APPENDIX N

NYS OPRHP Clearance Letter dated April 22, 2020 and Archaeological Review Documents

NEW YORK STATE OF OPPORTUNITY. Parks, Recreation and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

ARCHAEOLOGY COMMENTS

Phase IA/IB Archaeological Survey Recommendation
Project: Proposed Industrial Park – HK Ventures
PR#: 20PR02526
Date: 4/22/2020

Your project is in an archaeologically sensitive location. Therefore, the State Historic Preservation Office/Office of Parks, Recreation and Historic Preservation (SHPO/OPRHP) recommends a Phase IA/IB archaeological survey for components of the project that will involve ground disturbance, unless substantial prior ground disturbance can be documented. A Phase IA/IB survey is designed to determine the presence or absence of archaeological sites or other cultural resources in the project's Area of Potential Effects (APE).

If you consider the entire project area to be disturbed, documentation of the disturbance will need to be reviewed by SHPO/OPRHP. Examples of disturbance include mining activities and multiple episodes of building construction and demolition. Documentation of ground disturbance typically consists of soil bore logs, photos, or previous project plans. Agricultural activity is not considered to be substantial ground disturbance.

Please note that in areas with alluvial soils or fill archaeological deposits may exist below the depth of superficial disturbances such as pavement or even deeper disturbances, depending on the thickness of the alluvium or fill. Evaluation of the possible impact of prior disturbance on archaeological sites must consider the depth of potentially culture-bearing deposits and the depth of planned disturbance by the proposed project.

Our office does not conduct archaeological surveys. A 36 CFR 61 qualified archaeologist should be retained to conduct the Phase IA/IB survey.

Please also be aware that a Section 233 permit from the New York State Education Department (SED) may be necessary before archaeological fieldwork is conducted on State-owned land. If any portion of the project includes the lands of New York State, you should contact the SED before initiating survey activities. The SED contact is Christina Rieth and she can be reached at (518) 402-5975 or christina.rieth@nysed.gov. Section 233 permits are not required for projects on private land.

If you have any questions concerning archaeology, please contact Tim Lloyd at 518-268-2186 or Timothy.Lloyd@parks.ny.gov

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

May 28, 2020

Kim Gennaro-Oancea
Vice President
PW Grosser Consulting, Inc.
630 Johnson Avenue
Suite 7
Bohemia, NY 11716

Re: DEC
Proposed Industrial Park – HK Ventures LLC
4285 Middle Country Rd, Calverton, NY 11933
20PR02526

Dear Kim Gennaro-Oancea:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (5NYCRR Part 617).

We have reviewed the Phase IA archaeological report (Survey No. 20SR00263). OPRHP concurs with the report's recommendations regarding the areas where Phase IB archaeological survey is necessary. OPRHP also concurs with the use of plow strips and shovel tests for Phase IB survey, under the condition that the distance from the edge of a plow strip to the adjacent shovel test pit transect is no more than 15 meters (50 feet).

The report states that the "methods that will be used are standard and will adhere to the New York Archaeological Council guidelines as accepted by the NYSHPO" (Page 11). The report also states that, "In all locations, the shovel tests will measure 50 by 50cm (20 by 20in) and will be excavated stratigraphically in 10cm (4in) arbitrary levels within stratum. The shovel tests will be set at 25-foot (7.5 meters [m]) intervals or half the distance between the next closest shovel test" (Page 12). The proposed shovel tests are larger, and the shovel test intervals are shorter than what is stated in the New York Archaeological Council's guidelines (NYAC 1994). Therefore, OPRHP recommends the use of shovel test pit size and interval stated in the NYAC 1994 guidelines, unless conditions warrant greater effort.

The report describes several potential interactions with Indian Nations, such as reviewing artifacts with, and providing the Phase IB archaeological survey report to Native Americans. This project was submitted to OPRHP with the NYS Department of Environmental Conservation (DEC) indicated as an agency with jurisdiction. Therefore, the DEC is responsible for Native American consultation. No one should engage in Native American consultation regarding this project without explicit permission from DEC.

If further correspondence is required regarding this project, please refer to the OPRHP Project Review (PR) number noted above. If you have any questions, I can be reached at 518-268-2186.

Sincerely,

Tim Lloyd, Ph.D., RPA
Scientist - Archaeology
timothy.lloyd@parks.ny.gov

via e-mail only

Projects (3)
Projects
Date Cre
04/16/20
10/10/20
06/30/20

Submission Status

Clo

Project 20PR02526: Proposed Industrial Park – HK Ventures LLC (6G5XKY5IXTHU)

Please accept the following information below as the consolidated response from NYS SHPO for the above referenced submission.

Review Responses

Reviewer	Review Type	Response
Tim Lloyd	Archaeology	Carol, thank you for your 5/29/2020 letter clarifying aspects of the proposed Phase IB work scope. I look forward to reading the report of the results.

Information Requests

Status	Reviewer	Review Type	Request Type	Request Entity	Request Item	Request Description
No Request Records						

Attachments

Attachmen	Reviewer	Review Type	Type	Name	Description
No Attachment Records					

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

October 06, 2020

Kim Gennaro-Oancea
Vice President
PW Grosser Consulting, Inc.
630 Johnson Avenue
Suite 7
Bohemia, NY 11716

Re: DEC
Proposed Industrial Park – HK Ventures LLC
4285 Middle Country Rd, Calverton, NY 11933
20PR02526

Dear Kim Gennaro-Oancea:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (5NYCRR Part 617).

We have read the Phase IB archaeological survey report (No. 20SR00500). Regarding locations from which Native American artifacts were recovered, the report mentions four Loci and three locations characterized as Isolated Finds. None of these seven locations are clearly identified on any report figure, hindering the ability of the reader to evaluate the results. OPRHP recommends that the report be revised such that all seven locations are clearly delineated and labeled on the figures showing the results of the archaeological survey.

If further correspondence is required regarding this project, please refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact me via email.

Sincerely,

Tim Lloyd, Ph.D., RPA
Scientist - Archaeology
timothy.lloyd@parks.ny.gov

via e-mail only

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

October 14, 2020

Kim Gennaro-Oancea
Vice President
PW Grosser Consulting, Inc.
630 Johnson Avenue
Suite 7
Bohemia, NY 11716

Re: DEC
Proposed Industrial Park – HK Ventures LLC
4285 Middle Country Rd, Calverton, NY 11933
20PR02526

Dear Kim Gennaro-Oancea:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources.

We have reviewed the revised Phase IB archaeological survey report (No. 20SR00500). Two archaeological sites were identified: (1) the Tintle Farm Site (USN 10306.001187), consisting of the remnants of a twentieth-century farmstead that also had Native American artifacts; and (2) the Industrial Park Pre-Contact Site (USN 10306.001191), consisting of a number of concentrations (Loci) of Native American artifacts.

OPRHP concurs with the report recommendation that the Tintle Farm Site does not meet the eligibility criteria of the New York State and National Registers of Historic Places (S/NRHP) and that no additional archaeological work is necessary. It is OPRHP's opinion that there is insufficient information to assess the potential eligibility of the Industrial Park Pre-Contact site for listing in the S/NRHP. If impacts to the Pre-Contact site cannot be avoided, then OPRHP recommends a Phase II archaeological investigation to assess the site for S/NRHP eligibility. OPRHP concurs with the report recommendation that no additional archaeological work is necessary at Locus 1, due to soil disturbance, and that the other Loci warrant additional investigation. If a Phase II investigation is chosen, then OPRHP recommends the submission of a Phase II work plan.

The report states that there are three locations from which Native American artifacts were recovered (Shovel Tests E13, E15 and F05), and the three locations are designated in the report as Isolated Finds. The three locations appear to have been designated as Isolated Finds because a Native American artifact was recovered from a shovel test that had no other nearby positive shovel tests. The report recommendation is that no additional archaeological work is needed at the three locations. OPRHP does not concur with that recommendation, and we do not concur with the designation of the three as Isolated Finds.

It is standard procedure when conducting a Phase I archaeological survey in New York State to excavate a total of eight radial shovel tests around an isolated positive shovel test. If no additional Native American artifacts are recovered from the eight radials, then the location can be designated as an Isolated Find. There were no radial shovel tests excavated around Shovel Tests E13 and E15, and only four radials excavated around Shovel Test F05. It is OPRHP's opinion that the Phase I archaeological testing at these three locations was not completed and that designation of the three locations as Isolated Finds is inappropriate. OPRHP recommends that the Phase I radial shovel tests at the three locations be completed. One or more of the locations may be additional concentrations of artifacts at which Phase II investigation is warranted.

The report states that the recovered artifacts will be reburied on the property. Reburial of recovered artifacts does not conform to New York State standards regarding the curation of archaeological collections. OPRHP recommends that attempts be made to curate the recovered artifacts in accordance with accepted standards.

OPRHP recommends that relevant Native American Nations be offered the opportunity to consult, prior to the initiation of a Phase II archaeological investigation. I have copied Dr. David Witt, the Indian Nations Affairs Coordinator for the NYS Department of Environmental Conservation (DEC). Dr. Witt will be responsible for conducting Native American consultation on behalf of the DEC.

If further correspondence is required regarding this project, please refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact me via email.

Sincerely,

Tim Lloyd, Ph.D., RPA
Scientist - Archaeology
timothy.lloyd@parks.ny.gov

via e-mail only

cc: C. Weed
D. Witt (DEC)
C. Vandrei (DEC)

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

November 23, 2020

Kim Gennaro-Oancea
Vice President
PW Grosser Consulting, Inc.
630 Johnson Avenue
Suite 7
Bohemia, NY 11716

Re: DEC
Proposed Industrial Park – HK Ventures LLC
4285 Middle Country Rd, Calverton, NY 11933
20PR02526

Dear Kim Gennaro-Oancea:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources.

We have reviewed the Phase II Archaeological Work Plan (the Work Plan) for the investigation of the Industrial Park Precontact site (No. 01306.001191). The Work Plan states that soil anomalies/features will be exposed in plan view, but they will not be excavated without consultation with OPRHP, NYS DEC, and the Native American Nations. It is our opinion that consultation with OPRHP when an anomaly is identified in plan view in unnecessary, and that soil anomalies should be fully investigated in accordance with standard field procedures.

In Table 4, the Work Plan presents a proposed scope of work that includes the excavation of a combined total of 21 shovel tests at the three identified loci, and the excavation of a combined total of 13 50x50-centimeter tests at the three loci. OPRHP finds the excavation of a total of 13 50x50-cenitmeter tests to be insufficient. OPRHP recommends that twice as many 50x50-centimeter tests be excavated at each locus, for a combined total of 26 50x50-centimeter excavations.

If further correspondence is required regarding this project, please refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact me via email.

Sincerely,

Tim Lloyd, Ph.D., RPA
Scientist - Archaeology
timothy.lloyd@parks.ny.gov

via e-mail only

NYSHPO CRIS Submission

Phase IA Archaeological Assessment, Proposed Industrial Park – HK Ventures LLC, 4285 Middle Country Road (NYOPRHP 20PR02526)

Calverton, Town of Riverhead, New York

Prepared for: The Pinewood Organization
Mr. David Zere, Senior Project Coordinator
399 W. John Street
Hicksville, New York 11801
516.822.4250
dzere@pinewoodorg.com

Prepared by: Carol S. Weed (CSW13108), Principal Investigator
50 Saw Mill Road, Unit 15326
Danbury, CT 06810
646.276.2460

May 2020

Project Summary

SHPO Project Review Number: 20PR02526

Involved City, State and Federal Agencies: Town of Riverhead Planning Board (SEQRA)

Phase of Survey: Phase IA Archaeological Assessment (draft Phase IB Work Plan is presented as report section 4)

Location Information
Location: Calverton
Minor Civil Division: Town of Riverhead
County: Suffolk

Survey Area (Metric & English)
Length: 2510 feet (765 meters)
Width: 510 feet (155 meters)
Depth (when appropriate): not applicable
Number of Acres Surveyed (when appropriate): Phase IA walkover = 3 judgmental n-s transects over 30.5 acres (12.4 hectares)
Number of Square Meters and Feet Excavated: 0 sq meters (0 sq feet)
Percentage of Site Excavated: not applicable

USGS 7.5 Minute Quadrangle Map: Wading River 7.5-minute quadrangle

Archaeological Survey Overview
GPR Survey Blocks: none
Plow Strips: Phase IB proposed, 4, 50 ft (15 m) wide plow strips totaling approximately 7.2 ac (2.9 heactares)
Number & Interval of Shovel Tests: Phase IB proposed 50 ft (15-m) interval shovel tests north-south in Areas 2 and 3, also tighter interval shovel tests in Area 3 at features. Total STs 231
Number & Size of Units: none
Width of Plowed Strips: none
Survey Transect Interval: judgmental walkover to assess existing conditions in wood lots and fallow, grass covered field

Results of Archaeological Survey
Number & Name of Archaeological Sites identified: 2 building remnants (Features 1 and 2) + 4 dump sites
Number & Name of Historic Sites identified: none
Number & Name of Sites Recommended for Phase II/Avoidance: n/a

Report Author(s): Carol S. Weed, M.A. (RPA #989090)

Date of Report: May 2020

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Executive Summary

Administration and Regulatory Approvals

HK Ventures, LLC (the Applicant) proposes to develop the 30.5-acre (ac) parcel located at 4285 Middle Country Road, Calverton, Town of Riverhead, Suffolk County, New York (Project, Project Site; Figures 1, 2a/b, 3a/b; Photographs 1-7). Kim Gennaro-Oancea (P.W. Grosser Consulting, Inc.) is the Environmental lead on the Project and is under contract to The Pinewood Corporation (Pinewood). Carol S. Weed, the cultural resources consultant, also is under contract to Pinewood.

An application for site plan development was filed with the Town of Riverhead Planning Board in January 2020 and the Applicant is proceeding with supplemental analyses as part of the State Environmental Quality Review Act (SEQRA) process. In support of the SEQRA action, an initial project notification was made to the New York State Office of Parks, Recreation and Historic Preservation (NYOPRHP, NYSHPO) describing the Project. By letter dated April 23, 2020, NYOPRHP responded that professional cultural resources investigations would be required.

Project Description and Direct Impact Elements

The proposed Project consists of the development of an industrial park with approximately 425,464±-square feet of new building area, on the Project Site which is zoned for said uses (Industrial C Zoning District; Figure 4). The development parcel measures about 2510 feet (765 meters) north-south by 510 ft (155 m) east-west.[1]

The Project Site is bounded on the north by Middle Country Road. On the west, the length of the Project Site abuts to a 51.8 ac parcel that was originally the site of the Boskowski Farm. Calverton Industries bought the property in the 1980s and operated a sand/gravel quarry the remnants of which are still present. The central and south ends of quarry pit now serve an alternate purpose in an operation managed by Sky Materials Corporation (Photographs 8-9). The north third of the lot has been reclaimed and is now the site of a Tractor Supply Company store that opened in 2019 (RiverheadLOCAL 2019; Photograph 10). On the east side, there is a large sod farm (Satur Farms LLC) (Photographs 11-12).

[1] Abbreviations: ac=acre, acres; cm=centimeters; CF=cubic feet; ft=foot, feet; in=inch, inches; m=meter

The boundaries to the east and west of the Project Site are not fenced. However, the south end hosts a chain link fence that separates the Project Site from the Naval Weapons Industrial Reserve Plant (Photograph 13). A one-lane paved road is immediately south of the fence and recreational bicyclists were noted on it on May 5, 2020.

The Project direct impact elements are defined as those that will remove or displace the existing soil matrix to various depths. Table 1.1 presents the direct impact elements and the extent, if known, of their horizontal and vertical impact.

Table 1.1 Project Elements and Direct Impact Detail

Type	**Element**	**Area (sq ft/m), Length (ft/m), Volume (CF)**	**Depth**
Landscaping	Landscaping	307,172 sq ft (28,536 sq m)	variable
	Pervious Pavers	50,675 sq ft (4,707 sq m)	12 in (30 cm)
Infrastructure (utilities)	Electrical transformer (via duct bank). Each building will have a transformer. Each transformer has an underground vault.	8 ft (2.4 m) wide trench for 20 in wide/20 in (51 cm) deep duct bank. Transformer vault, 10 by 10 ft (3 by 3 m).	50 in (127 cm) deep trench. Top of duct bank will be 30 in (76 cm) below ground surface. Duct bank depth will add 20 in (51 cm). Transformer vault: 5 ft (1.5 m) deep.
	Water line (main), 8-inch (20-cm) Water line (domestic), 2-inch (5-cm) Water line (sprinkler), 4-inch (10-cm)	Three lines set in same 15 ft (4.6 m) wide trench is assumed by engineer. Water line loop is ca. 5,057 ft (1,541 m) long including tie-in to service main in Middle Country Road.	54 in (137 cm) below grade to top of main. 48 in (122 cm) below grade to top of domestic and sprinkler.
	Hydrants (connect to water main)		n/a
Building Blocks (n=8)	Phase I, West Side (2 blocks)	Ea. Block 100 ft (30 m) e-w by 56 ft (17 m) divided into 10 spaces each	
	Phase I, East Side (2 blocks)	Each Block 100 ft (30 m) e-w by 93.3 ft (28 m) n-s divided into 6 spaces each. The northern block has 1 additional space at north end for cafeteria.	
	Phase II, West Side (2 blocks)	Ea. Block 100 ft (30 m) e-w by 49 ft (15 m) divided into 10 spaces each	
	Phase II, East Side (2 blocks)	Each Block 100 ft (30 m) e-w by 98 ft (29.8 m) n-s divided into 6 spaces each.	
Structures	Security fence	Posts set on 8 ft (2.4 m) centers, approximately 6,042 ft (1,841 m)	Concrete footer, 48 in (122 cm) below grade, 10 in (25 cm) is diameter.
	Dumpster pad (installed at ground level)	10 x 10 ft (3 by 3 m)	12 in (30 cm) thick divided as 6 in (15 cm) thick stone base + 6 in (15 cm) thick

Table 1.1 Project Elements and Direct Impact Detail			
Type	**Element**	**Area (sq ft/m), Length (ft/m), Volume (CF)**	**Depth**
			concrete slab
	Depressed concrete loading docks with retaining walls	15 ft (4.6 m) wide including 1 ft (0.3 m) wide retaining walls on the two long sides. Each dock is 64 ft (19.5 m) long.	50 in (127 cm) below finished floor elevation of the building wall. Each retaining wall has a 4 ft (1.2 m) deep footer.
	Dry wells/catch basins	12 in (30 cm) diameter	20 in (51 cm) deep
	Stormwater recharge basin (n=2)	#1 = 107, 980 cubic feet (3,057 cubic meters) #2 = 94,070 CF (2,663 cubic meters)	ca. 10 ft (3 m) deep
	Light poles	16 ft (4.8 m) high by 2 ft (0.6 m) diameter	Installed to a depth of 5 ft (1.5 m) below finished grade

The available USDA soils data (USDA 2020, Warner 1975) indicates that C-horizon soils will be encountered throughout the Project Site at depths between 14 and 36 in (35 and 91 cm) below ground surface. Any direct impact below those elevations is unlikely to encounter cultural artifacts though structural elements may extend into the C-horizon after originating at surface.

Report Organization

The report that follows contains four chapters, references cited, and four appendices. The principal sections are

- Executive Summary
- Chapter 2 – Literature Review and Walkover Methods and Results, Chapter 3 – Phase IA Assessment Conclusions and Recommendations
- Chapter 4 – Preliminary Phase IB Work Plan
- References Cited

The appendices include are A – Figures; B – Photographs; C=Agency Correspondence; and D – Human Burial Discovery Protocol. All tables are embedded in the narrative.

2

Literature Review and Walkover Methods and Results

Literature Review and Walkover Methods

The focus of the research was on reviewing sources pertaining to the historic environmental setting and functional uses of the Project parcel. For context purposes, the study area was defined as a 1-mile buffer around the Project parcel. The sources used during the research are listed in Table 2.1 below.

Table 2.1. Data Sources Used and Data Obtained

Research Domain	Source Location(s)	Data
Environmental Conditions	USDA SCS Web Soil Survey, Slacke Test Borings	1) Custom Report for the Project Parcel 2) Project Geotechnical Reports (Slacke Test Boring 2020a, 2020b
Environmental Conditions	USGS/ESRI Historical Topographic Collection	1) Wading River 7.5-minute quadrangle for water features on-site or adjacent
Functional Areas	New York Public Library	1) Atlas of Suffolk County (Belcher-Hyde 1906) 2) Atlas of Suffolk County (Beers 1873)
Functional Areas	New York State Library	Town of Riverhead, Suffolk County
Functional Areas	Town of Riverhead	1) Tax Assessment
Functional Areas	New York Office of Parks, Recreation and Historic Preservation (NYOPRHP) Cultural Resource Information System (CRIS)	1) Archaeological site forms, buffer area properties 2) Reports and due diligence assessments, buffer area projects

The research was conducted by Carol S. Weed with additional information supplied by Kim Gennaro-Oancea and Jaclyn Peranteau, P.E. (Key Civil Engineering).

Similarly, the walkover was conducted by Ms. Weed who completed the work on May 5, 2020. The project parcel is bounded by Middle Country Road on the north and a fence line on the south. The east and west sides are not fenced but there are distinct natural boundaries formed by changes in elevation and use. On the west side, from north to south, there is a Tractor Supply Company store and associated parking lot,

buildings related to a reclamation and recycling operation, and the abandoned remnants of the Calverton Industries quarry. On the east side, again from north to south, there are farm buildings and a sod operation.

The project parcel was divided into three area (numbered 1 thru 3). Each area was walked judgmentally and each transect was oriented north-south. Transect 1, through Area 1, was off-set from the west property line by distances ranging from about 25 feet to 75 feet. Area 2, the fallow field, was examined with Transect 2. Transect 2 was walked in a zig-zag pattern from the southeast corner of the Project Site northwest about 125 ft (38 m) into the field and then back to the vicinity of the east property line. This pattern was repeated until the south end of the Area 3 wood lot in the northeast quadrant of the parcel was reached. At that point, Transect 2 continued northward in basically a straight line through the woods, off set into the woods from a farm 2-track path between 10 and 25 feet (3 and 7.5 m). Once Middle Country road was reached, Transect 3 was started at the west side of a large depression. Transect 3 continued southward between the depression and the east side of a building remnant (Feature 1). The transect continued to the south end of Area 3. Photographs were taken of existing conditions along all three transects.

Environmental and Historic Contexts

Environmental Context

This section of Long Island has been subjected to human occupation since the end of the Pleistocene. Glacier cation throughout the Pleistocene recontoured the landscape and deposited a wide variety of rock in their retreating wakes. The glaciers also left ice-formed kettle ponds/depressions which ultimately supported important ecotone communities that were exploited by both humans and other species (Bernstein, Warner et al. 1975).

Geology and Soils

Topographically, the Project Site lies on an outwash plain (Warner et al. 1975). The immediate parcel area slopeS generally southward (see Figures 2a/b) with major deviations in the northeast corner of the parcel and along the west side in the woods to the west of a large earthen berm (see Photograph 3). The origin of the landform deviation in the northeast corner is unconfirmed (see Figure 5-1957 USGS); however, it appears to be either a closed erosional feature like a kettle or an abandoned quarry (see Photographs 6-7). On the west side of the Project Site, Area 1 appears to have been stripped and the soils were moved eastward to create a large berm. Additional stripping evidence was also observed, in the form of a smaller berm (see Photograph 5), in the northeast quadrant (Area 3). The dominant ground cover on the west side is now pine though deciduous trees are present. This cover contrasts sharply to the tree cover in the northeast quadrant of the parcel. Here, the tree cover is dominated by deciduous trees.

USDA (1975, 2020) classifies the soils of the project parcel as Plymouth or Riverhead soils with varying percentages of gravels (Figure 6). Of the six USDA soil units in the parcel, four are either soils of statewide importance or prime farmland. Table 2.1 summarizes the soil characteristics presented in USDA 2020. Data from USDA (Warner et al. 1975) augments the 2020 information as soil color and percent of gravel data are absent in the 2020 custom report. In general, H1 is equivalent to an A-horizon, H2 equates with a B-horizon, and H3 is a typical C-horizon.

Geotechnical testing was conducted on-site in 2020 (Slacke 2020a, 2020b) and their results in the upper 64 inches (1.6 m) are pertinent. Those results have been added to Table 2.1 as well and they are noted by Boring Test number. The USDA soil class is based on the boring plot presented in Slacke (2020b). Slacke's geotechnical bores were confined to the north half of the Project Site and their general locations are plotted on Figure 6. Boring Test #2 plots at the intersection between USDA soil units PlA and PmB3.

Table 2.1. Project Area Soils (USDA 2020, Slacke 2020a/b, Warner et al. 1975)

Name	Soil Horizon Depth (in; cm)	Color	Texture, Inclusions	Slope %	Drainage	Landform/Farmland Classification
PlA, Plymouth loamy sand, 0-3% slopes	H1: 0-4 in H2: 4-27 in H3: 27-60 in (60 in = 5 ft)	H1: 10YR3/2 dk gr-brn H2: 10YR5/4 yel-brn grade to 10YR5/6 rd-brn grade to 7.5YR5/4 strong brn H3: 10yr5/6 yel-brn	H1and H2: loamy sand, 5% fine gravel grade to 10% gravel in H2 H3: gravelly coarse sand, 30% rounded pebbles <1inch	0-3	Excessively drained	Moraines, outwash plains/farmland of statewide importance
Boring Test #1	In 2 ft increments to 40 ft	0-4 ft: Dark brn to light brn 4-6 ft:	0-4 ft: Fine silty sand to médium sand; 4-6 ft: fine to coarse sand w/ increasing gravel and stone deeper			
PlB, Plymouth loamy sand, 3-8% slopes	H1: 0-4 in H2: 4-27 in H3: 27-60 in	Same as above	H1 and H2: loamy sand H3: gravelly coarse sand	3-8	Excessively drained	Moraines, outwash plains/farmland of statewide importance
Boring Test #3	In 2 ft increments to 40 ft	0-4 ft: dk brn to med and light brn; 4-6 ft: light brn and rust brn	0-4 ft: fine silty sand and fine to coarse sand 4-6 ft: fine to coarse sand w/ fine to coarse gravel and some clay			
Boring Test #4	In 2 ft increments to 40 ft	0-4 ft: dk brn to brn and rust brn 4-6 ft: brn and rust brn	0-4 ft: fine to coarse sand with fine to small gravel 4-6 ft: sand w/ fine to small gravel			
PmB3, Plymouth gravelley loamy sand, 3-8% slopes, eroded	H1: 0-4 in H2: 4-14 in H3: 14-60 in	Same as above	H1 & H2: gravelly loamy sand; H3: gravelly coarse sand	3-8	Excessively drained	Moraines, outwash plains/not prime farmland

Table 2.1. Project Area Soils (USDA 2020, Slacke 2020a/b, Warner et al. 1975)						
Name	**Soil Horizon Depth (in; cm)**	**Color**	**Texture, Inclusions**	**Slope %**	**Drainage**	**Landform/Farmland Classification**
PmC3, Plymouth gravelley loamy sand, 8-15% slopes, eroded	H1: 0-4 in H2: 4-14 in H3: 14-60 in	Same as above	H1 & H2: gravelly loamy sand; H3: gravelly coarse sand	8-15	Excessively drained	Moraines, outwash plains/not prime farmland
Boring Test #2	In 2 ft increments to 40 ft	Same as Boring Test #1	Same as Boring Test #1			
RdA, Riverhead sandy loam, 0-3% slopes	H1: 0-12 in H2: 12-27 in H3: 27-35 in H4: 36-64 in	H1: 10YR4/3 brn-dk brn H2: 7.5YR 5/6 strong brn H3: 10YR5/4 yel-brn H4: 7.5YR4/4 brn to dk brn grade to 10YR7/4 very pale brn	H1 & H2: sandy loam, <5 to 10% gravel H3: gravelly loamy sand, 10% gravel H4: stratified coarse sand to gravelly sand, greater than 10% gravel and in layers	0-3	Well drained	Moraines, outwash plains/all areas are prime farmland
RdB, Riverhead sandy loam, 3-8% slopes	H1: 0-12 in H2: 12-27 in H3: 27-35 in H4: 36-64 in	Same as above	Same as above	3 - 8	Well drained	Moraines, outwash plains/all areas of prime farmland

Key: Shade: dk = dark
Color: brn = brown; gr = gray; rd = reddish; yel=yellowish

Hydrology

Archaeologically, potable water sources are commonly identified as freshwater cold springs, permanent or seasonal streams, or non-vegetated freshwater ponds and lakes located within 250 ft (76 m) of a potential habitation (camp, village) location. The only possible surface potable water source documented on the Project Site is a probable kettle depression in Area 3. Kettle ponds and active secondary streams are also present to the west and east of the Project Site within the one-mile study buffer.

Historic Context and Walkover Results

Prior Cultural Resources Investigations

No previous archaeological investigations have been completed based on the NYOPRHP CRIS records. A review of Parker's 1920 Suffolk County listing finds only one site called out in the Calverton vicinity (Parker #55) and it is not proximate to the Project Site. A large building survey conducted by Freeland et al. in 2018 included the Project Site within its study area but no standing buildings were on the property. Freeland et al. did record buildings and structures to either side of side of the Project Site. On the west side, a one-story, corrugated metal shed was recorded, and it was assigned USN number 10306.001169. Earlier, the same site, Ellen Cole (1977) had recorded a house, barn, and windmill base on the then-extant Boskowski

Farm (USN 10306.000425) which was the precursor function to Calverton Industries. These two properties were demolished, and the location taken over by Calverton Industries, followed by Sky Materials Corporation and Tractor Supply Company. On the east side of the Project Site, one freight structure is located on the Satur Farm LLC property which was also recorded by Freeland et al. (2018) and is still present today.

Within the one-mile study buffer, NYOPRHP lists six projects with cultural resources components and seven archaeological surveys . These and other projects have resulted in the identification of six archaeological sites between 407 ft (124 m) and 4,938 ft (1,505 m) from the west side of the project parcel.

The six projects listed in CRIS and the associated NYOPRHP project numbers include: Meyer's Plant and Project, LLC (16PR07360); EPCAL Trail (17PR00723); Cal 705 LLC - Façade Alteration and Additional Parking (17PR04774); Calverton Solar Energy Center Project (18PR02406); NEPR-Calverton (18PR06148); and the current Riverhead Solar 2/36MW/290 Acres (18PR06033) project. A seventh project, an archaeological walkover sensitivity assessment, was completed for sPower Calverton (NYOPRHP 16PR06504) and that due diligence report is available upon request from CRIS. Four additional surveys included both walkover assessments and excavations of various types. The projects were conducted at the Naval Weapons Industrial Reserve Plant in 2002 (Projects 02SR52704 and 02SR52879) and in 2019 at the Calverton Solar Energy Center (Project 19SR00143) and the Calverton Solar Energy Center Western Parcel (19SR00683). Finally, in 1990 and again in 1998, Robert Miller completed archaeological survey of the Calverton Industries Mine parcel immediately adjacent to the proposed Project Site.

As noted earlier, the various projects have resulted in the identification of six archaeological sites. These sites are designated with Unique Site Numbers (USNs) 10306.000776, 10306.000777, 10306.000779, 10306.000782, 10306.000798, and 10306.000825. All but one of these were found during the surveys of the Naval Weapons Industrial Reserve Plant. The other site, USN 10306.000798, was found during surveys of parts of the now highly disturbed and repurposed Calverton Industries Mine. Sites 10306.000776 and 10306.000798 both had projectile points that are diagnostic of the Middle to Late Woodland Periods (1800 to 500 years before present [BP]), the Terminal Archaic Period (3700 to 3000 BP), and the Late to Terminal Archaic Periods (5000 to 3000 BP). Second, the associated chipped stone assemblages indicated that the indigenous peoples were not only actively utilizing readily available raw materials but that they were trading with others for materials of higher quality.

Historic Era Maps and Literature Review

The historic map and literature review focused on Project Site functions. The Project Site topographic and boundary survey mapped various contour-based exceptions to the gradual and relatively broad south-trending contours on the parcel. It was unclear what these features were though the survey plan did indicate the presence of two concrete block walls. The walkover found the archaeological remains of the two buildings in Area 3 and these were designated Features 1 and 2. Based on building materials, and map and aerial photograph data, these buildings date after 1873 and likely between 1901 and 1974 (Figurse 7 and 8). The 1966 aerial photograph (Figure 8) shows the two buildings in some detail. Three dump sites (2, 3, and 4) in Area 3 also contained significant amounts of building debris and material cultural. The features, dumps, push piles and berms observed on the walkover are discussed below.

Walkover Observations

The walkover was conducted in clear weather on May 5, 2020. Evidence of surface disturbance in the form of push piles, dumps, and building/structures were encountered in Areas 1 and 2, the two wooded lots.

Area 1's appears to have been stripped based on surface conditions and also the depiction of the area on a 1974 aerial photograph (Figure 9) where is shows distinctly white. The east boundary is the large, man-made berm that is shown on Figure 2a and 2b. Its purpose is unknown though it may have resulted from the stripping documented in the 1974 aerial photograph. No intentional dumping was noted in the berm, but one small dump, designated Dump 1, was observed along the west boundary line (Figure 10). It is unknown if this dump was related to a possible feature noted on the 1966 aerial photograph as the dump is north of the 1966 feature. Dump 1 is the smallest of four earth/artifact dumps observed in the field. As shown in Photograph 14, the pile contents were very fragmented. Inclusions included both brick and glass. The dump was less than 2 ft (0.6 m) high and it is located about 10 ft (3 m) east of the west property line. The artifact scatter measured about 5 by 5 ft (1.5 by 1.5 m).

Area 2, the fallow field, creates visual division between the two woods lots and allow an unimpeded view from the south boundary northward to Middle Country Road. Animals burrows were noted throughout the field as were various survey markers and two of the four geotechnical test locations. Although rock in sizes ranging from gravel up to about 5-in (13 cm) cobbles were noted, no larger rock was observed. Occasional pieces of broken glass and stray brick fragments also were noted. No building remnants were noted.

Area 3, the northeast quadrant wood lot, contained Dumps 2 (Photograph 15), 3 (Photograph 16), and 4 (Photograph 17), a large push pile (Photograph 18), and two building remnants (Features 1 and 2). The dumps, push pile, and Feature 1 were located on Transect 2 between about 10 and 25 ft (3 and 7.5 m) east of the area's west woods line. Feature 2, encountered on Transect 3, is located about 50 ft (15 m) east of Feature 1 on the west edge of the Area's large, possible kettle depression.

Dump 2 is located about 12 ft (3.5 m) off the southwest side of Dump 3. Dump 2 consisted of lumber and other building fragments spread over a 15 by 6 ft (4.5 by 1.8 m) area. Dump 3 consisted of earth and discarded household debris including a toilet bowl, stoneware crock, truck tire, and a television cabinet (without innards) among other items (Figure 3a). Dump 3 measures about 60 ft by 19 ft (18.5 by 6 m) and it stands about 8 ft (2.4 m) high. Dump 4 is north of Dump 3 and it consisted of whole and fragmentary brick and concrete items. Dump 4 is about 10 ft (3 m) in diameter.

Feature 1 is the remnants of a molded, concrete block building that measures ca. 30 ft n-s by 20 ft e-w (9 by 6 m) with two standing walls and two collapsed walls (Photographs 19-22). Gavin (2001) and Hall (2009) state that molded concrete blocks are marketed at the beginning in the first decade of the 1900s and they continue in production today. As noted earlier, the buildings appear to have been abandoned by the 1970s. Feature 1 had electrical service and fragmented lead water pipe was noted on the north side of the north wall. No possible roof elements were noted, and depth of the foundation could not be determined.

Feature 2 is about 50 ft (15 m) east of Feature 1 and it is situated off the west side of the possible kettle depression (Photographs 23-25). The only remnants of the features are the cellar hole and concrete block line segments that seem to mark the west and east sides of the structure. The cellar hole measures at least 20 by 20 feet (6 by 6 m).

3

Phase IA Assessment Conclusions and Recommendations

On the basis of Phase IA research and walkover, the Project Site retains archaeological sensitivity in Areas 2 and 3. Area 1, between the west boundary and long earthen berm, appears to have been surface stripped. It is possible that the stripped matrix was used to create the earthen berm. Because of the amount of prior disturbance, no further work is recommended in this area.

Area 2 is the fallow field. According to the current landowners, the fallow field was last used for alfalfa production. Its prior agricultural uses are unknown, but this section of Long Island specialized in truck vegetables in addition to grass crops like alfalfa. The WSS soils data and that observed during the Slacke geotechnical work suggests that the solum in the field are typical of that for Plymouth loamy sand and the Riverhead sandy loams. These two soil classes typically have a relatively thin A-horizon overlaying a thicker B-horizon. Both Plymouth and Riverhead soils have farmland importance. Although no potable streams are shown on the historic maps, ponds were present in the historic period and one of these may be present in the northeast quadrant of the project. If the large depression in that quadrant is a natural feature, it would have served the Indian Nations in the same way as the much larger Swan Pond and other kettle features on Long Island, creating a source of fresh water and an ecotone. It is recommended that Area 2 be surveyed using plow strips alternating with and shovel test transects. The two zones will be spaced at 50 ft (15 m) intervals across the width of Area 2.

Area 3 also has been disturbed in the historic period. There are dumps and push piles present in addition to Features 1 and 2, both of which are building remnants. Feature 1 was present as late as 1957 and Feature 2 was still present in 1967. Both had basement walls constructed of concrete block; Feature 1 retains two standing above-ground walls of the same material. Mold-formed concrete blocks are used in building construction after ca. 1901. Based on the currently available information, Features 1 and 2, then, may date between 1901 and 1967. The presence of the depression feature makes this section of the Project Site attractive to the Indian Nations and Historic-era Euro-Americans. It is recommended that systematic shovel testing be completed in the 6 ac wood lot at 50-ft (15 m) intervals except in the kettle depression which measures ca. 178 ft n-s by 91 ft e-w (54 by 28 m). Judgemental shovel tests will be placed in two opposing corners of each feature.

4

Preliminary Phase IB Work Plan

The proposed Phase IB methods to investigate Areas 1 through 3 are described below. This plan is preliminary and, if necessary, it will be modified based on NYSHPO comments. The Phase IB will be completed under the supervision of Carol S. Weed working in conjunction with Matthew Spigelman (ACME Heritage Consultants) and ACME's crew. It is anticipated that the fieldwork will begin either immediately upon NYOPRHP acceptance of the Phase IB work plan and the lifting of New York PAUSE restrictions on Long Island or after plan acceptance during the pre-construction phase of the project.

Proposed Phase IB Methods

Overall, the field, laboratory, and reporting methods that will be used are standard and will adhere to the New York Archaeological Council guidelines as accepted by the NYSHPO. Methods specific to this proposed work are discussed below.

Preliminary Health and Safety Plan

A final health and safety plan will be prepared prior to fieldwork based on public health conditions at that time. The remaining Phase IB archaeological investigations will be conducted when the following guidelines can be met:

1) No fieldwork will be conducted by any crew member if their home or the project area are under "stay-in" orders issued by a local, state, or federal entity
2) There will be a port-a-potty on site so that team members do not have to leave the site to use bathroom facilities
3) All team members will wear face masks and practice social distancing if these orders are still in effect when the fieldwork is conducted
4) Each team member will use their own set of field equipment. The jointly used screens and shovels will be temporarily tagged with personnel names and be stored in the person's car each night while the fieldwork is underway
5) No excavation will be conducted in rain, snow, or other adverse weather conditions
6) In the event of an on-site medical emergency, the Town of Riverhead emergency services will be notified that an accident has occurred, and we will request transportation to the nearest hospital

7) At the time of the accident, the project manager, The Pinewood Organization, will be notified and an accident report will be filed that day with their office.

Field Methods

Two field methods will be used during the Phase IB investigations: plowing and shovel test excavation. It is assumed that the entire parcel will be disturbed by the proposed activities. The direct impact elements were presented on Table 1.1.

No archaeological investigations will be conducted on the slopes or in the base of the possible kettle feature nor will the large berm that marks the east side of Area 1 be trenched. No shovel testing will be completed along proposed fence lines that will mark the exterior boundaries of the Project Site.

The plow strips will be walked north-south in one-meter wide intervals. Any cultural artifact will be flagged, and the flagged artifact locations will be recorded using GPS. Temporally diagnostic artifacts will be collected. All other artifacts will be counted and recorded by class/type.

In all locations, the shovel tests will measure 50 by 50cm (20 by 20in) and will be excavated stratigraphically in 10cm (4in) arbitrary levels within a stratum. The shovel tests will be set at 25-foot (ft; 7.5 meters [m] intervals or half the distance between the next closest shovel test.

All matrix recovered from shovel tests will be screened through ¼-in hardware mesh. Material cultural recovered during the screening will be field bagged as follows. All Indian Nations material culture will be bagged separately from Euro-American material culture. The former will be reviewed with the First Nation representatives and, with permission, subject to preparation by washing or other cleaning and stabilization prior to analysis. All Indian Nations material cultural will be returned to the First Nation representative, if requested. The Euro-American artifacts will be subject to washing or other cleaning and stabilization methods as appropriate. These artifacts, except for a collection that will be used for teaching purposes, will be reburied on the Farm.

If human bone is found, all excavation in the area of the find will be halted and the Human Remains Discovery Protocol will be implemented.

All shovel tests will be backfilled after recordation is completed unless cultural features have been identified. If features have been identified, then next steps will be determined in consultation with NYOPRHP.

Information Recordation

Standardized forms will be used to record field data. These include shovel test summary forms, bag and special sample logs (if needed), and photograph logs. Most of the descriptive data recorded in the field will be recorded on paper forms. In order to ensure that these data are available in electronic format as soon as possible, data entry will be completed during and immediately following fieldwork.

Where appropriate, digitized data also will be geo-rectified and incorporated on to the larger Project plan. The purpose of this is to build the archaeological sensitivity map as quickly as possible so that the results can be discussed meaningfully with the Applicant and NYOPRHP.

The shovel tests will be excavated to a minimum depth of 50cm/20in or confirmed C-horizon soil (whichever comes first). The strata will be described using standard soils terminology and Munsell color designations. On the water lines and any shovel test transect consisting of more than three shovel tests, the north wall of each shovel test also will be drawn so that a fence diagram can be prepared for each location crossed. Any features identified in plan or profile will be documented but not excavated.

Mapping and Provenience Control

The boundaries of the three Areas will be geo-referenced as will the corners of plow strip. Datums will be set in the southwest corner of each shovel test.

Artifact and Sample Recovery and Recordation

All artifacts recovered will be recorded in the project's Field Sample (FS) log, assigned separate FS numbers by provenience: by block, coordinate, shovel test, and stratigraphic layer. In the unlikely event that piece-plotted artifacts are taken, these also will be listed separately within the FS log.

Specialized samples (flotation, C^{14}, or soil samples) will be taken only from Euro-American contexts, if at all. These samples will be entered into the project's Special Sample (SS) log. Assigned FS and SS numbers will be used to track materials throughout the processing, analysis, and curation process.

Laboratory Analyses

The processing, cataloging, and data entry tasks associated with recovered artifacts and samples and the analysis of all records, maps, photographs, and cultural materials for the Project will be undertaken by Phase IB project members as detail in the subsequent Personnel section.

All artifacts will be washed (unless detrimental to the item or the item is being submitted for specialized analyses). The artifacts will be sorted by into two gross classes (Native American and Historic) and then into functional classes (Native American chipped stone, ground and pecked stone, ceramics, other; Historic glass, ceramics, metal, plastic, other; Organic floral, animal bone, and human bone). All temporally diagnostic artifacts will be described and if appropriate diagnostic elements will be photographed.

Phase IA/IB Report

The comprehensive Phase I report will present the Phase IA/IB results to date and the recommendations for further work if warranted. If further work is recommended, then the report will present a draft research design and work plan for subsequent investigations. The report with be compiled by Carol S. Weed and jointly authored by Weed and subcontracted team.

Post-Phase IB Investigations

If it is determined by NYOPRHP that archaeological sites eligible for listing on the National or State Registers of Historic Places are present, then additional fieldwork or research may be needed. Any post-Phase IB work will be directed by a Phase II/III Research Design which supports the Determination of Eligibility. The Phase II/III Research Design will provide detail based on the results of the Phase I investigations.

The Phase II/III Research Design would consist of the Phase II/III Field and Laboratory Work Plan, Curation Plan including re-burial options, Unanticipated Finds Protocol, and Phase Schedule. The Schedule will have built into it time for the development and review of the Memorandum of Agreement.

Agency Coordination and Work Schedule

The timeline for the Phase IB investigation is being driven by the current pandemic restrictions. Assuming appropriate conditions, shovel skimming and testing will be conducted starting one work week after current non-essential service locations restrictions begin to be lifted. As of this writing, restrictions will begin to be eased in Connecticut on May 20. The restrictions in New York are being eased by region and will begin May 15th in upstate New York. We are currently projecting completion of the draft Phase IB report 20 working days from the cessation of fieldwork.

EuroAmerican and, with permission, Indian Nations material culture will be processed and analyzed while fieldwork is underway. This effort will continue after fieldwork as well. The draft report will be submitted to the NYSHPO, District, SED, Indian Nations, and the SEQR consultant.

Project Personnel

The Phase IB investigations are being completed by Carol S. Weed (MA, RPA) and Secretary of the Interior-qualified supervisory and crew personnel. The plow operator is being selected in consultation with Dr. Mark Bridges, Director, of the Long Island Horticultural Research and Extension Center . Artifact analyses will be conducted by Ms. Weed and members of the subconsultant team. Others who specialize in building materials may be needed. The full list of supervisory and laboratory personnel will be forwarded to NYOPRHP two weeks prior to beginning field work.

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Appendix A – Figures

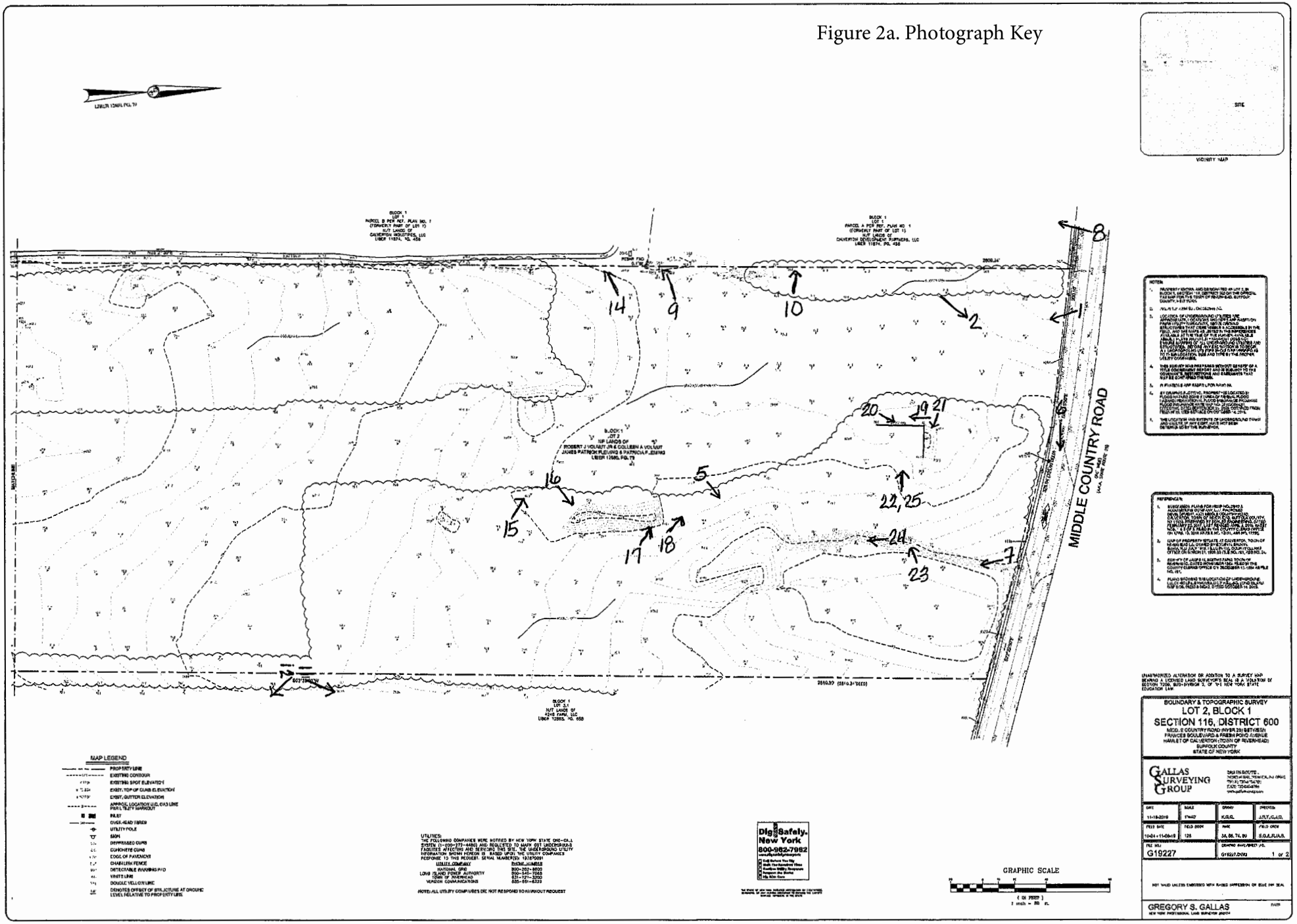
Source: ESRI NYOPRHP CRIS

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

Project Location

Figure **1**

Figure 2a. Photograph Key



NOTES:

REFERENCES:

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW

BOUNDARY & TOPOGRAPHIC SURVEY
LOT 2, BLOCK 1
SECTION 116, DISTRICT 600
NEC. E COUNTRY ROAD (NYSR 25) BETWEEN FRANCES BOULEVARD & FRESH POND AVENUE
HAMLET OF CALVERTON (TOWN OF RIVERHEAD)
SUFFOLK COUNTY
STATE OF NEW YORK

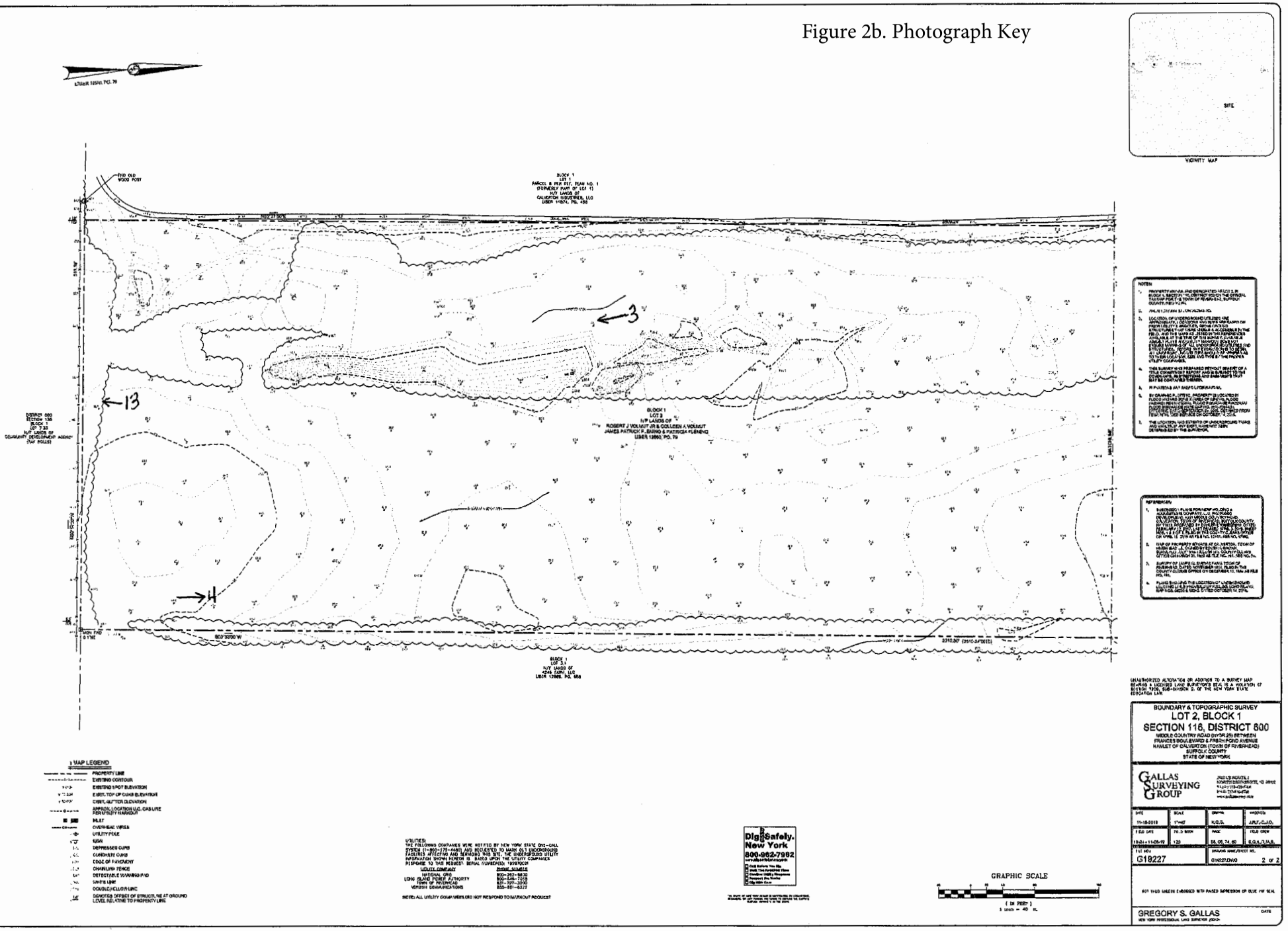
GALLAS SURVEYING GROUP

DATE	SCALE	DRAWN	PROTRACTED
11-16-2019	1"=40'	K.G.G.	J.R.T./C.J.D.
FIELD DATE	FIELD BOOK	PARTY	FIELD CREW
10/24 + 11/06/19	126	JA, DS, TH, BG	S.G.J.R.J.A.S.
FILE NO.: G19227	DRAWING NUMBER(S): G19227.DWG		1 OF 2

NOT VALID UNLESS EMBOSSED WITH RAISED IMPRESSION OF BLUE INK SEAL

GREGORY S. GALLAS
NEW YORK PROFESSIONAL LAND SURVEYOR #050710
DATE

Figure 2b. Photograph Key



MAP LEGEND

	PROPERTY LINE
	EXISTING CONTOUR
	EXISTING SPOT ELEVATION
	EXIST. TOP OF CURB ELEVATION
	EXIST. GUTTER ELEVATION
	APPROX. LOCATION U.G. GAS LINE PER UTILITY MARKOUT
	INLET
	OVERHEAD WIRES
	UTILITY POLE
	SIGN
	DEPRESSED CURB
	CONCRETE CURB
	EDGE OF PAVEMENT
	CHAIN LINK FENCE
	DETECTABLE WARNING PAD
	WHITE LINE
	DOUBLE YELLOW LINE
	DENOTES OFFSET OF STRUCT. TIE AT GROUND LEVEL RELATIVE TO PROPERTY LINE

UTILITIES:
THE FOLLOWING COMPANIES WERE NOTIFIED BY NEW YORK STATE ONE-CALL SYSTEM (1-800-272-4480) AND REQUESTED TO MARK OUT UNDERGROUND FACILITIES AFFECTING AND SERVICING THIS SITE. THE UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS BASED UPON THE UTILITY COMPANIES RESPONSE TO THIS REQUEST. SERIAL NUMBER(S): 190870091

UTILITY COMPANY	PHONE NUMBER
NATIONAL GRID	800-252-9630
LONG ISLAND POWER AUTHORITY	800-490-7315
TOWN OF RIVERHEAD	631-727-3200
VERIZON COMMUNICATIONS	800-991-6372

NOTE: ALL UTILITY COMPANIES DID NOT RESPOND TO MARKOUT REQUEST

Dig Safely. New York
800-962-7962
www.digsafelynewyork.com

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.

BOUNDARY & TOPOGRAPHIC SURVEY
LOT 2, BLOCK 1
SECTION 116, DISTRICT 600
MIDDLE COUNTRY ROAD (NYS RT.25) BETWEEN
FRANCES BOULEVARD & FRENCH POND AVENUE
HAMLET OF CALVERTON (TOWN OF RIVERHEAD)
SUFFOLK COUNTY
STATE OF NEW YORK

GALLAS SURVEYING GROUP

DATE	SCALE	DRAWN	CHECKED
11-19-2019	1"=40'	K.O.S.	J.R.F./G.S.G.
F.B.B. DATE	F.B.B. BOOK	PAGE	FIELD CREW
10-24 - 11-05-19	120	58, 65, 74, 80	E.G./L.T./A.S.

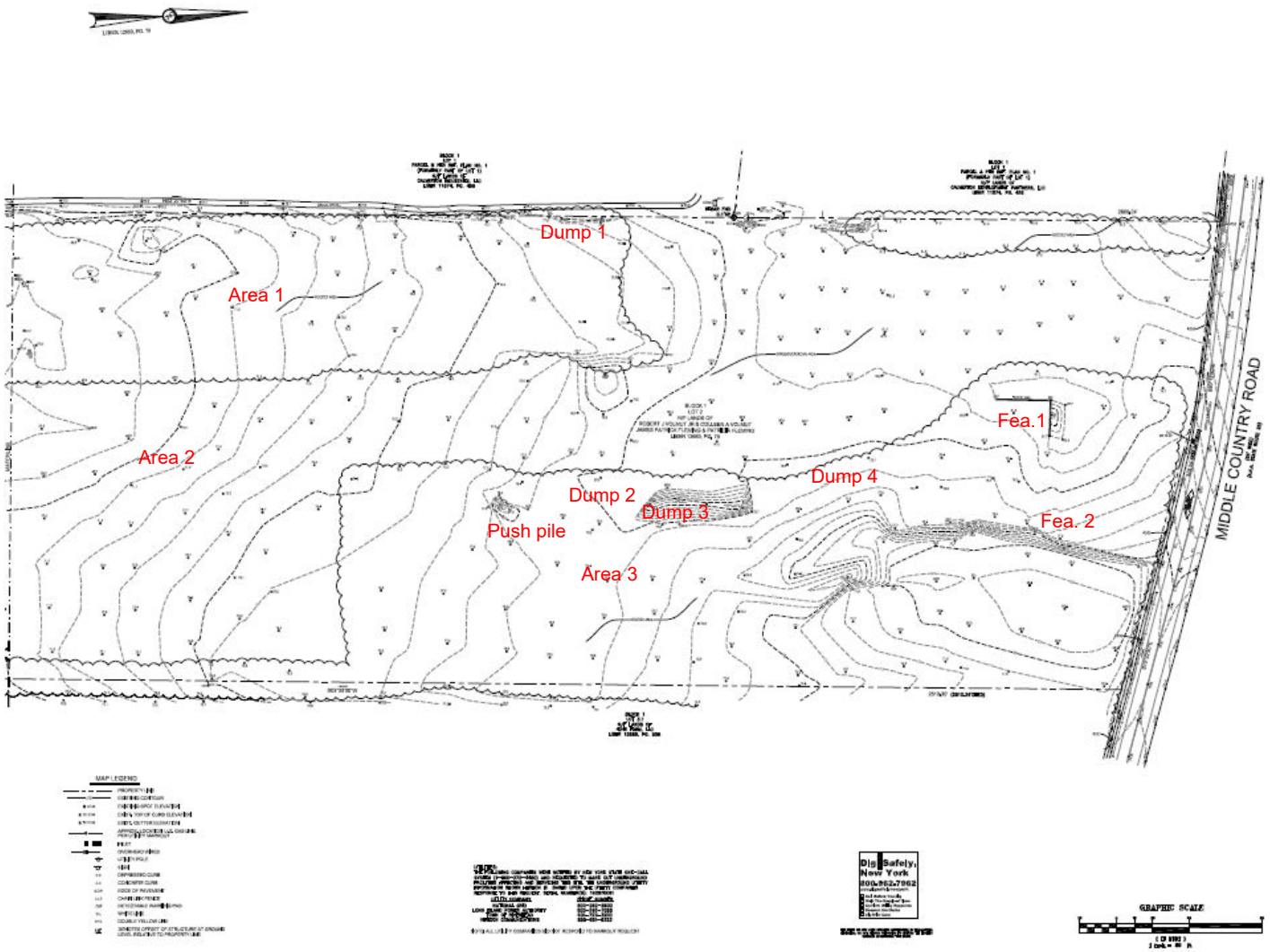
FILE NO#
G19227

DRAWING NAME/SHEET NO.
G19227DWG 2 of 2

NOT VALID UNLESS EMBOSSED WITH RAISED IMPRESSION OR BLUE INK SEAL

GREGORY S. GALLAS
NEW YORK PROFESSIONAL LAND SURVEYOR #050...

DATE

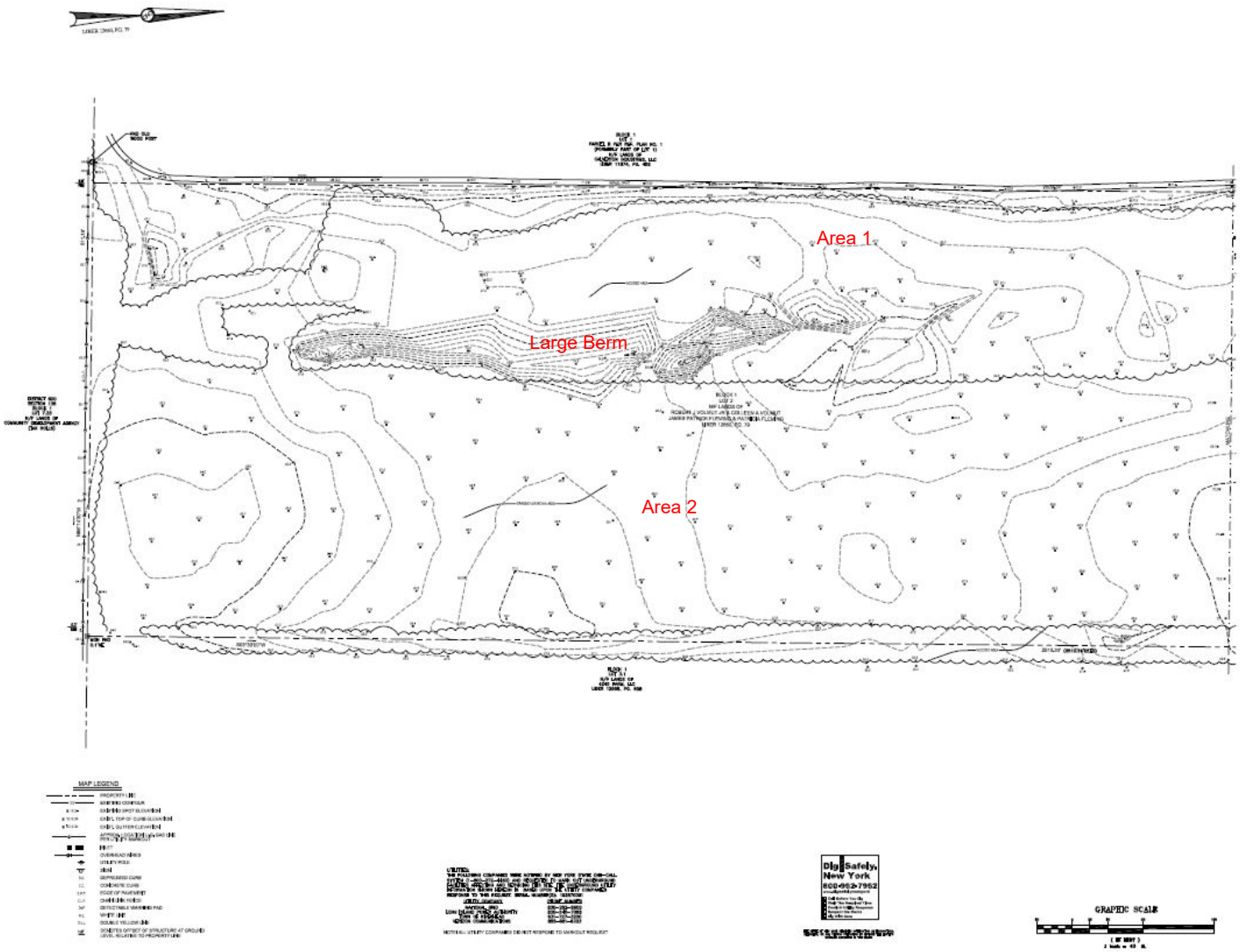


Source: Gallas Surveying Group

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

Project Boundary and Topographic Survey with Notations

Figure **3a**

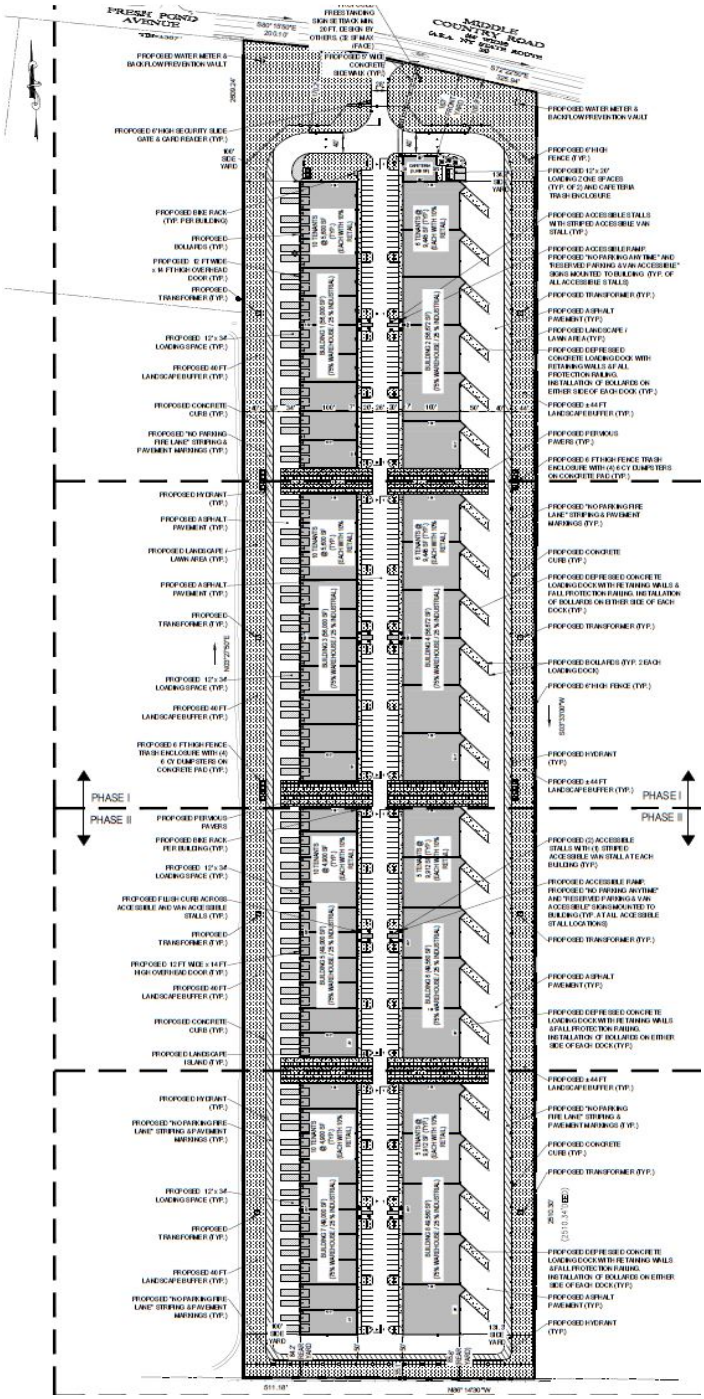


Source: Gallas Surveying Group

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

Project Boundary and Topographic Survey with Notations

Figure **3b**

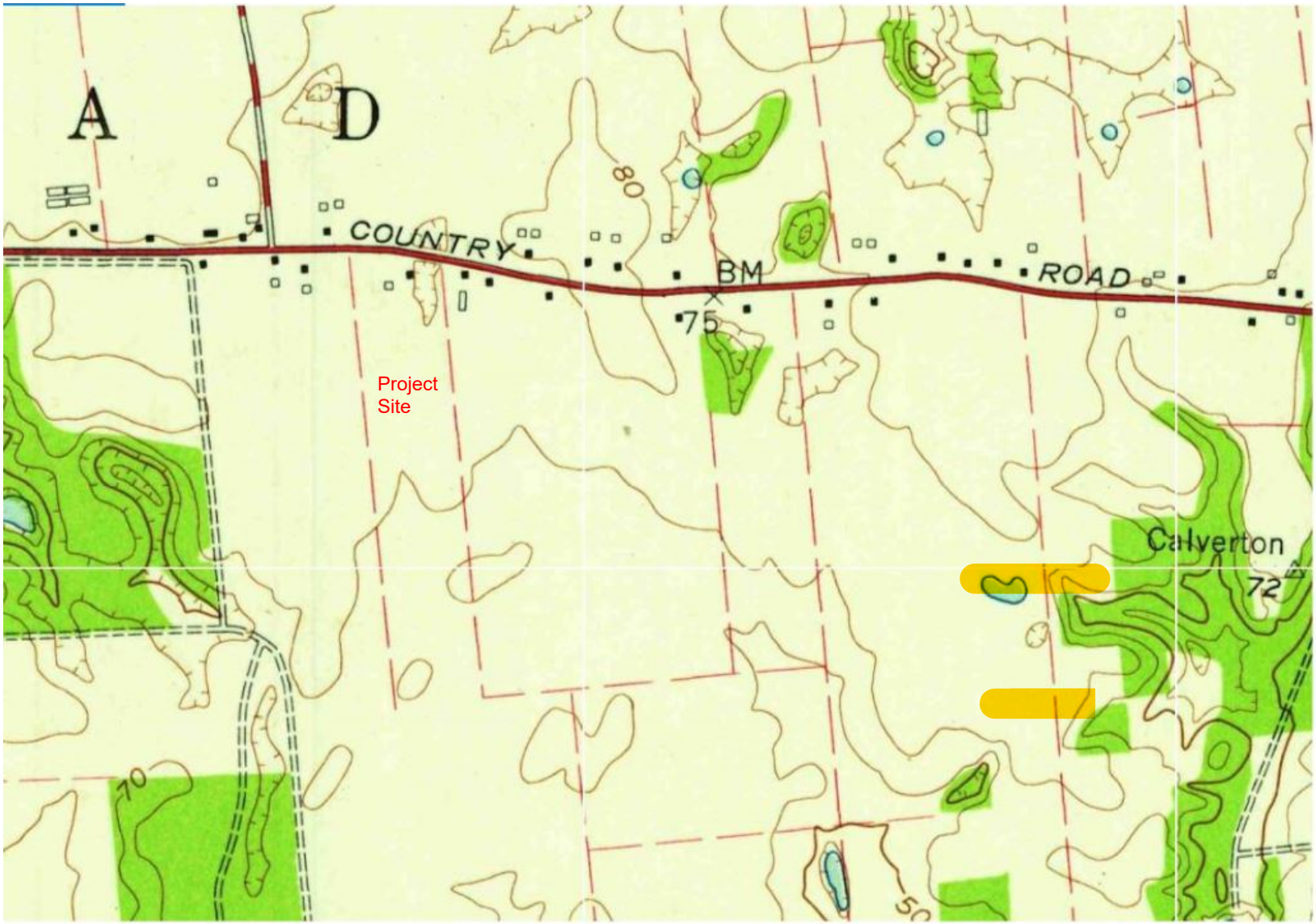


Source: Key Civil Engineering, Drawing No. C-3

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

Project Overall Site Plan (Sheet C-3)

Figure **4**



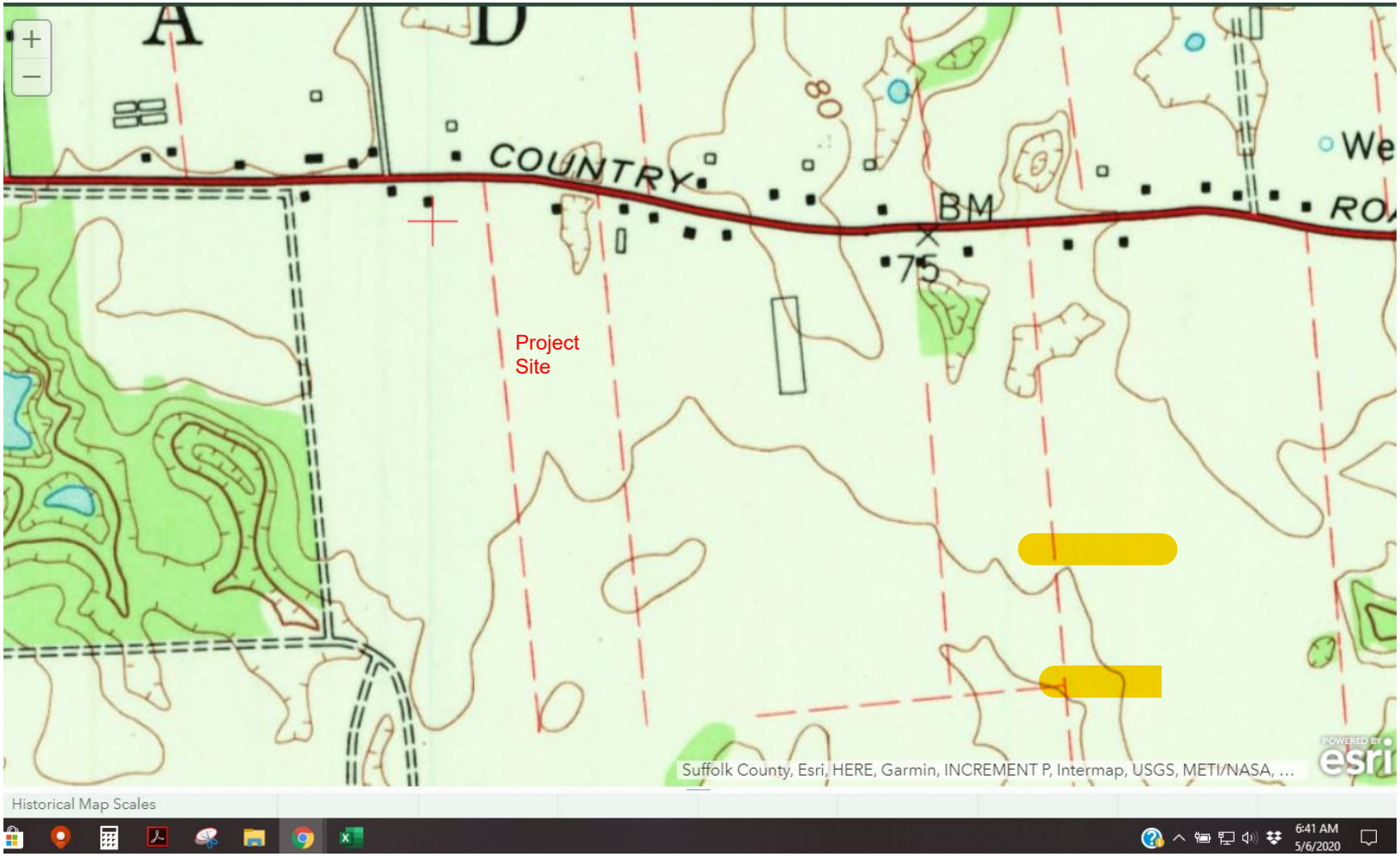
Source: USGS/ESRI Historical Topographic Map Explorer

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

1957 USGS Wading River 7.5-minute Quadrangle with Project Site

Figure **5**

Figure 6
Custom Soil Resource Report
Soil Map
with notations added



Source: USGS/ESRI Historical Topographic Map Explorer

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

1967 USGS Wading River 7.5-minute Quadrangle with Project Site

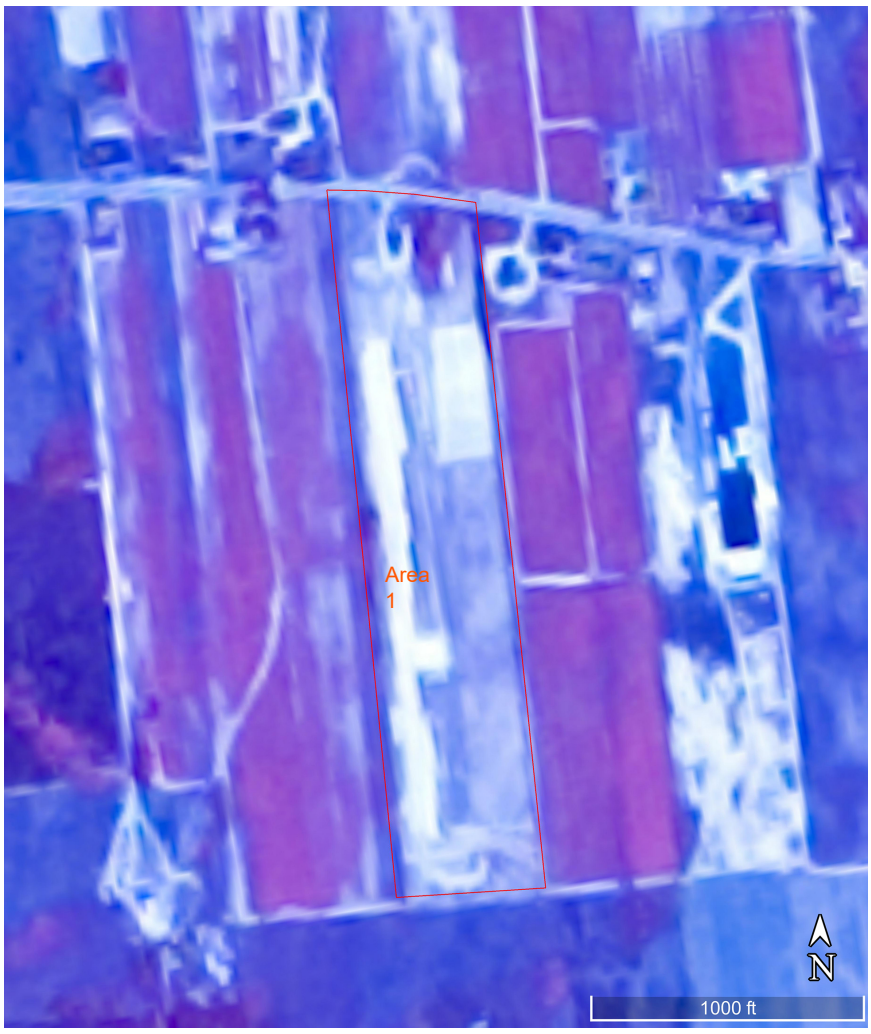
Figure **7**

Source: USGS EarthExplorer

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

1966 Aerial Photograph with Features 1 and 2

Figure **8**



Source: USGS EarthExplorer

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

1974 Aerial Photograph with Area 1 Stripping

Figure
9

Source: USGS EarthExplorer

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

1966 Aerial Photograph with Area 1 and 3 Field Features

Figure **10**

Appendix B – Photographs

Photograph 1. Looking SE from Middle Country Road into Project Site (Field Photograph CSWP101003, 5/5/2020).

Photograph 2. Looking NE from Area 2, fallow field, toward Middle Country Road (left) and Area 3, woods lot on the right (Field Photograph CSWP101006, 5/5/2020).

Photograph 3. Looking S/SE at tall berm on the east side of Area 1, west woods (Field Photograph CSWP101027, 5/5/2020).

Photograph 4. Looking N from the east side of Area 2, fallow field (Field Photograph CSWP101044, 5/5/2020)

Photograph 5. Area 3 push pile, no cultural items observed (Field Photograph CSWP101066, 5/5/2020).

Photograph 6. Looking NE from the edge of Middle Country Road toward the dip in the road (Field Photograph CSWP101076, 5/5/2020).

Photograph 7. West slope of the possible kettle depression in Area 3. The depression is bisected by Middle County Road (Field Photograph CSWP101079, 5/5/2020)

Photograph 8. Looking S at the west side of the Calverton Industries debris piles in rear left and the east facade of the Tractor Supply Company building (Field Photograph CSW101002, 5/5/2020)

Photograph 9. Looking SW at the Sky Materials Corporation facility in north part of the original Calverton Industries quarry (Field Photograph CSWP101008, 5/5/2020).

Photograph 10. Looking W from Area 1 at the west and north facades of the Tractor Supply Company building and adjacent parking lot (Field Photograph CSWP101005, 5/5/2020).

Photograph 11. Looking NE at the north end of Satur Farm, LLC from the east side of Area 3 (Field Photograph CSWP101051, 5/5/2020).

Photograph 12. Looking SE at the sod field and the adjacent freight area, Satur Farm, LLC (Field Photograph CSWP101053, 5/5/2020).

Photograph 13. Looking south at the Project Site chain link boundary fence and the adjacent one-lane paved road (Field Photograph P101030, 5/5/2020).

Photograph 14. Area 1, Dump 1 debris scatter detail (Field Photograph CSWP101015, 5/5/2020).

Photograph 15. Area 3, Dump 2, building debris (Field Photograph CSWP101056, 5/5/2020).

Photograph 16. Area 3, Dump 3 push pile and dumped trash (Field Photograph CSWP101058, 5/5/2020).

Photograph 17. Area 3, Dump 4 brick and concrete debris (Field Photograph CSWP101061, 5/5/2020).

Photograph 18. Area 3, push pile sans cultural material (Field Photograph CSWP101059, 5/5/2020).

Photograph 19. Area 3, Feature 1 looking south at the collapsed west wall (Field Photograph CSWP101069, 5/5/2020).

Photograph 20. Area 3, Feature 1 looking at the interior of the north wall (Field Photograph CSWP101072, 5/5/2020)

Photograph 21. Area 3, Feature 1, exterior of the north wall looking east (Field Photograph CSWP101073, 5/5/2020).

Photograph 6. Area 3, Feature 1 exterior of the east wall (Field Photograph CSWP101085, 5/5/2020).

Photograph 23. Area 3, Feature 2, tree-trapped wall segment (Field Photograph CSWP101082, 5/5/2020)

Photograph 24. Area 3, Feature 2, looking south at the east wall of the feature on the west edge of the depression (Field Photograph CSW101083, 5/5/2020)

Photograph 25. Looking west from Feature 2 at the east wall of Feature 1 (Field Photograph CSWP1010084, 5/5/2020

Appendix C – Agency Correspondence

NEW YORK STATE OF OPPORTUNITY. Parks, Recreation and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

ARCHAEOLOGY COMMENTS

Phase IA/IB Archaeological Survey Recommendation
Project: Proposed Industrial Park – HK Ventures
PR#: 20PR02526
Date: 4/22/2020

Your project is in an archaeologically sensitive location. Therefore, the State Historic Preservation Office/Office of Parks, Recreation and Historic Preservation (SHPO/OPRHP) recommends a Phase IA/IB archaeological survey for components of the project that will involve ground disturbance, unless substantial prior ground disturbance can be documented. A Phase IA/IB survey is designed to determine the presence or absence of archaeological sites or other cultural resources in the project's Area of Potential Effects (APE).

If you consider the entire project area to be disturbed, documentation of the disturbance will need to be reviewed by SHPO/OPRHP. Examples of disturbance include mining activities and multiple episodes of building construction and demolition. Documentation of ground disturbance typically consists of soil bore logs, photos, or previous project plans. Agricultural activity is not considered to be substantial ground disturbance.

Please note that in areas with alluvial soils or fill archaeological deposits may exist below the depth of superficial disturbances such as pavement or even deeper disturbances, depending on the thickness of the alluvium or fill. Evaluation of the possible impact of prior disturbance on archaeological sites must consider the depth of potentially culture-bearing deposits and the depth of planned disturbance by the proposed project.

Our office does not conduct archaeological surveys. A 36 CFR 61 qualified archaeologist should be retained to conduct the Phase IA/IB survey.

Please also be aware that a Section 233 permit from the New York State Education Department (SED) may be necessary before archaeological fieldwork is conducted on State-owned land. If any portion of the project includes the lands of New York State, you should contact the SED before initiating survey activities. The SED contact is Christina Rieth and she can be reached at (518) 402-5975 or christina.rieth@nysed.gov. Section 233 permits are not required for projects on private land.

If you have any questions concerning archaeology, please contact Tim Lloyd at 518-268-2186 or Timothy.Lloyd@parks.ny.gov

Appendix D – Human Remains Discovery Protocol

State Historic Preservation Office/
New York State Office of Parks, Recreation and Historic Preservation
Human Remains Discovery Protocol
(August 2018)

If human remains are encountered during construction or archaeological investigations, the New York State Historic Preservation Office (SHPO) recommends that the following protocol is implemented:

- Human remains must be treated with dignity and respect at all times. Should human remains or suspected human remains be encountered, work in the general area of the discovery will stop immediately and the location will be secured and protected from damage and disturbance.

- If skeletal remains are identified and the archaeologist is not able to conclusively determine whether they are human, the remains and any associated materials must be left in place. A qualified forensic anthropologist, bioarchaeologist or physical anthropologist will assess the remains in situ to help determine if they are human.

- No skeletal remains or associated materials will be collected or removed until appropriate consultation has taken place and a plan of action has been developed.

- The SHPO, the appropriate Indian Nations, the involved state and federal agencies, the coroner, and local law enforcement will be notified immediately. Requirements of the corner and local law enforcement will be adhered to. A qualified forensic anthropologist, bioarchaeologist or physical anthropologist will assess the remains in situ to help determine if the remains are Native American or non-Native American.

- If human remains are determined to be Native American, they will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. Please note that avoidance is the preferred option of the SHPO and the Indian Nations. The involved agency will consult SHPO and the appropriate Indian Nations to develop a plan of action that is consistent with the Native American Graves Protection and Repatriation Act (NAGPRA) guidance. Photographs of Native American human remains and associated funerary objects should not be taken without consulting with the involved Indian Nations.

- If human remains are determined to be non-Native American, the remains will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. Please note that avoidance is the preferred option of the SHPO. Consultation with the SHPO and other appropriate parties will be required to determine a plan of action.

- To protect human remains from possible damage, the SHPO recommends that burial information not be released to the public.

CRIS Submission (v2)

Phase IB Archaeological Assessment, Proposed Industrial Park – HK Ventures LLC, 4285 Middle Country Road (NYOPRHP 20PR02526; USN 10306.001187)

Calverton, Town of Riverhead, New York

Prepared for: HK Ventures LLC

Prepared by: Matthew Spigelman, Co-Principal Investigator (ACME Heritage Consultants)
Jenna Anderson, Archaeologist (ACME Heritage Consultants)
Carol S. Weed (CSW13108), Co-Principal Investigator/Editor

September 29, 2020

Project Summary

SHPO Project Review Number: 20PR02526

Involved City, State and Federal Agencies: Town of Riverhead Planning Board (site plan), Town Board (Riverhead Water District Extension 37R – Calverton), Board of Zoning Appeals (area variance), Water Department; Suffolk County Department of Health Services (SCDHS) (Article 6 Permit), Planning Commission (SCPC) planning review authority under the General Municipal Law; New York State Department of Transportation (NYSDOT) (Highway Work Permit) and Department of Environmental Conservation (NYSDEC) (State Pollution Discharge Elimination System [SPDES] permit).

Phase of Survey: Phase IB Archaeological Assessment

Location Information
Location: Calverton
Minor Civil Division: Town of Riverhead
County: Suffolk

Survey Area (Metric & English)
Length: 2510 feet (765 meters) maximum
Width: 510 feet (155 meters)
Depth (when appropriate): maximum shovel test depth in Area 2, ca. 29.5 in (75 cm)
Number of Acres Surveyed (when appropriate): not applicable
Number of Square Meters and Feet Excavated: 52 sq meters (ca. 560 sq ft)
Percentage of Site Excavated: n/a

USGS 7.5 Minute Quadrangle Map: Wading River 7.5-minute quadrangle

Archaeological Survey Overview
GPR Survey Blocks: none
Plow Strips: none
Number & Interval of Shovel Test Pits (STPs): 272 STPs at 50 ft (15 meter) intervals across Areas 2 and 3. 34 STPs as radial tests at 25 ft (7m) spacing around positive STPs. 23 STPs in and around Features 1 and 2. 10 STPs at 100 ft (30 meter) intervals within a disturbed portion of Area 3.
Total STPs: 339
Number & Size of Units: not applicable
Survey Transect Interval: not applicable

Results of Archaeological Survey
Number & Name of Archaeological Sites identified: USN 10306.001187 (Site field number 2020-003.1).
Number & Name of Historic Sites identified: none
Number & Name of Sites Recommended for Phase II/Avoidance: No further archaeological investigation of the historic-era ubiquitous field scatter or Isolated Finds 1, 2, and 3 are recommended. Additional

investigation of Loci 2, 3, and northern part of Locus 4 is recommended to refine the boundary and confirm the stratigraphic associations.

Report Author(s): Matthew Spigelman, PhD (RPA #36587230); Jenna L. Anderson, MA; Carol S. Weed, M.A. (RPA #989090),

Date of Report: September 29, 2020

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1

Executive Summary

Administration and Regulatory Approvals

HK Ventures, LLC (the Applicant) proposes to develop the 30.5±-acre (ac) parcel located at 4285 Middle Country Road, Calverton, Town of Riverhead, Suffolk County, New York (Project, Project Area; Appendix A, Figures 1, 2a/b, 3a/b, 4; Appendix B, Photograph 1). An application for site plan approval was filed with the Town of Riverhead Planning Board in January 2020 and the Applicant is proceeding with a Draft Environmental Impact Statement pursuant to a Positive Declaration issued for the project in August 2020, as part of the State Environmental Quality Review Act (SEQRA) process.

In support of the SEQRA action, an initial project notification was made to the New York State Office of Parks, Recreation and Historic Preservation (NYOPRHP, NYSHPO) describing the Project. By letter dated April 23, 2020, NYOPRHP responded that professional cultural resources investigations would be required. The Phase IA report was submitted on May 15, 2020, and it included a Phase IB Work Plan (IB Plan) which was accepted following minor revisions by NYOPRHP on May 29, 2020

The Project will require the approvals and/or permits from the following entities:

- Town of Riverhead Planning Board (site plan), Town Board (Riverhead Water District Extension 37R – Calverton), Board of Zoning Appeals (area variance), –Water Department;
- Suffolk County Planning Commission (SCPC) General Municipal Law planning review authority over the proposed action, Suffolk County Department of Health Services (SCDHS) (Article 6 Permit;
- New York State Department of Transportation (NYSDOT) (Highway Work Permit), Department of Environmental Conservation (NYSDEC) (State Pollution Discharge Elimination System [SPDES] permit); and
- PSEG Long Island and National Grid will provide utility service connections.

A word is warranted about metrics presented in the report that follows. The excavations were conducted using meter scales. A meter-based scale also was used for Indian Nation artifacts. Building dimensions, however, are presented in feet. When appropriate, the other meter scales are accompanied by conversions. The following abbreviations are used throughout the manuscript: feet (ft), meter (m), inch (in), centimeter (cm), millimeter (mm).

Project Description and Direct Impact Elements

The proposed project consists of the development of an industrial park with approximately 425,464±-square feet of new building area, on the Project Area which is zoned for said uses (Industrial C Zoning District). The development parcel measures about 2510 ft (765 m) north-south by 510 ft (155 m) east-west (Figure 4).

The Project Area is bounded on the north by Middle Country Road. The road right-of-way is not fenced. However, the south end of the project parcel is marked by a chain link fence that separates the Project Area from the Naval Weapons Industrial Reserve Plant. A one-lane paved road is immediately south of the fence and recreational walkers and bicyclists also use the road.

On the parcel's west side, the length of the Project Area abuts to a 51.8± ac parcel that historically was the site of the Boskowski Farm. Calverton Industries bought the property in the 1980s and operated a sand/gravel quarry. The remnants of that operation are still present. Sky Materials Corporation now operates in the central and southern thirds of the original quarry pit. The north third of the lot has been reclaimed and is now the site of a Tractor Supply Company store. On the east side of the Project Area, Satur Farms LLC operates a sod farm.

The proposed project direct impact elements are defined as those that will remove or displace the existing soil matrix to various depths. These elements were detailed on Table 1.1 in the Phase IA report (Weed 2020a). Subsequently, the project plan has been modified and the current version also encompasses most of the parcel. The confirmed direct impact elements include an access road, landscaping with pervious pavers, security fencing, service pads, and utilities in addition to four building blocks. The maximum depth of proposed impact from any of the confirmed elements will be 5 ft (1.5 m) resulting from emplacement of a transformer vault. The inclusion of a sewage treatment plant is under evaluation as of this writing. It will be located approximately 1,350 ft (411 m) south of Middle Country Road along the east side of the Project Area. The maximum depth below grade for this element would be approximately 10 ft (3 m; see Figure 4).

Prior Cultural Resources Investigations

A Phase IA due diligence assessment focused on the current actions was conducted in May 2020 by Carol S. Weed (Weed 2020a, 2020b). Background research indicated that the parcel (SCTM 0600-116.00-01.00-002.000) was included in a visual assessment of buildings/structures for the Riverhead Solar 2 project (Freeland et al. 2018). The Phase IA research results are briefly summarized herein in Chapter 2.

Ms. Weed (2020a) included a Phase IB work plan in the Phase IA report. The final work plan was modified to reduce the size of the proposed shovel test pits (STPs) and eliminate the use of plow strips. Sections of the revised, final plan are presented in Chapters 3 and 4.

The current Phase IB cultural resources investigations were conducted under the supervision of Matthew D. Spigelman, co-principal investigator, and Jenna L. Anderson, who was the field director and lithic analyst. The field archaeologists included Ms. Anderson, Scott R. Ferrara, Brendan Murphy, and Jonathan Wiener. Ms. Weed served as co-principal investigator and editor. She also reviewed the chipped and ground stone results in addition to completing report sections. Ms. Lisa Geiger created Appendix D, Stratigraphic Summary, which was reviewed by Dr. Spigelman.

Report Organization

The report that follows contains this Executive Summary, four other chapters, references cited, and six appendices labelled A through E. The principal sections are

- Chapter 1 – Executive Summary
- Chapter 2 – Phase IA Methods and Results
- Chapter 3 – Phase IB Field and Laboratory Methods
- Chapter 4 – Phase IB Results
- Chapter 5 – Conclusions and Recommendations
- References Cited

The lettered appendices are A – Figures; B – Photographs; C - Agency Correspondence (including emails); D – Stratigraphic Summary; and E – Artifact Summary. All tables except those presented in Appendices D and E are embedded in the narrative.

NYSHPO assigned the historic archaeological site identified during the Phase IA walkover Unique Site Number (USN) 10306.001187 (Field Site 2020-003.1). Site 10306.001187 was defined on the basis of historic building and structure remnants. Additional historic-era artifacts and another feature were identified during the Phase IB survey. In addition, Indian Nation artifacts were recovered and these were found within the area of USN 10306.001187 and also outside of that site. The items outside of the USN area are assigned field designations as follows: Isolated Finds (IF) 1, 2, and 3; Loci 1, 2, 3, and 4. Three of these (Loci 2, 3, and 4) are recommended for boundary refinement and 1 by 1 m (3 by 3 ft) unit excavation (see Chapter 5). These three loci may eventually be subsumed within a single site.

2

Phase I Methods and Results

Literature Review and Walkover Methods

The focus of the initial Phase IA and subsequent Phase IB research was on reviewing sources pertaining to the historic environmental setting, functional uses of the Project parcel, and parcel title. For context purposes, the study area was defined as a 1-mile buffer around the Project parcel. The sources used during the research are listed in Table 2.1 below.

Table 2.1. Data Sources Used and Data Obtained

Research Domain	Source Location(s)	Data
Environmental Conditions	USDA SCS Web Soil Survey, Slacke Test Borings	1) Custom Report for the Project Parcel 2) Project Geotechnical Reports (Slacke Test Boring 2020)
Environmental Conditions	USGS/ESRI Historical Topographic Collection	1) Wading River 7.5-minute quadrangle for water features on-site or adjacent 2) Plotted buildings in the parcel location or adjacent to the parcel
Functional Areas	New York Public Library	1) Atlas of Suffolk County (Belcher-Hyde 1906) 2) Atlas of Suffolk County (Beers 1873)
Functional Areas	New York State Library	Town of Riverhead, Suffolk County
Functional Areas	Suffolk County and Town of Riverhead	1) Tax Assessment 2) Deed Records 3) Historic Aerials (1947, 1978, and 1983)
Functional Areas	New York Office of Parks, Recreation and Historic Preservation (NYOPRHP) Cultural Resource Information System (CRIS)	1) Archaeological site forms, buffer area properties 2) Reports and due diligence assessments, buffer area projects

The research was conducted by Ms. Weed with additional information supplied by Kim Gennaro-Oancea, AICP CEP (P.W. Grosser Inc.), Jaclyn Peranteau, P.E. (Key Civil Engineering), and HK Ventures LLC.

Similarly, the walkover was conducted by Ms. Weed who completed that work on May 5, 2020. During the Phase IA walkover, the project parcel was divided into three areas (numbered 1 thru 3). Each area was walked judgmentally and each transect was oriented north-south.

Transect 1, through Area 1, was off-set from the west property line by distances ranging from about 25 ft (7.5 m) to 75 ft (ca 23 m). Area 2 is comprised of two fallow fields. One is located in the northwest quadrant of the parcel. The other covers the southeast quadrant of the parcel. These two fields were covered in Transect 2 which has a zig-zag pattern. Transect 3 was started at the west side of a large depression in the northeast quadrant of the parcel. The northeast quadrant is wooded. Transect 3 continued southward between the depression and the east side of a building remnant (Feature 1). During Transect 3, Feature 2, a cellar hole, also was identified. The transect continued to the south end of Area 3. Photographs were taken of existing conditions along all three transects and these were presented in the Phase IA report (Weed 2020b).

Phase IA Results

The discussion on the environmental and historical contexts is extrapolated from the Phase IA report and it has been updated as warranted.

Environmental Context

The Phase IA research confirmed that this area of Long Island had indeed been subject to glacier action throughout the Pleistocene. During the various advances and retreats, glacier till rock was re-deposited onto the recontoured landscape. That till rock now marks the basal C-horizons in the Project Area (Warner et al. 1975; see Chapter 4 and also Appendix D). The glaciers also left ice-formed kettle ponds/depressions which ultimately supported important ecotone communities that were exploited by both humans and other species (Bernstein 1993, 1999; Warner et al. 1975).

Geology and Soils

Topographically, the Project Area lies on an outwash plain (Warner et al. 1975). The immediate Project Area generally slopes southward with major deviations in the northeast corner of the parcel and along the west side in the woods to the west of a large earthen berm (see Figures 1, 3a/b). The origin of the landform deviation in the northeast corner is unresolved though it appears to be a kettle pond which may have been modified in the historic period. Figure 5 shows the extent of the pond feature about 1957. On the west side of the Project Area, Area 1 appears to have been stripped and the soils moved eastward to create a large berm (see Figures 6 and 7). The dominant ground cover on the west side is now pine though deciduous trees are present. This cover contrasts sharply to the tree cover in the northeast quadrant of the parcel. Here, the tree cover is dominated by deciduous trees.

USDA (Warner et al. 1975, USDA 2020) classifies the soils of the Project parcel as Plymouth or Riverhead soils with varying percentages of gravels. Of the six USDA soil units in the parcel, four are either soils of statewide importance or prime farmland. Table 2.1 is repeated from Weed (2020b) as it summarizes the soil characteristics presented in USDA 2020. Data from USDA (Warner et al. 1975) augments the 2020 information as soil color and percent of gravel data are absent in the 2020 custom report. In general, H1 is equivalent to an A-horizon, H2 equates with a B-horizon, and H3 is a typical C-horizon.

Geotechnical testing was conducted on-site in 2020 (Slacke 2020) and their results in the upper 64 inches (1.6 m) are pertinent. Those results have been added to Table 2.2 as well and they are noted by Boring Test number. The USDA soil class is based on the boring plot presented in Slacke (2020). Slacke's geotechnical bores were confined to the north half of the Project Area and their general locations were plotted on Weed (2020b: Figure 6). Boring Test #2 plots at the intersection between USDA soil units PlA and PmB3.

Table 2.2. Project Area Soils (USDA 2020, Slacke 2020, Warner et al. 1975)

Name	Soil Horizon Depth (in; cm)	Color	Texture, Inclusions	Slope %	Drainage	Landform/Farmland Classification
PlA, Plymouth loamy sand, 0-3% slopes	H1: 0-4 in H2: 4-27 in H3: 27-60 in (60 in = 5 ft)	H1: 10YR3/2 dk gr-brn H2: 10YR5/4 yel-brn grade to 10YR5/6 rd-brn grade to 7.5YR5/4 strong brn H3: 10yr5/6 yel-brn	H1and H2: loamy sand, 5% fine gravel grade to 10% gravel in H2 H3: gravelly coarse sand, 30% rounded pebbles <1inch	0-3	Excessively drained	Moraines, outwash plains/farmland of statewide importance
Boring Test #1	In 2 ft increments to 40 ft	0-4 ft: Dark brn to light brn 4-6 ft:	0-4 ft: Fine silty sand to médium sand; 4-6 ft: fine to coarse sand w/ increasing gravel and stone deeper			
PlB, Plymouth loamy sand, 3-8% slopes	H1: 0-4 in H2: 4-27 in H3: 27-60 in	Same as above	H1 and H2: loamy sand H3: gravelly coarse sand	3-8	Excessively drained	Moraines, outwash plains/farmland of statewide importance
Boring Test #3	In 2 ft increments to 40 ft	0-4 ft: dk brn to med and light brn; 4-6 ft: light brn and rust brn	0-4 ft: fine silty sand and fine to coarse sand 4-6 ft: fine to coarse sand w/ fine to coarse gravel and some clay			
Boring Test #4	In 2 ft increments to 40 ft	0-4 ft: dk brn to brn and rust brn 4-6 ft: brn and rust brn	0-4 ft: fine to coarse sand with fine to small gravel 4-6 ft: sand w/ fine to small gravel			
PmB3, Plymouth gravelly loamy sand, 3-8% slopes, eroded	H1: 0-4 in H2: 4-14 in H3: 14-60 in	Same as above	H1 & H2: gravelly loamy sand; H3: gravelly coarse sand	3-8	Excessively drained	Moraines, outwash plains/not prime farmland

Table 2.2. Project Area Soils (USDA 2020, Slacke 2020, Warner et al. 1975)						
Name	**Soil Horizon Depth (in; cm)**	**Color**	**Texture, Inclusions**	**Slope %**	**Drainage**	**Landform/Farmland Classification**
PmC3, Plymouth gravelly loamy sand, 8-15% slopes, eroded	H1: 0-4 in H2: 4-14 in H3: 14-60 in	Same as above	H1 & H2: gravelly loamy sand; H3: gravelly coarse sand	8-15	Excessively drained	Moraines, outwash plains/not prime farmland
Boring Test #2	In 2 ft increments to 40 ft	Same as Boring Test #1	Same as Boring Test #1			
RdA, Riverhead sandy loam, 0-3% slopes	H1: 0-12 in H2: 12-27 in H3: 27-35 in H4: 36-64 in	H1: 10YR4/3 brn-dk brn H2: 7.5YR 5/6 strong brn H3: 10YR5/4 yel-brn H4: 7.5YR4/4 brn to dk brn grade to 10YR7/4 very pale brn	H1 & H2: sandy loam, <5 to 10% gravel H3: gravelly loamy sand, 10% gravel H4: stratified coarse sand to gravelly sand, greater than 10% gravel and in layers	0-3	Well drained	Moraines, outwash plains/all areas are prime farmland
RdB, Riverhead sandy loam, 3-8% slopes	H1: 0-12 in H2: 12-27 in H3: 27-35 in H4: 36-64 in	Same as above	Same as above	3 - 8	Well drained	Moraines, outwash plains/all areas of prime farmland

Key: Shade: dk = dark
Color: brn = brown; gr = gray; rd = reddish; yel=yellowish

Hydrology

Archaeologically, potable water sources are commonly identified as freshwater cold springs, permanent or seasonal streams, or non-vegetated freshwater ponds and lakes located within 250 ft (76 m) of a potential habitation (camp, village) location. The only possible surface potable water source documented on the Project Area is a probable kettle depression in Area 3. Kettle ponds and active secondary streams are also present to the west and east of the Project Area within the one-mile Phase IA study buffer.

Historic Context

No previous archaeological investigations have been completed based on the NYOPRHP CRIS records. A review of Parker's 1920 Suffolk County listing finds only one site called out in the Calverton vicinity (Parker #55) and it is not proximate to the Project Area. A large building survey conducted by Freeland et al. in 2018 included the Project Area within its study area but no standing buildings were on the Project Area.

Freeland et al. (2018), however, did record buildings and structures to either side the Project. On the west side, they found a single, one-story, corrugated metal shed. It was assigned USN #10306.001169. Previously, in 1977, Ellen Cole recorded the then-extant Boskowski Farm (USN #10306.000425) which included a house, barn, and windmill base on the same parcel. The farm elements were demolished by Calverton Industries. On the east

side of the Project Area, one freight structure is located on the Satur Farm LLC property. That structure was also recorded by Freeland et al. (2018) and is still present today.

Within the one-mile study buffer, NYOPRHP lists six projects with cultural resources components and eight archaeological surveys. These and other projects resulted in the identification of six archaeological sites between 407 ft (124 m) and 4,938 ft (1,505 m) west of the Project Area and a ubiquitous field scatter with isolated Indian Nation projectile points east of the Project Area.

The six projects listed in CRIS and the associated NYOPRHP project numbers include:

- Meyer's Plant and Project, LLC (16PR07360);
- EPCAL Trail (17PR00723);
- Cal 705 LLC - Façade Alteration and Additional Parking (17PR04774);
- Calverton Solar Energy Center Project (18PR02406);
- NEPR-Calverton (18PR06148); and
- Riverhead Solar 2/36MW/290 Acres (18PR06033)

A seventh project, an archaeological walkover sensitivity assessment (Weed 2016), was completed for sPower Calverton (NYOPRHP 16PR06504) and that due diligence report is available upon request from CRIS.

Five archaeological projects that included both walkover assessments and excavations of various types complete the suite of investigations conducted within the one-mile Phase IA study area. The projects were conducted

- in the Boskowski Farm/Calverton Industries Mine parcel in 1990 and 1998 (Robert Miller 1990, 1998)
- in the Naval Weapons Industrial Reserve Plant in 2002 (Projects 02SR52704 and 02SR52879)
- in the Calverton Solar Energy Center in 2019 (Project 19SR00143) and the Calverton Solar Energy Center Western Parcel (19SR00683)
- in selected locations in the Riverhead Solar 2 Project in April 2020 (18PR06033; Yankel et al. 2020)

The May 2020 Phase IA walkover assessment of the current Project Area also resulted in the identification of an historic archeological site (USN 10306.001187). The Phase IB survey reported herein also recovered Indian Nation material culture.

The various Phase IB projects in the 1-mile study area resulted in the identification of seven archaeological sites and a ubiquitous historic artifact scatter with isolated Indian Nation artifacts (Yankel et al. 2020). The sites are designated by NYOPRHP USNs 10306.000776, 10306.000777, 10306.000779, 10306.000782, 10306.000798, 10306.000825, and 10306.001187. With two exceptions (USNs 10306.000798 and 10306.001187), the sites were found during the surveys of the Naval Weapons Industrial Reserve Plant.

The Indian Nation sites are USN #s 10306.000776, 10306.000777, 10306.000779, 10306.000798, and 10306.000825. Site 10306.000777 was a single quartz flake (Pappalardo 1997). Site 10306.000776, 10306.000779, and 10306.000798 yielded projectile points that are diagnostic of the Middle to Late Woodland Periods (1800 to 500 years before present [BP]), the Terminal Archaic Period (3700 to 3000 BP), and the Late to Terminal Archaic Periods (5000 to 3000 BP). The projectile points included a Levanna, two Bare Island points, and two Orient Fishtail points (Pappalardo 1997). The associated chipped stone assemblages indicated that the indigenous peoples were not only actively utilizing readily available raw materials but that they were trading

with others for materials of higher quality. Reeve (2002) found evidence of possible Late Archaic Wading River Complex use at Site USN 10306.000825 in the form of a side-notched biface with graver point.

USN 10306.000798 was found during surveys of parts of the now highly disturbed and repurposed Calverton Industries Mine. Miller (1990, 1998) reported a single diagnostic projectile point, a Transitional Archaic Orient Fishtail projectile point, from his work in addition to chipped stone debris. Similarly, Yankel et al. (2020) also recovered an isolated Late Archaic Squibnocket projectile point, designated RH-Isolate-001; five pieces of chipped stone debitage (RH-Isolate-002); and a single quartz flake (RH-Isolate-003).

Site 10306.000782 was an historic-era, poured concrete foundation (Pappalardo 1997). The function of the original building is unspecified on the site form but Pappalardo noted "bottles, ceramic fragments, pots and pans, various packaging materials, various furniture remains" in and about the feature. The feature measured 29.5 ft (9 m) by 16 ft (5 m) by ca. 5 ft (1.5 m) deep. USN 10306.001187 was defined on the basis of two building remnants (Features 1 and 2) in Area 3. Weed (2020b) also noted three dump sites (2, 3, and 4) in the same general area. She concluded that the building remnants likely dated between 1901 and 1974. Her conclusion was based on the building materials observed (molded concrete blocks; Gavin 2001, Hall 2009), map data, and aerial photographs. The two building remnants and the three dumps were located west of the possible kettle pond feature. Others have noted that kettle ponds created resource-rich ecotones that were commonly exploited by both Indigenous Nations and EuroAmericans. Because of the presence of the kettle pond feature, Weed (2020b) also concluded that evidence of Indian Nation use of the Project Area might be found.

Subsequent research in support of the Phase IB field results documented the presence of farms along Middle Country Road as early as the 1820s (Freeland et al. 2018). Many of the farms in the immediate area of the Project Area, by the mid-1900s, appear to have been around 35 acres in size. Aerial photographs from 1947 and 1966 (Figure 6) show the parcel configurations of the Boskowski Farm, the Project Area, and Satur Farms. USN 10306.001187 Features 1 and 2 clearly show on the aerial as does the 'wet spot' of the pond.

According to the Project Area Topographic Survey (see Figure 3a), the Project Area was owned by Robert J. Volmut, Jr./Colleen Volmut and James Patrick Fleming/Patricia Fleming (Suffolk County Town of Riverhead Liber 12660, pg. 79) in 2019. The Suffolk County Clerk's Office indicates that the property title changed five times between 1998 and 2011. The 1998 owners were Margaret Tintle and William Tintle, Sr. who granted the property to a shell, Main Road Associates. When the Tintles acquired the property is unknown. In 2005, Mrs. Tintle and her son William Tintle Jr. passed control to Main Road Associates LLC. Mr. Tintle died in 2000 and Mrs. Tintle passed in 2007. The property was acquired by Fleming and Volmut from Main Road Associates LLC in 2010 (Suffolk County Town of Riverhead Liber 12615, pg. 457).

The 1978 Suffolk County GIS Historic aerials shows that Feature 1 had lost its roof though Feature 2 may still be present (Figure 7). The homeplace yard appears ill-maintained and large portions of the fields have been stripped of topsoil (Figure 7). By 1984, the yard is definitely overgrown and Feature 2 is no longer present (see Figure 7). The remaining portions of the fields, however, were still being tilled.

3

Phase IB Field and Laboratory Methods

The final field and laboratory methods used during the Phase IB investigations were outlined in the May 2020 work plan. There were some modifications to the approaches in the field because of conditions and these are discussed below. The artifact analyses methods were only sketched in the work plan and are fully discussed in the laboratory methods section.

Phase IB Field Methods

The previously approved Phase IB Work Plan proposed two field methods to be used across Areas 2 and 3: plow strips with pedestrian survey alternating with systematic shovel testing transect of unplowed areas. The field conditions were assessed by the plow operator and it was determined that plow strips would involve successive preparatory steps. The plow strips, with NYSHPO approval, were replaced by additional shovel test pit (STP) transects.

As noted previously in Chapter 1, no archaeological investigations were conducted in Area 1 which was stripped in the historic period. Testing within Area 2 was conducted with a grid of STPs at 50-foot (15m) intervals. Ten transects running north to south were laid out west to east and labelled alphabetically (A to J). The STPs were numbered from north to south (Figures 8a and 8b). Transect spacing was measured by tape and marked with pin flags, STP spacing was paced out by the field archaeologists, with additional pin flags placed at periodic measured intervals.

Testing within Area 3 was conducted along the same transects laid out for Area 2, however, no STPs were excavated through the large push piles or within the deepest parts of the pond area. The southern portion of Area 3 showed clear evidence of surface stripping, with a notably lower surface then the surrounding fields and several large push piles. This conclusion was confirmed by STPs excavated at 100-foot (30m) intervals within this area. The areas surrounding Features 1 and 2 were tested with STPs set back 1m (3 ft) from the foundation and spaced at 25-foot (7.5m) intervals. The interior spaces of Features 1 and 2 were similarly tested with additional STPs. Areas clearly within the kettle pond were not investigated, though STPs were excavated along the gradually sloping margin to the south of the pond. The remainder of Area 3 was tested with STPs spaced at 50 feet (15m).

Pre-Fieldwork Survey and Excavation Mapping

Gallas Surveying Group completed civil survey of the property on November 15, 2019. Their base maps data provided the surface elevations and the final boundary and topographic survey is presented herein as Figures 3a/b.

Shovel Test Pits

Within Area 2 and the previously stripped portion of Area 3 STPs standardly measured 16 in (40 cm) round and were excavated in 4-in (10 cm) arbitrary levels within strata. Within and around Features 1 and 2, the STPs measured 19 by 19 in (50 by 50 cm) and were again excavated in 4-in (10 cm) arbitrary levels within strata. All STPs were excavated 4-in (10 cm) into culturally sterile subsoil, where possible.

Artifact and Sample Recovery and Recordation

All excavated material from the STPs were screened through 1/4-in (6 mm) hardware mesh, utilizing two-leg, standing screens. Material cultural recovered was field bagged by material types. The possible chipped and ground stone artifacts were reviewed in-field by Ms. Anderson and Ms. Weed; Dr. Spigelman recorded the review notes and Ms. Anderson completed the subsequent results recordation and writeup. Dr. Spigelman completed the historic artifact analyses. The artifacts were washed and/or cleaned as appropriate to their material type. Following acceptance of this report by NYSHPO and the Town, the artifacts will be re-buried on the Project Area and the global positioning system (GPS) coordinates for the burial location will be provided to NYSHPO, the Town, and HK Ventures LLC.

Standardized forms were used to record field data. These included shovel test summary forms, bag and special sample logs (if needed), and photograph logs. Paper forms were digitized daily by Lisa Geiger into spreadsheets.

Phase IB Laboratory Methods

The processing, cataloging, and data entry tasks associated with recovered artifacts and samples and the analysis of all records, maps, photographs, and cultural materials for the Project were undertaken by Phase IB project members. The artifacts were returned to the ACME laboratory space where they were organized by provenience and the bag list finalized. None of the items were prepared for long-term curation.

Indian Nation Artifacts

The expectation during the Phase IB work was that some Indian Nation materials might be recovered and, if found, could include chipped stone, ground stone, ceramics, or fire-cracked rock (FCR). No ceramics or FCR was found. The chipped and ground stone that was recovered was treated as described below.

The Project Area lies on an outwash plain (see Chapter 2) and the Riverhead and Haven soils typically are increasingly gravelliferous with depth. This was the case in Areas 2 and 3 outside of the feature interiors. The presence of the till gravels resulted in a quantity of stone ranging in size from gravel through cobbles. Natural breakage was often observed. Any chipped stone that appeared to show regular edge removals, possible platforms, clear points of detachment, or other characteristics of conchoidal fracture (including concave ventral surfaces, visible striations on ventral surface) were saved in the field and, after washing, subject to review using a 10-power hand lens. Similarly, any stone that displayed possible use polish, grinding striations, collapsed particle ridges, or shaped surfaces was kept, washed without brushing, and reviewed with a hand lens as well. Any object that was evaluated as cultural in origin was measured (length, width, thickness) using a Mitutoyo

Digimatic Caliper which measures in inches and millimeters. The recorded metrics are in millimeters. Weights were taken using an electronic scale and recorded in grams.

EuroAmerican Artifacts

Historic period artifacts were identified and dated by Dr. Spigelman. The on-line references maintained by the Jefferson Patterson Park & Museum (Jef Pat n.d.), the Digital Archive of Comparative Slavery (DAACS n.d.), and the Historic Glass Bottle Identification and Information Website (Lindsey n.d.) were the primary guides consulted. The artifacts were classified by class and type (brick, ceramic, coal, charcoal, construction material, faunal, firearm, glass vessel, glass window, metal, metal hardware, glass, metal hardware, personal, plastic, fauna, and shell). The artifacts in each type were described, as applicable assigned their production era, and their maximum length measured in centimeters.

4

Phase IB Results

The results of the Phase IB investigations are presented below. The Phase IB field investigations and subsequent analyses were conducted in August and September 2020.

Shovel Test Pit Summaries

Systematic shovel testing was conducted across Areas 2 and 3. Area 1 measures approximately 9.4 acres and was not investigated due to prior disturbance, which is evidenced by areas stripped of topsoil and a series of large soil berms (Figures 6 and 7).

The following discussion is organized by work area and subsections within each area. Fieldwork was conducted by Matthew Spigelman, Jenna Anderson, Scott Ferrara, Brendan Murphy, and Jonathan Wiener. Transects were laid out and fieldwork begun on 8/14/20 by Dr. Spigelman and Mr. Ferrara. Systematic fieldwork across the Project Area was conducted by the entire team from 8/17/20–8/21/20. Additional fieldwork within and around Feature 2 was conducted by Dr. Spigelman and Ms. Anderson on 8/24/20. Radial STPs were excavated by Dr. Spigelman, Ms. Anderson, and Mr. Ferrara on 9/6/20.

Appendices D and E contain the stratigraphic data and artifact tables for the various excavations in each of the subsections. The tables are ordered by area and subsection as well. Results maps are presented for Indian Nation artifacts (Figures 9a, 9b) and Historic artifacts (Figures 10a, 10b, 10c).

Area 2: Fallow Fields

Area 2 measures approximately 15 acres and was investigated with 239 regularly spaced STPs (Figures 8a and 8b; Photograph 1). An additional 24 STPs were excavated as radials to positive STPs. There was broadly consistent stratigraphy across the area. A sandy loam with sparse gravel, interpreted as an A/B horizon, sits above a loamy sand with gravel, interpreted as a BC horizon (Photograph 2). Several STPs in the southern portion of Area 2 were excavated through this BC horizon, finding a sandy gravel layer, interpreted as a C horizon (Photograph 3). The A/B horizon was loose and showed no clear division between an A and a B horizon. The A/B was brown (10YR 4/3 or 4/4) when dry, and dark brown (10YR 3/2 or 3/3) when wet. It ranged from 25 to 35 cm in depth and was well drained. The texture and depth of the A/B horizon is consistent with the fields having seen 20th century mechanical plowing. The BC horizon was very dense, yellowish brown (10YR 5/6 or 6/6), and was generally excavated for 10 to 15 cm. The C horizon, where it was reached, was loose and very pale brown (10YR 7/4).

The exception to the stratigraphic consistency found throughout Area 2 was observed in STPs A12–13, B12–13, and C12–13 in the southern part of the northern section. Here the ground surface was noticeably lower and the STPs had generally thinner A/B horizons, which contained more gravel. This lower elevation and stratigraphy suggest that the area was stripped of topsoil and that this disturbance had encountered the underlying C horizon. This portion of Area 2, however, in contrast to Area 1 to its south, was subsequently returned to agricultural use, rather than being allowed to reforest (see Figures 6 and 7).

Area 3: Forested Areas of the Northeast

Area 3 measures approximately 6 acres and can be subdivided into several sections based on differing use events. The southern 3 acres is forested and previously disturbed. The northeastern 1.6 acres is a kettle pond that has been modified. The northwestern 1.4 acres also is forested and contains USN 10306.001187, a historic site with a prehistoric component.

The southern 3± acres of the forested area is notably lower in elevation then the adjacent fallow fields, and aerial photographs from 1978 and 1984 show this area as having been stripped of topsoil (see Figure 7). There are also several large push piles within the area, also suggesting mechanical earth movement. Based on these observations STPs excavated within this area (G51–55 and I51–55) were spaced at a larger 100-foot (30 m) interval (see above). As was the case in the previously stripped portion of Area 2, these STPs revealed a generally thinner A/B horizon and larger amounts of gravel. This stratigraphy reinforces the supposition that the area was stripped of topsoil and that this mechanical action disturbed the soil sequence into the underlying C horizon.

The northeastern portion of Area 3 contains the currently dry and mechanically modified kettle pond. Phase IA research (Weed 2020a) identified this as a likely glacial kettle pond, a portion of which extends to the northern side of Middle Country Road and therefore predates its construction. Phase IB fieldwork suggests that the pond section in the Project Area was expanded and deepened through mechanical means in the late-20th century. The western bank of the pond is notably steep and STPs on the top of the bank (see below) found it to be constructed of fill with 20th century artifacts and quantities of glacial till. The southern bank of the pond has an extremely gradual slope, but is punctuated at its center by a large and approximately 8 feet (2.4m) tall push pile, which also contains visible quantities of 20th century artifacts.

STPs excavated within and around the southern end of the pond found soils that transitioned from upland areas with soils resembling those of the fallow fields of Area 2 (F51–53, G56–58, H51–52, J51–52), to lowland areas with distinctly silty soils as would be expected of a ponded area (I56–59, J53–54). Specifically, STPs within the pond contained a recently developed O/A horizon of very dark grayish brown (10YR 3/2) organic material and sandy loam, atop a thick layer of brownish yellow (10YR 6/6) silty sand with gravel, the bottom of which was not reached despite STPs extending to depths of 45 or 50 cm below ground level (bgl). Within this southern margin of the pond is a large push pile (as mentioned above), which contains visible 20th century trash, and an adjacent STP (H53) that contained a fill of similar material. The stratigraphy of the southern portion of the pond suggests that large scale mechanical earth movement occurred here as well, potentially bringing material from the northern portions of the pound south, and also creating the large push pile along this southern margin.

The northwestern portion of Area 3 contains the remnants of the historic homeplace (USN 10306.001187). The historic component at the site is composed of Feature 1, a 60 by 40-foot cement block building, interpreted as a barn; Feature 2, a 25 by 25-foot cellar hole, interpreted as a house; and Feature 3, a well (Photograph 4). Both Features 1 and 2 are visible on the 1947 and 1966 historic aerial photographs (Figure 6), as are a network of driveways and pathways. Only Feature 1, the barn, is clearly visible on the 1978 and 1984 aerial photographs

(Figure 7), and it is roofless. Feature 3, the well, was an approximately 1m diameter hole (largely obscured by roots and vines), located to the northeast of Feature 1 (Photograph 4). The well appears to be brick-lined.

STPs surrounding Feature 1 (X01–08) found a variably deep (30 to 50 cm bgl) sandy loam A/B horizon, containing 20th century artifacts (see below), above a sandy layer that was culturally sterile but showed mottling in some areas suggesting modern disturbance (X07–08). Within Feature 1, two STPs (X09–10) showed a similar stratigraphy, with a sandy loam fill above a dense loamy sand with gravel, as seen at the base of STPs in Area 2.

STPs surrounding Feature 2 (Y01–08) showed deep fill on all sides of the structure. To the west and south of Feature 2 STPs (Y01–03, 05, 07–08) found a thin organic horizon overlaying a thick fill (extending 35 to 79 cm bgl) containing 20th century artifacts, which appeared to date to the demolition of the structure (see below). To the east and north of Feature 2, however, STPs (Y04, Y06) found a thin organic layer, over a culturally sterile fill of sand and gravel (extending 15 to 35 cm bgl), over a thick fill containing 20th century artifacts. This stratigraphy suggests that the demolition of the structure resulted in the mixing and filling of the surrounding area, and that subsequent to that event culturally sterile material from the pond to the east was excavated and used to build up the western bank of the pond, the area to the east of Feature 2.

STPs within Feature 2 (Y09–13) found a thick fill of demolition debris (Photographs 5 and 6). The full depth of the structure could not be determined, due to impenetrable demolition debris (cement block, structural tile, wall plaster and wood, etc.) reached at depths of 95 cm bgl, which equates to 1.2 m below the ground level of the surrounding area. An STP excavated against the interior face of the western wall of Feature 2 found four courses of cement blocks, with additional courses below (Photograph 7). This deep stratigraphy suggests that Feature 2 had a full height basement, and that the demolition of the structure resulted in the filling of the interior with significant quantities of debris.

Additional STPs (F54–59, G59–68) were excavated in the areas to the north, south, and between Features 1 and 2. In the north, no shovel testing was conducted in the area made inaccessible by the large push pile that sits between Feature 1 and Middle Country Road. These STPs generally found a thin layer of fill, which contained artifacts associated with the use and demolition of the farm (see below), above a culturally sterile BC horizon. STPs along the western edge of the pond (G62–64) found culturally sterile fill of sand and gravel, as was found to the east of Feature 2 (also along the western edge of the pond).

Phase IB testing within the USN 10306.001187 portion of Area 3 found widespread evidence of fill associated with the decomposition and demolition of the two structures (Features 1 and 2). No traces of the driveway and pathways evident in the 1966 historic aerial photograph were identified. The mechanical demolition and removal of parts of Features 1 and 2, the creation of a large push pile or dump, and changes to the western edge of the pond, have caused widespread disturbance throughout the site.

Artifact Assemblages

Indian Nation

A total of 37 lithic objects were determined to be of cultural origin. The total weight of all worked lithic material was 0.74 kg. All lithic artifacts except three were made on quartz, of varying qualities and grain sizes. The other materials used were micaceous schist, granite, and quartz conglomerate. The quartz objects included partial projectile points (n = 2), flakes (n = 4), flake fragments (n = 15), 1 core, 2 unifacially worked scrapers/flake tools,

bifacially worked flake tools (n = 2), split/tested pebbles (n =3), chunks (n = 4) and 3 pieces of shatter. Flakes averaged 2.43 cm in length, 2.93 cm in width, and 1.01 cm in thickness. The tool metrics are presented in Tables 4.1 and 4.2 and are presented in millimeters. The distribution of the lithic assemblage is described in more detail later in this chapter.

Table 4.1 Flake Tool Descriptions and Dimensions				
Functional Type	**Raw material**	**Description**	**Length**	**Width**
Scraper	Quartz	Flake, steep unifacial retouch along one edge	37.32	55.62
Graver	Quartz	Flake, cortical platform, distal end retouched to produce convergent tip or spur. One edge notched using unifacial retouch, other edge transverse flake/burin removal.	14.46	16.64
Unifacial tool	Quartz	Flake, unifacial notching on two edges. Other diagnostic features removed by abrupt, fresh breaks on 3 edges.	20.45	25.45
Unifacial tool fragment	Quartz	Flake, unifacial retouch along one edge, signs of damage, fresh breaks along 3 other edges	8.81	14.83
Point	Quartz	Orient Fishtail, distal end missing, rounded shoulders, expanding convex base	22.21	15.56
Point	Quartz	Beekman Triangle, one ear missing, convex blade edges, slightly concave base	24.93	20.03

Table 4.2 - Groundstone Descriptions and Dimensions				
Functional Type	**Raw material**	**Description**	**Length**	**Width**
Smoother	Micaceous schist	Groundstone, cobble, one surface showing parallel linear striations consistent with smoothing use.	104.49	64.98
Irregular abrader	Quartz conglomerate	Pebble, subcircular divot on one surface, sheen/polish on opposing side	32.55	23.56
Flat abrader	Granite	Coarse material, split cobble w/ flat surface showing crushing damage. 2 v-shaped grooves on other surfaces.	66.14	39.24

Historic-Era

The historic assemblage consists of 478 items, which primarily represent the 20th century use and demolition of the historic homeplace on the property (USN 10306.0001187) in Area 3. Some chronologically earlier material was found within the Area 2 fallow fields. The Area 2 materials are very fragmented and are interpreted as the result of casual dumping along Middle Country Road. A number of plastic shotgun shells were noted during fieldwork and clay pigeon fragments were recovered from several STPs, attesting to the more recent use of the project area for hunting and recreation.

Site, Loci, and Isolated Finds

Archaeological Site USN 10306.001187

Historic Component

The historic component of site USN 10306.001187 is located in Area 3 (the forested area in the northeast of the project area) and contains Feature 1 (a large cement block barn), Feature 2 (a small house), and Feature 3 (a well). Of the 478 historic era artifacts recovered during Phase IB survey, 442 were found within Area 2 and are associated with USN 10306.001187.

These site-specific artifacts are highly fragmentary and mostly associated with the decomposition and/or demolition of Features 1 and 2, most notably wire nails, window glass, bricks, structural tiles, tar paper, asphalt shingles, wall plaster, and interior tiles. These building materials account for 253 of the 442 historic artifacts recovered from Area 3. The remaining historic artifacts are associated with the active use of the farm, both as a commercial enterprise and a residence. Artifacts associated with farming activities include various indeterminate pieces of corroded metal equipment, a spark plug, and potentially some portion of the glass bottles recovered. Artifacts associated with the use of Feature 2 as a domestic structure are also highly fragmented and include, most notably, glass bottles, ceramic tableswares, an enamel plate, and a "church key" can and bottle opener. One piece of large mammal bone was recovered, as well as numerous bivalve shell fragments.

Glass and ceramic artifacts date near exclusively to the 20th century, with abundant machine molded bottle fragments and factory produced porcelains and earthenwares. Fragments of embossed glass druggist bottles are too small to date conclusively, but all appear machine made and presumably date to the early 20th century. Several pieces of machine-made milk glass likely date to the floruit of that production in the 1930s and 1940s, and the two fragments of fiesta ware (one vessel) date to the 1930s or later. Several pieces of plastic and a pull tab beer can show use of the property into the 1960s or 1970s. The one small fragment of blue transferware, and several other small fragments of painted earthenwares, date to the 19th century, however, they were likely either discarded on the property as trash prior to the construction of USN 10306.0001187 or they were brought to the site in the 20th century as heirlooms.

Indian Nation Component

The Indian Nation component of the site was composed of five lithics recovered from STPs F54, G61, X10, and Y11. These included two flakes, one graver, a core and a partial projectile point. The graver was produced through convergent retouch on the distal end of a quartz flake. One edge has been notched using unifacial retouch, while a transverse or burin flake was removed from the other edge. Gravers have been interpreted as expedient tools, and can be used in a variety of tasks that include piercing, perforating, engraving or cutting (Tomenchuk and Storck 1997; Maika 2010). The graver recovered from G61 does not demonstrate wear patterns consistent with use as a piercer or perforator, such as polish or microfractures around the edges of the spur. The spur does preserve some micro-fractures on the tip, and therefore may have been used in engraving (Tomenchuk and Storck 1997).

The partial projectile point was recovered from Stratum III of STP X10 (Photograph 8, right). No other prehistoric material was recovered from this STP. The point is made on fine-grained white quartz. The distal portion of the point is missing, and the fracture surface is rough, showing evidence of possible grinding and re-use. The point has been designated as an Orient Fishtail due to the rounded shoulders, notched and expanding stem, the convex base, and the estimated length of the complete point (~4.8 cm; Ritchie 1961, rev. 1971). There is evidence of grinding on the base, and a natural surface has been preserved on one face of the point. Orient Fishtails have been recovered from sites dating to the Late and Transitional Archaic to the Early Woodland periods (3,700-2,700 BP; Ritchie 1961 rev. 1971).

Loci and Isolated Finds

Historic Era Field Scatter Outside of USN 10306.001187

A scatter of highly fragmented historic artifacts was found within the fallow fields of Area 2. The total number of historic artifacts recovered from Area 2 was 36, a small percentage of the 478 artifacts recovered from the project area as a whole. These were primarily found as a single artifact within an STP, and most are less than 2cm (<1in) in size. The distribution of these field scatter items is largely confined to the northern portion of Area 2 (N=29 artifacts) with the remaining 7 spread throughout the southern portion of Area 2.

The field scatter contains primarily 20th century artifacts consistent with those found in Area 3, most notably wire nails and fragments of brick, window glass, and bottle glass. Several chronologically earlier artifacts include small fragments of glazed red earthenware, white earthenware, a 3cm length of kaolin pipe stem (6/64" bore), and a Prosser pie crust type ceramic button. Given the sparse distribution and fragmented nature of the assemblage this historic field scatter of Area 2 can be attributed to casual dumping, both along Middle Country Road and associated with the 20th century use of the project area as an active farm and residence.

Locus 1

Locus 1 is comprised of 12 lithic objects collected from STPs G56, J52, J53 and subsequent radials. The material recovered from this locus includes 2 flakes, 3 flake fragments, one split pebble, 4 chunks, and 2 pieces of shatter. Angular fragments, shatter, and chunks are prevalent in this area, and non-cultural broken rocks were also abundant.

Locus 2

Locus 2 is centered on STP E6. A partial projectile point and two flake fragments were recovered from Stratum I of E06 during initial investigations, and a flake fragment and a split cobble were recovered from the subsequent radials. The flake fragments from E06 were both made on coarse grained white quartz, and one showed evidence of fresh breaks along two of its edges. The partial projectile point is made on fine-grained, translucent quartz (Photograph 8, left). One ear is missing. The distal tip shows signs of bifacial retouch, potentially re-sharpening, which has caused the plane of intersection of the two faces to appear twisted. The point has been designated as a Beekman Triangle due to the convex blade edges, slightly concave base, and dimensions (2.5 cm maximum length, Ritchie 1971). Beekman Triangles have been recovered from sites dating from the Transitional Archaic to the late Middle Woodland period (~3700-2,000 BP; Funk 1976; Hoffman 1991).

Locus 3

Locus 3 is centered on STP E24. A flake tool/scraper and a flake fragment were collected from STP E24 during initial investigations, and an irregular abrader and a flake tool fragment were recovered from subsequent radials. The flake tool/scraper is a flake produced by bipolar knapping which preserves a small amount of unifacial retouch along one edge. The flake tool fragment has unifacial retouch along one edge, which also preserves evidence of damage, and recent breaks along three other edges. Unifacial scrapers are often interpreted as expedient tools used for a variety of scraping tasks. The irregular abrader has a subcircular divot with rounded edges on one surface, while the opposing surface has a sheen on the coarse interstitial matrix. Abraders were commonly used to smooth the surface of implements made from other materials, such as wood or bone (Adams 2002).

Locus 4

Locus 4 was made up of 8 lithic objects recovered from STPs E40, E41, F25, F26 and subsequent radials. These include flake fragments (n=5), one piece of shatter, and two groundstone objects. The first groundstone object is a smoother made on micaceous schist which displayed linear, parallel striations on one face, similar to marks produced during soft material rendering. This object was most likely used to process animal products such as sinew or hide, or plant material such as reeds (Adams 2002; Bernstein 1999). The other object is a flat abrader, made on a coarse-grained granite material and fashioned from a split cobble. The flat surface created by the splitting of the cobble shows evidence of damage. The flat abrader also displays two v-shaped grooves on opposite faces, suggesting a secondary function grinding worked tool edges (Adams 2002).

Isolated Finds

Three finds have been determined to represent isolates. The first IF-1, was recovered from STP E13. It is a tested pebble with multiple stepped fractures along a single striking platform. It appears that numerous internal imperfections in the material prohibited invasive removals. The second (IF-02) was recovered from STP E15. It is a distal flake fragment. The third isolate (IF-3), recovered from STP F05, is a flake tool of indeterminate type. Unifacial retouch was used to produce notching on two edges. However, recent breaks are present on 2 other edges.

5

Conclusions and Recommendations

The conclusions reached during the Phase IB investigations are summarized below. The final recommendations follow the conclusions.

Conclusions

Except for Area 1 and the possible kettle pond depression in Area 3, the Project Area was subject to systematic shovel testing and initial boundary definition. The systematic shovel testing was conducted across Areas 2 and 3. The transects were oriented north-south and assigned letter designations west-to-east (A-J). Shovel test numbering was not consistent from north-to-south and the first and last numbers on each transect are shown on Figures 3a and 3b.

In total, 37 Indian Nation artifacts were recovered. These included 34 chipped stone artifacts and 3 groundstone artifacts. Indian Nation artifacts were found in Area 3 within USN 10306.001187 in STPs F54, G61, X10 in Feature 1, and Y11 in Feature 2. Included with the Indian Nation artifacts within the site is an Orient Fishtail base, two flakes and a core. Additional Indian Nation chipped and ground stone items were found in the disturbed and scraped area south of Site 10306.001187. This collection of artifacts was designated Locus 1 and chunks, chunky debris, a flake, flake fragments, and tertiary shatter were recovered from STP G56, G56+7.5N, G56+7.5E, J52, J52+7.5E, J52+7.5W, J53, and J53+7.5W. These were found in both strata I and II. Because of the angular nature of many of the breaks, it is suggested that the some of the items were either damaged or created by the scraping of the area immediately south of Site USN 10306.001187 and the kettle pond.

In Area 2, from north to south, Indian Nation chipped and/or ground stone were recovered at Locus 2, IF-1, IF-2, IF-3, Locus 3, and Locus 4. Radials excavated around the three isolated finds did not recover additional artifacts. This, however, was not the case with the other loci which are widely distributed south from Locus 1. Table 5-1 presents a summary of these isolated items and small concentrations and the distance between each.

Table 5.1 Distribution of Indian Nation Isolated Finds and Loci			
IF and Loci # (STPs + radials)	**Artifacts**	**Closest Positive STP North**	**Closest Positive STP South**
Locus 2 (STP E6, E6+7.5W)	Beekman Triangle, 2 flake fragments, 1 split cobble	150 ft N + 100 ft E (STP G56)	400 ft (E13)
IF-1 (STP E13)	Tested pebble	400 ft (E6)	100 ft (E15)
IF-2 (STP E15)	Distal flake fragment	100 ft (E15)	150 ft S + 50 ft E (STP F5)
IF-3 (STP F5)	Flake tool fragment, indeterminate type	150 ft (STP F5)	275 ft S + 50 ft W (STP E24+7.5N)
Locus 3 (STP E24, E24+7.5N)	2 flake tools, 1 flake fragment, 1 abrader	275 ft N (STP 5)	650 ft S (STP F25) and 800 ft S (STP E40)
Locus 4 (STP E40, E40+7.5E, E41, E41+7.5E, F25, F26, F26+7.5W)	3 flake fragments, 2 distal flake fragments, 1 flat abrader, 1 groundstone with parallel striations	650 ft N (STP F25)	Not applicable, parcel boundary is approximately 40 ft S of STP E41.

The distance between the various occurrences and those recovered in Area 3 suggests that the Indian Nation uses of the area were intermittent. The two temporally diagnostic artifacts, the Beekman Triangle and the Orient Fishtail, date to the latter years of the Archaic era, though the Beekman can extend in the Woodland era as well. Similarly, the projectile points reported to date west and east of the Project Area are predominately Late and Terminal Archaic (Bare Island, Orient Fishtail, Squibnocket) with a very low incidence of Middle to Late Woodland in the form of a single Levanna. While the Phase IB survey revealed no Indian Nation features, the variety of artifact types at Site USN 10306.001186 and Loci 2, 3, and 4 suggest that more than simple hunting activities may have been conducted.

Available documentation primarily in the form of historic maps and aerials document the presence of farms along Middle Country Road as early as the 1820s (Freeland et al. 2018). Many of the farms in the immediate area of the Project Area were, by the mid-1900s, of the same size. The 1947 and 1966 aerial photographs show the farms on the Boskowski, Project Area, and Satur Farms properties were very similar in configuration and acreage (Figure 6). The Suffolk County property records for the period between 1998 and 2010 suggest that the farm may have been owned by the Tintle family. The 1947 and subsequent aerials suggest that the farm was tilled at least until 1984 though by 1978 the barn had no roof (Figure 7). Feature 2 may still have been present in 1978 but is gone from the 1984 aerial.

The suite of aerials (Figures 6 and 7) illustrate episodes of stripping and spreading in Areas 1, 2, and 3. The boundary and topographic elevations suggest that the extent of the stripping and spreading was significant in Area 1 and that area was dismissed from further investigation during Phase IA. In Area 2, initial disturbance is noted in the vicinity of Locus 2 (STPs E06, E06+7.5W) on the 1984 aerial (Figure 7). However, the 2019 topographic survey (Figure 3a) recorded 80ft AMSL elevations both in the site location and north and west outside of the 1984 disturbance. It appears that the disturbance may have been minimal. Further south in Area

2, Locus 3 (E24, E24+7.5N) is not disturbed on either the 1978 or 1984 aerials. Finally, the Locus 4 locations are not disturbed on the north (F25, F26, F26+7.5W) but they appear more disturbed to the south (E40, E40+7.5E, E41, E41+7.5W). The Locus 4 components, however, are all confined to either the 65ft AMSL contour or the interface of the 65ft/66ft AMSL contours. This, again, suggests that the degree of disturbance may have been minimal.

The distribution of the historic artifacts on the Project Area is weighted to the northern 1/3rd of the Project Area. Isolated historic artifact fragments were found west and south of the homeplace area (see Figure 10a/b) but were concentrated in the immediate homeplace yard. The proposed site boundary for USN 10306.001186 encapsulates the homeplace yard as documented on the 1947 and 1966 aerial photographs (Figure 11).

Recommendations

The combined Phase IA/IB investigations yielded information on Indian Nation and Historic-era use of the Project Area. Indian Nation temporally diagnostic artifacts were recovered and what appear to be discrete artifact concentrations also were identified. It is recommended that no further investigation of the Indian Nation component in USN 10306.001186 or Locus 1 is warranted because of historic era disturbance. No further work is warranted for Isolated Finds 1, 2, and 3 because of low density and limited research value.

It is recommended that Phase II testing, including closer interval radials and one or two, 1-by-1-meter units be excavated at Loci 2, 3, 4 to refine the boundaries and to determine the integrity of the stratigraphy at Loci 2, 3 and 4. If NYSHPO accepts this recommendation, then a Phase II Work Plan with Research Design will be submitted.

Like the Indian Nation component of Site USN 10306.001187, the historic component of the site is badly disturbed. Soils have been moved and remixed across the homeplace area. The artifact assemblage is dominated by architectural debris, and very fragmented kitchen and household debris. There is a marked absence of personal items. Although there is a sparse assemblage of artifacts pre-dating the 20th century, these items form no discernable distributional pattern. In sum, the site is recommended not significant. Similarly, no further archaeological investigation of the thin, sparse historic scatter outside of the USN is recommended.

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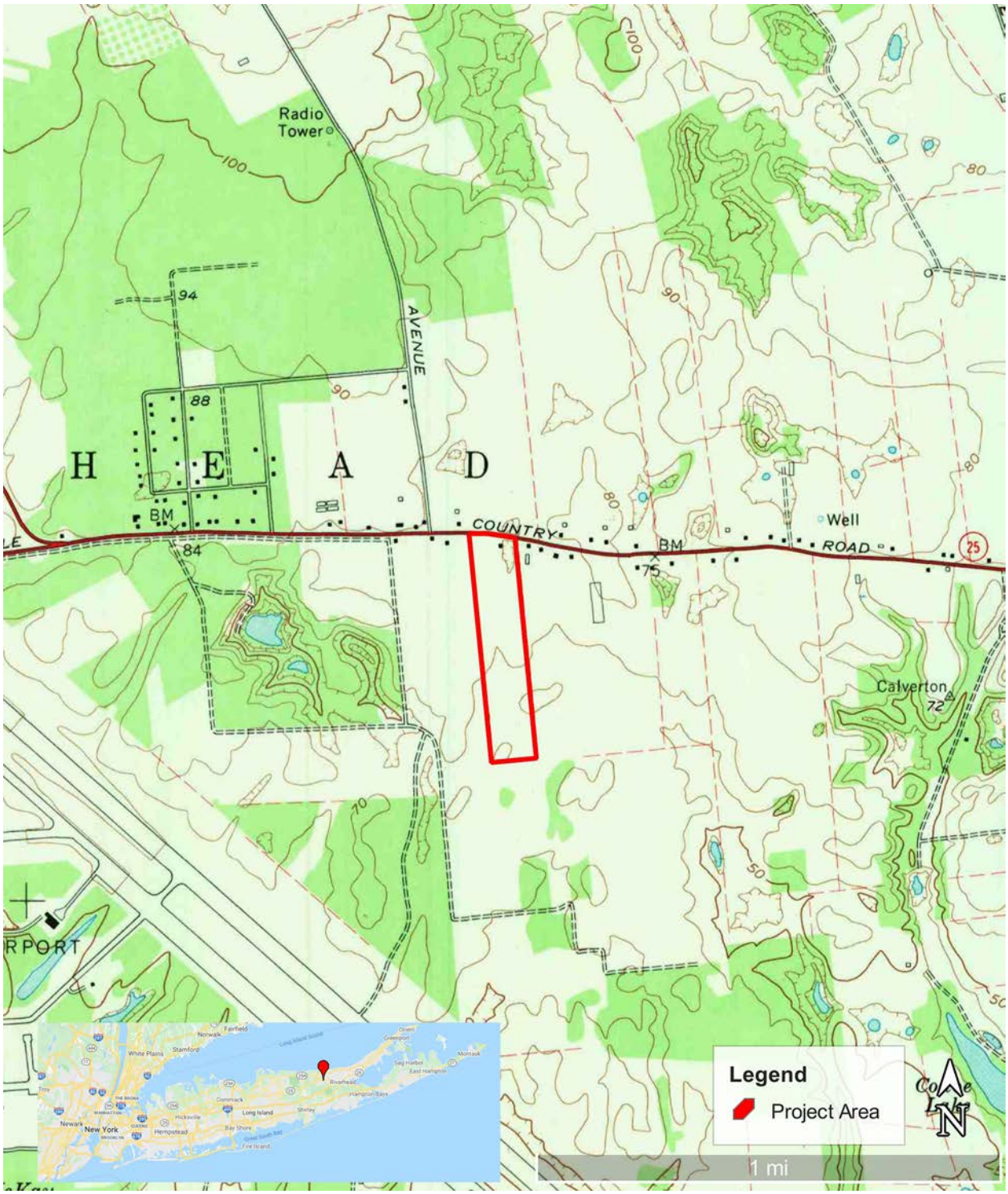
Appendix A – Figures



Source: ESRI Historical USGS, Wading River 7.5 minute

Proposed Industrial Park - HK Ventures LLC
4285 Middle Country Road, Calverton, Town of Riverhead, NY

Project Loction

Figure
1

Source: Google Earth

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

Photograph Locations

Figure **2**

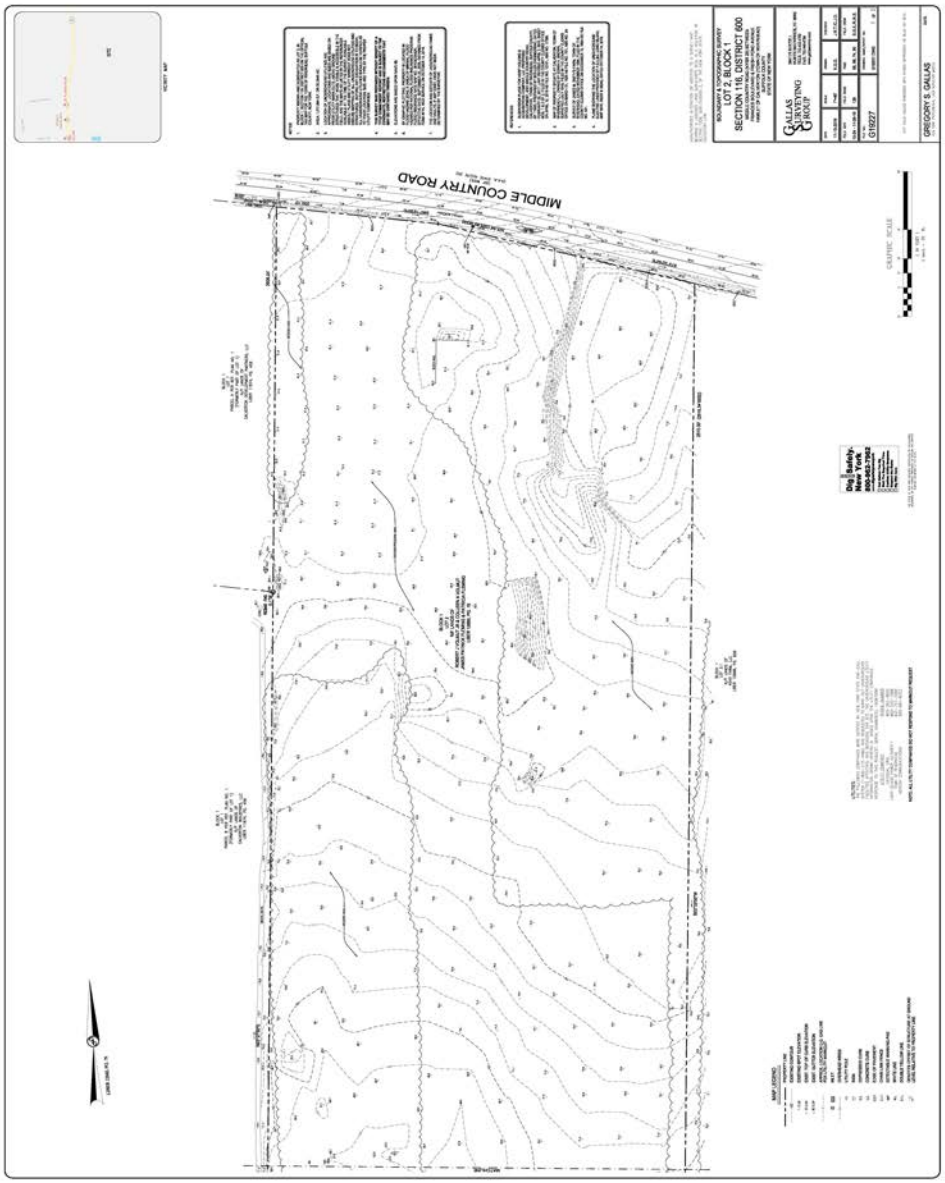


Figure 3a

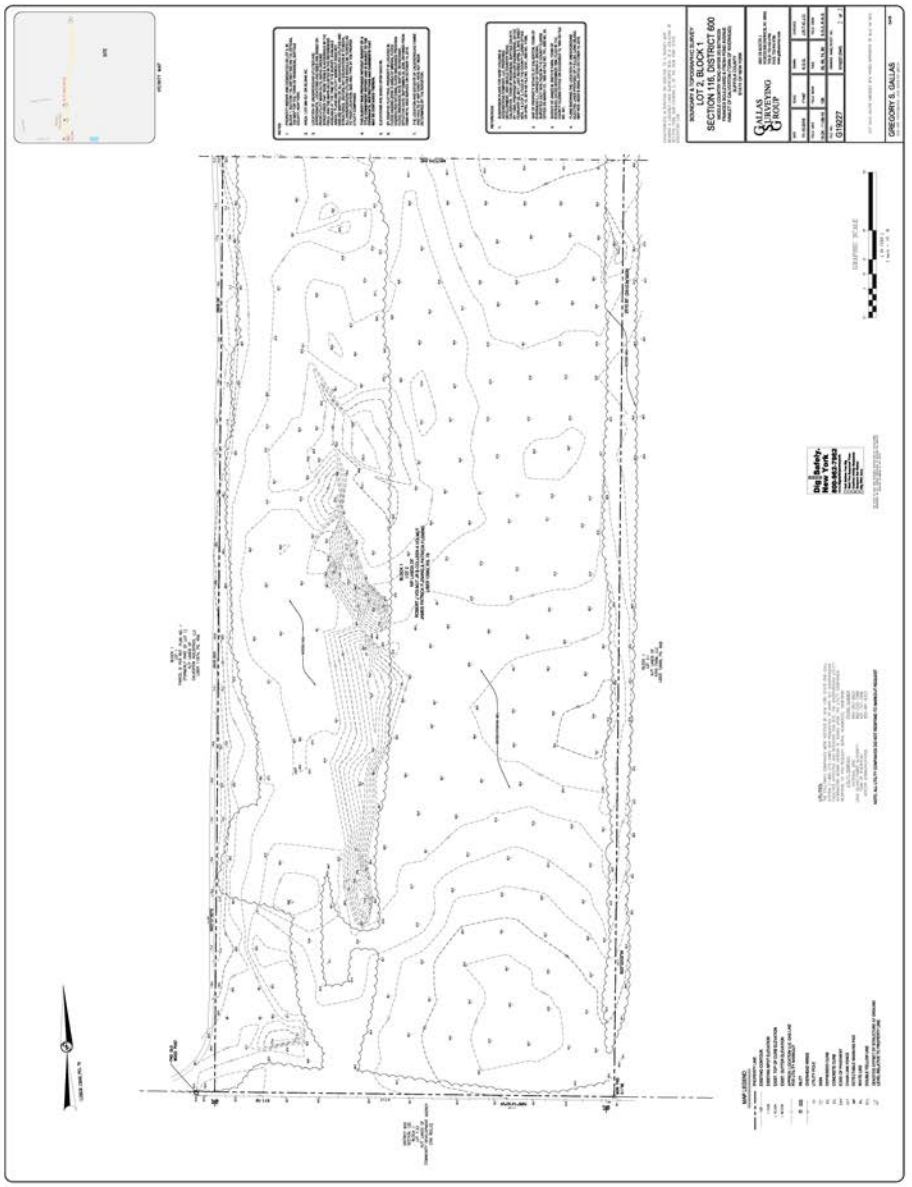


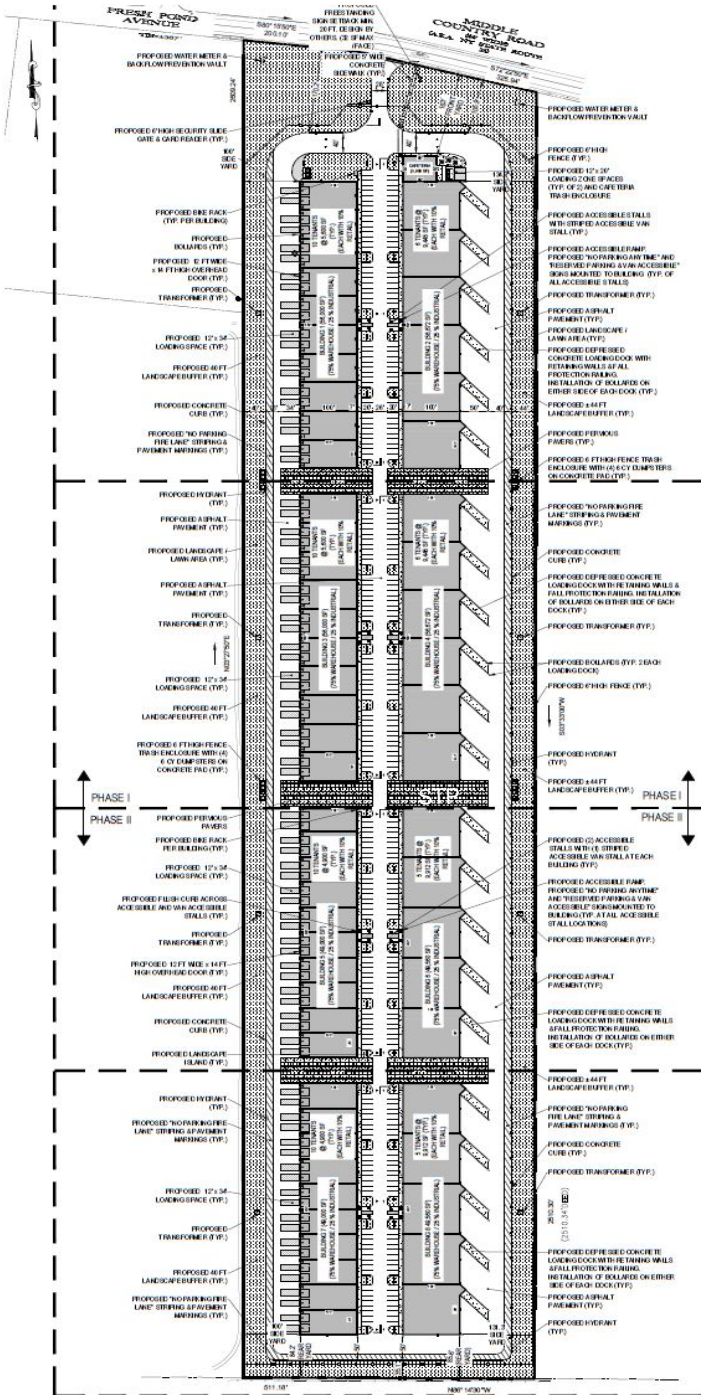
Figure 3b

Source: Gallas Surveying Group

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

Project Area Boundary and Topographic Survey

Figure **3a/b**

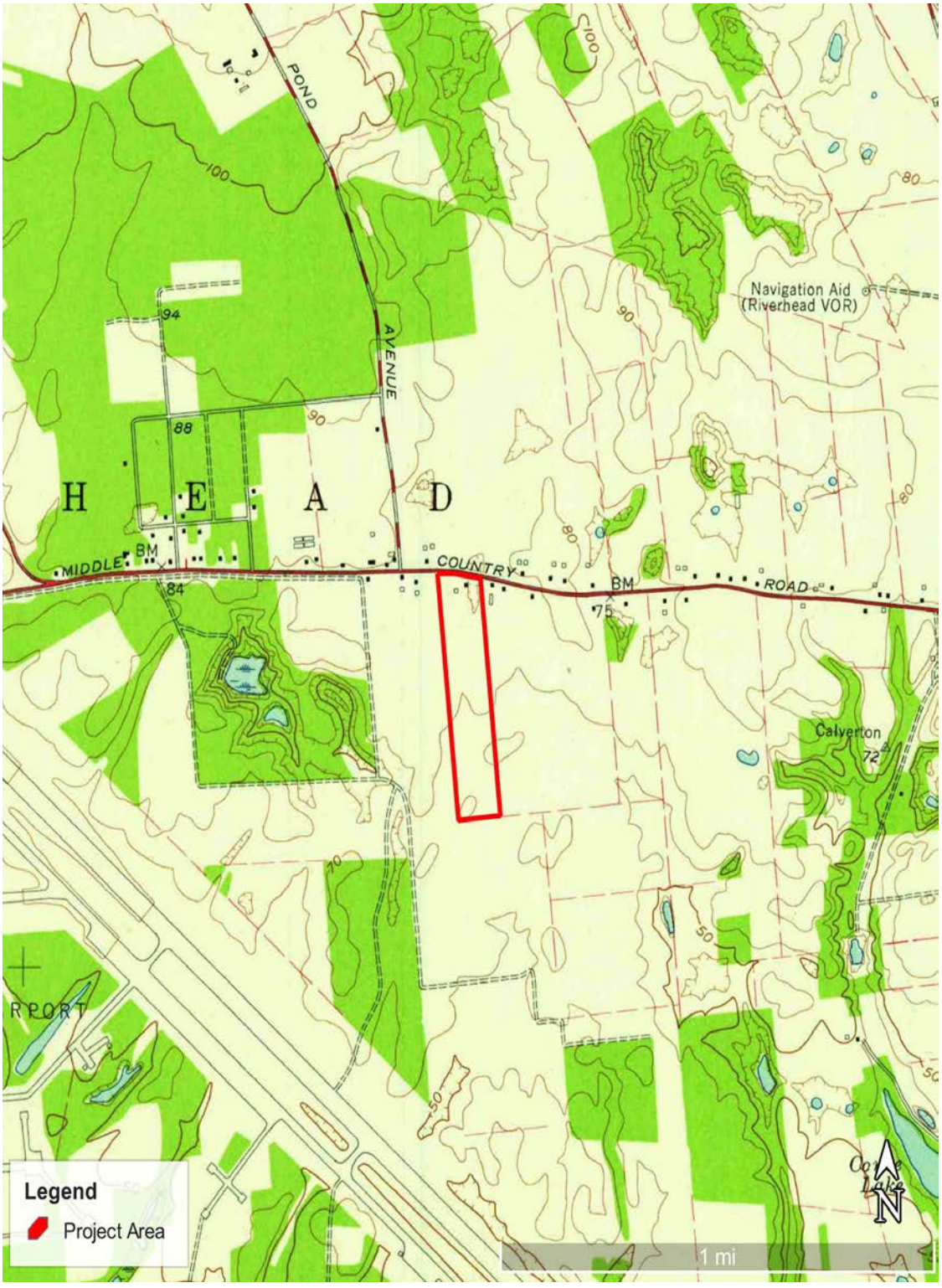


Source: Key Civil Engineering, Drawing No. C-3

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

Project Overall Site Plan (Sheet C-3)with Sewage Treatment Plant (STP) Location

Figure **4**

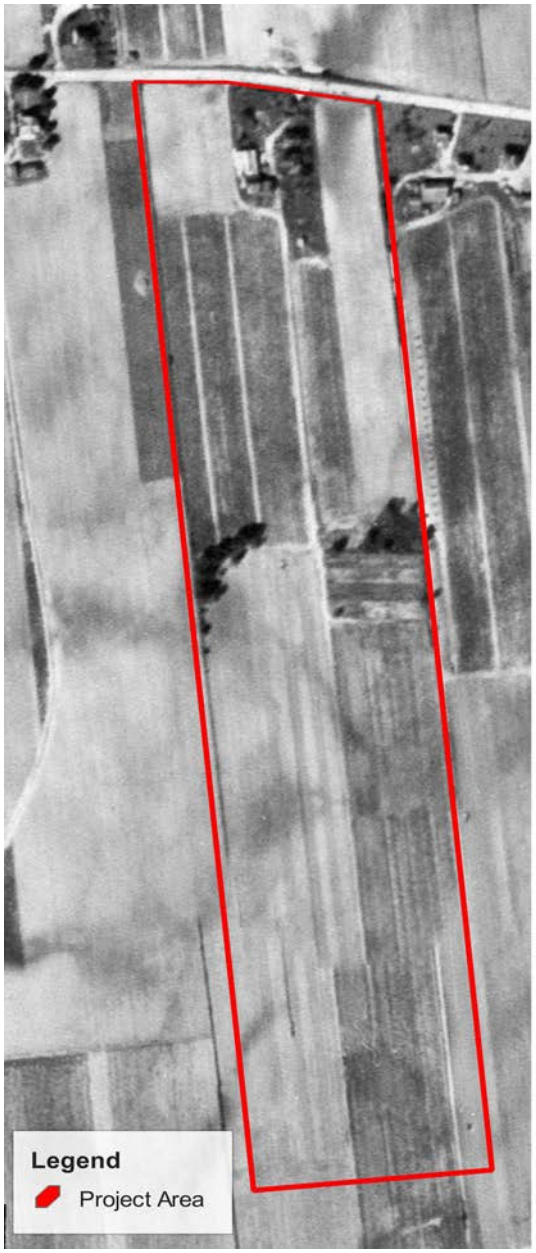


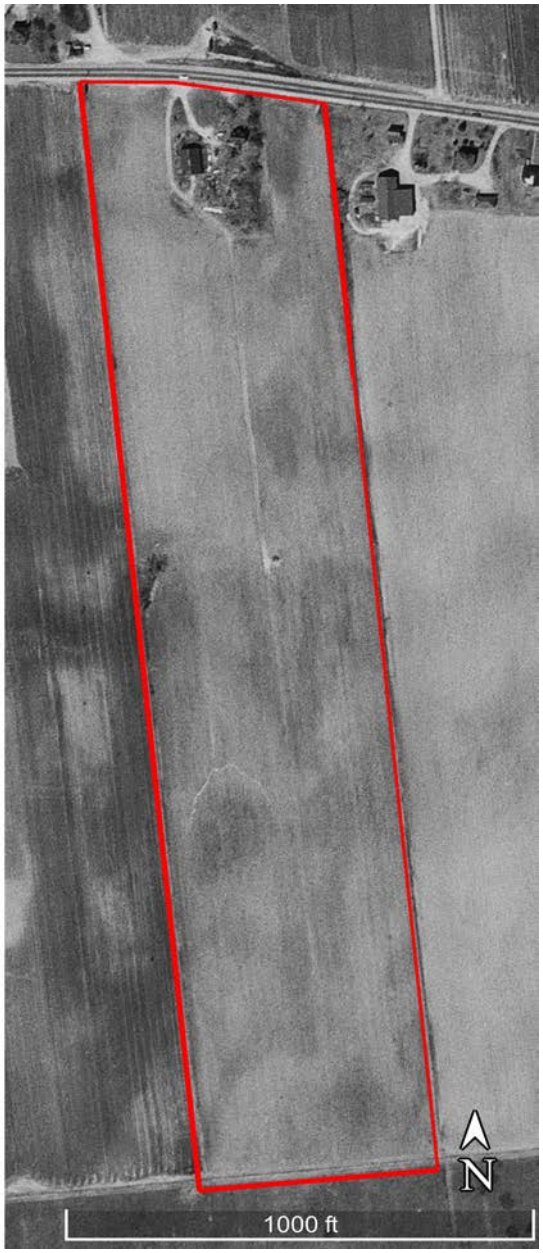
Source: ESRI Historical USGS, Wading River 7.5 minute

Proposed Industrial Park - HK Ventures LLC
4285 Middle Country Road, Calverton, Town of Riverhead, NY

1957 Wading River Quadrangle with Project Area

Figure **5**



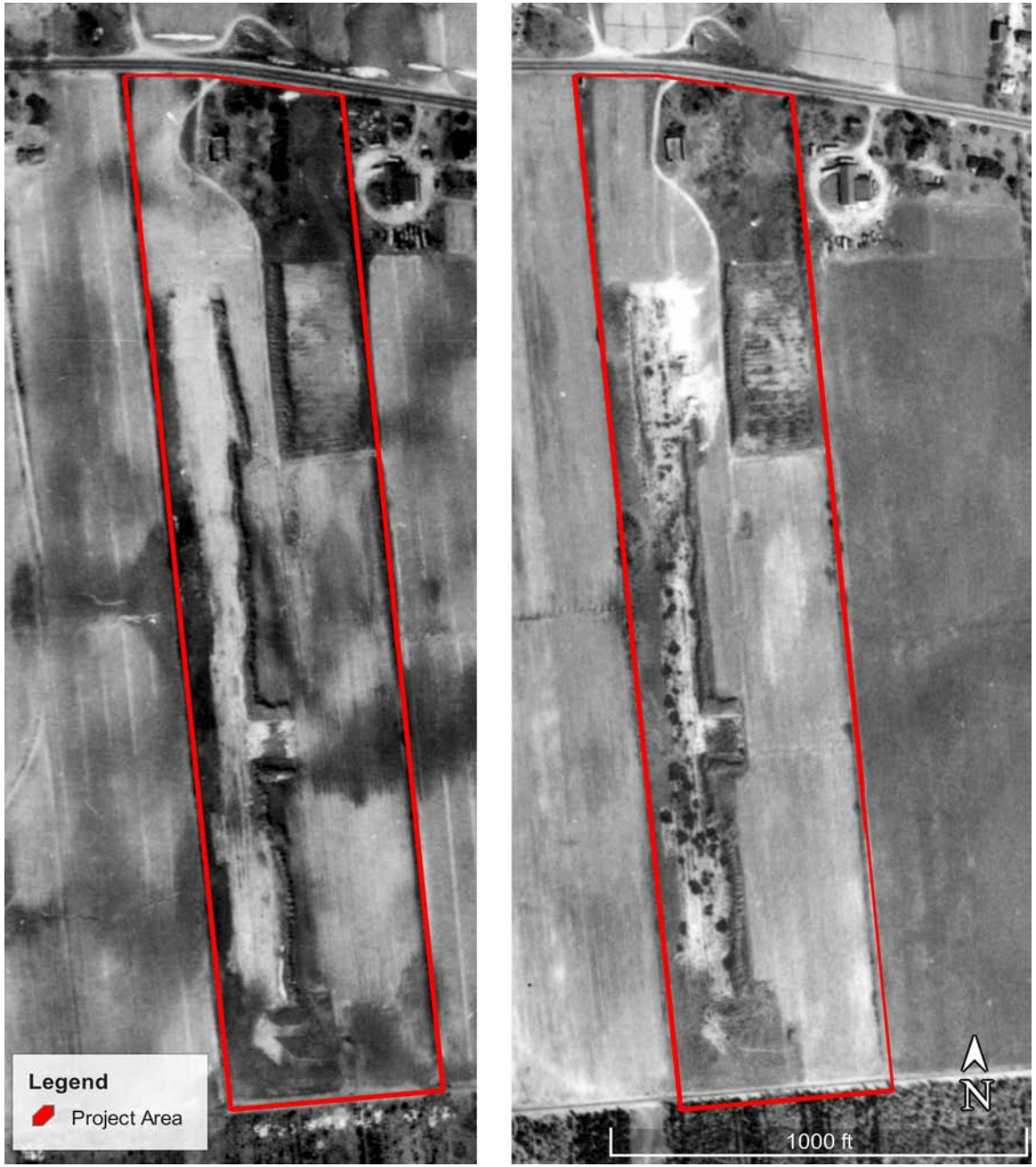


Source: Suffolk County GIS

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

1947 and 1966 Aerials with Farm

Figure
6

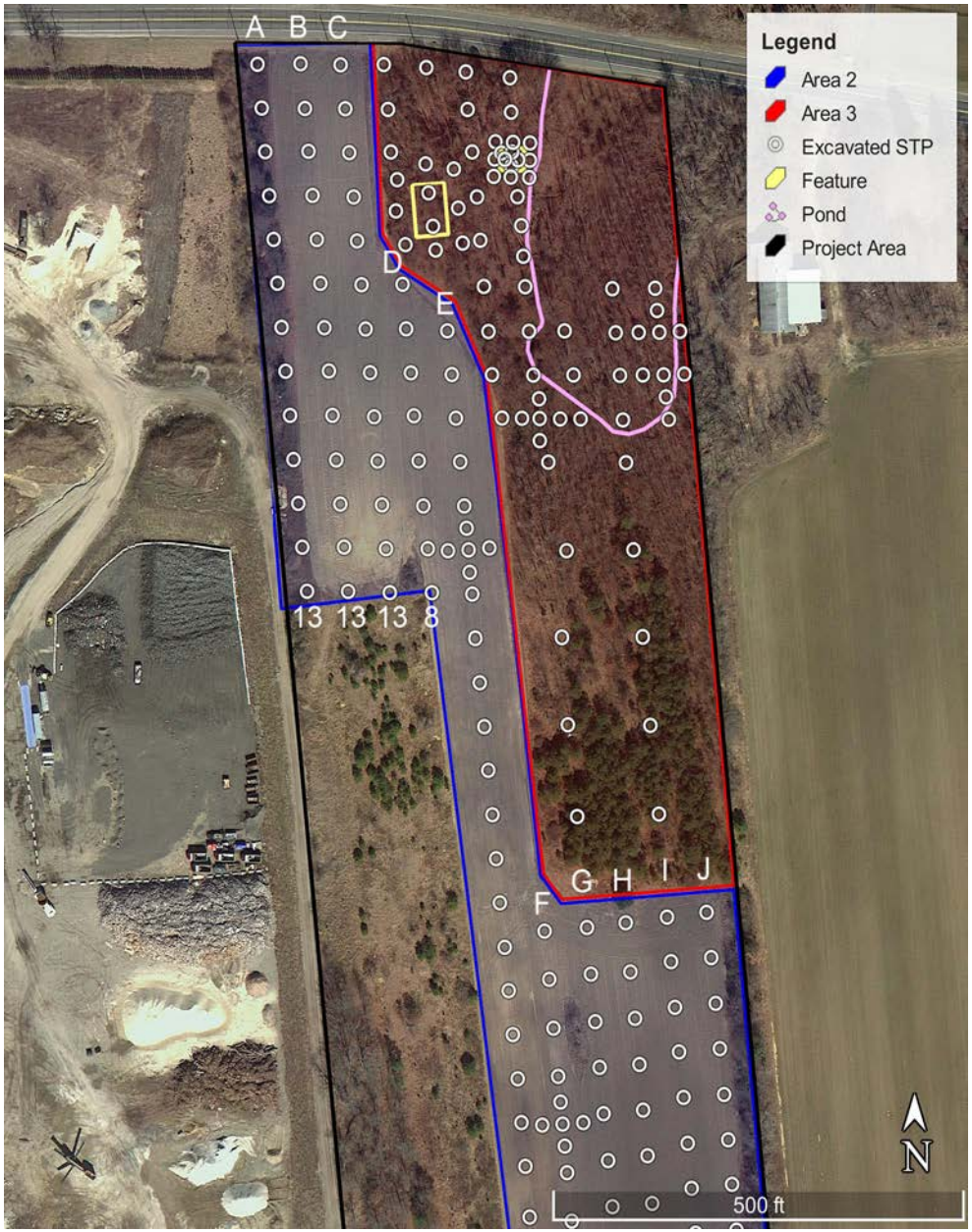


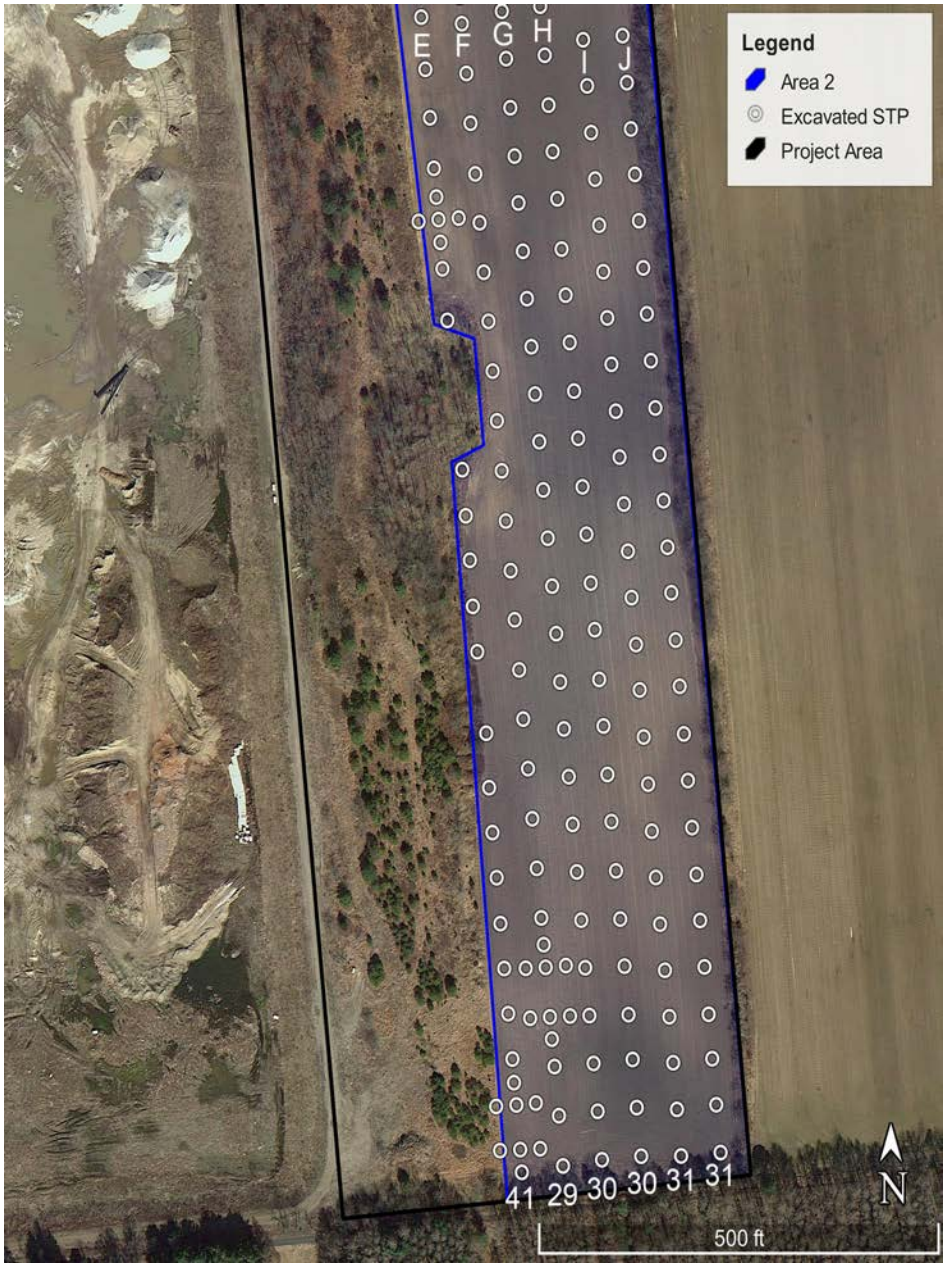
Source: Suffolk County GIS

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

1978 and 1984 Aerials with Farm

Figure
7



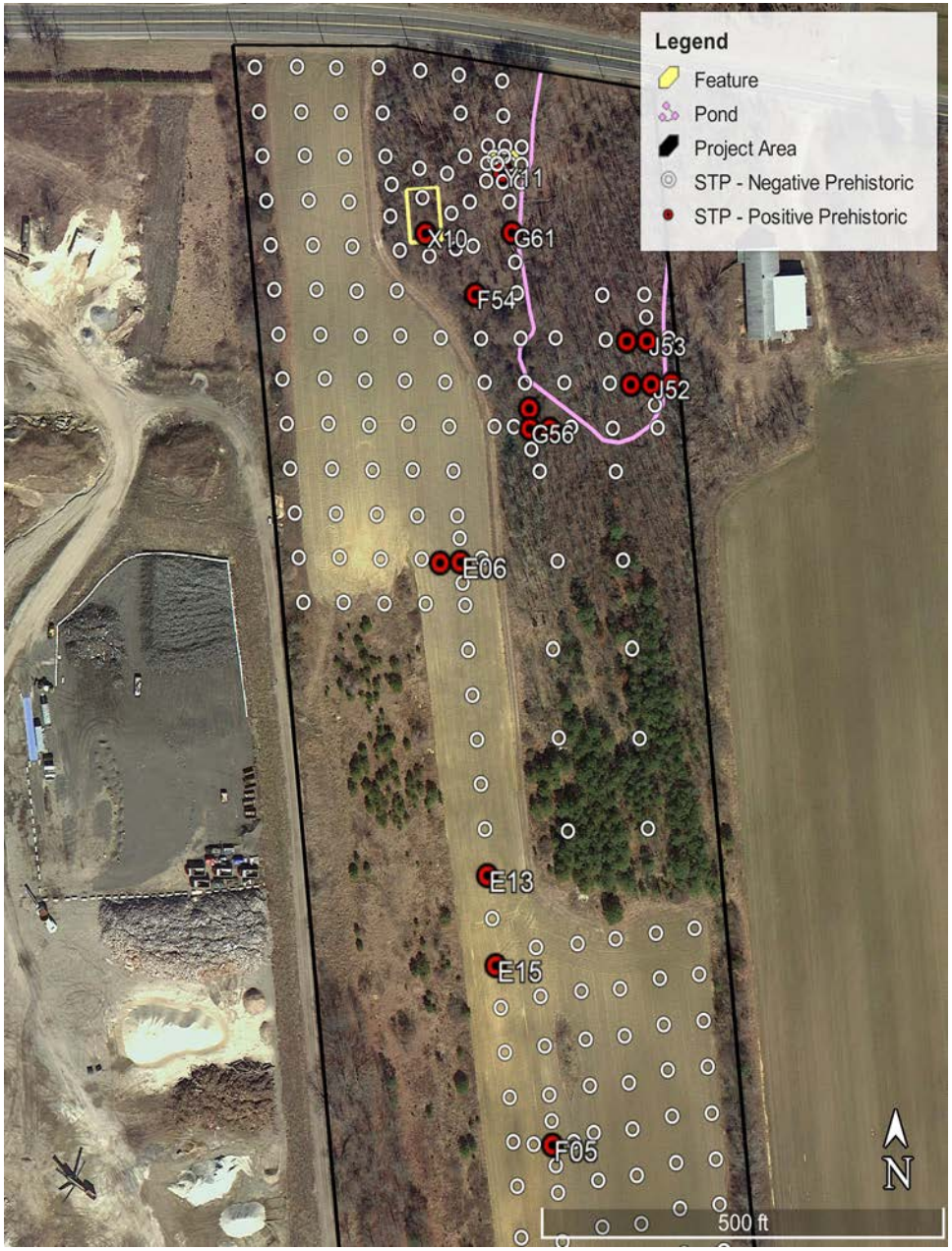


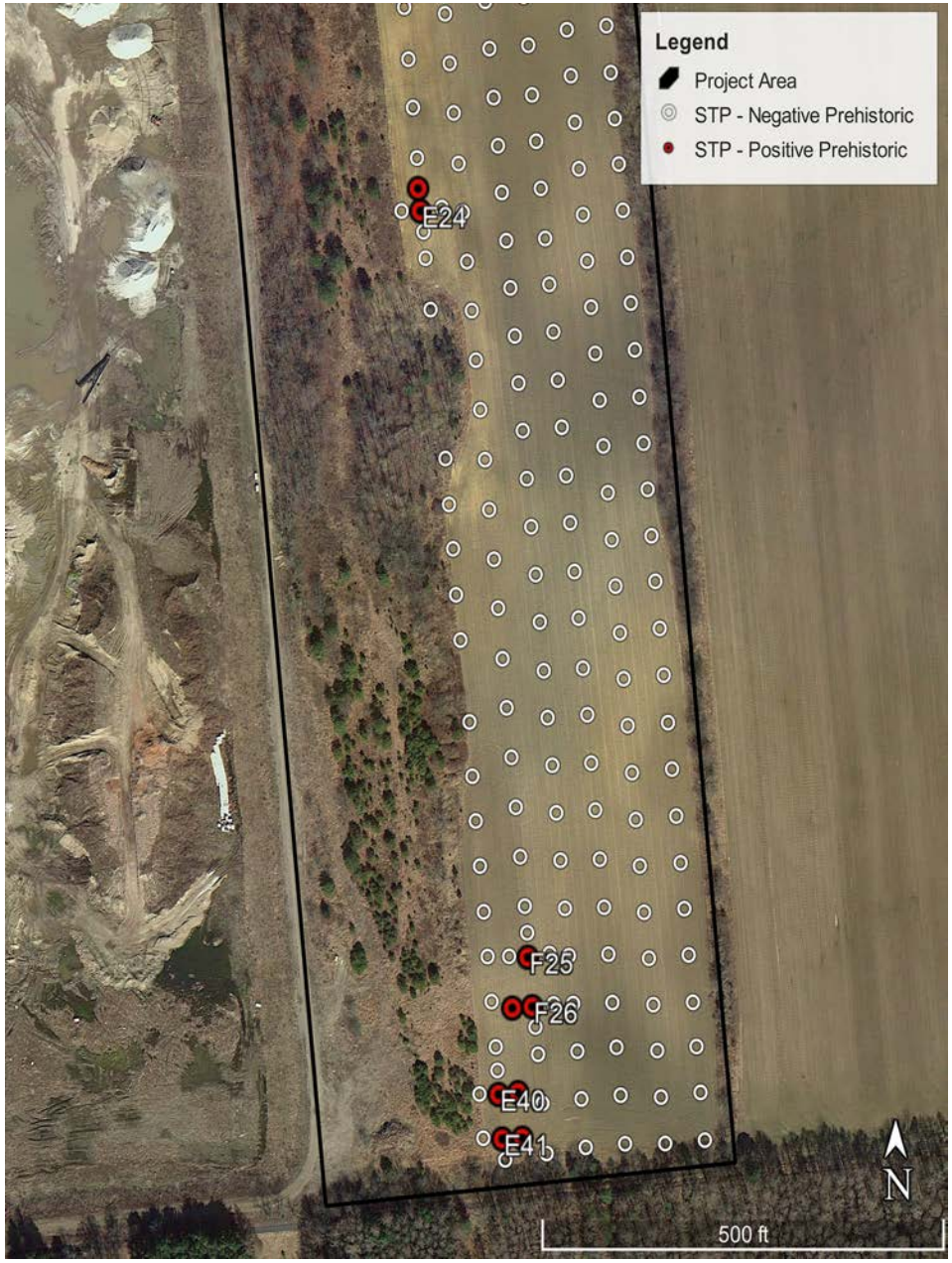
Source: Project Data

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

Phase IB Survey Transects and Radials

Figure **8a/b**



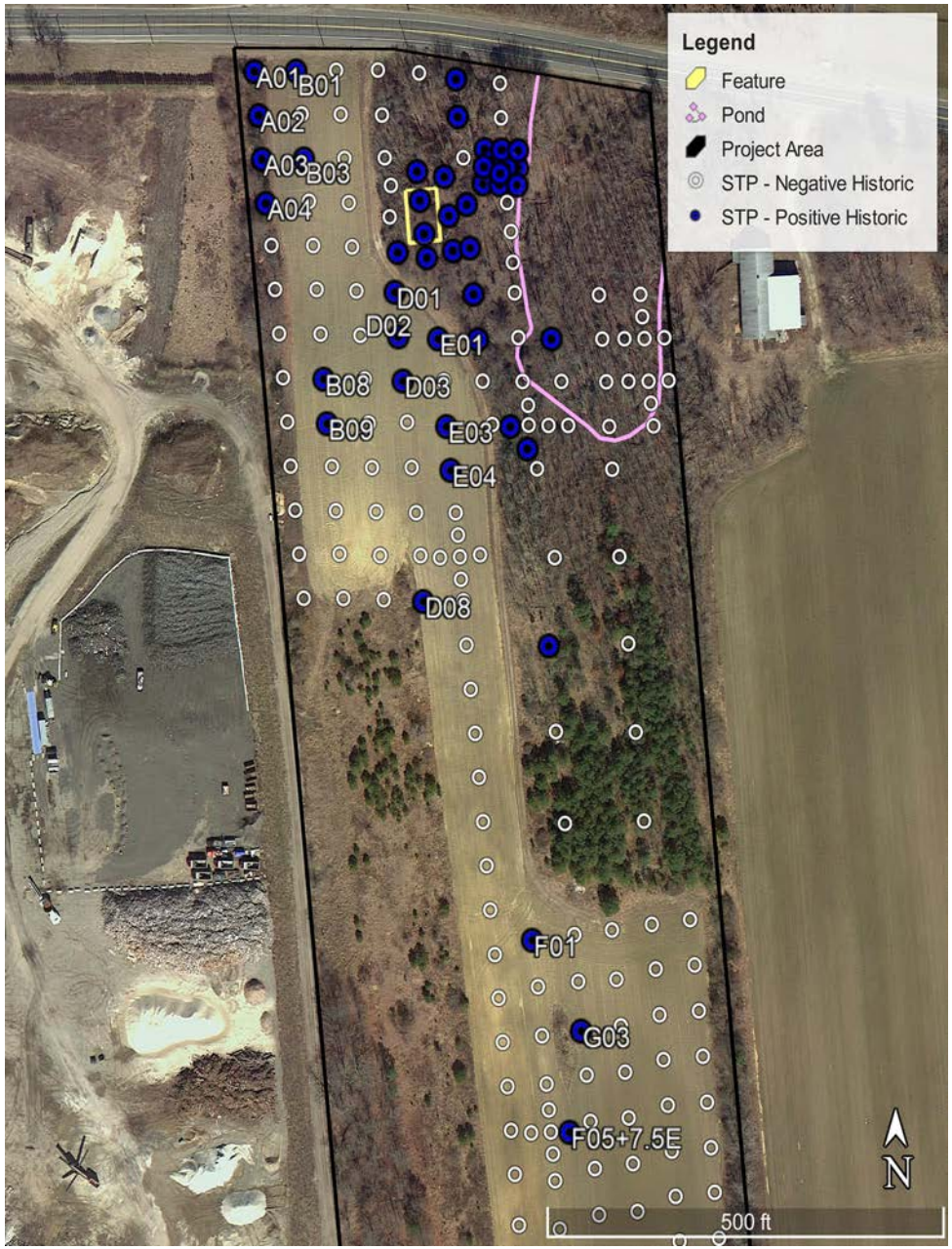


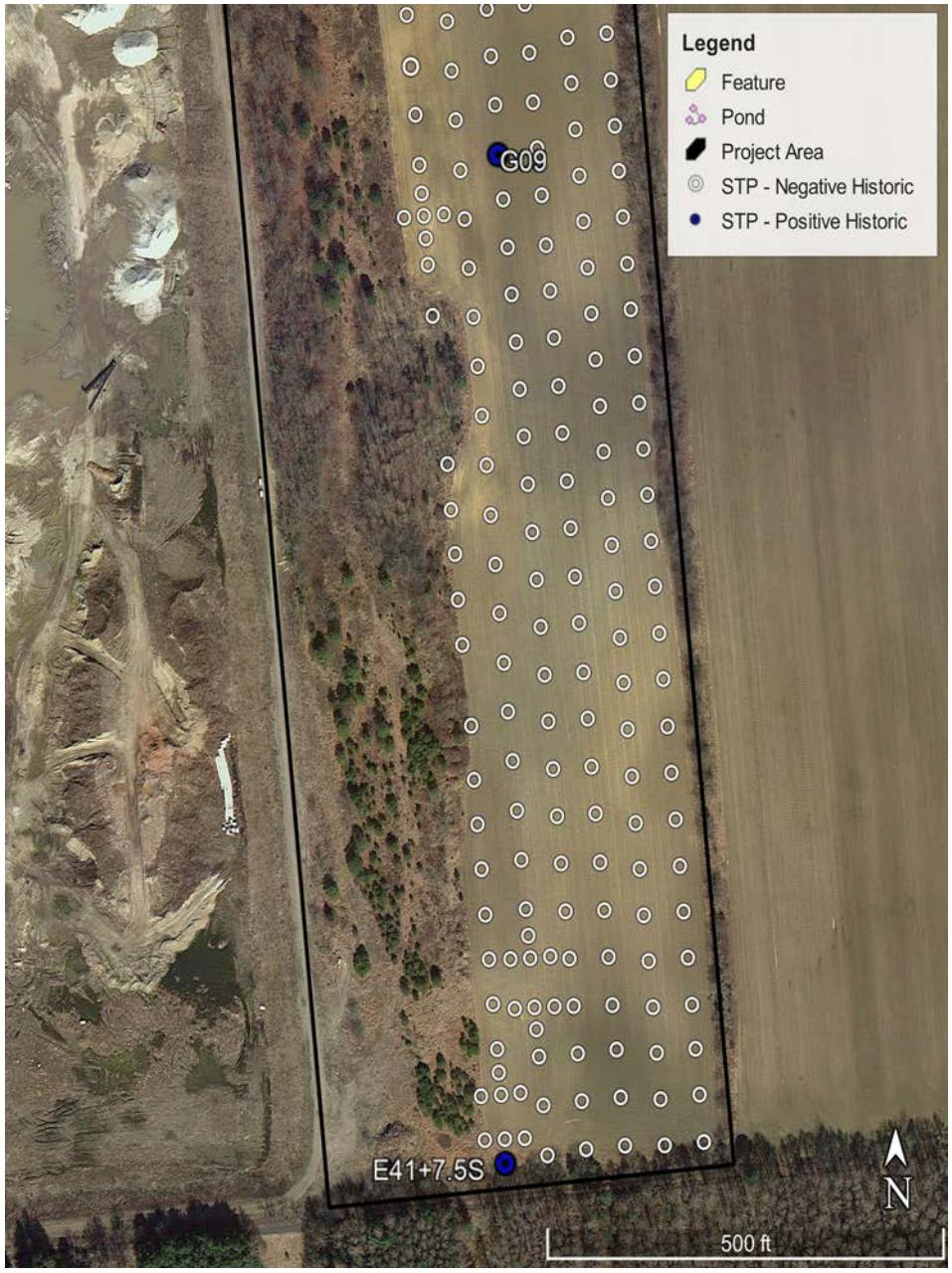
Source: Project Data

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

STP Locations with Indigenous Nation Chipped and Ground Stone

Figure **9a/b**



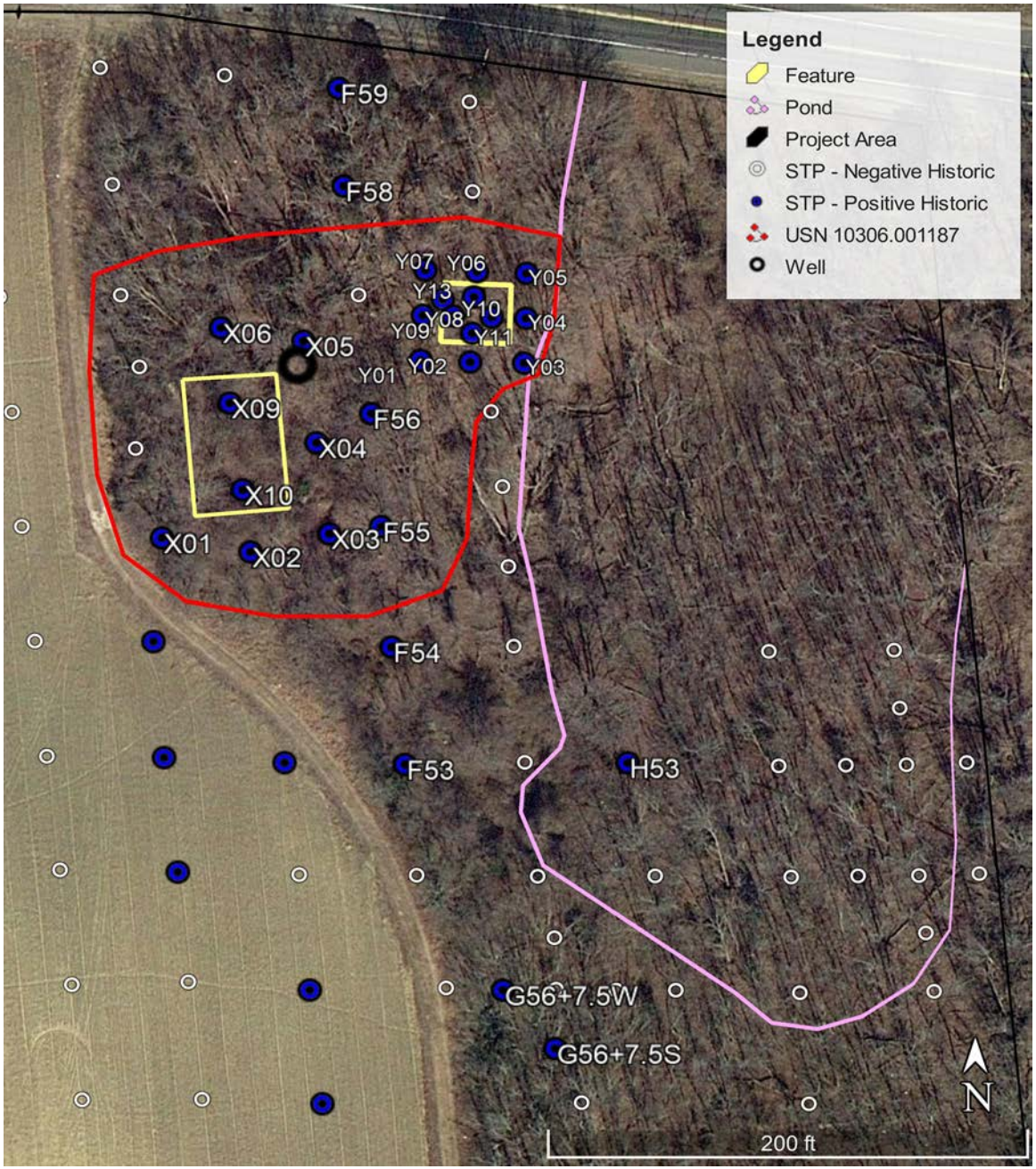


Source: Project Data

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

STP Locations with EuroAmerican Artifacts

Figure **10a/b**

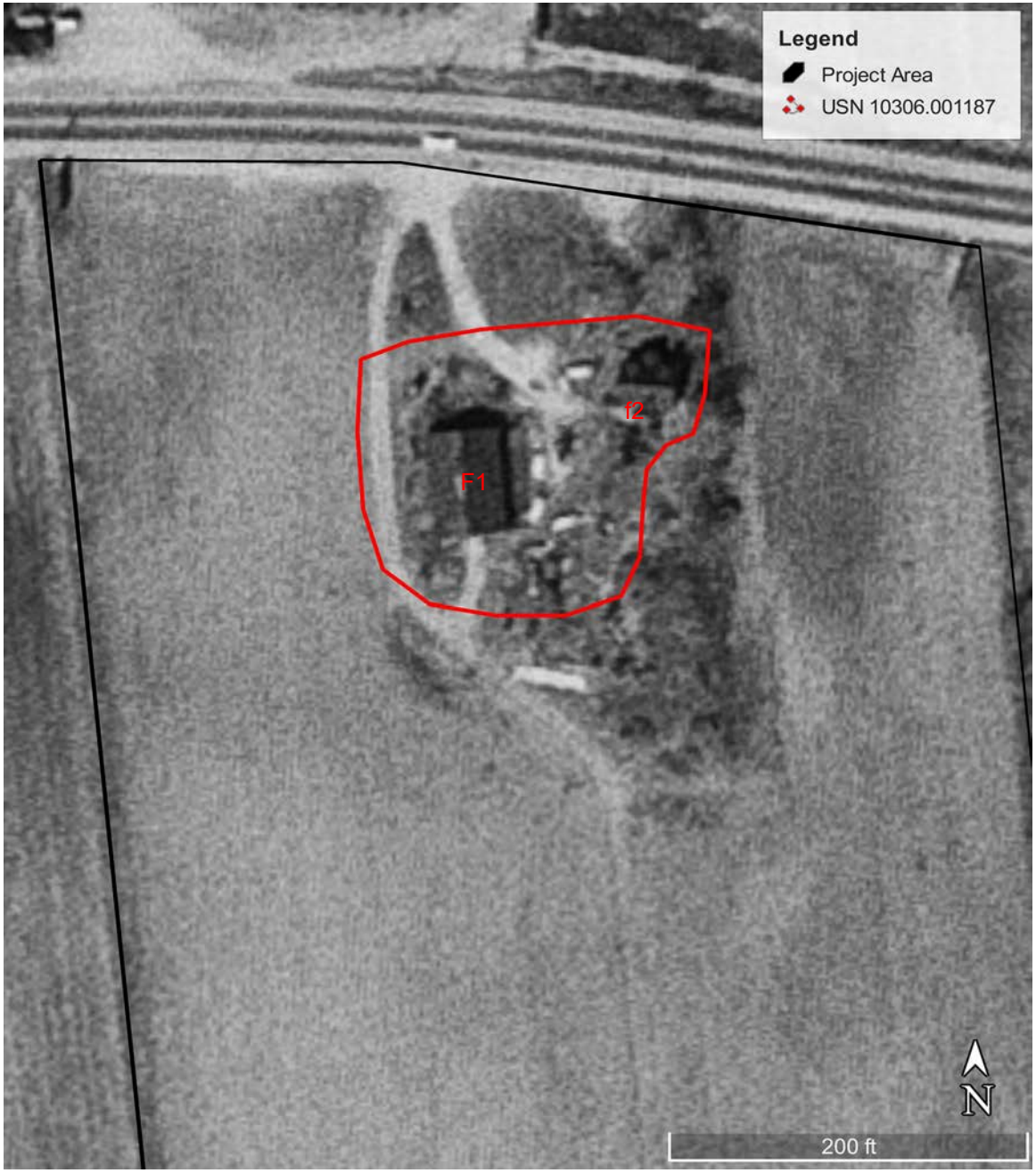


Source: Project Data

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

Detail of EuroAmerican Artifact Distribution in Area 3

Figure **10c**



Source: Suffolk County GIS, Project Data

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

USN 10306.001187 Boundary Based on Shovel Tests with Features 1 and 2 Marked

Figure **11**

Appendix B – Photographs

Photograph 1. Overview looking south from Middle Country Road at Area 2.

Photograph 2. STP E06 (Locus 2)

Photograph 3. STP E41+7.5E (Locus 4, southern part).

Photograph 4. USN 10306.001187 Feature 3 (well) and Feature 1 (barn, wall)

Photograph 5. STP Y12 within Feature 2 (cellar) showing demolition debris layer in STP bottom.

Photograph 6. STP Y12, Feature 2 demolition debris layer.

Photograph 7. STP Y13 west wall of Feature 2 (cellar).

Photograph 8. Beekman Triangle (l.) and Orient Fishtail (r.) fragments.

Appendix C – Agency Correspondence

NEW YORK STATE OF OPPORTUNITY. Parks, Recreation and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

ARCHAEOLOGY COMMENTS

Phase IA/IB Archaeological Survey Recommendation
Project: Proposed Industrial Park – HK Ventures
PR#: 20PR02526
Date: 4/22/2020

Your project is in an archaeologically sensitive location. Therefore, the State Historic Preservation Office/Office of Parks, Recreation and Historic Preservation (SHPO/OPRHP) recommends a Phase IA/IB archaeological survey for components of the project that will involve ground disturbance, unless substantial prior ground disturbance can be documented. A Phase IA/IB survey is designed to determine the presence or absence of archaeological sites or other cultural resources in the project's Area of Potential Effects (APE).

If you consider the entire project area to be disturbed, documentation of the disturbance will need to be reviewed by SHPO/OPRHP. Examples of disturbance include mining activities and multiple episodes of building construction and demolition. Documentation of ground disturbance typically consists of soil bore logs, photos, or previous project plans. Agricultural activity is not considered to be substantial ground disturbance.

Please note that in areas with alluvial soils or fill archaeological deposits may exist below the depth of superficial disturbances such as pavement or even deeper disturbances, depending on the thickness of the alluvium or fill. Evaluation of the possible impact of prior disturbance on archaeological sites must consider the depth of potentially culture-bearing deposits and the depth of planned disturbance by the proposed project.

Our office does not conduct archaeological surveys. A 36 CFR 61 qualified archaeologist should be retained to conduct the Phase IA/IB survey.

Please also be aware that a Section 233 permit from the New York State Education Department (SED) may be necessary before archaeological fieldwork is conducted on State-owned land. If any portion of the project includes the lands of New York State, you should contact the SED before initiating survey activities. The SED contact is Christina Rieth and she can be reached at (518) 402-5975 or christina.rieth@nysed.gov. Section 233 permits are not required for projects on private land.

If you have any questions concerning archaeology, please contact Tim Lloyd at 518-268-2186 or Timothy.Lloyd@parks.ny.gov

TOWN OF RIVERHEAD
PLANNING DEPARTMENT

201 HOWELL AVENUE, RIVERHEAD, NEW YORK 11901-2596
(631) 727-3200, FAX (631) 727-9101

Jefferson V. Murphree, AICP	John F. Flood, Jr.	vacant	Greg Bergman	Carissa Collins
Town Building and Planning Administrator	*Environmental Planner*	*Planner*	*Planning Aide*	*Planning Board Secretary*
Ext. 239	*Ext. 207*	*Ext. 206*	*Ext. 264*	*Zoning Board Secretary*
				Ext. 240

STAFF REPORT

To: Stan Carey, Chairman
Planning Board

From: Greg Bergman, Planning Aide

Re: **HK Ventures – Calverton**
4285 Middle Country Road, Calverton, NY
SCTM #600-116-1-2

Date: May 15, 2020

Current Application

The Planning Department has received and reviewed a site plan application proposing to develop a vacant parcel of industrial land with a phased development consisting of a total of 425, 464 sq. ft. of industrial space across a total of eight (8) buildings, ranging in size from 49,000 sq. ft. through 56,672 sq. ft., with divided tenant spaces. The proposed development includes a 3,000 sq. ft. accessory cafeteria for tenants of the industrial complex, parking, lighting, landscaping, loading bays, stormwater management, and on-site sanitary systems.

SEQRA

The proposed site plan application is a Type 1 Action pursuant to 6NYCRR part 617.4(b)(6), as the project proposes physical alteration in excess of 10 acres, requiring mandatory coordinated review among involved agencies. Involved agencies have been identified as the following:

1. New York State Department of Transportation
2. Suffolk County Department of Health Services
3. Suffolk County Planning Commission
4. New York State Department of Environmental Conservation
5. Town Board of the Town of Riverhead
6. Town of Riverhead Water District
7. New York State Office of Historic Preservation
8. Town of Riverhead Building Department
9. Town of Riverhead Fire Marshal's Office
10. Town of Riverhead Zoning Board of Appeals

cweed
Sticky Note
New York State Office of Parks, Recreation and Historic Preservation

11. LIPA/PSEG

Planning Staff recommends that the Planning Board circulate a request for Lead Agency status for the purposes of SEQRA review.

Site Location, Existing Conditions & Surrounding Area

The subject parcel, particularly identified as SCTM No. 600-116-1-2, is located at 4285 Middle Country Road (State Route 25), on the south side of the road, approximately 570 ft. east of the intersection of Middle Country Road and Fresh Pond Ave (see Figure 1). The subject parcel is located within the Industrial C (Ind C) zoning use district.

Figure 1: Aerial view of subject parcel, taken from Suffolk County GIS.

The subject parcel is 30.254 acres is size, with approximately 525 ft. of frontage on Middle Country Road, and which extends approximately 2,600 ft. south from Middle Country Road. The property is generally flat, with the exception of some mounds of earthen material which have grown over with vegetation, found in several locations throughout the subject property (see Figure 2). The composition and origin these piles is unknown, although are likely remnants of historic farming which took place on the subject property.

Figure 2: Earthen mound overgrown with vegetation. Typical of several locations on-site.

cweed
Sticky Note
Tractor Supply Company

The property shares its western property boundary with the Tractor Supply retail store site, as well as Sky Materials C&D processing site, and its eastern property boundary is shared with a farm parcel which is currently enrolled in Suffolk County Agricultural Commitment program. The parcel's southern property boundary abuts the Town owned EPCAL property, as well as a portion of the EPCAL recreational bike path.

Plans Submitted

The Planning Department has received and reviewed a site plan, prepared and stamped by Jaclyn Peranteau, PE, last dated January 24, 2020, with sheets labeled C-1: Cover Sheet, C-2: Notes Sheet, C-3: Overall Site Plan, C-4: Partial Site Plan (Section A – Phase I), C-5: Partial Site Plan (Section B – Phase I), C-6: Partial Site Plan (Section C – Phase II), C-7: Partial Site Plan (Section D – Phase II), C-20: Overall Landscape Plan, C-21: Partial Landscape Plan (Section A – Phase I), C-22: Partial Landscape Plan (Section B – Phase I), C-23: Partial Landscape Plan (Section C – Phase II), C-24: Partial Landscape Plan (Section D – Phase II), C-25: Overall Lighting Plan, C-26: Partial Lighting Plan (Section A – Phase I), C-27: Partial Lighting Plan (Section B – Phase I), C-28: Partial Lighting Plan (Section C – Phase II), C-29: Partial Lighting Plan (Section D – Phase II), C-30: Overall Erosion & Sediment Control Plan, C-31: Site Details, C-32: Site Details II, C-33: Site Details III, FM-1: Fire Marshal Plan; a two page property survey, prepared and stamped by Gregory S. Gallas, LS, last dated November 15, 2019; and building elevations, prepared and stamped by Alexander Badalamenti, RA, with sheets labeled A1.0 and A2.0, last dated January 24, 2020.

It is noted that the drawing list on the cover sheet of the site plan lists the following pages which were **not** included with the application submission packet:

C-8: Overall Grading & Drainage Plan, **C-9**: Partial Grading & Drainage Plan (Section A – Phase I), **C-10**: Partial Grading & Drainage Plan (Section B – Phase I), **C-11**: Partial Grading & Drainage Plan (Section C – Phase II), **C-12**: Partial Grading & Drainage Plan (Section D – Phase II), **C-13**: Overall Sanitary & Utility Plan, **C-14**: Partial Sanitary & Utility Plan (Section A – Phase I), **C-15**: Partial Sanitary & Utility Plan (Section B – Phase I), **C-16**: Partial Sanitary & Utility Plan (Section C – Phase II), **C-17**: Partial Sanitary & Utility (Section D – Phase II), **C-18**: Sanitary & Utility Notes & Details I, **C-19**: Sanitary & Utility Notes & Details II, **C-30**: Overall Erosion & Sediment Control Plan, **C-31**: Site Details, **C-32**: Site Details II, **C-33**: Site Details III.

These drawings must be submitted prior to SEQRA and site plan comment referrals to involved agencies and the Town's Consulting Engineer.

Proposed Phased Development and Layout

The industrial development on the subject parcel is proposed to be spread out in a "campus style" development, with the uses occupying four separate buildings. Due to the configuration of the parcel, the buildings are oriented in a north-south direction, with truck traffic, circulation, and loading areas proposed along the "outside" of the site along eastern, western, and southern property boundaries. The main parking/drive aisle area for non-truck traffic is proposed through the center of the parcel in between the two sets of buildings.

The project is proposed to be developed in two phases, Phase 1 consisting of developing the northern portion of the site by creating an access point from Middle Country Road, construct the "front" four buildings, identified as Buildings 1-4 on the site plan, constructing parking, lighting, landscaping, drainage, and required sanitary improvements, while Phase II consists of developing the southern portion of the site by constructing Building 5-8 as well as additional parking and landscaping areas.

Suffolk County Groundwater Management Zone

The project site is located within Suffolk County Groundwater Management Zone III, which has an allowable sanitary flow of 300 gallons per day, per acre. The subject parcel, being 30.2545 acres in size, has an allowable sanitary flow of 9,076.35 gallons per day. The sanitary density allowance is only sufficient to cover the proposed Phase I development. According to the applicant's sanitary calculations, the proposed Phase II development will require the purchase and redemption of 26.3 Pine Barrens credits to permit the sanitary density from the Phase II buildout.

Riverhead Water District

The front ~500 ft. of the subject site is partially located within Riverhead Water District Extension No. 37R (Calverton) (see Figure 2). Approval of this project will require action by the Town Board to extend the water district to serve the entire parcel.

Figure 2: Image taken from Town GIS identifying the limits of Riverhead Water District Extension No. 37R (Calverton).

Fire Districts

It is noted that the subject parcel is located partially within three (3) separate and distinct fire districts, Riverhead, Wading River, and Manorville (see Figure 3). A copy of the proposed site plan and request for comments will be referred to each Fire District for their review and comment. Jurisdiction over the site should be established in order to prevent multiple departments reporting to an emergency call from the site.

Figure 3: Subject parcel, identified in green, located within three separate Fire Districts, taken from Town GIS.

Zoning Chart & Required Variances

The site plan provides a zoning chart which demonstrates conformance with the Industrial C dimensional regulations. It is noted that a Floor Area Ration (FAR) calculation is omitted from this zoning chart. The FAR must be included on future submissions.

The site plan currently identifies the need for ZBA relief for proposed impervious surface coverage, where 73.05% impervious coverage is proposed, and 60% is the maximum permitted under the Industrial C zoning code. Pending the FAR calculation being provided on a revised site plan, a denial letter will be drafted for any required relief.

Site Ingress/Egress

The site plan currently proposes a 28 ft. wide, two-way access point from Middle Country Road. The access road would approximately centered along the parcel's frontage.

Proposed Retail Space

The site plan includes notes on all buildings that each tenant has 10% retail space, however, this is somewhat problematic with regards to zoning. Town Code §301-122C(2) permits retail uses as accessory to wholesale business, subject to the following limitations:

1. Retail use shall not exceed 10% of the gross floor area of the wholesale business or 3,000 square feet, whichever is less.
2. The parcel shall have frontage on an arterial road.
3. Retails uses shall be located at the front of the parcel and building.
4. Off-street visitor parking shall be provided.

Current Recommendations

At this time, staff recommends the Planning Board adopt a resolution initiating the SEQRA review process among involved agencies. The referral will include both a SEQRA lead agency request, as well as a request for site plan comments relative to the proposed development. Pending receipt of input from involved agencies, Planning will issue a new staff report which incorporates these comments and makes specific recommendations related to SEQRA and site plan issues.

cc: Jefferson V. Murphree, AICP, Building & Planning Administrator
Richard Ehlers, Esq., Town's Consulting Attorney
Keith Brown, Attorney for the Applicant
Jackie Peranteau, Engineer for the Applicant

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

May 28, 2020

Kim Gennaro-Oancea
Vice President
PW Grosser Consulting, Inc.
630 Johnson Avenue
Suite 7
Bohemia, NY 11716

Re: DEC
Proposed Industrial Park – HK Ventures LLC
4285 Middle Country Rd, Calverton, NY 11933
20PR02526

Dear Kim Gennaro-Oancea:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (5NYCRR Part 617).

We have reviewed the Phase IA archaeological report (Survey No. 20SR00263). OPRHP concurs with the report's recommendations regarding the areas where Phase IB archaeological survey is necessary. OPRHP also concurs with the use of plow strips and shovel tests for Phase IB survey, under the condition that the distance from the edge of a plow strip to the adjacent shovel test pit transect is no more than 15 meters (50 feet).

The report states that the "methods that will be used are standard and will adhere to the New York Archaeological Council guidelines as accepted by the NYSHPO" (Page 11). The report also states that, "In all locations, the shovel tests will measure 50 by 50cm (20 by 20in) and will be excavated stratigraphically in 10cm (4in) arbitrary levels within stratum. The shovel tests will be set at 25-foot (7.5 meters [m]) intervals or half the distance between the next closest shovel test" (Page 12). The proposed shovel tests are larger, and the shovel test intervals are shorter than what is stated in the New York Archaeological Council's guidelines (NYAC 1994). Therefore, OPRHP recommends the use of shovel test pit size and interval stated in the NYAC 1994 guidelines, unless conditions warrant greater effort.

The report describes several potential interactions with Indian Nations, such as reviewing artifacts with, and providing the Phase IB archaeological survey report to Native Americans. This project was submitted to OPRHP with the NYS Department of Environmental Conservation (DEC) indicated as an agency with jurisdiction. Therefore, the DEC is responsible for Native American consultation. No one should engage in Native American consultation regarding this project without explicit permission from DEC.

If further correspondence is required regarding this project, please refer to the OPRHP Project Review (PR) number noted above. If you have any questions, I can be reached at 518-268-2186.

Sincerely,

Tim Lloyd, Ph.D., RPA
Scientist - Archaeology
timothy.lloyd@parks.ny.gov

via e-mail only

Carol S. Weed, M.A. (RPA #989090)
Independent Consultant
50 Saw Mill Road #15326
Danbury, CT 06810
646.276.2460

Dr. Timothy Lloyd
Scientist – Archaeology
New York State Office of Parks, Recreation, and Historic Preservation
Via CRIS Submission

RE: Proposed Industrial Park – HK Ventures LLC
4285 Middle Country Rd., Calverton, NY 11933
20PR02526 (20SR00263)

5/29/2020

Dear Tim:

Thank you for your comments on the *Phase IA Archaeological Assessment, Proposed Industrial Park – HK Ventures LLC, 4285 Middle Country Road (NYOPRHP 20PR02526), Calverton, Town of Riverhead, New York.*

Per our conversation this morning, the following sections in the Phase IB Work Plan are modified to read as follows:

1) In all locations, the shovel tests will measure 30 by 30cm (12 by 12in) though some 50 by 50cm (20 by 20in) shovel tests will be excavated near Features 1 and 2. The shovel tests will be excavated stratigraphically in 10cm (4in) arbitrary levels within a stratum. The shovel tests will be set standardly at 50-foot (15-meter) intervals though some 25-foot (7.5 meter) interval shovel tests may be excavated in the vicinity of Features 1 and 2.

2) All matrix recovered from shovel tests will be screened through ¼-in hardware mesh. Material cultural recovered during the screening will be field bagged as follows. All Indian Nations material culture will be bagged separate from Euro-American material culture. The artifacts will be subject to washing or other cleaning and stabilization methods as appropriate. Upon completion of the final phase of work on the Project Site, the artifacts will be reburied at the Project Site.

3) The draft report will be submitted to the NYSHPO, the Town, the Applicant, and the SEQR consultant.

Overall, no consultation with Indian Nations will be conducted.

With regards,

Carol S. Weed

Carol S. Weed, M.A. (RPA #989090)

Appendix D – Stratigraphic Summary

Appendix D: STP Tables

Table D1. Area 2 STPs.

STP#	Strat#	Depth (cm)	Soil Texture	Munsell	Horizon	Positive	Cultural Materials / Notes	Date	Excav-ator
A01	I	0-35	Sa Lo	10YR 4/3	A/B	H	2 ceramics, 1 brick, 1 glass	08/14/20	MS
A01	II	35-50	Lo Sa, gravel	10YR 6/4	BC	—	NCM	08/14/20	MS
A02	I	0-45	Sa Lo	10YR 4/3	A/B	H	2 ceramics, 2 brick	08/14/20	MS
A02	II	45-70	Lo Sa, gravel	10YR 6/4	BC	—	NCM	08/14/20	MS
A03	I	0-45	Sa Lo	10YR 4/3	A/B	H	1 small red brick frag. NR	08/14/20	MS
A03	II	45-70	Lo Sa, gravel	10YR 6/4	BC	—	NCM	08/14/20	MS
A04	I	0-50	Sa Lo	10YR 4/3	A/B	H	1 small window glass NR	08/14/20	MS
A04	II	50-75	Lo Sa, gravel	10YR 6/4	BC	—	NCM	08/14/20	MS
A05	I	0-45	Sa Lo	10YR 4/3	A/B	—	NCM	08/14/20	MS
A05	II	45-55	Lo Sa, gravel	10YR 6/4	BC	—	NCM, very hard	08/14/20	MS
A06	I	0-45	Sa Lo	10YR 4/3	A/B	—	NCM	08/14/20	MS
A06	II	45-60	Lo Sa, gravel	10YR 6/4	BC	—	NCM, very hard	08/14/20	MS
A07	I	0-40	Sa Lo	10YR 4/3	A/B	—	NCM, 10YR 3/3 while wet to 26cm	08/17/20	MS
A07	II	40-55	Lo Sa	10YR 6/6	BC	—	NCM	08/17/20	MS
A08	I	0-35	Sa Lo	10YR 4/3	A/B	—	NCM, 10YR 3/3 while wet to 25cm	08/17/20	MS
A08	II	35-45	Lo Sa	10YR 6/6	BC	—	NCM	08/17/20	MS
A09	I	0-42	Sa Lo	10YR 4/3	A/B	—	NCM, 10YR 3/3 while wet to 26cm	08/17/20	MS
A09	II	42-55	Lo Sa	10YR 6/6	BC	—	NCM	08/17/20	MS
A10	I	0-40	Sa Lo	10YR 4/3	A/B	—	NCM, 10YR 3/3 while wet to 25cm	08/17/20	MS
A10	II	40-55	Lo Sa	10YR 6/6	BC	—	NCM	08/17/20	MS
A11	I	0-34	Sa Lo	10YR 4/3	A/B	—	NCM, 10YR 3/3 while wet to 28cm	08/17/20	MS
A11	II	34-50	Lo Sa	10YR 6/6	BC	—	NCM	08/17/20	MS
A12	I	0-28	Sa Lo	10YR 4/3	A/B	—	NCM, 10YR 3/3 while wet to 28cm, soil removed, shallow A	08/17/20	MS
A12	II	28-40	Lo Sa	10YR 6/6	BC	—	NCM	08/17/20	MS
A13	I	0-35	Sa Lo	10YR 4/3	A/B	—	plastic, disturbed, 10YR 3/3 while wet to 30cm	08/17/20	MS
A13	II	35-50	Lo Sa	10YR 6/6	BC	—	NCM	08/17/20	MS

B01	I	0-35	Sa Lo	10YR 4/3	A/B	H	modern glass, NR brick	08/14/20	SF
B01	II	35-60	Lo Sa	10YR 6/4	BC	—	NCM	08/14/20	SF
B02	I	0-30	Sa Lo	10YR 4/3	A/B	—	NCM	08/14/20	SF
B02	II	30-60	Lo Sa	10YR 6/4	BC	—	NCM	08/14/20	SF
B03	I	0-30	Sa Lo	10YR 4/3	A/B	H	ceramic, glass	08/14/20	SF
B03	II	30-60	Lo Sa	10YR 6/4	BC	—	NCM	08/14/20	SF
B04	I	0-35	Sa Lo	10YR 4/3	A/B	—	NCM	08/14/20	SF
B04	II	35-60	Lo Sa	10YR 6/4	BC	—	NCM	08/14/20	SF
B05	I	0-35	Sa Lo	10YR 4/3	A/B	—	NCM	08/14/20	SF
B05	II	35-60	Lo Sa	10YR 6/4	BC	—	NCM	08/14/20	SF
B06	I	0-35	Sa Lo	10YR 4/3	A/B	—	NCM	08/14/20	SF
B06	II	35-60	Lo Sa	10YR 6/4	BC	—	NCM	08/14/20	SF
B07	I	0-35	Sa Lo	10YR 4/3	A/B	—	NCM, 10YR 3/3 while wet	08/17/20	SF
B07	II	35-60	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/17/20	SF
B08	I	0-35	Sa Lo	10YR 4/3	A/B	H	white button, 10YR 3/3 while wet	08/17/20	SF
B08	II	35-60	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/17/20	SF
B09	I	0-35	Sa Lo	10YR 4/3	A/B	—	NCM	08/17/20	SF
B09	II	35-60	Lo Sa, gravel	10YR 6/6	BC	H	pipe stem	08/17/20	SF
B10	I	0-35	Sa Lo	10YR 4/3	A/B	—	NCM	08/17/20	SF
B10	II	35-60	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/17/20	SF
B11	I	0-35	Sa Lo	10YR 4/3	A/B	—	NCM	08/17/20	SF
B11	II	35-60	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/17/20	SF
B12	I	0-35	Sa Lo	10YR 4/3	A/B	—	NCM	08/17/20	SF
B12	II	35-60	Lo Sa, 20% gravel	10YR 6/6	BC	—	NCM	08/17/20	SF
B13	I	0-20	Sa Lo	10YR 4/3	A/B	—	NCM	08/17/20	SF
B13	II	20-50	Lo Sa	10YR 6/6	BC	—	NCM	08/17/20	SF
C01	I	0-26	Sa Lo, gravel	10YR 3/3	A/B	—	NCM, wet to 26cm	08/17/20	JW
C01	II	26-48	sm Sa, gravel	10YR 6/4	BC	—	NCM	08/17/20	JW
C02	I	0-30	Sa Lo, gravel	10YR 3/3	A/B	—	NCM, wet to 30cm	08/17/20	JW
C02	II	30-59	sm Sa, gravel	10YR 6/4	BC	—	NCM	08/17/20	JW
C03	I	0-20	Sa Lo, gravel	10YR 3/3	A/B	—	NCM	08/17/20	JW
C03	II	20-56	sm Sa, gravel	10YR 6/4	BC	—	NCM	08/17/20	JW
C04	I	0-35	Sa Lo, gravel	10YR 3/3	A/B	—	NCM, wet to 35cm	08/17/20	JW
C04	II	35-65	sm Sa, gravel	10YR 6/4	BC	—	NCM	08/17/20	JW
C05	I	0-30	Sa Lo, gravel	10YR 3/3	A/B	—	NCM, wet to 30cm	08/17/20	JW
C05	II	30-58	sm Sa, gravel	10YR 6/4	BC	—	NCM	08/17/20	JW
C06	I	0-30	Sa Lo, gravel	10YR 3/3	A/B	—	NCM	08/17/20	JW
C06	II	30-60	sm Sa, gravel	10YR 6/4	BC	—	NCM	08/17/20	JW

C07	I	0-30	Sa Lo, gravel	10YR 3/3	A/B	—	NCM	08/17/20	JW
C07	II	30-55	sm Sa, gravel	10YR 6/4	BC	—	NCM	08/17/20	JW
C08	I	0-30	Sa Lo, gravel	10YR 3/3	A/B	—	NCM	08/17/20	JW
C08	II	30-60	sm Sa, gravel	10YR 6/4	BC	—	NCM	08/17/20	JW
C09	I	0-35	Sa Lo, gravel	10YR 3/3	A/B	—	NCM	08/17/20	JW
C09	II	35-65	sm Sa, gravel	10YR 6/4	BC	—	NCM	08/17/20	JW
C10	I	0-30	Sa Lo, gravel	10YR 3/3	A/B	—	NCM	08/17/20	JW
C10	II	30-60	sm Sa, gravel	10YR 6/4	BC	—	NCM	08/17/20	JW
C11	I	0-30	Sa Lo, gravel	10YR 3/3	A/B	—	NCM	08/17/20	JW
C11	II	30-55	sm Sa, gravel	10YR 6/4	BC	—	NCM	08/17/20	JW
C12	I	0-30	Sa Lo	10YR 4/4	A/B	—	NCM	08/18/20	JW
C12	II	30-60	Lo Sa, gravel	2.5Y 6/4	BC	—	NCM	08/18/20	JW
C13	I	0-30	Sa Lo	10YR 4/4	A/B	—	NCM	08/18/20	JW
C13	II	30-60	Lo Sa, gravel	2.5Y 6/4	BC	—	NCM	08/18/20	JW
D01	I	0-23	Sa Lo	10YR 3/2	A/B	H	green glass, 2 flat glass	08/17/20	BM
D01	II	23-53	Sa	10YR 7/4	B	—	NCM	08/17/20	BM
D02	I	0-29	Sa Lo	10YR 3/2	A/B	H	glass, metal, wet to 23cm	08/17/20	BM
D02	II	29-52	Sa	10YR 7/4	B	—	NCM	08/17/20	BM
D03	I	0-30	Sa Lo	10YR 3/2	A/B	H	glass, wet to 26cm	08/17/20	BM
D03	II	30-50	Sa	10YR 7/4	B	—	NCM	08/17/20	BM
D04	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM	08/17/20	BM
D04	II	30-50	Sa	10YR 7/4	B	—	NCM	08/17/20	BM
D05	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM	08/17/20	BM
D05	II	30-55	Sa	10YR 7/4	B	—	NCM	08/17/20	BM
D06	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM, wet to 26cm	08/17/20	BM
D06	II	30-44	Sa	10YR 7/4	B	—	NCM	08/17/20	BM
D07	I	0-32	Sa Lo	10YR 3/2	A/B	—	NCM, wet to 25cm	08/17/20	BM
D07	II	32-59	Sa	10YR 7/4	B	—	NCM	08/17/20	BM
D08	I	0-32	Sa Lo	10YR 3/2	A/B	H	glass, disturbed	08/17/20	BM
D08	II	32-48	Sa	10YR 7/4	B	—	NCM	08/17/20	BM
E01	I	0-20	Sa Lo	10YR 4/3	A/B	H	1 bottle glass NR, 10YR 3/3 wet	08/17/20	MS
E01	II	20-40	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/17/20	MS
E02	I	0-23	Sa Lo	10YR 4/3	A/B	—	NCM, 10YR 3/3 wet	08/17/20	MS
E02	II	23-36	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/17/20	MS
E03	I	0-29	Sa Lo	10YR 4/3	A/B	H	1 sm clear window glass NR, 10YR 3/3 wet	08/17/20	MS
E03	II	29-40	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/17/20	MS

E04	I	0-33	Sa Lo	10YR 4/3	A/B	H	1 sm clear bottle glass NR, 10YR 3/3 wet to 25cm	08/17/20	MS
E04	II	33-45	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/17/20	MS
E05	I	0-35	Sa Lo	10YR 4/3	A/B	—	NCM, 10YR 3/3 wet to 24cm	08/17/20	MS
E05	II	35-45	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/17/20	MS
E06	I	0-29	Sa Lo	10YR 4/3	A/B	P	Quartz point, 10YR 3/3 wet to 22cm	08/17/20	MS
E06	II	29-40	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/17/20	MS
E06+7.5S	I	0-30	Sa Lo	10YR 4/4	A/B	—	NCM	09/06/20	JA
E06+7.5S	II	30-50	Lo Sa, gravel	10YR 5/6	BC	—	NCM	09/06/20	JA
E06+7.5W	I	0-30	Sa Lo	10YR 4/4	A/B	P	flake frag, split pebble	09/06/20	JA
E06+7.5W	II	30-50	Lo Sa, gravel	10YR 5/6	BC	—	NCM	09/06/20	JA
E06+7.5E	I	0-30	Sa Lo	10YR 4/4	A/B	—	exotic stone?	09/06/20	SF
E06+7.5E	II	30-60	Lo Sa	10YR 5/6	B	—	NCM	09/06/20	SF
E06+7.5N	I	0-30	Sa Lo	10YR 4/4	A/B	—	exotic stone?	09/06/20	SF
E06+7.5N	II	30-60	Lo Sa	10YR 5/6	B	—	NCM	09/06/20	SF
E07	I	0-27	Sa Lo	10YR 4/3	A/B	—	NCM, 10YR 3/3 wet to 23cm	08/17/20	MS
E07	II	27-35	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/17/20	MS
E08	I	0-30	Sa Lo	10YR 4/3	A/B	—	NCM, 10YR 3/3 wet to 22cm	08/17/20	MS
E08	II	30-35	Lo Sa, gravel	10YR 6/6	BC	—	NCM, very hard	08/17/20	MS
E09	I	0-30	Sa Lo	10YR 3/3	A/B	—	NCM	08/18/20	JA
E09	II	30-42	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/18/20	JA
E10	I	0-29	Sa Lo	10YR 3/3	A/B	—	NCM	08/18/20	JA
E10	II	29-41	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/18/20	JA
E11	I	0-30	Sa Lo	10YR 3/3	A/B	—	modern plastic refuse NR	08/18/20	JA
E11	II	30-40	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/18/20	JA
E12	I	0-30	Sa Lo	10YR 3/3	A/B	—	NCM	08/18/20	JA
E12	II	30-43	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/18/20	JA
E12	III	43-53	Sa	10YR 6/8	C?	—	NCM	08/18/20	JA
E13	I	0-30	Sa Lo	10YR 3/3	A/B	P	tested quartz cobble	08/18/20	JA
E13	II	30-45	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/18/20	JA
E14	I	0-30	Sa Lo	10YR 3/3	A/B	—	bag closure string	08/18/20	JA
E14	II	30-42	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/18/20	JA
E15	I	0-13	Sa Lo	10YR 4/6	A	—	NCM	08/18/20	JA
E15	II	13-30	Sa Lo	10YR 3/3	B	P	flake fragment/shatter	08/18/20	JA
E15	III	30-40	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/18/20	JA
E16	I	0-30	Sa Lo	10YR 3/3	A/B	—	NCM	08/18/20	JA
E16	II	30-45	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/18/20	JA
E17	I	0-30	Sa Lo	10YR 3/3	A/B	—	NCM	08/18/20	JA

E17	II	30-45	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/18/20	JA
E18	I	0-33	Sa Lo	10YR 3/3	A/B	—	modern refuse/plastic	08/18/20	JA
E18	II	33-43	Lo Sa, gravel	10YR 5/6	Bw	—	NCM	08/18/20	JA
E19	I	0-28	Sa Lo, gravel	10YR 3/3	A/B?	—	NCM	08/18/20	JA
E19	II	28-41	Lo Sa, gravel	10YR 5/6	Bw	—	NCM	08/18/20	JA
E20	I	0-31	Sa Lo, gravel	10YR 3/3	A/B?	—	modern refuse / plastic	08/18/20	JA
E20	II	31-43	Lo Sa, gravel	10YR 5/6	Bw	—	NCM	08/18/20	JA
E21	I	0-30	Sa Lo, gravel	10YR 3/3	A/B?	—	NCM	08/18/20	JA
E21	II	30-44	Lo Sa, gravel	10YR 5/6	Bw	—	NCM	08/18/20	JA
E22	I	0-30	Sa Lo	10YR 3/3	A/B?	—	NCM	08/18/20	JA
E22	II	30-43	Lo Sa, gravel	10YR 5/6	Bw	—	NCM	08/18/20	JA
E22	III	43-45	Lo Sa, gravel	10YR 7/4	BC	—	NCM	08/18/20	JA
E23	I	0-32	Sa Lo, gravel	10YR 3/3	A/B	—	NCM	08/19/20	JA
E23	II	32-55	Sa, sm gravel	10YR 5/6	BC	—	NCM	08/19/20	JA
E24	I	0-30	Sa Lo, gravel	10YR 3/3	A/B	P	lithics	08/19/20	JA
E24	I	30-55	Sa, lg gravel	10YR 5/6	BC	—	NCM	08/19/20	JA
E24+7.5E	I	0-30	Sa Lo	10YR 4/4	A/B	—	NCM	09/06/20	JA
E24+7.5E	II	30-40	Lo Sa, gravel	10YR 5/6	BC	—	NCM	09/06/20	JA
E24+7.5E	III	40-60	Sa, gravel	7.5YR 4/4	C	—	NCM	09/06/20	JA
E24+7.5N	I	0-30	Sa Lo	10YR 4/4	A/B	P	lithics	09/06/20	JA
E24+7.5N	II	30-40	Lo Sa, gravel	10YR 5/6	BC	—	NCM	09/06/20	JA
E24+7.5N	III	40-55	Sa, gravel	7.5YR 4/4	C	—	NCM	09/06/20	JA
E24+7.5S	I	0-25	Sa Lo, gravel	10YR 4/4	A/B	—	NCM	09/06/20	JA
E24+7.5S	II	25-40	Lo Sa, gravel	10YR 5/6	BC	—	NCM	09/06/20	JA
E24+7.5S	III	40-60	Sa, gravel	7.5YR 4/4	C	—	NCM	09/06/20	JA
E24+7.5W	I	0-25	Sa Lo, gravel	10YR 4/4	A/B	—	NCM	09/06/20	JA
E24+7.5W	II	25-45	Lo Sa, gravel	10YR 5/6	BC	—	NCM	09/06/20	JA
E25	I	0-30	Sa Lo, sm gravel	10YR 3/3	A/B	P	lithics	08/19/20	JA
E25	II	30-55	Sa, lg gravel	10YR 5/6	BC	—	NCM	08/19/20	JA
E25+7.5E	I	0-35	Sa Lo	10YR 4/4	A/B	—	NCM	09/06/20	JA
E25+7.5E	II	35-55	Lo Sa, gravel	10YR 5/6	BC	—	NCM	09/06/20	JA
E25+7.5N	I	0-35	Sa Lo	10YR 4/4	A/B	—	NCM	09/06/20	JA
E25+7.5N	II	35-55	Lo Sa, gravel	10YR 5/6	BC	—	NCM	09/06/20	JA
E26	I	0-22	Sa Lo, gravel	10YR 3/3	A	—	NCM	08/19/20	JA
E26	II	22-31	Si Lo, sm gravel	10YR 7/4	B	—	NCM	08/19/20	JA
E26	III	31-50	Lo Sa, lg gravel	10YR 5/6	BC	—	NCM	08/19/20	JA
E27	I	0-15	Sa Lo, gravel	10YR 3/3	A/B	—	NCM	08/19/20	JA
E27	II	15-42	Lo Sa, sm gravel	10YR 5/6	BC	—	NCM	08/19/20	JA

E28	I	0-30	Sa Lo, sm gravel	10YR 3/3	A/B	—	Modern Trash	08/19/20	JA
E28	II	30-50	Lo Sa, med gravel	10YR 5/6	BC	—	NCM	08/19/20	JA
E29	I	0-28	Sa Lo, sm gravel	10YR 3/3	A/B	—	NCM	08/19/20	JA
E29	II	28-45	Lo Sa, med gravel	10YR 5/6	BC	—	NCM	08/19/20	JA
E30	I	0-30	Sa Lo, sm gravel	10YR 3/3	A/B	—	Modern Trash	08/19/20	JA
E30	II	30-50	Lo Sa, med gravel	10YR 5/6	BC	—	NCM	08/19/20	JA
E31	I	0-35	Sa Lo, sm gravel	10YR 3/3	A/B	—	NCM	08/19/20	JA
E31	II	35-45	Lo Sa, sm-med gravel	10YR 5/6	BC	—	NCM	08/19/20	JA
E32	I	0-30	Sa Lo	10YR 3/3	A/B	—	NCM	08/19/20	JA
E32	II	30-45	Lo Sa, med-lg gravel	10YR 5/6	BC	—	NCM, distinct boundary	08/19/20	JA
E33	I	0-30	Sa Lo	10YR 3/3	A/B	—	NCM	08/19/20	JA
E33	II	30-45	Lo Sa, med-lg gravel	10YR 5/6	BC	—	NCM, distinct boundary	08/19/20	JA
E34	I	0-35	Sa Lo	10YR 3/3	A/B	—	NCM	08/19/20	JA
E34	II	35-50	Lo Sa, med gravel	10YR 5/6	BC	—	NCM	08/19/20	JA
E35	I	0-30	Sa Lo, sm gravel	10YR 3/3	A/B	—	NCM	08/20/20	JA
E35	II	30-48	Lo Sa, md gravel	10YR 5/6	Bw	—	NCM	08/20/20	JA
E36	I	0-30	Sa Lo, sm gravel	10YR 3/3	A/B	—	NCM	08/20/20	JA
E36	II	30-45	Lo Sa, md gravel	10YR 5/6	Bw	—	NCM	08/20/20	JA
E37	I	0-35	Sa Lo, sm gravel	10YR 3/3	A/B	—	NCM	08/20/20	JA
E37	II	35-50	Lo Sa, md gravel	10YR 5/6	Bw	—	NCM	08/20/20	JA
E38	I	0-30	Sa Lo, sm gravel	10YR 3/3	A/B	—	NCM	08/20/20	JA
E38	II	30-45	Lo Sa, md gravel	10YR 5/6	Bw	—	NCM	08/20/20	JA
E39	I	0-28	Sa Lo, sm gravel	10YR 3/3	A/B	—	NCM	08/20/20	JA
E39	II	28-50	Lo Sa, md gravel	10YR 5/6	Bw	—	NCM	08/20/20	JA
E40	I	0-30	Sa Lo, sm gravel	10YR 3/3	A/B	P	1 quartz flake frag, historic	08/20/20	JA
E40	II	30-50	Lo Sa, md gravel	10YR 5/6	Bw	—	NCM	08/20/20	JA
E40+7.5E	I	0-30	Sa Lo	10YR 4/4	A	P	ground stone?	09/06/20	SF
E40+7.5E	II	30-60	Lo Sa	10YR 5/6	Bw	—	NCM	09/06/20	SF
E40+7.5N	I	0-30	Sa Lo	10YR 4/4	A/B	—	NCM	09/06/20	JA
E40+7.5N	II	30-50	Lo Sa, gravel	10YR 5/6	BC	—	NCM	09/06/20	JA
E40+7.5W	I	0-30	Sa Lo, gravel 40%	10YR 5/6	Disturbed	—	NCM	09/06/20	SF
E41	I	0-28	Sa Lo, sm gravel	10YR 3/3	A/B	P	quartz frag; roadbed, compacted	08/20/20	JA
E41	II	28-45	Lo Sa, md gravel	10YR 5/6	Bw	—	NCM, very dry	08/20/20	JA
E41+7.5E	I	0-32	Sa Lo	10YR 4/4	A/B	P	possible flake; dry	09/06/20	MS
E41+7.5E	II	32-47	Lo Sa	10YR 5/6	BC	—	NCM; dry, compact	09/06/20	MS
E41+7.5E	III	47-60	Sa, gravel	10YR 6/4	C	—	NCM (photo)	09/06/20	MS

E41+7.5S	I	0-35	Sa Lo	10YR 4/4	A/B	H	historic (2 possible metal nails)	09/06/20	JA
E41+7.5S	II	35-60	Lo Sa, gravel	10YR 5/6	BC	—	NCM	09/06/20	JA
E41+7.5W	I	0-30	Sa Lo	10YR 4/4	A	—	NCM	09/06/20	SF
E41+7.5W	II	30-60	Lo Sa	10YR 5/6	Bw	—	NCM	09/06/20	SF
F01	I	0-25	Sa Lo	10Yr 4/3	A/B	H	brick, glass	08/17/20	SF
F01	II	25-50	Lo Sa, 90% gravel	10YR 6/6	BC	—	NCM	08/17/20	SF
F02	I	0-25	Sa Lo	10Yr 4/3	A/B	—	NCM	08/17/20	SF
F02	II	25-50	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/17/20	SF
F03	I	0-25	Sa Lo	10Yr 4/3	A/B	—	NCM	08/17/20	SF
F03	II	25-50	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/17/20	SF
F04	I	0-25	Sa Lo	10Yr 4/3	A/B	—	NCM	08/17/20	SF
F04	II	25-50	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/17/20	SF
F05	I	0-25	Sa Lo	10Yr 4/3	A/B	P	lithic	08/17/20	SF
F05	II	25-50	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/17/20	SF
F05+7.5E	I	0-30	Sa Lo	10YR 4/4	A	H	modern glass	09/06/20	SF
F05+7.5E	II	30-60	Lo Sa	10YR 5/6	Bw	—	ground stone?	09/06/20	SF
F05+7.5N	I	0-30	Sa Lo	10YR 4/4	A	—	NCM	09/06/20	SF
F05+7.5N	II	30-60	Lo Sa	10YR 5/6	Bw	—	NCM	09/06/20	SF
F05+7.5S	I	0-30	Sa Lo	10YR 4/4	A	—	NCM	09/06/20	SF
F05+7.5S	II	30-60	Lo Sa	10YR 5/6	Bw	—	NCM	09/06/20	SF
F05+7.5W	I	0-30	Sa Lo	10YR 4/4	A	—	NCM	09/06/20	SF
F05+7.5W	II	30-60	Lo Sa	10YR 5/6	Bw	—	NCM	09/06/20	SF
F06	I	0-25	Sa Lo	10YR 4/3	A/B	—	NCM, 10YR 4/4 when wet	08/18/20	SF
F06	II	25-50	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/18/20	SF
F07	I	0-25	Sa Lo	10YR 4/3	A/B	—	NCM	08/18/20	SF
F07	II	25-60	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/18/20	SF
F08	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/18/20	SF
F08	II	25-60	Lo Sa	10YR 6/4	Bw	—	NCM	08/18/20	SF
F09	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/18/20	SF
F09	II	25-60	Lo Sa	10YR 6/4	Bw	—	NCM	08/18/20	SF
F10	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/18/20	SF
F10	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/18/20	SF
F11	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/18/20	SF
F11	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/18/20	SF
F12	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/18/20	SF
F12	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/18/20	SF
F13	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/18/20	SF
F13	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/18/20	SF

F14	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/18/20	SF
F14	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/18/20	SF
F15	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/18/20	SF
F15	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/18/20	SF
F16	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/18/20	SF
F16	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/18/20	SF
F17	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/18/20	SF
F17	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/18/20	SF
F18	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/18/20	SF
F18	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/18/20	SF
F19	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/18/20	SF
F19	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/18/20	SF
F20	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/18/20	SF
F20	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/18/20	SF
F21	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/18/20	SF
F21	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/18/20	SF
F22	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/19/20	SF
F22	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/19/20	SF
F23	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/19/20	SF
F23	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/19/20	SF
F24	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/19/20	SF
F24	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/19/20	SF
F25	I	0-25	Sa Lo	10YR 4/3	A	P	lithics	08/19/20	SF
F25	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/19/20	SF
F25+7.5N	I	0-35	Sa Lo	10YR 4/4	A/B		NCM	09/06/20	JA
F25+7.5N	II	35-55	Lo Sa, gravel	10YR 5/6	BC		NCM	09/06/20	JA
F25+7.5E	I	0-35	Sa Lo	10YR 4/4	A/B		NCM	09/06/20	JA
F25+7.5E	II	35-55	Lo Sa, gravel	10YR 5/6	BC		NCM	09/06/20	JA
F25+7.5W	I	0-30	Sa Lo	10YR 4/4	A	—	NCM	09/06/20	SF
F25+7.5W	II	30-60	Lo Sa	10YR 5/6	Bw	—	NCM	09/06/20	SF
F26	I	0-25	Sa Lo	10YR 4/3	A	P	NCM	08/19/20	SF
F26	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/19/20	SF
F26+7.5E	I	0-30	Sa Lo	10YR 4/4	A	—	NCM	09/06/20	SF
F26+7.5E	II	30-60	Lo Sa	10YR 5/6	Bw	—	NCM	09/06/20	SF
F26+7.5S	I	0-36	Sa Lo	10YR 4/4	A/B	—	NCM	09/06/20	MS
F26+7.5S	II	36-50	Lo Sa	10YR 5/6	BC	—	NCM, compact	09/06/20	MS
F26+7.5W	I	0-28	Sa Lo	10YR 4/4	A/B	P	flake?	09/06/20	MS
F26+7.5W	II	28-50	Lo Sa	10YR 5/6	BC	—	NCM	09/06/20	MS

F27	I	0-35	Sa Lo	10YR 4/3	A	—	NCM	08/19/20	SF
F27	II	35-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/19/20	SF
F28	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/19/20	SF
F28	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/19/20	SF
F29	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/19/20	SF
F29	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/19/20	SF
G01	I	0-26	Sa Lo	10YR 3/2	A/B	—	NCM	08/17/20	BM
G01	II	26-45	Sa	10YR 7/4	B	—	NCM	08/17/20	BM
G02	I	0-28	Sa Lo	10YR 3/2	A/B	—	NCM	08/17/20	BM
G02	II	28-47	Sa	10YR 7/4	B	—	NCM	08/17/20	BM
G03	I	0-35	Sa Lo	10YR 3/2	A/B	H	1 metal frag, wet to 30cm	08/18/20	BM
G03	II	35-59	Sa	10YR 7/4	B	—	NCM	08/18/20	BM
G04	I	0-37	Sa Lo	10YR 3/2	A/B	—	NCM, wet to 26cm	08/18/20	BM
G04	II	37-52	Sa	10YR 7/4	B	—	NCM	08/18/20	BM
G05	I	0-36	Sa Lo	10YR 3/2	A/B	—	NCM, wet to 28cm	08/18/20	BM
G05	II	36-57	Sa	10YR 7/4	B	—	NCM	08/18/20	BM
G06	I	0-37	Sa Lo	10YR 3/2	A/B	—	NCM, wet to 26cm	08/18/20	BM
G06	II	37-52	Sa	10YR 7/4	B	—	NCM	08/18/20	BM
G07	I	0-36	Sa Lo	10YR 3/2	A/B	—	NCM, wet to 29cm	08/18/20	BM
G07	II	36-53	Sa	10YR 7/4	B	—	NCM	08/18/20	BM
G08	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM, wet to 20cm	08/18/20	BM
G08	II	30-50	Sa	10YR 7/4	B	—	NCM	08/18/20	BM
G09	I	0-28	Sa Lo	10YR 3/2	A/B	H	glass fragment, shallow A/B	08/18/20	BM
G09	II	28-44	Sa	10YR 7/4	B	—	NCM	08/18/20	BM
G10	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM	08/18/20	BM
G10	II	30-48	Sa	10YR 7/4	B	—	NCM	08/18/20	BM
G11	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM, wet to 24cm	08/18/20	BM
G11	II	30-50	Sa	10YR 7/4	B	—	NCM	08/18/20	BM
G12	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM, wet to 20cm	08/18/20	BM
G12	II	30-52	Sa	10YR 7/4	B	—	NCM	08/18/20	BM
G13	I	0-28	Sa Lo	10YR 3/2	A/B	—	NCM, wet to 20cm	08/18/20	BM
G13	II	28-49	Sa	10YR 7/4	B	—	NCM	08/18/20	BM
G14	I	0-34	Sa Lo	10YR 3/2	A/B	—	NCM, wet to 24cm	08/18/20	BM
G14	II	34-50	Sa	10YR 7/4	B	—	NCM	08/18/20	BM
G15	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM, wet to 28cm	08/18/20	BM
G15	II	30-50	Sa	10YR 7/4	B	—	NCM	08/18/20	BM
G16	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM, wet to 15cm	08/18/20	BM
G16	II	30-54	Sa	10YR 7/4	B	—	NCM	08/18/20	BM

G17	I	0-38	Sa Lo	10YR 3/2	A/B	—	NCM, wet to 27cm	08/18/20	BM
G17	II	38-53	Sa	10YR 7/4	B	—	NCM	08/18/20	BM
G18	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM	08/19/20	BM
G18	II	30-58	Sa	10YR 7/4	B	—	NCM	08/19/20	BM
G19	I	0-34	Sa Lo	10YR 3/2	A/B	—	NCM	08/19/20	BM
G19	II	34-52	Sa	10YR 7/4	B	—	NCM	08/19/20	BM
G20	I	0-34	Sa Lo	10YR 3/2	A/B	—	NCM	08/19/20	BM
G20	II	34-53	Sa	10YR 7/4	B	—	NCM	08/19/20	BM
G21	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM	08/19/20	BM
G21	II	30-60	Sa	10YR 7/4	B	—	NCM	08/19/20	BM
G22	I	0-32	Sa Lo	10YR 3/2	A/B	—	NCM	08/19/20	BM
G22	II	32-57	Sa	10YR 7/4	B	—	NCM	08/19/20	BM
G23	I	0-29	Sa Lo	10YR 3/2	A/B	—	NCM	08/19/20	BM
G23	II	29-52	Sa	10YR 7/4	B	—	NCM	08/19/20	BM
G24	I	0-34	Sa Lo	10YR 3/2	A/B	—	NCM	08/19/20	BM
G24	II	34-56	Sa	10YR 7/4	B	—	NCM	08/19/20	BM
G25	I	0-36	Sa Lo	10YR 3/2	A/B	—	NCM	08/19/20	BM
G25	II	36-60	Sa	10YR 7/4	B	—	NCM	08/19/20	BM
G26	I	0-37	Sa Lo	10YR 3/2	A/B	—	NCM	08/19/20	BM
G26	II	37-58	Sa	10YR 7/4	B	—	NCM	08/19/20	BM
G27	I	0-37	Sa Lo	10YR 3/2	A/B	—	NCM	08/19/20	BM
G27	II	37-60	Sa	10YR 7/4	B	—	NCM	08/19/20	BM
G28	I	0-55	Sa Lo	10YR 3/2	A/B	—	NCM, deep A/B	08/19/20	BM
G28	II	55-64	Sa	10YR 7/4	B	—	NCM	08/19/20	BM
G29	I	0-38	Sa Lo	10YR 3/2	A/B	—	NCM	08/19/20	BM
G29	II	38-61	Sa	10YR 7/4	B	—	NCM	08/19/20	BM
G30	I	0-26	Sa Lo	10YR 3/2	A/B	—	NCM, Disturbed roadbed	08/19/20	BM
G30	II	26-34	Sa	10YR 7/4	B	—	NCM	08/19/20	BM
H01	I	0-30	Sa Lo	10YR 4/4	A/B	—	NCM	08/18/20	JW
H01	II	30-60	Sm Sa	10YR 6/4	BC	—	NCM	08/18/20	JW
H02	I	0-30	Sa Lo, gravel	10YR 4/4	A/B	—	NCM	08/18/20	JW
H02	II	30-58	Sm Sa, gravel	10YR 6/4	BC	—	NCM	08/18/20	JW
H03	I	0-30	Sa Lo, gravel	10YR 4/4	A/B	—	NCM	08/18/20	JW
H03	II	30-60	Lo Sa, gravel	10YR 5/4	BC	—	NCM, w/ 10YR 6/4	08/18/20	JW
H04	I	0-30	Sa Lo, gravel	10YR 4/4	A/B	—	NCM	08/18/20	JW
H04	II	30-55	Lo Sa, gravel	10YR 6/4	BC	—	NCM	08/18/20	JW
H05	I	0-26	Sa Lo, gravel	10YR 4/4	A/B	—	NCM	08/18/20	JW
H05	II	26-52	Lo Sa, gravel	10YR 6/4	BC	—	NCM	08/18/20	JW

H06	I	0-26	Sa Lo, gravel	10YR 4/4	A/B	—	NCM	08/18/20	JW
H06	II	26-52	Lo Sa, gravel	10YR 6/4	BC	—	NCM	08/18/20	JW
H07	I	0-25	Sa Lo, gravel	10YR 5/4	A/B	—	NCM	08/18/20	JW
H07	II	25-50	Lo Sa, gravel	10YR 6/4	BC	—	NCM	08/18/20	JW
H08	I	0-26	Sa Lo, gravel	10YR 4/4	A/B	—	NCM	08/18/20	JW
H08	II	26-58	Lo Sa, gravel	10YR 6/4	BC	—	NCM	08/18/20	JW
H09	I	0-20	Sa Cl Lo	10YR 4/4	A/B	—	NCM	08/18/20	JW
H09	II	20-50	Lo Sa, gravel	10YR 6/4	BC	—	NCM	08/18/20	JW
H10	I	0-20	Sa Lo	10YR 4/4	A/B	—	NCM	08/18/20	JW
H10	II	20-50	Lo Sa, gravel	10YR 6/4	BC	—	NCM	08/18/20	JW
H11	I	0-30	Sa Lo	10YR 4/4	A/B	—	NCM	08/18/20	JW
H11	II	30-60	Lo Sa, gravel	10YR 6/4	BC	—	NCM	08/18/20	JW
H12	I	0-30	Sa Lo	10YR 4/4	A/B	—	NCM	08/18/20	JW
H12	II	30-58	Lo Sa, gravel	10YR 6/4	BC	—	NCM	08/18/20	JW
H13	I	0-30	Sa Lo	10YR 4/4	A/B	—	NCM	08/18/20	JW
H13	II	30-62	Lo Sa, gravel	2.5Y 6/4	BC	—	NCM	08/18/20	JW
H28	I	0-30	Sa Lo	10YR 4/4	A/B	—	NCM	08/20/20	JW
H28	II	30-60	Lo Sa, gravel	2.5Y 5/6	BC	—	NCM	08/20/20	JW
H29	I	0-20	Sa Lo	10YR 4/4	A/B	—	NCM	08/20/20	JW
H29	II	20-55	Lo Sa, gravel	2.5Y 5/6	BC	—	NCM	08/20/20	JW
H30	I	0-30	Sa Lo	10YR 4/4	A/B	—	NCM	08/20/20	JW
H30	II	30-55	Lo Sa, gravel	2.5Y 5/6	BC	—	NCM	08/20/20	JW
H31	I	0-30	Sa Lo	10YR 4/4	A/B	—	NCM	08/20/20	JW
H31	II	30-55	Lo Sa, gravel	2.5Y 5/6	BC	—	NCM	08/20/20	JW
H32	I	0-30	Sa Lo	10YR 4/4	A/B	—	NCM	08/20/20	JW
H32	II	30-55	Lo Sa, gravel	2.5Y 5/6	BC	—	NCM	08/20/20	JW
I01	I	0-25	Sa Lo	10YR 4/3	A/B	—	lithic	08/20/20	SF
I01	II	25-60	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/20/20	SF
I02	I	0-25	Sa Lo	10YR 4/3	A/B	—	NCM	08/20/20	SF
I02	II	25-60	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/20/20	SF
I03	I	0-25	Sa Lo	10YR 4/3	A/B	—	NCM	08/20/20	SF
I03	II	25-60	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/20/20	SF
I04	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I04	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/20/20	SF
I05	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I05	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/20/20	SF
I06	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I06	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/20/20	SF

I07	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I07	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/20/20	SF
I08	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I08	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/20/20	SF
I09	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I09	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/20/20	SF
I10	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I10	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/20/20	SF
I11	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I11	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/20/20	SF
I12	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I12	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/20/20	SF
I13	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I13	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/20/20	SF
I14	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I14	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/20/20	SF
I15	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I15	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/20/20	SF
I16	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I16	II	25-60	Lo Sa	10YR 6/6	Bw	—	NCM	08/20/20	SF
I17	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I17	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/20/20	SF
I18	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I18	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/20/20	SF
I19	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I19	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/20/20	SF
I20	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I20	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/20/20	SF
I21	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I21	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/20/20	SF
I22	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I22	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/20/20	SF
I23	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/20/20	SF
I23	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/20/20	SF
I24	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/21/20	SF
I24	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/21/20	SF
I25	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/21/20	SF
I25	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/21/20	SF

I26	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/21/20	SF
I26	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/21/20	SF
I27	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/21/20	SF
I27	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/21/20	SF
I28	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/21/20	SF
I28	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/21/20	SF
I29	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/21/20	SF
I29	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/21/20	SF
I30	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/21/20	SF
I30	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/21/20	SF
I31	I	0-25	Sa Lo	10YR 4/3	A	—	NCM	08/21/20	SF
I31	II	25-60	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/21/20	SF
J01	I	0-26	Sa Lo	10YR 3/2	A/B	—	NCM, Two-track	08/20/20	BM
J01	II	26-54	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J02	I	0-38	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J02	II	38-52	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J03	I	0-35	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J03	II	35-50	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J04	I	0-32	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J04	II	32-52	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J05	I	0-33	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J05	II	33-53	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J06	I	0-36	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J06	II	36-51	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J07	I	0-40	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J07	II	40-58	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J08	I	0-38	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J08	II	38-53	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J09	I	0-36	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J09	II	36-50	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J10	I	0-32	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J10	II	32-48	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J11	I	0-46	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J11	II	46-54	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J12	I	0-40	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J12	II	40-52	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J13	I	0-36	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J13	II	36-50	Sa	10YR 7/4	B	—	NCM	08/20/20	BM

J14	I	0-40	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J14	II	40-50	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J15	I	0-44	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J15	II	44-52	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J16	I	0-35	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J16	II	35-51	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J17	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J17	II	30-51	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J18	I	0-42	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J18	II	42-50	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J19	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J19	II	30-52	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J20	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J20	II	30-60	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J21	I	0-35	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J21	II	35-56	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J22	I	0-24	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J22	II	24-51	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J23	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM	08/20/20	BM
J23	II	30-48	Sa	10YR 7/4	B	—	NCM	08/20/20	BM
J24	I	0-32	Sa Lo	10YR 3/2	A/B	—	NCM	08/21/20	BM
J24	II	32-53	Sa	10YR 7/4	B	—	NCM	08/21/20	BM
J25	I	0-33	Sa Lo	10YR 3/2	A/B	—	NCM	08/21/20	BM
J25	II	33-54	Sa	10YR 7/4	B	—	NCM	08/21/20	BM
J26	I	0-29	Sa Lo	10YR 3/2	A/B	—	NCM	08/21/20	BM
J26	II	29-52	Sa	10YR 7/4	B	—	NCM	08/21/20	BM
J27	I	0-30	Sa Lo	10YR 3/2	A/B	—	NCM	08/21/20	BM
J27	II	30-52	Sa	10YR 7/4	B	—	NCM	08/21/20	BM
J28	I	0-26	Sa Lo	10YR 3/2	A/B	—	NCM	08/21/20	BM
J28	II	26-48	Sa	10YR 7/4	B	—	NCM	08/21/20	BM
J29	I	0-28	Sa Lo	10YR 3/2	A/B	—	NCM	08/21/20	BM
J29	II	28-54	Sa	10YR 7/4	B	—	NCM	08/21/20	BM
J30	I	0-28	Sa Lo	10YR 3/2	A/B	—	NCM	08/21/20	BM
J30	II	28-51	Sa	10YR 7/4	B	—	NCM	08/21/20	BM
J31	I	0-38	Sa Lo	10YR 3/2	A/B	—	NCM	08/21/20	BM
J31	II	38-50	Sa	10YR 7/4	B	—	NCM	08/21/20	BM

Table D2. Area 3 STPs.

STP#	Strat#	Depth (cm)	Soil Texture	Munsell	Horizon	Positive	Cultural Materials / Notes	Date	Excav-ator
F51	I	0-4	Sa Lo	10YR 2/2	A	—	NCM	08/20/20	MS
F51	II	4-23	Sa Lo	10YR 4/4	A/B	—	NCM	08/20/20	MS
F51	III	23-30	Lo Sa, gravel	10YR 5/6	BC	—	NCM, hard	08/20/20	MS
F52	I	0-4	Sa Lo	10YR 2/2	A	—	NCM	08/20/20	MS
F52	II	4-19	Sa Lo	10YR 4/4	A/B	—	NCM	08/20/20	MS
F52	III	19-30	Lo Sa, gravel	10YR 5/6	BC	—	NCM, hard	08/20/20	MS
F53	I	0-5	organics	10YR 2/2	O	—	NCM	08/21/20	MS
F53	II	5-17	Sa Lo	10YR 4/4	A	H	2 clear glass bottle fragments, 1 small metal fragment (NR)	08/21/20	MS
F53	III	17-30	Lo Sa, gravel	10YR 5/6	B	—	NCM, compact and doesn't appear to have been plowed. Shallower depth to compact layer	08/21/20	MS
F54	I	0-10	organics	10YR 2/2	O/A	H	modern trash, asphalt roof shingle, red brick frag. (NR); glass, etc. retained	08/21/20	MS
F54	II	10-20	Si Sa	10YR 5/3	F	P	Flake, core	08/21/20	MS
F54	III	20-42	Sa Lo	10YR 4/4	B	—	NCM	08/21/20	MS
F54	IV	42-55	Lo Sa, gravel	10YR 5/6	BC	—	NCM	08/21/20	MS
F55	I	0-10	Si Lo	10YR 3/3	O	—	NCM	08/21/20	JW
F55	II	10-38	Si Sa, gravel	10YR 5/6	A/B	H	6 bottle glass, 1 beer can	08/21/20	JW
F56	I	0-3	organics	10YR 2/2	O	—	NCM	08/21/20	MS
F56	II	3-34	Sa, gravel	10YR 4/6	Fill	H	red brick fragment, asphalt shingle, linoleum tiles, clear window glass (NR); screw	08/21/20	MS
F56	III	34-50	Sa, gravel	10YR 5/6	BC	—	NCM, compact	08/21/20	MS
F57	I	0-6	organics	10YR 2/2	O	—	NCM	08/21/20	MS
F57	II	6-19	Sa, gravel	10YR 4/6	Fill	—	NCM	08/21/20	MS
F57	III	19-32	Sa Lo	10YR 4/5	B	—	NCM, compact	08/21/20	MS
F57	IV	32-40	Lo Sa	10YR 5/6	B/C	—	NCM, compact	08/21/20	MS
F58	I	0-6	organics	10YR 2/2	O	—	NCM	08/21/20	MS
F58	II	6-21	Lo Sa	10YR 4/5	Fill	H	ceramic, glass, electric, etc.	08/21/20	MS
F58	III	21-30	Lo Sa	10YR 5/6	B/C	—	NCM, compact	08/21/20	MS
F59	I	0-5	organics	10YR 2/2	O	—	NCM	08/21/20	MS

F59	II	5-23	Lo Sa	10YR 4/5	Fill	H	window glass, brick, wire nail, coal	08/21/20	MS
F59	III	23-35	Lo Sa	10YR 5/6	B/C	—	NCM, compact	08/21/20	MS
G51	I	0-3	organics	10YR 2/2	O	—	NCM	08/20/20	MS
G51	II	3-21	Lo Sa, gravel	10YR 5/6	A/B?	—	NCM, disturbed	08/20/20	MS
G51	III	21-40	Lo Sa, gravel	10YR 6/6	B/C	—	NCM	08/20/20	MS
G52	I	0-5	organics	10YR 2/2	O	—	NCM	08/20/20	MS
G52	II	5-32	Lo Sa, gravel	10YR 6/6	B	—	NCM	08/20/20	MS
G52	III	32-50	Lo Sa, gravel	10YR 7/4	C	—	NCM	08/20/20	MS
G53	I	0-5	organics	10YR 2/2	O	—	NCM	08/20/20	MS
G53	II	5-23	Sa, gravel	10YR 2/2	C	H	clear glass bottle shard NR, disturbed	08/20/20	MS
G53	III	23-40	Sa, gravel	10YR 5/6	C	—	NCM, firm, wet	08/20/20	MS
G54	I	0-5	organics	10YR 2/2	O	—	NCM	08/20/20	MS
G54	II	5-24	Lo Sa, gravel	10YR 5/6	BC	—	NCM, wet	08/20/20	MS
G54	III	24-35	Sa, gravel	10YR 6/6	C	—	NCM, dry	08/20/20	MS
G55	I	0-5	organics	10YR 2/2	O	—	NCM	08/20/20	MS
G55	II	5-21	Lo Sa, gravel	10YR 5/6	BC	—	NCM, wet	08/20/20	MS
G55	III	21-30	Sa, gravel	10YR 6/6	C	—	NCM, dry	08/20/20	MS
G56	I	0-8	Si Lo	10YR 3/3	O	—	NCM	08/20/20	JW
G56	II	8-30	Si Sa, gravel	10YR 5/4	A/B	P	Flake, shatter	08/20/20	JW
G56	II	30-40	Si Sa, gravel	2.5Y 5/6	BC	—	NCM	08/20/20	JW
G56+7.5E	I	0-31	Sa Lo, gravel	10YR 4/4	A/B	P	2 shatter?	09/06/20	MS
G56+7.5E	II	31-45	Lo Sa, gravel	10YR 5/6	BC	—	NCM, compact	09/06/20	MS
G56+7.5N	I	0-29	Sa Lo, gravel	10YR 4/4	A/B	P	flakes, 2 small <1cm colorless glass (NR)	09/06/20	MS
G56+7.5N	II	29-40	Lo Sa, gravel	10YR 5/6	BC	—	NCM, compact	09/06/20	MS
G56+7.5S	I	0-27	Sa Lo, gravel	10YR 4/4	A/B	H	metal bar	09/06/20	MS
G56+7.5S	II	27-40	Lo Sa, gravel	10YR 5/6	BC	—	NCM, compact	09/06/20	MS
G56+7.5W	I	0-26	Sa Lo, gravel	10YR 4/4	A/B	—	Coal and clay pigeon (NR)	09/06/20	MS
G56+7.5W	II	26-40	Lo Sa, gravel	10YR 5/6	BC	—	NCM, compact	09/06/20	MS
G57	I	0-8	Si Lo	10YR 3/3	O	—	NCM	08/20/20	JW
G57	II	8-38	Si Sa, gravel	10YR 5/4	A/B	—	NCM	08/20/20	JW
G57	III	38-50	Si Sa, gravel	2.5Y 5/6	BC	—	NCM	08/20/20	JW
G58	I	0-8	Si Lo	10YR 3/3	O	—	NCM, STP moved due to slope	08/21/20	JW
G58	II	8-33	Si Sa, gravel	10YR 5/4	A/B	—	NCM	08/21/20	JW
G58	III	33-46	Si Sa, gravel	2.5Y 5/6	BC	—	NCM	08/21/20	JW
G59	I	0-8	Si Lo	10YR 3/3	O	—	NCM	08/21/20	JW

G59	II	8-48	Si Sa, gravel	10YR 5/4 w/ 2.5Y 5/6(?)	A/B	—	NCM	08/21/20	JW
G60	I	0-10	Si Lo	10YR 3/3	O	—	NCM	08/21/20	JW
G60	II	10-42	Si Sa, gravel	10YR 5/4	A/B	—	NCM	08/21/20	JW
G61	I	0-10	Si Lo	10YR 3/3	O	—	NCM	08/21/20	JW
G61	II	10-36	Si Sa, gravel	10YR 5/4	A/B	P	hammerstone, quartz flake fragment	08/21/20	JW
G61	III	36-48	Si Sa, gravel	2.5Y 5/6	BC	—	NCM	08/21/20	JW
G62	I	0-12	Si Lo	10YR 3/3	O	—	NCM	08/21/20	JW
G62	II	12-30	Si Sa, gravel	10YR 6/6	Fill 1	—	NCM	08/21/20	JW
G62	III	30-58	Si Sa, gravel	10YR 5/6	Fill 2	—	NCM	08/21/20	JW
G63	I	0-12	Si Sa, gravel	10YR 6/2	Fill 1	—	NCM	08/21/20	JW
G63	II	12-50	Lo Sa, gravel	2.5Y 5/4	Fill 2	—	NCM	08/21/20	JW
G64	I	0-8	Si Lo	10YR 3/3	O	—	NCM	08/21/20	JW
G64	II	8-23	Si Sa, gravel	10YR 6/2	Fill 1	—	NCM	08/21/20	JW
G64	III	23-46	Lo Sa, gravel	2.5Y 5/4	Fill 2	—	NCM, rock impasse at 46cm	08/21/20	JW
G65	I	0-6	Si Lo	10YR 3/3	O	—	NCM	08/21/20	JW
G65	II	6-20	Si Sa, gravel	10YR 6/2	Fill 1	—	NCM	08/21/20	JW
G65	III	20-50	Lo Sa, gravel	2.5Y 5/4	Fill 2	—	NCM	08/21/20	JW
G66	I	0-6	Si Lo	10YR 3/3	O	—	NCM	08/21/20	JW
G66	II	6-50	Si Sa, gravel	2.5Y 5/4	Fill 1	—	NCM	08/21/20	JW
G67	I	0-6	Si Lo	10YR 3/3	O	—	NCM	08/21/20	JW
G67	II	6-30	Si Sa, gravel	10YR 5/4	Fill 1	—	NCM	08/21/20	JW
G67	III	30-42	Lo Sa, gravel	2.5Y 6/4	Fill 2	—	NCM, rock impasse at 42cm	08/21/20	JW
G68	I	0-9	Si Lo	10YR 3/3	O	—	NCM	08/21/20	JW
G68	II	9-30	Si Sa, gravel	10YR 5/4	Fill 1	—	NCM	08/21/20	JW
G68	III	30-48	Lo Sa, gravel	2.5Y 6/4	Fill 2	—	NCM	08/21/20	JW
H51	I	0-4	organics	10YR 2/2	O	—	NCM	08/20/20	MS
H51	II	4-27	Sa Lo	10YR 4/6	A/B	—	flake	08/20/20	MS
H51	III	27-40	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/20/20	MS
H52	I	0-4	organics	10YR 2/2	O	—	NCM	08/20/20	MS
H52	II	4-21	Sa Lo	10YR 4/6	A/B	—	NCM	08/20/20	MS
H52	III	21-35	Lo Sa, gravel	10YR 6/6	BC	—	NCM	08/20/20	MS
H53	I	0-3	organics	10YR 2/2	O	—	NCM	08/20/20	MS
H53	II	3-40	Si Sa, gravel	10YR 4/4	Fill	H	Plastic, silty fill, broken rocks, heavy equip.	08/20/20	MS
I51	I	0-36	Si Sa, gravel	2.5Y 5/6	BC	—	NCM	08/20/20	JW
I52	I	0-35	Si Sa, gravel	2.5Y 5/6	BC	—	NCM, rock impasse at 35cm	08/20/20	JW

I53	I	0-36	Si Sa, gravel	2.5Y 5/6	BC	—	NCM	08/20/20	JW
I54	I	0-38	Si Sa, gravel	2.5Y 5/6	BC	—	NCM	08/20/20	JW
I55	I	0-36	Si Sa, gravel	2.5Y 5/6	BC	—	NCM	08/20/20	JW
I56	I	0-10	Si Lo	10YR 3/3	O	—	NCM	08/20/20	JW
I56	II	10-40	Si Sa, gravel	2.5Y 5/6	A/B	—	NCM	08/20/20	JW
I57	I	0-8	Si Lo	10YR 3/3	O	—	NCM	08/20/20	JW
I57	II	8-40	Si Sa, gravel	2.5Y 5/6	A/B	—	NCM	08/20/20	JW
I58	I	0-8	Si Lo	10YR 3/3	O	—	NCM	08/20/20	JW
I58	II	8-40	Si Sa, gravel	10YR 6/4	A/B	—	NCM, with 2.5Y 5/6	08/20/20	JW
I59	I	0-8	Si Lo	10YR 3/3	O	—	NCM	08/20/20	JW
I59	II	8-46	Si Sa, gravel	7.5YR 6/8	A/B	—	NCM, wet	08/20/20	JW
J51	I	0-5	Loam, roots/organics	10YR 3/2	O	—	NCM	08/20/20	JA
J51	II	5-35	Sa Lo, gravel (fine)	10YR 4/4	A/B	—	NCM	08/20/20	JA
J51	III	35-45	Lo Sa	10YR 6/6	Bw	—	NCM	08/20/20	JA
J52	I	0-5	Loam, roots/organics	10YR 3/2	O	—	NCM	08/20/20	JA
J52	II	5-30	Sa Lo, gravel (fine)	10YR 4/4	A/B	P	cortical flake fragment	08/20/20	JA
J52	III	30-50	Lo Sa, gravel	10YR 6/6	Bw	—	NCM	08/20/20	JA
J52+7.5E	I	0-35	Si	10YR 5/4	A/B	—	NCM	09/06/20	JA
J52+7.5E	II	35-55	Si Sa	10YR 6/6	BC	—	NCM	09/06/20	JA
J52+7.5S	I	0-30	Sa Lo	10YR 5/4	A/B	—	NCM	09/06/20	SF
J52+7.5S	II	30-60	Lo Sa	10YR 6/6	BC	—	NCM	09/06/20	SF
J52+7.5W	I	0-30	Si	10YR 5/4	A/B	P	Shatter?	09/06/20	JA
J52+7.5W	II	30-55	Si, med gravel	10YR 5/4	BC	—	NCM, very compacted	09/06/20	JA
J53	I	0-5	Loam, roots/organics	10YR 3/2	O	—	NCM	08/20/20	JA
J53	II	5-35	Sa Si	10YR 5/4	A	P	quartz flake	08/20/20	JA
J53	III	35-45	Sa, gravel	10YR 6/6	B	—	NCM	08/20/20	JA
J53+7.5E	I	0-25	Si Sa, gravel	10YR 4/6	F1	—	NCM	09/06/20	MS
J53+7.5E	II	25-50	Si Sa	10YR 6/6	F2	—	sily material, bottom of pond	09/06/20	MS
J53+7.5N	I	0-30	Sa Lo	10YR 5/4	A/B	—	NCM	09/06/20	SF
J53+7.5N	II	30-60	Lo Sa	10YR 6/6	A/B	—	NCM	09/06/20	SF
J53+7.5W	I	0-30	Si	10YR 5/4	A/B	P	chunks? Lithics	09/06/20	JA
J53+7.5W	II	30-50	Si, gravel	10YR 6/6	BC	—	NCM, compacted	09/06/20	JA
J54	I	0-5	Loam, roots/organics	10YR 3/2	O	—	NCM	08/20/20	JA
J54	II	5-35	Sa Si	10YR 5/4	A	—	NCM	08/20/20	JA
J54	III	35-45	Sa, gravel	10YR 6/6	B	—	NCM	08/20/20	JA

Table D3. STPs Feature 1.

STP#	Strat#	Depth (cm)	Soil Texture	Munsell	Horizon	Positive	Cultural Materials / Notes	Date	Excav-ator
X01	I	0-46	SaLo	10YR 3/2	A/B	H	glass, metal, paver tile, tar shingle	08/21/20	BM
X01	II	46-52	Sa	10YR 7/4	BC	—	NCM	08/21/20	BM
X02	I	0-37	SaLo	10YR 3/2	A/B	H	glass, ceramic, tile, metal, brick	08/21/20	BM
X02	II	37-49	Sa	10YR 7/4	BC	—	NCM	08/21/20	BM
X03	I	0-33	SaLo	10YR 3/2	A/B	H	glass, ceramic, brick, shell (SR); 2 metal objects (NR)	08/21/20	BM
X03	II	33-52	Sa	10YR 7/4	BC	—	NCM	08/21/20	BM
X04	I	0-41	SaLo	10YR 3/2	A/B	H	wire nails, brick, asbestos shingle (NR)	08/21/20	BM
X04	II	41-59	Sa	10YR 7/4	BC	—	NCM	08/21/20	BM
X05	I	0-30	SaLo	10YR 3/2	A/B	H	glass and shell (SR)	08/21/20	BM
X05	II	30-54	Sa	10YR 7/4	BC	—	NCM	08/21/20	BM
X06	I	0-37	SaLo	10YR 3/2	A/B	H	wire nails, glass, plastic, and coal (SR)	08/21/20	BM
X06	II	37-66	Sa	10YR 7/4	BC	—	NCM	08/21/20	BM
X07	I	0-25	SaLo	10YR 3/2	A/B	—	Disturbed	08/21/20	BM
X07	II	25-47	Sa	10YR 7/4	BC	—	Mottled A/B	08/21/20	BM
X08	I	0-30	SaLo	10YR 3/2	A/B	—	same mottling as X07	08/21/20	BM
X08	II	30-47	Sa	10YR 7/4	BC	—	same mottling as X07	08/21/20	BM
X09	I	0-11	organics	10YR 2/2	O	—	NCM	08/21/20	MS
X09	II	11-25	SaLo	10YR 4/5	Fill	H	tiles, glass, etc.	08/21/20	MS
X09	III	25-34	Sa	10YR 5/2	Fill	—	NCM	08/21/20	MS
X09	IV	34-45	LoSa	10YR 5/6	BC	—	NCM, compact	08/21/20	MS
X10	I	0-9	SiLo	10YR 3/3	O	—	NCM	08/21/20	JW
X10	II	9-29	SiSa, gravel	10YR 5/4	Fill	H	2 plastic, glass	08/21/20	JW
X10	III	29-45	LoSa, gravel	2.5Y 5/4	BC	P	quartz projectile point (Fishtail)	08/21/20	JW

Table D4. STPs Feature 2.

STP#	Strat#	Depth (cm)	Soil Texture	Munsell	Horizon	Positive	Cultural Materials / Notes	Date	Excav-ator
Y01	I	0-10	Loam	10YR 3/2	O	—	NCM	08/20/20	JA
Y01	II	10-25	LoSa	10YR 4/4	A/B	H	glass, brick; quartz fragment	08/20/20	JA
Y01	III	25-35	LoSa	10YR 5/3	?	H	glass	08/20/20	JA
Y01	IV	35-55	LoSa, gravel (medium)	10YR 5/6	Bw	—	NCM	08/20/20	JA
Y02	I	0-10	SaLo	10YR 3/2	O	—	NCM	08/24/20	JA
Y02	II	10-35	LoSa, gravel	10YR 5/4	Fill	H	glass, brick, coal, wire nails, asphalt shingles	08/21/20	JA
Y02	III	35-40	LoSa	10YR 5/2	Fill	H	glass, brick, coal, wire nails, asphalt shingles	08/21/20	JA
Y02	IV	40-79	LoSa, gravel (medium and fine)	10YR 5/6	Fill	H	6 (?) complete/semi complete bottle in N wall	08/21/20	JA
Y02	V	79-90	LoSa, gravel (fine)	10YR 5/6	B?	—	NCM	08/21/20	JA
Y03	I	0-5	SaLo	10YR 3/2	O	H	glass	08/21/20	JA
Y03	II	5-15	LoSa	10YR 5/2	Fill	H	brick, glass, wire nails, mid-century ceramics	08/21/20	JA
Y03	III	15-35	LoSa, gravel	10YR 5/6	Fill	H	brick, glass, wire nails, mid-century ceramics	08/21/20	JA
Y03	IV	35-85	LoSa, gravel	10YR 4/4	Fill	H	brick, glass, wire nails, mid-century ceramics	08/21/20	JA
Y04	I	0-5	SaLo	10YR 3/2	O	—	NCM	08/21/20	JA
Y04	II	5-15	LoSa	10YR 5/2	Fill	—	NCM	08/21/20	JA
Y04	III	15-35	LoSa, gravel	10YR 6/4	Fill	—	NCM	08/21/20	JA
Y04	IV	35-45	LoSa, gravel	10YR 5/6	Fill	H	glass, nails	08/21/20	JA
Y04	V	45-80	LoSa, gravel	10YR 4/4	Fill	H	glass, tube?	08/21/20	JA
Y05	I	0-90	LoSa	10YR 4/4	Fill	H	NE of cellar pit/ historical material	08/21/20	SF
Y06	I	0-5	SaLo	10YR 3/2	O	—	NCM	08/21/20	JA
Y06	II	5-15	LoSa	10YR 5/2	Fill	—	NCM	08/21/20	JA
Y06	III	15-50	LoSa, gravel (fine)	10YR 4/4	Fill	H	glass, brick, nails	08/21/20	JA
Y06	IV	50-55	LoSa	10YR 5/2	Fill	—	NCM	08/21/20	JA
Y06	V	55-80	LoSa, gravel (fine)	10YR 4/4	Fill	—	NCM	08/21/20	JA
Y07	I	0-40	LoSa	10YR 4/4	Fill	H	NW of cellar pit/ ceramics	08/21/20	SF
Y07	II	40-85	LoSa	10YR 5/4	Fill	—	NCM	08/21/20	SF
Y08	I	0-5	SaLo	10YR 3/2	O	—	NCM	08/24/20	JA
Y08	II	5-35	LoSa	10YR 5/2	Fill	H	glass, brick, oyster shell	08/24/20	JA

Y08	III	35-40	LoSa	10YR 4/2	Fill	—	NCM	08/24/20	JA
Y08	IV	40-60	LoSa, gravel (medium)	10YR 5/6	BC(w)	—	NCM	08/24/20	JA
Y09	I	0-5	SaLo	10YR 3/2	O	—	NCM	08/24/20	JA
Y09	II	5-80	LoSa	10YR 4/3	Fill	H	glass, brick, oyster and clam shell, nails	08/24/20	JA
Y10	I	0-5	organics	10YR 3/3	O	—	NCM	08/24/20	MS
Y10	II	5-20	SaLo	10YR 4/4	Fill	H	asphalt shingles, coal (NR); metal artifacts in dense fill	08/24/20	MS
Y10	III	20-55	LoSa	10YR 4/4	Fill	H	dense historic fill	08/24/20	MS
Y10	IV	55-95	Lo	10YR 3/3	Fill	H	soft fill, many plaste fragments, demo fill is dense layer of plaster, wood, asphalt shingles with some nails and brick fragments. One large brick frag. w/ mortar and one large piece of cut lumber found NR. Could not get through fill due to wood and depth.	08/24/20	MS
Y11	I	0-5	SaLo	10YR 3/4	O	—	NCM	08/24/20	JA
Y11	II	5-45	LoSa	10YR 4/3	Fill	P, H	glass, brick, oyster and clam shell, nails	08/24/20	JA
Y11	III	45-55	LoSa	10YR 5/4	Fill	H	glass, brick, oyster and clam shell, nails; compacted	08/24/20	JA
Y11	IV	55-85	LoSa	10YR 4/3	Fill	H	glass, wood, nails, brick, ceramics	08/24/20	JA
Y12	I	0-3	organics	10YR 3/3	O	—	NCM	08/24/20	MS
Y12	II	3-21	SaLo	10YR 4/4	Fill	H	1 bag	08/24/20	MS
Y12	III	21-38	SaLo, gravel	10YR 4/4	Fill	H	glass (window), shell frags.; rubble fill w/ voids, cement and large brick	08/24/20	MS
Y12	IV	38-40	SaLo, rocks	10YR 4/4	Fill	—	Bricks, etc.	08/24/20	MS
Y13	I	0-3	demolition debris	10YR 3/3	O	—	NCM	08/24/20	MS
Y13	II	3-80	demolition debris	10YR 4/4	Fill	H	bag of historics; *bottom of STP 120cm bgl, 4 courses of cinder block preserved, continues down farther. Large piece of chimney flue	08/24/20	MS

							tile pipe in fill. Bottom of STP a layer of cement block or stucco wall layer, more or less flat. Some voids in lowest fill.		

Appendix E – Artifact Tables

Appendix E: Artifact Catalog

Table E1. Area 2 Artifacts.

STP	Strat	Interpretation	Count	ID	Size	Dating
A01	I	A/B	2	Earthenware, white, glazed, fr.	1cm	
A01	I	A/B	1	Brick red fr.	1cm	
A01	I	A/B	1	Window glass fr.	1cm	
A02	I	A/B	4	Earthenware, red, glazed, fr.	1-3cm	
A03	I	A/B	1	Brick, red, fr., NR	2cm	
A04	I	A/B	1	Window glass fr., NR	2cm	
B01	I	A/B	1	Window glass, colorless, fr., NR	—	
B01	I	A/B	1	Brick, red, fr., NR	2cm	
B03	I	A/B	1	Earthenware, white, glazed, fr.	2cm	
B08	I	A/B	1	Button, Prosser, pie crust type, ceramic, white, fr.	1cm	1840-1880
B09	I	BC	1	Pipestem, white clay, 6/64 bore.	3cm	ca.1680-1710
D01	I	A/B	1	Bottle glass, green, fr.	4cm	
D01	I	A/B	2	Window glass fr.	2cm	
D02	I	A/B	2	Window glass fr.	2cm	
D03	I	A/B	1	Bottle glass, colorless, fr.	3cm	
D08	I	A/B	1	Bottle glass, brown, fr.	2cm	
E01	I	A/B	1	Bottle glass, colorless, fr., NR.	2cm	
E03	I	A/B	1	Window glass, colorless, fr., NR	2cm	
E04	I	A/B	1	Bottle glass, colorless, fr., NR.	2cm	
E09	I	A/B	1	Earthenware, red, slipped, fr.	1cm	
E09	I	A/B	1	Bottle glass, colorless, fr.	1cm	
F01	I	A/B	1	Bottle glass, colorless, fr.	3cm	
F01	I	A/B	1	Brick, red, fr.	3cm	
F05+7.5E	I	A/B	1	Bottle glass, colorless, fr.	2cm	
F05+7.5E	I	A/B	1	Window glass, fr.	1cm	
G03	I	A/B	1	Metal, ferrous, fr.	10cm	
G09	I	A/B	1	Bottle glass, colorless, fr.	2cm	

Table E2. Area 3 Artifacts.

STP	Strat	Interpretation	Count	ID	Size	Dating
E41+7.5S	I	A/B	1	Metal, ferrous, wire nail	—	
E41+7.5S	I	A/B	1	Metal, ferrous, fr.	—	
F53	II	A	2	Bottle glass, colorless, fr. NR	—	
F53	II	A	1	Metal, ferrous, fr. NR	—	
F54	II	A	1	Ceramic, porcelain, white fabric, white glaze, handle, tea cup, fr.	4cm	
F54	II	A	2	Ceramic, tile, 6-sided, white	2.5cm	
F54	II	A	4	Bottle glass, colorless, fr.	1-3cm	
F54	II	A	1	Bottle glass, brown, fr.	3cm	
F54	II	A	2	Window glass, fr.	2cm	
F54	II	A	1	Window glass, textured, fr.	2cm	
F54	II	A	1	Linoleum tile, fr.	5cm	
F54	II	A	1	Metal, ferrous, bolt	3cm	
F54	II	A	1	Metal, alloy, wire nail	3cm	

F54	II	A	50+	Asphalt roof shingle, fr. NR	—	
F55	I	Fill	1	Pull tab can, "Black Label" "Carling Brewing Company, Baltimore, MD.	—	1961-1975
F55	I	Fill	1	Bottle glass, brown, fr.	2cm	
F55	I	Fill	1	Bottle glass, green, fr.	7cm	
F55	I	Fill	5	Window glass, colorless, fr.	2-4cm	
F56	II	Fill	1	Bottle glass, brown, stippled, fr.	2cm	
F56	II	Fill	1	Bottle glass, green, fr.	1cm	
F56	II	Fill	1	Metal, copper alloy, screw, flat head	2.5cm	
F56	II	Fill	1	Metal, ferrous, wire nail	9cm	
F56	II	Fill	1	Metal, ferrous, wire nail, fr.	2cm	
F58	II	Fill	2	Ceramic, earthenware, Fiestaware, green, plate, fr.	2-4cm	1936-present
F58	II	Fill	1	Ceramic, earthenware, white fabric, white slip, cup/bowl base, fr.	3cm	
F58	II	Fill	1	Ceramic, tile, 6-sided, blue/gray, fr.	2.5cm	
F58	II	Fill	1	Bottle glass, brown, fr.	2cm	
F58	II	Fill	2	Window glass, fr.	2cm	
F58	II	Fill	4	Metal, enamel, plate, fr.	3-7cm	
F58	II	Fill	1	Plastic, sheet, black print, fr.	2cm	
F58	II	Fill	1	Composite, sparkplug, "V Ray"	7cm	
F59	II	Fill	1	Metal, ferrous, wire nail, fr.	5cm	
F59	II	Fill	1	Brick, red, fr.	2cm	
F59	II	Fill	2	Window glass, fr.	2-3cm	
F59	II	Fill	1	Coal, fr.	2cm	
G53	II	A/B	1	Bottle glass, colorless, fr. NR		
G56+7.5S	I	A/B	1	Metal, ferrous, bar, fr.	1cm D, 7cm L	
G56+7.5W	I	A/B	1	Coal, fr. NR	—	
G56+7.5W	I	A/B	5	Clay pigeon, fr. NR	—	
H53	II	Fill	1	Plastic, gray, fr.	1cm	

Table E3. Feature 1 Historic Artifacts.

STP	Strat	Interpretation	Count	ID	Size	Dating
X01	I	A	1	Bottle glass, colorless, fr.	3cm	
X01	I	A	1	Window glass, fr.	2cm	
X01	I	A	1	Metal, copper alloy, fr.	3cm	
X01	I	A	1	Ceramic, red, structural tile, fr.	5cm	
X01	I	A	6	Tar paper, fr.	2-7cm	
X02	I	A	1	Ceramic, porcelain, white fabric, fr.	1cm	
X02	I	A	1	Window glass, dotted surface, fr.	2cm	
X02	I	A	2	Brick, red, fr.	4cm	
X02	I	A	2	Ceramic, tile, 6-sided, blue/gray	2.5cm	
X02	I	A	1	Metal, ferrous, fr.	6cm	
X03	I	A	3	Bottle glass, colorless, fr.	2cm	
X03	I	A	1	Bottle glass, colorless, embossed "…PS…", fr.	2cm	

X03	I	A	1	Bottle glass, orange/red, fr.	1cm	
X03	I	A	1	Ceramic, tan, structural tile.	3cm	
X03	I	A	3	Bivalve, fr.	2cm	
X04	I	A	1	Brick, red, fr. w/mortar	3cm	
X04	I	A	2	Metal, ferrous, wire nail	3-6cm	
X04	I	A	1	Metal, copper alloy, fr.	7cm	
X05	I	A	1	Bottle glass, colorless, molded lip, fr.	3cm	
X05	I	A	2	Bottle glass, colorless, embossed "…R…", fr.	1cm	
X05	I	A	1	Bottle glass, colorless, fr.	2cm	
X05	I	A	4	Bivalve, oyster, fr.	3-6cm	
X06	I	A	1	Ceramic, earthenware, white fabric, white glaze	2cm	
X06	I	A	1	Bottle glass, colorless, fr.	3cm	
X06	I	A	3	Window glass, fr.	2cm	
X06	I	A	9	Metal, ferrous, wire nail	3-6cm	
X06	I	A	1	Metal, ferrous, fr.	2cm	
X06	I	A	1	Rubber, black, threaded foot	2cm	
X06	I	A	2	Coal, fr.	1cm	
X06	I	A	1	Bivalve, fr.	1cm	
X9	II	Fill	1	Window glass, fr.	3cm	
X9	II	Fill	2	Ceramic, tile, 6-sided, white	2.5cm	
X10	I	Fill	1	Ceramic, tile, 6-sided, white	2.5cm	
X10	I	Fill	1	Ceramic, tile, 6-sided, blue/gray	2.5cm	
X10	II	Fill	1	Metal, wire nail, fr.	4cm	

Table E4. Feature 2 Historic Artifacts.

STP	Strat	Interpretation	Count	ID	Size	Dating
Y01	II (10-25cm)	Fill	2	Window glass fr.	3cm	
Y01	II (10-25cm)	Fill	1	Bottle glass, bown, fr.	2cm	
Y01	II (10-25cm)	Fill	1	Bottle glass, colorless, fr.	2cm	
Y01	II (10-25cm)	Fill	1	Brick, red, fr.	1cm	
Y01	III (25-35cm)	Fill	1	Metal, ferrous, wire nail	10cm	
Y02	II (10-35cm)	Fill	5	Metal, ferrous, wire nail	5-10cm	
Y02	II (10-35cm)	Fill	1	Metal, alloy, wire nail	10cm	
Y02	II (10-35cm)	Fill	1	Metal, alloy, clock gear	3cm	
Y02	II (10-35cm)	Fill	1	Ceramic, red, structural tile, fr.	10cm	
Y02	II (10-35cm)	Fill	2	Brick, red, fr.	4cm	
Y02	II (10-35cm)	Fill	1	Coal, fr.	2cm	
Y02	II (10-35cm)	Fill	1	Asphalt roof shingle fr.	2cm	
Y02	III (35-45cm)	Fill	1	Brick, red, fr.	3cm	
Y02	III (35-45cm)	Fill	2	Window glass fr.	3cm	
Y02	III (35-45cm)	Fill	1	Coal, fr.	3cm	
Y02	III (35-45cm)	Fill	2	Asphalt roof shingle fr.	3cm	
Y02	III (35-45cm)	Fill	5	Metal, ferrous, wire nail	3-10cm	
Y02	IV (45-79cm)	Fill	12	Bottle glass, colorless, mold made, fr., embossed "FE…"	1-5cm	
Y02	IV (45-79cm)	Fill	1	Bottle glass, brown, fr.	3cm	
Y02	IV (45-79cm)	Fill	1	Lightbulb glass, frosted, fr.	2cm	
Y02	IV (45-79cm)	Fill	1	Earthenware, white fabric, green glaze, fr.	2cm	

Y02	IV (45-79cm)	Fill	1	Porcelain, glaze, black paint, thin 2cm, modern	3cm	
Y02	IV (45-79cm)	Fill	2	Brick, red, fr.	2-10cm	
Y02	IV (45-79cm)	Fill	12	Asphalt roof shingle fr.	1-5cm	
Y02	IV (45-79cm)	Fill	2	Bivalve, fr.	2-4cm	
Y02	IV (45-79cm)	Fill	4	Metal, ferrous, wire nail	3-6cm	
Y02	IV (45-79cm)	Fill	2	Mortar, fr. (brick wall)	10cm	
Y02	IV (45-79cm)	Fill	2	Ceramic, red, structural tile, fr.	20cm	
Y03	II (15-35cm)	Fill	11	Window glass fr.	1-3cm	
Y03	II (15-35cm)	Fill	4	Bottle glass, colorless, fr.	1-4cm	
Y03	II (15-35cm)	Fill	1	Tableware, milk glass, white, base, embosed diamond with an M inside	4cm	1930s/1940s
Y03	II (15-35cm)	Fill	2	Porcelain, white fabric, red and green paint, modern.	2cm	
Y03	II (15-35cm)	Fill	2	Brick, red, fr.	2-5cm	
Y03	II (15-35cm)	Fill	1	Ceramic, red, structural tile, fr.	10cm	
Y03	II (35-85cm)	Fill	2	Ceramic, porcelain, white fabric, stencil multi-colored decoration under glaze, fr joining, tea cup	5cm	
Y03	II (35-85cm)	Fill	1	Ceramic, porcelain, white fabric, tea cup handle, molded hand decoration	3cm	
Y03	II (35-85cm)	Fill	5	Metal, ferrous, wire nail	3-5cm	
Y03	II (35-85cm)	Fill	1	Metal, ferrous, sheet, fr.	3cm	
Y03	II (35-85cm)	Fill	1	Metal, ferrous, tube, fr.	3cm	
Y03	II (35-85cm)	Fill	1	Metal, ferrous, square nail.	5cm	
Y04	IV (35-45cm)	Fill	6	Bottle glass, colorless, fr.	2-4cm	
Y04	IV (35-45cm)	Fill	1	Ceramic, earthenware, white body, underglaze colored stencil decoration, clear glaze, fr.	3cm	
Y04	IV (35-45cm)	Fill	1	Metal, ferrous, wire nail.	5cm	
Y04	V (45-80cm)	Fill	1	Metal, copper alloy tube.	1cm D, 10+cm L	
Y04	V (45-80cm)	Fill	1	Wall plaster, white, fr.	3cm	
Y05	I	Fill	2	Ceramic, earthenware, white body, underglaze hand painted flowers pink, fr.	1-3cm	
Y05	I	Fill	2	Ceramic, porcelain, stencil decoration, modern, fr.	2-4cm	
Y05	I	Fill	1	Window glass fr.	3cm	
Y05	I	Fill	1	Bottle glass, melted, fr.	4cm	
Y05	I	Fill	1	Brick, red, fr.	4cm	
Y06	III (15-50cm)	Fill	7	Metal, ferrous, wire nail	4-8cm	
Y06	III (15-50cm)	Fill	2	Metal, ferrous, wire nail, fr.	2cm	
Y06	III (15-50cm)	Fill	5	Window glass fr.	1-2cm	
Y06	III (15-50cm)	Fill	2	Bottle glass, semi-opaque white, fr joining	2cm	
Y06	III (15-50cm)	Fill	1	Glass, drawn glass sculpture fr.	2cm	
Y06	III (15-50cm)	Fill	5	Brick, red, fr.	2-4cm	
Y06	III (15-50cm)	Fill	1	Ceramic, red, structural tile, fr.	3cm	

Y06	III (15-50cm)	Fill	1	Bivalve, fr.	3cm	
Y07	I	Fill	1	Ceramic, earthenware, white fabric, glaze, fr.	2cm	
Y07	I	Fill	1	Bone, lg mamal fr.	5cm	
Y07	I	Fill	1	Bivalve, fr.	4cm	
Y08	II	Fill	1	Bottle glass, colorless, fr.	2cm	
Y08	II	Fill	1	Window glass fr.	3cm	
Y08	II	Fill	1	Metal, ferrous, stove or bathtub leg	8.5cm	
Y08	II	Fill	1	Brick, red, fr.	3cm	
Y08	II	Fill	1	Mortar, fr. (brick wall)	8cm	
Y08	II	Fill	3	Ceramic, tan, structural tile, fr.	7cm	
Y09	II (5-80cm)	Fill	1	Ceramic, earthenware, white fabric, glaze, fr.	2cm	
Y09	II (5-80cm)	Fill	1	Bottle glass, white, milkglass, fr.	4cm	1930s/1940s
Y09	II (5-80cm)	Fill	1	Bottle glass, green, fr.	4cm	
Y09	II (5-80cm)	Fill	3	Bottle glass, colorless, fr.	2cm	
Y09	II (5-80cm)	Fill	1	Bottle glass, brown, fr.	1cm	
Y09	II (5-80cm)	Fill	4	Window glass fr.	1cm	
Y09	II (5-80cm)	Fill	3	Brick, red, fr.	3-5cm	
Y09	II (5-80cm)	Fill	1	Ceramic, tan, structural tile, fr.	2cm	
Y09	II (5-80cm)	Fill	4	Asphalt roof shingle fr.	2-6cm	
Y09	II (5-80cm)	Fill	2	Bivalve, fr.	3cm	
Y09	II (5-80cm)	Fill	6	Metal, ferrous, wire nail	10cm	
Y09	II (5-80cm)	Fill	5	Metal, ferrous, wire nail	6cm	
Y09	II (5-80cm)	Fill	10	Metal, ferrous, wire nail	2-4cm	
Y09	II (5-80cm)	Fill	1	Metal, ferrous, fragment	9cm	
Y09	II (5-80cm)	Fill	1	Metal, ferrous, can and bottle opener, aka church key	12.5cm	
Y10	II	Fill	2	Window glass fr.	2cm	
Y10	II	Fill	1	Metal, ferrous, fr.	7cm	
Y10	II	Fill	4	Bivalve, fr.	2cm	
Y10	III	Fill	1	Ceramic, earthenware, white fabric, glaze, fr.	3cm	
Y10	III	Fill	4	Metal, ferrous, wire nail	3-6cm	
Y10	III	Fill	1	Metal, ferrous, nut and bolt	9cm	
Y10	III	Fill	1	Metal, ferrous, fr.	4cm	
Y10	III	Fill	3	Asphalt roof shingle fr.	2-4cm	
Y10	III	Fill	2	Bottle glass, colorless, fr.	1-3cm	
Y10	III	Fill	1	Window glass fr.	1cm	
Y10	III	Fill	5	Coal, fr.	1-4cm	
Y10	IV	Fill	1	Metal, ferrous, wire nail	10cm	
Y10	IV	Fill	1	Window glass fr.	2cm	
Y10	IV	Fill	1	Wood, moulding, fr	13cm	
Y10	IV	Fill	10	Plaster, wall, painted white and red.	1-5cm	
Y10	IV	Fill	2	Brick, red, fr.	3cm	
Y10	IV	Fill	1	Ceramic, tan, chimney liner, black on inside	7cm	
Y10	IV	Fill	7	Asphalt roof shingle fr.	2-5cm	
Y11	II-III (5-55cm)	Fill	1	Bottle glass, aqua, fr.	2cm	
Y11	II-III (5-55cm)	Fill	3	Bottle glass, colorless, fr.	1-3cm	

Y11	II-III (5-55cm)	Fill	3	Window glass fr.	1-4cm	
Y11	II-III (5-55cm)	Fill	4	Metal, ferrous, wire nail	4-7cm	
Y11	II-III (5-55cm)	Fill	4	Asphalt roof shingle fr.	1-4cm	
Y11	II (55-85cm)	Fill	1	Ceramic, porcelain, transfer print blue, fr.	1cm	
Y11	II (55-85cm)	Fill	1	Bottle glass, colorless, fr.	4cm	
Y11	II (55-85cm)	Fill	1	Bottle glass, aqua, fr.	3cm	
Y11	II (55-85cm)	Fill	1	Brick, red, fr.	2cm	
Y11	II (55-85cm)	Fill	2	Metal, ferrous, wire nail	4-10cm	
Y12	II	Fill	10	Window glass fr.	2-8cm	
Y13	II	Fill	1	Bottle glass, white, milkglass, fr.	2cm	1930s/1940s
Y14	II	Fill	4	Metal, ferrous, wire nail	2-10cm	
Y15	II	Fill	1	Metal, ferrous, wire, fr.	6cm	
Y16	II	Fill	4	Bivalve, fr.	—	
Y13	II	Fill	1	Ceramic, earthenware, white fabric, blue glaze, fr	4cm	
Y13	II	Fill	1	Ceramic, earthenware, white fabric, colored stencil flowers underglaze, fr	2cm	
Y13	II	Fill	2	Bottle glass, aqua, fr.	3cm	
Y13	II	Fill	1	Bottle glass, soda, embossed, fr.	8cm	
Y13	II	Fill	2	Bottle glass, white, milkglass, fr. joining, netting pattern	3cm	1930s/1940s
Y13	II	Fill	18	Metal, ferrous, wire nail	2-11cm	
Y13	II	Fill	1	Metal, alloy, wire nail	7cm	
Y13	II	Fill	8	Window glass fr.	2-6cm	
Y13	II	Fill	1	Bivalve, fr.	2cm	
Y13	II	Fill	1	wood, fr	4cm	

Agency Submission

Phase II Archaeological Work Plan, Proposed Industrial Park – HK Ventures LLC, 4285 Middle Country Road (NYOPRHP 20PR02526)

Calverton, Town of Riverhead, New York

Prepared for: HK Ventures, LLC

Prepared by: Carol S. Weed (CSW13108)
Matthew D. Spigelman (ACME Heritage Consultants)
Jenna L. Anderson (ACME Heritage Consultants)

November 11, 2020

Phase II Work Plan

This proposed Phase II work plan includes a short summary of the Phase IA/B investigations, a research design and field, laboratory, and report methods. The Phase II work is focused exclusively on Native American, pre-contact archaeological loci and isolated finds that are currently grouped within a provisionally defined archaeological site (Figures 1 and 2). This site was designated by the New York Office of Parks, Recreation and Historic Preservation (NYSHPO, NYOPRHP) as USN 10306.001191 (the Industrial Park Pre-Contact Site).

This plan responds to comments made by NYSHPO on October 14, 2020, in its review letter of the Phase IB report (Weed et al. 2020). Consultation with the applicable Indian Nations is being coordinated by the New York State Department of Environmental Conservation (NYSDEC).

The Phase II investigations will be completed by co-Principal Investigators Carol S. Weed (CSW13108) and Matthew Spigelman (ACME Heritage Consultants) and ACME staff.

Phase IA/IB Summary

A Phase IA due diligence assessment focused on the current actions was conducted in May 2020 by Carol S. Weed (Weed 2020a, 2020b). Background research indicated that the parcel (SCTM 0600-116.00-01.00-002.000) was included in a visual assessment of buildings/structures for the Riverhead Solar 2 project (Freeland et al. 2018). There were no indications that prior archaeological investigations had been completed. During the Phase IA, Ms. Weed (2020a) noted the remnants of an historic farmstead and, for this reason, included a Phase IB work plan in the Phase IA report. The final Phase IB work plan was modified to reduce the size of the proposed shovel test pits (STPs) and eliminate the use of plow strips. Sections of the revised, final plan were presented in the subsequent Phase IB survey report (Spigelman et al. 2020).

During the Phase IB work, 37 Indian Nation artifacts were recovered. These included 34 chipped stone artifacts and 3 ground stone artifacts. Indian Nation artifacts were found in Area 2, effectively encompassing the fallow fields in the center of the project parcel, and Area 3, a wooded but previously scraped location in the northeast quadrant of the project parcel (see Figures 1 and 2).

In Area 3, two Indian Nation clusters were found in badly disturbed contexts. Five artifacts were found within USN 10306.001187 in STPs F54, G61, X10 in Feature 1, and Y11 in Feature 2. These artifacts included an Orient Fishtail base, two flakes and a core. All were found in association with historic materials and in disturbed contexts. Additional Indian Nation chipped and ground stone items were found in the disturbed and scraped area south of Site 10306.001187 within Area 3 as well. This collection of artifacts was designated Locus 1 and chunks, chunky debris, a flake, flake fragments, and tertiary shatter were recovered from STP G56, G56+7.5N, G56+7.5E, J52, J52+7.5E, J52+7.5W, J53, and J53+7.5W. These items were found in both strata I and II. Because of the angular nature of many of the breaks, it is suggested that the some of

the items were either damaged or created by the scraping of the area immediately south of Site USN 10306.001187 and the kettle pond. No further work was recommended for the Indian Nation components within USN 10306.001187 or south of the site in Area 3 and NYSHPO accepted that recommendation.

In Area 2, from north to south, Indian Nation chipped and/or ground stone were recovered at locations designated Loci 2, 3, and 4 and Isolated Finds (IFs) IF-1, IF-2, and IF-3. Following discussion with NYSHPO, these loci and isolated finds were subsumed within a single, somewhat arbitrary boundary. NYSHPO designated this site USN 10306.001191 and indicated that radial shovel tests would need to be conducted around the isolated finds and increased around Locus 2.

In Area 2, initial disturbance was noted in the vicinity of Locus 2 (Phase IB STPs E06, E06+7.5W) on a 1984 aerial (Spigelman et al. 2020, Figure 7). However, the 2019 Project Site topographic survey (Spigelman et al. 2020, Figure 3a) recorded 80ft AMSL elevations both in the locus location and north and west outside of the 1984 disturbance. It appears that the disturbance may have been minimal. Further south in Area 2, the Locus 3 area (E24, E24+7.5N) is not disturbed on either the 1978 or 1984 aerials. Finally, the Locus 4 locations are not disturbed on the north (F25, F26, F26+7.5W), but they appear more disturbed to the south (E40, E40+7.5E, E41, E41+7.5W). The Locus 4 components, however, are all confined to either the 65ft AMSL contour or the interface of the 65ft/66ft AMSL contours. This, again, suggests that the degree of disturbance may have been minimal.

The combined Phase IA/IB investigations yielded information on Indian Nation and Historic-era use of the Project Area. Indian Nation temporally diagnostic artifacts were recovered and what appear to be discrete artifact concentrations also were identified. It was recommended that Phase II testing, including closer interval radials and one or two, one(1)-by-one (1)-meter units be excavated at Loci 2, 3, 4 to refine the boundaries and to determine the integrity of the stratigraphy at Loci 2 and 4. NYSHPO accepted this recommendation. This Phase II work plan presents the initial Research Design for the Phase II work.

Initial Phase II Research Design

The Phase II investigations are directed by a research design that has been developed based on the results of the Phase IB investigations on the Project Site and comparative data generated by cultural resources projects that have recovered Native American artifacts or identified Native American features within Nassau and Suffolk County. Because the Phase II research is on-going, this initial research design likely will be refined as the Phase II comparative research and excavations are conducted.

Based on the results of the investigation to date, three research domains can be supported and research questions can be posited about: 1) spatial and stratigraphic integrity, 2) chipped stone typology and function, and 3) ground stone design and function. Charcoal, faunal remains, fire-cracked rock (FCR), and Native American pottery have not been recovered. If these artifact classes are found, specific research domains for them may be developed.

This initial research design has three research domains: Spatial and Stratigraphic Integrity; Chipped Stone Typological and Functional Implications, and Ground Stone Design and Use Implications.

Spatial and Stratigraphic Integrity

Spigelman et al. (2020) found mixed A/B horizons in the shovel test pits (STPs) excavated in Area 2. The sources of the disturbance were considered to be plowing, scraping (as noted on aerial photographs), and

burrowing animals. Plow scars, however, were not obvious at the B/C strata interface suggesting that the plowing might have been shallow mixing only the A and B soils. During Phase II, the excavations will focus on discriminating between A and B horizons or upper and lower A/B deposits. To this end, the 50cm x 50cm excavation units (EUs) will be excavated using 5cm arbitrary levels within stratum.

***Spatial and Stratigraphic Research Questions**:*
To determine if the loci retain Stratigraphic Integrity the following research questions will be asked:

- Do loci have firm boundaries, or has historic period plowing created broad scatters without definable structure?
- Are distinct A and B soil horizons present? Or have they been mixed by historic period plowing?
- Are plow scars visible in the underlying BC soil horizon?
- Are features present within the A/B horizon and/or cut into the underlying BC horizon? Can distinct functional areas be identified within or between loci based on the presence of features, such as pits, hearth, and post molds?

Chipped Stone: Typological and Functional Implications
The chipped stone artifacts recovered during Phase IB from Loci 2, 3, and 4, are summarized below (see Table 1).

Table 1. Phase IB Lithic Artifacts

Context	# of Artifacts	Artifact Types
Isolate 1	1	Tested pebble
Isolate 2	1	Distal flake fragment
Isolate 3	1	Flake tool/indeterminate
Locus 2	5	Partial projectile point, flake fragments, split cobble
Locus 3	3	Scraper, flake tool, flake fragments
Locus 4	8	Flake fragments, shatter

The chipped stone assemblages recovered to date are dominated by non-cortical flake fragments, shatter, and retouched tools. They include a broken projectile point showing evidence of retouching on the distal point. The composition of these assemblages is similar to that of the artifacts recovered from Site USN 10302.001713, Coram Route 112, which is located approximately 12.6 mi from the current study area. The assemblage recovered from Route 112 was made up of bifacially worked tools and non-cortical debitage. The lack of cortex on these artifacts indicates that only the later stage of tool manufacture took place on site. Both sites also show evidence of repair and possible reuse of bifacially flaked tools. The composition of the Route 112 assemblage has been interpreted as evidence of use as a camp or brief field station (Johnson 1989; Lightfoot 1985; Bernstein and Lenardi 2008).

The partial projectile point recovered from Locus 2 is a Beekman Triangle, which have been found at sites dating from the Transitional Archaic to the late Middle Woodland period (~3700-2000 BP; Funk 1976; Hoffman 1991). No temporally specific material has been recovered from Locus 3 or 4.

Chipped Stone Typological Research Questions: The research questions for Functional Areas are aimed at developing an archaeological feature hierarchy by temporal period for the Project. On a gross level, the answers to the questions will provide bases for determining the possible importance of a particular feature type in the use history of the Farm Colony area. To this end, the following questions will be addressed

- What are the feature types documented? What are the defining criteria for the types?

- Do the feature types define functional spaces? Do these functional areas (and, by association, the feature types) change through time? What heralds the change (demolition, re-use, abandonment, economic change)?
- What is the likelihood that the feature type is retained in the Project and that an archaeological signature can be identified?

Chipped Stone Assemblage Research Questions: The focus of this domain is determining the spatial integrity and intra-site patterning of the chipped stone assemblages from each locus. To these ends, we will address the following questions:

- Do Loci 2, 3, and 4 represent defined, functional areas?
- How diverse are the chipped stone artifacts in terms of type? Is there evidence for multiple activities being carried out at any of the loci?
- If the loci represent foraging or procurement stations, the only feature type present will be hearths. Similarly, if these loci represent field camps, then hearths plus postmold patterns and rock caches will be present. Are these assumptions supported by the field data?

GroundsStone: Strategic/Expedient Design and Primary/Secondary Uses

As noted by Adams (2020:21), the design of a ground stone object can be described in two ways: expedient or strategic. A ground stone has an expedient design if the object is modified only through use. Effectively, the rock is used because its form is appropriate for the task. In contrast, an object with a strategic design has been intentionally modified to "make the item easier to hold or to achieve a specific shape."

The intended use of an object obviously is taken into consideration when developing its design. For example, the form of a hand-axe must accommodate several actions (hafting, striking, crushing, etc.) which require modification of the rock's form. The primary use of the hand-axe is as a multi-functional tool. In contrast, a mano performs a single function (grinding) and it is often a rock that is naturally oval and that fits without modification in a person's palm. It may, after its primary use, also be used expediently as a hammerstone.

Ground stone objects have been recovered from Native American sites on Long Island though none are reported from the 18 prehistoric components documented within three miles of the Project Site (Table 2 attached). The three-mile radius was chosen because this distance includes both Long Island Sound and headwater lobes of the Peconic River. Thus, this area might contain all landscape elements exploitable during a Native American seasonal round. The ground stone objects recovered during Phase IB at the Project Site were from Loci 3 and 4 and included two abraders and a smoother. Both abraders displayed multi-functions and the smoother was interpreted as a single use object. None of them were designed.

The presence of these tools suggests that functions other than those resulting from chipped stone production and tool preparation were being conducted at two of the three loci currently clustered within USN 10306.001191. The research questions are focused ground stone design, function, and chronological changes in these elements. In order to address the questions, the ground stone assemblage recovered during Phase II will be compared to a larger data base of sites subjected to Phase II or III located in Nassau and Suffolk counties and the north shore of Long Island Sound.

Ground stone Research Questions: The research questions are focused ground stone design, function, and chronological changes in these elements. In order to address the questions, the ground stone assemblage recovered during Phase II will be compared to a larger data base of sites subjected to Phase II or III located

in Nassau and Suffolk counties and the north shore of Long Island Sound. To these ends, we will address the following questions:

- Do the recovered artifacts display specific characteristics that can be linked to documented functions?
- Are there obvious design and function changes that are linked to specific temporal periods?
- Are all of the objects built on stones that are readily available in the glacial tills of the area?
- If multi-functional tools are present, are the uses functionally linked (e.g., a mano with hammerstone use could reflect break nut shell and then grinding the nut meat)?

Data Sources

The documentary data sources for the cultural resources effort are listed on Table 3 below. The specific data being sought are listed by the likely source locations but we may find that the data are elsewhere. This research is underway.

Table 3. Phase II Source Locations

Research Domain	Source Location(s)	Data
Spatial and Stratigraphic Intergrity	Phase IB Notes On-line	Phase IB shovel test forms NYSAA Bulletins (Keywords: Suffolk and Nassau Counties) NYSHPO CRIS (Phase II and III reports for treatment of sites with plowzones)
Chipped Stone Ground stone	On-line	1) NYSHPO CRIS (Site form and report data) 2) NY State Museum (Beauchamp ground stone and site distribution reports; also Parker 1920) 3) NYSAA Bulletins (Keywords: Suffolk and Nassau Counties) 4) SCAA Newsletters (Suffolk County Planning Department) 5) NYC Landmarks Preservation Commission, Nan Rothchild Repository

Field data will be collected using two excavation types: STPs measuring 40cm in diameter and excavation units (EU) measuring 50cm x 50cm. The STPs are proposed to confirm isolates and refine loci boundaries. The EUs are proposed to investigate the stratigraphic integrity of the deposits and investigate the presence of subsurface features within loci. Units may be expanded to 1m × 1m as needed to clarify a feature's horizontal boundary or to more clearly define strata relationships. The distribution of these STPs and EUs is discussed later in this plan. No features will be sectioned without consulation with NYSHPO, NYDEC, and the consulting Tribes.

Field, Laboratory and Reporting Methods

Overall, the field, laboratory, and reporting methods that will be used are standard and will adhere to the New York Archaeological Council guidelines as accepted by the NYSHPO. Methods specific to this proposed work are discussed below.

Preliminary Health and Safety Plan

A final health and safety plan will be prepared prior to fieldwork based on public health conditions at that time. The remaining Phase II archaeological investigations will be conducted when the following guidelines can be met:

1) No fieldwork will be conducted by any crew member if their home or the project area are under "stay-in" orders issued by a local, state, or federal entity.
2) There will be a port-a-potty on site so that team members do not have to leave the site to use bathroom facilities.
3) All team members will wear face masks and practice social distancing if these orders are still in effect when the fieldwork is conducted.
4) Each team member will use their own set of field equipment. The jointly used screens and shovels will be temporarily tagged with personnel names and be stored in the person's car each night while the fieldwork is underway.
5) No excavation will be conducted in rain, snow, or other adverse weather conditions.
6) In the event of an on-site medical emergency, the Town of Riverhead emergency services will be notified that an accident has occurred, and we will request transportation to the nearest hospital.
7) At the time of the accident, the project manager, The Pinewood Organization, will be notified and an accident report will be filed that day with their office.

Field Methods

As noted above, STP and EU excavation will be employed in order to define the boundaries of the three isolated finds and three loci (Table 4; Figures 1 and 2).

Table 4. Phase II Proposed Testing

Location	Methods	Rationale
Isolate 1	8 STPs	Radial tests to confirm isolated artifact or identify additional locus
Isolate 2	8 STPs	Radial tests to confirm isolated artifact or identify additional locus
Isolate 3	4 STPs	Radial tests to confirm isolated artifact or identify additional locus
Locus 2	6 STPs & 2 EUs	Clarify locus boundary, investigate stratigraphy, identify features, collect data
Locus 3	5 STPs & 2 EUs	Clarify locus boundary, investigate strigraphy, identify features, collect data
Locus 4	10 STPs & 9 EUs	Clarify locus boundary and artifact patterning, investigate stratigraphy, identify features, collect data
Total	41 STPs & 13 EUs	Additional Units will be excavated if isolated artifacts are identified as loci.

The EU excavations will be utilized to more closely define the vertical profiles present at each loci and to determine if identifiable use surfaces are still present in these plow-disturbed locations. STPs will measure 30cm in diameter and be excavated 10cm into sterile subsoil. EUs will measure 50 by 50cm (20 by 20 inches). These units may be expanded to 1m-by-1m (40 by 40 inches) if features are exposed in the floor or walls or if discrete A and B horizons strata can be discriminated. No features will be sectioned without NYSHPO, NYSDEC, and Indian Nation consultion, but a feature's plan will be fully exposed.

The STPs will be excavated stratigraphically in 10cm (4in) arbitrary levels within a stratum; the EUs will be excavated in 5cm (2in) arbitrary levels within a stratum. Both excavation types will be excavated to a minimum depth of 50cm/20in or confirmed C-horizon soil (whichever comes first). The strata will be described using standard soils terminology and Munsell color designations. All STPs and Units will be backfilled after recordation is completed unless cultural features have been identified.

All matrix recovered from the STPs and EUs will be screened through ¼-in hardware mesh. All Indigenous Nation or EuroAmerican material culture items recovered during excavation or from the screens will be field bagged separately from one another.

If human bone is found, all excavation in the area of the find will be halted and the NYSHPO Human Remains Discovery Protocol will be implemented. If features are identified, their treatment will be determined in consultation with NYOPRHP, NYSDEC, and the Tribes.

Information Recordation

Standardized forms will be used to record field data. These include shovel test summary forms, bag and special sample logs (if needed), and photograph logs. Most of the descriptive data recorded in the field will be recorded on paper forms. In order to ensure that these data are available in electronic format as soon as possible, data entry will be completed during and immediately following fieldwork.

Where appropriate, digitized data also will be geo-rectified and incorporated on to the larger Project plan. The purpose of this is to build the archaeological sensitivity map as quickly as possible so that the results can be discussed meaningfully with the Applicant and NYOPRHP.

The shovel tests will be excavated to a minimum depth of 50cm/20in or confirmed C-horizon soil (whichever comes first). The strata will be described using standard soils terminology and Munsell color designations. In order to facilitate the creation of graphic cross sections (aka fence diagrams), the east wall of each shovel test also will be drawn. Any features identified in plan or profile will be documented but not excavated.

Mapping and Provenience Control

Each STP and EU will be geo-referenced. Elevation datums will be set in the southwest corner of each STP and Unit.

Artifact and Sample Recovery and Recordation

All artifacts recovered will be recorded in the project's Field Sample (FS) log, assigned separate FS numbers by provenience: by block, coordinate, shovel test, and stratigraphic layer. The plow strip piece-plotted artifacts will be listed separately within the FS log.

Specialized samples (flotation, C^{14}, or soil samples) will be taken only from EuroAmerican contexts, if at all. These samples will be entered into the project's Special Sample (SS) log. Assigned FS and SS numbers will be used to track materials throughout the processing, analysis, and curation process.

Laboratory Analyses

The processing, cataloging, and data entry tasks associated with recovered artifacts and samples and the analysis of all records, maps, photographs, and cultural materials for the Project will be undertaken by Phase IB project members as detail in the subsequent Personnel section.

The Indian Nations chipped and ground stone and ceramic objects will be subject to light brushing to remove superficial dirt. These artifacts will not be washed unless the consulting Indigenous Nations agree to the use of this procedure. The artifacts will be sorted into material classes (Native American chipped stone, ground and pecked stone, ceramics, and other). The chipped and ground stone recovered during the Phase IB work are typical of stone found on an outwash plain. The presence of the till gravels resulted in a quantity of stone ranging in size from gravel through cobbles in the screens and observed in the soils during excavation. Many of the stones had been subject to natural breakage. Thus, the following characteristics were used to separate natural breakage or erosion from cultural modifcations.

Any chipped stone that appears to show regular edge removals, possible platforms, clear points of detachment, or other characteristics of conchoidal fracture (including concave ventral surfaces, visible striations on ventral surface) will be saved in the field and, after brushing and/or washing, subject to review using a 10-power hand lens. Similarly, any stone that displays possible use polish, grinding striations, collapsed particle ridges, or shaped surfaces will kept, subject to light brushing, and reviewed with a hand lens as well. Any object that was evaluated as cultural in origin will be measured (length, width, thickness) using a Mitutoyo Digimatic Caliper which measures in inches and millimeters. The recorded metrics will be in millimeters. Weights will be taken using an electronic scale and recorded in grams.

Any EuroAmerican artifacts will be washed (unless detrimental to the item or the item is being submitted for specialized analyses). The artifacts will be sorted by into material classes (Historic glass, ceramics, metal, plastic, other; organic floral, animal bone). All temporally diagnostic artifacts will be described and, if appropriate, diagnostic elements will be photographed.

Artifact Curation (All Phases)

We originally proposed to rebury all artifacts recovered on-site. In comment, NYSHPO requested that a curation facility be identified. A possible curation facility might be the Shinnecock Nation Cultural Center & Museum. However, Harry B. Wallace, responding for the Unkechaug Tribe, has notified NYSDEC that reburial on the Project Site is requested. As of this writing, NYSDEC has not received a response from the Shinnecock Nation. The NYSDEC, NYSHPO, and the consulting Tribes will continue to discuss the disposition of the Indigenous Nation artifacts recovered from the Project Site.

Phase II Report

The Phase II report will present the Phase II methods and results. The results will be divided into two sections: field and laboratory results which will detail stratigraphy and artifacts, and research question responses. The latter will address each research question posed in this work plan's research design and also any new questions that might have been developed based on field observations or artifacts recovered. The report will conclude with recommendations for further work if warranted. If further work is recommended, then the report will present possible mitigation, minimization or avoidance options. The report with be compiled by Ms. Weed and jointly authored by Weed and ACME personnel.

Post-Phase II Investigations

If it is determined by NYOPRHP that archaeological sites eligible for listing on the National or State Registers of Historic Places are present, then additional fieldwork or research may be needed. Any post-Phase II work will be directed by a Phase III Research Design which supports the Determination of Eligibility. The Phase III Research Design will provide detail based on the results of the Phase II investigations.

The Phase III Research Design would consist of the Phase III Field and Laboratory Work Plan, Curation Plan, Unanticipated Finds Protocol, and Work Schedule. The Schedule will have built into it time for the development and review of the Memorandum of Agreement.

Agency Coordination and Work Schedule

The project work will begin within five (5) business days of receipt of the signed administrative paperwork and acceptance of this work plan by NYSHPO and the consulting Indigenous Nations. We anticipate that the fieldwork will be conducted prior to Thanksgiving Day and the analyses and report preparation in December. The draft report will be submitted for review to the client representatives in early January and to NYSHPO and the Tribes the same month.

Project Personnel

The Phase II investigations will be completed by Secretary of the Interior-qualified supervisory and crew personnel. Matthew Spigelman and Jenna Anderson will serve as field supervisors, Scott Ferrara will serve as field crew. Artifact analyses and reporting will be conducted by Ms. Weed (ground stone, Indigenous Nation ceramics), Ms. Jenna Anderson (Chipped Stone), and Dr. Spigelman (EuroAmerican artifacts).

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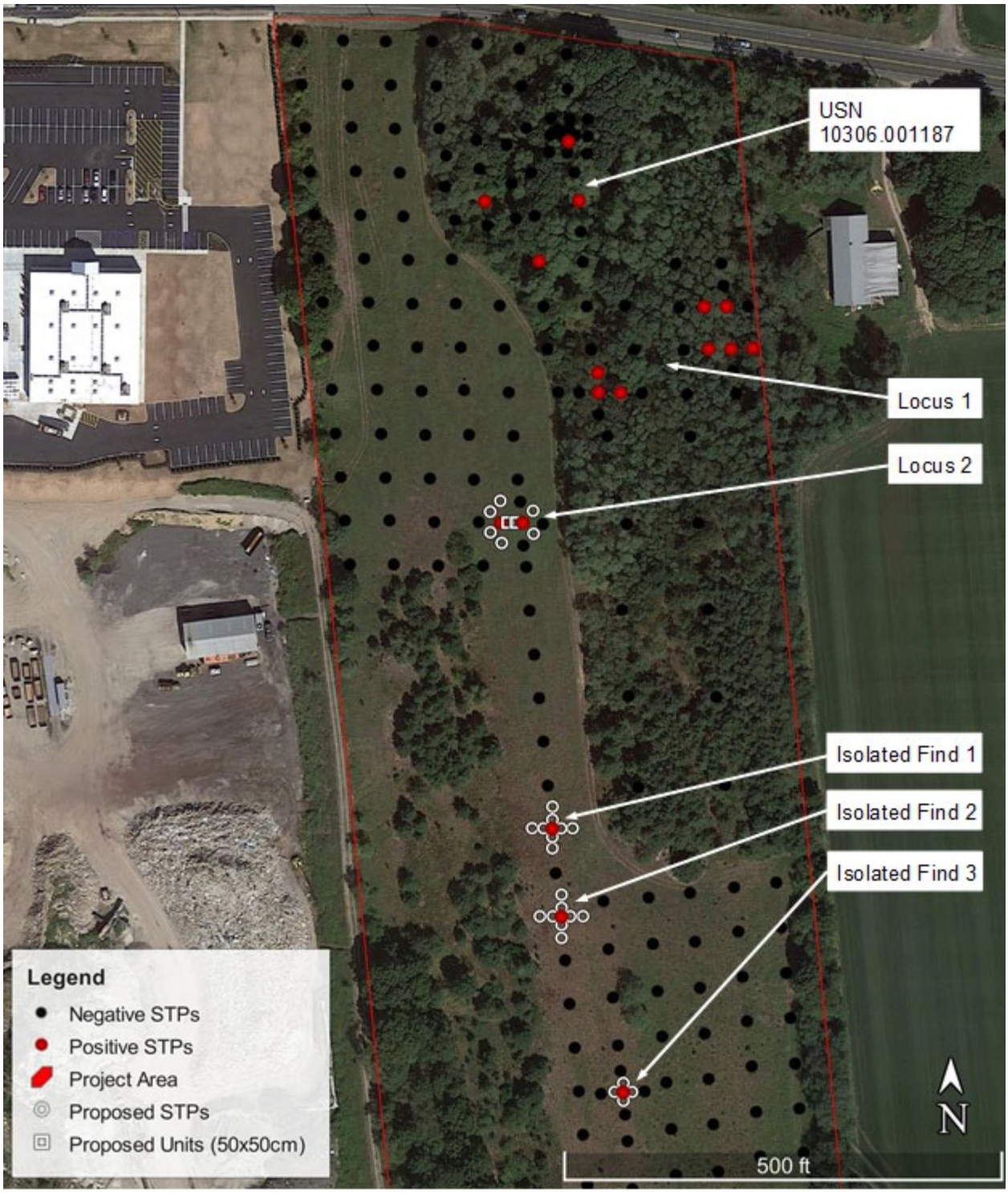

Source: ACME Heritage Consultants, Google Earth Pro

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

Proposed Phase II Testing

Figure **1**

Source: ACME Heritage Consultants, Google Earth Pro

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

Proposed Phase II Testing

Figure **2**

Table 2. Indigenous Nation Components within 3-mile Radius

USN	CRIS Site Name	NRHP Status	Affiliation	Indigenous Nation Artifacts	Euro-American Artifacts	Comments
10302.000512	CALVERTON I PREHISTORIC/HISTORIC SITE	Undetermined	P/H	caldedony point, 4 quartz [flakes?], 2 bifaces, scrapers	ceramics	
10302.000513	CALVERTON (2) SITE	Undetermined	Not noted			SCAA form: "test holes dug."
10306.000681	BAITING HOLLOW PREHISTORIC SITE	Undetermined	Prehistoric	SCAA form: "Archaic. heavily potted"		
10306.000682	WEST SIDE PREHISTORIC SITE	Undetermined	Prehistoric	SCAA form: "Area of unfinished tools (blanks, rejects) & corner-notched arrownpoints.		
10306.000683	EAST SIDE PREHISTORIC SITE	Undetermined	Prehistoric	SCAA form: "Chips, arrowhead, in pasture along river"		
10306.000753	CALVERTON LINKS GOLF COURSE PREHISTORIC SITE	Not Eligible	Prehistoric	No artifact list. Form says Late Archaic, Late Woodland		Bernstein 1992, Stage II Archaeological Examination of the Proposed Calverton Links Project. March 1992. SUNY Stony Brook.
10306.000776	AREA 1 (TWIN POND)	Eligible	Prehistoric	1 Levanna pp, 1 Bare Island pp, 1 Orient Fishtail pp, 2 FCR, 308 debitage, 6 projectiles, 2 quartz tools		6 loci located between and around 2 kettle ponds
10306.000777	AREA 2	Not Eligible	Prehistoric	1 quartz flake		
10306.000778	AREA 4 (NORTH RUNWAY POND)	Undetermined	Prehistoric	39 flakes, 8 shatter, 2 pottery, 1 pp tip fragment, 1 biface fragment		Site form: "Woodland Period based on recovery of 2 pottery fragments (2700-500 BP)"

Table 2. Indigenous Nation Components within 3-mile Radius

10306.000779	AREA 5 (MIDDLE RUNWAY POND)	Not Eligible	Prehistoric	1 Bare Island pp		
10306.000780	AREA 6 (SOUTHERN RUNWAY POND)	Undetermined	Prehistoric	1 pottery fragment, 2 flakes (chert, quartz), and 1 quartz shatter		Site form: "Woodland Period based on recovery of a pottery fragment (2700-500 BP)"
10306.000781	AREA 7 (McKAY LAKE)	Not Eligible	Prehistoric	1 jasper, unifacially flaked scraper		
10306.000798	CALVERTON INDUSTRIES MINE	Undetermined	Prehistoric	1 Orient Fishtail pp base, flaked quartz artifact and debitage		Miller 1998:
10306.000825	NWIRP Northeast Pond Disposal Site	Not Eligible	Prehistoric	1 side-notched quartz biface with utilized edge and perforator-graver tip, 1 quartz tertiary flake		Reeve 2002: "Late Archaic: probably within the Wading River complex, ca 4500 to 2700 BP"
10306.000854	Ferguson Prehistoric Site (NYSM 12352)	Undetermined	P/H	1 biface, 9 broken flakes, 1 pp fragment, 1 shatter	7 ceramic, 3 glass, 8 brick, 3 building glass, metal, 1 plaster, 6 unmodified bone, 43 kitchen glass, 2 charcoal, 4 coal, 2 slag, 1 styrafoam	
10306.000857	Kent Animal Shelter Site	Undetermined	Prehistoric	5 quartz flakes		
10306.001186	TRC-IF-1	Undetermined	Prehistoric	1 IF		

NYSHPO CRIS Submission

Phase II Archaeological Assessment, Proposed Industrial Park – HK Ventures LLC, 4285 Middle Country Road (NYOPRHP 20PR02526; USN 10306.001191)

Calverton, Town of Riverhead, New York

Prepared for: HK Ventures LLC

Prepared by: Matthew Spigelman, Co-Principal Investigator (ACME Heritage Consultants)
Jenna Anderson, Archaeologist (ACME Heritage Consultants)
Carol S. Weed (CSW13108), Co-Principal Investigator/Editor

February 2021

Project Summary

SHPO Project Review Number: 20PR02526

Involved City, State and Federal Agencies: Town of Riverhead Planning Board (site plan), Town Board (Riverhead Water District Extension 37R – Calverton), Board of Zoning Appeals (area variance), Riverhead Water District (water supply); Suffolk County Department of Health Services (SCDHS) (Article 6 Permit), Suffolk County Planning Commission (SCPC) (referral under the General Municipal Law); New York State Department of Transportation (NYSDOT) (Highway Work Permit) and New York State Department of Environmental Conservation (NYSDEC) (State Pollution Discharge Elimination System [SPDES] permit).

Phase of Survey: Phase II Archaeological Assessment

Location Information
Location: Calverton
Minor Civil Division: Town of Riverhead
County: Suffolk

Survey Area (Metric & English)
Length: not applicable
Width: not applicable
Depth (when appropriate): maximum 50×50cm unit depth Locus 2 = 36cm, Locus 3 = 55cm, Locus 4 = 50cm
Number of Acres Surveyed (when appropriate): not applicable
Number of Square Meters and Feet Excavated: STPs = 5.5 square meters, EUs = 6.5 square meters
Percentage of Site Excavated: n/a

USGS 7.5 Minute Quadrangle Map: Wading River 7.5-minute quadrangle

Archaeological Survey Overview
Plow Strips: none
Number & Interval of Shovel Test Pits: Loci 2, 3, and 4 total = 22 STPs (40cm round), both systematic and judgmental intervals
Number & Size of Units: Loci 2, 3, 4 total 26 excavation units (50×50cm), both systematic and judgmental intervals
Survey Transect Interval: not applicable

Results of Archaeological Survey
Number & Name of Archaeological Sites identified: USN 10306.001191 (Site field number 2020-003.2). See Appendix F for Archaeological Site Form Data for this site.
Number & Name of Historic Sites identified: none
Number & Name of Sites Recommended for Phase II/Avoidance: No significant finds. No further work recommended.

Report Author(s): Matthew Spigelman, PhD (RPA #36587230); Jenna L. Anderson, MA; Carol S. Weed, M.A. (RPA #989090),

Date of Report: February 2021

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Executive Summary

Administration

HK Ventures, LLC (the Applicant) proposes to develop the 30.5±-acre (ac) parcel located at 4285 Middle Country Road, Calverton, Town of Riverhead, Suffolk County, New York (Project, Project Area; Appendix A, Figure 1). In support of the review under SEQRA, an initial project notification was made to the New York State Office of Parks, Recreation and Historic Preservation (NYOPRHP, NYSHPO) describing the Project. By letter dated April 23, 2020, NYOPRHP responded that professional cultural resources investigations would be required.

The Phase IA report was submitted on May 15, 2020, and it included a Phase IB Work Plan (IB Plan) which was accepted following minor revisions by NYOPRHP on May 29, 2020. The Phase IB excavations were reported on October 14, 2020. The combined Phase IA/IB investigations yielded information on Indian Nation and Historic-era use of the Project Area. Indian Nation temporally diagnostic artifacts were recovered and what appear to be discrete artifact concentrations were also identified. The report authors (Spigelman et al. 2020) recommended that Phase II investigations be conducted.

The proposed work included the excavation of closer interval radials and four or more, 50×50cm units at Archaeological Loci 2, 3, and 4 to refine the boundaries and to determine the integrity of the stratigraphy at these three loci. NYSHPO accepted this recommendation and assigned Loci 2, 3, and 4 a single Unique Site Number, 10306.001191, based on a provisional boundary created by the authors. NYSHPO named the site "Industrial Park Pre-Contact Site." NYSHPO also requested that the number of Phase II excavations be increased by 100 percent and that any possible cultural feature be fully exposed and excavated.

The Phase II field investigations and artifact analyses were completed by Co-Principal Investigator Matthew Spigelman (ACME Heritage Consultants) and ACME staff in December 2020. Co-Principal Investigator Carol S. Weed (CSW13108) created the report outline and served as the report editor.

A word is warranted about metrics presented in the report that follows. The excavations were conducted using meter scales. A meter-based scale also was used for Indian Nation artifacts. The following abbreviations are used throughout the manuscript: feet (ft), meter (m), inch (in), centimeter (cm), millimeter (mm).

Final Phase II Research Design

The Phase II investigations were directed by a research design that was developed based on the results of the Phase IB investigations on the Project Site and comparative data generated by cultural resources projects that have recovered Native American artifacts or identified Native American features within Nassau and Suffolk counties. Three research domains were developed. There were:

1) Spatial and Stratigraphic Integrity
2) Chipped Stone: Typological and Functional Implications
3) Ground Stone: Strategic/Expedient Design and Primary/Secondary Uses

No additional ground stone artifacts were recovered in the Phase II investigations, nor were charcoal, faunal remains, fire-cracked rock (FCR), or Native American pottery. Similarly, no subsurface features or intact, artifact-bearing stratigraphic layers were identified during the Phase II investigations. Research domains associated with these lines of evidence were not investigated further. Finally, although historic-era artifact fragments were found during Phase II, they were interpreted as miscellaneous field debris.

The final research domains are as follows:

Spatial and Stratigraphic Integrity

Phase IB investigations (Spigelman et al. 2020) found mixed A/B horizons in the shovel test pits (STPs) excavated within and around USN 10306.001191. The sources of the disturbance were considered to be plowing, scraping (as noted on aerial photographs), and burrowing animals. Plow scars, however, were not obvious at the B/C strata interface suggesting that the plowing might have been shallow mixing only the A and B soils. During Phase II, excavations focused on discriminating between A and B horizons or upper and lower A/B deposits. To this end, the 50×50cm excavation units (EUs) were excavated using 10cm arbitrary levels within strata.

Spatial and Stratigraphic Research Questions:

To determine if the loci retain Stratigraphic Integrity the following research questions will be asked:

- Do loci have firm boundaries, or has historic period plowing created broad scatters without definable structure?
- Are distinct A and B soil horizons present? Or have they been mixed by historic period plowing?
- Are plow scars visible in the underlying B/C soil horizon?
- Are features present within the A/B horizon and/or cut into the underlying B/C horizon? Can distinct functional areas be identified within or between loci based on the presence of features, such as pits, hearth, and post molds?

Chipped Stone: Typological and Functional Implications

The chipped stone artifacts recovered during Phase IB from Loci 2, 3, and 4, are summarized below (see Table 1-1).

Table 1-1. Phase IB Lithic Artifacts

Context	# of Artifacts	Artifact Types
Isolate 1	1	Tested pebble
Isolate 2	1	Distal flake fragment
Isolate 3	1	Flake tool/indeterminate
Locus 2	5	Partial projectile point, flake fragments, split cobble
Locus 3	3	Scraper, flake tool, flake fragments
Locus 4	8	Flake fragments, shatter

The chipped stone assemblages recovered from the Phase IB investigation were dominated by non-cortical flake fragments, shatter, and retouched tools. They include a broken projectile point showing evidence of retouching

on the distal point. The composition of these assemblages is similar to that of the artifacts recovered from Site USN 10302.001713, Coram Route 112, which is located approximately 12.6 mi from the current study area. The assemblage recovered from Route 112 was made up of bifacially worked tools and non-cortical debitage. The lack of cortex on these artifacts indicates that only the later stage of tool manufacture took place on site. Both the Phase IB and the Coram Route 112 assemblages show evidence of repair and possible reuse of bifacially flaked tools. The composition of the Route 112 assemblage has been interpreted as evidence of use as a camp or brief field station (Johnson 1989; Lightfoot 1985; Bernstein and Lenardi 2008).

The partial projectile point recovered from Locus 2 is a Beekman Triangle, which have been found at sites dating from the Transitional Archaic to the late Middle Woodland period (~3700-2000 BP; Funk 1976; Hoffman 1991). No temporally specific material has been recovered from Loci 3 or 4.

Chipped Stone Assemblage Research Questions:

The focus of this domain is determining the spatial integrity and intra-site patterning of the chipped stone assemblages from each locus. To these ends, we will address the following questions:

- Do Loci 2, 3, and 4 represent defined, functional areas?
- How diverse are the chipped stone artifacts in terms of type? Is there evidence for multiple activities being carried out at any of the loci?
- If the loci represent foraging or procurement stations, the only feature type present will be hearths. Similarly, if these loci represent field camps, then hearths plus postmold patterns and rock caches will be present. Are these assumptions supported by the field data?

Report Organization

The report that follows contains this Executive Summary, four other chapters, references cited, and six appendices labelled A through F. The principal sections are

- Chapter 1 – Executive Summary
- Chapter 2 – Phase II Methods
- Chapter 3 – Phase II Results
- Chapter 4 – Conclusions and Recommendations
- References Cited

The lettered appendices are A – Figures; B – Photographs; C - Agency Correspondence (including emails); D – Stratigraphic Summary; E – Artifact Summary; and Appendix F – USN 10306.001191 Form Data. All tables except those presented in Appendices D and E are embedded in the narrative.

2

Phase II Field and Laboratory Methods

Field Methods

The Phase II work plan proposed the use of both STP and EU excavations. STP excavation was employed in order to define the boundaries of the three isolated finds and three loci. EU excavation was utilized to more closely define the vertical profiles present at each locus and to determine if identifiable use surfaces are still present in these plow-disturbed locations (Table 2-1; Figure 2).

Table 2-1. Phase II Proposed Testing

Location	Methods	Rationale
Isolate 1	8 STPs	Radial tests to confirm isolated artifact or identify additional locus
Isolate 2	8 STPs	Radial tests to confirm isolated artifact or identify additional locus
Isolate 3	4 STPs	Radial tests to confirm isolated artifact or identify additional locus
Locus 2	6 STPs & 4 EUs	Clarify locus boundary, investigate stratigraphy, identify features, collect data
Locus 3	6 STPs & 4 EUs	Clarify locus boundary, investigate stratigraphy, identify features, collect data
Locus 4	10 STPs & 18 EUs	Clarify locus boundary and artifact patterning, investigate stratigraphy, identify features, collect data
Total	42 STPs & 26 EUs	Additional Units will be excavated if isolated artifacts are identified as loci.

STPs measured 30cm in diameter and were excavated 10cm into sterile subsoil. EUs measured 50×50cm (20 by 20 inches). These units would have been expanded to 1m-by-1m (40 by 40 inches) had features been exposed in the floor or walls or if discrete A and B horizons strata were discriminated. No features would have been

sectioned without NYSHPO, NYSDEC, and Indian Nation consultation, but a feature's plan would have been fully exposed.

The STPs were excavated by natural stratigraphy; the EUs were excavated in 10cm (4in) arbitrary levels within each stratum. Both excavation types were excavated to a minimum depth of 50cm/20in or confirmed C-horizon soil (whichever came first). The strata were described using standard soils terminology and Munsell color designations. In order to facilitate the creation of graphic cross sections (aka fence diagrams), one wall of each EU was drawn. All STPs and EUs were backfilled after recordation was completed as no cultural features were identified.

All matrix recovered from the STPs and EUs was screened through ¼-in hardware mesh. All Indian Nation or Euro-American material culture items recovered during excavation or from the screens was field bagged separately from one another.

No human bone was found and the NYSHPO Human Remains Discovery Protocol was not employed.

Information Recordation

Standardized forms were used to record field data. These included shovel test summary forms, bag and special sample logs (if needed), and photograph logs. Most of the descriptive data recorded in the field was recorded on paper forms. In order to ensure that these data are available in electronic format as soon as possible, data entry was completed during and immediately following fieldwork.

Where appropriate, digitized data also was geo-rectified and incorporated on to the larger Project plan. The purpose of this was to build the archaeological sensitivity map as quickly as possible so that the results could be discussed meaningfully with the Applicant and NYOPRHP.

Mapping and Provenience Control

Each STP and EU were geo-referenced. Elevation datums were set in the southwest corner of each STP and EU.

Artifact and Sample Recovery and Recordation

All artifacts recovered were recorded in the project's Field Sample (FS) log, assigned separate FS numbers by provenience: by STP or EU designation, arbitrary level, and stratigraphic layer. No specialized samples (flotation, C^{14}, or soil samples) were taken. Assigned FS numbers were used to track materials throughout the processing, analysis, and curation process.

Laboratory Methods

The processing, cataloging, and data entry tasks associated with recovered artifacts and the analysis of all records, maps, photographs, and cultural materials for the Project will be undertaken by Phase II area, Isolated Find, or site USNs.

The Indian Nations chipped stone was subject to light brushing to remove superficial dirt. The artifacts were sorted into raw material and production trajectory classes. The chipped stone recovered during Phase II was typical of stone found on an outwash plain. The presence of the till gravels resulted in a quantity of stone ranging in size from gravel through cobbles in the screens and observed in the soils during excavation. Many of

the stones had been subject to natural breakage. Thus, the following characteristics were used to separate natural breakage or erosion from cultural modifications.

Any chipped stone that appears to show regular edge removals, possible platforms, clear points of detachment, or other characteristics of conchoidal fracture (including concave ventral surfaces, visible striations on ventral surface) were saved in the field and, after brushing and/or washing, subject to review using a 10-power hand lens. Similarly, any stone that displays possible use polish, grinding striations, collapsed particle ridges, or shaped surfaces will be kept, subject to light brushing, and reviewed with a hand lens as well. Any object that was evaluated as cultural in origin was measured (length, width, thickness) using a Mitutoyo Digimatic Caliper which measures in inches and millimeters. The recorded metrics are in millimeters. Weights were taken using an electronic scale and recorded in grams.

The two Euro-American artifacts were washed (unless detrimental to the item or the item is being submitted for specialized analyses). The artifacts were described by material and functional class).

Artifact Curation

The NYSYDEC has attempted to contact the Shinnecock Nation Cultural Center & Museum to determine if that facility will temporarily curate the Indian Nation artifacts. Harry B. Wallace, responding for the Unkechaug Tribe, has notified NYSDEC that reburial on the Project Site is requested. As of this writing, NYSDEC has not received a response from the Shinnecock Nation. The NYSDEC, NYSHPO, and the consulting Tribes will continue to discuss the disposition of the Indigenous Nation artifacts recovered from the Project Site.

3

Phase II Field and Laboratory Results

The Phase II cultural resources investigations were conducted by Matthew Spigelman, Jenna Anderson, Lisa Geiger, and Scott Ferrara. Fieldwork began on 12/10/2020 and it was completed on 12/15/2020. Ms. Anderson completed the chipped stone analysis and Dr. Spigelman completed the historic artifact analysis.

Isolated Finds

Additional STPs were excavated during Phase II at Isolated Finds 1, 2, and 3 (Figure 3). These isolated finds are located within the provisional boundary of archaeological site USN 10306.0111191. The Phase II STPs did not yield additional cultural materials and all three of the isolated finds remain as originally defined. Appendix D, Tables D-1 through D-3 contains the Phase II stratigraphic data for the Phase II STPs excavated near the isolated finds.

Isolated Find 1 (IF-1) was found in STP E13 during the Phase IB survey. IF-1 consists of a tested pebble with multiple stepped fractures along a single striking platform. During Phase II testing eight STPs were excavated about STP E13, spaced at 3.5m and 7m from the initial find and in the cardinal directions. All Phase II STPs were negative for cultural material.

Isolated Find 2 (IF-2) is a distal flake fragment recovered from STP E15 during the Phase IB survey. During Phase II testing eight STPs were excavated about STP E15, spaced at 3.5m and 7m in the cardinal directions. All were negative for cultural material.

Isolated Find 3 (IF-3) was recovered from STP F05 during the Phase IB survey. IF-3 consists of a flake tool of indeterminate type, with unifacial retouch used to produce notching on two edges (and recent breaks on other two edges). Four STPs were excavated about STP F05 at 7m intervals in the cardinal directions during the Phase IB survey, all were negative for cultural material. During Phase II testing an additional four STPs were excavated at 3.5m intervals in the cardinal directs. All were negative for cultural material.

Archaeological Site USN 10306.001191, Locus Summaries

The following discussion is organized by locus with stratigraphy and artifact assemblage subsections within each locus. The stratigraphic data and artifact summaries for the three loci are presented in Appendices D and E respectively. The Indian Nation survey and testing results are graphically represented on Figures 4, 5, and 6.

Locus 2

Locus 2 is located at the north end of USN 10306.001191, at approximately UTM 687592 E and 4532996 N. Locus 2 was initially identified during the Phase IB survey in STP E06. A projectile point (Beekman Triangle) and two flake fragments were recovered from Stratum I (A/B). Four additional STPs were dug at 7.5m intervals about STP E06, with STP E06+7.5W yielding a flake fragment and split cobble. Phase II testing consisted of six STPs judgmentally located to define locus boundaries and four EUs to test for stratigraphic integrity (Figure 4).

The six Phase II STPs were negative for Indian Nation cultural material (Appendix D, Table 4). Plastic and a fragment of a trap-shooting clay pigeon, however, were recovered from STP E06+3.5E+3.5N. Two of the four EUs were spaced at 2.5m intervals between the two positive STPs from the Phase IB survey. Of these, the western unit (E06+5W) yielded two flake fragments (1 tertiary flake fragment, 1 distal flake fragment). Two other EUs were spaced at 2.5m intervals to the north and south of EU E06+5W. Neither of these yielded artifacts.

Stratigraphy

Consistent stratigraphy was found in all of the additional STPs and EUs excavated around and within Locus 2, with an unstructured A/B soil as Stratum I and a dense, B/C-horizon layer below as Stratum II. Plow scars were found at the interface between the A/B and B/C horizons in the EUs (Appendix B, Photograph 1). The scars were oriented in a north-south direction, at the interface between the unstructured and structured soil horizons. These scars confirm the disturbed nature of the upper soil horizon and identify it as an Ap. They form distinct, parallel cuts into the underlying B/C soil horizon, suggesting a single episode of deep plowing, rather than repeated events.

All additional Indian Nation material recovered during Phase II testing was found within the Ap soil horizon, as was the case during the Phase IB survey. The B/C soil horizon, below the plow scars at the base of the Ap soil horizon, was intact and culturally sterile.

Artifact Assemblage

In total, seven Indian Nation lithic artifacts were recovered from Locus 2 (Appendix E, Table 1). Of the total, five were found during Phase IB and the other two were recovered during Phase II. The overall assemblage consists of a projectile point (Beekman Triangle type), 5 flake fragments, and a split cobble. All of these objects were made on quartz, but three of the flake fragments and the split cobble were made on coarse-grained, lower-quality material.

Two of the flake fragments, recovered from E06+5W during Phase II, were made on a fine-grained translucent quartz with white banding and yellow inclusions, similar to the material used to produce the point (Appendix B, Photograph 2). Neither fragment directly refits with the point, but the smaller of the two fragments possesses characteristics often produced by the retouch of a bifacially-worked tool: a facetted platform, broad distal end, and feather termination. These features, in addition to its spatial proximity and raw material, suggest it may have been produced during retouching or re-sharpening of the point prior to discard. However, the second flake

fragment lacks these distinctive characteristics. In the absence of refits, it remains possible that they were produced during the retouch or re-sharpening of another tool. In this case, the similarity of the raw material to that used for the point suggests a preference for high-quality, fine-grained lithic raw materials.

The low density of flaking byproducts, low artifact diversity, and absence of features at Locus 2 suggests that this was not a prolonged episode of knapping or a complete core reduction sequence, but rather an isolated, brief episode of tool repair and discard. Chronologically, Beekman Triangle points have been recovered from sites dating from the Transitional Archaic to the late Middle Woodland period, suggesting an age between 3700–2000 BP (Funk 1976; Hoffman 1991).

Locus 3

Locus 3 is located at the center of USN 10306.001191, at approximately UTM 687626 E and 4532716 N. Locus 3 was initially identified during the Phase IB survey in STP E24. That STP yielded a flake tool/scraper and a flake fragment. Additional STPs were dug at 7.5m intervals about STP E24, with STP E24+7.5N producing a flake fragment and an abrader.

Phase II testing consisted of an additional six STPs to define locus boundaries and four EUs to test internal stratigraphy (Figure 6). All STPs were negative for cultural material (Appendix D, Table 5). Two EUs were spaced at 2.5m intervals between the two positive STPs from the Phase IB survey. Both of these EUs were also negative for cultural material. An additional two EUs were then placed judgmentally, one 2.5m to the north of the northern positive STP and one 2.5m to the south of the southern positive STP. These EUs too were negative for cultural material. No additional Indian Nation material was recovered from the Phase II excavations in and around Locus 3.

Stratigraphy

Plow scars, here too oriented north-south, were found in three of the EUs excavated in Locus 3 (in E24+2.5S the Ap extended down into the C horizon, a sand-gravel layer without sufficient structure to preserve plow scars). As with Locus 2, the stratigraphy was consistent across all STPs and EUs, with an unstructured Ap soil above and a dense B/C soil layer below.

Artifact Assemblage

One ground stone artifact (an abrader) and four chipped stone artifacts (one scraper, one flake tool fragment, and one flake fragment) were recovered from Locus 3 in the Phase IB survey. No additional artifacts were recovered during Phase II testing. All of the chipped stone implements were made on quartz. The presence of both a scraper and ground stone abrader at this locus suggest that processing activities were conducted. The limited spatial distribution and low artifact density suggest that Locus 2 was a briefly used resource procurement station or camp, rather than a prolonged tool production episode or sustained occupation. No temporally informative chipped stone artifacts were recovered from Locus 3.

Locus 4

Locus 4 is located at the south end of USN 10306.001191, at approximately UTM 687676 E and 4532450 N. Locus 4 was initially identified during Phase IB survey in STPs E40, E41, F25, and F26 (Appendix A, Figure 2). Additional STPs were dug at 7.5m intervals about these four positive tests, with additional positive STPs at E40+7.5E, E41+7.5E, and F26+7.5W. The Phase IB survey assemblage consisted of three flake fragments, two distal flake fragments, one piece of tertiary shatter, one flat abrader, and one ground stone. All positive tests from the Phase IB survey contained a single artifact, with the exception of F25, which contained two items.

Phase II testing consisted of an additional 10 STPs to delineate site boundaries and 18 EUs to test internal stratigraphy. Nine EUs were arranged as proposed in the Phase II testing plan, with an additional nine EUs judgmentally placed based on positive results. All of the boundary delineating STPs were negative for Indian Nation cultural material (Appendix D, Table 6). Four of the EUs were positive for Indian Nation cultural material, with three of the positive EUs (F25+3.5N, F25+3.5W, and F25+3.5S) located in the northern portion of Locus 4, surrounding STP F25 (a positive STP from the Phase IB survey). In the Phase IB survey STP F25 contained two artifacts, the only STP in Locus 4 to contain multiple artifacts. In the Phase II survey EU F25+3.5N contained three artifacts, EU F25+3.5W contained one artifact, and EU F25+3.5S contained one artifact (see below for details).

The fourth positive EU (E41+3.5E) is located in the southern portion of Locus 4, between STPs E41 and E41+7.5E (positive STPs from the Phase IB survey). It contained a single artifact. EUs located in proximity to the other positive STPs from the Phase IB survey (E40, E40+7.5E, F26, and F26+7.5W) were negative.

Stratigraphy

Plow scars were observed in 16 of the 18 EUs excavated in Locus 4 (Appendix B, Photograph 3). Only EUs E41+3.5E+7.5S and F25+3.5W were lacking plow scars, both showing an abrupt transition from the Ap to the B/C, with culturally sterile and undisturbed B/C below. All Indian National cultural material recovered from Locus 4 was found in the Ap soil horizon.

Artifact Assemblage

A total of 13 chipped stone artifacts have been recovered from Locus 4, six from Phase IB survey and seven from Phase II testing (Appendix E, Table 3). No additional ground stone was recovered in Phase II testing. The total chipped stone assemblage from Locus 4 consists of 2 flakes, 7 flake fragments, 2 pieces of shatter, 1 chunk, and 1 core. All of these artifacts were made on quartz, with considerable variation in color and grain size. The distal flake fragment recovered from STP E41 is a clear, fine grained quartz, while the tertiary shatter recovered from STP E41+3.5E is coarse grained, grey with black and orange inclusions. Three artifacts were recovered from STP F25+3.5N, all made on white quartz, but grain size varies from coarse to fine. The core recovered from STP F25+3.5S is small, with one striking platform, and the scars of two removals preserved on the flaking surface. The platform is crushed, most likely due to an imperfection in the raw material. This crushing likely led to the discard of the core. The material does not match any of the flakes and fragments recovered from the surrounding units.

Overall, Locus 4 does not appear to preserve an intact functional area due to disturbance from plowing. If Locus 4 represented a single, sustained episode of core reduction, we would expect to see multiple small and medium flakes of the same raw material, however, all of the flaking byproducts recovered at Locus 4 were made on different materials, each with different grain sizes and colors. The typological diversity is, however, low, as the chipped stone artifacts are all unretouched flakes, flake fragments, and flaking byproducts such as shatter and chunks. The wide range of raw materials and the low diversity of artifact types suggests that Locus 4 was likely used as a resource procurement station or camp, potentially with multiple visitations. No temporally diagnostic chipped stone artifacts were recovered from Locus 4.

Historic period artifacts recovered from Locus 4 during Phase II testing consist of a single fragment of colorless, machine made bottle glass from STP E41+7.5S+7.5W (Appendix E, Table 4). This artifact was produced at some time in the 20th or 21st century and is attributable to Historic or Modern field scatter.

Artifact Assemblages

Indian Nation

USN 10306.001191 yielded a relatively low density and typological diversity of chipped stone artifacts, thereby suggesting various brief occupations rather than sustained habitation (Lightfoot *et al.* 1985; Bernstein and Lenardi 2008). Locus 2 yielded a projectile point and small number of flakes, consistent with a brief episode of tool maintenance. Locus 3 produced a scraper and abrader, consistent with brief use as a procurement station (Bernstein and Lenardi 2008). Locus 4 contained a core, flaking byproducts, and wide variety of raw materials, suggesting that it was a procurement station, possibly with multiple occupations. We have previously noted the similarity of these assemblages to the one recovered from Site USN 10302.001713, Coram Route 112 (Bernstein et al. 1996). Coram Route 112 is located in the interior of Long Island, and has been interpreted as a procurement station (Bernstein and Lenardi 2008). The distance from the coast and nearest sources of raw material (8 km) resulted in a technological strategy of curation, evidenced by repeated reuse and re-sharpening of bifacial tools. The bifacially retouched distal tip and re-sharpening of the projectile point recovered from Locus 2 reflect a similar curation strategy. The assemblage at Coram Route 112 is dominated by flaking byproducts from later stages of reduction, similar to the assemblage from Locus 4. Both Coram Route 112 and the loci described here suggest a narrow range of activities consistent with brief use during resource procurement.

Chronologically, Locus 2 can be broadly assigned to the Transitional Archaic to late Middle Woodland period (3700-4000 B.P.) due to the recovery of the Beekman Triangle-type projectile point (Ritchie 1971). No temporally informative tool types were recovered from Locus 3 or 4, but based on the raw materials and presence of chipped and ground stone artifacts these loci may have been occupied from the Early Archaic period to the Contact period.

Historic-Era

The historic assemblage from USN 10306.001191 recovered in Phase II testing consists of two items that were retained for analysis, a ceramic trap shooting target fragment and a glass bottle fragment, and several pieces of modern plastic trash that were not retained. This assemblage is consistent with the 20th century use of the field for agriculture and the 21st century period of fallow. Shotgun shell casings were noted elsewhere on the surface, demonstrating the recent use of the field for recreational hunting and target practice. The low density of historic artifacts from USN 10306.001191 is as expected given the distance between the site and the know historic occupations of the area at USN 10306.001187, in the northeastern corner of the property, and Middle Country Road, along the northern edge of the property.

4

Conclusions and Recommendations

The conclusions reached during the Phase II investigations are summarized below. The final recommendations follow the conclusions.

Conclusions

Phase II testing within USN 1036.001191 consisted of STPs, excavated to confirm isolated artifacts and loci boundaries, and EUs, excavated to test stratigraphy within loci. All excavated STPs were negative for Native American cultural material, confirming the isolated artifacts and the loci boundaries established by the Phase IB survey. All EUs contained an upper stratum of mixed A and B soils, confirmed to be an Ap soil horizon by the presence of distinct plow marks in nearly all of the EUs. The remaining B soil horizon, below the Ap, was culturally sterile. There was no evidence of an intact A and B soil sequence anywhere within the site and no evidence for cultural features cut into the underlying B or C soil horizons. All cultural material recovered was from within the Ap soil horizon. There is, however, evidence for distinct use patterns with the three loci investigated, with Loci 2 interpreted as a brief episode of tool maintenance, Loci 3 interpreted as a procurement station, and Loci 3 interpreted as a procurement station but possibly with multiple occupations.

Recommendations

Based on the results of the previously conducted Phase IB survey and the Phase II testing presented herein, USN 1036.001191 is shown to contain three discrete loci, which have each retained some degree of horizontal integrity, but have been disturbed vertically by modern plowing. Due to the low density of artifacts recovered and the loss of stratigraphic integrity, it is our opinion that USN 1036.001191 is unlikely to yield additional information beyond that already recovered. No additional work is recommended with regards to archaeological considerations and we have no concerns with the proposed project proceeding as designed.

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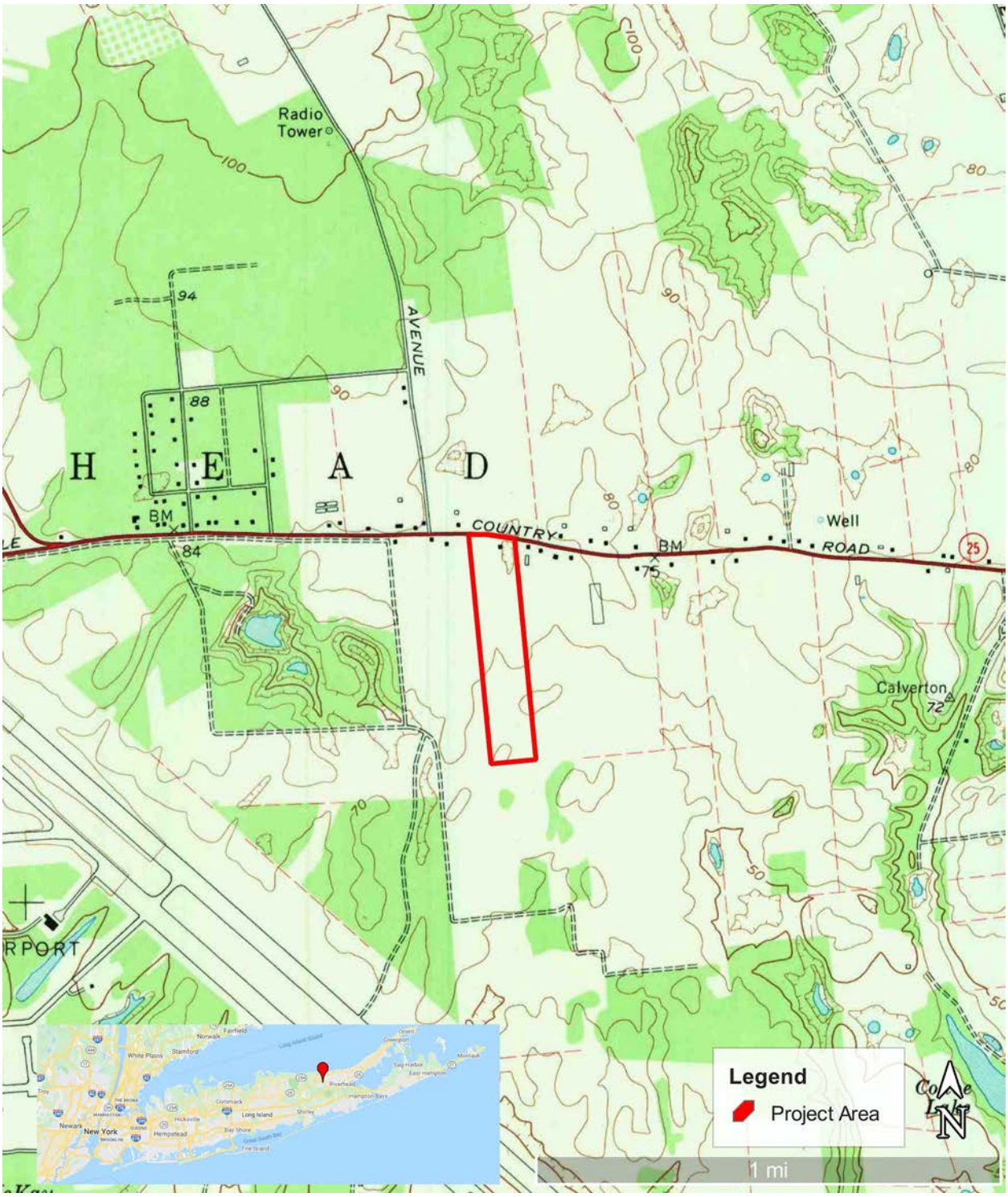
Appendix A – Figures

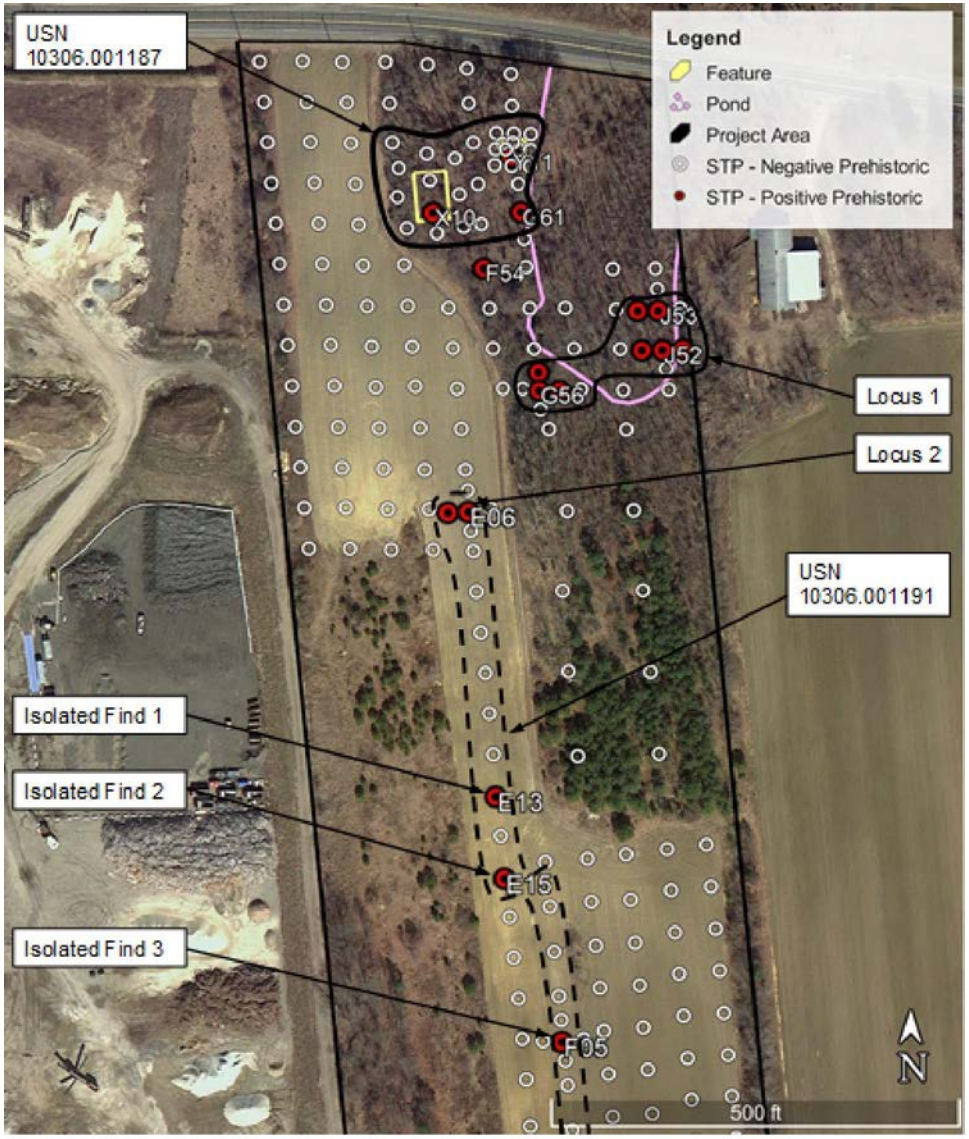


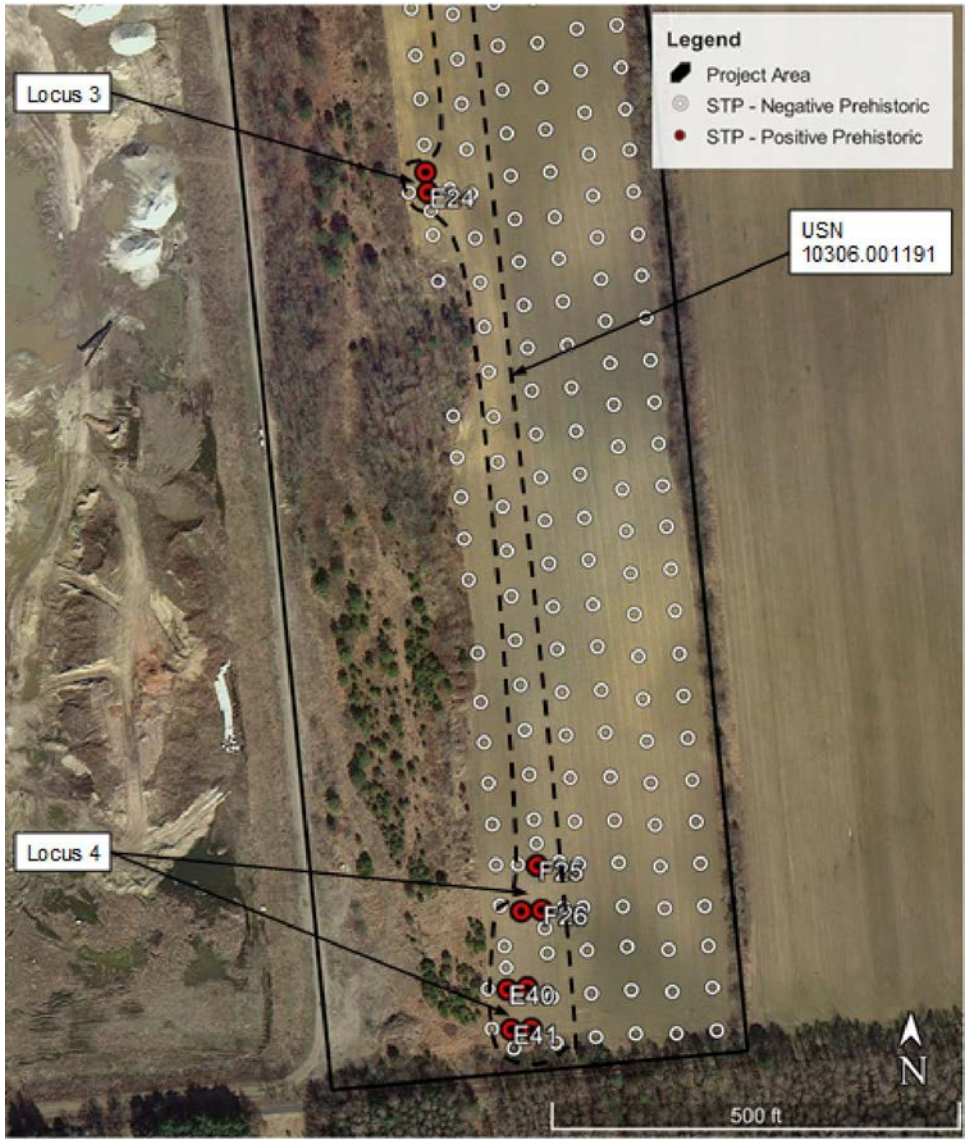
Source: TopoView

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

1957 Wading River Quadrangle with Project Area

Figure **1**



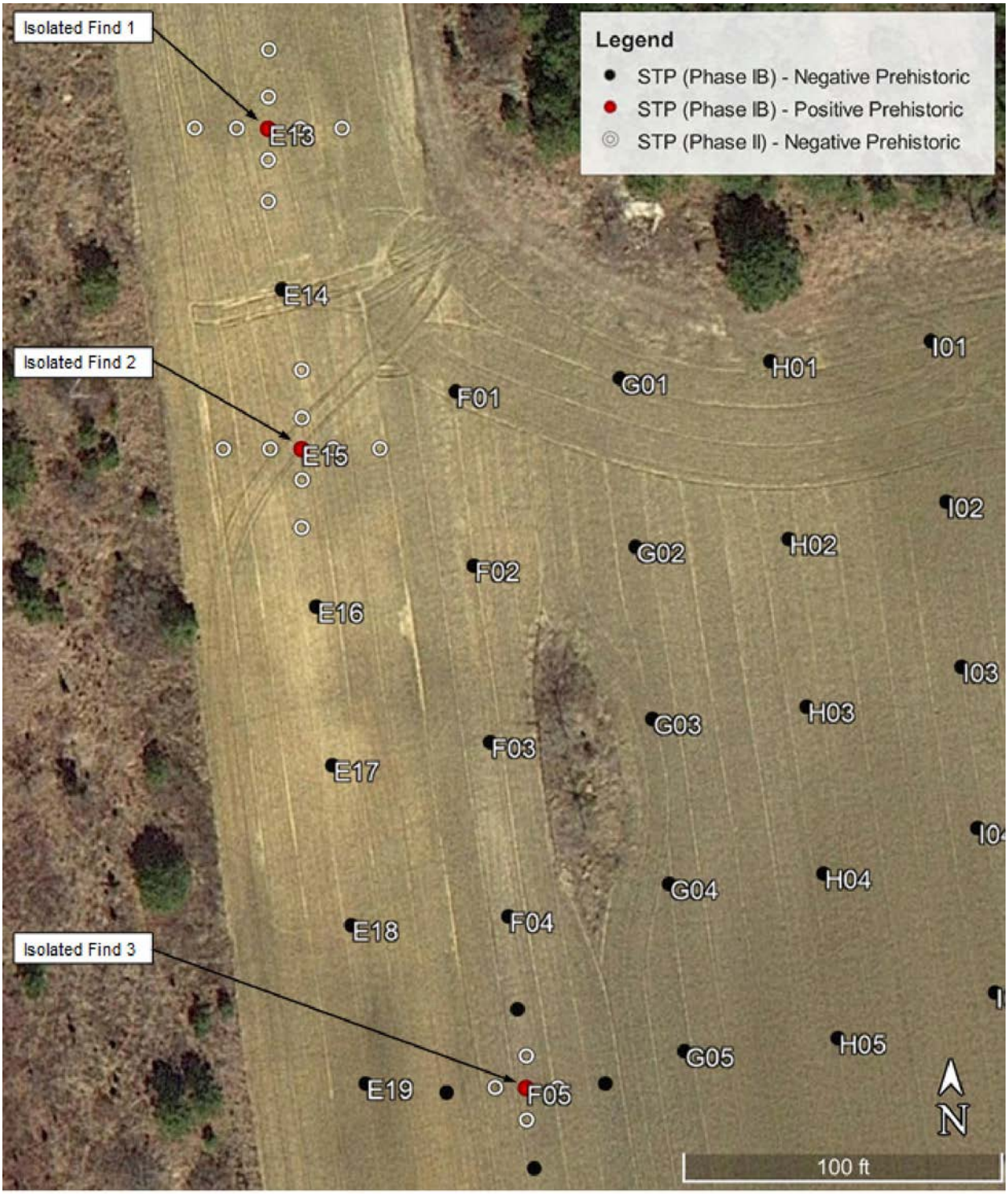


Source: Google Earth Pro

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

Results of Phase IB Survey with Site Locations

Figure **2a&b**

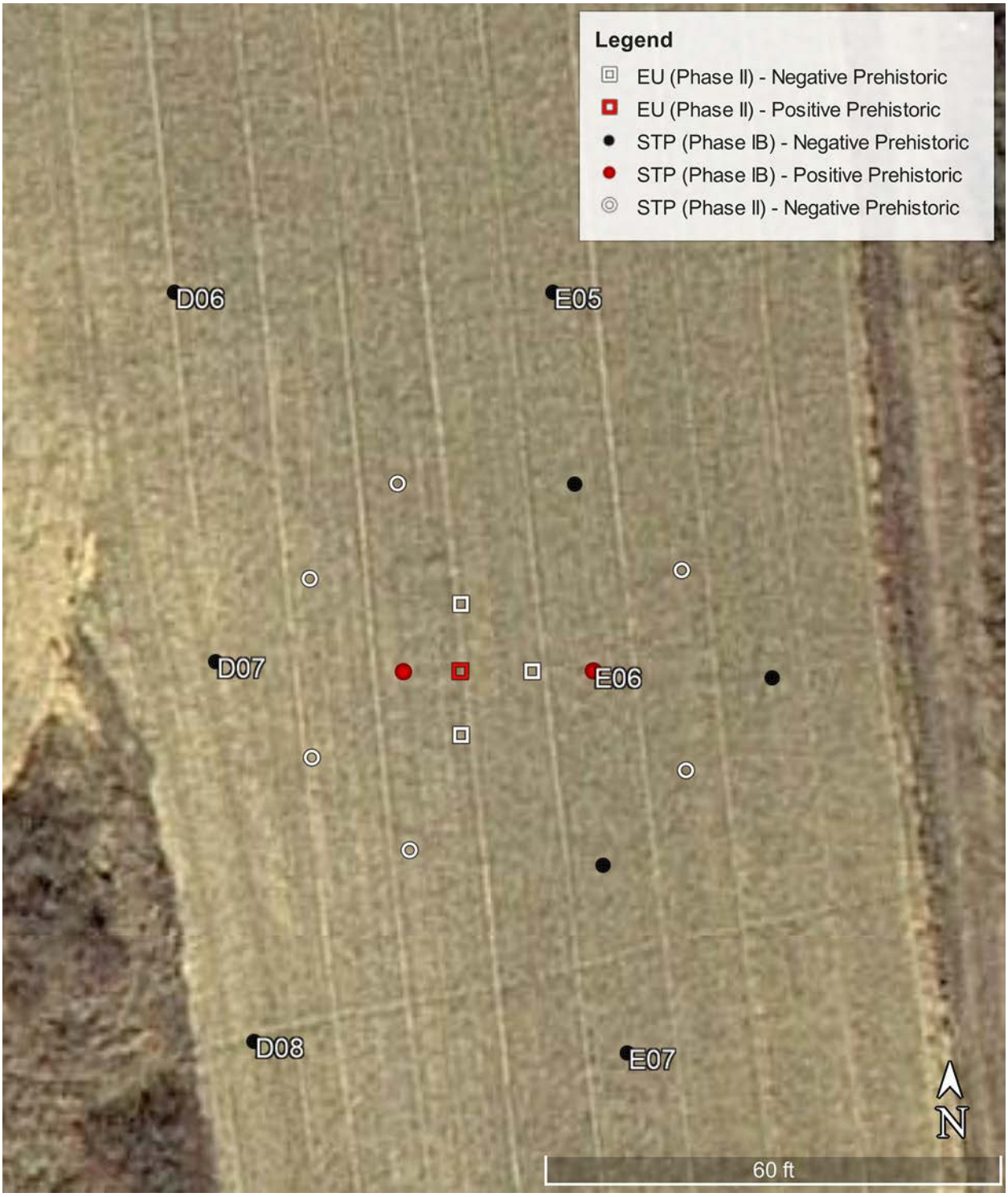


Source: Google Earth Pro

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

Isolates Results Map

Figure **3**

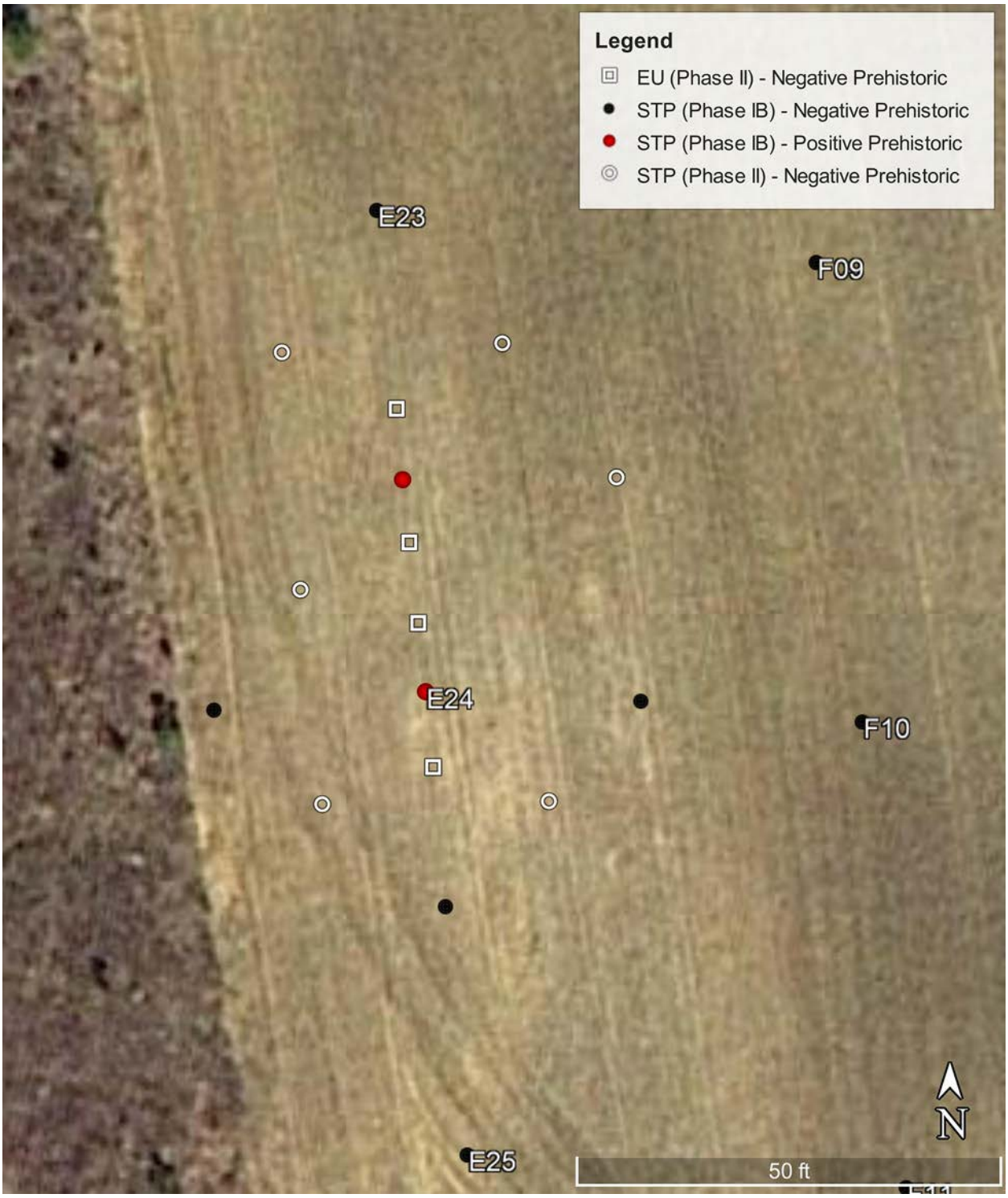


Source: Google Earth Pro

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

USN 10306.001191, Locus 2 Survey and Testing Results

Figure **4**

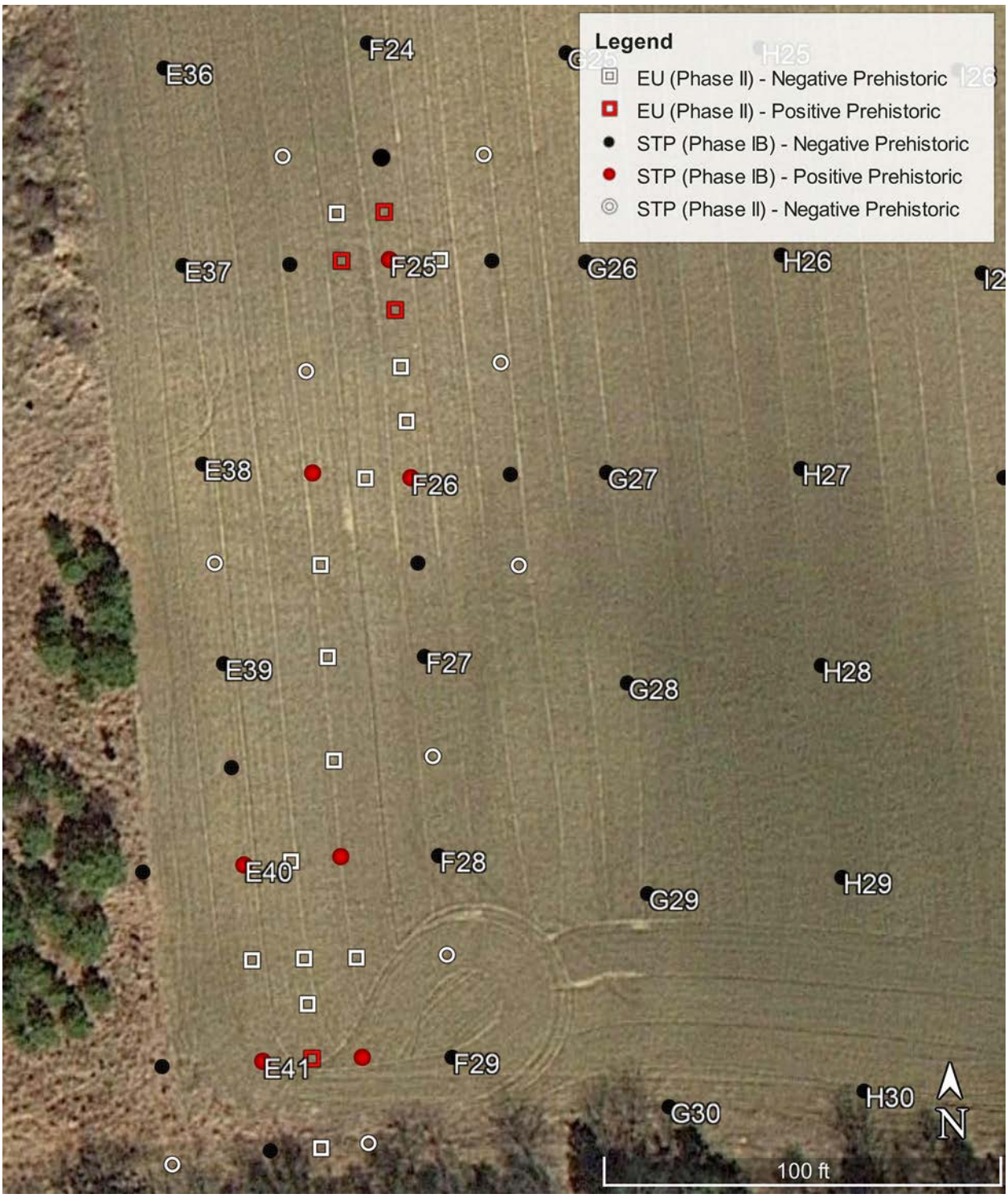


Source: Google Earth Pro

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

USN 10306.001191, Locus 3 Survey and Testing Results

Figure **5**



Source: Google Earth Pro

Proposed Industrial Park - HK Ventures LLC, 4285 Middle Country Road, Calverton, Town of Riverhead, NY

USN 10306.001191, Locus 4 Survey and Testing Results

Figure **6**

Appendix B – Photographs

Photograph 1. USN 10306.001191, Locus 2, EU E06+5W, note plow scars.

Photograph 2. USN 10306.001191, Locus 2, translucent quarts artifacts.

Photograph 3. USN 10306.001191, Locus 4, EU F26+7.5N, note plow scars.

Appendix C – Agency Correspondence

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

ARCHAEOLOGY COMMENTS

Phase IA/IB Archaeological Survey Recommendation
Project: Proposed Industrial Park – HK Ventures
PR#: 20PR02526
Date: 4/22/2020

Your project is in an archaeologically sensitive location. Therefore, the State Historic Preservation Office/Office of Parks, Recreation and Historic Preservation (SHPO/OPRHP) recommends a Phase IA/IB archaeological survey for components of the project that will involve ground disturbance, unless substantial prior ground disturbance can be documented. A Phase IA/IB survey is designed to determine the presence or absence of archaeological sites or other cultural resources in the project's Area of Potential Effects (APE).

If you consider the entire project area to be disturbed, documentation of the disturbance will need to be reviewed by SHPO/OPRHP. Examples of disturbance include mining activities and multiple episodes of building construction and demolition. Documentation of ground disturbance typically consists of soil bore logs, photos, or previous project plans. Agricultural activity is not considered to be substantial ground disturbance.

Please note that in areas with alluvial soils or fill archaeological deposits may exist below the depth of superficial disturbances such as pavement or even deeper disturbances, depending on the thickness of the alluvium or fill. Evaluation of the possible impact of prior disturbance on archaeological sites must consider the depth of potentially culture-bearing deposits and the depth of planned disturbance by the proposed project.

Our office does not conduct archaeological surveys. A 36 CFR 61 qualified archaeologist should be retained to conduct the Phase IA/IB survey.

Please also be aware that a Section 233 permit from the New York State Education Department (SED) may be necessary before archaeological fieldwork is conducted on State-owned land. If any portion of the project includes the lands of New York State, you should contact the SED before initiating survey activities. The SED contact is Christina Rieth and she can be reached at (518) 402-5975 or christina.rieth@nysed.gov. Section 233 permits are not required for projects on private land.

If you have any questions concerning archaeology, please contact Tim Lloyd at 518-268-2186 or Timothy.Lloyd@parks.ny.gov

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

May 28, 2020

Kim Gennaro-Oancea
Vice President
PW Grosser Consulting, Inc.
630 Johnson Avenue
Suite 7
Bohemia, NY 11716

Re: DEC
Proposed Industrial Park – HK Ventures LLC
4285 Middle Country Rd, Calverton, NY 11933
20PR02526

Dear Kim Gennaro-Oancea:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (5NYCRR Part 617).

We have reviewed the Phase IA archaeological report (Survey No. 20SR00263). OPRHP concurs with the report's recommendations regarding the areas where Phase IB archaeological survey is necessary. OPRHP also concurs with the use of plow strips and shovel tests for Phase IB survey, under the condition that the distance from the edge of a plow strip to the adjacent shovel test pit transect is no more than 15 meters (50 feet).

The report states that the "methods that will be used are standard and will adhere to the New York Archaeological Council guidelines as accepted by the NYSHPO" (Page 11). The report also states that, "In all locations, the shovel tests will measure 50 by 50cm (20 by 20in) and will be excavated stratigraphically in 10cm (4in) arbitrary levels within stratum. The shovel tests will be set at 25-foot (7.5 meters [m]) intervals or half the distance between the next closest shovel test" (Page 12). The proposed shovel tests are larger, and the shovel test intervals are shorter than what is stated in the New York Archaeological Council's guidelines (NYAC 1994). Therefore, OPRHP recommends the use of shovel test pit size and interval stated in the NYAC 1994 guidelines, unless conditions warrant greater effort.

The report describes several potential interactions with Indian Nations, such as reviewing artifacts with, and providing the Phase IB archaeological survey report to Native Americans. This project was submitted to OPRHP with the NYS Department of Environmental Conservation (DEC) indicated as an agency with jurisdiction. Therefore, the DEC is responsible for Native American consultation. No one should engage in Native American consultation regarding this project without explicit permission from DEC.

If further correspondence is required regarding this project, please refer to the OPRHP Project Review (PR) number noted above. If you have any questions, I can be reached at 518-268-2186.

Sincerely,

Tim Lloyd, Ph.D., RPA
Scientist - Archaeology
timothy.lloyd@parks.ny.gov

via e-mail only

My Projects (3)

My Projects

View | Date Cre

04/16/20

10/10/20

06/30/20

Submission Status

Close

Project 20PR02526: Proposed Industrial Park – HK Ventures LLC (6G5XKY5IXTHU)

Please accept the following information below as the consolidated response from NYS SHPO for the above referenced submission.

Review Responses

Reviewer	Review Type	Response
Tim Lloyd	Archaeology	Carol, thank you for your 5/29/2020 letter clarifying aspects of the proposed Phase IB work scope. I look forward to reading the report of the results.

Information Requests

Status	Reviewer	Review Type	Request Type	Request Entity	Request Item	Request Description
No Request Records						

Attachments

Attachmen	Reviewer	Review Type	Type	Name	Description
No Attachment Records					

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

October 06, 2020

Kim Gennaro-Oancea
Vice President
PW Grosser Consulting, Inc.
630 Johnson Avenue
Suite 7
Bohemia, NY 11716

Re: DEC
Proposed Industrial Park – HK Ventures LLC
4285 Middle Country Rd, Calverton, NY 11933
20PR02526

Dear Kim Gennaro-Oancea:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (5NYCRR Part 617).

We have read the Phase IB archaeological survey report (No. 20SR00500). Regarding locations from which Native American artifacts were recovered, the report mentions four Loci and three locations characterized as Isolated Finds. None of these seven locations are clearly identified on any report figure, hindering the ability of the reader to evaluate the results. OPRHP recommends that the report be revised such that all seven locations are clearly delineated and labeled on the figures showing the results of the archaeological survey.

If further correspondence is required regarding this project, please refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact me via email.

Sincerely,

Tim Lloyd, Ph.D., RPA
Scientist - Archaeology
timothy.lloyd@parks.ny.gov

via e-mail only

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

October 14, 2020

Kim Gennaro-Oancea
Vice President
PW Grosser Consulting, Inc.
630 Johnson Avenue
Suite 7
Bohemia, NY 11716

Re: DEC
Proposed Industrial Park – HK Ventures LLC
4285 Middle Country Rd, Calverton, NY 11933
20PR02526

Dear Kim Gennaro-Oancea:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources.

We have reviewed the revised Phase IB archaeological survey report (No. 20SR00500). Two archaeological sites were identified: (1) the Tintle Farm Site (USN 10306.001187), consisting of the remnants of a twentieth-century farmstead that also had Native American artifacts; and (2) the Industrial Park Pre-Contact Site (USN 10306.001191), consisting of a number of concentrations (Loci) of Native American artifacts.

OPRHP concurs with the report recommendation that the Tintle Farm Site does not meet the eligibility criteria of the New York State and National Registers of Historic Places (S/NRHP) and that no additional archaeological work is necessary. It is OPRHP's opinion that there is insufficient information to assess the potential eligibility of the Industrial Park Pre-Contact site for listing in the S/NRHP. If impacts to the Pre-Contact site cannot be avoided, then OPRHP recommends a Phase II archaeological investigation to assess the site for S/NRHP eligibility. OPRHP concurs with the report recommendation that no additional archaeological work is necessary at Locus 1, due to soil disturbance, and that the other Loci warrant additional investigation. If a Phase II investigation is chosen, then OPRHP recommends the submission of a Phase II work plan.

The report states that there are three locations from which Native American artifacts were recovered (Shovel Tests E13, E15 and F05), and the three locations are designated in the report as Isolated Finds. The three locations appear to have been designated as Isolated Finds because a Native American artifact was recovered from a shovel test that had no other nearby positive shovel tests. The report recommendation is that no additional archaeological work is needed at the three locations. OPRHP does not concur with that recommendation, and we do not concur with the designation of the three as Isolated Finds.

It is standard procedure when conducting a Phase I archaeological survey in New York State to excavate a total of eight radial shovel tests around an isolated positive shovel test. If no additional Native American artifacts are recovered from the eight radials, then the location can be designated as an Isolated Find. There were no radial shovel tests excavated around Shovel Tests E13 and E15, and only four radials excavated around Shovel Test F05. It is OPRHP's opinion that the Phase I archaeological testing at these three locations was not completed and that designation of the three locations as Isolated Finds is inappropriate. OPRHP recommends that the Phase I radial shovel tests at the three locations be completed. One or more of the locations may be additional concentrations of artifacts at which Phase II investigation is warranted.

The report states that the recovered artifacts will be reburied on the property. Reburial of recovered artifacts does not conform to New York State standards regarding the curation of archaeological collections. OPRHP recommends that attempts be made to curate the recovered artifacts in accordance with accepted standards.

OPRHP recommends that relevant Native American Nations be offered the opportunity to consult, prior to the initiation of a Phase II archaeological investigation. I have copied Dr. David Witt, the Indian Nations Affairs Coordinator for the NYS Department of Environmental Conservation (DEC). Dr. Witt will be responsible for conducting Native American consultation on behalf of the DEC.

If further correspondence is required regarding this project, please refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact me via email.

Sincerely,

Tim Lloyd, Ph.D., RPA
Scientist - Archaeology
timothy.lloyd@parks.ny.gov

via e-mail only

cc: C. Weed
D. Witt (DEC)
C. Vandrei (DEC)

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

November 23, 2020

Kim Gennaro-Oancea
Vice President
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630 Johnson Avenue
Suite 7
Bohemia, NY 11716

Re: DEC
Proposed Industrial Park – HK Ventures LLC
4285 Middle Country Rd, Calverton, NY 11933
20PR02526

Dear Kim Gennaro-Oancea:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources.

We have reviewed the Phase II Archaeological Work Plan (the Work Plan) for the investigation of the Industrial Park Precontact site (No. 01306.001191). The Work Plan states that soil anomalies/features will be exposed in plan view, but they will not be excavated without consultation with OPRHP, NYS DEC, and the Native American Nations. It is our opinion that consultation with OPRHP when an anomaly is identified in plan view in unnecessary, and that soil anomalies should be fully investigated in accordance with standard field procedures.

In Table 4, the Work Plan presents a proposed scope of work that includes the excavation of a combined total of 21 shovel tests at the three identified loci, and the excavation of a combined total of 13 50x50-centimeter tests at the three loci. OPRHP finds the excavation of a total of 13 50x50-cenitmeter tests to be insufficient. OPRHP recommends that twice as many 50x50-centimeter tests be excavated at each locus, for a combined total of 26 50x50-centimeter excavations.

If further correspondence is required regarding this project, please refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact me via email.

Sincerely,

Tim Lloyd, Ph.D., RPA
Scientist - Archaeology
timothy.lloyd@parks.ny.gov

via e-mail only

Appendix D – Stratigraphic Summary

Table D.1. Isolated Find 1

STP / EU #	Strat.	Depth (cm)	Soil Texture	Munsell	Horizon	Cultural Materials / Notes	Date	Ex.
STP E13+3.5N	I	0-28	SaLo, <10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	II	28-55	LoSa, >10% gr	10YR 5/4	BC	NCM	12/10/20	JA
STP E13+7N	I	0-25	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	II	25-60	LoSa, >10% gr	10YR 5/4	BC	NCM	12/10/20	JA
STP E13+3.5W	I	0-25	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	II	25-55	LoSa, >10% gr	10YR 5/4	BC	NCM	12/10/20	JA
STP E13+7W	I	0-28	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	II	28-50	LoSa, >10% gr	10YR 5/4	BC	NCM	12/10/20	JA
STP E13+3.5S	I	0-30	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	II	30-45	LoSa, >10% gr	10YR 5/4	BC	NCM	12/10/20	JA
	III	45-55	Sa, <10% gr	10YR 6/8	C	NCM	12/10/20	JA
STP E13+7S	I	0-30	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	II	30-55	LoSa, >10% gr	10YR 5/4	BC	NCM	12/10/20	JA
STP E13+3.5E	I	0-20	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	II	20-40	LoSa, >10% gr	10YR 5/4	BC	NCM; hard packed	12/10/20	JA
STP E13+7E	I	0-30	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	II	30-50	LoSa, >10% gr	10YR 5/4	BC	NCM	12/10/20	JA

Table D.2. Isolated Find 2

STP / EU #	Strat.	Depth (cm)	Soil Texture	Munsell	Horizon	Cultural Materials / Notes	Date	Ex.
STP E15+3.5N	I	0-30	SaLo	10YR 5/4	Ap	NCM	12/10/20	SF
	II	30-60	LoSa	10YR 6/8	BC	NCM	12/10/20	SF
STP E15+7.5N	I	0-30	SaLo	10YR 5/4	Ap	NCM	12/10/20	SF
	II	30-60	LoSa	10YR 6/8	BC	NCM	12/10/20	SF
STP E15+3.5E	I	0-30	SaLo	10YR 5/4	Ap	NCM	12/10/20	SF
	II	30-60	LoSa	10YR 6/8	BC	NCM	12/10/20	SF
STP E15+7.5E	I	0-30	Cl	10YR 5/4	BC	NCM	12/10/20	SF
STP E15+3.5S	I	0-30	SaLo	10YR 5/4	Ap	NCM	12/10/20	SF
	II	30-60	LoSa	10YR 6/8	BC	NCM	12/10/20	SF
STP E15+7.5S	I	0-30	SaLo	10YR 5/4	Ap	NCM	12/10/20	SF
	II	30-60	LoSa	10YR 6/8	BC	NCM	12/10/20	SF
STP E15+3.5W	I	0-30	Cl	10YR 5/6	BC	NCM	12/10/20	SF
STP E15+7.5W	I	0-30	Cl	10YR 5/6	BC	NCM	12/10/20	SF

Table D.3. Isolated Find 3

STP / EU #	Strat.	Depth (cm)	Soil Texture	Munsell	Horizon	Cultural Materials / Notes	Date	Ex.
STP F5+3.5N	I	0-30	SaLo	10YR 5/4	Ap	NCM	12/10/20	SF
	II	30-60	LoSa	10YR 6/8	BC	NCM	12/10/20	SF
STP F5+3.5E	I	0-30	SaLo	10YR 5/4	Ap	NCM	12/10/20	SF
	II	30-60	LoSa	10YR 6/8	BC	NCM	12/10/20	SF
STP F5+3.5S	I	0-30	SaLo	10YR 5/4	Ap	NCM	12/10/20	SF
	II	30-60	LoSa	10YR 6/8	BC	NCM	12/10/20	SF
STP F5+3.5W	I	0-30	SaLo	10YR 5/4	Ap	NCM	12/10/20	SF
	II	30-60	LoSa	10YR 6/8	BC	NCM	12/10/20	SF

Table D.4. Locus 2

STP / EU #	Strat.	Depth (cm)	Soil Texture	Munsell	Horizon	Cultural Materials / Notes	Date	Ex.
STP E06+11W+3.5S	I	0-27	SiSa, pebbles	10YR 4/3-4/4	AB	NCM	12/10/20	LG
	II	27-41	SiSa, pebbles	10YR 5/6	BC	NCM, compact	12/10/20	LG
STP E06+11W+3.5N	I	0-30	SiSa, pebbles	10YR 4/3-4/4	AB	NCM	12/10/20	LG
	II	30-45	SiSa, pebbles	10YR 5/6	BC	NCM, compact	12/10/20	LG
STP E06+7.5W+7.5N	I	0-33	SiSa, pebbles	10YR 4/3-4/4	AB	NCM	12/10/20	LG
	II	33-45	SiSa, pebbles	10YR 5/6	BC	NCM, compact	12/10/20	LG
STP E06+7.5W+7.5S	I	0-29	SiSa, pebbles	10YR 4/3	AB	NCM	12/10/20	LG
	II	29-41	SiSa, pebbles	10YR 5/6	BC	NCM, compact	12/10/20	LG
STP E06+3.5E+3.5S	I	0-32	SiSa, pebbles	10YR 4/3	AB	NCM	12/10/20	LG
	II	32-43	SiSa, pebbles	10YR 5/6	BC	NCM, compact	12/10/20	LG
STP E06+3.5E+3.5N	I	0-31	SiSa, pebbles	10YR 4/3	AB	1 black trap shooting fr., white plastic wrapper (NR)	12/10/20	LG
	II	31-42	SiSa, pebbles	10YR 5/6	BC	NCM, compact	12/10/20	LG
EU E06+2.5W	I:1	0-10	SiSa, pebbles	10YR 4/3	AB	NCM	12/10/20	LG
	I:2	10-20	SiSa, pebbles	10YR 4/3	AB	NCM	12/10/20	LG
	I:3	20-29	SiSa, pebbles	10YR 4/3	AB	1 dark brown modern plastic frag marked "…YE.." (NR). N-S oriented plow scars	12/10/20	LG
	II	29-33	SiSa, pebbles, compact	10YR 5/6	BC	NCM	12/10/20	LG
EU E06+5W	I:1	0-10	SiSa, pebbles	10YR 4/3	AB	NCM	12/10/20	LG
	I:2	10-20	SiSa, pebbles	10YR 4/3	AB	1 quartz flake	12/10/20	LG

	I:3	20-31	SiSa, pebbles	10YR 4/3	AB	1 quartz flake. N-S oriented plow scars	12/10/20	LG
	II	31-35	SiSa, pebbles	10YR 5/6	BC	NCM, compact	12/10/20	LG
EU E06+5W+2.5S	I:1	0-10	SiSa, pebbles	10YR 4/3	AB	NCM	12/10/20	LG
	I:2	10-20	SiSa, pebbles	10YR 4/3	AB	NCM	12/10/20	LG
	I:3	20-32	SiSa, pebbles	10YR 4/3	AB	NCM, N-S plow scars	12/10/20	LG
	II	32-36	SiSa, pebbles	10YR 5/6	BC	NCM, compact	12/10/20	LG
EU E06+5W+2.5N	I:1	0-10	SiSa, pebbles	10YR 4/3	AB	NCM	12/10/20	LG
	I:2	10-20	SiSa, pebbles	10YR 4/3	AB	NCM	12/10/20	LG
	I:3	20-31	SiSa, pebbles	10YR 4/3	AB	NCM, N-S plow scars	12/10/20	LG
	II	31-36	SiSa, pebbles	10YR 5/6	BC	NCM	12/10/20	LG

Table D.5. Locus 3

STP / EU #	Strat.	Depth (cm)	Soil Texture	Munsell	Horizon	Cultural Materials / Notes	Date	Ex.
STP E24+3E+11N	I	0-30	SaLo	10YR 5/4	Ap	NCM	12/10/20	SF
	II	30-60	LoSa	10YR 6/8	BC	NCM	12/10/20	SF
STP E24+7.5E+7.5N	I	0-30	SaLo	10YR 5/4	Ap	NCM	12/10/20	SF
	II	30-60	LoSa	10YR 6/8	BC	NCM	12/10/20	SF
STP E24+3E+3S	I	0-30	SaLo	10YR 5/4	Ap	NCM	12/10/20	SF
	II	30-60	LoSa	10YR 6/8	BC	NCM	12/10/20	SF
STP E24+3W+11N	I	0-30	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	II	30-55	Sa, ~10% pea gr	7.5YR 5/8	C	NCM	12/10/20	JA
STP E24+3W+3N	I	0-30	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	II	30-55	LoSa, >10% gr	10YR 5/4	BC	NCM	12/10/20	JA
STP E24+3W+3S	I	0-30	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	II	30-55	LoSa, >10% gr	10YR 5/4	BC	NCM	12/10/20	JA
EU E24+5N	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	I:2	10-20	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	II:1	20-30	LoSa, >10% gr	10YR 5/4	BC	NCM	12/10/20	JA
	II:2	30-40	LoSa, >10% gr	10YR 5/4	BC	NCM	12/10/20	JA
EU E24+2.5N	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	I:2	10-20	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	I:3	20-30	SaLo, ~10% gr to LoSa, >10% gr	10YR 5/4	BC	NCM	12/10/20	JA
	II	30-40	LoSa, >10% gr	10YR 5/4	BC	NCM	12/10/20	JA
EU E24+2.5S	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	I:2	10-20	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	I:3	20-30	Sa, ~10% gr	7.5 YR 6/8	C	NCM	12/10/20	JA
	II	30-40	Sa, ~10% gr	7.5 YR 6/8	C	NCM	12/10/20	JA
EU E24+10N	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA

	I:2	10-20	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/10/20	JA
	II	20-30	LoSa, >10% gr	10YR 5/4	BC	NCM	12/10/20	JA
	II/III	30-40	LoSa, >10% gr to Sa, ~10% gr	10YR 5/4 to 7.5YR 6/8	BC/C	NCM	12/10/20	JA

Table D.6. Locus 4

STP / EU #	Strat.	Depth (cm)	Soil Texture	Munsell	Horizon	Cultural Materials / Notes	Date	Ex.
STP F26+7.5W+7.5W	I	0-35	SaLo	10YR 4/3	Ap	NCM	12/11/20	SF
	II	35-60	LoSa	10YR 5/6	BC	NCM	12/11/20	SF
STP F26+7.5N+7.5E	I	0-35	SaLo	10YR 4/3	Ap	NCM	12/11/20	SF
	II	35-60	LoSa	10YR 5/6	BC	NCM	12/11/20	SF
STP F25+7.5W+7.5N	I	0-35	SaLo	10YR 4/3	Ap	NCM	12/11/20	SF
	II	35-60	LoSa	10YR 5/6	BC	NCM	12/11/20	SF
STP E39+7.5N	I	0-35	SaLo	10YR 4/3	Ap	NCM	12/11/20	SF
	II	35-60	LoSa	10YR 5/6	BC	NCM	12/11/20	SF
STP F27+7.5E+7.5N	I	0-35	SaLo	10YR 4/3	Ap	NCM	12/11/20	SF
	II	35-60	LoSa	10YR 5/6	BC	NCM	12/11/20	SF
STP F28+7.5N	I	0-35	SaLo	10YR 4/3	Ap	NCM	12/11/20	SF
	II	35-60	LoSa	10YR 5/6	BC	NCM	12/11/20	SF
STP E41+7.5S+7.5W	I	0-41	SiSa	10YR 4/3-4/4	AB	1 clear glass fr	12/11/20	LG
	II	41-56	SiClSa, pebbles	10YR 4/6	BC	NCM. Increasingly compact with greater depth.	12/11/20	LG
STP E41+7.5E+7.5S	I	0-34	SiSa	10YR 4/3-4/4	AB	NCM	12/11/20	LG
	II	34-46	SiSa, pebbles	10YR 5/6	BC	NCM	12/11/20	LG
STP F29+7.5N	I	0-31	SiSa, pebbles	10YR 4/3	AB	NCM	12/11/20	LG
	II	31-44	Sa, pebbles	10YR 5/6	BC	NCM. Very coarse, friable sand and dense pebble content.	12/11/20	LG
EU E39+7.5E	I:1	10-20	SaLo	10YR 4/3	Ap	NCM	12/11/20	SF
	I:2	20-30	SaLo	10YR 4/3	Ap	NCM	12/11/20	SF
	I:3	30-40	SaLo	10YR 5/6	BC	NCM	12/11/20	SF
	II	40-50	LoSa	10YR 5/6	BC	NCM	12/11/20	SF
EU E40+7.5E+7.5N	I:1	10-20	SaLo	10YR 4/3	Ap	NCM	12/11/20	SF
	I:2	20-30	SaLo	10YR 4/3	Ap	NCM	12/11/20	SF
	I:3	30-40	SaLo	10YR 5/6	BC	NCM	12/11/20	SF
	II	40-50	LoSa	10YR 5/6	BC	NCM	12/11/20	SF
EU E40+3.5E	I:1	0-10	SaLo ~10% gr	10YR 4/4	Ap	NCM	12/11/20	JA
	I:2	10-20	SaLo ~10% gr	10YR 4/4	Ap	NCM	12/11/20	JA

	I:3	20-30	SaLo ~10% gr to LoSa >10% gr	10YR 4/4 to 10YR 5/4	Ap/BC	NCM	12/11/20	JA
	II	30-40	LoSa, >10%gr	10YR 5/4	BC	NCM	12/11/20	JA
EU E39+7.5N+7.5E	I:1	0-10	SaLo ~10% gr to LoSa >10% gr	10YR 4/4	Ap	NCM	12/11/20	JA
	I:2	10-20	SaLo ~10% gr to LoSa >10% gr	10YR 4/4	Ap	NCM	12/11/20	JA
	II:1	20-30	LoSa, >10% gr	10YR 5/4	BC	NCM	12/11/20	JA
	II:2	30-40	LoSa, >10% gr	10YR 5/4	BC	NCM	12/11/20	JA
EU F26+3.5W	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	I:2	10-20	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	I:3	20-30	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	I:4	30-32	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	II	32-40	LoSa, >10% gr	10YR 5/4	BC	NCM	12/15/20	JA
EU E41+3.5E	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	I:2	10-20	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	I:3	20-30	SaLo, ~10% gr	10YR 4/4	Ap	1 shatter, quartz	12/15/20	JA
	I:4	30-33	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	II	33-40	LoSa, >10% gr	10YR 5/4	BC	NCM	12/15/20	JA
EU E41+3.5E+7.5S	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	I:2	10-20	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	I:3	20-28	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	II:1	28-30	LoSa, >10% gr	10YR 5/4	BC	NCM	12/15/20	JA
	II:2	30-40	LoSa, >10% gr	10YR 5/4	BC	NCM	12/15/20	JA
EU E41+3.5E+7.5N	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	I:2	10-15	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	II:1	15-20	LoSa, >10% gr	10YR 5/4	BC	NCM	12/15/20	JA
	II:2	20-30	LoSa, >10% gr	10YR 5/4	BC	NCM	12/15/20	JA
EU F26+3.5N+3.5W	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	I:2	10-20	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	I:3	20-30	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	I:4	30-32	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	II:1	32-40	LoSa, <10% gr	10YR 4/2	BC?	NCM	12/15/20	JA
	II:2	40-50	LoSa, <10% gr	10YR 4/2	BC?	NCM	12/15/20	JA
EU F25+3.5W	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	I:2	10-20	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	I:3	20-30	SaLo, ~10% gr	10YR 4/4	Ap	1 flake quartz	12/15/20	JA
	I:4	30-40	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	I:5	40-45	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	JA
	II	45-50	LoSa, >10% gr	10YR 5/4	BC	NCM	12/15/20	JA
EU F26+7.5N	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	MDS
	I:2	10-20	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	MDS
	I:3	20-30	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	MDS

	I:4	30-32	SaLo, ~10% gr	10YR 4/4	Ap	NCM, photo plow marks	12/15/20	MDS
	II:1	32-40	LoSa, >10% gr	10YR 5/4	B	NCM, plow @32cm bgl	12/15/20	MDS
	II:2	40-50	LoSa, >10% gr	10YR 5/4	B	NCM	12/15/20	MDS
EU F25+3.5N	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	1 chunk quartz	12/15/20	MDS
	I:2	10-20	SaLo, ~10% gr	10YR 4/4	Ap	1 flake quartz	12/15/20	MDS
	I:3	20-30	SaLo, ~10% gr	10YR 4/4	Ap	1 flake quartz	12/15/20	MDS
	I:4	30-32	SaLo, ~10% gr	10YR 4/4	Ap	NCM, faint plow	12/15/20	MDS
	II	32-40	LoSa, >10% gr	10YR 5/4	B	NCM	12/15/20	MDS
EU F25+3.5S	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	MDS
	I:2	10-20	SaLo, ~10% gr	10YR 4/4	Ap	1 core quartz	12/15/20	MDS
	I:3	20-30	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	MDS
	I:4	30-40	SaLo, ~10% gr	10YR 4/4	Ap	NCM, plow marks @34cm	12/15/20	MDS
	II	40-45	LoSa, >10% gr	10YR 5/4	B	NCM	12/15/20	MDS
EU F26+3.5N	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	MDS
	I:2	10-20	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	MDS
	I:3	20-30	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	MDS
	I:4	30-32	SaLo, ~10% gr	10YR 4/4	Ap	NCM, plow marks @32cm	12/15/20	MDS
	I:5	32-39	SaLo, ~10% gr	10YR 4/4	Ap	NCM, plow marks @39cm	12/15/20	MDS
	II	39-45	LoSa, >10% gr	10YR 5/4	B	NCM	12/15/20	MDS
EU F25+3.5E	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	1P	12/15/20	MDS
	I:2	10-20	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	MDS
	I:3	20-30	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	MDS
	I:4	30-39	SaLo, ~10% gr	10YR 4/4	Ap	NCM, plow @39cm bgl	12/15/20	MDS
	I:5	39-42	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	MDS
	II	42-50	LoSa, >10% gr	10YR 5/4	B	NCM	12/15/20	MDS
EU F25+3.5N+3.5W	I:1	0-10	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	MDS
	I:2	10-20	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	MDS
	I:3	20-30	SaLo, ~10% gr	10YR 4/4, firm	Ap	NCM	12/15/20	MDS
	I:4	30-36	SaLo, ~10% gr	10YR 4/4	Ap	NCM, plow marks @36cm	12/15/20	MDS
	I:5	36-42	SaLo, ~10% gr	10YR 4/4	Ap	NCM	12/15/20	MDS
	II	42-50	LoSa, >10% gr	10YR 5/4	B	NCM	12/15/20	MDS
EU E41+7.5N+7.5E	I:1	0-10	SiSa, pebbles	10YR 4/3-4/4	AB	NCM	12/11/20	LG
	I:2	10-20	SiSa, pebbles	10YR 4/3-4/4	AB	NCM	12/11/20	LG
	I:3	20-26	SiSa, pebbles	10YR 4/3-4/4	AB	NCM. N-S oriented plow scars	12/11/20	LG

	II	26-34	SiSa, pebbles	10YR 5/6	BC	NCM; compact, increased pebble content.	12/11/20	LG
EU E41+7.5N	I:1	0-10	SiSa, pebbles	10YR 4/3	AB	NCM. More wet than to E.	12/11/20	LG
	I:2	10-22	SiSa, pebbles	10YR 4/3	AB	NCM. N-S oriented plow scars photo'd at I/II interface - very shallow scarring.	12/11/20	LG
	II	22-28	Sa, pebbles	7.5YR 5/6	BC	NCM. More coarse than further N.	12/11/20	LG

Abbreviations:
Si – silt
Sa – sand
Lo – loam
Cl – clay
Gr – gravel
NCM – No Cultural Material

Appendix E – Artifact Tables

Table E.1. Locus 2. Indian Nation Artifacts

STP/EU	Strat.	Type	Material	Max. Length (mm)	Width (1/2 length, mm)	Thickness (1/2 length, mm)	Weight (g)	Cortex (% dorsal surface)
EU E06+5W	I:2	Tertiary flake fragment	Quartz	12.01	10.19	3.44	<1	0
EU E06+5W	I:3	Distal flake fragment	Quartz	9.8	8.75	1.1	<1	0

Table E.2. Locus 2. Historic Period and Modern Artifacts

STP/EU	Strat.	Count	Type	Material	Max. Size (cm)	Date
STP E06+3.5E+3.5N	I	1	Trap shooting fragment, black	ceramic	2	Modern

Table E.3. Locus 4. Indian Nation Artifacts

STP/EU	Strat.	Type	Material	Max. Length (mm)	Width (1/2 length, mm)	Thickness (1/2 length, mm)	Weight (g)	Cortex (% dorsal surface)
EU E41+3.5E	I:3	Tertiary shatter	Quartz	15.87	10.6	5.76	<1	0
EU F25+3.5N	I:1	Chunk	Quartz	12.87	7.89	5.18	<1	5
EU F25+3.5N	I:2	Decortication flake	Quartz	19.47	7.1	4.54	<1	50
EU F25+3.5N	I:3	Secondary distal flake fragment	Quartz	15.8	7.57	4.55	<1	30
EU F25+3.5S	I:2	Core	Quartz	25.6	25.46	14.24	10.5	N/A
EU F25+3.5S	I:2	Decortication flake	Quartz	26.37	16.61	7.99	5.5	100
EU F25+3.5W	I:3	Distal flake fragment	Quartz	9.47	7.53	4.19	<1	50

Table E.4. Locus 4. Historic Period and Modern Artifacts

STP/EU	Strat.	Count	Type	Material	Max. Size (cm)	Date
STP E41+7.5S+7.5W	I	1	glass bottle fragment, machine made, colorless	glass	6	1900-Modern

Appendix F – USN Form Data

Appendix F, Phase II Archaeological Assessment

20PR02526, HK Ventures LLC

Field Site Number 2020-003.2

USN Archaeology Site Form Data
(based on CRIS Online Help System USN Details Inventory Form Tab)

SITE INFORMATION

Name of the Site: Industrial Park Precontact Site

Site Type: Archaeological scatter

Other Site Number: 2020-003.2

Discovery Date: 2020 Phase IA/IB investigations in support of permit and approval submissions.

Sources:

Spigelman, Matthew, Jenna Anderson, Carol S. Weed. 2020. Phase IB Archaeological Assessment, Proposed Industrial Park – HK Ventures LLC, 4285 Middle Country Road (NYOPRHP 20PR02526; USN 10306.001187), Calverton, Town of Riverhead, New York. Submitted by Carol S. Weed to NYOPRHP.

Spigelman, Matthew, Jenna Anderson, Carol S. Weed. 2020. Phase II Archaeological Assessment, Proposed Industrial Park – HK Ventures LLC, 4285 Middle Country Road (NYOPRHP 20PR02526; USN 10306.001191), Calverton, Town of Riverhead, New York. Submitted by Carol S. Weed to NYOPRHP.

Weed, Carol S. 2020a (April 14). Memorandum, CSW13108, 4285 Middle Country Road, Short Cultural Resources Summary, 1-mile Study Area from 4285 Middle Country Road, Calverton, Town of Riverhead, Suffolk. File submitted to Kim Gennaro-Oancea, PW Grosser Consulting, Inc.

Weed, Carol S. 2020b (May 15). Phase IA Archaeological Assessment, Proposed Industrial Park – HK Ventures LLC, 4285 Middle Country Road (NYOPRHP 20PR02525), Calverton, Town of Riverhead, New York. Submitted by Carol S. Weed to NYOPRHP, Town of Riverhead, and The Pinewood Organization.

Weed, Carol S., Matthew D. Spigelman, Jenna L. Anderson. 2020. Phase II Archaeological Work Plan, Proposed Industrial Park – HK Ventures LLC, 4285 Middle Country Road (NYOPRHP 20PR02526), Calverton, Town of Riverhead, New York. Submitted by Carol S. Weed to NYOPRHP.

Notes:

HK Ventures, LLC (the Applicant) proposes to develop the 30.5±-acre (ac) parcel located at 4285 Middle Country Road, Calverton, Town of Riverhead, Suffolk County, New York. In support of the review under SEQRA, an initial project notification was made to the New York State Office of Parks, Recreation and Historic Preservation (NYOPRHP, NYSHPO) describing the Project. By letter dated April 23, 2020, NYOPRHP responded that professional cultural resources investigations would be required.

The Phase IA report was submitted on May 15, 2020, and it included a Phase IB Work Plan (IB Plan) which was accepted following minor revisions by NYOPRHP on May 29, 2020. The Phase IB excavations were reported on October 14, 2020. The combined Phase IA/IB investigations yielded information on Indian Nation and Historic-era use of the Project Area. Indian Nation temporally diagnostic artifacts were recovered and what appear to be discrete artifact concentrations were also identified. The report authors (Spigelman et al. 2020) recommended that Phase II investigations be conducted.

The proposed work included the excavation of closer interval radials and four or more, 50×50cm units at Archaeological Loci 2, 3, and 4 to refine the boundaries and to determine the integrity of the stratigraphy at Loci 2, 3, and 4. NYSHPO accepted this recommendation and assigned the Loci 2, 3, and 4 a Unique Site Number, 10306.001191, based on a provisional boundary created by the authors. NYSHPO also requested that the number of Phase II excavations be increased by 100 percent and that any possible cultural feature be fully exposed and excavated.

The Phase II cultural resources investigations were conducted by Matthew Spigelman, Jenna Anderson, Lisa Geiger, and Scott Ferrara. Fieldwork began on 12/10/2020 and it was completed on 12/15/2020. Ms. Anderson completed the chipped stone analysis, Dr. Spigelman completed the historic artifact analysis. Co-principal Investigator Carol S. Weed (CSW13108) created the report outlined and served as the report editor.

Additional STPs were excavated during Phase II at Isolated Finds 1, 2, and 3. These isolated finds are located within the provisional boundary of archaeological site USN 10306.0111191. The Phase II STPs did not yield additional cultural materials and all three of the isolated finds remain as originally defined.

Phase II testing within USN 1036.001191 consisted of STPs, excavated to confirm isolated artifacts and loci boundaries, and EUs, excavated to test stratigraphy within loci. All excavated STPs were negative for Native American cultural material, confirming the isolated artifacts and the loci boundaries established by the Phase IB survey. All EUs contained an upper stratum of mixed A and B soils, confirmed to be an Ap soil horizon by the presence of distinct plow marks in nearly all of the EUs. The remaining B soil horizon, below the Ap, was culturally sterile. There was no evidence of an intact A-B soil sequence anywhere within the site and no evidence for cultural features cut into the underlying B or C soil horizons. All cultural material recovered was from within the Ap soil horizon. There is, however, evidence for distinct use patterns with the three loci investigated, with Loci 2 interpreted as a brief episode of tool maintenance, Loci 3 interpreted as a procurement station, and Loci 3 interpreted as a procurement station but possibly with multiple occupations.

Based on the results of the previously conducted Phase IB survey and the Phase II testing presented herein, USN 1036.001191 is shown to contain three discrete loci, which have each retained some degree of horizontal integrity, but have been disturbed vertically by modern plowing. Due to the low density of artifacts recovered and the loss of stratigraphic integrity, it is our opinion that USN 1036.001191 is unlikely to yield additional information beyond that already recovered. No additional work is recommended with regards to archaeological considerations and we have no concerns with the proposed project proceeding as designed.

OTHER INFORMATION

Created Date (SHPO):

Created By (SHPO):

Drainage: well-drained Plymouth or Riverhead soils

Slope: less than 10%

Elevation: based on civil survey and USGS quadrangle contours elevations range from 84.2 to 71.8 AMSL.

Distance to Water: >200 ft., a kettle pond is located in the northeast corner of the project lot. While more than 200 ft from the southern end of the site, the site's northern locus (2) is about 250 ft from the southern end of the kettle pond.

Site Area: 1.41 hectares (615 x 25 = 15,375 sq meters) (153755 sq feet/43560 sq ft = 3.5 acres)

Construction Date: not applicable

Curation Facility: Not determined.

Classification: not applicable

Condition, Current Condition: fallow fields

Condition, Foundation: not applicable

Fieldwork: See Spigelman et al. 2000a and 2000b for fieldwork episodes.

Geo, Geographic Setting: Coastal till plain

Geo, Geomorphic Setting: outwash plain

Geo, Stratigraphy: Normal O/A/B/C with mixed A/B from plowing and distinct B/C interface marked by plowscars.

Historic, Periods: Precontact, Archaic and Woodland based on diagnostic artifacts recovered during Phase IB.

Native American, Phases: Transitional Archaic through Middle Woodland (Beekman Triangle)

Native American, Traditions: none identified

Native American, Site Types: Loci 2 interpreted as a brief episode of tool maintenance, Loci 3 interpreted as a procurement station, and Loci 3 interpreted as a procurement station but possibly with multiple occupations.

Samples, Dating Samples: none

Significance, Architects/Buildings: not applicable

Significance, Areas of Significance:

Significance, Cultural Affiliation: Indian Nation, Transitional Archaic to Middle Woodland (Beekman Triangle)

Significance, Periods of Significance: not evaluated as significant site

Significance, Significant Dates: not evaluated as significant site

Significance, Persons: not evaluated as significant site

Use, Current Uses: fallow farmland with woods and abandoned farmstead remnants

Use, Historic Uses: short-term uses, Indian Nations; farm and homeplace.