Appendix 9.2.2 Additional Phase I Archaeological Survey and Phase II Evaluation

Additional Phase I Archaeological Survey and Phase II Site Evaluation

Silo Ridge Resort Community Project

Town of Amenia
Dutchess County
New York

Prepared by:

THE Louis Berger Group, INC.

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Prepared for:

Silo Ridge Country Club

4651 Route 22
Amenia, New York 12501

September 2007

Management Summary

Involved State and Federal Agencies	New York State Office of Parks, Recreation and Historic Preservation (OPRHP) New York State Department of Environmental Conservation New York State Department of Transportation New York State Health Department New York State Department of State United States Army Corps of Engineers
Phase of Survey	Additional Phase I and Phase II for Sites A02701.000081 and A02701.000082
Location Information	
Town	Amenia
County	Dutchess
Survey Area	Subject property: 3.2 kilometers (2 miles) N-S at greatest extent, 1.36 kilometers (0.85 miles) E-W at greatest extent, for a total of 270.5 hectares (668.4 acres)
USGS 7.5-Minute Quadrangle Map	*Amenia, NY-CT 1958 (Photorevised 1984)*
Archaeological Survey Overview	
Methods Used	Site-specific background research Surface reconnaissance 31 shovel tests Excavation of two slot-trenches Excavation of one 1x1-meter test unit
Artifacts Recovered/ Features Identified	No artifacts Three additional historic charcoal hearth features
Results of Archaeological Survey	
No./Name(s) of Prehistoric Sites Identified	--
No./Name(s) of Historic Sites Identified	
Recommendations	No further work
Report Authors	Patrick Sabol, Rick Vernay, Niels Rinehart, and Hope E. Luhman, Ph.D.
Date of Report	September 2007

Abstract

The Louis Berger Group, Inc. (Berger), Albany, New York, completed an additional Phase I archaeological survey and Phase II site evaluation for the proposed Silo Ridge Resort Community Project in the Town of Amenia, Dutchess County, New York. Berger conducted the survey on behalf of Millbrook Ventures LLC. The initial Phase I study was prepared for the Silo Ridge Country Club in April 2006; the objective of the additional survey and the evaluation was to identify any archaeological sites within unsurveyed portions of a revised project area, record and evaluate the identifiable features associated with the iron ore industry related to Sites A02701.000081 and A02701.000082, and to evaluate the sites' eligibility for listing in the National Register of Historic Places. Site A02701.000082 was subject to limited evaluation, but it was determined shortly after the investigation commenced that the site would be avoided and the evaluation was terminated. The revised project area or area of potential effect (APE) lies within the subject property and includes the footprints of the proposed improvements, and adjacent areas that will be disturbed, in four areas not evaluated during the initial Phase I study. These four areas are situated north along Route 44, southwest of the Golf Club House, north and west of the Wetlands, and east of the Maintenance Building.

The subject property sits on the west side of Route 22 southwest of the intersection of Route 22 with Route 44. The property boundary is highly irregular; although a portion lies to the north of Route 44, the majority lies to the south. The property measures over 3.2 kilometers (2 miles) north-south and 1.36 kilometers (0.85 miles) east-west at its widest point, covering a total of 270.5 hectares (668.4 acres).

The archaeological survey was conducted from August 21 to 29, 2006, as well as September 7, 2006, and July 19, 2007. The Phase I archaeological fieldwork consisted of field reconnaissance and subsurface testing with the excavation of 31 shovel tests. These shovel tests failed to produce any prehistoric or historic artifacts. The Phase II investigation of Site A02701.000081 consisted of site-specific background research, the development of a historic context within which the charcoal production activities could be evaluated, an intensive field reconnaissance, and the detailed mapping and photographic documentation of the charcoal features. The archaeological fieldwork consisted of extensive field reconnaissance and subsurface testing through the excavation of two test units (slot/slit trenches) designed to characterize the structure of the charcoal production features that make up Site A02701.000081. The test units produced no artifacts, but charcoal samples were retained for analysis.

The comprehensive Phase I survey findings together with the site-specific documentary research and Phase II site evaluation of the Charcoal Hearths Site (A02701.000081) demonstrate that Site A02701.000081 is not eligible for listing in the National Register of Historic Places and no further work is warranted. The West Lake Amenia Road Historic Site (A02701.000082) will be avoided by the present design plan and no further work is necessary. It is Berger's opinion that no impact to cultural resources is expected to occur in association with the proposed action and that no further work is required. If, however, the project plans are modified to extend beyond the present boundaries investigated or result in potential impact to identified resources, such as Site A02701.000082, then additional archaeological work may be necessary.

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I. Introduction

The Louis Berger Group, Inc. (Berger), Albany, New York, completed an additional Phase I archaeological survey and Phase II site evaluation of the proposed Silo Ridge Resort Community Project in the Town of Amenia, Dutchess County, New York (Figures 1 and 2). The initial Phase I study was prepared for the Silo Ridge Country Club in April 2006 (Berger 2006). The additional Phase I survey was precipitated by changes to the construction plans that will result in impacts to previously unsurveyed areas. Overall, the proposed project includes the construction of a series of residential units, including single-family residences and four-unit condominiums, set primarily around the perimeter of the golf course at the existing Silo Ridge Country Club. The proposed project also involves the construction of a resort hotel along with associated parking lots in the central portion of the existing country club as well as new infrastructure to service the proposed living units, such as roads, utilities, runoff control structures, and sewage treatment facilities. The existing golf course will not be altered significantly nor will any proposed development take place on the ridgetop (Figure 3).

The objective of the additional Phase I survey was to identify any archaeological sites within the project area, or area of potential effect (APE). The project area lies within the subject property and includes the footprints of the proposed improvements, as well as any areas subject to ground disturbance during their construction (see Figure 3; Figures 4-6). The subject property sits on the west side of Route 22 southwest of the intersection of Route 22 with Route 44. The project boundary is highly irregular; although a portion lies to the north of Route 44, the majority lies to the south. The property measures over 3.2 kilometers (2 miles) north-south and 1.36 kilometers (0.85 miles) east-west at its widest point, covering a total of 270.5 hectares (668.4 acres). The objective of the Phase II evaluation was to record and evaluate the identifiable features associated with the historic charcoal production operations of Site A02701.000081, establish an overview of the local iron ore industry and an evaluation of the identified resources, and evaluate the site's eligibility for listing in the National Register of Historic Places.

The additional Phase I and Phase II archaeological work was conducted in accordance with guidelines and recommendations established by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) and the *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections*, published by the New York Archaeological Council (1994). This report conforms to the New York Archaeological Council (NYAC) standards and the requirements set forth in 36 CFR 66, *Methods, Standards, and Reporting Requirements for Data Recovery*. The study was performed in accordance with the National Historic Preservation Act of 1966, as amended; Procedures for the Protection of Historic and Cultural Properties (36 CFR 800); the Procedures for Determining Site Eligibility for the National Register of Historic Places (36 CFR 60 and 63); the New York State Environmental Quality Review Act (SEQRA); and the Secretary of the Interior's Standards for Archaeology and Historic Preservation. The archaeologist who performed the investigation meets or exceeds the standards specified in 36 CFR 66.3(b)(2) and 36 CFR 61.

This report is organized into four chapters. Chapter II describes the field investigations for the additional Phase IB and Phase II archaeological survey. Chapter III provides a summary and recommendations. Chapter IV contains a list of the references cited. The report concludes with four appendices: Appendix A contains a summary table of all excavated shovel tests; Appendix B contains the revised site forms for the two sites identified; Appendix C provides detailed information on the methods of artifact analysis and the artifact inventory; and Appendix D provides wood identification of recovered charcoal.

Berger Assistant Director for Cultural Resources and Senior Archaeologist Hope E. Luhman, Ph.D. directed the investigations. Rick Vernay served as Field Supervisor and was assisted by Crew Chief Patrick Sabol and Field Archaeologists Niall Conway and Paul Stansfield. Mr. Vernay and Dr. Luhman authored the report with the assistance of Berger Crew Chief Patrick Sabol and Berger Archaeologist Niels Rinehart. The artifacts were processed and cataloged under the supervision of Laboratory Director Susan Butler. Senior Editor Anne Moiseev supervised the editing and production of this report, including the graphics, which were prepared by Principal Draftsperson Jacqueline L. Horsford.

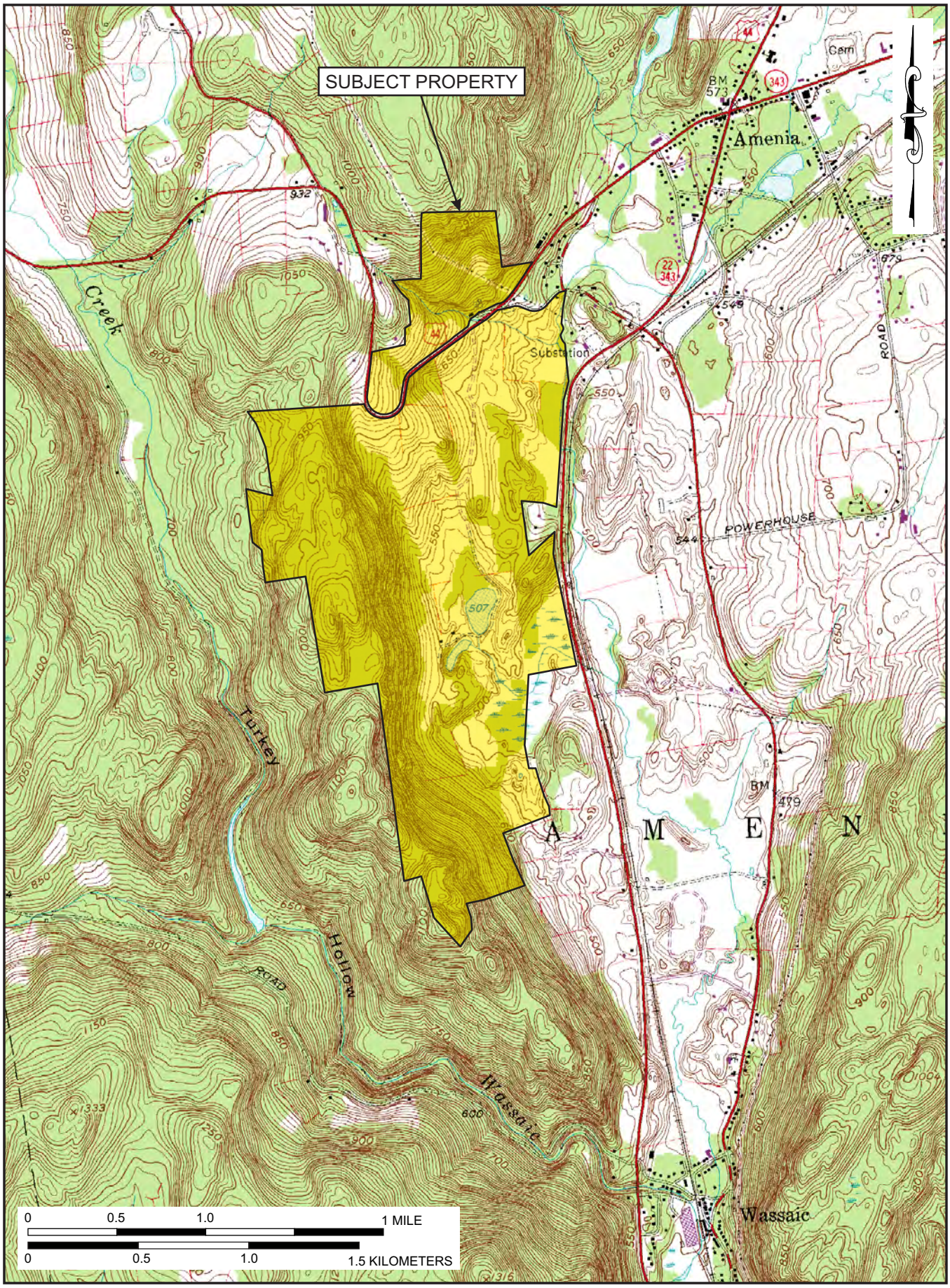


FIGURE 1: Subject Property Location

SOURCE: USGS 7.5-Minute Quadrangle, Amenia, NY-CT 1958 (Photorevised 1984)

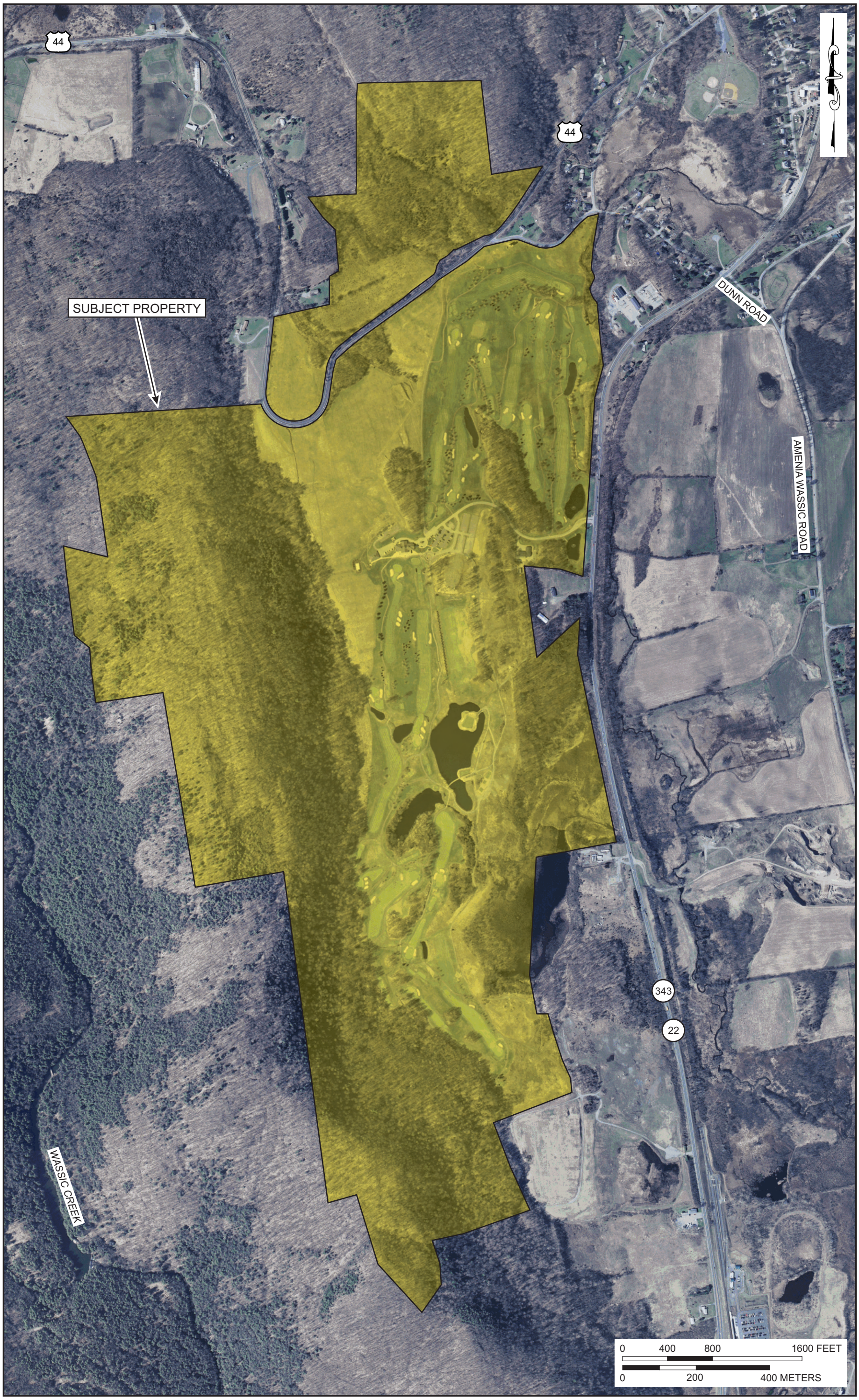


FIGURE 2: Aerial View of Subject Property

SOURCE: NYSGIS 2004

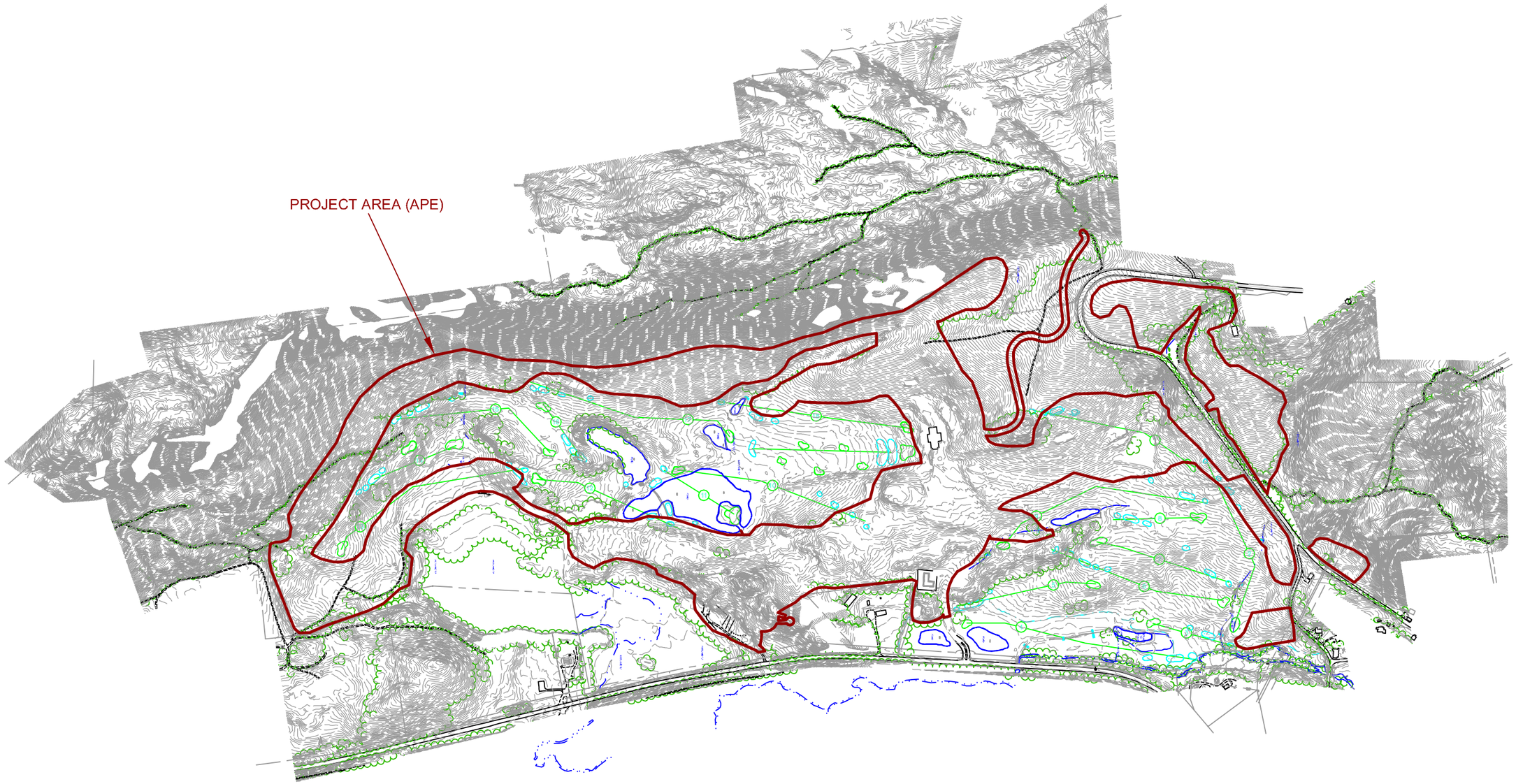


FIGURE 3: Plan Map of Subject Property Depicting Final Revised Project Area (APE)

BASE MAP: Chazen 2007

LEGEND

PROPOSED DEVELOPMENT

PROJECT AREA (APE)

SUBJECT PROPERTY

PROJECT AREA (APE)

0 400 800 1200 1600 FEET

0 100 200 300 400 500 METERS

FIGURE 4: Plan Map of Subject Property Showing Final Revised Proposed Project

BASE MAP: Chazen 2007

LEGEND

- SHOVEL TEST AND TEST UNIT LOCATION
- FEATURE LOCATION
- UNEXCAVATED DUE TO STEEP SLOPE
- UNEXCAVATED DUE TO DISTURBANCE

SUBJECT PROPERTY

PROJECT AREA (APE)

GRADING AND FILLING (SEE FIGURE 7)

GOLF COURSE LANDSCAPING AND CUTTING

CUTTING, GRADING, BLASTING, DOZING, AND PRIOR CONSTRUCTION

BULLDOZED FOR GOLF COURSE LANDSCAPING

PRIOR CONSTRUCTION

GOLF COURSE LANDSCAPING INCLUDING BULLDOZING AND GRADING

0 400 800 1200 1600 FEET

0 100 200 300 400 500 METERS

FIGURE 5: Plan Map of Subject Property, Showing Reconnaissance Results and Subsurface Testing

BASE MAP: Chazen 2007

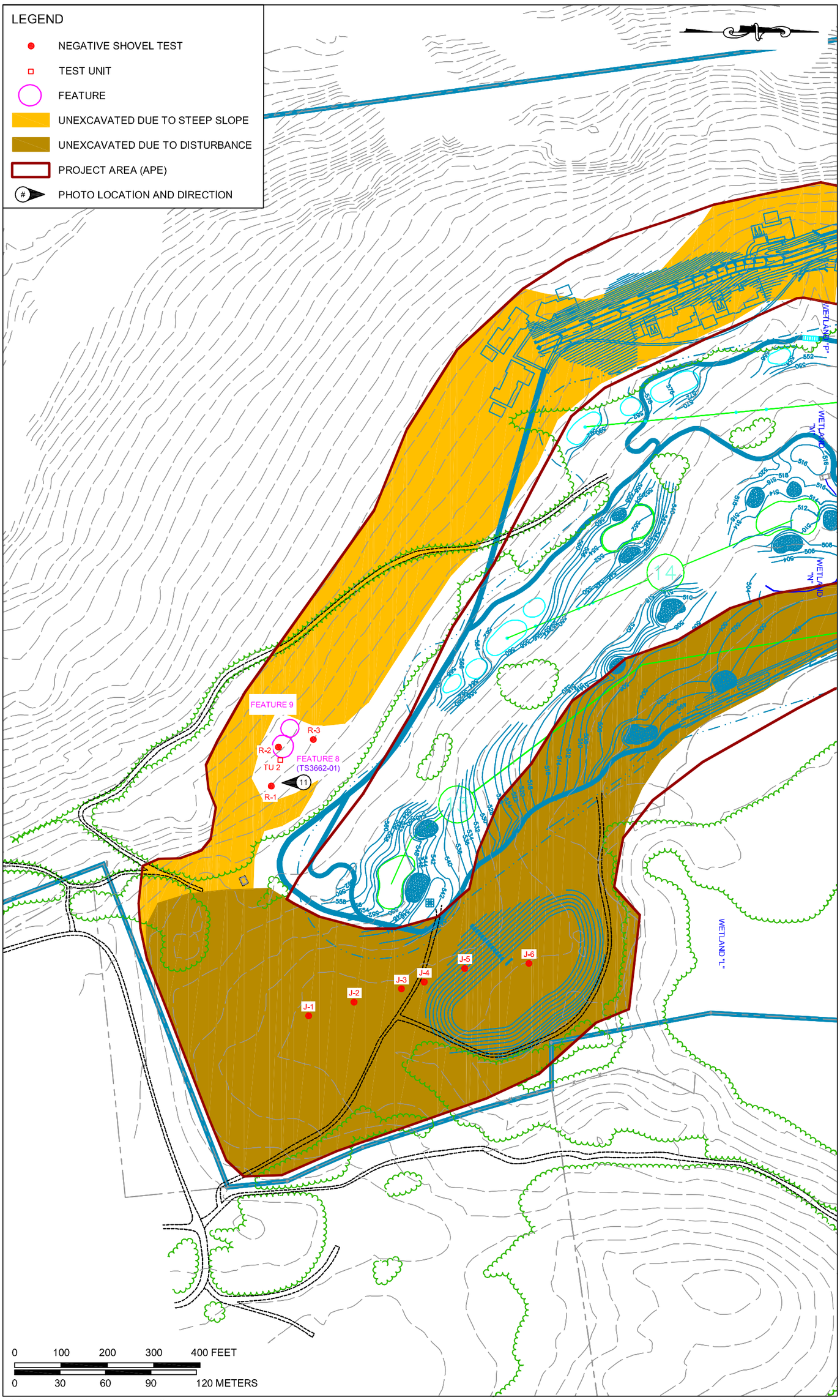


FIGURE 6a: Plan Map Detail

BASE MAP: Chazen 2007

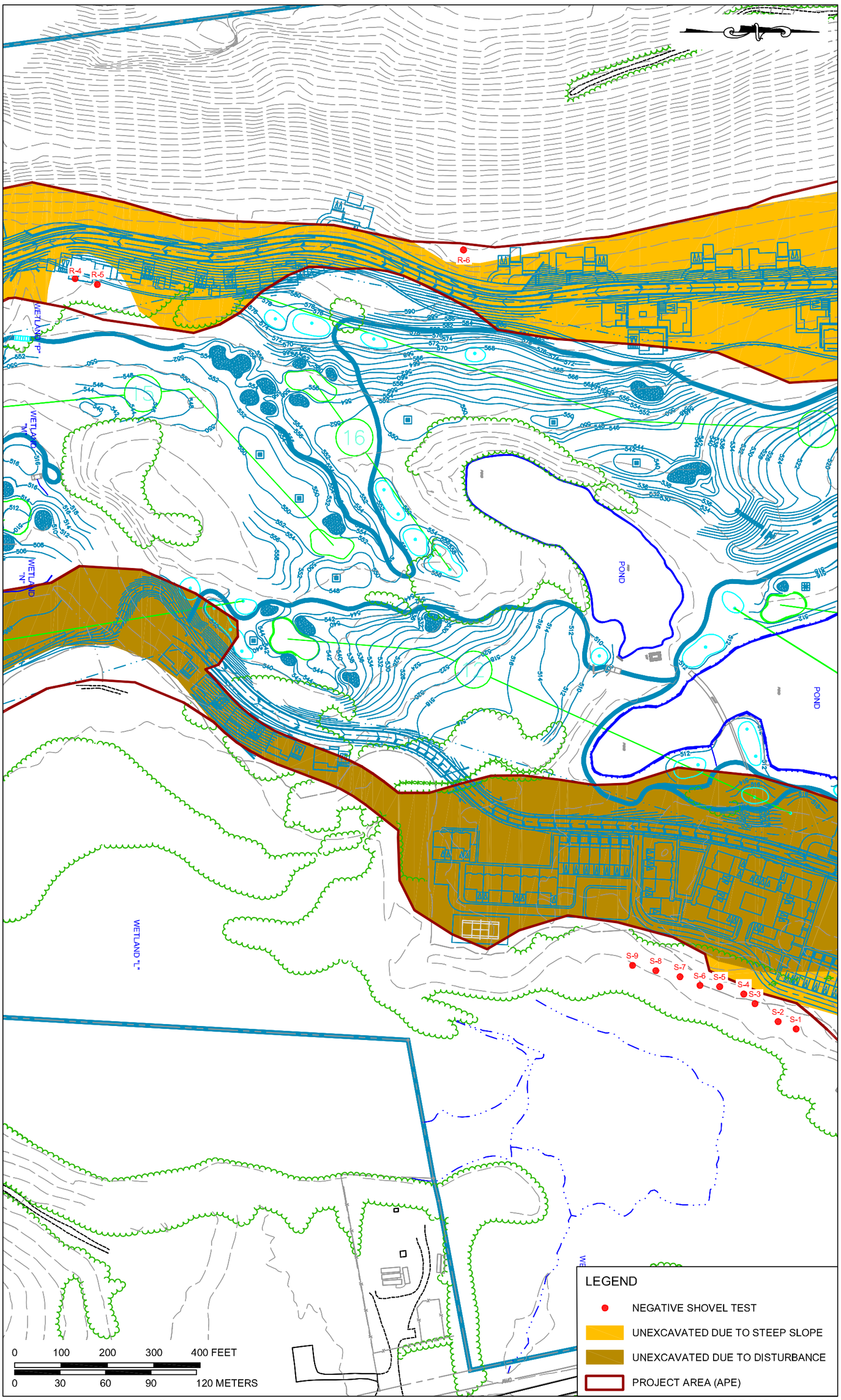


FIGURE 6b: Plan Map Detail

BASE MAP: Chazen 2007

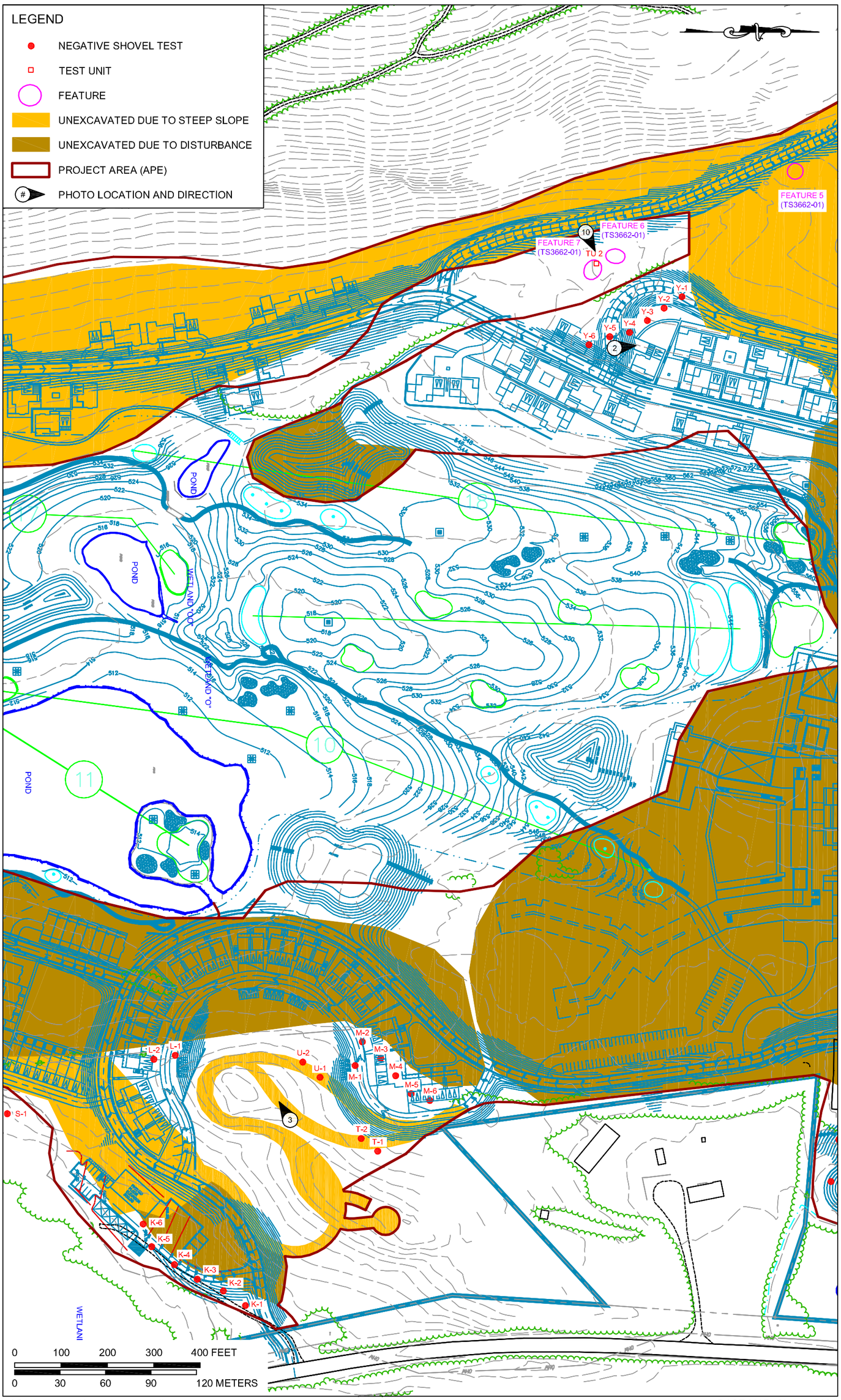


FIGURE 6c: Plan Map Detail

BASE MAP: Chazen 2007

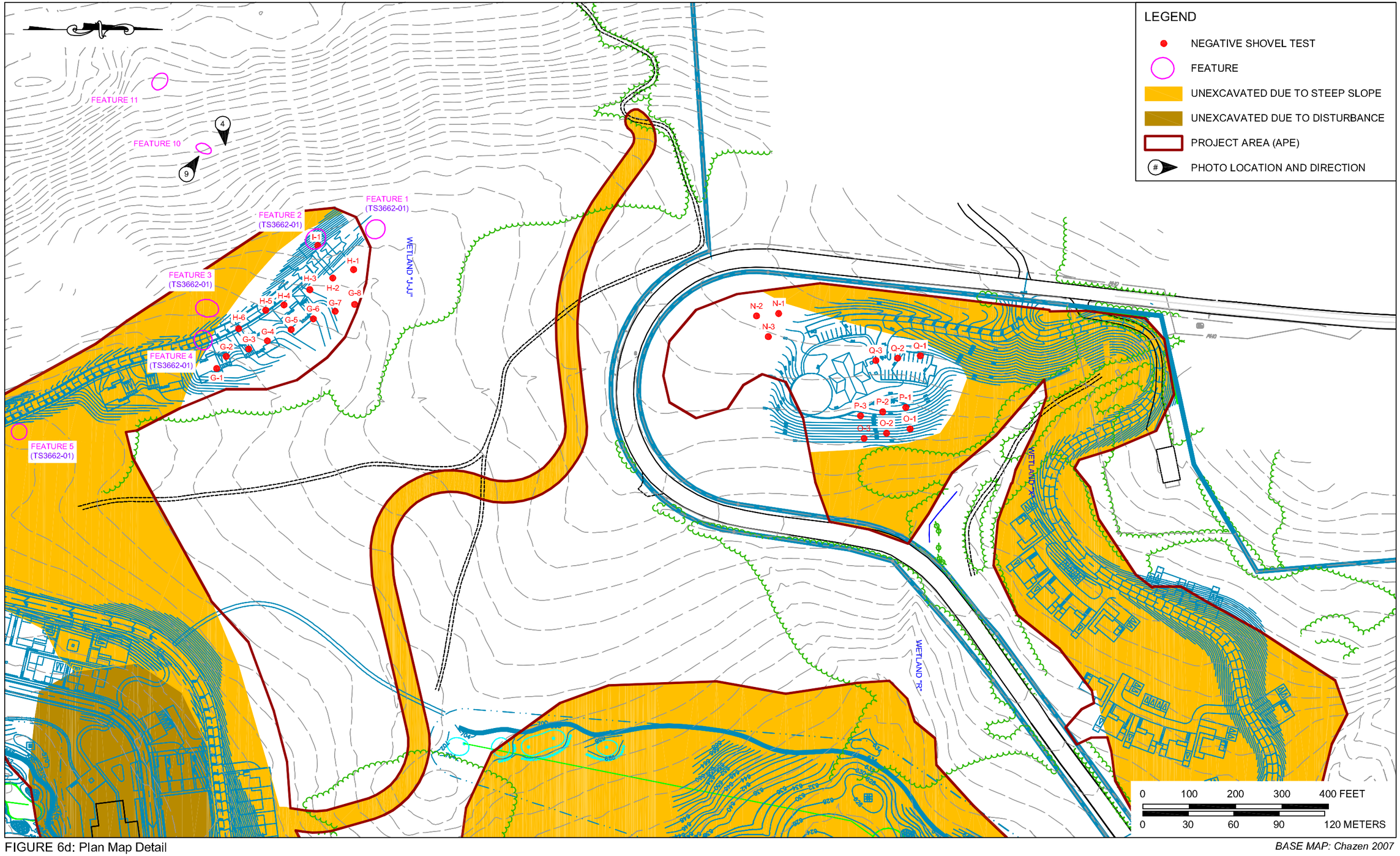


FIGURE 6d: Plan Map Detail

BASE MAP: Chazen 2007

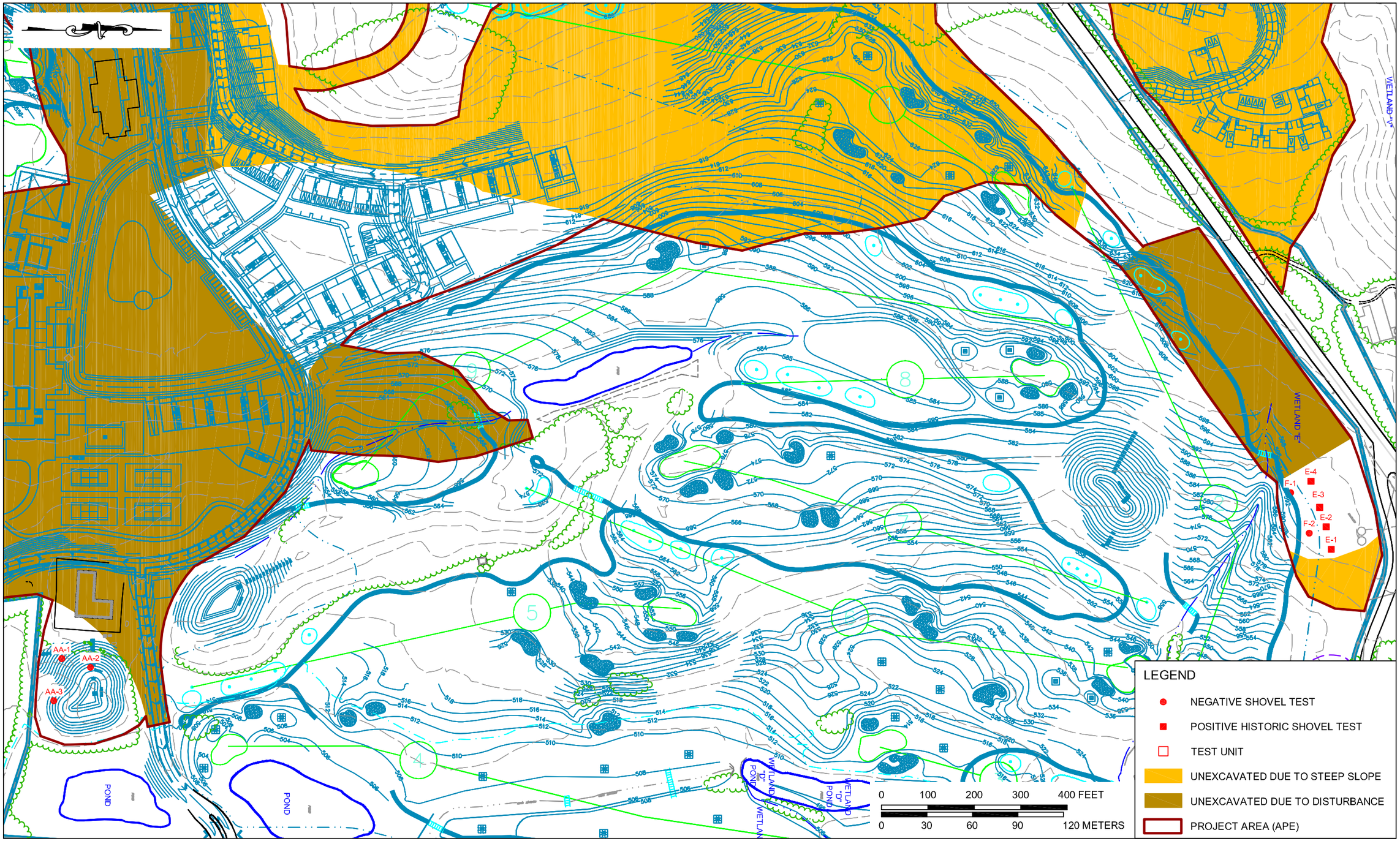


FIGURE 6e: Plan Map Detail

BASE MAP: Chazen 2007

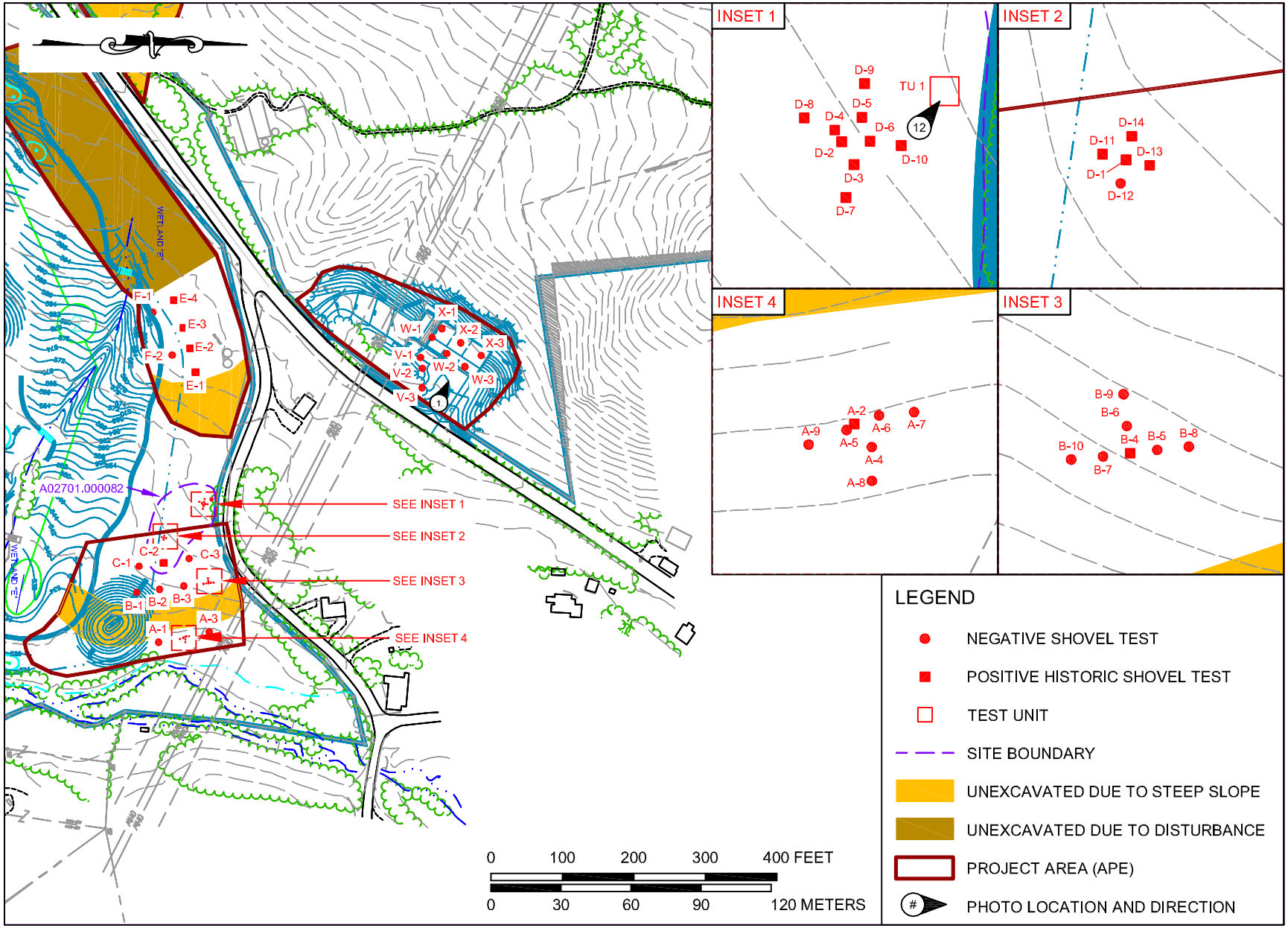


FIGURE 6f: Plan Map Detail

BASE MAP: Chazen 2007

II. History of the Project

Berger conducted a field inspection of the subject property in February 2006. The purpose of the field inspection was to identify the Phase I project area, or APE, in the field as well as to evaluate the slope and degree of previous disturbance, and to look for any visible evidence of cultural remains. The subject property sits on the west side of Route 22 southwest of the intersection of Route 22 with Route 44. The subject property boundary is highly irregular; although a portion lies to the north of Route 44, the majority lies to the south. It measures over 3.2 kilometers (2 miles) north-south and 1.36 kilometers (0.85 miles) east-west at its widest point, covering a total of 270.5 hectares (668.4 acres).

After conducting the literature review and field inspection of the subject property, Berger conducted a subsurface survey in February and March 2006 of the APE. Initially, the APE encompassed an area of 37.9 hectares (93.6 acres). As a total of 12.5 hectares (30.8 acres) of the APE was too steep or too disturbed to warrant subsurface testing, Berger investigated the remaining 25.4 hectares (62.8 acres) of the APE with shovel tests. This work consisted of the excavation of 95 shovel tests in (1) undisturbed portions of the APE that will be subject to ground disturbance and (2) areas interpreted to have a higher potential for archaeological resources owing to the presence of slopes of 12 to 15 percent or less.

The initial Phase I report was submitted in April 2006 (Berger 2006). The field survey program identified eight historic cultural features (Features 1 through 8). All eight are interpreted as historic-era charcoal manufacturing areas referred to in the literature as charcoal pits, hearths, circles, or kilns (Benton n.d.; Hoadley, personal communication 2006). In that report these features were called hearths since they are not true pits, not necessarily circular, and have no associated structural elements. The Wassaic Charcoal Kilns (Site A027.01.0005), located about 1.6 kilometers (1 mile) south of the Silo Ridge property, are true kilns. Features 1 through 8 were very subtle in appearance and were not discovered during the pedestrian reconnaissance. Features 1 through 7 lie on the west side of the creek that runs along the base of the cliff, from the northwest near the Route 44 loop to the central part of the project area ("Wetland J-JJ"). Feature 8 was located in the south end of the project area in the southernmost group of proposed single-family residences along the outer loop road. These sites must be seen in the context of a larger landscape that encompasses the entire town of Amenia and possibly beyond. It is therefore not possible to give a single site size, although each locus is approximately 25 meters (82 feet) in diameter and measures 490 square meters (6,724 square feet). In total, all eight features cover 3,920 square meters (1.2 acres). During an interview with Town of Amenia Historian Kenneth Hoadley, he mentioned that these features are common in wooded areas throughout the town. Such features are directly related to iron furnaces, of which there are at least 10 within a distance of 19 kilometers (12 miles) of the project area. The nearest is the Gridley Iron Works in Wassaic, which was started in 1825 and continued into the twentieth century. Other furnaces existed in the region from the time of the American Revolution. Therefore Features 1 through 8 may date to as early as the late eighteenth century to as late as the early twentieth century (Hoadley, personal communication 2006).

These charcoal concentrations do not form a single distinct archaeological site but rather reflect the use of a large landscape that likely encompassed the town of Amenia and beyond. In addition, 149 historic/modern artifacts were recovered along Route 44 and West Amenia Lake Road in a concentration now known as Site A02701.000082 or the West Lake Amenia Road Site, possibly associated with a structure labeled "Parsons" on the north side of West Lake Amenia Road.

Based on the initial Phase I survey findings, Berger recommended avoidance of these sites. If avoidance was not possible, Berger recommended a Phase II site evaluation designed and conducted in consultation with the New York State OPRHP. It was suggested that the Phase II investigation of Site A02701.000081 include the mapping and photographic documentation of the features as well as background research to develop a context for understanding the role charcoal production played in the history of the surrounding region. In addition, the excavation of a slot/slit trench into one of the features would offer the opportunity to evaluate the profile of one of these features, sample the matrix for subsequent analysis, and offer a significant contribution to understanding of the technology surrounding these features.

The Phase II investigation for Site A02701.000082 was planned to involve additional shovel tests to determine the extent of modern disturbance to the site as well as the site's horizontal and vertical dimensions. In addition, the implementation of a trench could determine if any structural remains exist below the surface.

In a letter dated June 20, 2006, OPRHP concurred with the Phase II evaluations of these sites along with site-specific historical research to develop a context within which to evaluate these resources.

Construction plans were revised to avoid impacts to Site A02701.000082 by relocating the proposed waste water treatment plant to the north side of Route 44. Phase II site evaluation of the West Lake Amenia Road Historic Site (Site A02701.000082) was initiated but not completed when it was clarified during the fieldwork that the subsequent design revisions would result in no impact to the site. Work was terminated at that time. The construction plan revision, however, resulted in previously unsurveyed areas now falling within the APE. The revised APE lies within the subject property and includes the footprints of the proposed improvements and adjacent areas that will be disturbed in three areas not evaluated during the initial Phase I study: north along Route 44; southwest of the Golf Club House; and north and west of the Wetlands. Subsequently, Berger completed additional Phase I archaeological survey to identify any archaeological sites within unsurveyed portions of a revised project area, as well as the Phase II site evaluations discussed above.

This additional archaeological survey was conducted from August 21 to 29 and September 7, 2006. The Phase I archaeological fieldwork consisted of field reconnaissance and subsurface testing with the excavation of 24 shovel tests. These shovel tests failed to produce any prehistoric or historic artifacts. The Phase II archaeological fieldwork consisted of extensive field reconnaissance and subsurface testing through the excavation of two test units (slot/slit trenches) designed to determine the structure of the charcoal production features, which make up Site A02701.000081. The test units produced no artifacts, but charcoal samples were retained for taxonomic identification, which resulted in the identification of hickory, maple, white oak, and chestnut woods. The wide-ranging field reconnaissance documented and mapped three additional historic charcoal production features. Site-specific background research was conducted to develop a historic context describing the importance of charcoal production to the region. No evidence suggestive of remains of the Peekskill Iron Company was identified, other than the pond labeled Wetland K, which does appear to be a flooded mine pit.

Another revision of the project plans became available in December 2006, and it was determined that additional Phase I testing may be necessary, as previously unsurveyed areas now fell within the APE. Field reconnaissance, conducted on December 21, 2006, confirmed that additional subsurface testing would indeed be required. Prior to completing the additional Phase I survey work, further revisions to the final project plans were issued in late May 2007 and, after reviewing the new plan, a few small areas necessitated further field inspection. Additional field reconnaissance was completed in June 2007, with the excavation of three additional shovel tests in the area east of the Maintenance Building on July 19, 2007. No cultural deposits were encountered.

III. The Investigations

A. Introduction

Berger personnel conducted a pedestrian reconnaissance of the project area in January 2006, August 2006, and July 2007. This reconnaissance consisted of walking the entire project area in an attempt to identify any archaeological remains that may be visible on the surface, study the topography of the project area to determine the potential for both prehistoric and historical archaeological resources, and identify any possible disturbances, both natural (i.e., erosion) and man-made (i.e., construction-related cutting and/or filling), paying particular attention to the portion of the project area associated with the proposed construction. Berger excavated a total of 27 shovel tests. The average depth of all shovel tests was 46.28 centimeters (1.60 feet), with a minimum depth of 10 centimeters (0.33 feet) and a maximum depth of 60 centimeters (1.97 feet). This chapter presents the results of the additional Phase IB and Phase II archaeological survey of the project area, including information on shovel tests and recovered artifacts. Shovel test data are provided in Appendix A, and a detailed list of the artifacts recovered during the survey is provided in the artifact inventory in Appendix C.

B. Methodology

The project area or APE, within the subject property, consists of the footprints of the proposed improvements, as well as any areas that will be disturbed during their construction. In defining the project area, a considerably larger area than the structural footprint was chosen to accommodate the greater cut and fill areas required for construction on steep slopes (see Figure 3).

After Berger reviewed the alterations made to the original plans provided by The Chazen Companies (TCC), a pedestrian reconnaissance of the revised APE was conducted to determine which portions were suitable for Phase I testing, based on the degree of disturbance and slope, and also to look for any surficial evidence of cultural remains. The subsurface testing methodology was straightforward and consisted of standard shovel testing at 15-meter (50-foot) intervals of all areas within the project area that fell within the requisite parameters of disturbance and slope. Transects were labeled alphabetically in the order in which they were excavated, and the shovel tests were numbered likewise.

Shovel tests were 50 centimeters (1.64 feet) in diameter and were excavated into the glacial soils. All soils removed from the shovel tests were passed through 0.64-centimeter (0.25-inch) mesh hardware cloth to recover artifacts. As each natural or cultural stratum was excavated, that stratum was assigned an alphabetic designation (i.e., Stratum A, Stratum B, Stratum C, etc.) in order to indicate its stratigraphic relationship to the other levels within the shovel test. The letter designations were assigned beginning with the first excavated level of the shovel test and proceeding alphabetically through each subsequent level, until the termination of the shovel test. Any artifacts recovered were bagged by level, and a field number was assigned to each provenience. Modern artifacts recovered from fill strata were noted and then discarded in the field. The shovel test data were recorded on standardized Berger forms and included stratum depth, soil texture, soil color according to Munsell soil color charts, and artifact content. Appendix A provides the shovel test data in tabular form.

Hand-excavated test units were used in the Phase II studies. Excavation of each test unit involved several steps. Each test unit was excavated by natural or cultural strata; thick strata were subdivided into arbitrary 10-centimeter (0.33-foot) excavation levels if necessary to provide detailed data on the vertical distribution of material. Each excavation level was assigned a sequential number counting downward from the surface. Excavation levels might subdivide a stratum, might comprise an entire stratum, or might encompass several strata, each of which was generally maintained as a separate provenience unit. All test units were excavated into culturally sterile glacial soils.

Two test units were excavated to define the structure of the charcoal heath features that make up Site A02701.000081. Both were excavated as slot trenches 50 centimeters (1.64 feet) wide that proceeded from the interior of the feature to the exterior. Test Unit 2 was 6 meters (19.68) long, and Test Unit 3 was 3.25 meters (10.66

feet) long. Charcoal samples collected from these test units were submitted to archaeobotanical consultant Justine McKnight for species identification, and those results are provided in a subsequent chapter. Test Unit 1 was excavated in the West Amenia Lake Road Site (A02701.000082). This turned out to be unnecessary as the construction plans were revised to avoid this site. Nevertheless, the results of Test Unit 1 are presented, and the site form was updated.

A site map was prepared, showing the locations of all excavations in relation to key landmarks of the project area. Excavation locations and project area conditions were recorded using a Trimble Pathfinder Pro XL GPS unit, which provides sub-meter accuracy when utilized in conjunction with a base station. Digital photographs were taken of the project area to document disturbances and cultural features, and to complement the field notes.

The artifact inventory, translation of utilized codes, and detailed description of cataloging and analysis methods may be found in Appendix C.

C. Additional Phase I Results

1. Pedestrian Reconnaissance

The project area or APE is divided into four distinct areas: north along Route 44, southwest of the Golf Club House, north and west of the Wetlands, and east of the Maintenance Building.

a. North along Route 44

Silo Ridge Country Club proposes to construct a waste water treatment plant north of Route 44 adjacent to the power line easement. Although the area is generally steep, subsurface testing was required in the form of a few transects in the areas that exhibited less than a 15 percent slope. The fieldwork for this portion of the project area was conducted from August 21 to 29, 2006.

b. Southwest of the Golf Club House

The client proposes to place condominiums southwest of the existing Golf Club House. This area is excessively steep; however, the top of the landform was level enough to emplace one transect of shovel tests. The fieldwork for this portion of the project area was conducted from August 21 to 29, 2006.

c. North and West of the Wetlands

Proposed construction along the east half of the golf course includes development in areas that have not been altered by the landscaping of the course. Undisturbed areas within this section could have potential for prehistoric archaeological resources based on proximity to the New York State Department of Environmental Conservation wetlands south of the upland area. This area required subsurface testing in the few level areas. The fieldwork for this portion of the project area was conducted from August 21 to 29, 2006.

d. East of the Maintenance Building

Proposed construction east of the maintenance building includes development in an area that has not been altered by the landscaping of the course. Undisturbed areas within this section could have potential for prehistoric archaeological resources based on proximity to the New York State Department of Environmental Conservation wetlands south of the upland area. This area required subsurface testing in the few level areas. The fieldwork for this portion of the project area was conducted on July 19, 2007.

2. Subsurface Testing

The additional subsurface survey began in August 2006. This work consisted of the excavation of 31 shovel tests in the project area (APE) in both the undisturbed portions subject to ground disturbance and areas with slopes of less than 12 to 15 percent.

The field survey revealed three additional historic cultural features (Features 9, 10, and 11). All three are interpreted as historic-era charcoal manufacturing areas similar to those identified during the initial survey. Feature 9 was located just north of Feature 8. Features 10 and 11 lie immediately west of Feature 2, higher up on the slope of the ridge.

Excavations in each of the four areas surveyed are discussed below.

a. North along Route 44

Berger excavated nine shovel tests on the less sloped portion in this area in three transects labeled V, W, and X (three shovel tests each), recovering no cultural material (Photograph 1). These shovel tests revealed very consistent profiles; typical of these was Shovel Test W-2. Stratum A in Shovel Test W-2 was dark yellowish brown (10YR 3/4) sandy loam with about 20 percent gravel and cobbles. At 28 centimeters (0.91 feet) below ground surface (bgs), Stratum A gave way to Stratum B, a dark yellowish brown (10YR 4/6) silt loam with about 15 percent gravel, which continued to the base of excavation at 39 centimeters (1.27 feet) bgs.

b. Southwest of the Golf Club House

Berger placed six shovel tests on the level portion of this area in one transect labeled Y, recovering no cultural material (Photograph 2). The profile of Shovel Test Y-2 is typical of these units, exhibiting dark grayish brown (2.5Y 4/2) silt loam with about 10 percent gravel to a depth of 30 centimeters (0.98 feet) bgs, overlying light olive brown (2.5Y 5/3) silt loam with about 10 percent gravel, which continued to the base of excavation at 43 centimeters (1.41 feet) bgs.

c. North and West of the Wetlands

Shovel testing in this area was judgmental, based on slope and impact of the proposed construction. The proposed condominiums east of the inner loop road are situated in an area with intact soils on moderate to excessive slope. Subsurface testing in this portion of the APE consisted of three shovel test transects labeled S, T, and U. A total of 13 shovel tests was excavated; Transect S contained nine tests placed along the west side of the wetlands, and Transects T and U contained two shovel tests each (Photograph 3).

All of the shovel tests in this area exposed intact soil profiles with high amounts of gravel and angular cobbles. No cultural material was recovered from any of these shovel tests. The profile of Shovel Test T-2 is typical of these units, exhibiting brown (10YR 4/3) sandy loam with 10 percent gravel to a depth of 10 centimeters (0.32 feet) bgs, overlying yellowish brown (10YR 5/4) silt loam with about 5 percent gravel that continued to the base of excavation at 32 centimeters (1.04 feet) bgs.

d. East of the Maintenance Building

Berger excavated three shovel tests on the less sloped portion in this area in one transect AA, recovering no cultural material. These shovel tests revealed very consistent profiles; typical of these was Shovel Test AA-2. Stratum A in Shovel Test AA-2 was dark yellowish brown (10YR 4/4) sandy loam with about 10 percent gravel. At 21 centimeters (0.69 feet) bgs, Stratum A gave way to Stratum B, a dark yellowish brown (10YR 4/6) silt loam with about 10 percent gravel, which continued to the base of excavation at 60 centimeters (1.97 feet) below the ground surface.

PHOTOGRAPH 1: Area of Proposed Waste Water Treatment Plant, View to North

PHOTOGRAPH 2: Excavating Shovel Test Y-4, View to North

PHOTOGRAPH 3: Location of Transect U, View to Southwest

D. Phase II Evaluation of Site A02701.000081

The purpose of a Phase II site evaluation is to obtain sufficient information about a site to determine its eligibility for listing in the National Register of Historic Places. Evaluation of a site's National Register eligibility typically requires an assessment of the potential of the archaeological deposits to contribute to the history of the nation, the state, or the local area (Townsend et al. 1993). Specifically, at historic sites such investigations seek to accomplish the following tasks: (1) obtain an in-depth understanding of the site's history and historical context, including (a) identification of significant persons or events that may be associated with it and (b) identification of significant disturbance processes during the historic period; (2) define the horizontal extent and stratigraphic context of the deposits making up the site; (3) identify the types and characteristics of features at the site; and (4) determine the date or date range for each component (period of occupation) of the site. In addition, at historic archaeological sites careful attention must be given to assessing the extent to which links can be established between historically known individuals or groups of people (however defined) and the material remains represented by the archaeological record.

Phase II studies are conducted within a series of research issues that guide the research and provide a framework within which the significance and National Register eligibility of the site may be evaluated. These questions fall into two broad categories, questions concerned with an elucidation of certain basic archaeological attributes of the site, such as boundaries and depositional characteristics, and questions concerned with the activities that took place at the site and the broader historical and cultural contexts of these activities. Evaluations of site significance require information gathered through investigations of both types of questions.

The goal of a Phase II investigation is to obtain reasonably complete answers to the basic questions that concern the site as an archaeological entity. At the same time, however, a Phase II investigation is not intended to provide necessarily definitive answers to the behavioral, historical, and cultural questions raised in the context of any particular investigation, nor do the questions posed for that investigation necessarily exhaust those that might be raised in connection with a given site. Rather, the preliminary answers obtained by the Phase II investigation to such questions serve to indicate the research potential of the site. In turn, the quality of these preliminary answers serves as one important measure for judging the significance and National Register eligibility of the site on which the Phase II investigation is conducted.

1. Phase II Research Issues

Berger identified the following questions as key issues for the Phase II portion of the investigation concerning the archaeological characteristics and broader historical context of the Charcoal Hearths Site (A02701.000081).

a. Site Attributes

- Determine whether historically significant persons or events are associated with the properties within the project area.

- Evaluate the potential for attributing specific archaeological features or deposits to specific individuals, families, or groups. The more specifically historic archaeological deposits can be attributed to persons or groups and to narrow time ranges, the more informative and significant the archaeological data recovered from them tends to be, and the more likely the deposits are to be eligible under one of the National Register criteria.

- Obtain a sample of charcoal from the hearth features, located within the site. Specifically, examine selected portions of the ridge, where Phase I testing has demonstrated the presence of such features.

- Evaluate whether the project area is most informatively conceived of as a single archaeological site (Site A02701.000081) or whether multiple site designations are more appropriate.

b. Behavioral, Historical, and Cultural Issues

- Based on the Phase I investigation, it was expected that the Phase II site evaluation at the Charcoal Hearths Site would be concerned with the period from about 1780 to 1920.

- Describe the land-use history of the project area, examining both the development of the iron ore industry and changes in the use and design of charcoal hearths. To what extent does each reflect the other? To what extent are changes in the general functional character of the project area reflected in the features from the site?

- Examine the history of this parcel as a historical microcosm of the development of Amenia in general. In what ways does its history, and hence the archaeological record it contains, reflect general patterns of historical development and in what ways does it not reflect such patterns?

2. Site-Specific Documentary Research

Amenia, New York, is situated within the regionally designated Salisbury Iron District, an area of extensive iron ore deposits in the tri-state area of southeastern New York, northwestern Connecticut, and southwestern Massachusetts[1]. The eighteenth-century discovery of these ore beds was followed by the mining, refining, and manufacturing of iron, which became an important venture in the region throughout the nineteenth century.

The iron industry began in Amenia around the time of the American Revolution. Captain Samuel Dunham had a forge, and the first iron ore mine was opened in 1780 west of Sharon Valley center; however, little is known about the early history of these operations (Kirby 1998:46; Reed 1985:126). The industry did not expand significantly until the early nineteenth century with the establishment of N. Gridley & Sons in Wassaic. Founded by Josiah M. Reed, Leman Bradley, and Nathanial and Noah Gridley in 1825, the company built Amenia's first blast furnace, which was supplied with iron ore from nearby deposits (Reed 1985:126)[2]. The Gridley ironworks were supplied by two mines: the Johnny Cake Mine, located less than 2 miles north of the furnace; and the Gridley Mine, west of Amenia. The former Johnny Cake Mine was located in the current project area (Kirby 1998:25, 110).

Open pit mining was standard practice, and the surrounding forests were commonly harvested and used for charcoal production in the early years of the iron industry. Charcoal was the favored fuel because it burned hotter than wood and created the right atmosphere for the production of high quality iron. Charcoal, made by colliers, was prepared by creating mounds of wood by stacking 4-foot lengths vertically in three levels with a hole in the center to allow for a draft. The stacks were covered with an inch of leaves and 4 inches of soil, and then a fire was started at the bottom of the center hole. The horizontal openings between the logs were alternatively covered and uncovered to control the flow of air into the mound. After two weeks the carbonization of the wood was complete (Kirby 1998:13). Charcoal production took place wherever there was available space and a sufficient supply of wood, which was often far from the ironworks. After the coal was adequately cooled, it was transported to the furnace, where cast or wrought iron was made depending on the type of furnace. Charcoal production was done in this fashion until the post-Civil War period, when kilns became more common. The Gridley ironworks were the first in the area to have charcoal kilns incorporated at the furnace site (Kirby 1998:25). The production of charcoal in masonry kilns took between 10 and 12 days and produced a stronger coal that did not crumble in the blast furnace (Rolando 1992:154).

By 1843 there were approximately 10 furnaces within 12 miles of Amenia, supplied by several ore beds in Amenia and the surrounding area to meet the growing demand for iron. The Johnny Cake Mine was one of the smaller beds, but contained a good ore vein that went mostly to the Gridley ironworks (Reed 1985:182-183). Other ore beds in Amenia provided ore to other forges and furnaces throughout the region.

[1] The District takes its name from the town of Salisbury, Connecticut, which was one of the most significant locations for iron making in the region.
[2] The official name of the blast furnace was the Gridley Furnace; however, it was referred to locally as the Johnny Cake Furnace. Leman Bradley also helped establish the Sharon Valley ironworks in 1825 and was a significant investor in other iron industries throughout the region.

The arrival of the New York Central Railroad's Harlem Valley Division in 1851 through Amenia opened up the area to iron entrepreneurs outside the immediate area. Until that time the iron industry had been largely local. After the advent of the railroad, ironworks on or within short distances of it were placed in a more competitive position and soon enjoyed greater access to the expanding market (Kirby 1998:37). Among the first large corporations to operate in Amenia was the Manhattan Iron Co. near Sharon Station. In 1860 the ironworks used 150 tons of coal and produced 9,000 tons of iron ore annually. By comparison, the smaller and locally owned Gridley ironworks produced only 1,000 tons of iron ore annually (U.S. Census 1860).

Another corporation to establish itself in Amenia was the Peekskill Iron Company. The iron company built a blast furnace in Peekskill, a hamlet at the mouth of the Annsville Creek in Westchester County, in 1853 (French 1925:671). The company needed iron ore for its blast furnace, and in 1865 it began purchasing mining facilities in Putnam and Dutchess counties. The first parcel purchased in Amenia was bought for $3,000 from Warren Murdock of New York City (Dutchess County Deed Books [Deeds] 1865). The following year another 100-acre parcel was purchased from William H. Barnum of Salisbury, Connecticut, for $20,000, and a third parcel from Warren Parson of Amenia sold for $10,000 (Deeds 1866a, 1866b). That same year the company filed for official incorporation under the laws of Dutchess County. The mines and ore beds taken over by the Peekskill Iron Company included the Johnny Cake Mine formerly used to supply the Gridley ironworks, which over time transferred ownership several times among parties with vested interests in the mining industry. One such notable former owner was William H. Barnum. Barnum became the president of the Barnum Richardson Company of Lime Rock, Connecticut, in 1864. As president he set out to gain control of the iron industry in the tri-state region by purchasing mines and facilities in both Massachusetts and New York. The iron mined in Amenia and other places supplied the company's furnace and forges in Connecticut. The Barnum Richardson Company was best known for making the highest quality railroad car wheels (Kirby 1998:66-67).

Both the 1867 and 1876 Beers atlases of Dutchess County depict the Peekskill Iron Works property in Amenia (Figures 7 and 8). An office, engine house, and several other buildings, along with the ore beds, are shown. The Harlem Division Railroad passed along the east side of the property; however, there was no siding to the mines. The company's property in Peekskill was also on the Harlem Division Railroad, which did have a 6-mile railroad spur to the furnace (French 1925:671).

By 1877, just 12 years after first investing in land and iron production in Amenia, the Peekskill Iron Company defaulted on its mortgages and the entire company's holdings were sold to Louis C. Clark. Clark assumed control of the company's blast furnace in Peekskill, the mines in Amenia, as well as mines in Phillipstown in Putnam County (Deeds 1877). Within a year Clark sold the former Peekskill Iron Company holdings to Chester Griswold (Deeds 1878). The property transferred hands multiple times over the course of the next 100 years until it was developed as a golf course in the early 1990s.

The iron industry in the Northeast began to decline around 1880. Iron production shifted out of the region further south and west, where new deposits were found and the facilities built to mine and forge iron used the most advanced technology available, unlike the outmoded but still functional ironworks in the tri-state area. Although the ore beds outside of the Salisbury District contained lower quality ore, improved technology not only made iron production more economical but also made it possible to process the lower grade ore (Kirby 1998:72). Adding to the industry's decline in the Northeast was the increased cost of production as a result of deeper mining as surface deposits were depleted. Higher iron production costs began to price the local industry out of the growing steel market in the East (Reed 1985:184). By 1899 the mine and ore bed in the project area was no longer active (Figure 9). The Peekskill Iron Company closed in 1877, followed by the Gridley ironworks in 1886. The Manhattan Iron Co. near Sharon Station closed in 1902 (Kirby 1998:47).

By the turn of the twentieth century, the iron industry in and around Amenia had almost completely ended. There was an unsuccessful attempt to revitalize it at the beginning of World War I, but the effects were not lasting (Reed 1985:185). The last ironworks in the region ended production in the 1920s.

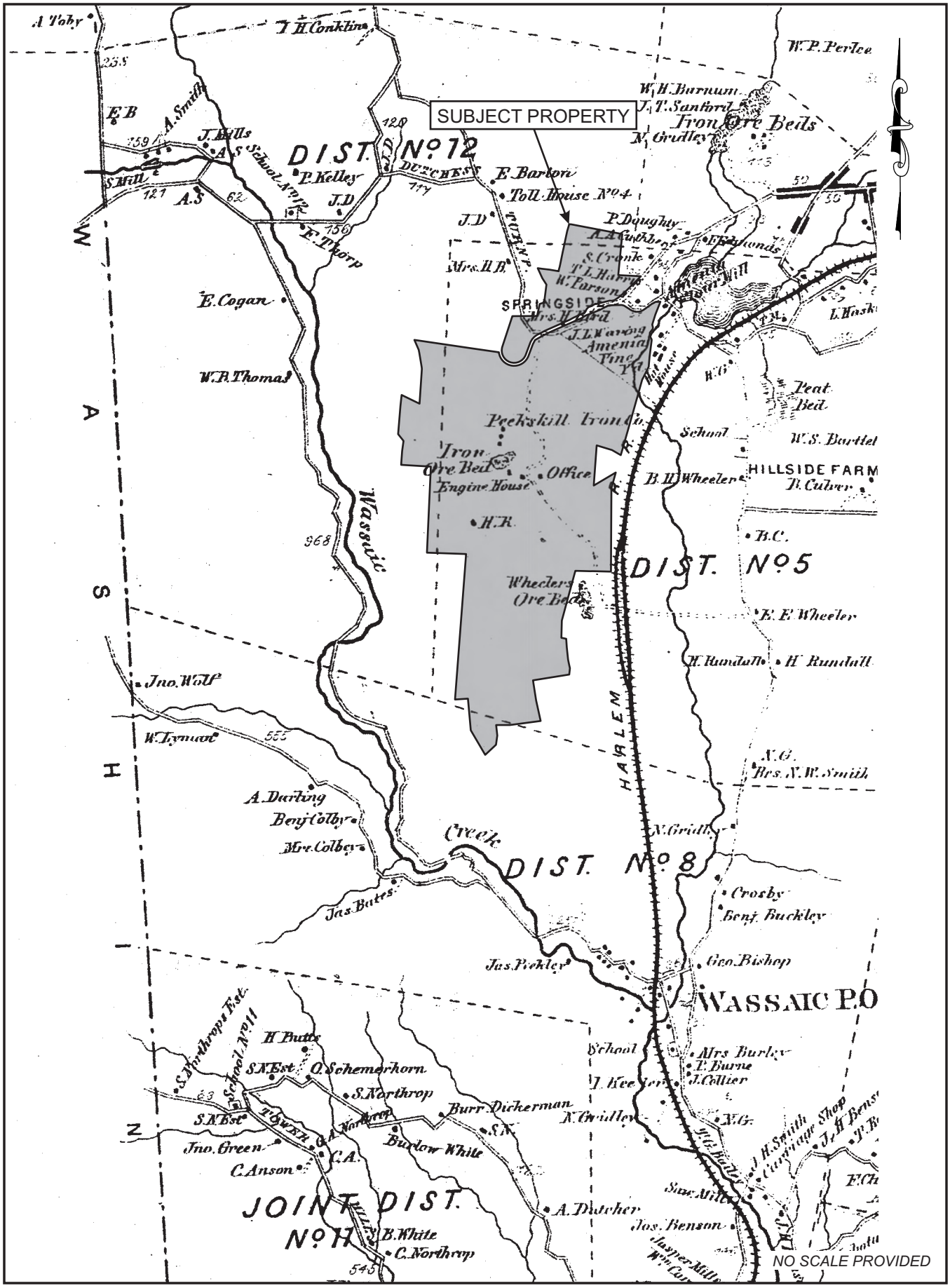


FIGURE 7: Subject Property in 1867

SOURCE: Beers 1867

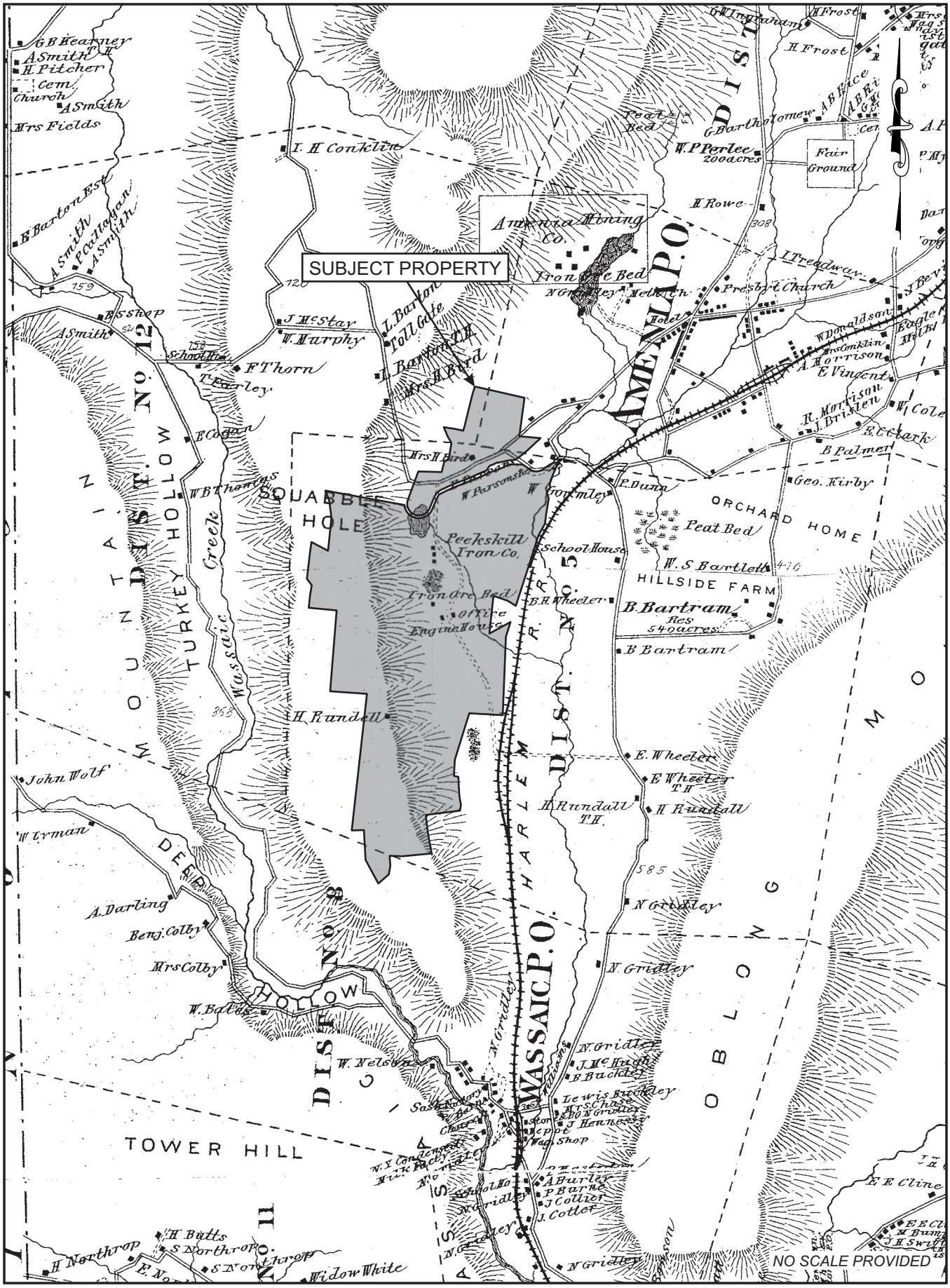


FIGURE 8: Subject Property in 1876

SOURCE: Beers 1876

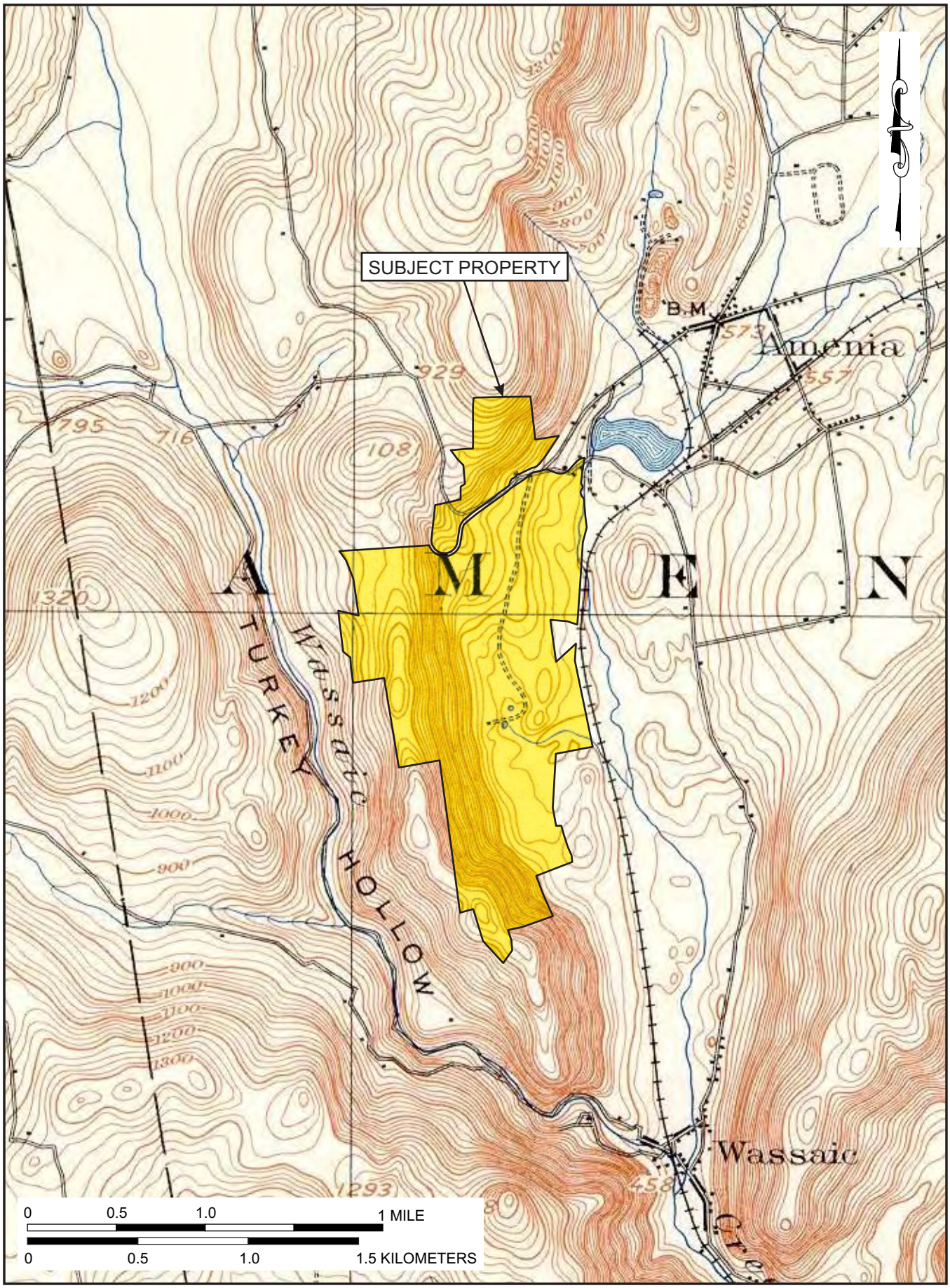


FIGURE 9: Subject Property in 1899

SOURCE: USGS 15-Minute Quadrangle, Millbrook NY-CT 1899

3. Pedestrian Reconnaissance

As requested by the OPRHP, part of the Phase II process included a pedestrian surface survey of the entire subject property, undertaken to locate and identify any structures or features related to the historic iron ore mining operations. Of specific interest to the investigation was locating map-documented structures, as well as additional charcoal hearths or ore pits related to the mining. Special attention was paid to areas along the base of the ridge line because features had previously been located there. Historic features were identified and mapped as completely as possible.

Berger began by investigating the sloped area north of Route 44 in the far northern extent of the subject property. No new features were located in this portion of the project area.

The pedestrian reconnaissance was then continued in the western half of the subject property along the ridge line (Photographs 4-8). Berger personnel started the investigation at the northern tip of the ridge and worked their way south along the existing trail network. The ground surface was extensively studied for any evidence of historic features or structures. Three additional charcoal features (Features 9, 10, and 11) were located during the survey. No evidence of any structures was located on the top of the ridge line.

Feature 9 was located immediately north of Feature 8, and Features 10 and 11 were situated west of Features 1 and 2 and well up the steep slope to the ridge top (Photograph 9) (see Figures 6a and 6d).

4. Subsurface Investigations

Two test units were excavated to attempt to characterize the structure of the charcoal hearths. Test Unit 2 was excavated into Feature 7 (Photograph 10), and Test Unit 3 (Photograph 11) was excavated into Feature 8. The profiles of these test units were very similar (Figures 10 and 11). Stratum A was a black (10YR 2/1) loam with a heavy charcoal concentration overlying Stratum B, a dark reddish brown (5YR 3/2) loamy silt that had characteristics of a soil that had been exposed to intense heat. Stratum C consisted of an intact B-horizon of dark grayish brown (10YR 4/2) loamy silt with approximately 15 percent gravel. No cultural materials were recovered from any of the strata. Charcoal samples were collected from both of the test units for further analysis and identification.

Two samples of carbonized wood collected from non-feature contexts during Phase II excavation of Site A02701.000081 were submitted archaeobotanical consultant Justine McKnight for taxonomic identification (Table 1). For more specific information on the identification of these samples, see Appendix D.

Hickory, maple, white oak, maple, and chestnut woods were identified. All taxa identified are native to the project area, with the possible exception of American chestnut, whose native range is spotty in south-central New York State (Little 1980).

TABLE 1

WOOD CHARCOAL IDENTIFICATION

field sample n.		105		106		total
total sample weight (grams)		47.30		25.14		72.44
total >2mm wood charcoal weight (grams)		45.75		20.25		66.00
total >2mm wood fragments		78		290		368
maple (Acer)	3	1.74	7	1.38	10	3.12
chestnut (Castanea dentata)	0	0	13	1.99	13	1.99
hickory (Carya)	16	13.27	0	0	16	13.27
white oak (Quercus)	1	1.27	0	0	1	1.27
total wood identified	20	16.28	20	3.37	40	19.65

PHOTOGRAPH 4: Ridge Top Logging Road near Feature 10 (Site A02701.000081), View to East

PHOTOGRAPH 5: Ridge Top, View to East

PHOTOGRAPH 6: Ridge Top, View to West

PHOTOGRAPH 7: Ridge Top, View to North

PHOTOGRAPH 8: Ridge Top, View to South

PHOTOGRAPH 9: Feature 10, View to Northwest

PHOTOGRAPH 10: Excavating Test Unit 2 (Site A02701.000081), View to Northeast

PHOTOGRAPH 11: Excavating Test Unit 3 (Site A02701.000081), View to South

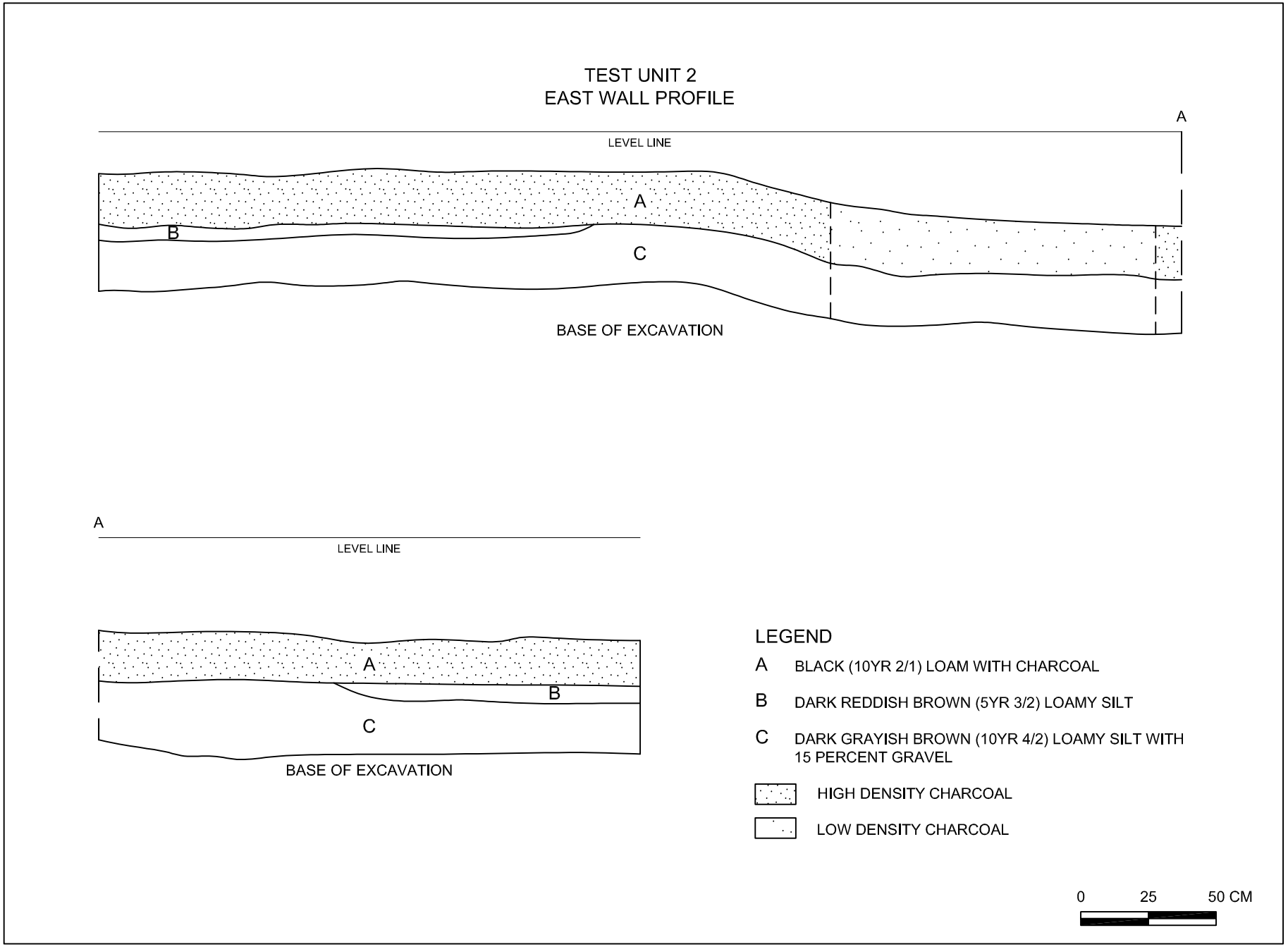
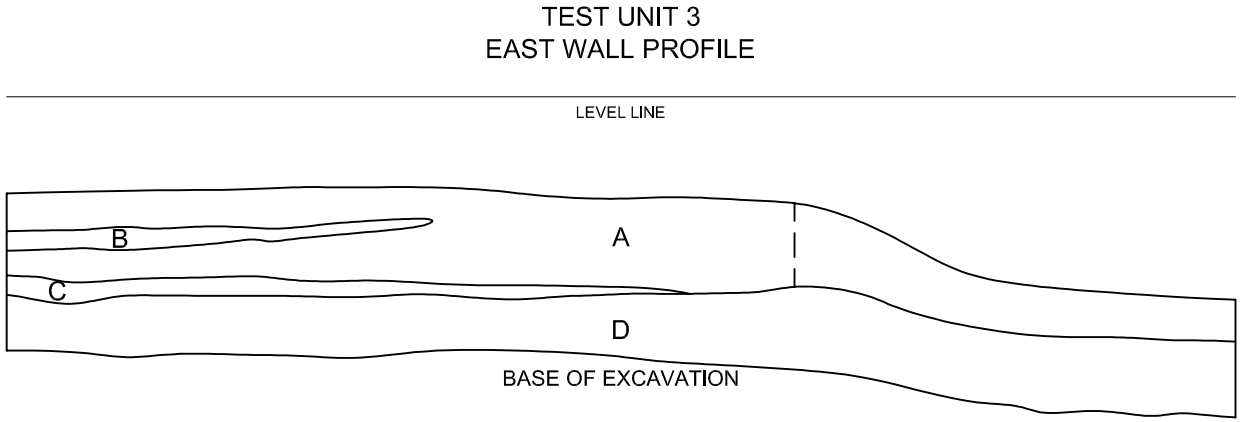


FIGURE 10: Test Unit 2, East Wall



LEGEND

A BLACK (10YR 2/1) LOAM WITH CHARCOAL

B GRAY (10YR 5/1) SILT LOAM

C DARK REDDISH BROWN (5YR 3/2) LOAMY SILT

D GRAYISH BROWN (10YR 5/2) LOAMY SILT WITH 15 PERCENT GRAVEL

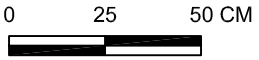


FIGURE 11: Test Unit 3, East Wall

E. Phase II Evaluation of Site A02701.000082

Test Unit 1 (Photograph 12) was excavated in close proximity to a cluster of positive historic shovel tests (Shovel Tests D-2 through D-10) (see Figure 6e) located in the northern portion of the project area adjacent to West Lake Amenia Road. The test unit was excavated to determine the extent of the historical deposits and to locate any possible structural remains or features associated with the deposit. This was not required, as the current construction plans are to avoid this site.

The stratigraphy of Test Unit 1 displayed the characteristics of a landform that had been filled with redeposited local soils in an attempt to level off the southerly sloping topography. Soil colors were mottled with the dark yellowish brown (10YR 4/6) commonly associated with the localized B-horizon and a very dark grayish brown (10YR 3/2) soil indicative of a former plowzone (Figure 12). An intact B-horizon was exposed in the northern portion of the test unit; however, the test unit's excavation was terminated when the proposed plans for the construction impacts were clarified by the client and it was determined that this area would no longer be impacted.

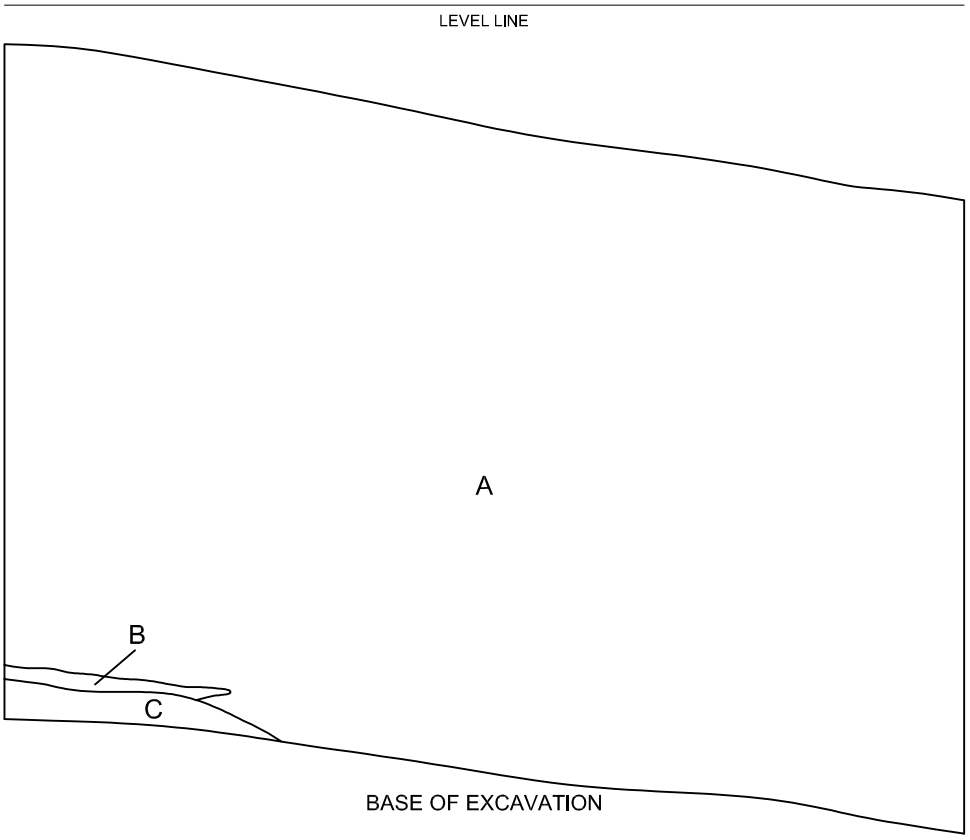
F. Discussion

The Phase II investigation of Site A02701.000081 consisted of site-specific background research, the development of a historic context within which the charcoal production activities could be evaluated, an intensive field reconnaissance, and the detailed mapping and photographic documentation of the charcoal features. The archaeological fieldwork consisted of extensive field reconnaissance and subsurface testing through the excavation of two test units (slot/slit trenches) designed to characterize the structure of the charcoal production features that make up Site A02701.000081. The test units produced no artifacts, but charcoal samples were retained for analysis, and the findings have been presented above.

The comprehensive Phase I survey findings together with the site-specific documentary research and Phase II site evaluation of the Charcoal Hearths Site (A02701.000081) demonstrate that Site A02701.000081 is not eligible for listing in the National Register of Historic Places and no further work is warranted. The West Lake Amenia Road Historic Site (A02701.000082) will be avoided by the present design plan and no further work is necessary. It is Berger's opinion that no impact to cultural resources is expected to occur in association with the proposed action and that no further work is required. If, however, the project plans are modified to extend beyond the present boundaries investigated or result in potential impact to identified resources, such as Site A02701.000082, then additional archaeological work may be necessary.

PHOTOGRAPH 12: Excavating Test Unit 1(Site A02701.000082), View to Northwest

TEST UNIT 1
EAST WALL PROFILE



LEGEND

A VERY DARK GRAYISH BROWN (10YR 3/2) SILT LOAM WITH 10 PERCENT GRAVEL

B YELLOWISH BROWN (10YR 5/8) SILT LOAM

C DARK YELLOWISH BROWN (10YR 4/6) SILT LOAM

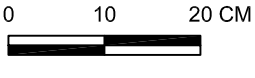


FIGURE 12: Test Unit 1, East Wall

III. Conclusions and Recommendations

The Louis Berger Group, Inc. (Berger), Albany, New York, completed an additional Phase I archaeological survey and Phase II site evaluation for the proposed Silo Ridge Resort Community Project in the Town of Amenia, Dutchess County, New York. Berger conducted the survey on behalf of Millbrook Ventures LLC. The initial Phase I study was prepared for the Silo Ridge Country Club in April 2006; the objective of the additional survey and the evaluation was to identify any archaeological sites within unsurveyed portions of a revised project area, record and evaluate the identifiable features associated with the iron ore industry related to Sites A02701.000081 and A02701.000082, and to evaluate the sites' eligibility for listing in the National Register of Historic Places. Site A02701.000082 was subject to limited evaluation, but it was determined shortly after the investigation commenced that the site would be avoided and the evaluation was terminated. The revised project area or area of potential effect (APE) lies within the subject property and includes the footprints of the proposed improvements, and adjacent areas that will be disturbed, in four areas not evaluated during the initial Phase I study. These four areas are situated north along Route 44, southwest of the Golf Club House, north and west of the Wetlands, and east of the Maintenance Building.

The subject property sits on the west side of Route 22 southwest of the intersection of Route 22 with Route 44. The property boundary is highly irregular; although a portion lies to the north of Route 44, the majority lies to the south. The property measures over 3.2 kilometers (2 miles) north-south and 1.36 kilometers (0.85 miles) east-west at its widest point, covering a total of 270.5 hectares (668.4 acres).

The archaeological survey was conducted from August 21 to 29, 2006, as well as September 7, 2006, and July 19, 2007. The Phase I archaeological fieldwork consisted of field reconnaissance and subsurface testing with the excavation of 31 shovel tests. These shovel tests failed to produce any prehistoric or historic artifacts. The Phase II investigation of Site A02701.000081 consisted of site-specific background research, the development of a historic context within which the charcoal production activities could be evaluated, an intensive field reconnaissance, and the detailed mapping and photographic documentation of the charcoal features. The archaeological fieldwork consisted of extensive field reconnaissance and subsurface testing through the excavation of two test units (slot/slit trenches) designed to characterize the structure of the charcoal production features that make up Site A02701.000081. The test units produced no artifacts, but charcoal samples were retained for analysis.

The comprehensive Phase I survey findings together with the site-specific documentary research and Phase II site evaluation of the Charcoal Hearths Site (A02701.000081) demonstrate that the survey has exhausted the site's potential to contribute to our understanding of charcoal production in the project area and any further work would result in redundant information. Site A02701.000081 is therefore not eligible for listing in the National Register of Historic Places and no further work is warranted. The West Lake Amenia Road Historic Site (A02701.000082) will be avoided by the present design plan and no further work is necessary. It is Berger's opinion that no impact to cultural resources is expected to occur in association with the proposed action and that no further work is required. If, however, the project plans are modified to extend beyond the present boundaries investigated or result in potential impact to identified resources, such as Site A02701.000082, then additional archaeological work may be necessary.

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APPENDIX A

Shovel Test Data

STP	Stratum	Depth to base of Stratum		Soil Color	Texture	Coarse Fraction	Artifact Cat. #	Comments
		cm	ft					
S-1	A	40	1.31	10YR 3/6 Dark Yellowish Brown	Sandy Loam	20 Percent Gravel and Angular Cobbles	NCM	
	B	56	1.84	10YR 4/3 Brown	Sandy Loam	20 Percent Gravel	NCM	
S-2	A	15	0.49	10YR 4/3 Brown	Sandy Loam	20 Percent Gravel	NCM	
	B	27	0.89	10YR 5/3 Brown	Silt Loam	10 Percent Gravel	NCM	
	C	45	1.48	10YR 4/2 Dark Grayish Brown	Silt Loam	10 Percent Gravel	NCM	
S-3	A	15	0.49	10YR 4/3 Brown	Sandy Loam	10 Percent Gravel	NCM	
	B	28	0.92	10YR 5/3 Brown	Silt Loam	10 Percent Gravel	NCM	
	C	45	1.48	10YR 4/2 Dark Grayish Brown	Silt Loam	10 Percent Gravel	NCM	
S-4	A	17	0.56	10YR 3/4 Dark Yellowish Brown	Sandy Loam	15 Percent Gravel	NCM	
	B	35	1.15	10YR 5/3 Brown	Silt Loam	10 Percent Gravel	NCM	
	C	46	1.51	10YR 5/4 Yellowish Brown	Silt Loam	5 Percent Gravel	NCM	
S-5	A	20	0.66	10YR 3/2 Very Dark Grayish Brown	Sandy Loam	20 Percent Gravel	NCM	
	B	33	1.08	10YR 3/4 Dark Yellowish Brown	Sandy Loam	20 Percent Gravel	NCM	
	C	46	1.51	10YR 3/6 Dark Yellowish Brown	Sandy Loam	15 Percent Gravel	NCM	
S-6	A	30	0.98	10YR 3/3 Dark Brown	Sandy Loam	20 Percent Gravel	NCM	
	B	48	1.57	10YR 5/4 Yellowish Brown	Silt Loam	10 Percent Gravel	NCM	
S-7	A	22	0.72	10YR 5/3 Brown	Sandy Loam	20 Percent Gravel	NCM	
	B	40	1.31	10YR 5/4 Yellowish Brown	Sandy Loam	10 Percent Gravel	NCM	
S-8	A	18	0.59	10YR 4/3 Brown	Sandy Loam	20 Percent Gravel	NCM	
	B	41	1.35	10YR 5/4 Yellowish Brown	Sandy Loam	10 Percent Gravel	NCM	
S-9	A	21	0.69	10YR 5/3 Brown	Sandy Loam	20 Percent Gravel	NCM	
	B	40	1.31	10YR 5/4 Yellowish Brown	Sandy Loam	10 Percent Gravel	NCM	
T-1	A	8	0.26	10YR 4/3 Brown	Sandy Loam	10 Percent Gravel	NCM	
	B	37	1.21	10YR 5/4 Yellowish Brown	Silt Loam	5 Percent Gravel	NCM	

STP	Stratum	Depth to base of Stratum		Soil Color	Texture	Coarse Fraction	Artifact Cat. #	Comments
T-2	A	10	0.33	10YR 4/3 Brown	Sandy Loam	15 Percent Gravel	NCM	
	B	32	1.05	10YR 5/4 Yellowish Brown	Silt Loam	10 Percent Gravel	NCM	
U-1	A	17	0.56	10YR 3/4 Dark Yellowish Brown	Sandy Loam	20 Percent Gravel and Angular Cobbles	NCM	
	B	48	1.57	10YR 5/4 Yellowish Brown	Sandy Loam	10 Percent Gravel	NCM	
U-2	A	14	0.46	10YR 3/4 Dark Yellowish Brown	Sandy Loam	20 Percent Gravel	NCM	
	B	42	1.38	10YR 5/4 Yellowish Brown	Sandy Loam	20 Percent Gravel	NCM	
V-1	A	13	0.43	10YR 3/4 Dark Yellowish Brown	Sandy Loam	15 Percent Gravel	NCM	
	B	42	1.38	10YR 4/6 Dark Yellowish Brown	Sandy Loam	20 Percent Gravel and Cobbles	NCM	
V-2	A	19	0.62	10YR 3/4 Dark Yellowish Brown	Sandy Loam	20 Percent Gravel	NCM	
	B	35	1.15	10YR 4/6 Dark Yellowish Brown	Sandy Loam	20 Percent Gravel	NCM	
V-3	A	21	0.69	10YR 3/3 Dark Brown	Sandy Loam	20 Percent Gravel	NCM	
	B	38	1.25	10YR 5/6 Yellowish Brown	Sandy Loam	20 Percent Gravel	NCM	
W-1	A	18	0.59	10YR 3/4 Dark Yellowish Brown	Silt Loam	20 Percent Gravel and Angular Cobbles	NCM	
	B	32	1.05	10YR 3/6 Dark Yellowish Brown	Silt Loam	20 Percent Gravel and Angular Cobbles	NCM	
W-2	A	28	0.92	10YR 3/4 Dark Yellowish Brown	Sandy Loam	20 Percent Gravel and Cobbles	NCM	
	B	39	1.28	10YR 4/6 Dark Yellowish Brown	Silt Loam	15 Percent Gravel	NCM	
W-3	A	31	1.02	10YR 3/4 Dark Yellowish Brown	Silt Loam	20 Percent Gravel	NCM	
	B	44	1.44	10YR 4/6 Dark Yellowish Brown	Silt Loam	15 Percent Gravel	NCM	
X-1	A	25	0.82	10YR 3/4 Dark Yellowish Brown	Sandy Loam	20 Percent Gravel	NCM	
	B	42	1.38	10YR 4/6 Dark Yellowish Brown	Silt Loam	10 Percent Gravel	NCM	
X-2	A	24	0.79	10YR 3/3 Dark Brown	Sandy Loam	20 Percent Gravel	NCM	
	B	44	1.44	10YR 4/6 Dark Yellowish Brown	Silt Loam	20 Percent Gravel	NCM	

STP	Stratum	Depth to base of Stratum		Soil Color	Texture	Coarse Fraction	Artifact Cat. #	Comments
X-3	A	27	0.89	10YR 3/3 Dark Brown	Sandy Loam	20 Percent Gravel	NCM	
	B	40	1.31	10YR 4/6 Dark Yellowish Brown	Silt Loam	20 Percent Gravel	NCM	
Y-1	A	26	0.85	2.5Y 4/2 Dark Grayish Brown	Silt Loam	10 Percent Gravel	NCM	
	B	39	1.28	2.5Y 5/3 Light Olive Brown	Silt Loam	10 Percent Gravel	NCM	
Y-2	A	30	0.98	2.5Y 4/2 Dark Grayish Brown	Silt Loam	10 Percent Gravel	NCM	
	B	43	1.41	2.5Y 5/3 Light Olive Brown	Silt Loam	10 Percent Gravel	NCM	
Y-3	A	33	1.08	2.5Y 4/2 Dark Grayish Brown	Silt Loam	10 Percent Gravel	NCM	
	B	46	1.51	2.5Y 5/3 Light Olive Brown	Silt Loam	10 Percent Gravel	NCM	
Y-4	A	25	0.82	2.5Y 4/2 Dark Grayish Brown	Silt Loam	10 Percent Gravel	NCM	
	B	40	1.31	2.5Y 5/3 Light Olive Brown	Silt Loam	15 Percent Gravel	NCM	
Y-5	A	33	1.08	2.5Y 4/2 Dark Grayish Brown	Silt Loam	10 Percent Gravel and Cobbles	NCM	
	B	43	1.41	2.5Y 5/3 Light Olive Brown	Silt Loam	15 Percent Gravel	NCM	
Y-6	A	29	0.95	2.5Y 4/3 Olive Brown	Silt Loam	10 Percent Gravel	NCM	
	B	41	1.35	2.5Y 5/3 Light Olive Brown	Silt Loam	15 Percent Gravel	NCM	
AA-1	A	37	1.21	10YR 4/4 Dark Yellowish Brown	Sandy Loam	10 Percent Gravel	NCM	
	B	47	1.54	10YR 4/6 Dark Yellowish Brown	Silt Loam	10 Percent Gravel	NCM	
AA-2	A	21	0.69	10YR 4/4 Dark Yellowish Brown	Sandy Loam	10 Percent Gravel	NCM	
	B	60	1.97	10YR 4/6 Dark Yellowish Brown	Silt Loam	10 Percent Gravel	NCM	
AA-3	A	14	0.46	10YR 4/4 Dark Yellowish Brown	Sandy Loam	10 Percent Gravel	NCM	
	B	24	0.79	10YR 4/6 Dark Yellowish Brown	Silt Loam	10 Percent Gravel	NCM	

APPENDIX B

Site Forms for Temporary Sites A02701.000081 and A02701.000082

NEW YORK STATE HISTORIC ARCHAEOLOGICAL SITE INVENTORY FORM

NYS OFFICE OF PARKS, RECREATION & HISTORIC PRESERVATION
(518) 237-8643

Bernadette Castro
Commissioner

For Office Use Only--Site Identifier

Project Identifier

Your Name The Louis Berger Group, Inc. Date September 2007
Address 20 Corporate Woods Blvd., Albany, NY Phone 518-432-9545
Organization (if any)

1. SITE IDENTIFIER(S) Silo Ridge Charcoal Hearths (A02701.000081)
2. COUNTY Dutchess One of the following: CITY
TOWNSHIP Amenia
INCORPORATED VILLAGE
UNINCORPORATED VILLAGE OR HAMLET

3. PRESENT OWNER Silo Ridge Country Club
Address 4651 Route 22
Amenia, New York

4. SITE DESCRIPTION (check all appropriate categories):

Structure/site

Superstructure: complete ____ partial ____ collapsed ____ not evident ____
Foundation: above ____ below ____ (ground level) not evident ____
____ Structural subdivisions apparent ____ Only surface traces visible
X Buried traces detected

List construction materials (be as specific as possible):

Grounds

____ Under cultivation ____ Sustaining erosion ____ Woodland X Upland
____ Never cultivated ____ Previously cultivated ____ Floodplain ____ Pastureland
Soil Drainage: excellent ____ good X fair ____ poor ____
Distance to nearest water from structure (approx.) 1000 ft
Elevation:

5. Site Investigation (append additional sheets, if necessary):

Surface – date (s) January 2006, August 2006, and July 2007
____ Site map (submit with form*)
____ Collection
Subsurface – date (s) February 2006, August 2006
Testing: shovel 1 coring ____ other ____ unit size ____
no. units ____ (Submit plan of units with form*)
Excavation: unit size 0.5x6m no. of units 2
(Submit plan of units with form*)

* Submission should be 8 ½" by 11", if feasible

Investigator The Louis Berger Group, Inc.

Manuscript or published report (s) (reference fully):

The Louis Berger Group, Inc. 2006 Phase I Archaeological Survey, Proposed Silo Ridge Resort Community Project, Town of Amenia, Dutchess County, New York.

The Louis Berger Group, Inc. 2007 Additional Phase I Archaeological Survey and Phase II Site Evaluation, Proposed Silo Ridge Resort Community Project,Town of Amenia, Dutchess County, New York.

Present repository of materials The Louis Berger Group, Inc

6. Site inventory:

a. Date constructed or occupation period Middle to Late Nineteenth Century

b. Previous owners, if known

c. Modifications, if known

(append additional sheets, if necessary)

7. Site documentation (append additional sheets, if necessary):

a. Historic map references

1) Name County Atlas of Dutchess, New York Date 1867 Source Beers, F.W

Present location of original, if known

2) Name New Historical Atlas of Dutchess County, New York Date 1876 Source Beers, F.W

Present location of original, if known

b. Representation in existing photography

1) Photo date Where located

2) Photo date Where located

c. Primary and secondary source of documentation (reference fully)

d. Persons with memory of site

1) Name Address

2) Name Address

8. List of material remains other than those used in construction (be as specific as possible in identifying object and material):

11 charcoal hearth features along the base of the western ridge. No artifacts recovered.

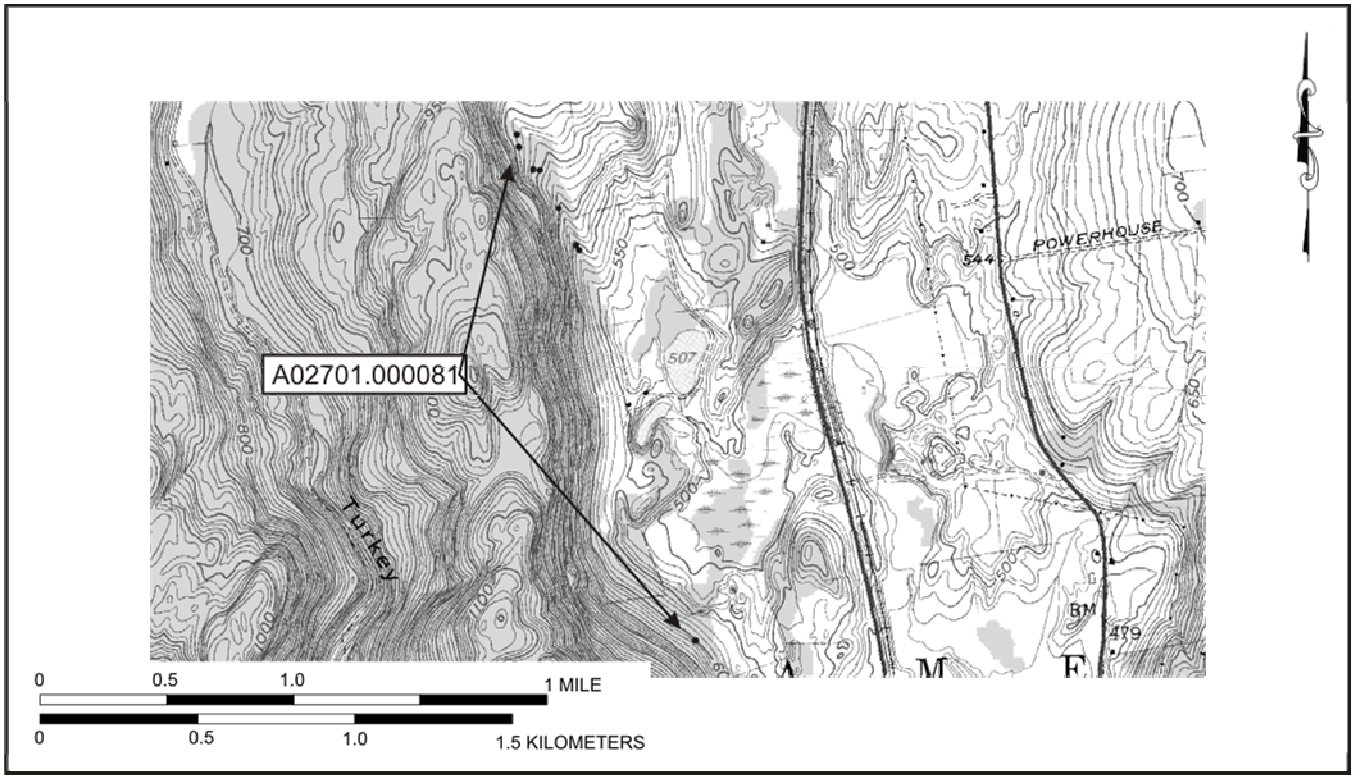
If prehistoric materials are evident, check here and fill out prehistoric site form.

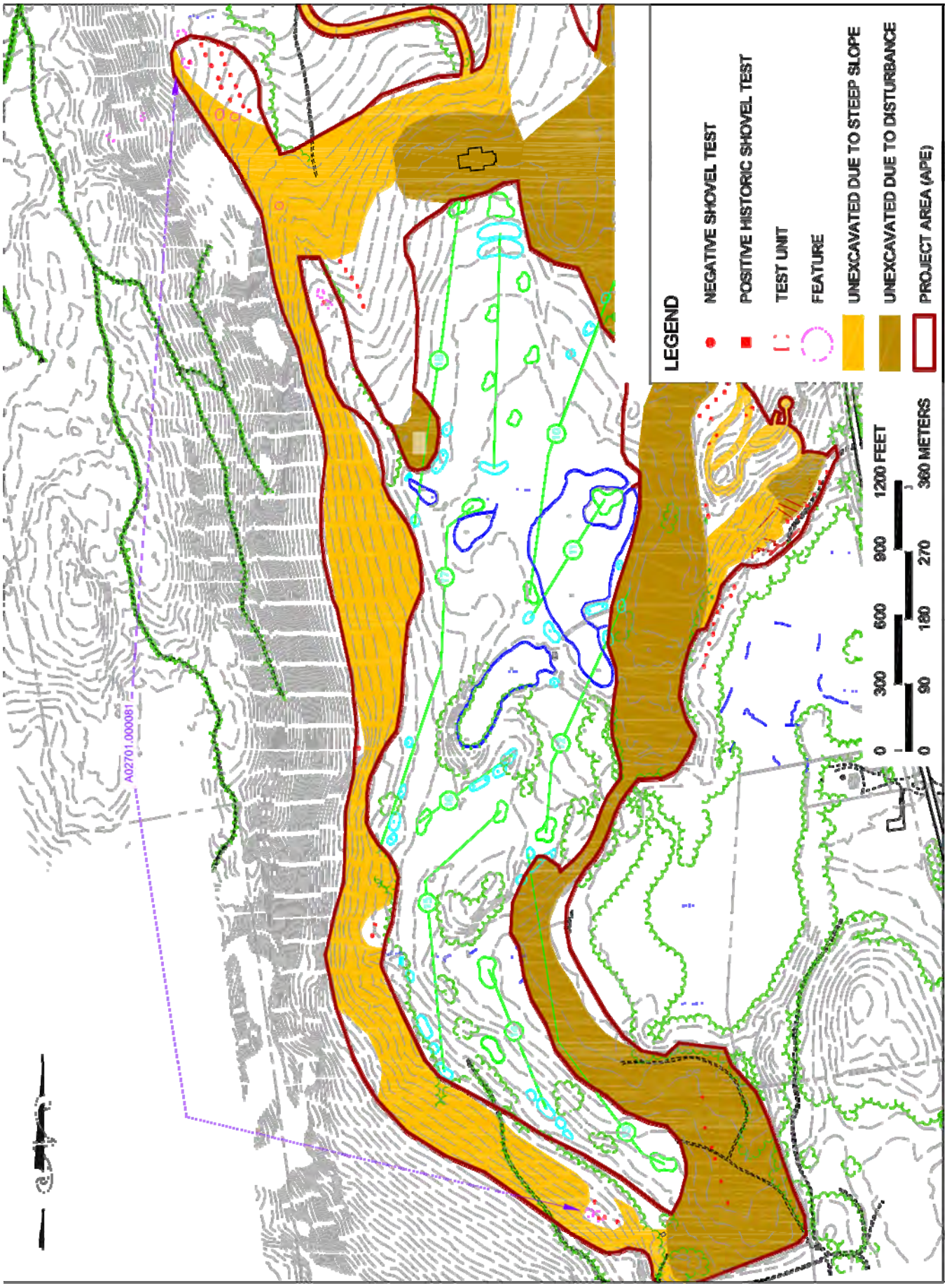
9. Map References: Map or maps showing exact location and extent of site must accompany this form and be identified by source and date. Keep this submission to 8½" x 11", if possible.

USGS 71/2 Minute Series Quad. Name Amenia, NY-CT

For Office Use Only--UTM Coordinates

10. Photography (optional for environmental impact survey): Please submit a 5"x7" black and white print(s) showing the current state of the site. Provide a label for the print(s) on a separate sheet.


A02701.000081
POWERHOUSE
544
507
Turkey
BM
479
0
0.5
1.0
1 MILE
0
0.5
1.0
1.5 KILOMETERS


LEGEND
NEGATIVE SHOVEL TEST
POSITIVE HISTORIC SHOVEL TEST
TEST UNIT
FEATURE
UNEXCAVATED DUE TO STEEP SLOPE
UNEXCAVATED DUE TO DISTURBANCE
PROJECT AREA (APE)
0 300 600 900 1200 FEET
0 90 180 270 360 METERS
A02701.000081

NEW YORK STATE HISTORIC ARCHAEOLOGICAL SITE INVENTORY FORM

NYS OFFICE OF PARKS, RECREATION & HISTORIC PRESERVATION
(518) 237-8643

Bernadette Castro
Commissioner

For Office Use Only--Site Identifier

Project Identifier

Your Name The Louis Berger Group, Inc. Date September 2007
Address 20 Corporate Woods Blvd., Albany, NY Phone 518-432-9545
Organization (if any)

1. SITE IDENTIFIER(S) West Lake Amenia Road (A02701.000082)
2. COUNTY Dutchess One of the following: CITY
TOWNSHIP Amenia
INCORPORATED VILLAGE
UNINCORPORATED VILLAGE OR HAMLET

3. PRESENT OWNER Silo Ridge Country Club
Address 4651 Route 22
Amenia, New York

4. SITE DESCRIPTION (check all appropriate categories):

Structure/site

Superstructure: complete ____ partial ____ collapsed ____ not evident ____
Foundation: above ____ below ____ (ground level) not evident ____
____ Structural subdivisions apparent ____ Only surface traces visible
X Buried traces detected

List construction materials (be as specific as possible):

Grounds

____ Under cultivation ____ Sustaining erosion ____ Woodland X Upland
____ Never cultivated ____ Previously cultivated ____ Floodplain ____ Pastureland
Soil Drainage: excellent ____ good X fair ____ poor ____
Distance to nearest water from structure (approx.) 1000 ft
Elevation:

5. Site Investigation (append additional sheets, if necessary):

Surface – date (s) January 2006, August 2006, and July 2007
____ Site map (submit with form*)
____ Collection
Subsurface – date (s) February 2006, August 2006
Testing: shovel 15 coring ____ other ____ unit size ____
no. units ____ (Submit plan of units with form*)
Excavation: unit size 1x1m no. of units 1
(Submit plan of units with form*)

* Submission should be 8 ½" by 11", if feasible

Investigator The Louis Berger Group, Inc.

Manuscript or published report (s) (reference fully):

The Louis Berger Group, Inc. 2006 Phase I Archaeological Survey, Proposed Silo Ridge Resort Community Project, Town of Amenia, Dutchess County, New York.

The Louis Berger Group, Inc. 2007 Additional Phase I Archaeological Survey and Phase II Site Evaluation, Proposed Silo Ridge Resort Community Project,Town of Amenia, Dutchess County, New York.

Present repository of materials The Louis Berger Group, Inc.

6. Site inventory:

a. Date constructed or occupation period Middle to Late Nineteenth Century

b. Previous owners, if known

c. Modifications, if known

(append additional sheets, if necessary)

7. Site documentation (append additional sheets, if necessary):

a. Historic map references

1) Name County Atlas of Dutchess, New York Date 1867 Source Beers, F.W

Present location of original, if known

2) Name New Historical Atlas of Dutchess County, New York Date 1876 Source Beers, F.W

Present location of original, if known

b. Representation in existing photography

1) Photo date Where located

2) Photo date Where located

c. Primary and secondary source of documentation (reference fully)

d. Persons with memory of site

1) Name Address

2) Name Address

8. List of material remains other than those used in construction (be as specific as possible in identifying object and material):

Redware, Whiteware, Pearlware, Stoneware, Handwrought Nail- Rose Head, Creamware, Machine Cut Nail, Brick, Faunal

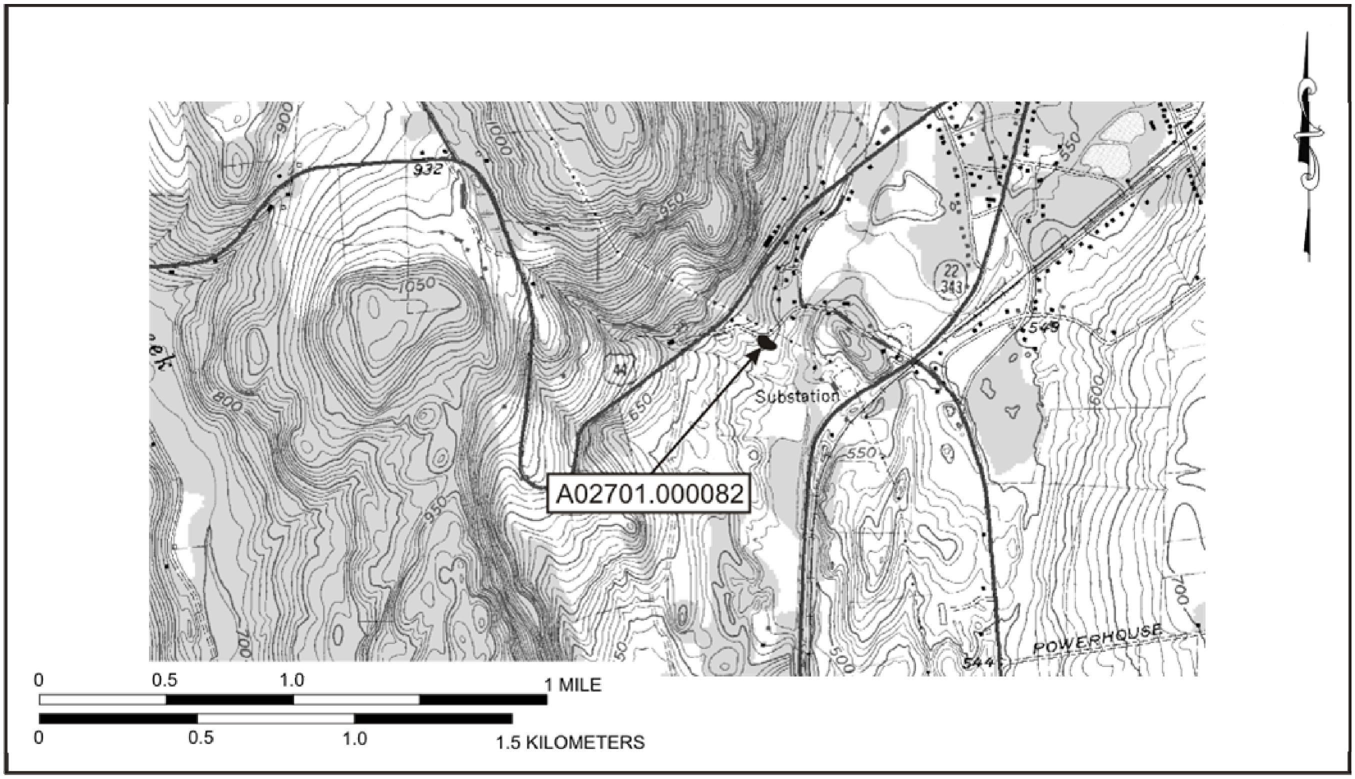
If prehistoric materials are evident, check here and fill out prehistoric site form.

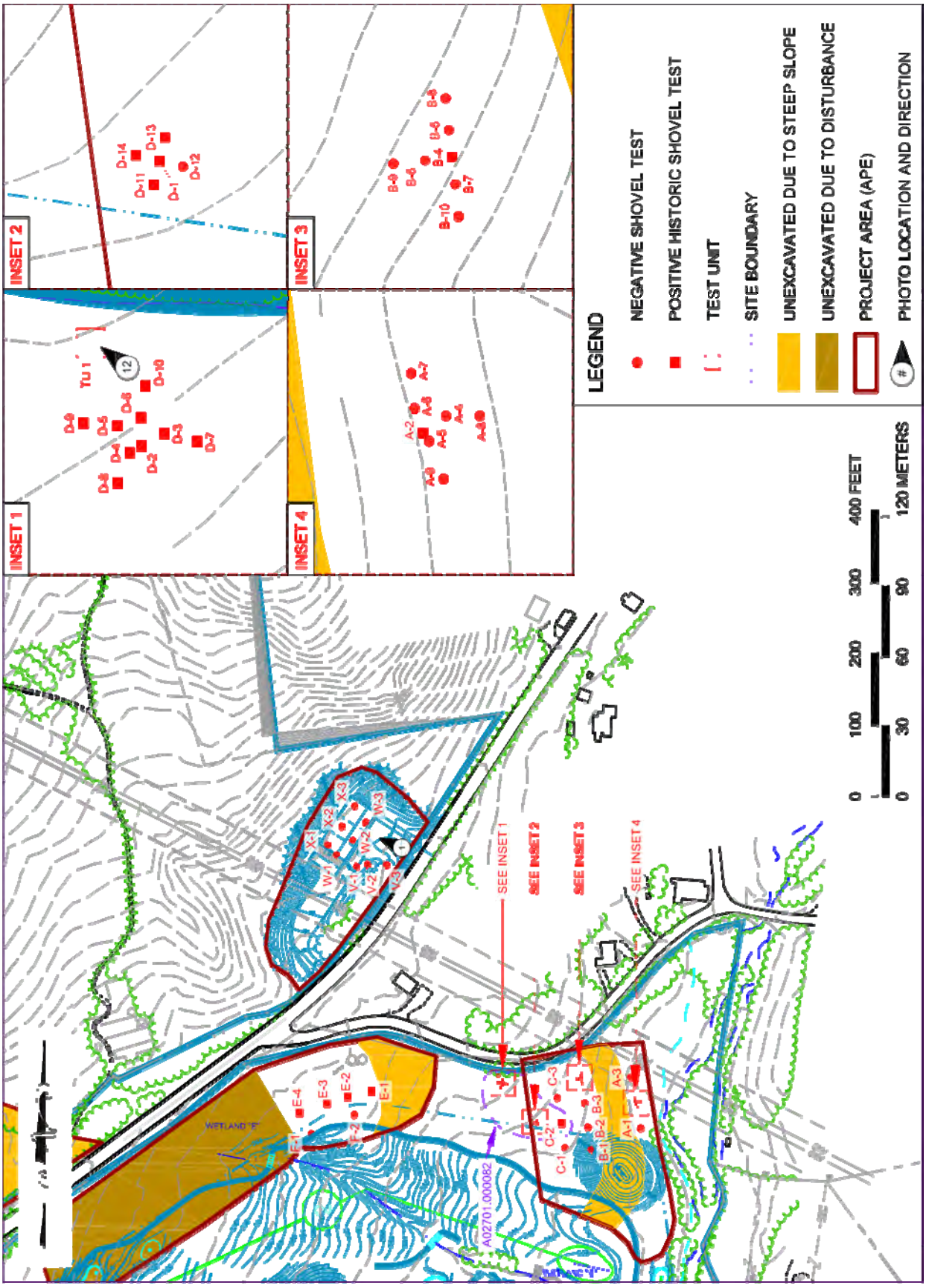
9. Map References: Map or maps showing exact location and extent of site must accompany this form and be identified by source and date. Keep this submission to 8½" x 11", if possible.

USGS 71/2 Minute Series Quad. Name Amenia, NY-CT

For Office Use Only--UTM Coordinates

10. Photography (optional for environmental impact survey): Please submit a 5"x7" black and white print(s) showing the current state of the site. Provide a label for the print(s) on a separate sheet.


A02701.000082
Substation
POWERHOUSE
0 0.5 1.0 1 MILE
0 0.5 1.0 1.5 KILOMETERS


INSET 1
INSET 2
INSET 3
INSET 4
LEGEND
NEGATIVE SHOVEL TEST
POSITIVE HISTORIC SHOVEL TEST
TEST UNIT
SITE BOUNDARY
UNEXCAVATED DUE TO STEEP SLOPE
UNEXCAVATED DUE TO DISTURBANCE
PROJECT AREA (APE)
PHOTO LOCATION AND DIRECTION
0 100 200 300 400 FEET
0 30 60 90 120 METERS
SEE INSET 1
SEE INSET 2
SEE INSET 3
SEE INSET 4
WETLAND "B"
A02701.000082

APPENDIX C

Methods of Artifact Cataloging and Analysis
Translation of Utilized Codes
Artifact Inventory

METHODS OF ARTIFACT CATALOGING AND ANALYSIS

A. LABORATORY PROCESSING

All artifacts were transported from the field to Berger's laboratory. In the field, artifacts were bagged in 4-mil, resealable polyethylene bags. Artifact cards bearing provenience information were included in the plastic bags. A Field Number was assigned to each unique provenience in the field. This number appears with all the provenience information and is used throughout processing and analysis to track artifacts.

In the laboratory, provenience information on each artifact card was checked against a master list of Field Numbers with their proveniences. Any discrepancies were corrected at that time, and a Catalog Number was assigned to each provenience, according to New York State Museum guidelines.

Most historic artifacts were washed in water with a soft toothbrush. Metal objects were cleaned using a dry toothbrush or stainless steel wire brush. During analysis, individual Specimen Numbers were assigned to artifacts within each Catalog Number for each analytical Class: historic ceramics, curved (vessel) glass, small finds/architectural, faunal, and floral.

After analysis, the artifacts were re-bagged into clean, perforated 4-mil resealable polyethylene bags. Artifacts are organized sequentially first by Site Number, then by Catalog Number, and finally by artifact Class and Specimen Number within each Catalog Number. An acid-free artifact card listing full provenience information and analytical class was included in each bag.

Artifacts were marked with provenience information following the format shown below, using black waterproof India ink on a base of Rhoplex. The label was then sealed with a top coat of 10 percent polyvinyl acetate (PVA) in acetone.

	Example:
(Accession #) . (Catalog #) . (Specimen #) . (Class)	A2006 . 09. 102 . 4 . G

B. ANALYTICAL METHODS

Berger has developed a flexible analytical database system that fully integrates all artifacts in one database for use in data manipulation and interpretation. The computerized data management system is written using Paradox® 9, a relational database development package that runs on a Windows® platform.

Each class of artifacts (historic ceramics, curved (vessel) glass, small finds/architectural, faunal, and floral) has a series of attributes, sometimes unique to that class, that are recorded to describe each artifact under analysis. Artifact information (characteristics), recorded on the data entry forms by the analysts, was entered into the system. The system was then used to enhance the artifact records with the addition of provenience information. Berger maintains a complete type and attribute coding book for each material class.

The artifact coding system employs a Type/SubType system developed by Berger's Cultural Resources division. The format for the historic artifacts is based on the South/Noël Hume typology (South 1977), as modified for use in a computerized system (Berger 1987).

REFERENCES CITED

Louis Berger & Associates, Inc. [Berger]
1987 *Druggists, Craftsmen, and Merchants of Pearl and Water Streets, New York: The Barclays Bank Site*. Prepared for London and Leeds Corporation, New York, New York, and Barclays Bank PLC, New York, New York, by the Cultural Resource Group, Louis Berger & Associates, Inc., East Orange, New Jersey.

South, Stanley
1977 *Method and Theory in Historical Archaeology*. Academic Press, New York.

Utilized Codes for XE 3807 Silo Ridge Resort Community, Dutchess Co, NY Ph II

Historic Ceramic

Var1 Meaning	Var2 Meaning	Var3 Meaning	Var4 Meaning	Var5 Meaning	Var6 Meaning	Var7 Meaning	Var8 Meaning	Var9 Meaning	Var10 Meaning	Var11 Meaning
Maker's Mark	Vessel Number	Wear	Motif/Pattern	Form	Percent Complete	Part		Color		

Var7	Translation
1	Body
2	Rim
3	Base

Var4	Translation
2	Unidentifiable Motif
102	Small Scale Floral
677	Albany Type Slip, Interior Only
750	Glazed Interior Only
752	Glazed Both Surfaces
759	Both Surfaces Spalled
809	Unidentified Number of Slip Lines

Var5	Translation
50	Plate-Unidentified Diameter
78	Unidentified Tableware, Hollowware
79	Unidentified Tableware
357	Miscellaneous Storage/Serving Vessel

Var9	Translation
4	Red & Green
23	Orange, Blue & Brown
30	Red
35	Purple
40	Green
48	Green & Yellow
50	Blue
62	Brown

Glass

Var1 Meaning	Var2 Meaning	Var3 Meaning	Var4 Meaning	Var5 Meaning	Var6 Meaning	Var7 Meaning	Var8 Meaning	Var9 Meaning	Var10 Meaning	Var11 Meaning
Maker's Mark	Vessel Number	Brand	Motif/Pattern	Manufacturing Technique	Percent Complete	Base	Finish	Color	Wear	Embossment/Label

Var9	Translation
1	Colorless
5	Light Olive/Dark Olive Green
7	Brown/Amber/Honey
11	Amethyst Tint (Solarized)

Small Finds/Architectural

Var1 Meaning	Var2 Meaning	Var3 Meaning	Var4 Meaning	Var5 Meaning	Var6 Meaning	Var7 Meaning	Var8 Meaning	Var9 Meaning	Var10 Meaning	Var11 Meaning
Maker's Mark/Brand		Material	Decoration	Characteristic	Percent Complete			Color		BackMark

Var6	Translation
2	Portion/Fragment

Var3	Translation
1	Brick
2	Asbestos
320	Glass
624	Ferrous Metal
800	Slag

Var9	Translation
11	Aqua

Var5	Translation
414	Common
591	Porus/Low Fired

Faunal

Var1 Meaning	Var2 Meaning	Var3 Meaning	Var4 Meaning	Var5 Meaning	Var6 Meaning	Var7 Meaning	Var8 Meaning	Var9 Meaning	Var10 Meaning	Var11 Meaning
Butchering Type		Illustrated Meat Cut	Age/Fusion	Element	Portion	Burning	Gnawing	Weathering	MNU Type	

Var6	Translation
2	Fragment

Var5	Translation
13	Molar
120	Longbone
700	Shell
999	Unidentified

Floral

Var1 Meaning	Var2 Meaning	Var3 Meaning	Var4 Meaning	Var5 Meaning	Var6 Meaning	Var7 Meaning	Var8 Meaning	Var9 Meaning	Var10 Meaning	Var11 Meaning
				Element	Percent Complete	Burning				

Var6	Translation
2	Fragment

Var7	Translation
10	Carbonized

Var5	Translation
50	Wood

Pattern Group and Class Translations

PatGrp	Pattern Analysis Group
1	Kitchen
2	Architecture
8	Activities
11	Faunal
12	Floral

PatCls	Pattern Analysis Class
2	Bottles
4	Tableware
7	Cookware/Cooking-Related
11	Window Glass/Caming/Etc.
12	Nails, Spikes, Tacks, etc., and Misc. Construction Hardware
16	Misc. Building Materials/Floor Covering/Roofing Materials
63	Heating Related
97	Faunal/Floral Domestic/Exploited
98	Faunal/Floral Non-domestic
99	Faunal/Floral - Other

Site	Acc	Cat	Spec	TempSite	Fld	Ph	Unit	Str	Lev	Type Stype		Translation	Cnt	Wght	Beg-End Date		V3	V4	V5	V6	V7	V9	Ptn	Note
		1	1	3662-01	105	2	1	A	1	FZA	10	Wood Sub-sample - Not Analyzed	58	29.5	-	-	-	-	50	2	10	-	12.99	-
		1	2	3662-01	105	2	1	A	1	FTO	3	White Oak Group	1	1.3	-	-	-	-	50	2	10	-	12.97	-
		1	3	3662-01	105	2	1	A	1	FTN	10	Hickory	16	13.3	-	-	-	-	50	2	10	-	12.97	-
		1	4	3662-01	105	2	1	A	1	FDC	1	Maple	3	1.8	-	-	-	-	50	2	10	-	12.98	-
		2	1	3662-01	106	2	3	A	1	FZA	10	Wood Sub-sample - Not Analyzed	270	16.9	-	-	-	-	50	2	10	-	12.99	-
		2	2	3662-01	106	2	3	A	1	FDC	1	Maple	7	1.4	-	-	-	-	50	2	10	-	12.98	-
		2	3	3662-01	106	2	3	A	1	FTO	21	American Chestnut	13	2.0	-	-	-	-	50	2	10	-	12.97	-
		16	1	3662-02	101	2	1	A	1	CRW	0	Whiteware	1	-	1820	-	-	-	78	-	3	-	1.4	-
		16	2	3662-02	101	2	1	A	1	CRW	84	Whiteware - Colored Glaze	1	-	1820	-	-	-	79	-	1	40	1.4	-
		16	3	3662-02	101	2	1	A	1	CRC	0	Creamware	3	-	1762	1820	-	-	79	-	1	-	1.4	-
		16	4	3662-02	101	2	1	A	1	CSL	72	Stoneware - Buff Salt Glazed w/ Albany Type Slip	1	-	1800	1940	-	677	357	-	1	-	1.7	-
		16	5	3662-02	101	2	1	A	1	CER	2	Redware - Clear Glaze	2	-	-	-	-	750	357	-	1	-	1.7	-
		16	6	3662-02	101	2	1	A	1	CEU	0	Buff/Yellow Bodied Slipware	1	-	1670	1795	-	809	79	-	1	-	1.4	-
		16	7	3662-02	101	2	1	A	1	GBU	4	Unidentified Bottle/Fragment-Body	6	-	-	-	-	-	-	-	-	1	1.2	-
		16	8	3662-02	101	2	1	A	1	GBU	4	Unidentified Bottle/Fragment-Body	1	-	-	-	-	-	-	-	-	5	1.2	-
		16	9	3662-02	101	2	1	A	1	GBU	4	Unidentified Bottle/Fragment-Body	2	-	-	-	-	-	-	-	-	7	1.2	-
		16	10	3662-02	101	2	1	A	1	GBU	4	Unidentified Bottle/Fragment-Body	2	-	1880	1915	-	-	-	-	-	11	1.2	-
		16	11	3662-02	101	2	1	A	1	SAB	1	Brick	2	7.3	-	-	1	-	591	2	-	-	2.16	-
		16	12	3662-02	101	2	1	A	1	SAG	11	Broad Glass	1	0.4	-	1926	320	-	-	2	-	11	2.11	-
		16	13	3662-02	101	2	1	A	1	SAT	1	Tile	1	1.9	-	-	2	-	-	2	-	-	2.16	-
		16	14	3662-02	101	2	1	A	1	SAF	2	Handwrought Nail - Rose Head	1	-	-	1820	624	-	414	2	-	-	2.12	-
		16	15	3662-02	101	2	1	A	1	ZXP	1	Oyster/Clam	2	1.8	-	-	-	-	700	2	-	-	11.97	-
		17	1	3662-02	102	2	1	A	2	CRC	0	Creamware	1	-	1762	1820	-	-	79	-	1	-	1.4	-
		17	2	3662-02	102	2	1	A	2	CRP	0	Pearlware	2	-	1775	1840	-	-	79	-	1	-	1.4	-
		17	3	3662-02	102	2	1	A	2	CRW	0	Whiteware	1	-	1820	-	-	-	79	-	1	-	1.4	-
		17	4	3662-02	102	2	1	A	2	CRW	55	Whiteware - Transfer Printed - Other Colors	1	-	1825	1915	-	2	79	-	1	30	1.4	-
		17	5	3662-02	102	2	1	A	2	CER	2	Redware - Clear Glaze	3	-	-	-	-	750	357	-	1	-	1.7	-
		17	6	3662-02	102	2	1	A	2	CER	64	Redware - Olive Glaze	2	-	-	-	-	750	357	-	1	-	1.7	-
		17	7	3662-02	102	2	1	A	2	CER	62	Redware - Brown Glaze	1	-	-	-	-	752	357	-	1	-	1.7	-
		17	8	3662-02	102	2	1	A	2	CER	0	Redware	2	-	-	-	-	759	357	-	1	-	1.7	-
		18	1	3662-02	103	2	1	B	2	CFT	0	Stoneware - White Salt Glazed	1	-	1720	1805	-	-	79	-	1	-	1.4	-
		18	2	3662-02	103	2	1	B	2	CRP	0	Pearlware	2	-	1775	1840	-	-	79	-	1	-	1.4	-
		18	3	3662-02	103	2	1	B	2	CRP	35	Pearlware - Underglaze	2	-	1775	1820	-	2	78	-	2	50	1.4	-
		18	4	3662-02	103	2	1	B	2	CRP	36	Pearlware - Underglaze Handpainted - Polychrome	1	-	1795	1825	-	2	79	-	1	48	1.4	-
		18	5	3662-02	103	2	1	B	2	CRP	52	Pearlware - Transfer Printed - Brown	1	-	1775	1840	-	2	79	-	1	62	1.4	-
		18	6	3662-02	103	2	1	B	2	CER	64	Redware - Olive Glaze	2	-	-	-	-	750	357	-	1	-	1.7	-
		18	7	3662-02	103	2	1	B	2	SAB	1	Brick	5	2.9	-	-	1	-	591	2	-	-	2.16	-

Site	Acc	Cat	Spec	TempSite	Fld	Ph	Unit	Str	Lev	Type Stype		Translation	Cnt	Wght	Beg Date	End Date	V3	V4	V5	V6	V7	V9	Ptn	Note
		18	8	3662-02	103	2	1	B	2	SAT	1	Tile	1	11.0	-	-	2	-	-	2	-	-	2.16	-
		18	9	3662-02	103	2	1	B	2	SAF	5	Machine Cut/Wrought Nail	1	-	-	-	624	-	-	2	-	-	2.12	-
		18	10	3662-02	103	2	1	B	2	SHB	5	Slag	1	3.9	-	-	800	-	-	2	-	-	8.63	-
		18	11	3662-02	103	2	1	B	2	ZXP	1	Oyster/Clam	1	2.5	-	-	-	-	700	2	-	-	11.97	-
		18	12	3662-02	103	2	1	B	2	ZMZ	5	Large Mammal	1	5.6	-	-	-	-	120	2	-	-	11.99	-
		19	1	3662-02	104	2	1	B	3	CFT	0	Stoneware - White Salt Glazed	2	-	1720	1805	-	-	78	-	2	-	1.4	-
		19	2	3662-02	104	2	1	B	3	CFT	40	Stoneware - White Salt Glazed - Handpainted	1	-	1740	1780	-	102	50	-	3	4	1.4	-
		19	3	3662-02	104	2	1	B	3	CRC	0	Creamware	10	-	1762	1820	-	-	79	-	1	-	1.4	-
		19	4	3662-02	104	2	1	B	3	CRP	0	Pearlware	3	-	1775	1840	-	-	79	-	1	-	1.4	-
		19	5	3662-02	104	2	1	B	3	CRP	36	Pearlware - Underglaze Handpainted - Polychrome	1	-	1795	1825	-	102	79	-	1	23	1.4	-
		19	6	3662-02	104	2	1	B	3	CRW	0	Whiteware	1	-	1820	-	-	-	79	-	1	-	1.4	-
		19	7	3662-02	104	2	1	B	3	CRW	55	Whiteware - Transfer Printed -	1	-	1825	1915	-	102	79	-	2	35	1.4	-
		19	8	3662-02	104	2	1	B	3	CER	64	Redware - Olive Glaze	3	-	-	-	-	750	357	-	1	-	1.7	-
		19	9	3662-02	104	2	1	B	3	CER	4	Redware - Dark Brown to Black Glaze	2	-	-	-	-	752	357	-	1	-	1.7	-
		19	10	3662-02	104	2	1	B	3	SAB	1	Brick	1	1.9	-	-	1	-	591	2	-	-	2.16	-
		19	11	3662-02	104	2	1	B	3	SAF	2	Handwrought Nail - Rose Head	1	-	-	1820	624	-	414	2	-	-	2.12	-
		19	12	3662-02	104	2	1	B	3	ZXP	1	Oyster/Clam	2	4.9	-	-	-	-	700	2	-	-	11.97	-
		19	13	3662-02	104	2	1	B	3	ZMZ	5	Large Mammal	1	3.3	-	-	-	-	120	2	-	-	11.99	-
		19	14	3662-02	104	2	1	B	3	ZMZ	5	Large Mammal	1	8.5	-	-	-	-	13	2	-	-	11.99	-
		19	15	3662-02	104	2	1	B	3	ZMZ	5	Large Mammal	2	4.3	-	-	-	-	999	2	-	-	11.99	-

APPENDIX D

Wood Charcoal Identification

XE3807, Site 36662.01, Silo Ridge Resort Community, Dutchess County, New York
Phase II Wood Charcoal Identification.

Two samples of carbonized wood collected from non-feature contexts during Phase II excavation of Site 3662.01 were submitted for taxonomic identification.

Each sample was weighed in its entirety and passed through a 2mm geologic sieve to clean the wood charcoal from small carbon particles and rootlets. The <2mm fraction was scanned for the remains of seeds (none were observed). The >2mm fraction was cleaned of debris (leaf and root fragments) and charcoal weight and fragment count was recorded. Identifications were attempted on a sub-sample of 20 randomly selected wood fragments from each sample in accordance with standard practice (Pearsall 2000). Taxonomic identification was accomplished under low magnification (10X to 40X) with the aide of standard texts (Edlin 1969; Panshin and deZeeuw 1980; Hoadley 1990). Identification was secured by comparison to modern woods from a reference collection representative of the flora of the project area. Cross sections were obtained by snapping the wood fibers to expose minute structure.

Field number 105 contained hickory, maple, and white oak wood charcoal. Maple and chestnut woods were identified from the Field number 106 sample. All taxa identified are native to the project area, with the possible exception of American chestnut, whose native range is spotty in south central New York State (Little1980). Details on sample contents are presented in the following table.

field sample n.	105		106		total	
total sample weight (grams)	47.30		25.14		72.44	
total >2mm wood charcoal weight (grams)	45.75		20.25		66.00	
total >2mm wood fragments	78		290		368	
maple (Acer)	3	1.74	7	1.38	10	3.12
chestnut (Castanea dentata)	0	0	13	1.99	13	1.99
hickory (Carya)	16	13.27	0	0	16	13.27
white oak (Quercus)	1	1.27	0	0	1	1.27
total wood identified	20	16.28	20	3.37	40	19.65

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