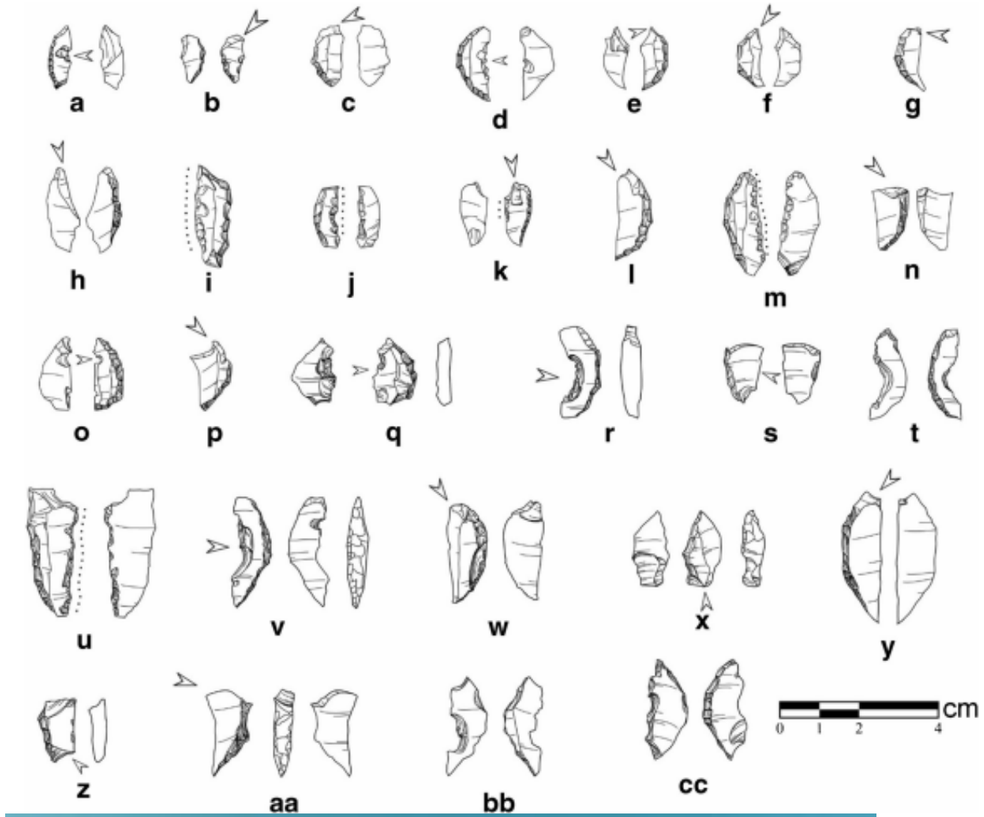
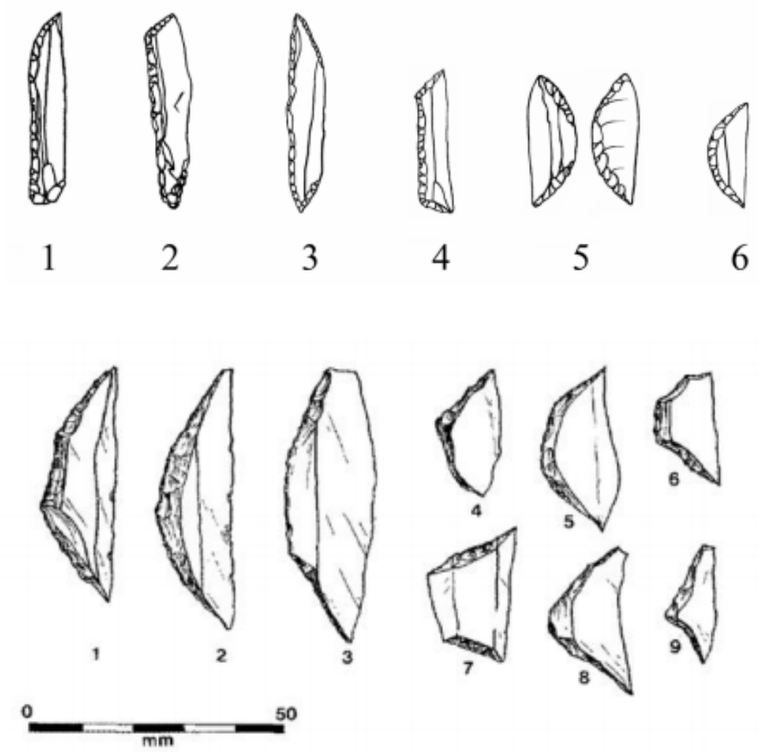
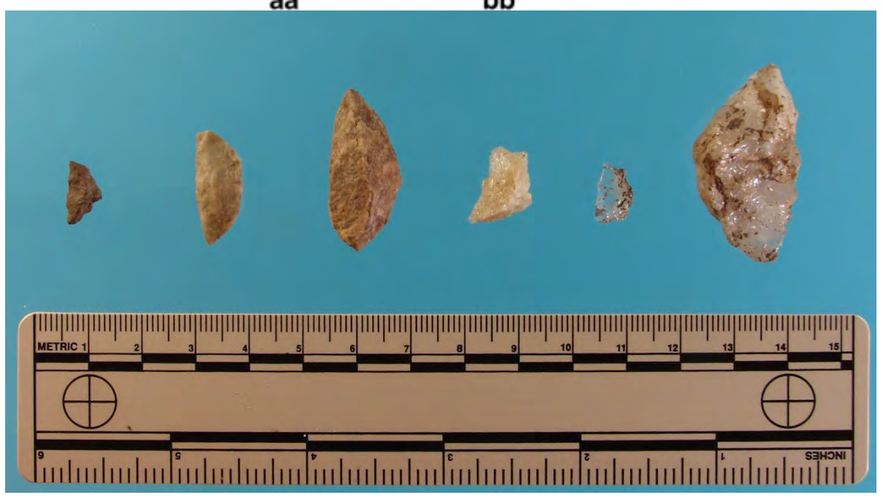


Figure 24: Spatial distribution map of all lithic artifacts recovered from Locus 2, by quadrant.







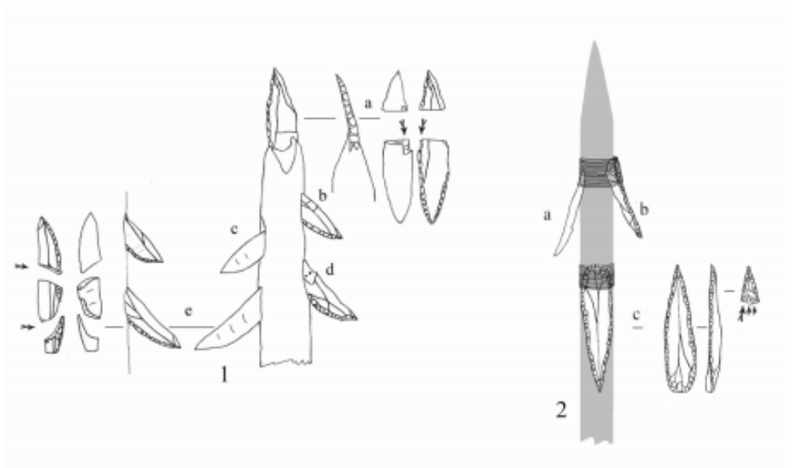


Figure 25: A comparison of crescent technology from around the world: top left - Neolithic Kenya (Goldstein and Shaffer 2017); top center – Natufian (Yaroshevich et al. 2010); center - Howiesoon's Poort, South Africa (Thackeray 1992); far right and bottom center experimental reconstructions (Yaroshevich et al. 2010); and bottom left – Northampton (see Figure 26 for high resolution photographs and modifications).

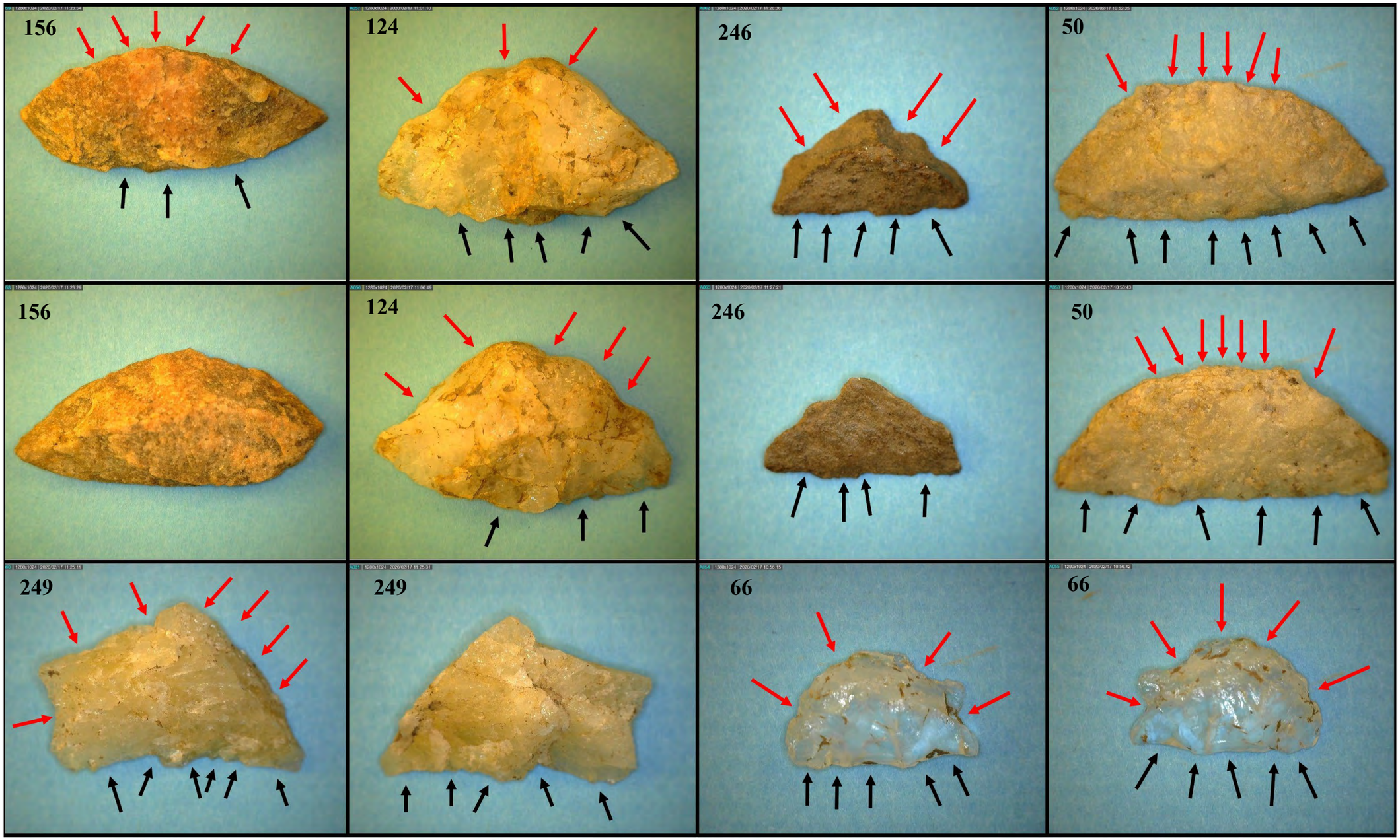


Figure 26: Microscopic (20x magnification using a DinoLite) view of crescents and modifications (red arrows indicate backing/crushing and black arrows indicate edge damage from possible use) with inventory numbers labeled. Reverse and obverse views of each artifact are shown. Three are unifacial (#156, 246, and 249), while three are bifacial (#50, 66, and 124).

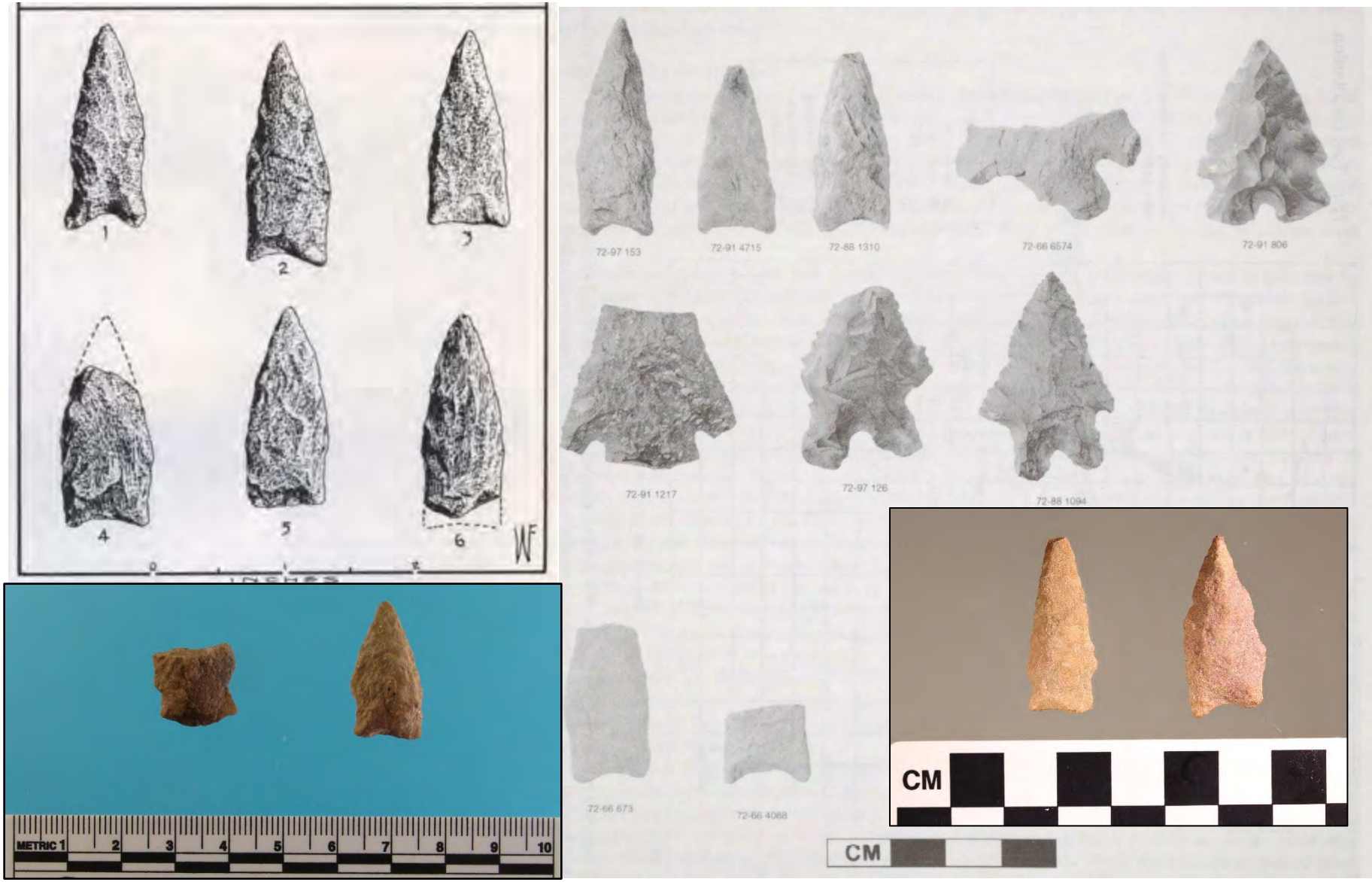


Figure 27: Comparison of known Parallel Stemmed projectile points: Fowler (1968a) upper left; Jones (1999) displaying Parallel Stemmed and Bifurcates, upper right; Singer (2017) lower right; and this site lower left. All points are approximately scaled to similar sizes.

APPENDIX B: Photographs

Photograph 1: Large borrow pit north of Transect 1, looking northeast with STP T1-11 on the right.

Photograph 2: South edge of large borrow pit, looking southwest.

Photograph 3: Talus slope in the northern part of the survey area (north of STP T2-15), looking north.

Photograph 4: Seasonal wetland north of STP T4-4, looking south.

Photograph 5: Small wetland area northeast of STP T3-8, looking east.

Photograph 6: Stone wall section located west of Hatfield Street in the southeastern part of the survey area, looking south.

Photograph 7: Soil profile of east wall of T3-2W.

Photograph 8: Soil profile of north wall of T3-7W.

Photograph 9: Metamorphic rock from talus slope in northern portion of APE.

Photograph 10: Photograph of west wall of N121E100 excavation unit.

Photograph 11: Photograph of east wall of N100E100 excavation unit.

Photograph 12: Photograph of west wall of N100E100 excavation unit, displaying Feature 1 stratigraphy before expanded site examination survey.

Photograph 13: Quartzite possible unifacial Parallel Stemmed point (left – N100E100, artifact inventory (#)47) and quartzite possible Parallel Stemmed point (right – N121E100, #55).

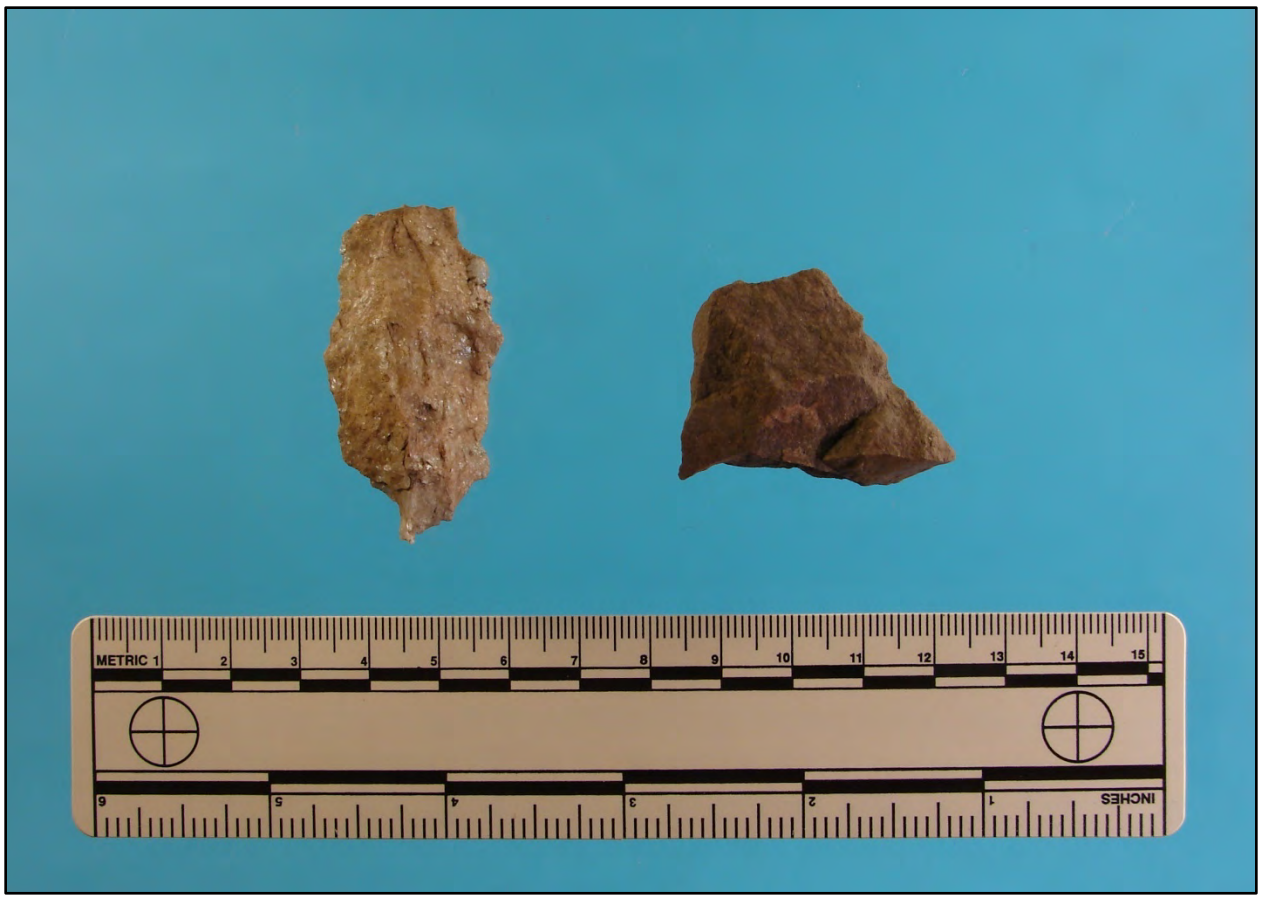
Photograph 14: Quartzite backed crescent (left – N121E100, #50) and quartz large possibly utilized flake (right – T3-7S, #30).

Photograph 15: Photograph of plan view of Locus 1, displaying Feature 1 exposed at the interface between the plowzone, subsoil, and feature interface.

Photograph 16: Photograph of bisect of Feature 1 at Locus 1, displaying bowl-shaped profile of feature.

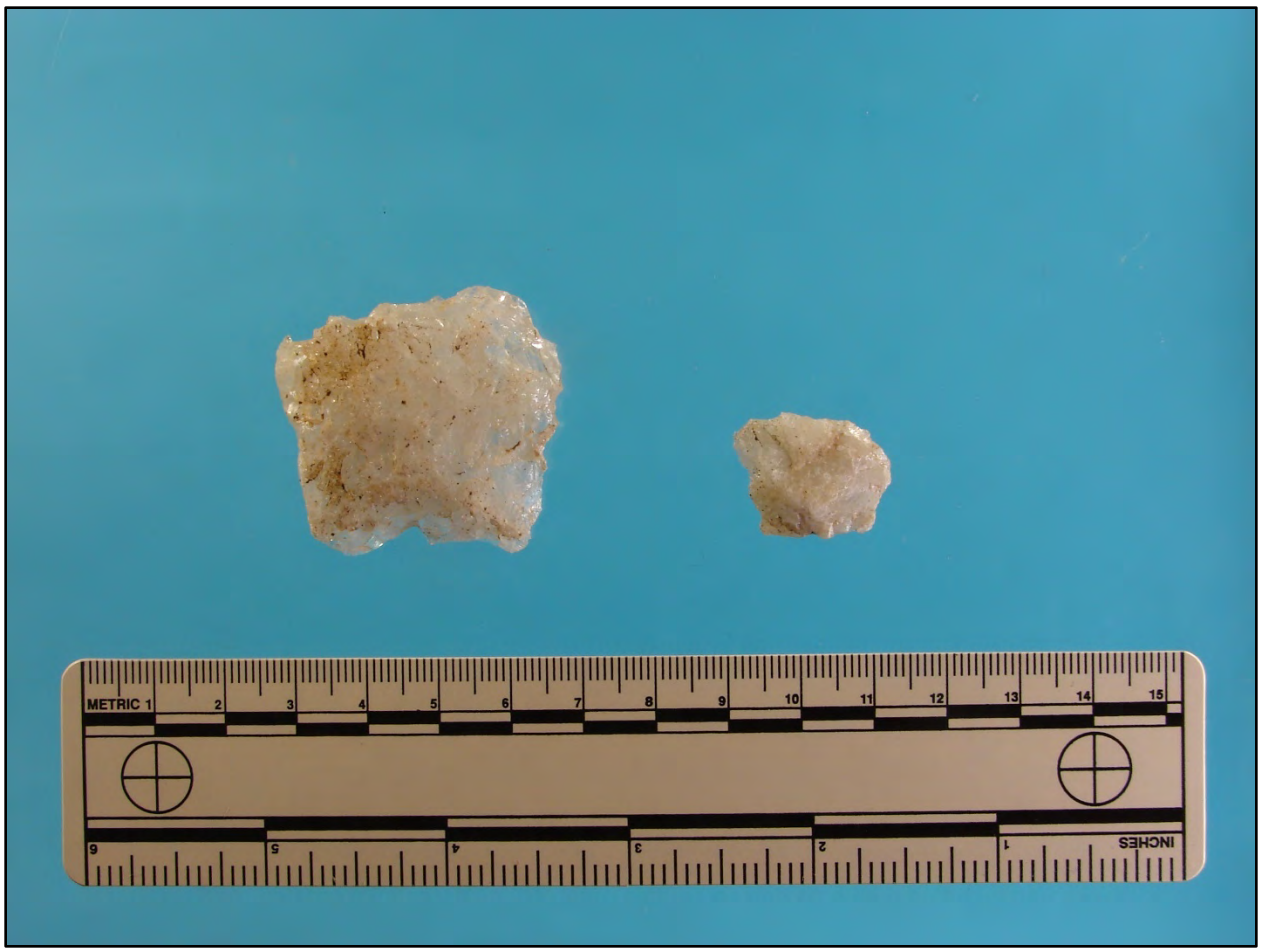
Photograph 17: View of north wall of Locus 1, displaying continuation of Feature 1, to the north.

Photograph 18: View of south wall of Locus 1, displaying continuation of Feature 1 south.



Photograph 19: Biface fragment (right, #248) and preform (left, #231) recovered from Locus 1, N101E100.

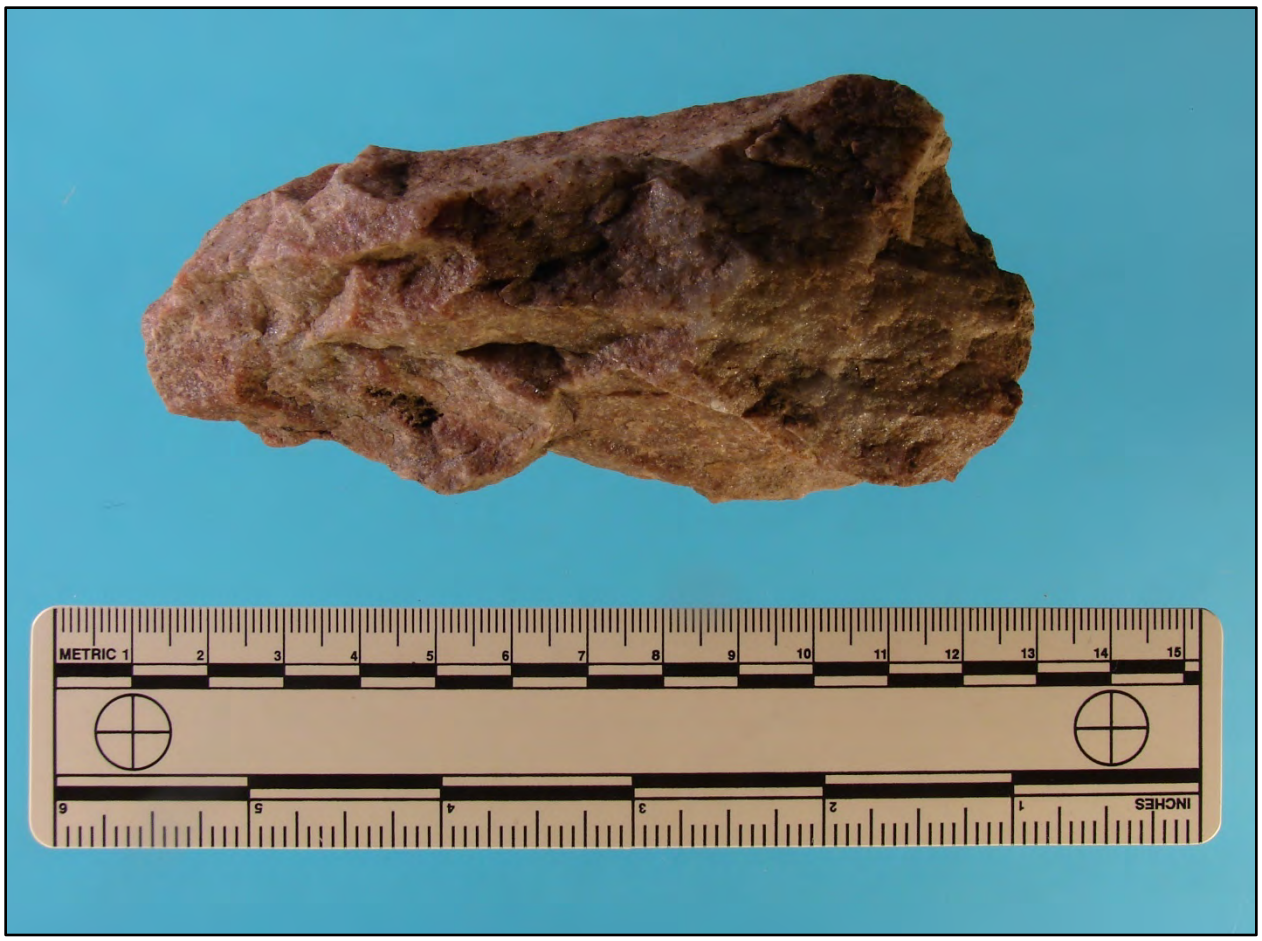
Photograph 20: Microlithic crescents recovered from Locus 1 and 2 during original and expanded site examination (left to right, N101E100 #246, N121E100 #50, N99E99 #156, N101E100 #249, N120E100 #66, and N120E101 #124).



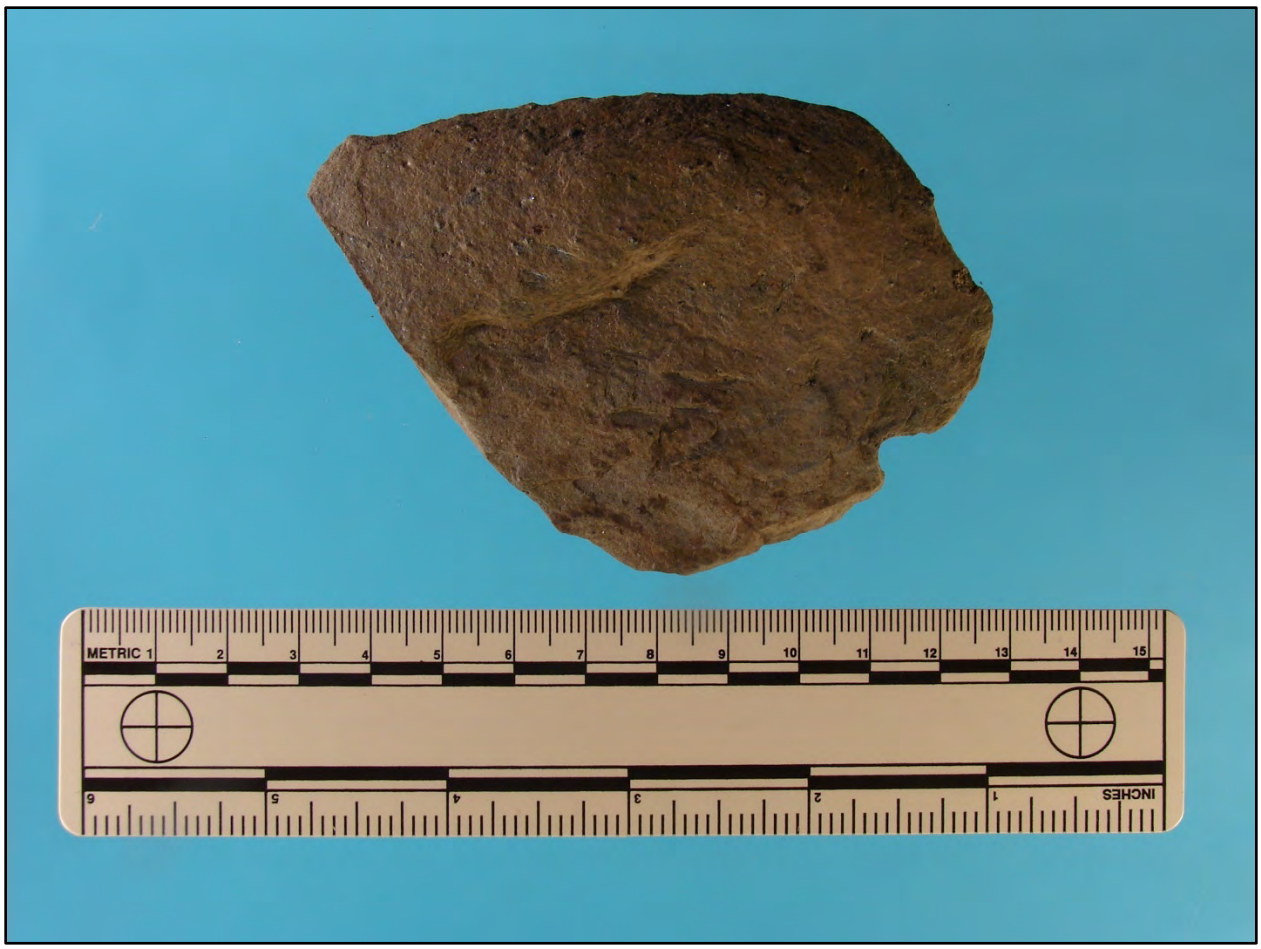
Photograph 21: Utilized quartz flakes recovered from Locus 1 (right, N101E100 #258) and Locus 2 (left, N120E100 #120).

Photograph 22: Quartzite cobble core recovered from Locus 1, reddening along the area of flake removals may indicate intentional heat-treatment (N101E99 #217).

Photograph 23: View of west wall of Locus 2.



Photograph 24: Possible bifacial preform for chopper or adze, recovered from Locus 2. This artifact also displays possible heat treatment (N121E101 #133).



Photograph 25: Shale artifact, also displays notching, possibly a gorget preform, recovered from Locus 2 (N119E100 #63).

Photograph 26: Unmodified quartzite cobble recovered from Locus 2. This cobble does not display any removals, and may have been heat-treated, but not reduced (N124E100 #136).

Photograph 27: Possible blade core recovered from Locus 2 (N120E100 #95).

APPENDIX C: Artifact Inventory Catalogue

Archaeological and Historical Services, Inc.

Site Summary Report

Site: 400-Nham 4

05/01/19

Material	Total
Lithic	567
Botanical	78
Soil Sample	3

Total Artifacts: 648

Archaeological and Historical Services, Inc.

Detailed Site Summary Report

Material	Description	Count
Lithic	coarse grained quartzite fire cracked rock	1
Lithic	crystal quartz bifacial retouch flake	2
Lithic	crystal quartz flake	4
Lithic	crystal quartz microflake	3
Lithic	crystal quartz crescent	1
Lithic	possible hornfels primary reduction flake	1
Lithic	possible quartz small primary reduction debris	1
Lithic	possible quartzite modified pebble	1
Lithic	possible quartzite small angular debris	1
Lithic	quartz cobble	1
Lithic	quartz modified pebble	1
Lithic	quartz bifacial retouch flake	2
Lithic	quartz core	3
Lithic	quartz exhausted core	2
Lithic	quartz flake	21
Lithic	quartz large angular debris	2
Lithic	quartz large flake	1
Lithic	quartz large primary reduction debris	2
Lithic	quartz medium flake	1
Lithic	quartz microflake	17
Lithic	quartz possible core	1
Lithic	quartz possible primary reduction flake	1
Lithic	quartz primary reduction flake	3
Lithic	quartz shatter	8
Lithic	quartz small angular debris	3
Lithic	quartz small primary reduction debris	6
Lithic	quartz early stage biface	1
Lithic	quartz early stage crescent	1
Lithic	quartz possible crescent	1
Lithic	quartz utilized flake	2
Lithic	quartzite cobble	1
Lithic	quartzite modified cobble	1
Lithic	quartzite biface thinning flake	2
Lithic	quartzite bifacial retouch flake	37
Lithic	quartzite core	6
Lithic	quartzite exhausted core	1
Lithic	quartzite flake	235
Lithic	quartzite large angular debris	5
Lithic	quartzite large flake	6
Lithic	quartzite large primary reduction debris	14
Lithic	quartzite large primary reduction flake	1
Lithic	quartzite medium flake	19
Lithic	quartzite microflake	27
Lithic	quartzite possible core	1
Lithic	quartzite primary reduction flake	36
Lithic	quartzite shatter	4

Material	Description	Count
Lithic	quartzite small angular debris	6
Lithic	quartzite small primary reduction debris	38
Lithic	quartzite biface	3
Lithic	quartzite crescent	1
Lithic	quartzite possible backed crescent	1
Lithic	quartzite possible crescent	1
Lithic	quartzite preform	1
Lithic	quartzite projectile point	1
Lithic	quartzite unifacial projectile point	1
Lithic	quartzite utilized flake	3
Lithic	quartzite utilized large flake	1
Lithic	sandstone historic whetstone	1
Lithic	sandstone fire cracked rock	3
Lithic	shale flake	1
Lithic	shale possible knife	1
Lithic	unidentified lithic hammerstone	1
Lithic	unidentified lithic non cultural	1
Lithic	unidentified metamorphic lithic flake	3
Lithic	unidentified metamorphic lithic large angular debris	2
Lithic	unidentified metamorphic lithic large flake	2
Lithic	unidentified metamorphic lithic large primary reduction debris	1
Lithic	unidentified metamorphic lithic medium flake	1
Lithic	unidentified metamorphic lithic primary reduction flake	1
Lithic	unidentified metamorphic lithic possible preform	1
Botanical	nut charred	2
Botanical	seed charred	2
Botanical	seed uncharred	1
Botanical	wood charred	73
Soil Sample	soil sample: archival	1
Soil Sample	soil sample: flotation	1
Soil Sample	soil sample: light fraction	1

Total Artifacts: 648

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
1.00		T3-2		23-30	cm bs	B1 (Upper Subsoil)	I		1	quartz flake			1
2.00	1	T3-5-N		0-10	cm bs	Duff/Plowzone	I		1	quartzite flake			1
3.00	1	T3-5-N		10-20	cm bs	Ap (Plowzone)	I		1	quartz medium flake			2
4.00	1	T3-5-N		10-20	cm bs	Ap (Plowzone)	I		1	quartz small angular debris			2
5.00	1	T3-5-N		10-20	cm bs	Ap (Plowzone)	I		4	quartzite flake			2
6.00	1	T3-5-N		10-20	cm bs	Ap (Plowzone)	I		1	quartzite small angular debris			2
7.00	1	T3-5-N		10-20	cm bs	Ap (Plowzone)	I		1	quartzite primary reduction flake			2
8.00	2	T3-7		10-20	cm bs	Ap (Plowzone)	I		2	quartzite flake			1
9.00	2	T3-7		10-20	cm bs	Ap (Plowzone)	I		1	quartz shatter			1
10.00	2	T3-7		10-20	cm bs	Ap (Plowzone)	I		3	quartz microflake			1
11.00	2	T3-7		20-27	cm bs	Ap (Plowzone)	I		4	quartz microflake			2
12.00	2	T3-7		20-27	cm bs	Ap (Plowzone)	I		3	quartzite flake			2
13.00	2	T3-7		20-27	cm bs	Ap (Plowzone)	I		1	quartzite small angular debris			2
14.00	2	T3-7		20-27	cm bs	Ap (Plowzone)	I		1	unidentified lithic hammerstone whole			2
15.00	2	T3-7		27-37	cm bs	B1 (Upper Subsoil)	I		3	quartz microflake			3
16.00	2	T3-7		27-37	cm bs	B1 (Upper Subsoil)	I		1	quartz flake			3
17.00	2	T3-7		27-37	cm bs	B1 (Upper Subsoil)	I		1	quartz primary reduction flake			3
18.00	2	T3-7		27-37	cm bs	B1 (Upper Subsoil)	I		3	quartzite microflake			3
19.00	2	T3-7		27-37	cm bs	B1 (Upper Subsoil)	I		2	quartzite flake			3
20.00	2	T3-7		37-47	cm bs	B1 (Upper Subsoil)	I		1	quartzite primary reduction flake			4
21.00	2	T3-7		37-47	cm bs	B1 (Upper Subsoil)	I		2	quartzite microflake			4

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
22.00	2	T3-7		37-47	cm bs	B1 (Upper Subsoil)	I		2	quartz microflake			4
23.00	2	T3-7-N		10-20	cm bs	Ap (Plowzone)	I		1	quartz flake			1
24.00	2	T3-7-E		0-10	cm bs	Duff/Plowzone	I		1	quartzite flake			1
25.00	2	T3-7-E		20-23	cm bs	Ap (Plowzone)	I		1	quartzite flake			2
26.00	2	T3-7-E		23-33	cm bs	B1 (Upper Subsoil)	I		2	quartz shatter			3
27.00	2	T3-7-E		23-33	cm bs	B1 (Upper Subsoil)	I		1	quartz microflake			3
28.00	2	T3-7-E		23-33	cm bs	B1 (Upper Subsoil)	I		1	quartzite bifacial retouch flake			3
29.00	2	T3-7-E		23-33	cm bs	B1 (Upper Subsoil)	I		1	quartzite primary reduction flake			3
30.00	2	T3-7-S		10-20	cm bs	Ap (Plowzone)	I		1	quartz large flake *notched, possibly utilized*			1
31.00	2	T3-7-S		10-20	cm bs	Ap (Plowzone)	I		1	quartz flake			1
32.01	1	T3-5		20-30	cm bs	Ap/B1 (Interface)	I		6	quartz flake			1
32.02	1	T3-5		20-30	cm bs	Ap/B1 (Interface)	I		3	quartz shatter			1
32.03	1	T3-5		20-30	cm bs	Ap/B1 (Interface)	I		1	crystal quartz flake			1
33.00	1	N100E100	SE	0-10	cm bs	Duff/Plowzone	II		1	quartz possible primary reduction flake			1
34.00	1	N100E100	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite biface fragment w/ cortex			3
35.00	1	N100E100	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite flake			3
36.00	1	N100E100	NE	10-20	cm bs	Ap (Plowzone)	II		2	quartzite primary reduction flake			3
37.00	1	N100E100	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite large primary reduction debris			3
38.00	1	N100E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite primary reduction flake			4
39.00	1	N100E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite flake			4
40.00	1	N100E100	SE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite primary reduction flake			8

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
41.00	1	N100E100	SE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite bifacial retouch flake			8
42.00	1	N100E100	SE	10-20	cm bs	Ap (Plowzone)	II		6	quartzite flake			8
43.00	1	N100E100	SE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite large flake			8
44.00	1	N100E100	SE	10-20	cm bs	Ap (Plowzone)	II		1	quartz flake			8
45.00	1	N100E100	NW	20-30	cm bs	Ap (Plowzone)	II		5	quartzite primary reduction flake			5
46.00	1	N100E100	NW	20-30	cm bs	Ap (Plowzone)	II		14	quartzite flake			5
47.00	1	N100E100	NW	20-30	cm bs	Ap (Plowzone)	II		1	quartzite possible Parallel Stemmed unifacial projectile point base fragment		Early Archaic	5
48.00	1	N100E100	SW	20-30	cm bs	Ap (Plowzone)	II		1	quartzite flake			6
49.00	1	N100E100	SE	20-27	cm bs	Ap (Plowzone)	II		1	quartzite flake			7
50.00	2	N121E100	NE	20-23	cm bs	Ap (Plowzone)	II		1	quartzite possible backed crescent			1
51.00	2	N121E100	NE	20-23	cm bs	Ap (Plowzone)	II		1	quartz flake			1
52.00	2	N121E100	SE	20-26	cm bs	Ap (Plowzone)	II		1	quartzite flake			2
53.00	2	N121E100	NW	20-28	cm bs	Ap (Plowzone)	II		1	quartz primary reduction flake			3
54.00	2	N121E100	SW	28-30	cm bs	B1 (Upper Subsoil)	II		1	quartzite medium flake w/cortical platform			4
55.00	2	N121E100	SW	28-30	cm bs	B1 (Upper Subsoil)	II		1	quartzite Parallel Stemmed projectile point whole		Early Archaic	4
56.00	2	N119E100	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite large primary reduction debris			1
57.00	2	N119E100	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite flake *recent break; 2 fragments refit to form 1 flake*			2
58.00	2	N119E100	NE	20-30	cm bs	Ap (Plowzone)	II		2	quartzite primary reduction flake			3
59.00	2	N119E100	NE	20-30	cm bs	Ap (Plowzone)	II		1	quartzite flake w/cortical platform			3
60.01	2	N119E100	NE	20-30	cm bs	Ap (Plowzone)	II		1	quartzite flake			3
60.02	2	N119E100	NE	20-30	cm bs	Ap (Plowzone)	II		1	quartzite flake w/cortical platform			3

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
61.00	2	N119E100	NE	20-30	cm bs	Ap (Plowzone)	II		2	quartzite bifacial retouch flake			3
62.00	2	N119E100	NE	20-30	cm bs	Ap (Plowzone)	II		1	quartzite utilized large flake w/ cortex			3
63.00	2	N119E100	NE	20-30	cm bs	Ap (Plowzone)	II		1	shale possible knife *notched; possible ulu*			3
64.00	2	N120E100	NW	10-20	cm bs	Ap (Plowzone)	II		1	unidentified metamorphic lithic flake *refits with AI# 65*			1
65.00	2	N120E100	NW	10-20	cm bs	Ap (Plowzone)	II		1	unidentified metamorphic lithic large primary reduction debris *refits with AI# 64*			1
66.00	2	N120E100	SE	10-20	cm bs	Ap (Plowzone)	II		1	crystal quartz crescent			2
67.00	2	N120E100	NW	20-23	cm bs	Ap (Plowzone)	II		1	quartz early stage biface			3
68.01	2	N120E100	SE	20-30	cm bs	Ap (Plowzone)	II		3	quartzite flake			4
68.02	2	N120E100	SE	20-30	cm bs	Ap (Plowzone)	II		1	quartzite primary reduction flake			4
69.00	2	N120E100	SE	20-30	cm bs	Ap (Plowzone)	II		3	quartzite primary reduction flake			4
70.00	2	N120E100	SE	20-30	cm bs	Ap (Plowzone)	II		3	quartzite flake w/cortical platform			4
71.00	2	N120E100	SE	20-30	cm bs	Ap (Plowzone)	II		1	quartzite biface thinning flake			4
72.00	2	N120E100	SE	20-30	cm bs	Ap (Plowzone)	II		2	quartzite microflake			4
73.00	2	N120E100	SE	20-30	cm bs	Ap (Plowzone)	II		1	quartz small primary reduction debris			4
74.00	2	N120E100	SE	20-30	cm bs	Ap (Plowzone)	II		1	quartz microflake			4
75.00	2	N120E100	SE	20-30	cm bs	Ap (Plowzone)	II		1	crystal quartz microflake			4
76.00	2	N120E100	SE	20-30	cm bs	Ap (Plowzone)	II		1	shale flake			4
77.01	2	N120E100	NE	20-23	cm bs	Ap (Plowzone)	II		5	quartzite flake			5
77.02	2	N120E100	NE	20-23	cm bs	Ap (Plowzone)	II		1	quartzite flake w/cortical platform			5
78.00	2	N120E100	NE	20-23	cm bs	Ap (Plowzone)	II		1	quartzite primary reduction flake			5
79.00	2	N120E100	NE	20-23	cm bs	Ap (Plowzone)	II		1	quartzite large primary reduction flake possibly thermally altered			5

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
80.00	2	N120E100	NE	20-23	cm bs	Ap (Plowzone)	II		1	crystal quartz flake			5
81.00	2	N120E100	NE	20-23	cm bs	Ap (Plowzone)	II		1	crystal quartz microflake			5
82.00	2	N120E100	NE	20-23	cm bs	Ap (Plowzone)	II		1	crystal quartz bifacial retouch flake			5
83.00	2	N120E100	NE	20-23	cm bs	Ap (Plowzone)	II		1	unidentified metamorphic lithic flake			5
84.00	2	N120E100	NE	20-23	cm bs	Ap (Plowzone)	II		1	unidentified metamorphic lithic large flake w/cortical platform			5
85.00	2	N120E100	SE	30-33	cm bs	Ap/B1 (Interface)	II		1	quartzite microflake			6
86.00	2	N120E100	SE	30-33	cm bs	Ap/B1 (Interface)	II		1	quartz modified pebble			6
87.00	2	N120E100	NW	23-30	cm bs	Ap/B1 (Interface)	II		2	quartzite flake			7
88.00	2	N120E100	NW	23-30	cm bs	Ap/B1 (Interface)	II		2	quartzite bifacial retouch flake			7
89.00	2	N120E100	NW	23-30	cm bs	Ap/B1 (Interface)	II		1	crystal quartz microflake			7
90.00	2	N120E100	NW	23-30	cm bs	Ap/B1 (Interface)	II		1	quartz small primary reduction debris			7
91.00	2	N120E100	NE	23-30	cm bs	Ap/B1 (Interface)	II		1	quartz flake			8
92.00	2	N120E100	NE	23-30	cm bs	Ap/B1 (Interface)	II		1	quartz microflake			8
93.01	2	N120E100	NE	23-30	cm bs	Ap/B1 (Interface)	II		2	quartzite flake			8
93.02	2	N120E100	NE	23-30	cm bs	Ap/B1 (Interface)	II		1	quartzite flake w/cortical platform			8
94.00	2	N120E100	NE	23-30	cm bs	Ap/B1 (Interface)	II		1	possible hornfels primary reduction flake			8
95.00	2	N120E100	NW	38	cm bs	B1 (Upper Subsoil)	II		1	quartzite core w/ cortex *N120.77E100.23; possible early stage blade core*			9
96.00	2	N120E100	NW	30-40	cm bs	B1 (Upper Subsoil)	II		2	quartz bifacial retouch flake			10
97.00	2	N120E100	NW	30-40	cm bs	B1 (Upper Subsoil)	II		1	quartzite medium flake			10
98.00	2	N120E100	NW	30-40	cm bs	B1 (Upper Subsoil)	II		1	quartzite large flake w/cortical platform			10
99.00	2	N120E100	NE	30-40	cm bs	B1 (Upper Subsoil)	II		1	quartzite biface thinning flake			11

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
100.00	2	N120E100	NE	30-40	cm bs	B1 (Upper Subsoil)	II		1	quartz small angular debris			11
101.00	2	N120E100	NE	30-40	cm bs	B1 (Upper Subsoil)	II		1	unidentified metamorphic lithic large angular debris			11
102.00	2	N120E100	NE	30-40	cm bs	B1 (Upper Subsoil)	II		1	unidentified metamorphic lithic large flake			11
103.00	2	N120E100	SE	33-38	cm bs	Ap/Bioturbation	II		1	quartzite utilized flake			12
104.00	2	N120E100	SE	33-38	cm bs	Ap/Bioturbation	II		1	quartzite flake w/cortical platform *possible potlid fractures*			12
105.00	2	N120E100	SE	33-38	cm bs	Ap/Bioturbation	II		1	possible quartz small primary reduction debris			12
106.00	2	N120E100	SE	30-40	cm bs	B1 (Upper Subsoil)	II		2	quartzite primary reduction flake			13
107.00	2	N120E100	SE	30-40	cm bs	B1 (Upper Subsoil)	II		1	coarse grained quartzite fire cracked rock w/ cortex	170.88 gm		13
108.00	2	N120E100	SE	30-40	cm bs	B1 (Upper Subsoil)	II		1	unidentified metamorphic lithic large angular debris			13
109.00	2	N120E100	NW	40-50	cm bs	B1 (Upper Subsoil)	II		1	quartzite core w/ cortex			14
110.00	2	N120E100	NW	40-50	cm bs	B1 (Upper Subsoil)	II		1	quartzite possible core w/ cortex			14
111.00	2	N120E100	NW	40-50	cm bs	B1 (Upper Subsoil)	II		1	quartz core w/ cortex			14
112.00	2	N120E100	NW	40-50	cm bs	B1 (Upper Subsoil)	II		1	quartz core w/ cortex			14
113.00	2	N120E100	NE	40-50	cm bs	B1 (Upper Subsoil)	II		1	quartzite core w/ cortex			15
114.00	2	N120E100	NE	40-50	cm bs	B1 (Upper Subsoil)	II		1	quartzite flake w/ cortex			15
115.01	2	N120E100	NE	40-50	cm bs	B1 (Upper Subsoil)	II		1	quartzite flake			15
115.02	2	N120E100	NE	40-50	cm bs	B1 (Upper Subsoil)	II		1	quartzite flake w/ cortex			15
116.00	2	N120E100	NE	40-50	cm bs	B1 (Upper Subsoil)	II		1	quartzite large flake			15
117.00	2	N120E100	NE	40-50	cm bs	B1 (Upper Subsoil)	II		1	quartzite modified cobble			15
118.00	2	N120E100	NE	40-50	cm bs	B1 (Upper Subsoil)	II		1	quartzite primary reduction flake			15
119.00	2	N120E100	NE	40-50	cm bs	B1 (Upper Subsoil)	II		2	quartz large primary reduction debris			15

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
120.00	2	N120E100	NE	40-50	cm bs	B1 (Upper Subsoil)	II		1	quartz utilized flake w/ cortex *notched*			15
121.00	2	N120E100	SE	40-54	cm bs	B1 (Upper Subsoil)	II		1	quartzite flake			16
122.01	2	N120E101	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite flake			1
122.02	2	N120E101	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite bifacial retouch flake			1
123.00	2	N120E101	NW	10-20	cm bs	Ap (Plowzone)	II		4	quartz flake			1
124.00	2	N120E101	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartz early stage crescent			1
125.01	2	N120E101	SW	20-27	cm bs	Ap (Plowzone)	II		1	quartzite flake			2
125.02	2	N120E101	SW	20-27	cm bs	Ap (Plowzone)	II		1	quartzite flake possibly thermally altered			2
126.00	2	N120E101	SW	20-27	cm bs	Ap (Plowzone)	II		2	quartzite primary reduction flake			2
127.00	2	N120E101	SW	20-27	cm bs	Ap (Plowzone)	II		1	quartzite large primary reduction debris thermally altered			2
128.00	2	N120E101	NW	20-24	cm bs	Ap (Plowzone)	II		1	crystal quartz flake			3
129.00	2	N120E101	SW	27-30	cm bs	B1 (Upper Subsoil)	II		1	crystal quartz flake			4
130.00	2	N120E101	SW	27-30	cm bs	B1 (Upper Subsoil)	II		1	quartzite medium flake			4
131.00	2	N121E101	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite flake			1
132.00	2	N121E101	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite flake			2
133.00	2	N121E101	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite large flake w/cortical platform *early stage biface; possibly thermally altered*			2
134.00	2	N121E101	SW	20-28	cm bs	Ap (Plowzone)	II		1	crystal quartz bifacial retouch flake			3
135.00	2	N121E101	NW	27-30	cm bs	Ap/B1 (Interface)	II		1	quartz primary reduction flake			4
136.00	2	N124E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite cobble whole *large 20 x 17 x 12 cm*			1
137.00	1	N99E99	NW	0-10	cm bs	Duff/Plowzone	II		1	quartz flake			1
138.00	1	N99E99	NW	0-10	cm bs	Duff/Plowzone	II		1	quartzite exhausted core w/ cortex			1

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
139.00	1	N99E99	NE	0-10	cm bs	Duff/Plowzone	II		1	quartzite flake			2
140.00	1	N99E99	NE	0-10	cm bs	Duff/Plowzone	II		1	quartzite primary reduction flake			2
141.00	1	N99E99	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite large angular debris			3
142.00	1	N99E99	NW	10-20	cm bs	Ap (Plowzone)	II		8	quartzite flake			3
143.00	1	N99E99	NW	10-20	cm bs	Ap (Plowzone)	II		4	quartzite flake w/cortical platform			3
144.00	1	N99E99	NW	10-20	cm bs	Ap (Plowzone)	II		3	quartzite small primary reduction debris			3
145.00	1	N99E99	NW	10-20	cm bs	Ap (Plowzone)	II		2	quartzite large primary reduction debris			3
146.00	1	N99E99	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite flake w/cortical platform			3
147.00	1	N99E99	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartz flake			3
148.00	1	N99E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartz possible core weathered			4
149.00	1	N99E99	NE	10-20	cm bs	Ap (Plowzone)	II		2	quartzite flake w/cortical platform			4
150.00	1	N99E99	NE	10-20	cm bs	Ap (Plowzone)	II		3	quartzite small primary reduction debris possibly thermally altered			4
151.00	1	N99E99	NE	10-20	cm bs	Ap (Plowzone)	II		2	quartzite large primary reduction debris			4
152.00	1	N99E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite small angular debris			4
153.00	1	N99E99	NE	10-20	cm bs	Ap (Plowzone)	II		4	quartzite bifacial retouch flake			4
154.00	1	N99E99	NE	10-20	cm bs	Ap (Plowzone)	II		10	quartzite flake			4
155.00	1	N99E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite microflake			4
156.00	1	N99E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite possible crescent			4
157.00	1	N99E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	possible quartzite small angular debris			4
158.00	1	N99E99	NE	20-24	cm bs	Ap (Plowzone)	II		1	quartzite primary reduction flake			5
159.00	1	N99E100	NE	0-10	cm bs	Duff/Plowzone	II		1	quartzite large primary reduction debris			1

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
160.00	1	N99E100	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite flake			2
161.00	1	N99E100	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite small primary reduction debris			2
162.00	1	N99E100	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartz microflake			2
163.00	1	N99E100	NE	10-20	cm bs	Ap (Plowzone)	II		3	quartzite large angular debris			3
164.00	1	N99E100	NE	10-20	cm bs	Ap (Plowzone)	II		2	quartzite flake			3
165.00	1	N99E100	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite small primary reduction debris			3
166.00	1	N100E99	NE	0-10	cm bs	Duff/Plowzone	II		1	quartzite primary reduction flake			1
167.00	1	N100E99	NE	0-10	cm bs	Duff/Plowzone	II		1	quartz exhausted core			1
168.00	1	N100E99	SW	10-19	cm bs	Ap (Plowzone)	II		1	unidentified metamorphic lithic primary reduction flake			2
169.00	1	N100E99	SE	10-20	cm bs	Ap (Plowzone)	II		2	quartzite flake			3
170.00	1	N100E99	SE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite bifacial retouch flake			3
171.00	1	N100E99	SE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite primary reduction flake			3
172.00	1	N100E99	SE	10-20	cm bs	Ap (Plowzone)	II		1	quartz large angular debris			3
173.00	1	N100E99	NE	18	cm bs	Ap (Plowzone)	II		1	quartzite large primary reduction debris *N100.75E100*			4
174.00	1	N100E99	NE	10-20	cm bs	Ap (Plowzone)	II		7	quartzite bifacial retouch flake			5
175.01	1	N100E99	NE	10-20	cm bs	Ap (Plowzone)	II		25	quartzite flake			5
175.02	1	N100E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite flake w/cortical platform			5
175.03	1	N100E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite primary reduction flake			5
176.00	1	N100E99	NE	10-20	cm bs	Ap (Plowzone)	II		8	quartzite medium flake			5
177.00	1	N100E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite large flake			5
178.00	1	N100E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite medium flake			5

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
179.00	1	N100E99	NE	10-20	cm bs	Ap (Plowzone)	II		2	quartzite large primary reduction debris			5
180.00	1	N100E99	NE	10-20	cm bs	Ap (Plowzone)	II		7	quartzite small primary reduction debris			5
181.00	1	N100E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite large angular debris			5
182.00	1	N100E99	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite medium flake			6
183.00	1	N100E99	NW	10-20	cm bs	Ap (Plowzone)	II		3	quartzite flake			6
184.00	1	N100E99	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite microflake			6
185.00	1	N100E99	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartz flake			6
186.00	1	N100E99	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartz small primary reduction debris			6
187.00	1	N100E99	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartz core weathered			6
188.00	1	N100E99	SW	20	cm bs	Ap (Plowzone)	II		4	charred wood fragment	0.70 gm		7
189.00	1	N100E99	NE	20-30	cm bs	Ap (Plowzone)	II		2	quartzite medium flake			8
190.00	1	N100E99	NE	20-30	cm bs	Ap (Plowzone)	II		1	quartzite flake			8
191.00	1	N100E99	NE	20-30	cm bs	Ap (Plowzone)	II		1	quartzite bifacial retouch flake			8
192.00	1	N100E99	NE	20-30	cm bs	Ap (Plowzone)	II		2	quartzite primary reduction flake			8
193.00	1	N100E99	NW	15-25	cm bs	Ap (Plowzone)	II		1	sandstone historic whetstone *N100.88E99.30*			9
194.00	1	N100E99	south 1/2	30	cm bs	Ap/Feature soil	II	1	1	quartzite bifacial retouch flake			10
195.00	1	N100E99	SW	30-40	cm bs	Feature soil	II	1C	1	charred wood fragment	0.14 gm		11
196.00	1	N100E99	NW	30-40	cm bs	Feature soil	II	1A	4	charred wood fragment	0.30 gm		12
197.00	1	N100E99	east 1/2	30-45	cm bs	Feature soil	II	1A	1	soil sample: flotation 10 liters			13
197.01	1	N100E99	east 1/2	30-45	cm bs	Feature soil	II	1A	1	soil sample: light fraction			13
197.02	1	N100E99	east 1/2	30-45	cm bs	Feature soil	II	1A	1	soil sample: archival .13 liters			13

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
197.03	1	N100E99	east 1/2	30-45	cm bs	Feature soil	II	1A	64	charred wood fragment	0.74 gm		13
197.04	1	N100E99	east 1/2	30-45	cm bs	Feature soil	II	1A	1	charred hazelnut (Corylus sp.) nut fragment	0.02 gm		13
197.05	1	N100E99	east 1/2	30-45	cm bs	Feature soil	II	1A	1	charred nut fragment	0.02 gm		13
197.06	1	N100E99	east 1/2	30-45	cm bs	Feature soil	II	1A	2	charred raspberry (Rubus sp.) seed whole	0.02 gm		13
197.07	1	N100E99	east 1/2	30-45	cm bs	Feature soil	II	1A	1	uncharred strawberry (Fragaria sp.) seed whole	0.02 gm		13
198.00	1	N101E99	SE	0-10	cm bs	Duff/Plowzone	II		1	unidentified metamorphic lithic medium flake			1
199.00	1	N101E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite microflake			2
200.00	1	N101E99	NE	10-20	cm bs	Ap (Plowzone)	II		2	quartzite flake			2
201.00	1	N101E99	NE	10-20	cm bs	Ap (Plowzone)	II		3	quartzite bifacial retouch flake			2
202.00	1	N101E99	NE	10-20	cm bs	Ap (Plowzone)	II		2	quartzite primary reduction flake			2
203.00	1	N101E99	SE	10-20	cm bs	Ap (Plowzone)	II		5	quartzite microflake			3
204.00	1	N101E99	SE	10-20	cm bs	Ap (Plowzone)	II		2	quartzite medium flake			3
205.00	1	N101E99	SE	10-20	cm bs	Ap (Plowzone)	II		28	quartzite flake			3
206.00	1	N101E99	SE	10-20	cm bs	Ap (Plowzone)	II		4	quartzite shatter			3
207.00	1	N101E99	SE	10-20	cm bs	Ap (Plowzone)	II		6	quartzite bifacial retouch flake			3
208.00	1	N101E99	SE	10-20	cm bs	Ap (Plowzone)	II		2	quartzite small angular debris			3
209.00	1	N101E99	SE	10-20	cm bs	Ap (Plowzone)	II		2	quartzite large primary reduction debris			3
210.00	1	N101E99	SE	10-20	cm bs	Ap (Plowzone)	II		12	quartzite small primary reduction debris			3
211.00	1	N101E99	SE	10-20	cm bs	Ap (Plowzone)	II		1	quartz small angular debris			3
212.00	1	N101E99	SE	10-20	cm bs	Ap (Plowzone)	II		2	quartz small primary reduction debris			3
213.00	1	N101E99	SE	10-20	cm bs	Ap (Plowzone)	II		2	quartz shatter			3

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
214.00	1	N101E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartz small primary reduction debris			4
215.00	1	N101E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartz cobble whole			4
216.00	1	N101E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite primary reduction flake			4
217.00	1	N101E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite core w/ cortex *large, 22 x 14 x 9 cm; N101.9E99.3; Possibly thermally altered*			4
218.00	1	N101E99	NE	10-20	cm bs	Ap (Plowzone)	II		1	unidentified metamorphic lithic possible preform			4
219.00	1	N101E99	SE	20-26	cm bs	Ap (Plowzone)	II		4	quartzite microflake			5
220.00	1	N101E99	SE	20-26	cm bs	Ap (Plowzone)	II		10	quartzite flake			5
221.00	1	N101E99	SE	20-26	cm bs	Ap (Plowzone)	II		2	quartzite small primary reduction debris			5
222.00	1	N101E99	NE	20-26	cm bs	Ap (Plowzone)	II		1	quartzite flake			6
223.00	1	N101E99	NE	20-26	cm bs	Ap (Plowzone)	II		1	quartzite small primary reduction debris			6
224.00	1	N101E99	NE	20-26	cm bs	Ap (Plowzone)	II		1	possible quartzite modified pebble *possible FCR*			6
225.00	1	N101E99	SW	20-30	cm bs	Ap (Plowzone)	II		3	quartzite flake			7
226.00	1	N101E99	SW	20-30	cm bs	Ap (Plowzone)	II		1	quartzite flake w/cortical platform			7
227.00	1	N101E99	SW	20-30	cm bs	Ap (Plowzone)	II		1	quartz exhausted core w/ cortex			7
228.00	1	N101E100	NE	surface	cm bs	A0 (Duff)	II		1	quartzite core w/ cortex			1
229.00	1	N101E100	NW	0-10	cm bs	Duff/Plowzone	II		1	quartzite flake			2
230.00	1	N101E100	NW	0-10	cm bs	Duff/Plowzone	II		1	quartzite small primary reduction debris			2
231.00	1	N101E100	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite preform			3
232.00	1	N101E100	NW	10-20	cm bs	Ap (Plowzone)	II		2	quartzite small primary reduction debris			3
233.00	1	N101E100	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite flake			3
234.00	1	N101E100	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite medium flake			3

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
235.00	1	N101E100	NW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite large primary reduction debris			3
236.00	1	N101E100	SW	10-20	cm bs	Ap (Plowzone)	II		34	quartzite flake			4
237.00	1	N101E100	SW	10-20	cm bs	Ap (Plowzone)	II		4	quartzite microflake			4
238.00	1	N101E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite medium flake			4
239.00	1	N101E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite large flake			4
240.00	1	N101E100	SW	10-20	cm bs	Ap (Plowzone)	II		3	quartzite bifacial retouch flake			4
241.00	1	N101E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite primary reduction flake			4
242.00	1	N101E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite flake w/cortical platform			4
243.00	1	N101E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite small angular debris			4
244.00	1	N101E100	SW	10-20	cm bs	Ap (Plowzone)	II		3	quartzite small primary reduction debris			4
245.00	1	N101E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite primary reduction flake *possible base*			4
246.00	1	N101E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite crescent *small*			4
247.00	1	N101E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite biface			4
248.00	1	N101E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartzite biface *early stage*			4
249.00	1	N101E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartz possible crescent			4
250.00	1	N101E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	quartz microflake			4
251.00	1	N101E100	SE	10-20	cm bs	Ap (Plowzone)	II		18	quartzite flake			5
252.00	1	N101E100	SE	10-20	cm bs	Ap (Plowzone)	II		4	quartzite bifacial retouch flake			5
253.00	1	N101E100	SE	10-20	cm bs	Ap (Plowzone)	II		2	quartzite microflake			5
254.00	1	N101E100	SE	10-20	cm bs	Ap (Plowzone)	II		2	quartzite small primary reduction debris			5
255.00	1	N101E100	SE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite flake w/cortical platform			5

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
256.00	1	N101E100	SE	10-20	cm bs	Ap (Plowzone)	II		3	quartzite flake w/cortical platform			5
257.00	1	N101E100	SE	10-20	cm bs	Ap (Plowzone)	II		2	quartzite utilized flake			5
258.00	1	N101E100	SE	10-20	cm bs	Ap (Plowzone)	II		1	quartz utilized flake			5
259.00	1	N101E100	SE	10-20	cm bs	Ap (Plowzone)	II		1	quartz flake			5
260.00	1	N101E100	SE	10-20	cm bs	Ap (Plowzone)	II		1	quartz large angular debris			5
261.00	1	N101E100	SE	10-20	cm bs	Ap (Plowzone)	II		3	sandstone fire cracked rock	46.82 gm		5
262.00	1	N101E100	NE	10-20	cm bs	Ap (Plowzone)	II		1	quartzite microflake			6
263.00	1	N101E100	NE	10-20	cm bs	Ap (Plowzone)	II		1	unidentified metamorphic lithic flake			6
264.00	1	N101E100	SW	30-40	cm bs	Feature soil	II	1A	1	unidentified lithic non cultural			7
										N101.02E100.02			
265.00	1	N104E100	SW	0-10	cm bs	Duff/Plowzone	II		1	quartzite core weathered			1

Archaeological and Historical Services, Inc.

Site Summary Report

Site: 400-Nham 3

04/25/19

Material	Total
Historic Ceramic	71
Faunal	5
Metal	15
Glass	103
Other Historic	13
Historic Pipe	2

Total Artifacts: 209

Archaeological and Historical Services, Inc.

Detailed Site Summary Report

Material	Description	Count
Historic Ceramic	red earthenware (no glaze)	1
Historic Ceramic	untyped porcelain	2
Historic Ceramic	Domestic salt glazed stoneware with Albany slip	2
Historic Ceramic	blue transfer printed whiteware	1
Historic Ceramic	untyped whiteware	65
Faunal	unidentified mammal non calcined bone	4
Faunal	unidentified calcined bone	1
Metal	iron bolt	1
Metal	iron machine cut machine headed nail	2
Metal	iron nail	2
Metal	iron wire nail	6
Metal	iron spring	1
Metal	iron strap	1
Metal	iron threaded pipe	1
Metal	iron unidentified	1
Glass	blue-green unidentified curved glass	2
Glass	clear window glass	23
Glass	clear oval glass bead	1
Glass	clear glass medicine bottle	1
Glass	clear glass unidentified bottle	13
Glass	clear glass unidentified container	22
Glass	clear unidentified curved glass	16
Glass	clear unidentified flat glass	19
Glass	green unidentified curved glass	1
Glass	opaque white/milk unidentified flat glass	5
Other Historic	brick	8
Other Historic	coal	3
Other Historic	coal ash	1
Other Historic	slag	1
Historic Pipe	kaolin pipe	1
Historic Pipe	kaolin pipe 5/64	1

Total Artifacts: 209

Archaeological and Historical Services, Inc.

Mean Ceramic Date Report

Class	Sum of Count	Date	Count*date
Domestic salt glazed stoneware with Albany slip	2.00	1853	3706
blue transfer printed whiteware	1.00	1860	1860
red earthenware (no glaze)	1.00		0
untyped porcelain	2.00		0
untyped whiteware	65.00	1860	120900

Mean Ceramic Date: 1860

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
1.00		T1-1		10-20	cm bs	Ap (Plowzone)	I		1	green unidentified curved glass fragment			1
2.00		T1-3		0-10	cm bs	Duff/Plowzone	I		2	iron machine cut machine headed nail whole			1
3.00		T2-2		0-10	cm bs	Duff/Plowzone	I		1	iron unidentified fragment *possible nail with attached nut and washer*			1
4.00		T2-2		10-20	cm bs	Ap/B1 (Interface)	I		4	untyped whiteware base/body sherd *mends*		1820-1900+	2
5.00		T2-2		20-30	cm bs	B1 (Upper Subsoil)	I		2	untyped whiteware sherd		1820-1900+	3
6.00		T2-2		20-30	cm bs	B1 (Upper Subsoil)	I		1	iron spring fragment			3
7.00		T2-11		10-20	cm bs	Ap (Plowzone)	I		1	clear glass unidentified container body fragment			1
8.00		T3-5-N		0-10	cm bs	Duff/Plowzone	I		17	clear glass unidentified container body fragment			1
9.00		T3-5-N		10-20	cm bs	Ap (Plowzone)	I		1	iron bolt whole			2
10.00		T3-5-N		10-20	cm bs	Ap (Plowzone)	I		1	Domestic salt glazed stoneware with Albany slip sherd		1805-1900	2
11.00		T3-5-N		10-20	cm bs	Ap (Plowzone)	I		3	clear unidentified curved glass fragment			2
12.00		T3-5-N		10-20	cm bs	Ap (Plowzone)	I		1	clear w/ glass label glass unidentified bottle base fragment *'2509.., 7 FL. O.."*			2
13.00		T3-5-N		20-30	cm bs	Ap (Plowzone)	I		1	clear unidentified curved glass fragment			3
14.00		T3-5-N		20-30	cm bs	Ap (Plowzone)	I		1	untyped whiteware sherd		1820-1900+	3
15.00		T3-5-N		20-30	cm bs	Ap (Plowzone)	I		1	iron nail shank			3
16.00		T3-5-W		10-20	cm bs	Ap (Plowzone)	I		1	slag fragment *only a sample was collected; total of 3*	38.68 gm		1
17.00		T3-5-W		10-20	cm bs	Ap (Plowzone)	I		1	clear oval glass bead whole *with partial gold exterior*			1
18.00		T3-8		0-10	cm bs	Ap (Plowzone)	I		1	kaolin pipe 5/64 stem fragment			1
19.00		T3-10		10-20	cm bs	Ap (Plowzone)	I		1	clear glass unidentified bottle neck/finish fragment *crown cap finish*			1
20.00		T3-10		10-20	cm bs	Ap (Plowzone)	I		1	clear glass unidentified bottle neck fragment			1
21.00		T3-10		10-20	cm bs	Ap (Plowzone)	I		1	coal ash fragment	0.86 gm		1

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
22.00		T3-10		10-20	cm bs	Ap (Plowzone)	I		1	iron threaded pipe end fragment			1
23.00		N100E100	NW	10-20	cm bs	Ap (Plowzone)	II		1	blue-green unidentified curved glass fragment			2
24.00		N100E100	NW	10-20	cm bs	Ap (Plowzone)	II		1	clear glass unidentified container body fragment			2
25.00		N100E100	NW	10-20	cm bs	Ap (Plowzone)	II		1	clear window glass fragment			2
26.00		N100E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	clear unidentified curved glass fragment			4
27.00		N100E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	iron nail shank			4
28.00		N100E100	SE	10-20	cm bs	Ap (Plowzone)	II		1	Domestic salt glazed stoneware with Albany slip base/body sherd		1805-1900	8
29.00		N100E100	NW	20-30	cm bs	Ap (Plowzone)	II		5	brick fragment	28.70 gm		5
30.00		N59E103	NE	0-10	cm bs	Duff/Plowzone	II		1	untyped porcelain base/footring/body sherd			1
31.00		N59E103	NE	0-10	cm bs	Duff/Plowzone	II		1	untyped porcelain decorated rim sherd			1
32.00		N59E103	NE	0-10	cm bs	Duff/Plowzone	II		3	clear glass unidentified bottle neck/finish fragment *screw top*			1
33.00		N59E103	NE	0-10	cm bs	Duff/Plowzone	II		1	clear glass unidentified bottle neck fragment			1
34.00		N59E103	NE	0-10	cm bs	Duff/Plowzone	II		5	clear glass unidentified bottle fragment			1
35.00		N80E95	SW	10-20	cm bs	Duff/Plowzone	II		1	clear unidentified curved glass fragment			1
36.00		N80E95	SW	10-20	cm bs	Duff/Plowzone	II		1	untyped whiteware rim sherd		1820-1900+	1
37.00		N80E103	SE	10-20	cm bs	Ap (Plowzone)	II		1	untyped whiteware sherd		1820-1900+	1
38.00		N95E90	SW	0-10	cm bs	Duff/Plowzone	II		1	clear w/ glass label glass medicine bottle whole *"MINARD'S LINIMENT FRAMINGHAM, MASS. U. S.A."; screw top*			1
39.00		N95E100	SW	0-10	cm bs	Duff/Plowzone	II		19	clear window glass fragment			1
40.00		N95E100	SW	0-10	cm bs	Duff/Plowzone	II		7	clear unidentified curved glass fragment			1
41.00		N95E100	SW	0-10	cm bs	Duff/Plowzone	II		16	clear w/ applied color label unidentified flat glass			1
42.00		N95E100	SW	0-10	cm bs	Duff/Plowzone	II		4	opaque white/milk unidentified flat glass fragment			1

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
43.00		N95E100	SW	0-10	cm bs	Duff/Plowzone	II		3	coal fragment *only a sample was collected; total of 20*	4.18 gm		1
44.00		N95E100	SW	0-10	cm bs	Duff/Plowzone	II		4	iron wire nail whole *only a sample was collected; total of 20*			1
45.00		N95E100	SW	0-10	cm bs	Duff/Plowzone	II		31	untyped whiteware sherd		1820-1900+	1
46.00		N95E100	SW	0-10	cm bs	Duff/Plowzone	II		3	untyped whiteware rim sherd		1820-1900+	1
47.00		N95E100	SW	10-20	cm bs	Ap (Plowzone)	II		3	untyped whiteware rim sherd		1820-1900+	2
48.00		N95E100	SW	10-20	cm bs	Ap (Plowzone)	II		7	untyped whiteware sherd		1820-1900+	2
49.00		N95E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	clear unidentified curved glass fragment			2
50.00		N95E100	SW	10-20	cm bs	Ap (Plowzone)	II		3	clear window glass fragment			2
51.00		N95E100	SW	10-20	cm bs	Ap (Plowzone)	II		3	clear w/ applied color label unidentified flat glass fragment			2
52.00		N95E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	opaque white/milk unidentified flat glass fragment			2
53.00		N95E100	SW	10-20	cm bs	Ap (Plowzone)	II		2	iron wire nail whole *only a sample was collected; total of 10*			2
54.00		N95E100	SW	10-20	cm bs	Ap (Plowzone)	II		1	iron strap fragment			2
55.00		N100E103	SW	10-20	cm bs	Ap (Plowzone)	II		1	brick fragment	0.48 gm		1
56.00		N100E103	SW	10-20	cm bs	Ap (Plowzone)	II		1	red earthenware (no glaze) sherd			1
57.00		N100E103	SW	10-20	cm bs	Ap (Plowzone)	II		1	clear unidentified curved glass fragment			1
58.00		N100E103	SW	10-20	cm bs	Ap (Plowzone)	II		1	clear glass unidentified bottle fragment			1
59.00		N100E103	SW	10-20	cm bs	Ap (Plowzone)	II		1	blue-green decorated unidentified curved glass fragment *"..t.."*			1
60.00		N100E103	SW	20-30	cm bs	B1 (Upper Subsoil)	II		1	brick fragment	6.66 gm		2
61.00		N105E103	SW	0-10	cm bs	Duff/Plowzone	II		1	untyped whiteware sherd		1820-1900+	1
62.00		N105E103	SW	10-20	cm bs	Ap (Plowzone)	II		7	untyped whiteware sherd		1820-1900+	2
63.00		N114E90	NW	0-10	cm bs	Duff/Plowzone	II		1	untyped whiteware sherd		1820-1900+	1

Inv#	Locus	Unit	Quad	Depth	Datum	Soil	Ph	Fea.	Count	Item Description	Weight	Period	Bag #
64.00		N114E90	NW	0-10	cm bs	Duff/Plowzone	II		1	clear unidentified curved glass fragment			1
65.00		N114E90	NW	0-10	cm bs	Duff/Plowzone	II		3	clear glass unidentified container fragment			1
66.00		N114E90	NW	10-20	cm bs	Ap (Plowzone)	II		3	untyped whiteware sherd		1820-1900+	2
67.00		N114E90	NW	10-20	cm bs	Ap (Plowzone)	II		1	blue transfer printed whiteware rim sherd		1820-1900+	2
68.00		N125E90	SW	10-20	cm bs	Ap (Plowzone)	II		1	brick fragment	3.28 gm		1
69.00		N125E90	SW	10-20	cm bs	Ap (Plowzone)	II		1	unidentified calcined bone fragment	0.50 gm		1
70.00		N130E90	SW	10-20	cm bs	Ap (Plowzone)	II		4	unidentified mammal non calcined bone fragment	4.10 gm		1
71.00		N130E90	SW	10-20	cm bs	Ap (Plowzone)	II		1	kaolin pipe bowl fragment			1

APPENDIX D: MHC Site Inventory Form

FORM D – ARCHAEOLOGICALSURVEY
PREHISTORIC ARCHAEOLOGICAL SITES

MASSACHUSETTS HISTORICAL COMMISSION
MASSACHUSETTS ARCHIVES BUILDING
220 MORRISSEY BOULEVARD
BOSTON, MASSACHUSETTS 02125

FOR MHC OFFICE USE ONLY

TOWN _____ MHC No. _____
UTM _____
Quad _____
NR ☐ ACT ☐ ELIG ☐ NO DISTRICT ☐ YES ☐ NO

IDENTIFICATION

1. SITE NAME(S) Skibiski Site (400-NHAM-4)
MAS. NO. **OTHER NO.**

2. TOWN/CITY Northampton
COUNTY Hampshire

3. STREET AND NUMBER (IF NOT AVAILABLE, GIVE DETAILED DESCRIPTION OF HOW TO REACH SITE)
West side of Hatfield Street at North King Street Intersection

4. OWNERS(S) AND ADDRESS(ES)
John F. Skibiski 426 Hatfield St, Northampton, Massachusetts 01060
Massachusetts (will purchase property for roadway construction)
☒ **Public** ☒ **Private**

5. SITE LOCATED BY
☒ **CRM Survey** ☐ **Avocational Collector** ☐ **Field School** ☐ **Other (Specify)** _____

Describe Sampling Strategy Used to Locate Site
Intensive (locational) survey (10-meter interval)

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

6b. Estimated Occupation Range

7. DATING METHODS **C-14** ☐ **Intuition** ☐ **Other (specify)**
Comparative Materials
Diagnostic Stone Tools – Parallel Stemmed points recovered in situ are indicative of an Early Archaic occupation

8a. DESCRIBE SITE TYPE/FUNCTION Two loci have been identified, both appear to be areas of lithic reduction and tool maintenance. Loci 1 is also above a deep soil feature (tree throw), and both loci contain heat treated quartzite, indicating that hearths were present at each locus.

9. DESCRIBE SIZE AND HORIZONTAL AND VERTICAL BOUNDARIES
The site is approximately 30 meters by nine meters in horizontal space and each loci is approximately six meters by six meters. Vertically, artifacts have been recovered from the plowzone, above (but not within)(the tree throw soil stratigraphy, and in the subsoil horizons.

10. GENERALIZED SITE PROFILE
Type of Soil(s) Cultural Materials
Typically 25 cm of plowzone, one subsoil horizon, and a C-horizon at approximately 60 cm. The tree throw feature at Locus 1 contained more complicated, slanted stratigraphy, but all artifacts were recovered from above the tree throw disturbance.
Indicate Depth of Levels

ENVIRONMENT

11. SOIL
USDA Soil Series Ridgebury fine sandy loam soil, very stony, 3-8% slopes
Contour Elevation 170 feet
% Slope of Ground
☒ **0 – 5** ☐ **5 – 15** ☐ **15 – 25** ☐ **Over 25**

Acidity
1 _____ **7** _____ **14**
(Acid) **(Base)**

12. TOPOGRAPHY
☐ **Flat** ☒ **Gentle undulation** ☐ **Other**
☐ **Rolling Hills** ☐ **Mountains**

13. WATER
NEAREST WATER SOURCE Connecticut River
SIZE AND SPEED Large
DISTANCE FROM SITE 250 meters
SEASONAL AVAILABILITY Year round

14. VEGE-TATION
PRESENT Oak, Walnut, and Pine trees
PAST

CONDITION

15. SITE INTEGRITY
☒ **Undisturbed** ☐ **Good** ☐ **Fair** ☐ **Destroyed**
IF DISTURBED, DESCRIBE DISTURBANCE

16. SURROUNDINGENVIRONMENT
☐ **Open Land** ☒ **Woodland** ☐ **Eroded Soils** ☐ **Residential** ☐ **Scattered Buildings**
☒ **Commercial** ☐ **Industrial** ☐ **Rural** **Visible from Site**
☐ **Coastal** ☐ **Isolated**

17. ANY THREATS TO SITE **DESCRIBE POTENTIAL THREATS** Highway development
☒ **Yes** ☐ **No**

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

RESEARCH STATUS

19. PREVIOUS WORK	By Whom / Affiliation	Date
☐ Surface Collected		
☐ "Pot hunted	By Whom / Affiliation	Date
☒ Tested	By Whom / Affiliation AHS, Inc.	Date 2018
☒ Excavation	By Whom / Affiliation AHS, Inc.	Date 2019

20. PRESENT LOCATIONOF MATERIAL (INCLUDE ADDRESS)

AHS laboratories, 569 Middle Turnpike, Storrs, CT

21. REFERENCES / REPORTS

Leslie, David E. 2019. Report, Intensive (Locational) Archaeological Survey, Site examination, and Expanded Site Examination. Intersection Improvements, North King Street (Routes 5/10) and Hatfield Street, Northampton, Massachusetts. Storrs, CT: Archaeological and Historical Services, Inc.

SIGNIFICANCE

22. RECOVERED DATA (Identify in DETAIL, including structures, related outbuildings, landscape features, etc.)

A total of 566 pre-colonial lithic artifacts were recovered from both loci. Expanded site examination testing revealed that the pre-colonial site is likely a rare Early Archaic site, with two contemporary loci of activity. Both loci contain projectile points, formal bifacial crescent tools, and evidence of biface manufacture and maintenance, as well as decortication of large and small quartz and quartzite cobbles. Activities at the site appear to have been focused on raw material acquisition, as well as the production and replacement of formal tools, and the production of informal tools for animal- and plant-processing. Although no discernable hearth features were found during the expanded site examination, it is highly likely that these hearths are preserved at both loci, but were outside the bounds of the shovel testing and excavation plan. Charred ecofacts were recovered from Locus 1 in the upper layer of Feature 1, but, these may date the tree-throw event, not the cultural occupation. The boundaries of the site are completely encapsulated within the APE, and no historic or modern-period disturbances were noted during any phase of the survey.

23. ARCHAEOLOGICAL OR HISTORICAL SIGNIFICANCE

Early Archaic archaeological sites are rare, and to date no single-component Parallel Stemmed sites have been discovered in the Northeast. Others have suggested that the Parallel Stemmed point may be indicative of remnant Paleoindian peoples during the Early Archaic period. Microlithic crescents have not been previously identified in the Northeast, although this tool type has been found commonly in arctic regions, and in other paleolithic contexts across the world. Given the rarity of Early Archaic sites, and the unique assemblage of formal tools at this site, we believe that this site is likely eligible for listing in the NRHP under Criteria A and D. It is likely eligible under Criterion A, because the site may provide valuable information about the transition between the Paleoindian and Early Archaic periods. It is also likely eligible for listing under Criterion D, because it has demonstrated through the artifact assemblage, site integrity, and remaining portions of each loci that are unexcavated, that it has the potential to yield important information about the Early Archaic period, a period that is understudied in New England due to the scarcity of sites.

SITE PLAN

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

25. SKETCH PLAN OF SITE	26. PHOTOS: Attach if available Label each with: Date of photo, photographer, view shown, name of site
Scale:	

REPORTED BY:	NAME	ADDRESS	
	David Leslie	569 Middle Turnpike, Storrs, CT	
	ORGANIZATION Archaeological and Historical Services, Inc.		DATE 5/1/2019

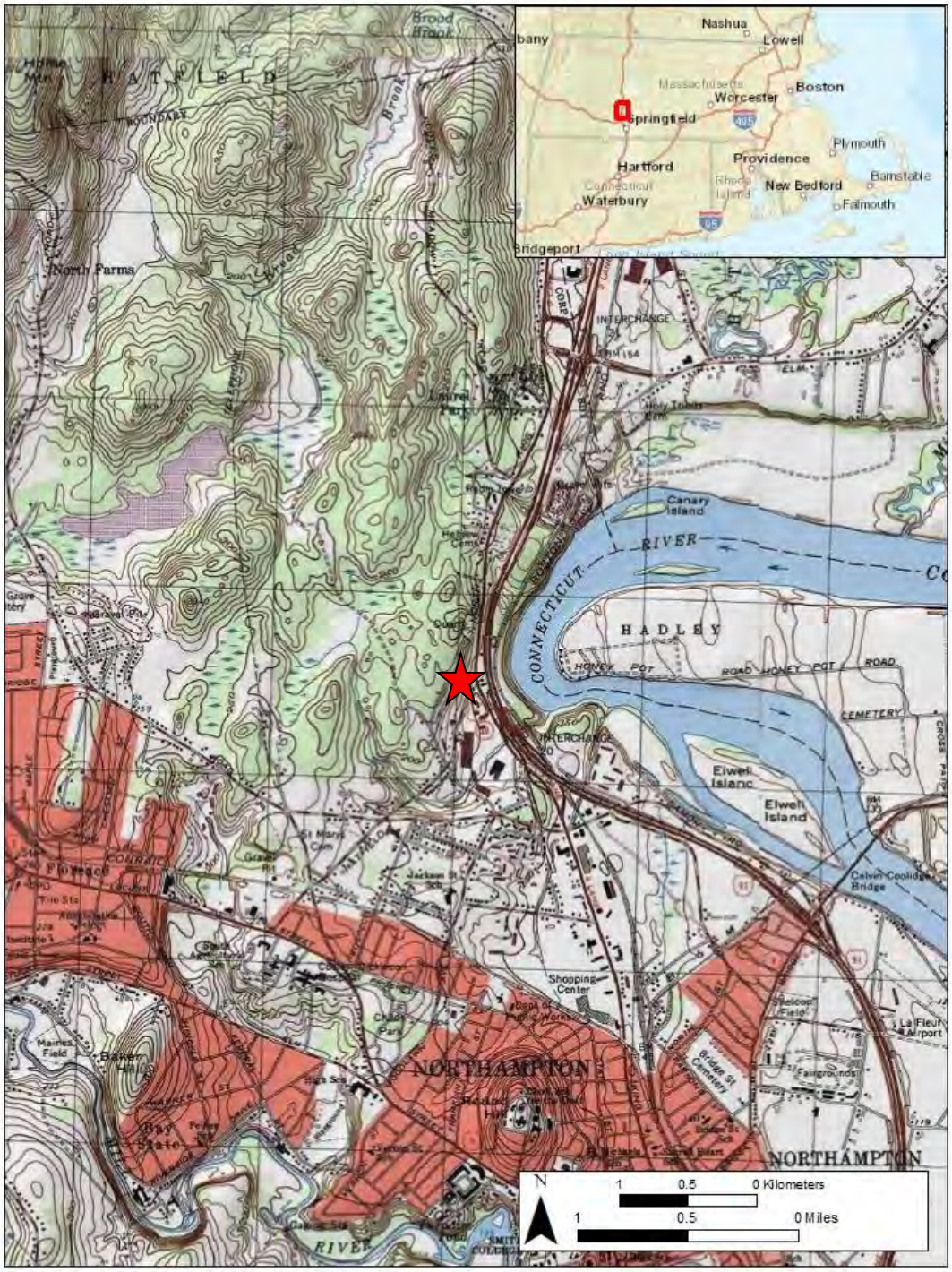
FOR OFFICE USE ONLY

FIELD EVALUATION

COMMENTS

FORM D – ARCHAEOLOGICALSURVEY
HISTORIC ARCHAEOLOGICAL SITES

MASSACHUSETTS HISTORICAL COMMISSION
MASSACHUSETTS ARCHIVES BUILDING
220 MORRISSEY BOULEVARD
BOSTON, MASSACHUSETTS 02125



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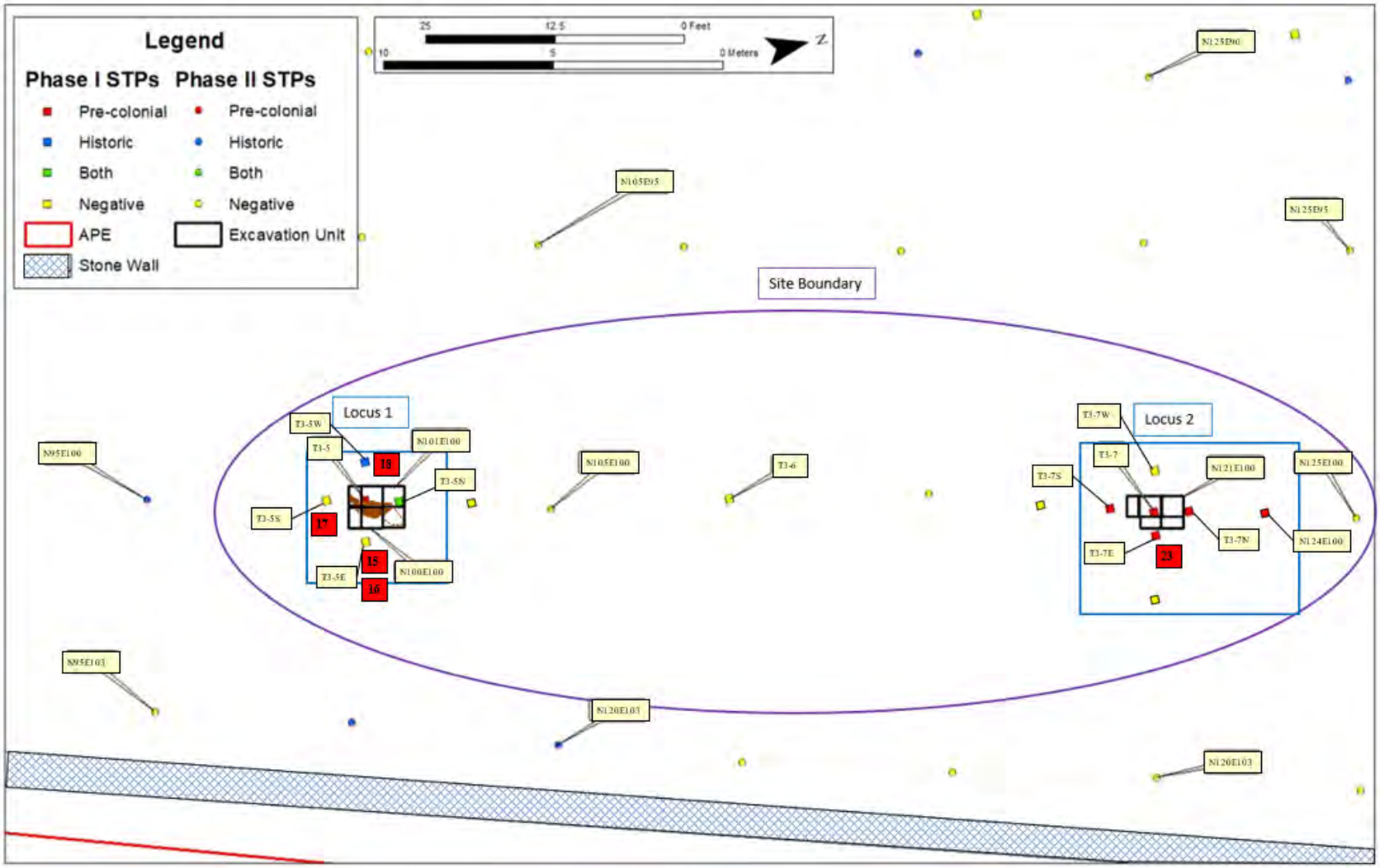

Plan of excavations at site, as well as site and loci boundaries.

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Quartzite possible unifacial Parallel Stemmed point (left – N100E100) and quartzite Parallel Stemmed point (right – N121E100).

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Microlithic crescents recovered from Locus 1 and 2 during original and expanded site examination.