Phase IB Archaeological Survey

Rodman's Neck Firearms and Tactics Facility
Block 5650, Lot 1
Rodman's Neck, Bronx, New York
DDC CAPIS ID: PO79ROD
CEQR Review No. LA-CEQR-X
NY SHPO Review No. OPRHP 23PR06662
(NYC Police Department)

Prepared for:

NYC DDC Department of Design and Construction

Prepared by:
Arcadis Dewberry a Joint Venture
27-01 Queens Plaza North, Suite 800
Long Island City, NY 11101

February 2025

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MANAGEMENT SUMMARY

SHPO Project Review Number (if available): **OPRHP 23PR06662**

Involved State and Federal Agencies: **New York City Department of Design and Construction**
New York City Department of Parks & Recreation

Phase of Survey: **Phase IB Archaeological Survey**

Location Information

Location: **Pelham Bay Park**
Minor Civil Division:
County: **Bronx**

Survey Area

Length: 3,589.2 feet
Width: 10 feet
Number of Acres Surveyed: 1.79
USGS 7.5 Minute Quadrangle Map: Flushing, NY

Archaeological Survey Overview

Number & Interval of Shovel Tests: 70 proposed, 14 excavated**;** 12 at 15-meter (50 feet) intervals, 2 radials at 5-meter (16 feet) intervals
Number & Size of Units: **N/A**
Width of Plowed Strips: **N/A**
Surface Survey Transect Interval: **N/A**

Results of Archaeological Survey

Number & name of precontact sites identified: **None**
Number & name of historic sites identified: **None**
Number & name of sites recommended for Phase II/Avoidance: **N/A**

Report Authors: **Lauren Cook, M.A., RPA, Niall Conway, M.A., R.P.A., Zachary Davis, M.A., R.P.A**
Dewberry Engineers Inc.

Date of Report: **February 2025**

EXECUTIVE SUMMARY

New York City Department of Design and Construction (DDC), contracted Arcadis Dewberry, a Joint Venture (Arcadis/Dewberry) to provide archaeological services for the proposed improvement project of New York Police Department's (NYPD) Rodman's Neck Firearms and Tactic Facility (Block 5650, Lot 1) located on Rodman's Neck in Pelham Bay Park, Bronx, New York. The project will include the construction of an indoor firing range, four additional buildings, and underground utilities at the NYPD facility and within the surrounding public roads (Project). This report presents the results of the Phase IB Archaeological Survey (Phase IB) conducted for the Project in December 2024.

The Phase IB field investigation excavated 12 grid-based shovel tests and two radial tests. Most of the proposed shovel tests could not be excavated due to proximity to New York City Department of Parks & Recreation trees, visible utilities, and paved areas. The fourteen shovel tests yielded a total of 247 artifacts in disturbed contexts. The majority of the material recovered dates to the historic/recent period (n = 242) while five precontact artifacts were also retained.

The subsurface investigation identified disturbed soils with an extensive dispersed scatter of recent and historic artifacts in the area of Phase IB survey. The northeastern portion of the Area of Potential Effects (APE) contain precontact material. The precontact material was recovered from redeposited contexts containing recent/historic material. This area can be documented as land created by historic landfilling during the construction of Pelham Bay Park in the 1930s The recent/historic artifacts consisted primarily of bottle glass fragments and plastic items. Some historic ceramics, likely dating to the late eighteenth or nineteenth century, were also recovered from the same locus as the precontact material and were also found in a redeposited context with recent/historic material. Coal and slag dating to the historic period were recovered from redeposited contexts across the APE. Slag was a common paving material prior to the extensive use of asphalt. Six fragments of a mold-blown beer bottle were recovered from a likely landfill stratum in Shovel Test (ST) 30. This appears to be the only material recovered from a primary context during the project and was probably discarded during an episode of landfilling or utility replacement.

No archaeological sites or potentially significant deposits were identified during the Phase IB survey. The survey encountered no intact ground surfaces predating the construction of Pelham Bay Park. The Project, as currently designed, will result in no effects to historic properties, and no further archaeological investigations are recommended.

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I. INTRODUCTION

New York City Department of Design and Construction (DDC), contracted Arcadis Dewberry, a Joint Venture (Arcadis/Dewberry) to provide archaeological services for the proposed improvement project of New York Police Department's (NYPD) Rodman's Neck Firearms and Tactic Facility (Block 5650, Lot 1) located on Rodman's Neck in Pelham Bay Park, Bronx, New York. The project will include the construction of an indoor firing range, four additional buildings, and underground utilities at the NYPD facility and within the surrounding public roads (Project). This report presents the results of the Phase IB Archaeological Survey (Phase IB) conducted for the Project in December 2024.

Prior to this survey, Arcadis/Dewberry completed a Phase IA Archaeological Documentary Study (Phase IA) in March 2024. The New York City Landmarks Preservation Commission (LPC) reviewed the Phase IA study and concurred that portions of the site may contain potentially significant archaeological resources associated with Native American occupation and from the historic period. Therefore, the Project required archaeological subsurface testing (Sutphin 2024) (**Appendix A:** Project Correspondences).

The Phase IB survey focused on the northern portion of the Area of Potential Effects (APE) to determine the presence or absence of archaeological deposits. This field investigation extended from City Island Circle to proximity of the front entrance of Orchard Beach Bathhouse, coinciding with the proposed path of the 6-inch force main sewer with air-release manholes along Park Drive (**Appendix B:** Project Construction Plans). This force main sewer will be a pressurized system connecting to an existing sanitary manhole and the "NYC DEP" pump station near the front of Orchard Beach Bathhouse.

Phase IB investigations adhered to LPC's *Guidelines for Archaeological Work in New York* (LPC 2018). Additionally, the survey followed a Work Plan that was reviewed and approved by the LPC and consulting Tribal Nations, identified as the Delaware Nation and the Stockbridge-Munsee Community (**Appendix C**).

The New York City Department of Parks & Recreation (Parks) issued a construction permit (#X039. E.20241114) to Arcadis/Dewberry to allow the Phase IB subsurface testing within their property (Parks 2024). The permit was effective from November 14, 2024, to December 31, 2024. The Phase IB survey complied with the conditions of the Parks permit (see **Appendix C**).

Mr. Cook and Mr. Conway authored this report with input from Zachary Davis, MA, RPA, Dewberry Cultural Resources Lead, who also provided QA/QC for the Phase IB investigations and for this report. Dewberry GIS Professional, Ashton Mook, prepared the report graphics.

A. Area of Potential Effect (APE)

Per Section 106 of the National Historic Preservation Act (NHPA), a Project's Area of Potential Effects (APE) is defined as:

> The geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking [36 CFR Part 800.16[d].

Arcadis/Dewberry defined the APE for the Project as the area subject to ground disturbance related to the Project (see **Figure 1**). The APE for the entire project measures about 19.9 acres. The Phase IB survey investigated the area of the proposed force main sewer route along Park Drive and north of the City Island Road traffic circle. This portion of the APE had been identified in the Phase IA study as having the potential to encounter archaeological resources. The portion of the APE investigated by the Phase IB archaeological survey encompassed 1.79 acres.

Source: Copyright:© 2013 National Geographic Society, i-cubed

NYC DDC Department of Design and Construction

PROJECT LOCATION

DDC CAPIS ID: PO79ROD

NYPD Rodmans Neck Firearm and Tactics Facility
Bronx, New York

SCALE: 1" = 2000'

DATE: February 2025

Arcadis Dewberry a Joint Venture
27-01 Queens Plaza North, Suite 800
Long Island City, NY 11101

FIGURE 1

Path: Q:\150085489\50141248 - 030 Rodmans Neck Phase IB\GIS\Mxd\Phase IB MXDs\1_PhaseIB_DDCRodmansNeck_ProjectLocationMap.mxd

II. ENVIRONMENTAL AND HISTORIC CONTEXT

This chapter provides a brief overview of environmental conditions and the area's precontact and post-contact history, drawn mostly from Arcadis/Dewberry's Phase IA report for the Project (Arcadis/Dewberry 2024a). Please see the Phase IA report for a more in-depth discussion of the history of development and land use within the APE.

A. Bedrock Geology

The APE falls within the New York-New Jersey Highlands, a portion of the Reading Prong, which is an extension of the New England Upland Physiographic Province. The Highlands consist of a rugged, high-elevation region of forested ridges and valleys extending from the Delaware River northeast across the Hudson River into Connecticut. Manhattan and the Bronx are within the Manhattan Prong of the Highlands Province. The Manhattan Prong formed approximately 550 million years ago and consists of rolling hills and valleys that overlie bedrock. The hills are comprised of metamorphic rocks resistant to erosion (Miracosta 2023; Public Water 2023; McCully 2018). The bedrock beneath Pelham Bay Park consists of the Hartland Formation, most likely of Cambrian-Ordovician age. Metamorphic and igneous rocks metamorphosed from shale comprise the Hartland Formation. Exposed schist outcrops have been documented on the North and South Twin Islands, Orchard Beach (USGS 2023; Pellegrini 2019; McCully 2018; Arcadis/Dewberry 2024a).

B. Surficial Geology

New York State Geological Survey mapping shows the surficial deposits within the Phase IB APE as consisting of both artificial fill and glacial tills (Cadwell 1986). Artificial fill characterizes both the northern end of the APE, before it turns to the south, and areas to the east of the southern portion of the APE.

Till, which may be present in the southern portion of the Phase IB APE, is described as poorly sorted relatively impermeable sediments deposited beneath glacial ice (Flint 1971:152-153). In upland contexts, it tends to include angular material of varying sizes, with either loamy or sandy matrix, depending on the underlying bedrock. In the region, it tends to vary between about 3 feet (1 meter [m]) and 150 feet (50 m) thick, and on schist, such as the local bedrock, it tends to be sandier (Cadwell 1986). The small scale of the mapping (1:250,000) and the selective representation of cultural features such as roads make it difficult to determine the precise boundary between fill and till. Further, it should be noted that filled areas may have natural soils beneath the fill, and anthropogenic processes, such as deforestation, road construction, and utility installation may have disturbed areas characterized as till.

C. Soils

The Natural Resources Conservation Service Websoil Survey only identified one soil type within the field investigation—North Meadow-Urban Land Complex (NUB) which occupies the entire APE (NRCS 2024). The complex consists of 70 percent North Meadow soils and 18 percent Urban Land, Till Substratum soils. This complex, formed from loamy human-transported material and asphalt over till, and is moderately well drained with slopes ranging from 0 to 8 percent. **Table 1** presents the typical pedon associated with the mapped soils; **Figure 2** illustrates the mapped soil types within the field investigation (Arcadis/Dewberry 2024a).

Table 1: Mapped Soil Types within the APE

Soil Type	Component	Horizon	Depth (inches)	Soil Color	Soil Texture	Slope	Drainage
North Meadow-Urban Land Complex (NUB)	North Meadow	^A	0-2	Black	Fine Sandy Loam	3-8%	Moderately Well Drained
		^Bw1	2-20	Reddish Brown	Stone Fine Sandy Loam		
		^Bw2	20-24	Reddish Brown	Sandy Loam		
		^Bw3	24-28	Reddish Brown	Sandy Loam		
		2Bwb1	28-39	Gray and Light Gray	Silt Loam		
		2Bwb2	39-72	Gray and Light Gray	Silt Loam		
	Urban Land, till substratum	M	0-15	Not provided	Cemented Material	0-3%	Not provided
		2^C	15-79		Gravelly Sandy Loam		

D. Topography and Hydrology

Elevations along Park Drive vary between 5 and 20 feet (1.5 and 6.1m) above sea level (asl) with the highest points at the traffic circle formed by City Island Road and Park Drive. The far northern portion of the APE is within 1,000 feet (304.8m) of Pelham Bay. A lagoon and marsh area also sit to the immediate west of the APE (Arcadis/Dewberry 2024a).

LEGEND

- Direct APE
- Soil Designation
- Area of Phase IB Survey (between the two lines)

Soil Code	Soil Description
NUB	North Meadow-Urban land complex, 0 to 8 percent slopes

0 100 200 400 Feet

Source: NYS Office of Information Technology Services, GIS Program Office. Nearmap Imagery Online Service, ESRI. Soil Data derived from Web Soil Survey, USDA & NRCS, 2023. NYC Department of City Planning, Information Technology Division, MapPLUTO 22v1, 2022. Langan Engineering & NYC Department of Design and Construction, 2023

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Department of Design and Construction

SOILS MAP

DDC CAPIS ID: PO79ROD

NYPD Rodmans Neck Firearm and Tactics Facility
Bronx, New York

SCALE: 1" = 200' DATE: February 2025

Arcadis Dewberry a Joint Venture
27-01 Queens Plaza North, Suite 800
Long Island City, NY 11101

FIGURE 2

E. Context Summary

The project's Phase IA report provided details on the general area's precontact and historic background, which was gleaned from research of historical maps, literature, and online sources, such as New York Cultural Resource Information System (CRIS).

a. Precontact Overview

The Phase IA research and documented archaeological sites have indicated a highly active area for precontact Native American culture in Pelham Park. Late Woodland peoples likely utilized fishing stations, migratory bird hunting sites, and winter hunting camps. The area's access to a network of surrounding waterways would have supported fishing and travel activities. This section highlights the Phase IA research that discussed precontact settlement and procurement activities in and near the APE.

Several Native American burial sites have been documented in the Rodman's Neck and Pelham Bay area. The earliest available historic map, the 1851 Sidney & Neff *Map of Westchester County, New York,* labels a location near the northern shore of Rodman's Neck as an "Indian Burial Ground," situated close to Rapelye Farm. The farm was established in the area in the nineteenth century (Arcadis/Dewberry 2024a).

Robert Bolton's 1881 *The History of the Several Towns, Manors, and Patents of the County of Westchester*, describes indigenous burial grounds near the entrance of Pelham Neck. He noted the presence of numerous mounds close to the water's edge on the former Rapelye estate. Excavation of one of these mounds revealed human remains associated with a stone axe and flint spear. Bolton further observed that Rodman's Neck "appears to have been used by the Indians for sepulture; in proof of this, their remains have been found in almost every part of it" (Bolton 1881:70; Arcadis/Dewberry 2024a).

M.R. Harrington's 1909 *Ancient Shell Heaps Near New York City* notes the existence of shell heaps along the shores of Pelham Bay Park near Jack's Rock, a well-known point on Rodman's Neck. The APE appears to cross the area near the former location of Jack's Rock. According to Harrington, the New York State Museum explored these shell heaps in 1899, recovering little material. However, pits near and on the knolls contained three burials, pottery, bone, and stone tools (Arcadis/Dewberry 2024a).

Reginald Bolton's 1922 "Indian Paths in the Great Metropolis," associated Rodman's Neck with the Native American settlement of Asumsowis. Excavation of this site on the northeastern side of Rodman's Neck by M. R. Harrington, uncovered a large amount of shell, charcoal, and several human burials (Bolton 1922:227). Bolton also identified an Indigenous trail extending from Rodman's Neck to the north, following the general path of City Island Road and Shore/Pelham Bridge Road (Bolton 1922:125; Grumet 1981:69; HPI 2022; Arcadis/Dewberry 2024a).

b. Historical Overview

The Phase IA research provided the historical background of the APE and its surrounding area. The findings indicate the various historical events and cultural activities have taken place on Rodman's Neck. These events include a skirmish during the American Revolution (1776), early Euroamerican settlements and farming (1700s-1900s), a US Naval training camp (1917-1919) during World War I, recreational activities and structures (1888-1934), a NYPD training camp (1930s), and the construction of Orchard Beach and Park Drive (1934-1937).

Sidney & Neff's 1851 *Map of Westchester County* shows dispersed mid-nineteenth century estates on Rodman's Neck (see **Figure 5**). Two buildings front the eastern shore of Pelham Bay, east of the Direct APE. A residence associated with S. Bowne sits to the east of the APE. The Rapelye Farm is also located on the eastern shore of Rodman's Neck, south of the APE. One major road extends through Rodman's Neck; private driveways lead from this road to the estates. The map depicts the far northeastern extent of the APE within Pelham Bay Park (Arcadis/Dewberry 2024a).

In 1888, New York City acquired Rodman's Neck for park land. The area was opened to the public for recreational use in 1903 and featured bathhouses, picnic tables, and cooking facilities (Parks 2023). In the early twentieth century, Jack's Rock was a rock outcrop that jutted into Pelham Bay and was once considered a destination spot for bathers

and tourists (Bell 2016). The Stuyvesant Yacht Club leased and occupied Jack's Rock; they vacated in 1934 with the filling of the bay (Ultan and Olson 2015:107; Arcadis/Dewberry 2024a).

In 1917, the U.S. Navy (Navy) acquired temporary usage of 225 acres in Pelham Bay Park; later that year, they were permitted an additional 235 acres for the Pelham Bay Naval Reserve Training Center and 481 single-story buildings and barracks within the park. The facility was designed to train new sailors and officers during World War I. In 1919, the government began dismantling some of the buildings at the Naval Training Station, and the area reverted to parkland (Scott 1993; Van Ellis 2015; Arcadis/Dewberry 2024a).

In 1930, the New York City Police Department established Camp Mulrooney, a summer camp, at Rodman's Neck. The camp operated for six years and used the Navy's large drill hall as their headquarters. Prospective police officers trained at Camp Mulrooney for 12 weeks before attending the Recruits' Training School (Scott 1993; Twomey 2002).

In the mid-1930s, Parks Commissioner Robert Moses supervised the construction of Orchard Beach that required two to three feet of fill between Rodman's Neck and Hunter Island. Pelham Bay Park was in poor condition with a dilapidated bridge connecting Rodman's Neck to the park. The Navy left their camps on Rodman's Neck in ruinous condition, with areas of concrete pavement and gouges in the landscape (Arcadis/Dewberry 2024a).

Ultimately, Moses transformed the shape of Rodman's Neck by adding 115 acres of land and over 3 million cubic yards of sanitary landfill, to connect Rodman's Neck and Hunter Island. For the beach construction, crews transported about 4,000 cubic yards of white sand from the Rockaways in Queens and Sandy Hook in New Jersey per day. During this period, Rodman's Neck was expanded to the northeast through infilling of portions of Pelham Bay (NYC Parks 2023; Arcadis/Dewberry 2024a).

F. Known Archaeological Sites

The Phase IA report provided a review of the archaeological site file data within one mile of the Project's APE (**Table 3**). These site files were collected from CRIS. There are 26 documented archaeological sites within one mile of the Phase IB survey. A few of these sites are identified by the New York State Museum (NYSM) Areas/Sites in CRIS. The NYSM Areas/Sites typically contain minimal descriptive information because they were primarily recorded by archaeologists in the early to mid-twentieth century. Ernest Boesch, recorded at least 16 sites within the vicinity, including sites identified by Arthur Parker and Reginald Bolton. Furthermore, Edward Kaeser, in his *Archaeological Survey of Prehistoric Pelham Bay Park*, summarized archaeological investigations at seven precontact sites within a one-mile radius. While some of these sites may represent the same locations recorded by different individuals, these studies reflect extensive precontact settlement and activity within the Pelham Bay Park region (Arcadis/Dewberry 2024a).

The closest known archaeological site to the Phase IB APE is Orchard Beach-Locus 1 (501.003570), part of a complex of multi-component archaeological sites including Orchard Beach-Locus 2 (501.003571) and Orchard Beach-Locus 3 (501.003572). Arcadis/Dewberry identified these sites during a Phase IB/Phase II archaeological investigation in 2023 for a previous DDC project (DDC CAPIS ID P-1ORCHMO). Orchard Beach-Locus 1 is located about 580 feet (175 m) southeast of the APE and consists of a low-density precontact lithic scatter with a quartz Levanna Projectile Point, a broken smokey quartz point, a large test quartz cobble, and quartz and jasper debitage. The Orchard Beach-Locus 2 Site yielded the greatest diversity of material types and forms including two precontact ceramic sherds, one a Jack's Reef Corded type; four pieces of FCR; two mending projectile point base fragments; two utilized flakes; and debitage, reflecting primarily lithic processing and refinement in addition to possibly short-term occupation activities including food preparation during the Middle to Late Woodland Period. The Orchard Beach-Locus 3 Site consists of a hammerstone, a pebble mortar, a quartz preform, and a quartz flake fragment. The recovered assemblage also reflects limited quartz refinement with the pebble mortar suggesting additional resource processing (Arcadis/Dewberry 2023).

In CRIS, there are three unknown precontact sites, NYSM 2836, NYSM 2835 and Boesch 57, that are represented as a large polygon, encompassing portions of Rodman's Neck and much of Orchard Beach. These sites consist of shell heaps, shell middens, and camp sites.

According to CRIS, NYSM 2835, a shell midden site also without accurate mapping, overlaps with the City Island Traffic Circle and includes a portion of the APE. Working in the 1920s, Arthur Parker documented both NYSM 2836 and NYSM 2835 and provided minimal descriptive and location information beyond Pelham Bay and City Island. Similarly, site Boesch 57 represents "the entire shoreline of Pelham Bay including the shoreline of Pelham Bay Lagoon, Eastchester Bay, and the Hutchinson River/Eastchester Creek" documented by Parker as "scattered shell middens and other camp sites" (Boesch 1996:105). While these three sites indicate extensive precontact occupation across Pelham Bay Park, their evidence does not provide a specific location for past precontact activity (Arcadis/Dewberry 2024a).

III. METHODOLOGY

This report consists of a Phase IB Archaeological Survey. The archaeological survey included limited background research to develop context for interpreting and evaluating identified archaeological deposits for inclusion in the NR. Arcadis/Dewberry developed the Phase IB Work Plan for the archaeological subsurface investigation of the area, as defined in Chapter I. Section A. *Area of Potential Effects (APE)*. This Work Plan was reviewed and approved by LPC, the Delaware Nation, and the Stockbridge-Munsee Community (see **Appendices A** and **C**).

A. Background Research

Phase IA report provided the bulk of the background research from literature and online sources such as CRIS, New York Municipal Archives, New York State Archives, and Museum of the City of New York. The Phase IB survey contributed supplemental research to better understand the road construction and the engineered landscape of Orchard Beach. This included examining historic photographs, aerial photographs, and re-examining the Project's proposed plan

B. Phase IB Work Plan

In May 2024, Arcadis/Dewberry prepared a Work Plan for the Phase IB Archaeological Survey (Arcadis/Dewberry 2024b). The Work Plan was submitted to LPC, the Delaware Nation, and the Stockbridge-Munsee Community. On June 12, 2023, LPC approved the Work Plan which be found in Appendix C of this report. The following discussion briefly summarizes the methodology outlined in the Work Plan and presents the research questions investigated by the Phase IB survey. The Work Plan also established procedures for the handling of human remains if encountered by the subsurface investigation. This included the Delaware Nation's *Inadvertent Discovery Policy* and Stockbridge-Munsee Community's *Treatment and Disposition of Human Remains and Cultural Items That May Be Discovered Inadvertently* (see **Appendix C**).

a. Research Questions

The Phase IB field investigation sought to determine the presence or absence of intact cultural deposits within the APE, as defined in Chapter I. The following research questions are addressed in Chapter IV.

- To what extent did twentieth-century development disturb the soil profile within the APE? Is the soil profile truncated? Does the APE contain undisturbed soils, and if so, are those soils cultural bearing?

- Are there precontact archaeological deposits within the APE? If present, do these deposits represent an intact precontact ground surface? Are there diagnostic materials or intact features that reflect a time period of occupation and/or suggest the type of occupation, e.g., short term, long term, repeated resource exploitation, etc.? Does the precontact deposit(s) have integrity; does it appear to be intact?

- Is there a potential for intact Indigenous burials within the APE? Is there evidence for a shell midden or heap deposits?

- Are there Revolutionary War-related, late-eighteenth, and/or nineteenth century deposits within the APE? Are intact or truncated shaft features associated with the Rapelye/Ward occupation extant? Is there an intact historic period ground surface? What does the historic deposit suggest about past occupants and past activities within the property?

- If cultural material is recovered, does that material represent an archaeological site? Can boundaries be established? Does the site appear to be intact and integral? Does it have the potential to yield further information regarding past occupation of the APE?

C. Pedestrian Reconnaissance and Field Investigations

Prior to the subsurface investigations, Arcadis/Dewberry conducted a pedestrian reconnaissance of the APE to document existing conditions including areas of evident subsurface disturbance, standing water, and exposed bedrock

along with potential surface features and cultural deposits. The Phase IB subsurface survey, conducted on December 3 and 4, 2024, proposed excavation of 70 shovel tests spaced at 50-foot (15.2-meter) intervals across the APE. Excavation locations were spatially located using a Trimble Geo 7X GPS unit with sub-meter accuracy. Excavated shovel test data were recorded on handheld tablet computers utilizing ArcGIS Survey123 software.

Following LPC approval of the Phase IB Work Plan and DDC/Parks consultation with the Delaware Nation, and the Stockbridge-Munsee Community, Arcadis/Dewberry initiated the New York City 811 One-Call Utility mark-outs for the Phase IB archaeological subsurface testing. No subsurface investigations occurred before the completion of the utility mark-out request. After several weeks of repeated contact, mark-out and clearance for utilities were obtained, with the proviso that there were known to be unreported and unmarked city utilities within the park. During the Phase IA report preparation, inquiries were made to Olmsted Center at Parks to identify the existing configuration plans (e.g., Orchard Beach and road as-builts) or utility layouts, however, Parks was unable to obtain construction documents for review.

The Phase IB survey consisted of a systematic archaeological survey along the grass shoulder of Park Drive, northeast of City Island Circle, to the termination of the proposed utility corridor. Shovel tests were spaced at 50-foot (15.2-meter) intervals along a linear transect extending from south to north, parallel to Park Drive northeast of City Island Circle (**Figure 6**). The survey proposed 70 shovel tests to investigate the presence or absence of archaeological resources. Each shovel test was measured between 15.7 to 19.7 inches (40 to 50 centimeters [cm]) in diameter. The shovel tests were excavated by hand to the terminal depth of the proposed ground disturbance, 6.0 feet (1.8 meters) below the surface, unless terminated by a natural or human-made impasse. Hand shovels were used to excavate the shovel tests a depth of approximately 3.0 to 4.0 feet (0.9 to 1.2 m) and then subjected to further testing via a hand auger to 6.0 feet (1.8 meters). Had intact potentially cultural-bearing soils been uncovered via the auger excavation, their location and depth would have been noted. Except for the handheld auger, shovel excavation below a depth of 4.0 feet (1.2 meters) was beyond the scope of the Work Plan.

The proposed shovel tests for Phase IB were positioned outside of the APE to account for the presence of utilities throughout the APE. The Work Plan included offsetting the proposed shovel tests from their location or precluded from excavation due to proximity to trees, standing water, exposed bedrock, or evident subsurface disturbance including paved areas and modern features. Photographs were taken throughout the Phase IB survey to document existing conditions, including areas precluded from testing.

Excavated shovel test data was recorded on handheld tablet computers utilizing ArcGIS Survey123 software. This mobile data collection system included shovel test transect/number, a stylized profile drawing with a detailed description of strata, soil types, Munsell color descriptions, depth measurements, and a list of cultural material observed and/or recovered. Survey123 data was uploaded to our cloud-based server upon completion of each shovel test, enabling immediate and reliable data entry.

D. Laboratory Analysis

Recovered artifacts were transported to Arcadis/Dewberry's archaeological laboratory in Parsippany, New Jersey for processing. Individual Field Specimens were cleaned separately to avoid mixing or comingling of artifacts from separate contexts. Artifacts were cleaned according to their material type. Metal material was cleaned using a dry brush to avoid introducing rusting agents. Most other artifacts, such as glass and historic ceramics, were submerged in water and scrubbed with a wet toothbrush.

Once the artifacts were cleaned, Arcadis/Dewberry's archaeologists inspected the cleaned material and classified the artifacts based on their material type. These categories included ceramic, stone, bone, and organic material. Artifacts are described in more detail in the artifact catalog (**Appendix E**). The results of the artifact analysis are presented in Chapter V.

After preliminary processing, the collection was sorted by major material classes: historic ceramics, curved glass (bottle, table, and furniture glass), pipes, small finds/architectural, bone, floral, shell, and aboriginal (precontact), or similar categories. Specialists then analyzed the archaeological material. Excavated artifacts are being temporarily housed at the archaeological consultant's laboratory.

a. Identification of Artifact Repository

Artifacts removed from the Project belong to the property owner, Parks. Upon LPC review and concurrence with the Phase IB report, the artifact assemblage will be returned to Parks (provided the recovered artifacts are determined to be insignificant or do not constitute an archaeological site), who may then choose to retain and store the collection or may seek out alternative methods of disposition. DDC, as the entity sponsoring the archaeological investigation, will assist Parks in developing a plan for material storage and/or disposal.

If the artifacts are determined to be part of a potentially significant assemblage or archaeological site, DDC will assist in identifying a long-term repository that will accept the artifacts, samples, and related project materials for long-term storage and curation. The repository would meet the *Standards for the Curation of Archaeological Collections*, Section 7, of the *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State* (NYAC 1994), adapted from the Department of the Interior, National Park Service (36 CFR Part 79) and the Standards of Research Performance of the Register of Professional Archaeologists.

Consultation with LPC, the Delaware Nation, and the Stockbridge-Munsee Community regarding the selection of the repository will be completed as necessary. It is anticipated that the Nan A. Rothschild Research Center at the Archaeology Repository would accept a significant portion of the assemblage for long-term curation.

E. National Register Criteria for Evaluation

Upon completion of the Phase IB survey, identified historic properties would be evaluated by applying the criteria of adverse effect (36 CFR Part 800.5(a)) to determine if the Project would result in an adverse effect to historic properties.

The criteria applied to evaluate properties for inclusion in the National Register are specified in 36 CFR Part 60.4 as follows.

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

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

Ordinarily, cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years would not be considered eligible for the National Register. However, such properties would qualify if they were integral parts of districts that do meet the criteria or if they fall within the following categories:

a. a religious property deriving primary significance from architectural or artistic distinction or historical importance; or
b. a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
c. a birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or building directly associated with his or her productive life; or
d. a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

e. a reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or
f. a property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or
g. a property achieving significance within the past 50 years if it is of exceptional importance.

In addition to meeting significance criteria listed above, a property must possess "integrity" to be considered eligible for listing in the National Register. According to National Register Bulletin 15, *How to Apply the National Register Criteria for Evaluation*, the property must physically represent its history by possessing integrity of location, design, setting, materials, workmanship, feeling, and association.

F. Criteria of Adverse Effect

In order to determine if a proposed undertaking would have an adverse effect on identified historic properties, the criteria of adverse effect (36 CFR Part 800.5(a)) is applied. In general, a proposed project is deemed to have an adverse effect if it would alter a historic property in a manner that would diminish any of the characteristics of the property that qualifies it for inclusion in the National Register. Adverse effects on historic properties include, but are not limited to:

- physical destruction, alteration, or damage to all or part of the property;
- removal of the property from its historic location;
- change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
- introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features; and
- neglect of a property that causes its deterioration.

IV. PHASE IB FIELD RESULTS

A. Introduction

Arcadis/Dewberry conducted the Phase IB Archaeological Survey on December 3 and 4, 2024. Senior Archaeologist Lauren Cook, RPA, and Archaeologist Niall Conway, RPA, supervised the field effort and were on site throughout the survey. The following discussion describes existing conditions within the APE and presents the results of the Phase IB field investigation. **Figures 3A** and **3 B** display the locations of the proposed shovel tests, excavated shovel tests (1, 1N5m, 1W5m, 2, 3, 4, 7, 23, 24, 30, 31, 40, 41, and 51), documented utilities, and photographs that are referenced throughout the chapter. The Phase IB shovel test log (**Appendix D**) and artifact catalog (**Appendix E**) are included in this report.

B. Pedestrian Reconnaissance

On December 3 and 4, 2024, the Phase IB archaeologists conducted a reconnaissance of the APE to inspect and document existing conditions and prior ground-disturbing activities. The archaeologists documented existing ground disturbances within the field investigation, as well as noting distances between the proposed shovel test locations of trees. Disturbances noted were visible landscaping, historically-documented filling, paved walkways and parking areas, and utility installation (concluded from the presence and location of manholes, junction boxes, light standards, storm sewer grates, gas line markers, and utility markouts (Arcadis/Dewberry 2024c) (see **Figures 3A** and **3B**). During the pedestrian reconnaissance, twelve shovel tests were established for excavation (two additional radial shovel tests were later excavated). The remaining proposed shovel tests were identified in areas of disturbance. The following paragraphs provide descriptive details on the field conditions and eliminated shovel tests.

The first proposed shovel test (ST) location was eliminated, as it lay within an active construction site for rehabilitation of the Orchard Beach bath house. That location was designated as ST 0 and was eliminated from testing. From there, the APE extended to the west. STs 1 through 7 were located in an area characterized by landscaping, paved walkways, a garden bed, paved roadways, and a parking area. STs 5 and 6 were eliminated from testing because of proximity to trees and unmarked utilities, identified by the presence of a junction box and light standard. Five shovel tests (STs 1, 2, 3, 4, and 7) were laid out during the field investigation.

The APE stretched west from down a corridor of trees. STs 8 through 22 were not excavated because of proximity to trees, and due to the presence of unmarked electric and water/sewer utilities, identified by the presence of manholes and junction boxes in the area. STs 23 and 24 were laid in. Although these tests were close to a gas line marker, the route of the line was well-marked, and these shovel tests would not intersect with the gas line.

After ST 24, the APE extended to the southwest, in a grassy median strip between Park Drive and a paved pedestrian/bike path to the south. STs 25 through 30 were eliminated due to the proximity to trees and the presence of a marked gas line and unmarked utilities, identified by the presence of manholes in the vicinity. STs 30 and 31 were established for excavation after the pedestrian reconnaissance.

The APE continued south from along Park Drive passing near the Orchard Beach bus terminal's paved entrance and exit. These roadways leading to and from the bus terminal were determined not to interfere with proposed ST locations, but proximity to a marked gas line, unmarked utilities, and trees eliminated STs 32 through 39. STs 40 and 41 were established for excavation. The APE continued south through the narrow median. Utilities inferred within the area included electric, storm sewer, and gas. Proximity to trees eliminated STs 42 through 50. ST 51 was laid in adjacent to a recently cut tree stump. Proximity to trees eliminated STs 52 through 62. STs 63 through 68 were directly on top of a marked communications utility route and were eliminated from the project, ST 69 was on a traffic island bounded by the northbound and southbound lanes of Park Drive and the Park Drive/City Island Avenue traffic circle but was eliminated from the project due to proximity to a tree.

In all, Phase IB pedestrian reconnaissance identified 58 shovel tests that were deemed heavily disturbed or inaccessible due to their locations within an active construction site, proximity to trees, proximity to unmarked utilities, and in conflict with the presence of marked utilities. A total of 12 proposed shovel tests that were laid in during pedestrian reconnaissance were not located in areas of prior disturbance from utilities. Those shovel tests were excavated.

BOROUGH OF BRONX

NEW YORK

N

Direct APE

Electrical Utility

Communication Utility

PARK DR

PARK DR

Junction Box Electrical

Junction Box Electrical

Junction Box Electrical

Junction Box Electrical

Manhole Unknown

Manhole Unknown

Manhole Unknown

Manhole Unknown

Manhole Electrical

Manhole Electrical

Manhole Electrical

Manhole "DWS"

Junction Box Communications

Junction Box Communications

Gas Pole

1N5

1W5

0

1

2

3

4

5

6

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LEGEND

- Direct APE
- Excavated Precontact Material and Historic/Recent Material
- Excavated Historic/Recent Material
- Unexcavated Shovel Tests

Utility Line
- Proposed Sanitary Sewer Force Main
- Storm Sewer

Utility Line
- Communication
- Electrical
- Water
- Gas
- Combined Sewer
- Sanitary Sewer

Utilities
- Junction Box Electrical
- Gas Line
- Junction Box Communications
- Manhole Electrical
- Manhole "DWS"
- Manhole Unknown

- Utility Markout Communication
- Photograph Location/Direction

0 50 100 200 Feet

Source: NYS Office of Information Technology Services, GIS Program Office. Nearmap Imagery Online Service, ESRI. Soil Data derived from Web Soil Survey, USDA & NRCS, 2023.
NYC Department of City Planning, Information Technology Division, MapPLUTO 22v1, 2022. Langan Engineering & NYC Department of Design and Construction, 2023

Path: Q:\500854891\50141248 - 030 Rodmans Neck Phase IB\GIS\Mxd\Phase IB MXDs\3A\Landscape_DDCRodmansNeck_PhaseIBResultsMap.mxd

NYC DDC Department of Design and Construction

PHASE IB TESTING

DDC CAPIS ID: PO79ROD

NYPD Rodmans Neck Firearm and Tactics Facility
Bronx, New York

SCALE: 1" = 100'

DATE: February 2025

Arcadis Dewberry a Joint Venture
27-01 Queens Plaza North, Suite 800
Long Island City, NY 11101

FIGURE 3A

BOROUGH OF BRONX

NEW YORK

Junction Box Communications

Junction Box Electrical

Junction Box Communications

Gas Pole

Junction Box Electrical

Gas Valve

Communication Utility

Gas Pole

Junction Box Electrical

Junction Box Communications

Direct APE

Junction Box Communications

Junction Box Communications

Utility Markout Communication

Junction Box Communications

Utility Markout Communication

ORCHARD BEACH RD

PARK DR

CITY ISLAND RD

Path: Q:\50085489\50141248 - 030 Rodmans Neck Phase IB\GIS\Mxd\Phase IB MXDs\3BLandscapeNew_DDCRodmansNeck_PhaseIBResultsMap.mxd

LEGEND

- Direct APE
- Excavated Precontact Material and Historic/Recent Material
- Excavated Historic/Recent Material
- Unexcavated Shovel Tests
- Excavated/NCM

Utility Line

- Proposed Sanitary Sewer Force Main
- Storm Sewer

Utility Line

- Communication
- Electrical
- Water
- Gas
- Combined Sewer
- Sanitary Sewer

Utilities

- Junction Box Electrical
- Gas Line
- Junction Box Communications
- Manhole Electrical
- Manhole "DWS"
- Manhole Unknown
- Utility Markout Communication
- Photograph Location/Direction

0 50 100 200 Feet

Source: NYS Office of Information Technology Services, GIS Program Office. Nearmap Imagery Online Service, ESRI. Soil Data derived from Web Soil Survey, USDA & NRCS, 2023.
NYC Department of City Planning, Information Technology Division, MapPLUTO 22v1, 2022. Langan Engineering & NYC Department of Design and Construction, 2023

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PHASE IB TESTING

DDC CAPIS ID: PO79ROD

NYPD Rodmans Neck Firearm and Tactics Facility
Bronx, New York

SCALE: 1" = 100'

DATE: February 2025

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27-01 Queens Plaza North, Suite 800
Long Island City, NY 11101

FIGURE 3B

C. Results of Subsurface Testing

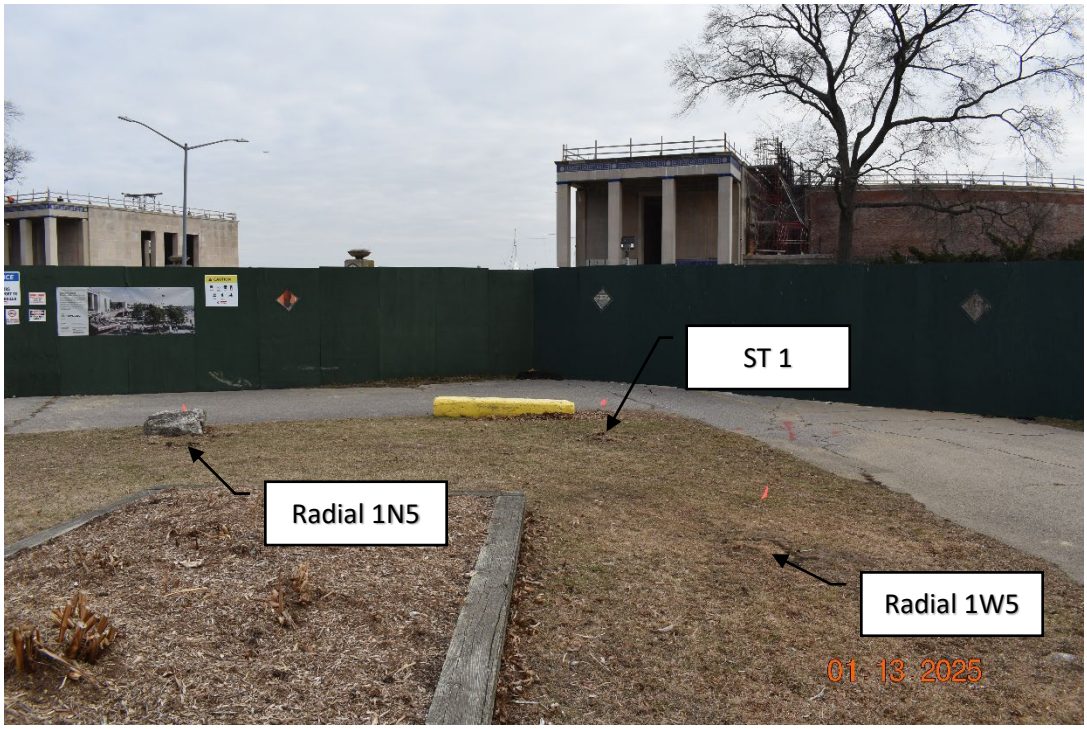
The Phase IB survey excavated a total of 14 shovel tests, consisting of 12 planned shovel tests and 2 radial tests (see **Figures 3A and 3B; Appendix D**). The archaeological work plan for the Phase IB survey proposed a total of 70 shovel tests however 58 of these shovel tests were not excavated because they were located within or immediately adjacent to utilities or trees. STs were not proposed within the majority of the APE given the presence of numerous utilities as shown by the mapped utilities present in Appendix B and Figure 3. Rather, the STs were proposed in areas close to the APE to assess the archaeological potential of the APE given the area's archaeological sensitivity as demonstrated by the background research and known archaeological sites in the area. However, the majority of the proposed STs were not excavated due to the presence of numerous utilities throughout the APE and the immediate surroundings.

Overall, the Phase IB investigation recovered a total of 247 artifacts (**Appendix E**) consisting primarily of historic/recent artifacts with limited precontact material.

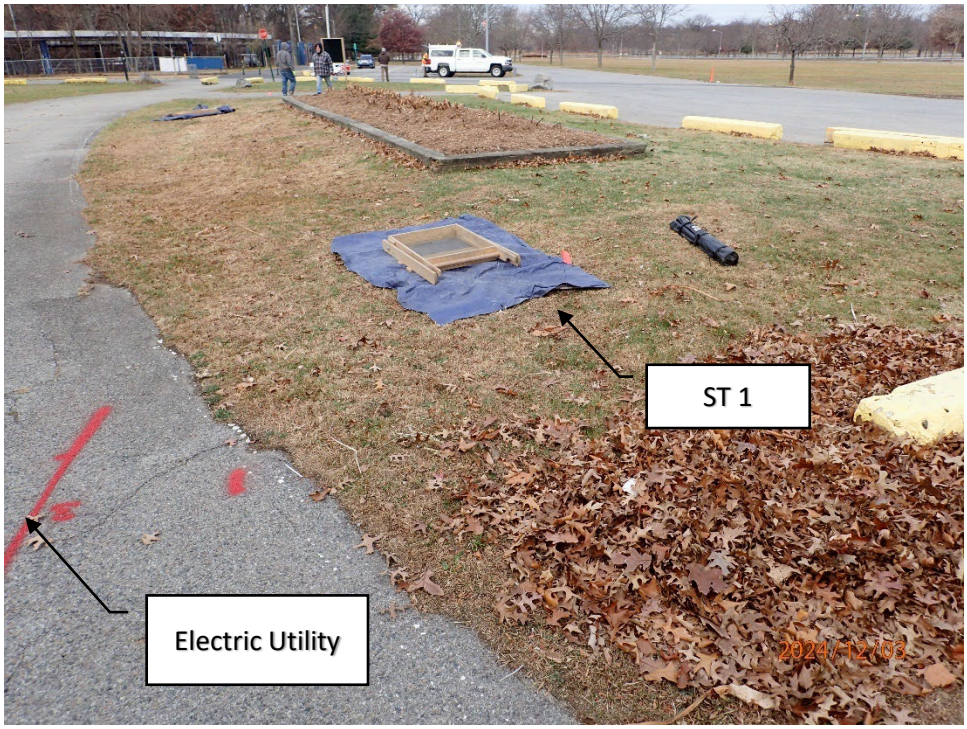
Shovel Tests 0 through 7
This area was bounded and intersected by paved pathways, roadways, and a parking area. This limited the team's ability to place radial tests around tests containing potentially significant material. ST 0 was located within an active construction site and was eliminated from the project. STs 1, 2, 3, 4, and 7 were excavated, as were two radial tests at Shovel Test 1 (see **Appendix D**). STs 5 and 6 were eliminated due to the proximity to trees, and presence of unmarked utilities.

Shovel Test 1
This shovel test was located in a grassy landscaped island between paved pathways and an access road (**Photographs 1** and **2**). Stratum 1 presents as a very dark grayish-brown silt loam with a root mat, measuring 7 cm thick. It was removed, set aside for replacement, and not screened. Stratum 2 was a dark brown silty clay loam that extended to 39 centimeters below the surface (cmbs). This stratum contained a precontact jasper lithic flake as well as a redware flowerpot fragment, a non-diagnostic porcelain sherd, a copper alloy "Yale" door lock key, an unidentified nail, and a fragment of window glass, as well as a white metal hardware part. Stratum 3 was a dark brown sandy clay loam that contained a fragment of recent/historic bottle glass, a window glass fragment, and a slag fragment. An impasse consisting of asphalt across the bottom of the shovel test halted excavation at 50 cm. The strata in this shovel test were interpreted as fill layers of unknown origin. It is possible that soils had been transported to this location from elevated areas to the south to fill in wetlands during the construction of Orchard Beach.

Radial Shovel Test 1 North 5 Meters (1N5)
Because of the precontact lithic recovered from Shovel Test 1, radial shovel tests were excavated 5 m to the north and west of ST 1 (see **Photograph 1**). Because of paved areas, radial tests could not be located to the south and east. Radial STP 1 N had very dark brown sod and root mat (Stratum 1) to 8 cm. Some of this soil was screened, but no cultural material was recovered. Stratum 2 was a dark brown sandy clay loam that extended to 60 cm. Stratum 2 contained two sherds of pearlware, a ceramic manufactured from the last quarter of the eighteenth century into the second quarter of the nineteenth. Also recovered were sherds of cream-colored earthenware, whiteware, white graniteware, yellowware, and several redware flowerpot fragments, all dating to either the nineteenth or twentieth century. Bottle glass, slag, and coal were recovered. A rock impasse precluded excavation beyond 68 cm. As with Shovel Test 1, the stratum was interpreted as fill of unknown origin, deposited to fill in wetlands or open water during the construction of Orchard Beach.



Photograph 1. View of ST 1, Radial 1W5, and Radial 1N5. Facing east. (NC 1/13/2025)



Photograph 2. View of ST 1 and electrical utility mark out on the ground. Facing west. (LC 12/3/2024)

Radial Shovel Test 1 West 5 Meters (1W5)
This shovel test was also on a landscaped traffic island surrounded by pavement (see **Photograph 1**). Only one stratum was encountered in the shovel test. Stratum 1 was a dark brown sandy clay loam extending to 51 cmbs, where excavation encountered bedrock. A single black chert precontact lithic flake, and several clam (*Mercenaria*) and oyster (*Crassotrea*) shells were recovered, in context with bottle and window glass, a nail, plastic, and coal. This stratum represents fill and the precontact lithic is not in its original depositional context, but appears instead to have been redeposited during landscaping.

Shovel Test 2
This shovel test was within the same landscaped traffic island as ST 1 and its radials. It was excavated by shovel to 90 cm, and augered to 99 cm, at which point rock was encountered. Only one stratum, a very dark grayish-brown silty clay loam, was encountered. This stratum contained a mix of material. Artifacts of historic date included a single pearlware flatware base sherd dating from the late eighteenth to the early nineteenth centuries. Five pressed redware flowerpot fragments, dating from the late nineteenth century to the present, were recovered. Glass included mold-blown bottle fragments, as well as automatic bottling machine-made fragments, as well as recent amber and clear bottle glass. Overall, the bottle fragments span a range between ca. 1880 and the present. Structural material included window glass, cut nails, wire nails, and brick, material both historic and recent in date. Faunal material was limited to four undiagnostic clam (*Mercenaria*) shell fragments. A toy plastic insect, plastic wrappers and a Styrofoam fragment were likely recent in date. Slag and coal, probably of historic date, were recovered.

Taken as an assemblage, the stratum contained material dating from the late eighteenth century to the present. There did not appear to be any stratification to the material, with, for example, Styrofoam recovered from about 60 cmbs, below earlier nails and ceramic. The stratum is interpreted as redeposited material' likely from a variety of waste streams, and likely deposited in its present location as part of filling activity incident to landscaping within the park and/or subsequent disturbance.

Shovel Test 3
This shovel test was located on a traffic island surrounded by paved asphalt walkways and roadways and included two distinct strata (**Photograph 3**). Stratum 1 was a very dark brown silt loam that extended to 7 cmbs. It consisted of topsoil and was removed as a unit with its root mat intact. No cultural material was recovered from Stratum 1.

Stratum 2 was a very dark grayish brown silty clay loam redeposited soil that extended to 71 cmbs. Historic/recent material included pressed redware flowerpot fragments and a window glass fragment. Recent material consisted of fragments of plastic drinking glasses, and a fragment of a Styrofoam food container. The water table was encountered at 62 cmbs within this stratum. Excavation was halted at 71 cmbs, due to water seeping into the test (**Photograph 4**). Overall, the shovel test was interpreted as containing redeposited soil resulting from a landscaping associated with the creation of Pelham Bay Park and Orchard Beach.

Photograph 3. Excavation of ST 3. Facing Northwest. (LC 12/3/2024)

Photograph 4. Water table at the bottom of ST 3. (LC 12/3/2024)

Shovel Test 4
This shovel test was excavated at the east end of a narrow island located between a paved parking area on the south and paved roadways on the west, north, and east (**Photograph 5**). The island contains trees, light standards and associated utilities. ST 4 contained three strata.

Stratum 1 was a very dark grayish brown silty clay loam that extended from the surface to 35 cmbs. This stratum contained a single precontact quartz lithic flake. This item was found in context with historic, historic/recent, and recent material, an indication that the stratum, and the material within it, was redeposited. Historic material consisted of two Lincoln cents, from 1944 and 1970, as well as coal fragments. Historic/recent materials included a bottle glass fragment dating between circa 1880 and the present, an unidentifiable iron nail fragment, and several concrete pavement fragments. Recent material consisted of a single fragment of a red plastic bottle cap. Faunal material consisted of four temporally undiagnostic oyster (*Crassotrea*) shell fragments. The material clearly consists of items from varying waste streams, included in the matrix before, during, and after its redeposition.

Stratum 2 was a light olive brown loamy sand that extended to 28 cmbs. The sole item recovered from this stratum was a fragment of a colorless glass drinking vessel that was of historic/recent date. The olive color suggests the possibility that the soil in this stratum was originally formed in a hydric location, then redeposited to the APE.

Stratum 3 was a dark yellowish-brown sand that extended to 80 cmbs. It contained no cultural material. Its organic component, indicated by its darker color, and its uniform sandy texture, suggests formation in a wetland environment, possibly somewhere else in the vicinity, followed by redeposition to its present location.

No radial tests were excavated around ST4, due to its location on the traffic island. Areas to the north and south were asphalt paved roadway and parking lot. An electrical junction box was located to the east-northeast and a tree was just over 50 feet to the east.

Shovel Tests 5 and 6
These shovel tests were located on the same traffic island as ST 4 and were not excavated due to proximity to both electric lines supplying a junction box and light poles.

Photograph 5. View of the ST 4 near the utility junction box. Facing northeast (LC 12/3/2024)

Photograph 6. View of STs 4 (background) and 5 (foreground). Facing east (LC 12/3/2024)

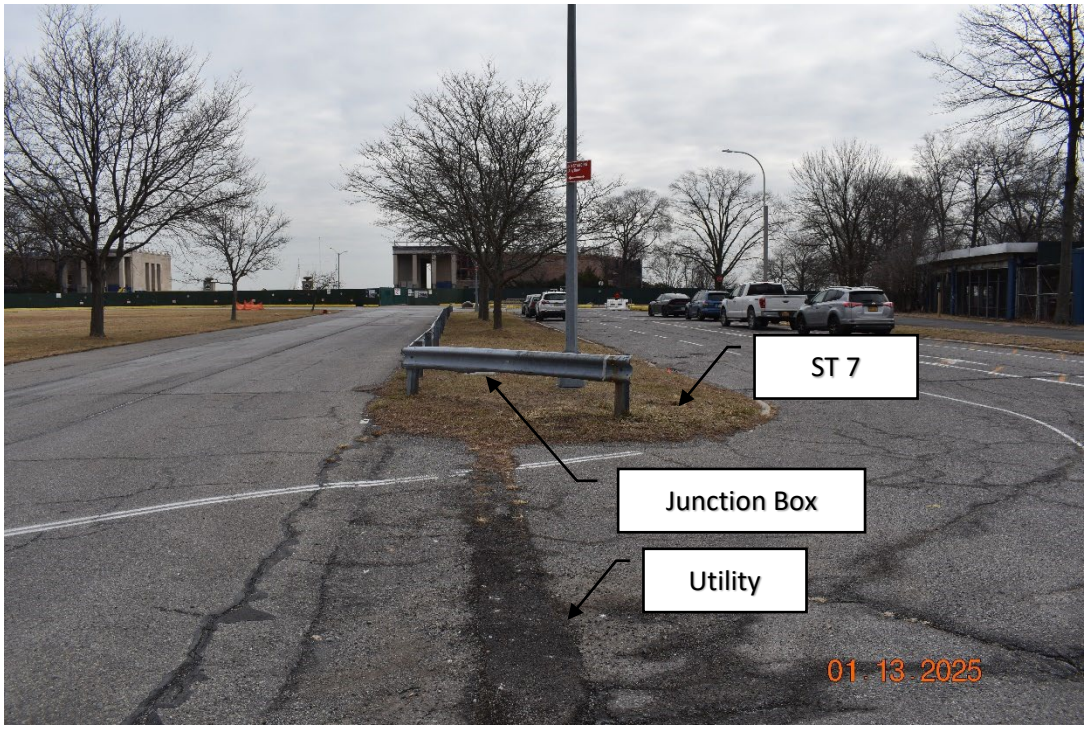
Shovel Test 7

ST 7 encountered three strata. The uppermost layer, a very dark grayish brown silt loam root mat, was removed to 10 cmbs. This root mat was not screened in order to be able to replace the root mat after backfilling the shovel test. Beneath the root mat was a brown sandy clay loam, lightly mottled with dark gray sandy clay loam that extended to 37 cmbs. No cultural material was recovered from this stratum, which was interpreted as a redeposited fill.

The lower stratum was olive-brown loamy sand that extended to 54 cmbs, where rock was encountered and excavation halted. This stratum contained two precontact chert lithic flakes. Also recovered were a single oyster shell (*Crassotrea*) and two slag fragments, which may have been used for paving, or as a component in asphalt. This stratum was likely redeposited during the construction of the park, as the location appears on historic maps to be within the water or adjacent low-lying wetlands.

Because the shovel test was located on a traffic island, in proximity to trees and unmarked utilities, no radial shovel tests could be excavated.

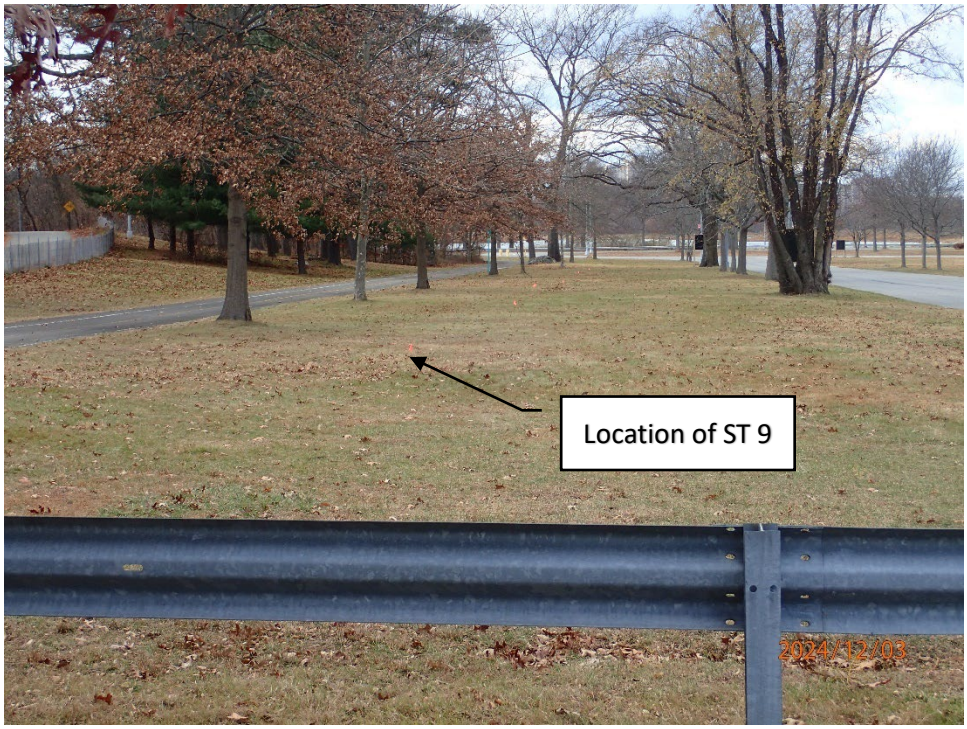
Photograph 7. View of ST 7 encountering weathered bedrock impasse. (LC 12/3/2024)



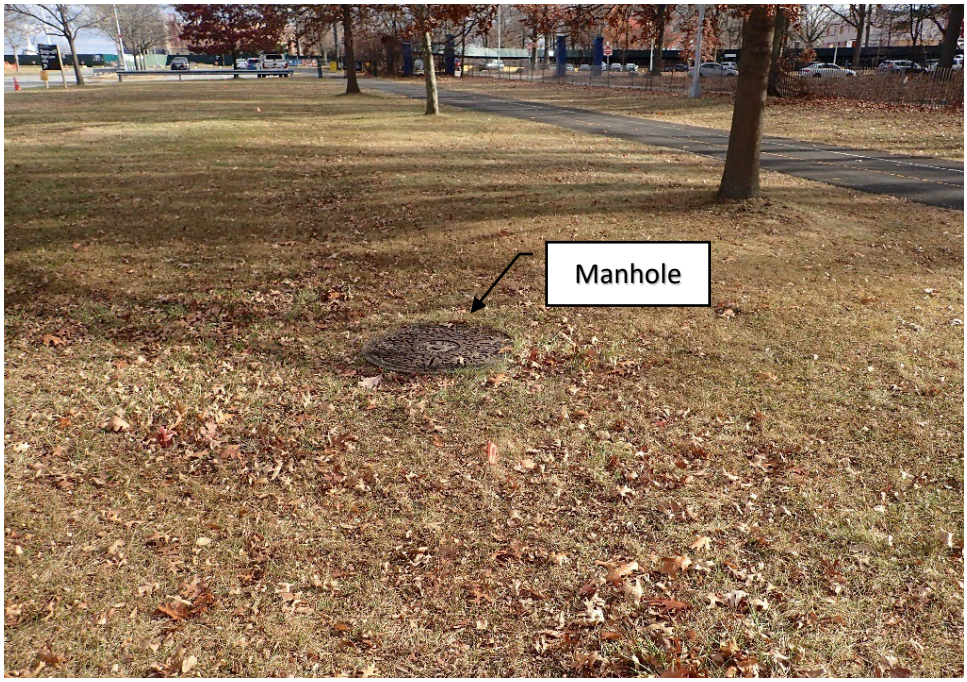
Photograph 8. View of ST 7, junction box behind the guardrail, and evidence of a buried utility under the road. Proposed force main to coincide with utility. Facing east. (NC 1/13/2025)

Shovel Tests 8 through 22

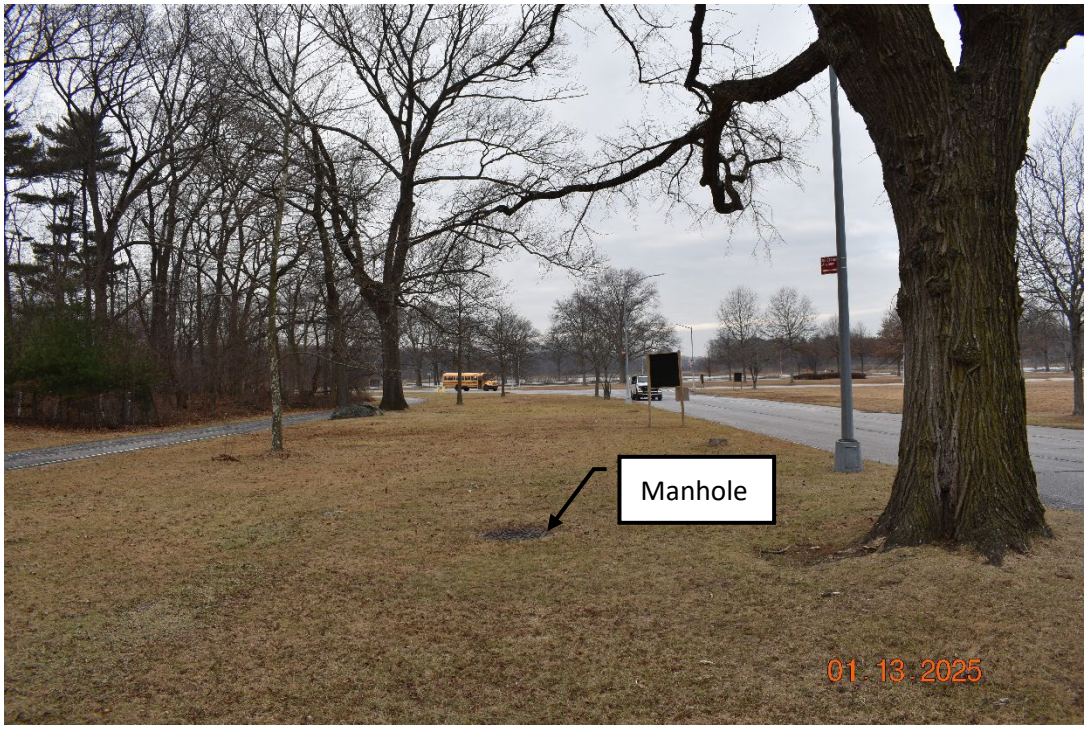
These tests were proposed on a portion of the force main sewer route that runs west down a lawn between two rows of trees. The paved pedestrian/bike path runs south of the southernmost row of trees, and the access road to the bath house travels north of the northernmost row of trees. Light poles line the southern edge of the road. The two rows of trees measure approximately 57 feet apart. Multiple utilities, including sewer and electric, are located in the lawn area between the trees. Those utilities are not entered in the 811 utility markout system, and were not marked during the 811 process, though manholes and junction boxes were visible. GPS locations were recorded for them. Because of the presence of unmarked utilities and proximity to trees, these shovel tests were eliminated from the project. The APE is shown in Figure 3 as containing numerous utilities between ST 8 to ST 22.



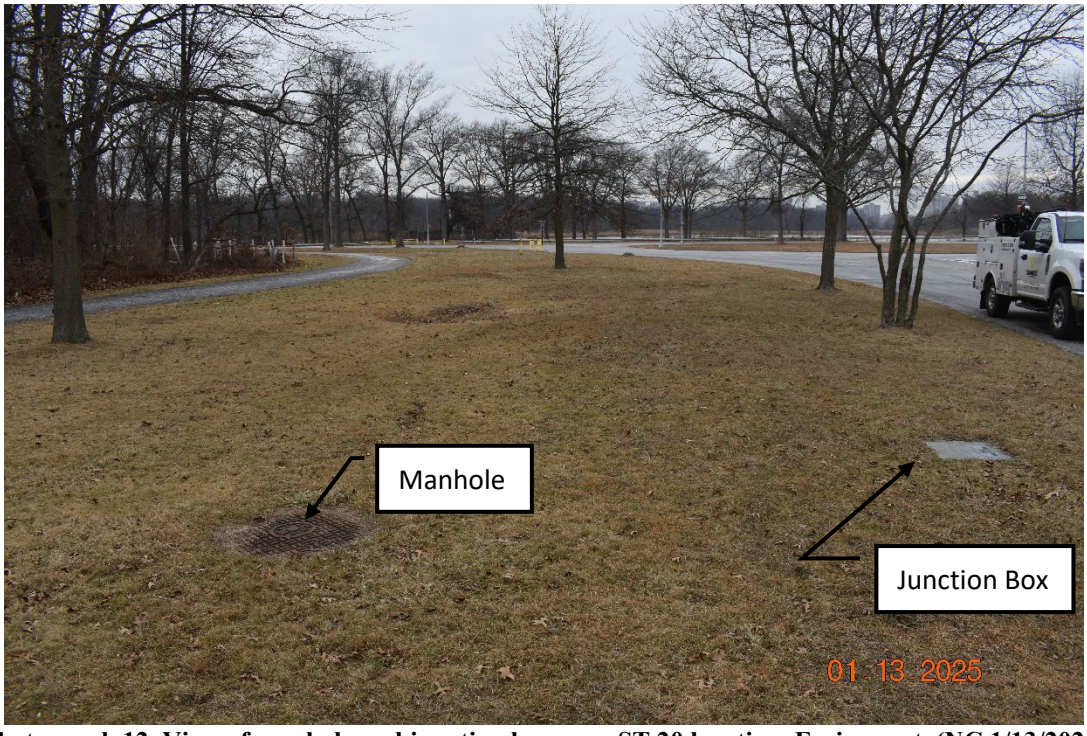
Photograph 9. View of STs 9 to 22. Facing west (LC 12/3/2024)



Photograph 10. View of a "NYC Electrical" manhole near ST 12. Facing east. (LC 12/3/2024)



Photograph 11. View of a manhole near ST 13. Facing west. (NC 1/13/2024)



Photograph 12. View of manhole and junction box near ST 20 location. Facing east. (NC 1/13/2025)

Shovel Test 23
This shovel test was located in an open lawn area southeast of the Orchard Beach traffic circle. There were several manholes in the vicinity, as well as a gas line, which was clearly marked with a warning post and flagging. The closest that the marked gas line came to the shovel test location was about 16 feet, and no trees were located within 50 feet. The decision was made to excavate the shovel test.

The upper stratum was a very dark grayish brown silty clay loam that extended to 23 cmbs. This stratum contained several items of likely historic date—a fragment of a white "milk glass" container and a fragment of structural tile. A fragment of burned and melted colorless bottle glass may be either of historic or recent date. Faunal material consists of single fragments of clam (*Mercenaria*) and oyster (*Crassotrea*) shell. This stratum was interpreted as soil redeposited during park landscaping.

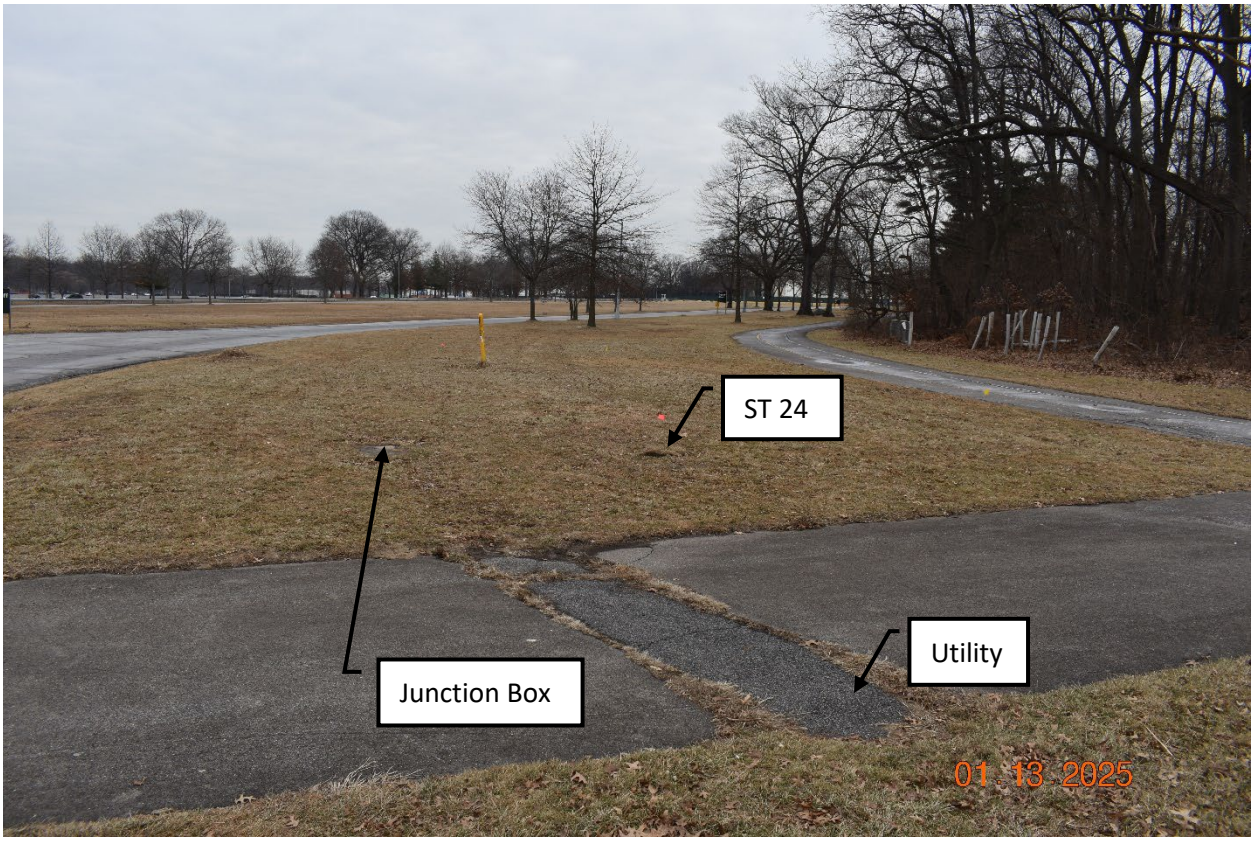
The second stratum was olive-brown loamy sand that extended to 60cmbs, where weathered schist bedrock halted excavation. Material from this stratum consisted of a historic/recent colorless bottle lip fragment. The faunal material consisted of a small shell that appeared to be from a land snail.

Overall, the strata in Shovel Test 23 appear to have been redeposited since the late nineteenth century, probably in the course of park landscaping. The strata contain material that appears to have derived from multiple depositional events given the variety of recovered artifacts.

Shovel Test 24
This shovel test is in the same lawn area as ST 23. It also contained two strata that appeared similar in color and texture to that shovel test.

The upper stratum was a very dark grayish-brown loamy sand that extended to 24 cmbs. It contained historical material consisting of a porcelain bar insulator fragment of the type used to hold house wiring in the late nineteenth and early twentieth centuries. Arcadis/Dewberry (2023) excavations at Orchard Beach recovered similar material, likely originating from the 1917-24 Naval Hospital. Slag of historic date was also recovered. Historic/recent material included eight rusted and unidentifiable nail fragments, a burned and molten fragment of colorless bottle glass, and an amber bottle glass fragment that resembles recent beer bottles.

Stratum 2 was a dark olive brown loamy sand with angular cobbles that extended to 54 cmbs. No cultural material was recovered, and a rock impasse prevented excavation below 54 cmbs.



Photograph 13.View of ST 24 and evidence of a buried utility. Facing north. (NC 1/13/2025).

Shovel Tests 25 through 29

These tests were laid out on a portion of the APE that runs south through a lawn area east of Park Drive and west of the pedestrian/bike path. Manholes and junction boxes were encountered in the area, indicating the presence of utilities that were not identified during 811 utility markout. The locations of those features are shown in **Figure 3**. Unmarked electric and a marked gas pipeline run through this area. Because of the presence of unmarked utilities and proximity to trees, these shovel tests were eliminated from the project.

Photograph 14. View of manhole near the locations of STs 26, 28, and 29. Facing south. (NC 1/13/2025)

Shovel Test 30

This shovel test, as well as Shovel Test 31, was located on a traffic island between the exit and entrance ramps of the access road to the bus station. The depositional history in this area was more complicated than areas to the north and northeast. ST 30 encountered five strata. The upper stratum was a very dark grayish-brown silt loam that extended to 18 cmbs. Most of the top stratum was not screened to preserve the root mat for replacement after excavation. No cultural material was recovered from the remainder of the root mat.

Stratum 2 was an olive-brown silty clay loam lightly mottled with very dark grayish brown loamy sand extending to 40 cmbs. Recovered material included a fragment of bottle glass made using an automatic bottling machine (ABM). This technology dates from 1902 and was out of use in America by the mid-twentieth century. Several fragments of historic/recent material were recovered as was a single oyster (*Crassotrea*) shell fragment, and 6 slag fragments.

Stratum 3 was a reddish-brown loamy sand that extended to 82 cmbs. Cultural material from this stratum consisted of six fragments of a blue aqua glass blown-in-mold (BIM) bottle. In America, this technology dates from the mid-nineteenth century to the second quarter of the twentieth century, when it was completely replaced by machine-made bottles. The bottle showed evidence of a slug plate embossed, "…OP…/…EWER/…EW YORK". This bottle likely held beer and may be the primary deposition in the stratum.

Stratum 4 was a dark gray clay loam that extended to 92 cmbs., that contained no cultural material. Stratum 5 was a yellowish-brown silty clay that was augered to 178 cmbs, where the water table was encountered and excavation halted. No cultural material was recovered in the auger.

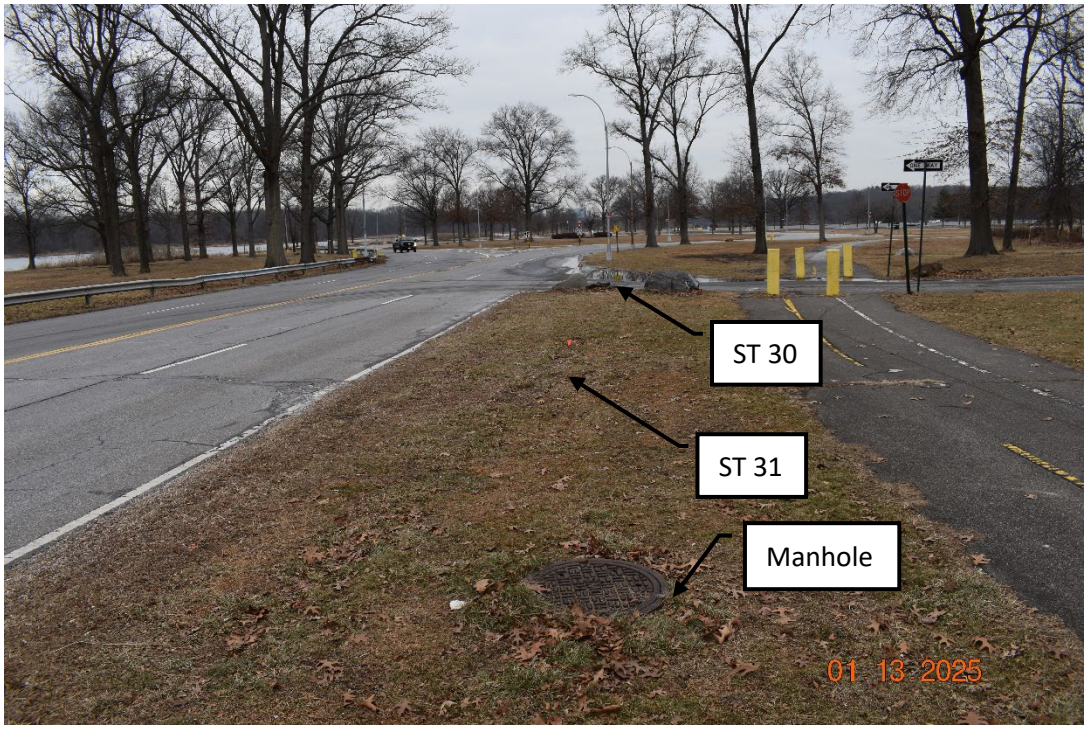
Shovel Test 31

This shovel test was also located in the same traffic island as ST 30, and also showed a complex depositional history. Four strata were encountered in the shovel test, which was augered between 90 and 168 cmbs. The upper stratum was a very dark grayish-brown silt loam extending to 25 cmbs. Recovered material included a fragment of a flowerpot that

is likely historic in date. Historic/recent material included colorless and amber bottle glass, a fragment of metal foil, and a variety of plastic items (cup fragment, spoon fragment, electrical tape, sheet plastic, coffee cup lid fragment). Two clams (*Mercenaria*) fragments were encountered. This appears to be a mix of primary and secondary refuse.

Stratum 2 consisted of olive-brown loamy sand that extended to 51 cmbs. Cultural material recovered included historic/recent and recent bottle glass, an unidentifiable nail, a single clam (*Mercenaria*) shell fragment, and a fragment of a Styrofoam coffee cup. This is clearly a mix of primary discard and redeposited material indicative of disturbance.

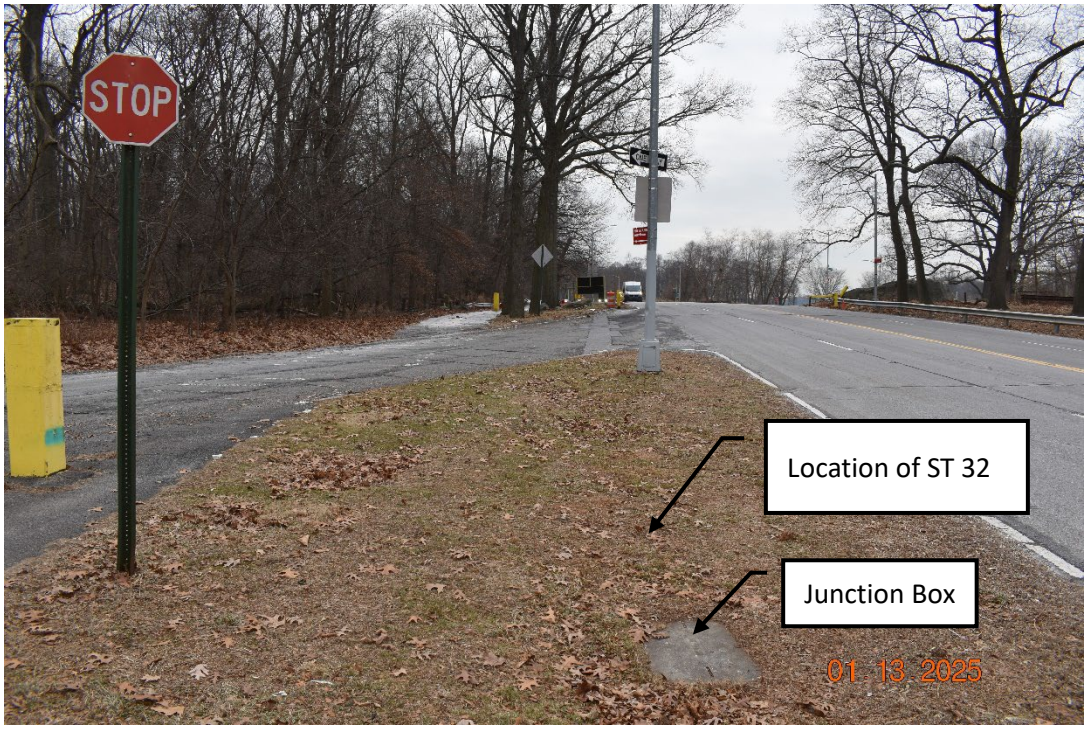
Stratum 3 was a very dark grayish-brown clayey loam extending to 90 cmbs. The stratum contained no cultural material. Stratum 4 was a silty clay loam that was investigated with an auger to 168 cmbs., where water was encountered and excavation halted. No cultural material was recovered from the augered soils.



Photograph 15. View of ST 30, ST 31, and manhole. Facing north. (NC 1/13/2025)

Shovel Tests 32 through 39

This portion of the APE runs along the unpaved median strip between Park Drive and the paved pedestrian/bike path. South of the exit ramp from Park Drive to the Bus Terminal, this median narrows to between 15 and 20 feet in width, and is occupied by trees and multiple unmarked utilities, including electric, gas and possible sewer lines. Light poles and storm drains line the east edge of Park Drive, but the location of storm sewers serving the latter are not clear. As each of these proposed shovel tests are in close proximity to mapped utilities, these tests were eliminated from the field survey.



Photograph 16. Overlooking the location of ST 32, junction box, and light pole. Facing south (NC 1/13/2025).

Photograph 17. Indication of a buried utility (red dashed line). Facing south (NC 1/13/2025).

Photograph 18. View of a junction box near ST 36 location. Facing north (NC 1/13/2025).

Photograph 19. View of junction box and light pole near ST 38, which is not visible in the photograph. Facing south (NC 1/13/2025).

Shovel Test 40

This shovel test was in a slightly wider part of the median and contained five strata. The uppermost stratum was a very dark grayish-brown silt loam extending to 10 cmbs. It consisted of root mat and was not screened. Beneath that was Stratum 2, a dark brown sandy loam with a slag content of approximately 10 percent, that extended to 44 cmbs. A large amount of material was recovered. Historic material was limited to a white stoneware bottle base fragment, probably for beer, and copious amounts of slag, Historic/recent material included 41 bottle glass fragments and plastic (including a cup fragment, a sheet plastic top from a cigarette package, and a Styrofoam fragment) and an aluminum pull-tab. The structural material consisted of a wire nail fragment and a window glass fragment. This part of the assemblage clearly derives from multiple waste streams, a clear indicator of redeposited and disturbed soil.

Stratum 3 was a dark yellowish-brown loamy sand that extended to 71 cmbs. This stratum contained two brick fragments, as well as slag and coal. Stratum 4 was a very dark grayish-brown loamy sand extending to 80 cmbs. It contained no cultural material. Stratum 5 was an olive brown sandy clay that was augered to 120 cmbs., before encountering impenetrable rock. It also contained no cultural material.

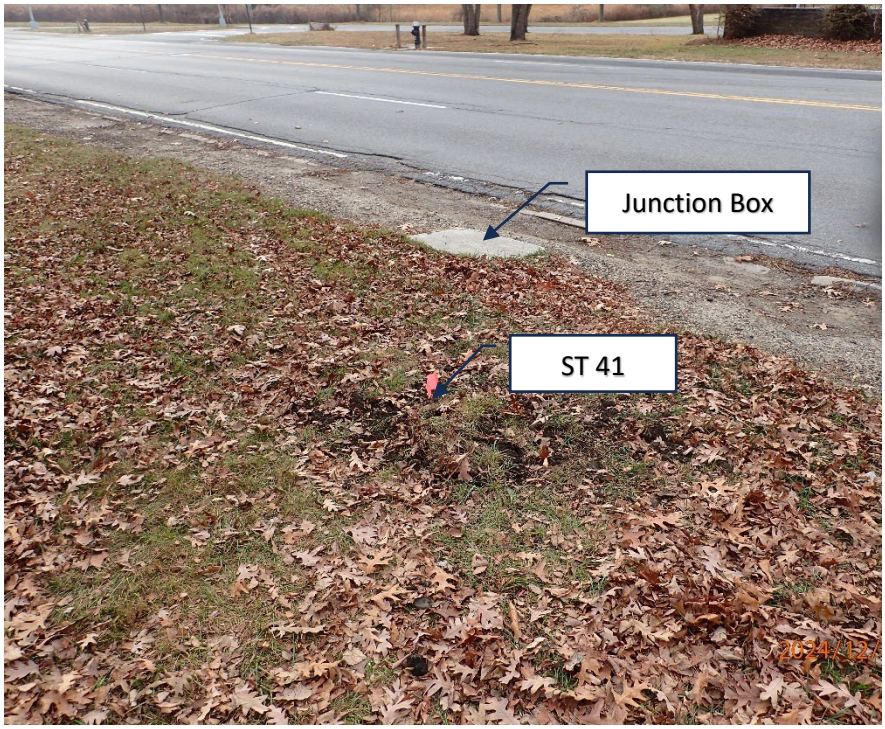
Photograph 20. View of ST 40. Facing south (NC 1/13/2025).

Shovel Test 41

This shovel test was also located in a slightly wider part of the median and was not in proximity to either trees or clear evidence of unmarked utilities, though there was a communications junction box about 2 meters to the southwest. Three strata were encountered in this shovel test. The uppermost layer presented as a very dark brown silt loam that extended to 12 cmbs. It contained root mat and was not screened.

Stratum 2 was a dark brown sandy loam, containing a cobble-sized fragment of concrete. Also present were historic/recent bottle glass fragments, unidentifiable rusted nail fragments, and an aluminum pull-tab, all indicative of disturbance into the second half of the twentieth century.

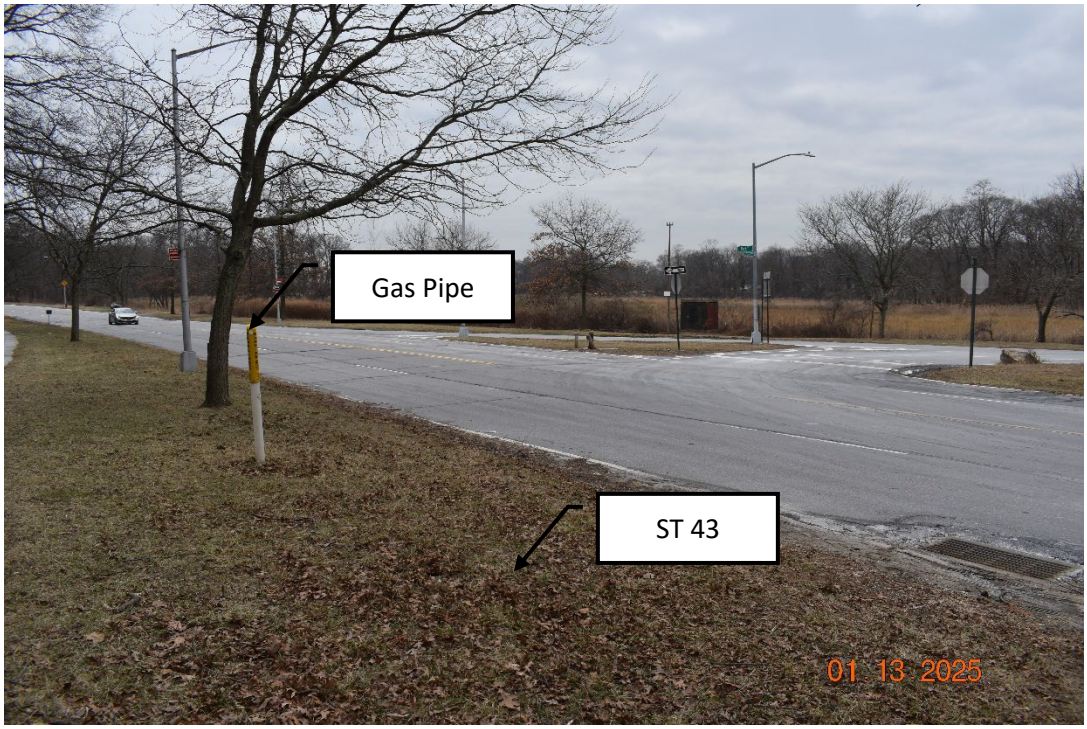
Stratum 3 was an olive brown loamy sand, that extended to a rock impasse at 59 cmbs. It contained a single fragment of a glazed earthenware drainpipe.



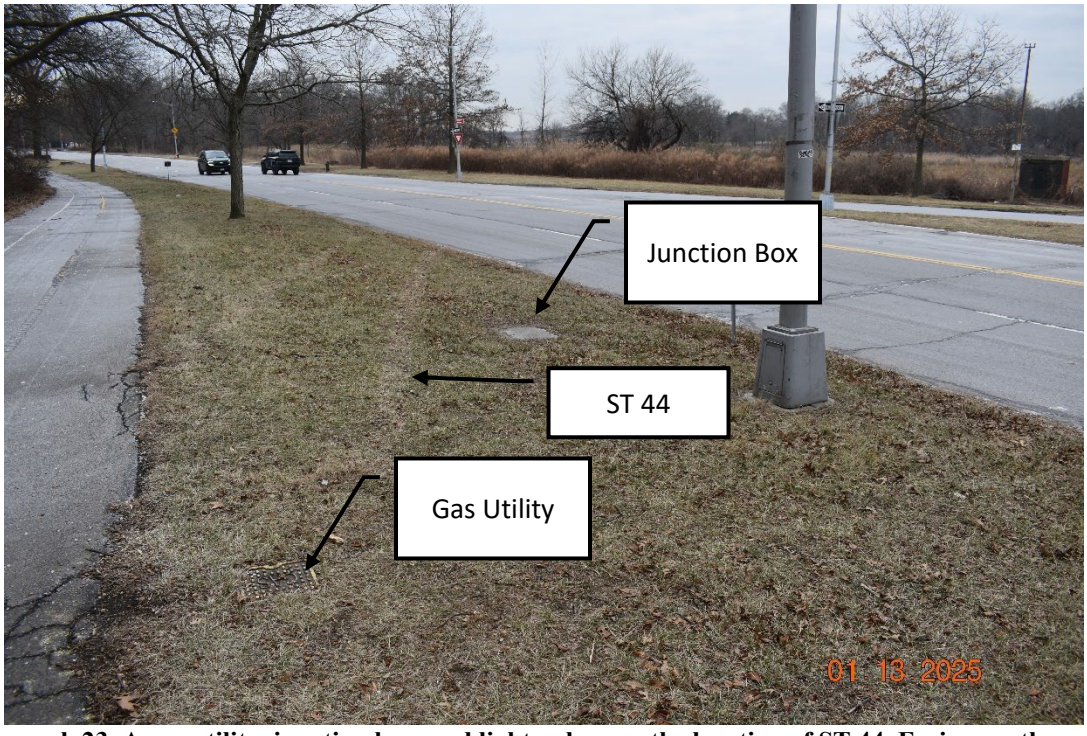
Photograph 21. ST 41 near a utility junction box. Facing southwest. (LC 12/4/2024)

Shovel Tests 42 through 50

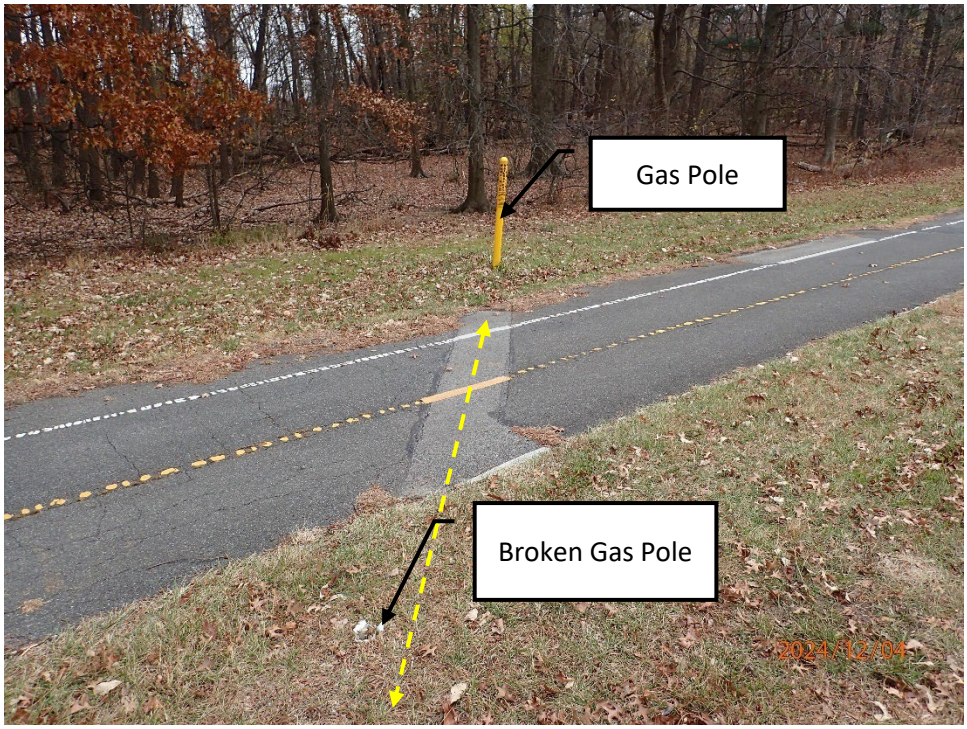
This portion of the APE runs along the narrow unpaved median between Park Drive and the paved pedestrian/bike path. Unmarked utilities, including electrical, gas and storm drains, run through the area (**Photographs 22 to 24**). Light poles and storm drain lines are located on the east edge of Park Drive, but the location of storm sewer lines was unclear. In addition, each of these proposed shovel tests are in close proximity to mapped utilities and as such, these tests were eliminated from the field survey.



Photograph 22. View of a gas pole near the location of ST 43. Facing southwest (NC 1/13/2025).



Photograph 23. A gas utility, junction box, and light pole near the location of ST 44. Facing southwest (NC 1/13/2025).



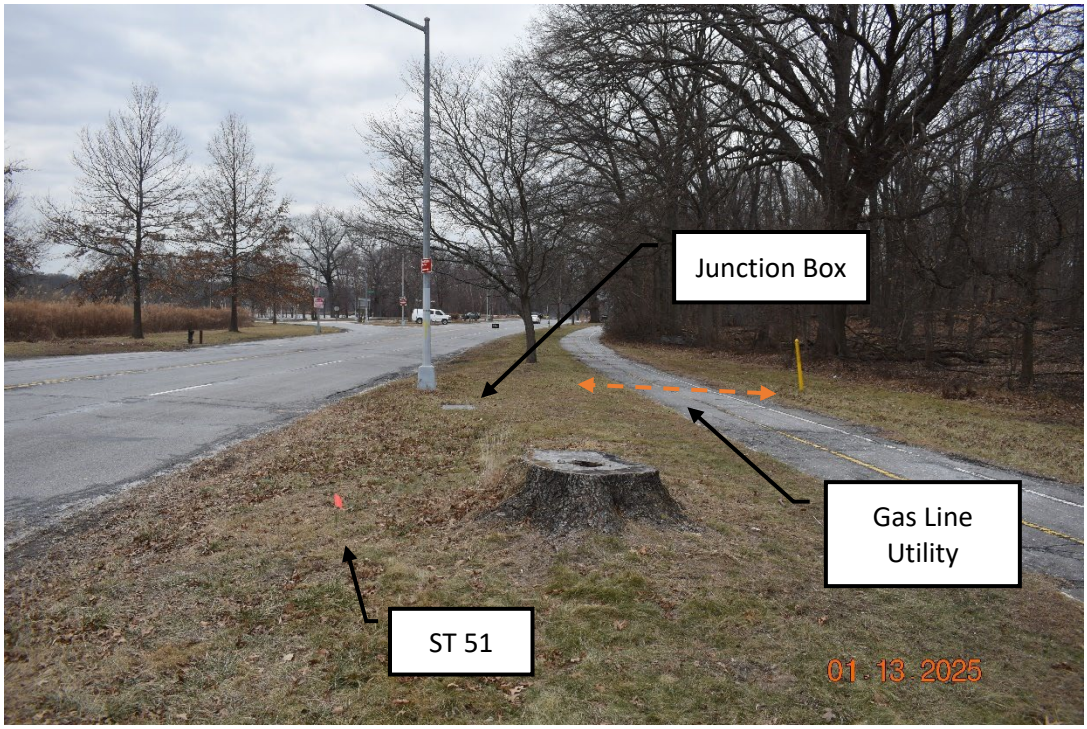
Photograph 24. View of the gas line utility (yellow dashed line) crossing the bicycle path. This gas line is close to ST 50 which is just beyond the edge of the photograph's right side. Facing southeast (LC 12/4/2024)

Shovel Test 51

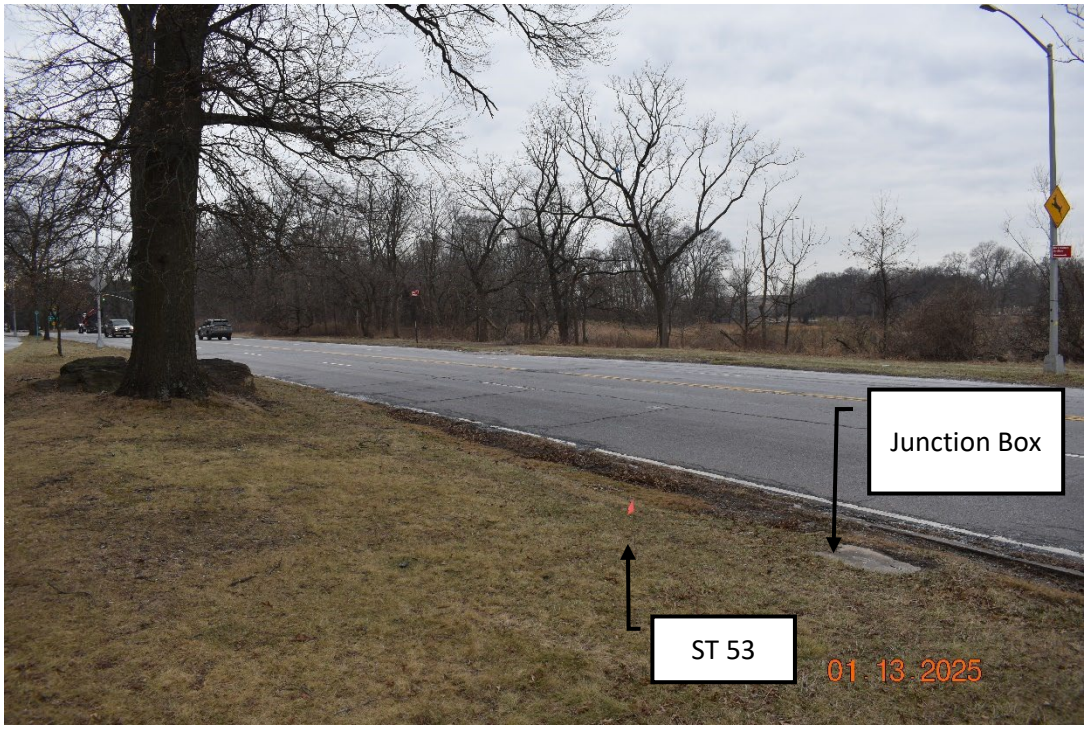
This shovel test was several feet from the stump of a large tree that had recently been cut down (**Photograph 25**). ST 51 was relocated several times but encountered the extensive root system of the tree in topsoil within 6 cm of the surface each time. The topsoil consisted of very dark grayish-brown silt loam, and no cultural material was observed. After three attempts, the shovel test was discontinued.

Shovel Tests 52 through 69

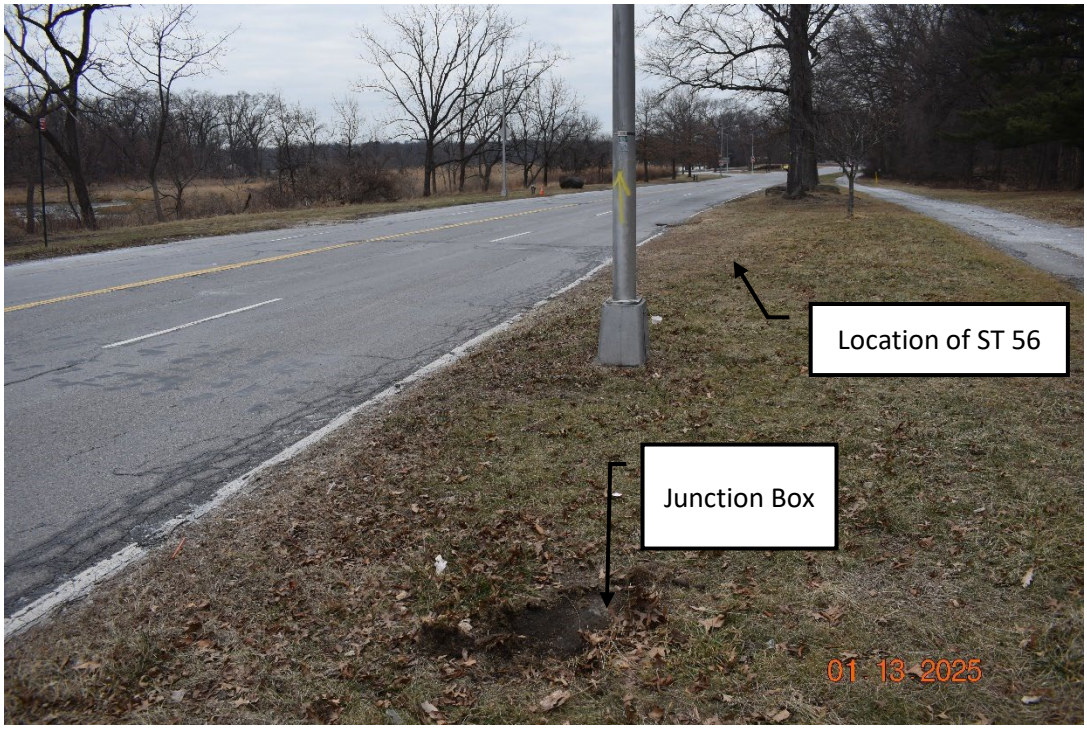
The tests in this area are in the narrow median between Park Drive and the pedestrian/bike path. As detailed above, this area contains unmarked utilities. The southern portion contains marked Broadband and "TV" lines and a junction box. Due to proximity to unmarked and marked utilities, as well as trees, STs 52 through 68 were eliminated from the project (**Photographs 26** to **29**). ST 69 was located on a traffic island adjacent to the north side of the Park Drive/City Island Avenue roundabout and was eliminated due to proximity to utilities (**Photograph 30**).



Photograph 25. Location of ST 51 and utilities. Facing north (NC 1/13/2025).



Photograph 26. Location of ST 53 near junction box. Facing southwest (NC 1/13/2025).



Photograph 27. Junction box near the location of STs 56 and 57. ST 57 is not visible in the photograph. Facing north (NC 1/13/2025).

Photograph 28. View of utility (white dashed line) and junction box located between STs 62 and 63. ST 63 is not visible in the photograph. Facing north (NC 12/4/2024)

Photograph 29. View of ST 64 in line with communication utility located at the southern end of the Phase IB Survey. Facing south. (LC 12/4/2024)

Photograph 30. View of the STs 68 and 69 with utility mark out. Facing southwest (NC 1/13/2025).

D. Recovered Artifacts

The collected artifacts from the Phase IB survey were analyzed after cleaning, when appropriate, to identify and potentially date the artifacts. The artifact analysis also assisted in understanding the broader context and cultural transformation process. The artifact catalog can be found in **Appendix E.**

The Phase IB field investigation recovered a total of 247 artifacts that included five precontact, 60 historic, 137 Historic/Recent, 18 Recent and 27 undiagnostic material (**Table 2**). Some of the field collected material was later discarded following analysis in our archaeological laboratory. This material included 58 items -- e.g. plastic, Styrofoam, aluminum foil, coal, and slag.

Table 2. Breakdown of Artifacts/Material Recovered From Phase IB Survey

Artifact Group	Material	Artifact Type	Type	Date Range	Count/ % of Group
Domestic	Glass	Bottle	Fragment	Historic	11
			Fragment	Historic/Recent	74
			Fragment	Recent	4
		Drinking Vessel	Fragment	Historic/Recent	1
		Glass Subtotal			**90**
	Ceramic	Whiteware	Fragment	Historic/Recent	1
		White Granite	Fragment	Historic/Recent	1
		Pearlware	Fragment	Historic	3
		Stoneware	Fragment	Historic	1
		Cream-Colored Ware	Fragment	Historic/Recent	1
		Yellowware	Fragment	Historic	1
		Porcelain	Fragment	Historic/Recent	1
		Ceramic Subtotal			**9**
	Metal	Aluminum	Pop-Top	Historic/Recent	2
		Aluminum Foil	Container seal	Recent	2
		Metal Subtotal			**4**
	Plastic/Styrofoam	Utensil	Spoon	Recent	**1**
		Drinking Vessel	Cup	Recent	**4**
			Cup Lid	Recent	**1**
		Bottle Cap	Red	Recent	**1**
		Packaging	Sheet	Recent	**2**
		Drinking Vessel	Styrofoam Coffee Cup	Recent	**3**
		Food Container	Styrofoam container	Recent	**5**
		Plastic/Styrofoam Subtotal			**17**
	Domestic Total				**120/48.6%**
Structural	Ceramic	Brick	Fragment	Historic/Recent	3
		Drain Pipe	Fragment	Historic/Recent	1
		Insulator	Fragment	Historic	1
		Terracotta Tile	Fragment	Historic/Recent	1
		Ceramic Subtotal			
	Metal	Iron Nail	Wire Nail	Historic/Recent	2
			Cut Nail	Historic	1
			Unidentified Nail	Historic/Recent	17
		Copper (Cu) Alloy	Lock Key	Historic/Recent	1
		Metal Subtotal			**21**
	Glass	Window	Fragment	Historic/Recent	12
		Glass Subtotal			**12**
	Concrete	Pavement	Fragment	Historic/Recent	2
		Concrete Subtotal			**2**
	Plastic	Electrical Tape	Fragment	Historic/Recent	1
		Plastic Subtotal			**1**
	Structural Total				**42/17%**

Industrial	Coal	Anthracite	Fragment	Historic	9
	Slag	Slag	Fragment	Historic	23
	Wood	Charcoal	Fragment	Historic	1
	Industrial Total				**33/13.3%**
Mollusc	Shell	Oyster	Valve	Unknown	9
		Clam	Valve	Unknown	16
		Snail	Land	Unknown	1
	Mollusc Total				**26/10.5%**
Activities	Ceramic	Redware	Flowerpot	Historic/Recent	13
		Ceramic Subtotal			**13**
	Metal	Copper	Lincoln Wheat Penny	Historic	1
			Lincoln One Penny	Recent	1
		Metal Subtotal			**2**
	Plastic	Toy	Insect	Historic/Recent	1
		Plastic Subtotal			**1**
	Glass	Jar	Cosmetic Cream	Historic	1
		Glass Subtotal			**1**
	Activities Total				**17/7%**
Precontact	Quartz	Flake	Clear	Precontact	1
		Quartz Subtotal			**1**
	Jasper	Flake	White	Precontact	1
		Jasper Subtotal			**1**
	Chert	Flake	Black	Precontact	**1**
		Chert Subtotal			**1**
		Flake	Clear	Tan	**2**
		Coarse-grained Chert Subtotal			**2**
	Precontact Total				**5/2.0%**
Unidentified	Metal	White Metal	Retaining Cap	Historic/Recent	1
		Metal Subtotal			**1**
	Plastic	Unknown	Fragment	Historic/Recent	2
		Plastic Subtotal			**2**
	Unidentified Total				**3/1.2%**
Tobacco	Plastic	Cigarette Package	Wrapper Top	Historic/Recent	1
		Tobacco Total			**1/0.4%**
Phase IB Total Number of Recovered Artifacts/Material					**247/100%**

a. Precontact Material

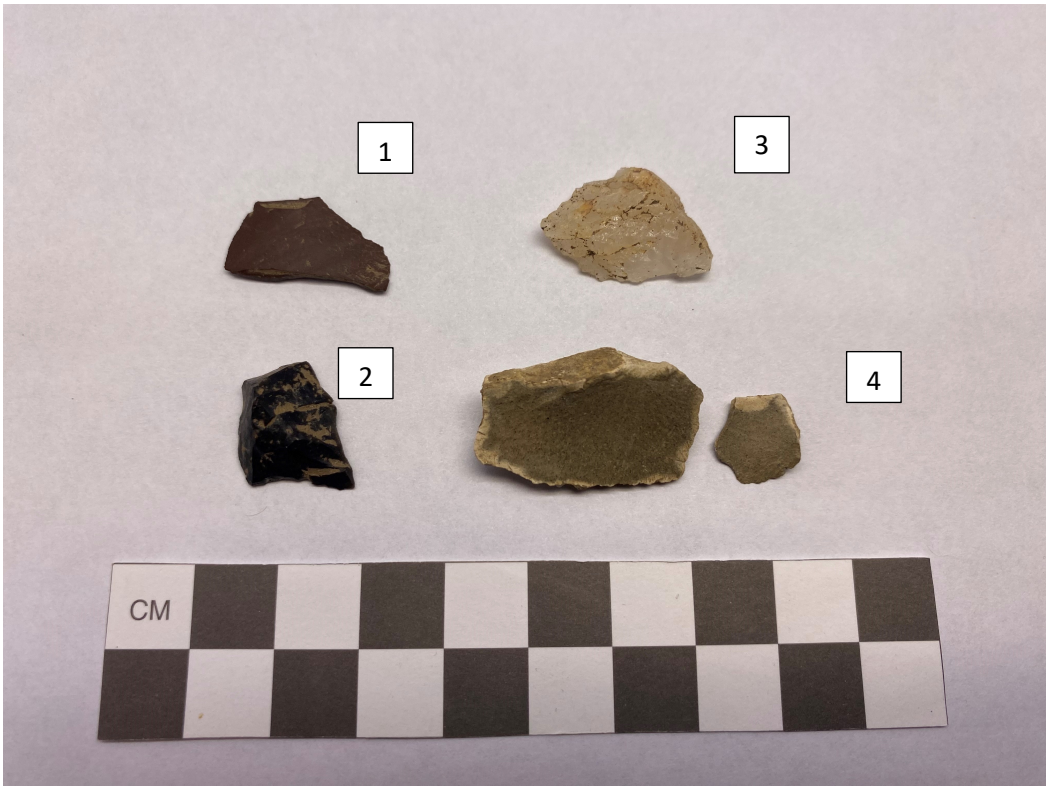
Phase IB survey collected a total of five lithic precontact artifacts (**Photograph 31;** see **Table 2**). The first flake recovered, the jasper flake (ST 1), is missing a platform and ends in a step fracture. This artifact is a bifacial thinning flake produced towards the end of the bifacial manufacturing process. The second flake (ST 1w5m) is black chert, a tertiary reduction flake (no cortex). There are small microfractures on the distal portion of the flake that suggest damage to the flake, likely from a scraping activity. The third flake (ST 4), a wide quartz flake, has a cortical platform. This type of flake would have been produced earlier in the reduction process. Two flakes from ST 7, consist of coarse-grained chert material. The larger flake has an extensive cortex, suggesting a secondary reduction flake. The other flake from ST 7 is a small platform preparation flake, also with cortex on the platform.

The lithic material was recovered from contexts with evidence of disturbance, in the form of clear redeposition or presence of later material in the same context, or contexts beneath it. The Jasper bifacial thinning flake (ST 1, Stratum 2) was recovered in context with fragments of a redware flowerpot, porcelain, an unidentifiable nail, window glass fragments, a "YALE" door lock key, and other material of recent or historic date. The underlying Stratum 3 in that shovel test contained slag, as well as bottle and window glass, a clear indication that Stratum 2 was redeposited. The black chert tertiary reduction flake/utilized flake (ST 1w5m, Stratum1) was recovered in context with clam and oyster

shell fragments, but also with bottle and window glass, unidentified nails, coal, and plastic. This is a clear indication of disturbance.

The quartz cortical flake (ST4, Stratum 1) was recovered in context with oyster shells, as well as bottle glass, a nail, concrete fragments, coal, Lincoln cents dated 1944 and 1970, and a fragment of a red plastic screw-on bottle cap. The underlying Stratum 2 contained a fragment of a glass drinking vessel. This is a clear indication that Stratum 1 was redeposited.

The two chert cortical flakes (ST 7, Stratum 3) were recovered in context with an oyster shell fragment, and several slag fragments. This indicates disturbance of that stratum.



Photograph 31. Phase IB Survey collected precontact artifacts from ST 1, 1W5, 4, and 7.

1. Jasper Flake (ST1, Stratum 2)
2. Black Chert Flake (ST1Radial W5M, Stratum1)
3. Quartz Flake (ST4, Stratum 1)
4. Coarse-grained Chert Flakes (ST7, Stratum 3)

b. Historic/Recent Material

The Phase IB field investigation collected a total of 242 artifacts identified as Historic (n=60), Historic/Recent (n=137), Recent (n=18), and Unidentified (n=27) material (see **Table 2**). The following artifact discussion is organized by Artifact Group (Structural, Industrial, Faunal, Activities, Unidentified, and Tobacco).

Domestic Material

Domestic material (n=120/48.6%) included ceramics, glass and plastic. The material was used in the preparation, serving, and consumption of food.

Ceramic items (n=9) included historic and historic/recent items (**Photograph 32**). Historic ceramics recovered included three fragments of pearlware manufactured between ca 1780 and ca 1840, and a single yellowware sherd, manufactured between 1850 and ca 1920. A base from a white stoneware bottle that likely held beer was nineteenth- or early twentieth-century in date. Historic/recent sherds included single fragments of cream-colored ware (ca. 1820-present), whiteware (1820-present), white granite ware, a refined white earthenware made from ca. 1840 to the present. A single sherd of porcelain likely dating to the nineteenth or twentieth century was also recovered.

Domestic glass (n=90) was also recovered. Bottle glass accounted for 89 items. These included 11 fragments of bottles manufactured before 1974, including mold-blown bottles (1850- ca 1920), and automatic bottling machine-made bottles (1902-ca 1930) 74 bottle fragments were broadly diagnostic to the historic/recent period, and four appeared to be the remains of recent beer bottles. A single fragment of a clear glass drinking vessel was recovered.

Domestic plastic and Styrofoam accounted for 17 items, including drinking cups and lids, sheet plastic packaging and food containers, a plastic bottle cap fragment, and a plastic spoon fragment. This material was interpreted as recent in date. Domestic metal items were limited to two historic/recent pull tabs from beverage cans.

Photograph 32. Historic/Recent artifacts

1. Pearlware (left) and Yellowware (Right) Ceramics (ST1Radial N5M, Statum 1)
2. Redware Flowerpot (ST2, Statum 1)
3. Porcelain Bar Insulator (ST24, Stratum 1)
4. Blue Aqua Bottle Glass Fragment (ST30, Stratum 3)
5. Stoneware Bottle Base (ST40, Stratum 1)

Structural Material

The Phase IB field investigation collected a total of 42 artifacts that were identified as Structural. These included ceramic, metal, and glass items. Ceramic items included a porcelain electrical "bar insulator" (see **Photograph 32**). These items were common elements of household electrical systems from the 1880s until the introduction of flexible

conduit in the 1920s. This item probably originated with the Naval Hospital (1917-1924) as previously documented by excavations at Orchard Beach (Arcadis/Dewberry 2023). A single fragment of undiagnostic ceramic structural tile, and a piece of black plastic electrical tape were also recovered.

Metal items included nails (n=21), and a lock key marked "Yale". Nails are broadly diagnostic. Most of those recovered were badly rusted and could not be typed. They were assigned to the historic/recent period. A single cut nail (ca 1815-1915) and two wire nails were recovered. Glass consisted of undiagnostic window glass (n=12) dating to the historic/recent period.

Industrial Material
This category (n=33) included 9 coal fragments, 23 slag fragments, and a single charcoal fragment. Coal is usually encountered on historic sites from the 1820s for home heating and industrial use and was gradually replaced by oil and diesel by the mid-twentieth century. Slag was a byproduct of coal-fired industry, and usually is encountered from ca 1850, when smaller steam engines were developed, to the mid-twentieth century. Note that slag was often recycled as a paving material, either alone, or as aggregate in asphalt. The charcoal recovered may also have been natural in origin. It is interesting that no coal ash, a byproduct of home heating, was recovered.

Mollusc Material
Mollusc material (n=26) constitutes the remains of animal species, most often those utilized for food. All recovered mollusc material presented as shell fragments. Clam (*Mercenaria*) (n=16) is a food species utilized in precontact times as food and as a source for beads utilized in exchange, and to the present as food. Oyster (*Crassotrea*) (n=8) has been utilized as food from precontact times to the present. The single land snail shell fragment recovered is likely natural in origin, as these are not documented as a food source in the new world. No bone was recovered.

Activities-related Material
These artifacts (n=17) are items used in daily activities other than food processing. Artifacts from the present Project were ceramic, metal, glass, and plastic. Ceramic items were limited to 13 flowerpot fragments. These were pressed redware, manufactured by mass production from the late nineteenth century to the present. They were used in growing and transporting plants, and their presence in greater numbers than domestic ceramics suggests their importance in a park environment. Metal items include two Lincoln cents, dated 1944 and 1970, apparently dropped by park visitors. Glass consisted of a single fragment of a white "milk glass" cosmetic jar. In addition, a small plastic toy insect was recovered.

Unidentified Material
These items (n=3) were not identifiable as to function. They included a white metal retaining cap from an unknown item, and an unidentifiable fragment of a plastic object of unknown function.

Tobacco-related Material
This category was limited to a single cellophane plastic cigarette package top, recovered from ST 40, Stratum 2. This item was likely discarded from a vehicle traveling along Park Drive.

Overall, the recovered historic/recent artifacts reflect late nineteenth-century to early twentieth-century activities, with the majority being related to the Domestic artifact group

V. SYNTHESIS OF PHASE IA AND PHASE IB INVESTIGATIONS

The following discussion presents a synthesis of the Phase IA research and Phase IB field results. The first section discusses prior disturbances that were gathered from reviewing mapped utilities, archival photographs, historic maps, and descriptions of the development that occurred with the area and APE. The Phase IB survey exposed stratigraphic profiles within the field investigation and the recovered artifact assemblage adjacent to the APE.

A. Prior Disturbances

Orchard Beach Construction

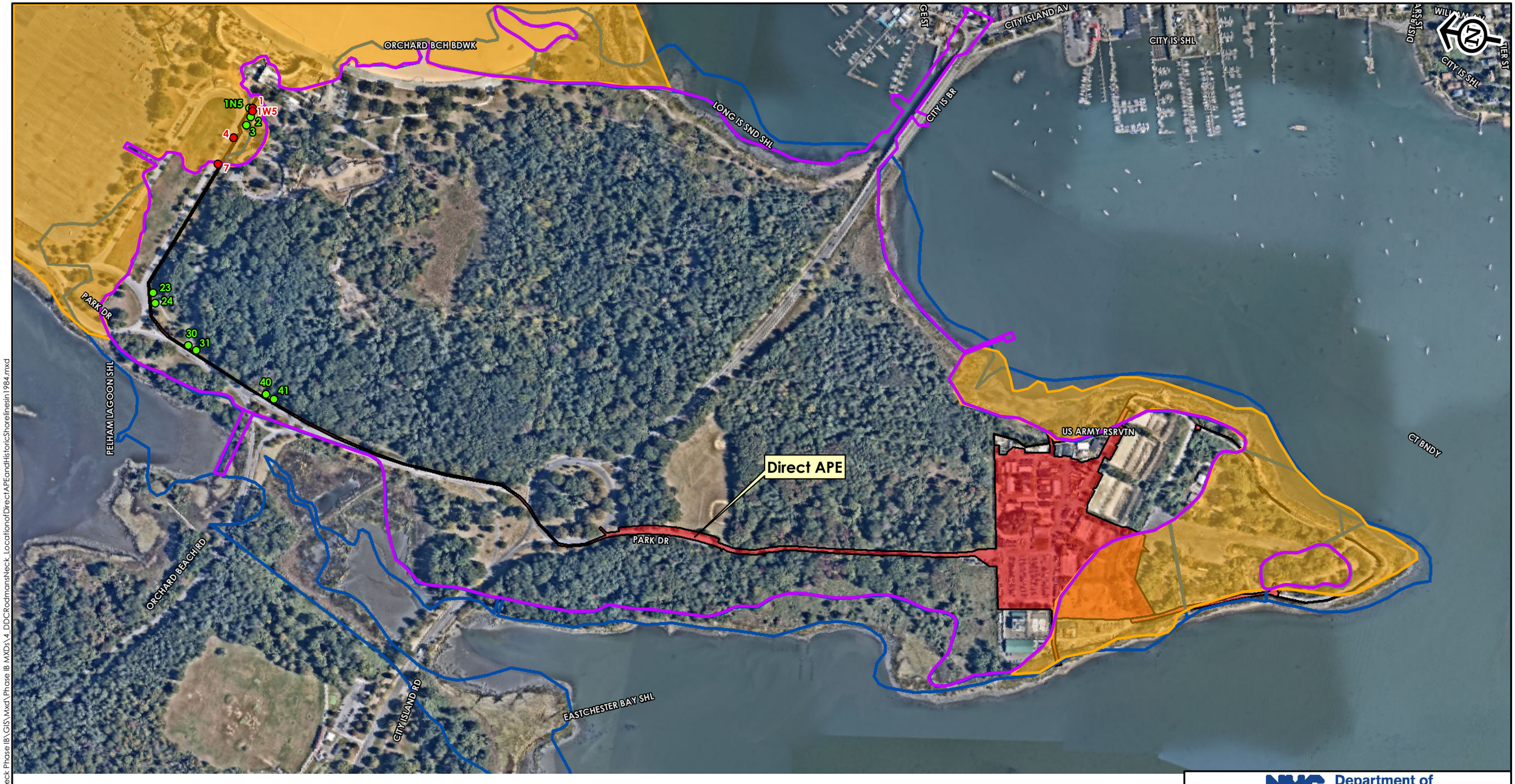
The construction of Orchard Beach and its associated components during the early twentieth century represented a significant engineering project that primarily took place from 1934 to 1937. The initial phase involved clearing preexisting structures, such as the bungalows, a yacht club, a seawall, and bathhouses, as well as developing the roads and circles (e.g., Park Drive, Orchard Beach, and City Island Circle) necessary for the transport of labor, equipment, and supplies for the project. Prior to the construction of Orchard Beach, New York City tried to improve the area with a retaining wall and bathhouse made of paving blocks in 1932, during the Great Depression. However, these structures were later demolished under the direction of the Parks Commissioner, Robert Moses (Landmarks Preservation Commission [Landmarks] 2006:8).

The construction of Orchard Beach required extensive land modification that can be seen when comparing historic maps and photographs with present-day conditions. Figure 4 shows the overlay of historical boundaries and a recent aerial photograph that illustrates the changes in the shoreline of Rodman's Neck and within the APE. Several of the shovel tests (STs 1, 1N5, 1W5, 2, 3, and 4) excavated in the northeastern portion of the Phase IB survey lie within the fill deposit of Orchard Beach (**Figure 4**). Before 1934, the locations of these shovel tests would have been within the water, and this landform was reshaped by the construction of Orchard Beach. Additionally, a bus terminal was constructed in 1938, connecting to Park Drive, which was near shovel tests (ST30 and ST31), further altering the landscape.

Landfilling operations of Orchard Beach commenced in 1935. Initially, Moses was coerced into using municipal waste from the Department of Sanitation as fill material. However, after a storm, the waste began to be washed out from the partially built crescent-shaped seawall. Seeking better quality fill, the project switched to using sand, primarily sourced from Jamaica Bay and Sandy Hook, New Jersey. The construction of Orchard Beach included a main seawall comprised of boulders and large stones (**Figure 5**). This large seawall was twenty-five feet wide and at a height of twenty-one feet, tapering to a point above high tide. A smaller seawall was constructed on the west side of the beach, creating a lagoon on the back bay (Landmarks 2006:8).

Historic photographs provided additional evidence as to the area's condition during the reshaping for the Orchard Beach project and associated roadways. **Figure 5** depicts early construction in 1935, featuring the half built main seawall, washed out fill deposits, and deep cuts in the artificial landscape. The photograph was taken from the northern shore of Rodman's Neck facing Hunter Island. Although the APE is outside the photograph, it offers a visual overview of the conditions during this extensive undertaking. An additional historic photograph, provided a partial view of the APE location in 1934 when the Orchard Beach Bathhouse was under construction and portions of the engineered landscape featured a paved road, fill deposits, and newly planted trees located on the approach to the Bathhouse (**Figure 6**).

Lastly, Mapping has shown sections of the Phase IB APE, which was once underwater within LeRoy Bay–a swallow inlet between Rodman's Neck and Hunter Island–were eventually filled in as part of the Orchard Beach project in the 1930s (**Figure 7**).



LEGEND

- Direct APE
- 1917 Historic Marsh
- Mid-20th Century Fill
- 1917 Historic Shoreline
- Excavated Precontact Material and Historic/Recent Material
- Excavated Historic/Recent Material

0 225 450 900 Feet

Source: Nearmap Imagery Service

Path: Q:\50085489\50141248 - 030 Rodmans Neck Phase IB\GIS\Mxd\Phase IB MXDs\4_DDCRodmansNeck_LocationofDirectAPEandHistoricShorelinesin1984.mxd

Department of Design and Construction

APPROXIMATE LOCATION OF HISTORIC SHORELINES

DDC CAPIS ID: PO79ROD

NYPD Rodman's Neck Firearm and Tactics Facility
Bronx, New York

SCALE: 1" = 450' DATE: February 2025

Arcadis Dewberry a Joint Venture
27-01 Queens Plaza North, Suite 800
Long Island City, NY 11101

FIGURE 4

Figure 5. View of the construction of Orchard Beach seawall in 1935 (NYC Municipal Archives 1935).

Figure 6. Photograph with a date range of 1934-1945 shows the construction of Orchard Beach Bath House and Promenade. The Phase IB Survey location can be seen in this photograph near the rows of trees (NYC Municipal Archives 1934-1945).

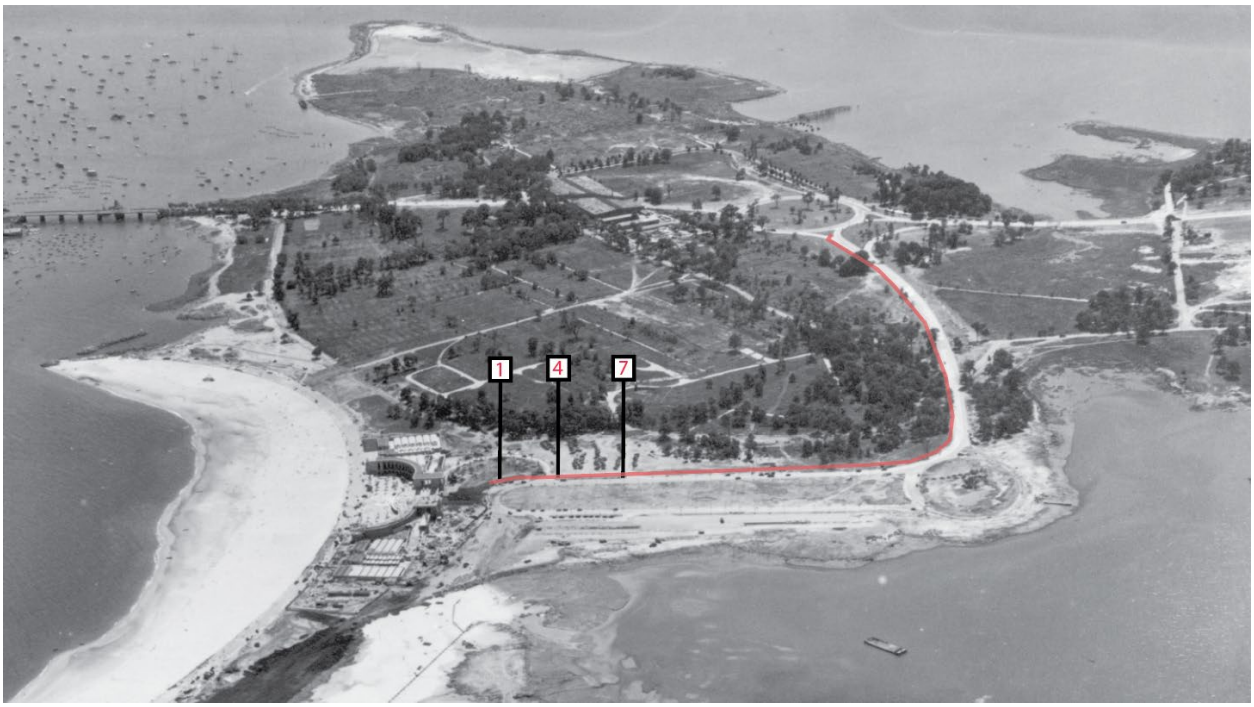


Figure 7. Aerial photograph taken in June of 1937. STs 1, 4, and 7 have callouts in the photograph. Phase IB survey is indicated in the photograph as a red line (NYC Municipal Archives 1937).

Existing Utilities

The proposed construction plans for the Project (see **Appendix B**) indicate the presence of several underground utilities within or near the APE and Phase IB APE (see **Figures 3A** and **3B**). The utilities in the plan include 4-inch to 6-inch gas lines, a 12-inch water main, storm sewers, electric lines, fiber optics cables, various manholes, light poles, and some "unknown" utilities.

The 2024 field investigation noted only a handful of 811 utility markings. While several utility components, such as junction boxes and manholes, were visible on the surface, there were no corresponding flags or spray paint to indicate their locations. These utilities were documented using a GPS survey grade device, mapping in the location of these utility components, particularly the manholes (see Figure 3). The utilities identified in the construction plan and the observed during the field investigation suggest that the area has a well-established utility corridor for various services connected to Orchard Beach.

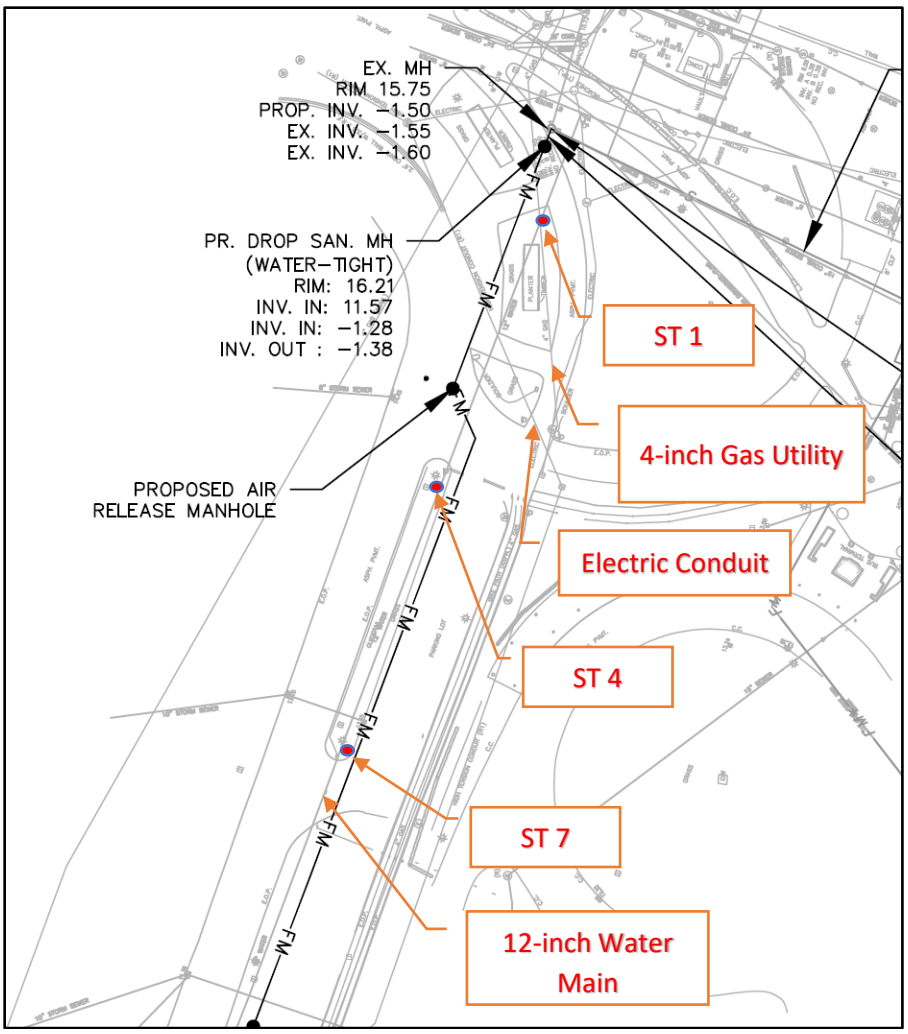


Figure 8. A clipped view of the Project construction plans showing the approximate locations of shovel tests (red circles and callouts) and identified utilities (callouts).

B. Stratigraphy within the Field Investigation

Previous Soil Borings

The Phase IA report summarized a 2023 soil boring testing conducted by Louis Berger (Berger) Phase II Environmental Site Investigation in association with the Project (Berger 2023). Near the Phase IB field investigation, there were six of these previously recorded soil borings (SB-32 to SB-38) (**Figure 9**). Most of the soil borings appeared to be located outside of the APE except for SB-36 and SB-37. The majority of the boring logs indicated fill layers with several reaching ten feet below the surface. The logs did not show evidence of organic soil such as peat or loams, that would suggest a buried A-horizon. The depth of the water table found in the borings ranged from 4.0 to 10.0 feet below the ground surface. The soil borings (SB-36 to SB-38) further north, and closer to the Orchard Beach generally exhibited a higher water table than the southern samples (SB-32 to SB-35).

BOROUGH OF BRONX

NEW YORK

PARK DR

38

37

36

35

34

33

32

Direct APE

CITY ISLAND RD

CITY ISLAND RD

PARK DR

ORCHARD BEACH RD

ORCHARD BEACH RD

CITY ISLAND RD

PELHAM LAGOON SHL

LEGEND

- Direct APE
- Soil Boring Locations (2023)

0 100 200 400 Feet

Source: NYS Office of Information Technology Services, GIS Program Office. Nearmap Imagery Online Service, ESRI.
NYC Department of City Planning, Information Technology Division, MapPLUTO 22v1, 2022. Langan Engineering & NYC Department of Design and Construction, 2023

Path: Q:\50085489\50141248 - 030 Rodmans Neck Phase IB\GIS\Mxd\Phase IB MXDs\5_DDCRodmansNeck_SoilBoringLocations.mxd

NYC DDC Department of Design and Construction

SOIL BORING LOCATIONS

DDC CAPIS ID: PO79ROD

NYPD Rodmans Neck Firearm and Tactics Facility
Bronx, New York

SCALE: 1" = 200' DATE: February 2025

Arcadis Dewberry a Joint Venture
27-01 Queens Plaza North, Suite 800
Long Island City, NY 11101

FIGURE 9

Phase IB Subsurface Testing Summary

The Phase IB investigation exposed disturbed soils throughout the area tested. These soils reflected twentieth-century impacts including mid-twentieth-century land clearing, grading, and filling as documented in historic photographs. Mixed recent and historic artifacts including plastic utensils, pull tabs, bottle caps, bottle glass fragments, nails, and slag were found across the area, predominantly within the upper strata of the soil profile, and reflect mass redeposition of soil as well as disturbance associated with road construction and maintenance, as well as utility installation throughout the mid to late-twentieth century. Generally, this stratigraphic profile is consistent with the USDA-mapped urban soils.

All the recovered precontact artifacts were found in association with mixed recent/historic artifacts. The Phase IB survey did not identify a precontact ground surface but rather, the precontact material was generally found in disturbed contexts. Twentieth-century historic mapping and imagery indicate filling, clearing, and grading associated with the development of Pelham Bay Park and Orchard Beach as well as the construction of Park Drive (see **Figures 10** through **15**). Overall, the Phase IB fieldwork revealed disturbed soils consistent with those twentieth-century activities. The presence of recent artifacts, consisting of plastic utensils, pull tabs, and plastic bottle caps, along with bottle glass and slag within most of the shovel tests, including those containing precontact material, in light of the documented disturbance to the area tested, demonstrates that those activities adversely impacted the archaeological record to the point that no potentially NR-eligible features, deposits or sites were encountered during the survey. No resources were encountered that would constitute contributing elements to the Pelham Bay Park Historic District.

Overall, the Phase IB investigations identified no intact soils within the APE. Twentieth-century aerial imagery indicates filling and mechanical stripping of the area in association with the construction of Orchard Beach and Park Drive. This activity clearly involved the deposition of fill and subsequent landscaping disturbances causing redeposition of upper strata. Since the clearing and road building in the APE in the 1930s, the APE has been exposed to landscaping, organic deposition, as well as pedestrian and vehicular traffic. Upper strata across the area reflect the accumulation and commingling of historic and recent materials and the accretional deposition of organic soils.

The presence of precontact material within the APE may support a former precontact occupation in the vicinity, as documented elsewhere (Arcadis/Dewberry 2023; Arcadis/Dewberry 2024a); however, the lack of an identifiable precontact ground surface and the commingling of recent and historical material reflects extensive twentieth-century disturbance to this area. The compromised nature of the deposits and the absence of an intact ground surface are clear indicators that the precontact material in this area is not in its primary context and lacks integrity.

VI. PHASE IB RESEARCH QUESTIONS

The Phase IB Work Plan outlined several research questions guiding the Phase IB survey. The following discussion addresses each of these questions based on the results of the Phase IB fieldwork and supplemental research.

1. **To what extent did twentieth-century development disturb the soil profile within the APE? Is the soil profile truncated? Does the APE contain undisturbed soils, and if so, are those soils cultural bearing?**

Archaeological testing indicates that twentieth-century development has extensively disturbed soil profiles within the APE. There are no deposits within the APE that are definitively deposited before the construction of Pelham Bay Park. Cultural material from those strata that contain artifacts is consistent with manufacture during the twentieth century. This is borne out by historic photographs dating to the construction of the park and associated roadways that show evidence of extensive disturbance.

2. **Are there precontact archaeological deposits within the APE? If present, do these deposits represent an intact precontact ground surface? Are there diagnostic materials or intact features that reflect a time period of occupation and/or suggest the type of occupation, e.g., short term, long term, repeated resource exploitation, etc.? Does the precontact deposit(s) have integrity; does it appear to be intact?**

While precontact material was recovered from four strata in the northeastern portion of the APE, that material was recovered in context with historic, historic/recent, or recent material, indicating that those strata had been disturbed. In several cases, underlying strata also contained post-contact material, indicating that overlying contexts had been redeposited. No intact precontact surfaces, deposits, or features were identified within the APE, and all deposits encountered that contained precontact material were determined to lack integrity.

3. **Is there a potential for intact Indigenous burials within the APE? Is there evidence for a shell midden or heap deposits?**

No evidence was encountered in the archaeological record that would indicate the presence or absence of indigenous burials. Generally, shovel testing as a method is not conducive to identification of burials, with most unmarked burials identified during construction or during area excavation on archaeological sites (cf., Cook 1985).

While both clam (*Mercenaria mercenaria*) and oyster (*Crassotrea virginica*) shells were recovered from multiple contexts during shovel testing, they were not numerous (n=26). These species continue to be utilized to the present time, and there is no evidence to indicate that they are either precontact in date or originated in a shell midden.

4. **Are there Revolutionary War-related, late-eighteenth, and/or nineteenth-century deposits within the APE? Are intact or truncated shaft features associated with the Rapelye/Ward occupation extant? Is there an intact historic period ground surface? What does the historic deposit suggest about past occupants and past activities within the property?**

No Revolutionary War-related material was recovered from the APE. While three fragments of late eighteenth- or early nineteenth-century pearlware were recovered, these were in context with later material, including nineteenth or twentieth century redware flowerpots, whiteware, white granite ware, cream-colored ware, yellowware and porcelain, as well as more recent plastic items. No undisturbed nineteenth-century contexts or surfaces were encountered within the APE. No features of any kind were identified.

5. **If cultural material is recovered, does that material represent an archaeological site? Can boundaries be established? Does the site appear to be intact and integral? Does it have the potential to yield further information regarding past occupation of the APE?**

Cultural material encountered in the APE does not constitute evidence of an archaeological site or sites, and do not constitute contributing elements to the NR-eligible Pelham Bay Park Historic District. The recovered material lacks integrity, and so does not have the potential to yield further information regarding past occupation of the APE.

VII. CONCLUSIONS & RECOMMENDATIONS

Arcadis/Dewberry completed a Phase IB Archaeological Survey in association with the proposed force main sewer for the NYPD Firearms and Tactics Facility on Rodman's Neck. The Phase IB field investigation excavated 11 grid-based shovel tests and two radial tests. Most of the shovel tests could not be excavated due to proximity to the trees, mapped utilities, and paved areas. The thirteen shovel tests yielded a total of 247 artifacts that consisted of a scatter of precontact (n=5) and historic/recent (n=242) material.

The subsurface investigation identified disturbed soils with an extensive dispersed scatter of recent and historic artifacts across the field investigation. The precontact material was recovered from redeposited contexts containing recent/historic material, and its location was documented as land filled during the construction of Pelham Bay Park in the 1930s. The recent/historic artifacts consisted primarily of bottle glass fragments and plastic items. Some historic ceramics, likely dating to the late eighteenth or nineteenth century, were also recovered from the same locus as the precontact material and were also found in a redeposited context with recent/historic material. Coal and slag dating to the historic period were recovered from redeposited contexts across the APE. Slag was a common paving material prior to the extensive use of asphalt. Six fragments of a mold-blown beer bottle were recovered from a likely landfill stratum. This appears to be the only material recovered from a primary context during the project and was probably discarded during an episode of landfilling or utility replacement.

Overall, the Phase IB survey has confirmed that the area was extensively modified during the 1930s and continues to undergo ground disturbance from various utility installations that support the Orchard Beach Bathhouse and other buildings. No potentially NR-eligible resources were identified during the survey. The project as proposed will have no effect on historic properties. Arcadis/Dewberry recommends no further archaeological investigation in connection with the proposed project.

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Louis Berger U.S. Inc. (Berger)

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Appendix A

Project Correspondence

From: thpo
To: ELDIN, AMR
Cc: ANAGNOSTOS, DEAN
Subject: RE: New York City Department of Design and Construction Initiation of Consultation Letter
Date: Thursday, June 6, 2024 9:53:25 AM
Attachments: image002.png

Hi Amr,

Thank you for the Phase IB work plan for the Rodman's Neck Firearms and Tactics Facility.

The Stockbridge-Munsee Community tribal Historic Preservation Office finds no issue with the aforementioned work plan. We ask to be kept apprised of the work schedule so we can schedule a visit to the archaeology crew in the field.

Warmly,
Jeff

Jeffrey C Bendremer Ph.D., RPA
Tribal Historic Preservation Officer
Stockbridge-Munsee Community
Tribal Historic Preservation Extension Office
86 Spring St.
Williamstown, MA 01267
413-884-6029 (o)
715-881-2254 (c)

www.mohican.com

From: ELDIN, AMR <AMR.ELDIN@nypd.org>
Sent: Wednesday, June 5, 2024 5:31 PM
To: thpo <thpo@mohican-nsn.gov>
Cc: ANAGNOSTOS, DEAN <DEAN.ANAGNOSTOS@nypd.org>
Subject: RE: New York City Department of Design and Construction Initiation of Consultation Letter

Good Afternoon Dr. Bendremer,

Please see attached work plan for Phase IB field work for your review and approval. Once approved, our team will conduct the study and provide all material/documents related to the work for your review. If you have any questions or concerns, please feel free to reach out to me at any time, thank you.

Amr Eldin
Director, Capital Construction
NYPD Deputy Commissioner Management & Budget
1 Police Plaza, Room 606
New York, NY 10038
O:646.610.5123
C:917.355.6316
Amr.Eldin@nypd.org

From: ELDIN, AMR
Sent: Wednesday, May 29, 2024 3:19 PM
To: thpo <thpo@mohican-nsn.gov>
Subject: RE: New York City Department of Design and Construction Initiation of Consultation Letter

Good Afternoon Dr. Bendremer,

Thank you for reviewing the documents and your prompt response. I will discuss your concerns with our team and begin working on the Phase 1B survey. Please feel free to reach out to me if you have any questions or concerns, thank you.

Amr Eldin
Director, Capital Construction
NYPD Deputy Commissioner Management & Budget
1 Police Plaza, Room 606
New York, NY 10038
O:646.610.5123
C:917.355.6316
Amr.Eldin@nypd.org

From: thpo <thpo@mohican-nsn.gov>
Sent: Wednesday, May 29, 2024 8:17 AM
To: ELDIN, AMR <AMR.ELDIN@nypd.org>
Subject: RE: New York City Department of Design and Construction Initiation of Consultation Letter

Dear Amr,

Thank you for the Phase IA Archaeological Documentary Study by Arcadis Dewberry for the proposed Rodman's Neck Firing Range project.

The Stockbridge-Munsee Community Tribal Historic Preservation Office is very concerned regarding the archaeological sensitivity of this APE. We strongly concur with the archaeological study's recommendation that a work plan be developed for a Phase IB Archaeological Survey for this project.

Thank You,
Jeff

Jeffrey C Bendremer Ph.D., RPA
Tribal Historic Preservation Officer
Stockbridge-Munsee Community
Tribal Historic Preservation Extension Office
86 Spring St.
Williamstown, MA 01267
413-884-6029 (o)
715-881-2254 (c)

www.mohican.com

From: AMR ELDIN <AMR.ELDIN@nypd.org>
Sent: Friday, May 24, 2024 4:05 PM
To: thpo <thpo@mohican-nsn.gov>
Subject: New York City Department of Design and Construction Initiation of Consultation Letter

Secure Delivery

The following file(s) have been sent to you from AMR.ELDIN@nypd.org

1_DDCRodmansNeck_ProjectLocationMap.pdf	1.85 MB
2_DDCRodmansNeck_DetailedViewofProposedImprovement_ImpactAreasUpdate.pdf	2.28 MB
3_DDCRodmansNeck_DirectandIndirectAPEs.pdf	1.24 MB

Rodman's Neck Phase IA Archaeological Documentary Study_March 2023_Updated.pdf	22.65 MB
Rodman's Neck Stockbridge Munsee Community Band of Mohican Indians Notification Letter.pdf	291.84 KB

Download Files

The secure message expires on 5/29/24 4:04:56 PM

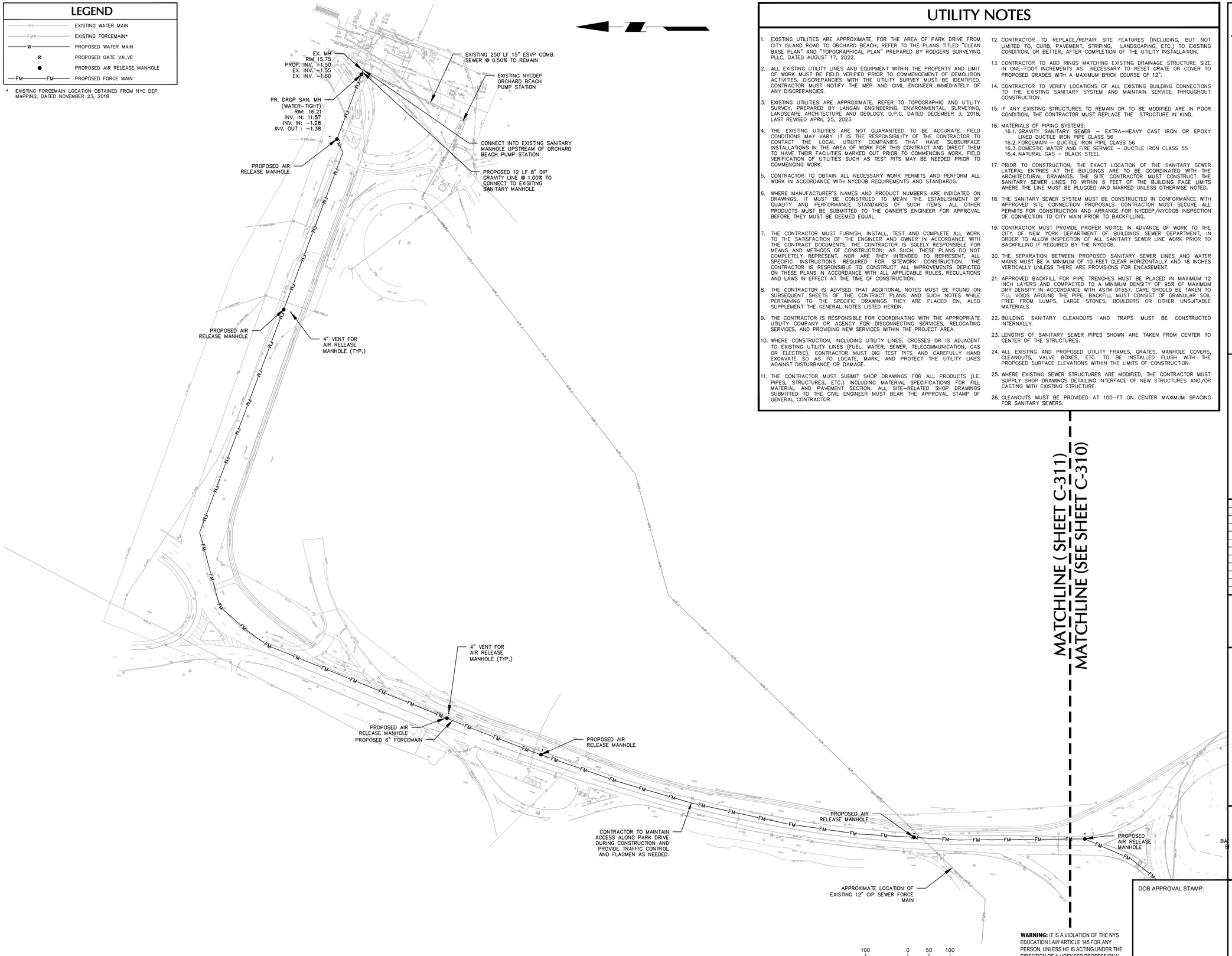
Appendix B

Project Construction Plans

LEGEND

——W/S——	EXISTING WATER MAIN
——F/M——	EXISTING FORCEMAIN*
——W——	PROPOSED WATER MAIN
⊗	PROPOSED GATE VALVE
●	PROPOSED AIR RELEASE MANHOLE
——FM——FM——	PROPOSED FORCE MAIN

* EXISTING FORCEMAIN LOCATION OBTAINED FROM NYC DEP MAPPING, DATED NOVEMBER 23, 2018



UTILITY NOTES

1. EXISTING UTILITIES ARE APPROXIMATE. FOR THE AREA OF PARK DRIVE FROM CITY ISLAND ROAD TO ORCHARD BEACH, REFER TO THE PLANS TITLED "CLEAN BASE PLAN" AND "TOPOGRAPHICAL PLAN" PREPARED BY RODGERS SURVEYING PLLC, DATED AUGUST 17, 2022.
2. ALL EXISTING UTILITY LINES AND EQUIPMENT WITHIN THE PROPERTY AND LIMIT OF WORK MUST BE FIELD VERIFIED PRIOR TO COMMENCEMENT OF DEMOLITION ACTIVITIES. DISCREPANCIES WITH THE UTILITY SURVEY MUST BE IDENTIFIED. CONTRACTOR MUST NOTIFY THE MEP AND CIVIL ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
3. EXISTING UTILITIES ARE APPROXIMATE. REFER TO TOPOGRAPHIC AND UTILITY SURVEY, PREPARED BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE AND GEOLOGY, D.P.C, DATED DECEMBER 3, 2018, LAST REVISED APRIL 25, 2023.
4. THE EXISTING UTILITIES ARE NOT GUARANTEED TO BE ACCURATE. FIELD CONDITIONS MAY VARY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE LOCAL UTILITY COMPANIES THAT HAVE SUBSURFACE INSTALLATIONS IN THE AREA OF WORK FOR THIS CONTRACT AND DIRECT THEM TO HAVE THEIR FACILITIES MARKED OUT PRIOR TO COMMENCING WORK. FIELD VERIFICATION OF UTILITIES SUCH AS TEST PITS MAY BE NEEDED PRIOR TO COMMENCING WORK.
5. CONTRACTOR TO OBTAIN ALL NECESSARY WORK PERMITS AND PERFORM ALL WORK IN ACCORDANCE WITH NYCDOB REQUIREMENTS AND STANDARDS.
6. WHERE MANUFACTURER'S NAMES AND PRODUCT NUMBERS ARE INDICATED ON DRAWINGS, IT MUST BE CONSTRUED TO MEAN THE ESTABLISHMENT OF QUALITY AND PERFORMANCE STANDARDS OF SUCH ITEMS. ALL OTHER PRODUCTS MUST BE SUBMITTED TO THE OWNER'S ENGINEER FOR APPROVAL BEFORE THEY MUST BE DEEMED EQUAL.
7. THE CONTRACTOR MUST FURNISH, INSTALL, TEST AND COMPLETE ALL WORK TO THE SATISFACTION OF THE ENGINEER AND OWNER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION; AS SUCH, THESE PLANS DO NOT COMPLETELY REPRESENT, NOR ARE THEY INTENDED TO REPRESENT, ALL SPECIFIC INSTRUCTIONS REQUIRED FOR SITEWORK CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO CONSTRUCT ALL IMPROVEMENTS DEPICTED ON THESE PLANS IN ACCORDANCE WITH ALL APPLICABLE RULES, REGULATIONS AND LAWS IN EFFECT AT THE TIME OF CONSTRUCTION.
8. THE CONTRACTOR IS ADVISED THAT ADDITIONAL NOTES MUST BE FOUND ON SUBSEQUENT SHEETS OF THE CONTRACT PLANS AND SUCH NOTES WHILE PERTAINING TO THE SPECIFIC DRAWINGS THEY ARE PLACED ON, ALSO SUPPLEMENT THE GENERAL NOTES LISTED HEREIN.
9. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE APPROPRIATE UTILITY COMPANY OR AGENCY FOR DISCONNECTING SERVICES, RELOCATING SERVICES, AND PROVIDING NEW SERVICES WITHIN THE PROJECT AREA.
10. WHERE CONSTRUCTION, INCLUDING UTILITY LINES, CROSSES OR IS ADJACENT TO EXISTING UTILITY LINES (FUEL, WATER, SEWER, TELECOMMUNICATION, GAS OR ELECTRIC), CONTRACTOR MUST DIG TEST PITS AND CAREFULLY HAND EXCAVATE SO AS TO LOCATE, MARK, AND PROTECT THE UTILITY LINES AGAINST DISTURBANCE OR DAMAGE.
11. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS FOR ALL PRODUCTS (I.E. PIPES, STRUCTURES, ETC.) INCLUDING MATERIAL SPECIFICATIONS FOR FILL MATERIAL AND PAVEMENT SECTION. ALL SITE-RELATED SHOP DRAWINGS SUBMITTED TO THE CIVIL ENGINEER MUST BEAR THE APPROVAL STAMP OF GENERAL CONTRACTOR.
12. CONTRACTOR TO REPLACE/REPAIR SITE FEATURES (INCLUDING, BUT NOT LIMITED TO, CURB, PAVEMENT, STRIPING, LANDSCAPING, ETC.) TO EXISTING CONDITION, OR BETTER, AFTER COMPLETION OF THE UTILITY INSTALLATION.
13. CONTRACTOR TO ADD RINGS MATCHING EXISTING DRAINAGE STRUCTURE SIZE IN ONE-FOOT INCREMENTS AS NECESSARY TO RESET GRATE OR COVER TO PROPOSED GRADES WITH A MAXIMUM BRICK COURSE OF 12".
14. CONTRACTOR TO VERIFY LOCATIONS OF ALL EXISTING BUILDING CONNECTIONS TO THE EXISTING SANITARY SYSTEM AND MAINTAIN SERVICE THROUGHOUT CONSTRUCTION.
15. IF ANY EXISTING STRUCTURES TO REMAIN OR TO BE MODIFIED ARE IN POOR CONDITION, THE CONTRACTOR MUST REPLACE THE STRUCTURE IN KIND.
16. MATERIALS OF PIPING SYSTEMS:
    - 16.1. GRAVITY SANITARY SEWER – EXTRA-HEAVY CAST IRON OR EPOXY LINED DUCTILE IRON PIPE CLASS 56
    - 16.2. FORCEMAIN – DUCTILE IRON PIPE CLASS 56
    - 16.3. DOMESTIC WATER AND FIRE SERVICE – DUCTILE IRON CLASS 55
    - 16.4. NATURAL GAS – BLACK STEEL
17. PRIOR TO CONSTRUCTION, THE EXACT LOCATION OF THE SANITARY SEWER LATERAL ENTRIES AT THE BUILDINGS ARE TO BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS. THE SITE CONTRACTOR MUST CONSTRUCT THE SANITARY SEWER LINES TO WITHIN 5 FEET OF THE BUILDING FACE LIMITS WHERE THE LINE MUST BE PLUGGED AND MARKED UNLESS OTHERWISE NOTED.
18. THE SANITARY SEWER SYSTEM MUST BE CONSTRUCTED IN CONFORMANCE WITH APPROVED SITE CONNECTION PROPOSALS. CONTRACTOR MUST SECURE ALL PERMITS FOR CONSTRUCTION AND ARRANGE FOR NYCDEP/NYCDOB INSPECTION OF CONNECTION TO CITY MAIN PRIOR TO BACKFILLING.
19. CONTRACTOR MUST PROVIDE PROPER NOTICE IN ADVANCE OF WORK TO THE CITY OF NEW YORK DEPARTMENT OF BUILDINGS SEWER DEPARTMENT, IN ORDER TO ALLOW INSPECTION OF ALL SANITARY SEWER LINE WORK PRIOR TO BACKFILLING IF REQUIRED BY THE NYCDOB.
20. THE SEPARATION BETWEEN PROPOSED SANITARY SEWER LINES AND WATER MAINS MUST BE A MINIMUM OF 10 FEET CLEAR HORIZONTALLY AND 18 INCHES VERTICALLY UNLESS THERE ARE PROVISIONS FOR ENCASEMENT.
21. APPROVED BACKFILL FOR PIPE TRENCHES MUST BE PLACED IN MAXIMUM 12 INCH LAYERS AND COMPACTED TO A MINIMUM DENSITY OF 95% OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D1557. CARE SHOULD BE TAKEN TO FILL VOIDS AROUND THE PIPE. BACKFILL MUST CONSIST OF GRANULAR SOIL FREE FROM LUMPS, LARGE STONES, BOULDERS OR OTHER UNSUITABLE MATERIALS.
22. BUILDING SANITARY CLEANOUTS AND TRAPS MUST BE CONSTRUCTED INTERNALLY.
23. LENGTHS OF SANITARY SEWER PIPES SHOWN ARE TAKEN FROM CENTER TO CENTER OF THE STRUCTURES.
24. ALL EXISTING AND PROPOSED UTILITY FRAMES, GRATES, MANHOLE COVERS, CLEANOUTS, VALVE BOXES, ETC. TO BE INSTALLED FLUSH WITH THE PROPOSED SURFACE ELEVATIONS WITHIN THE LIMITS OF CONSTRUCTION.
25. WHERE EXISTING SEWER STRUCTURES ARE MODIFIED, THE CONTRACTOR MUST SUPPLY SHOP DRAWINGS DETAILING INTERFACE OF NEW STRUCTURES AND/OR CASTING WITH EXISTING STRUCTURE.
26. CLEANOUTS MUST BE PROVIDED AT 100-FT ON CENTER MAXIMUM SPACING FOR SANITARY SEWERS.

Smith-Miller +Hawkinson Architects
305 Canal Street, New York, NY 10013
Tel: 212 966 3875

TACTICAL DESIGN
Tactical Design North
231 E. Buffalo St, Suite 502,
Milwaukee, WI 53202
Tel: 414 909 8586

SURVEY/CIVIL/GEOTECH. ENGINEER
Langan Engineering
360 W. 31st St, 8th Fl, New York, NY 10001
Tel: 212 479 5400

STRUCTURAL ENGINEERS
Silman
32 Old Slip, New York, NY 10005
Tel: 212 620 7970

M.E.P., FIRE ALARM, LEED
ADS Engineers
266 W 37th St, Suite 902, New York, NY 10018
Tel: 212 645 6060

IT/AV/ACOUSTICS/SECURITY
Cerami
404 5th Ave, New York, NY 10018
Tel: 212 370 1776

LANDSCAPE ARCHITECT
Langan Engineering
360 W. 31st St, 8th Fl, New York, NY 10001
Tel: 212 479 5400

CURTAIN WALL CONSULTANT
Front Inc.
20 Jay St, Suite 920, Brooklyn, NY 11201
Tel: 414 202 5796

BLAST/IMPACT/PHYSICAL SECURITY
Thornton Tomasetti
40 Wall St, 19th Fl, New York, NY 10005
Tel: 212 367 3000

TRANSPORTATION CONSULTANT
Sam Schwartz
332 Eighth Ave, 5th Fl, New York, NY 10001
Tel: 212 598 9010

LIGHTING DESIGN
Kugler Ning Lighting Design
247 W. 37th St, Suite 1502, New York, NY 10018
Tel: 212 382 2100

FUELING
PW Grosser
630 Johnson Ave Suite 7, Bohemia, NY 11716
Tel: 646 475 8055

PHOTOVOLTAIC ENGINEER
Pure Power Engineering, Inc.
111 River Street, Suite 1110, Hoboken, NJ 07030
Tel: 732 598 8407

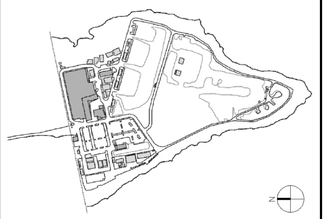
SIGNAGE + WAYFINDING DESIGNERS
Open
180 Varick Street, No. 822, New York, NY 10014
Tel: 917 442 5633

SPECIFICATIONS
Construction Specifications, Inc.
PO BOX 488, Morganville, NJ 07751
Tel: 732 598 8407

FILING/ZONING/CODE
Milrose Consultants, Inc
498 Seventh Ave, 17th Fl, New York, NY 10018
Tel: 212 643 4859

COST ESTIMATING
Dharam Consulting
35 W. 35th St, Suite 301, New York, NY 10001
Tel: 215 563 0525

KEY PLAN (N.T.S.)



NUMBER	DESCRIPTIONS	DATE
1	BID SET	01-05-2024
2	BID SET RESUBMISSION	03-29-2024

Department of Design and Construction

DIVISION OF PUBLIC BUILDINGS

CAPITOL PROJECT NUMBER:
PO79ROD

PROJECT:
RODMAN'S NECK FIREARMS AND TACTICS FACILITY
1 Rodman's Neck, Bronx, NY 10464

FOR THE:
NEW YORK POLICE DEPARTMENT (NYPD)

DRAWING TITLE:
UTILITY PLAN FOR PARK DRIVE AND CITY ISLAND ROAD

DOB APPROVAL STAMP:

SEAL & SIGNATURE:

BRYAN WAISNOR
PROFESSIONAL ENGINEER
NY Lic. No. 080661-1

DATE: 29 MARCH 2024
PROJECT NO: 100706401
DRAWN BY: JR/LMB
CHECKED BY: BMW
BLDG | DRAWING NUMBER: C-311.00
CAD FILE No:
19 OF 58

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Filename: c:\bms\langan-pw-01\d0281028\100706401-0509-CU102-0101.dwg Date: 4/9/2024 Time: 15:57 User: jrestrepo Style Table: Langan.stb Layout: C-311

Appendix C

Phase IB Archaeological Survey Work Plan and NYC Parks Permit

Arcadis Dewberry a Joint Venture
27-01 Queens Plaza North, Suite 800, Long Island City, NY 11101

May 21, 2024

Rodman's Neck Firearms and Tactics Facility—Phase IB Archaeology, Part of Block 5650, Lot 1 Rodman's Neck, Bronx, New York
CEQR Review No.: LA-CEQR-X (NYC Police Department), LPC Project 37178_FSO

Introduction

The New York City Department of Design and Construction (DDC), on behalf of the New York Police Department (NYPD), proposes to redevelop the outdoor firing range facility (Rodman's Neck Firing Range) located at Rodman's Neck in the Bronx, New York (Block 5650, Lot 1) (**Figure 1**). The Rodman's Neck Firing Range is on the southernmost portion of the Pelham Bay Park peninsula in Eastchester Bay within the Pelham Bay Park Historic District, eligible for inclusion in the National Register of Historic Places (National Register). The NYPD and the City of New York Department of Corrections (DOC) operate this restricted access, 48.7-acre property.

The project includes construction of an indoor firing range along with four additional buildings; demolishing three outside ranges on the west side of the Rodman's Neck Firing Range; upgrades to existing parking areas; grading and new site drainage; and relocation and removal of butler building and trailers (**Figure 2**). The project will remove an existing septic tank and install sanity sewer lines throughout the campus to connect to a new 4" sanitary force main extending from the property under Park Drive. The project will connect this new main with the municipal sewer system outside the campus. Two new outfalls with rip rap aprons will be installed on the eastern and western extents of the project site, flowing into Eastchester Bay. Proposed improvements also include removal and replacement of a fuel tank; removal and replacement of an 8" water main along Park Drive; installation and replacement of fencing, vegetation, and an electrical conduit along the Perimeter Road.

In March 2024, Arcadis Dewberry, a Joint Venture (Arcadis/Dewberry) completed a Phase IA Archaeological Documentary Study for the project. Arcadis/Dewberry defined the project's Direct Area of Potential Effects (Direct APE) as the footprint of proposed ground disturbance, including the proposed demolition and construction activities within the Rodman's Neck Firing Range and the proposed utility line along Park Drive, approximately 19.9 acres (**Figure 3**).

The Phase IA identified evidence for Native American occupation of Pelham Bay Park during at least the Middle to Late Woodland periods and limited mapped historic development within Rodman's Neck prior to the late-nineteenth century. Historic aerial imagery suggested extensive land modification and infilling associated with the creation of Orchard Beach, the installation of military bases in the early-twentieth century, and the construction of the Rodman's Neck Firing Range in the mid-twentieth century. Within the Rodman's Neck Firing Range, Arcadis/Dewberry documented extensive fill along with paved surfaces, utilities, and a generally shallow water table suggesting twentieth century development of Rodman's Neck compromised and most likely effaced preexisting archaeological resources and natural soils. Given the extent of documented disturbance, the Phase IA assessed the Rodman's Neck Firing Range with no potential for intact archaeological deposits. In addition, the southern portion of the proposed utility corridor along Park Drive south of City Island Circle was also assessed with no potential for intact archaeological resources as the utility will be installed in the footprint of an existing water line. However, Arcadis/Dewberry assessed the proposed utility corridor northeast of City Island Circle with moderate potential for precontact archaeological resources and with two areas of potential historic archaeological sensitivity (Arcadis/Dewberry 2024).

The New York City Landmarks Preservation Commission (LPC) reviewed the Phase IA and concurred that portions of the proposed utility corridor northeast of City Island Circle possess archaeological sensitivity and requested the preparation of a Phase IB Archaeological Work Plan (Work Plan). LPC noted that the Work Plan should prescribe a testing strategy intended to evaluate the full depth of the proposed project impacts. They also requested the Work Plan to include an Unanticipated Discoveries Plan. The Phase IA and Work Plan will be shared with consulting Tribal Nations prior to the onset of ground disturbing project activities (Sutphin 2024; Santucci 2024).

Arcadis/Dewberry, on behalf of DDC, has prepared this Work Plan for Phase IB Archaeology of the area of archaeological sensitivity within the Direct APE, the Phase IB Survey Area (Survey Area), including an Unanticipated Discoveries Plan for the project (**Figure 4**). The Work Plan presents a brief environmental and historic context for the Survey Area, outlines the research design guiding the Phase IB investigation, details the field and laboratory methodology, identifies critical personnel associated with the archaeological investigation, and provides a project schedule and communications protocol regarding the fieldwork and its results. The Work Plan includes both an Unanticipated Discoveries Plan and a Protocol for Handling Human Remains. Arcadis/Dewberry will conduct the Phase IB field investigation within 10 days of LPC's review and concurrence of the Work Plan and following DDC/NYPD consultation with affiliated Tribal Nations consisting of the Delaware Tribe, the Delaware Nation, the Stockbridge-Munsee Community Band of Indians (Stockbridge-Munsee), the Shinnecock Indian Nation, and the Unkechaug Nation.

Environmental and Historic Context

Geology

The Survey Area falls within the New York-New Jersey Highlands, a portion of the Reading Prong, which is an extension of the New England Upland Physiographic Province. The Highlands consist of a rugged, high elevation region of forested ridges and valleys extending from the Delaware River northeast across the Hudson into Connecticut. Manhattan and the Bronx are within the Manhattan Prong of the Highlands Province. The Manhattan Prong formed approximately 550 million years ago and consists of rolling hills and valleys that overlie bedrock. The hills are comprised of metamorphic rocks resistant to erosion (Miracosta 2023; Public Water 2023; McCully 2018).

The bedrock beneath Pelham Bay Park consists of the Hartland Formation, most likely dating to the Cambrian-Ordovician age. Metamorphic and igneous rocks metamorphosed from shale comprise the Hartland Formation. Exposed schist outcrops have been documented on the North and South Twin Islands, Orchard Beach (USGS 2023; Pellegrini 2019; McCully 2018).

Soils

The Natural Resources Conservation Service Websoil Survey maps one soils type within the Survey Area—North Meadow-Urban Land Complex (NUB) (NRCS 2023). his complex consists of 70 percent North Meadow soils and 18 percent Urban Land. North Meadow soils are composed of loamy human-transported material over fill. **Table 1** presents the typical pedon associated with the mapped soils.

Topography and Hydrology

Elevations along Park Drive vary between 5 and 20' (1.5 and 6.1m) asl with the highest points at the traffic circle formed by City Island Road and Park Drive. Eastchester and Pelham bays surround the Rodman's Neck Firing Range. The far northern portion of the Survey Area is within 1,000' (304.8m) of Pelham Bay and 1,500' (457.2m) of Pelham Bay. A lagoon and marsh area also sit to the immediate west.

Table 1: Mapped Soil Types within the Survey Area

Soil Type	Component	Horizon	Depth (inches)	Soil Color	Soil Texture	Slope	Drainage
North Meadow-Urban Land Complex (NUB)	North Meadow	^A	0-2	Black	Fine Sandy Loam	3-8%	Moderately Well Drained
		^Bw1	2-20	Reddish Brown	Stone Fine Sandy Loam		
		^Bw2	20-24	Reddish Brown	Sandy Loam		
		^Bw3	24-28	Reddish Brown	Sandy Loam		
		2Bwb1	28-39	Gray and Light Gray	Silt Loam		
		2Bwb2	39-72	Gray and Light Bray	Silt Loam		
	Urban Land, till substratum	M	0-15	Not provided	Cemented Material	0-3%	Not provided
		2^C	15-79		Gravelly Sandy Loam		

Brief Historic Overview

The Phase IA study provides a detailed precontact overview and discussion of historic development within the Direct APE. This Work Plan provides a summary of that discussion focusing on the archaeological sensitivity of the Survey Area. Further information is provided in the Phase IA.

Precontact Overview

The 1851 Sidney & Neff *Map of Westchester County, New York* documents an Indian Burial Ground along the eastern shore of Rodman's Neck, northwest of the Survey Area (Arcadis/Dewberry 2024: Figure 5). Robert Bolton, in his 1881 *The History of the Several Towns, Manors, and Patents of the County of Westchester*, may have identified this mapped burial ground in recording an indigenous burial area near the entrance of Pelham Neck. He noted the presence of numerous mounds close to the water's edge on the former Rapelyea (Rapelye) estate. Excavation of one of these mounds yielded human remains associated with a stone axe and flint spear. Bolton further observed that Rodman's Neck "appears to have been used by the Indians for the purpose of sepulture; in proof of this, their remains have been found in almost every part of it" (Bolton 1881:70).

Reginald Bolton, in his "Indian Paths in the Great Metropolis," associated Rodman's Neck with the possible Native American settlement of *Asumsowis*. Excavation of this possible site on the northeastern side of Rodman's Neck by M. Harrington, recovered a large amount of shell and charcoal, along with several human burials (Bolton 1922:227). Bolton also identified an Indigenous trail extending from Rodman's Neck to the north, following the general path of City Island Road and Shore/Pelham Bridge Road (Bolton 1922:125; Grumet 1981:69; HPI 2022).

In his 1996 *Archaeological Evaluation and Sensitivity Assessment of the Prehistoric and Contact Periods Aboriginal History of the Bronx, New York,* Eugene Boesch identified "the area of Pelham Bay Park, including Hunter's Island and Rodman's Neck" with the "greatest potential of any area in New York City for containing Native American sites that are relatively undisturbed" (23). He further observed that

> The area contains environments that are known to be sensitive for the presence of Native American sites. These include ridges, knolls, and other relatively high ground in proximity to sources of fresh water overlooking coves and inlets of Long Island Sound, salt water marshes, and in the Park's interior, fresh water wetlands [Boesch 1996:23].

Furthermore, Cantwell and Wall in their *Unearthing Gotham* describe the Late Woodland occupation of coastal New York with sites

> Located along the coast's bays, inlets, and coves, near fresh water, and frequently within easy walking distance of a variety of available wild foods. These communities appear to have been made up of clusters of houses from which people went to other work sites during the year. There were large storage pits filled with foods for leaner days; drying racks for meat, fish, and shellfish; workshop areas for making pottery, stone tools, clothing, and other necessities; and by the end of the Late Woodland, small gardens [2001:114].

They note Late Woodland peoples may have frequented fishing stations, migratory bird hunting sites, or winter hunting camps and households may have moved around within a given community.

Review of the archaeological site file data through CRIS revealed 26 archaeological sites within a one-mile radius of the Direct APE. New York State Museum (NYSM) Areas/Sites, primarily recorded by archaeologists in the early to mid-twentieth century for which there is minimal descriptive information, constitute half of the previously identified sites. Boesch also recorded at least 16 sites within the vicinity including sites identified by Arthur Parker and Reginald Bolton. Furthermore, Edward Kaeser, in his *The Archaeological Survey of Prehistoric Pelham Bay Park, Bronx County, New York*, summarized archaeological investigations at seven precontact sites within the one-mile radius. While some of these sites may represent the same location recorded by different individuals, nevertheless, these studies reflect extensive precontact activity within the Pelham Bay Park region.

Three unknown precontact sites, NYSM 2836, NYSM 2835 and Boesch 57, consisting of shell heaps, shell middens, and camp sites along Pelham Bay, overlap with the Direct APE. CRIS maps NYSM 2836, a village site with human remains and shell heaps, identified by amateur archaeologists in the early twentieth century. Accurate maps depicting the precise location of the site are not available. CRIS represents the site as a large polygon encompassing much of Orchard Beach including the northern portion of the Direct APE. According to CRIS, NYSM 2835, a shell midden site also without accurate mapping, overlaps with the City Island Traffic Circle and includes a portion of the Direct APE. Working in the 1920s, Arthur Parker documented both NYSM 2836 and NYSM 2835 and provided minimal descriptive and location information beyond Pelham Bay and City Island. As such, the site boundaries presented by CRIS represent conservative estimates derived from limited information rather than precisely delineated horizontal extents. Similarly, Boesch 57 represents "the entire shoreline of Pelham Bay including the shoreline of Pelham Bay Lagoon, Eastchester Bay, and the Hutchinson River/Eastchester Creek" documented by Parker as "scattered shell middens and other camp sites" (Boesch 1996:105). Therefore, while these three sites indicate extensive Indigenous occupation across Pelham Bay Park, they do not provide a specific location for past precontact activity.

Arcadis/Dewberry completed a Phase IB/Phase II archaeological investigation associated with proposed improvements at Orchard Beach, north and east of the Survey Area in 2023. These investigations identified three multicomponent archaeological sites—Orchard Beach-Locus 1 (501.003570), Orchard Beach-Locus 2 (501.003571), and Orchard Beach-Locus 3 (501.003572). Orchard Beach-Locus 1 consists of a low density precontact lithic scatter with a quartz Levanna Projectile Point, a broken smokey quartz point, a large test quartz cobble, and quartz and jasper debitage. The Orchard Beach-Locus 2 Site yielded the greatest diversity of material types and forms including two precontact ceramic sherds, one a Jack's Reef Corded type; four pieces of FCR; two refitting projectile point base fragments; two utilized flakes; and debitage, reflecting primarily lithic processing and refinement in addition to possibly short-term occupation activities including food preparation during the Middle to Late Woodland Period. The Orchard Beach-Locus 3 Site consists of a hammerstone, a pebble mortar, a quartz preform, and a quartz flake fragment. The recovered assemblage also reflects limited quartz refinement with the pebble mortar suggesting additional resource processing on site (Arcadis/Dewberry 2023).

The large number of recorded precontact archaeological sites and the historic documentation of Native American burial grounds within Rodman's Neck, suggests a high likelihood for precontact occupation of the Direct APE and its vicinity.

Mapped Historic Development

Historic accounts document the 1776 landing of British troops and the position of British advances along Rodman's Neck during the Battle of Pell's Point. Skirmishes between Continental troops and the British occurred further northeast and outside of the peninsula (Sauthier 1777). Following the Revolutionary War, large country estates developed along Rodman's Neck and within larger Pelham. The 1896 United States Coastal Survey (USCS) map depicts a dock within the far northeastern portion of the Direct APE; the 1905 *Topographical Atlas Map* indicates a small building complex within or near the Survey Area; several informal roads and historic Park Drive also extend through the Direct APE (**Figure 5**). Historic aerial imagery from the 1920s document road development within portions of the Direct APE coincident with the World War I era U.S. Navy's Pelham Bay Naval Training Station and Hospital (City of New York 1924). Development of Orchard Beach in the 1930s resulted in dramatic modifications to Rodman's Neck with the addition of 115 acres of land. By 1954, current Park Drive was extant, and the far northeastern portion of the Direct APE had been filled (Nationwide Environmental Title Research, LLC (NETR 2024).

Research Design

In the Phase IA study, Arcadis/Dewberry concluded the extent of past disturbance within the proposed utility corridor northeast of City Island Circle is uncertain despite the evidence for extensive disturbance throughout much of the Direct APE, particularly the Rodman's Neck Training Facility. As such, in light of the documented precontact occupation of Pelham Bay Park, the Survey Area was assessed with moderate potential for precontact archaeological resources. In addition, given the mapped early-twentieth century structures within two locations along this portion of the utility corridor, these locations were also assessed with moderate potential for historic archaeological deposits (Arcadis/Dewberry 2024). In March 2024, LPC concurred with Arcadis/Dewberry's recommendations to prepare an archeological work plan for the project. LPC noted "while shovel test pits may be part of the work plan, the testing should reach the full depths of the proposed project impacts to provide useful results" (Santucci 3/5/204). LPC also recommended development an Unanticipated Discoveries Plan for the project as despite the evidence for subsurface disturbance within much of the Direct APE, the area once possessed archaeological sensitivity.

The Phase IB field investigation will determine the presence or absence of intact cultural deposits within the Survey Area. Specifically, the Phase IB will seek to address the following questions:

- To what extent did twentieth century development disturb the soil profile within the Survey Area? Is the soil profile truncated? Within the limits of proposed ground disturbance, does the Survey Area contain undisturbed soils, and if so, are those soils cultural bearing?
- Are there precontact archaeological deposits within the Survey Area? If present, do these deposits represent an intact precontact ground surface? Are there diagnostic materials or intact features reflecting a time period of occupation and/or suggest the type of occupation, e.g., short term, long term, repeated resource exploitation, etc.? Does the precontact deposit(s) have integrity; does it appear to be intact?
- Is there a potential for intact Indigenous burials within the Survey Area? Is there evidence for a shell midden or heap deposits?
- Are there late-nineteenth century deposits within the Survey Area? Is there an intact historic period ground surface? What does the historic deposit suggest about past occupants and past activities within the property?
- If cultural material is recovered, does that material represent an archaeological site? Can boundaries be established? Does the site appear to be intact and integral? Does it have the potential to yield further information regarding past occupation of the Survey Area?

- If intact soils or cultural deposits are uncovered, is there a potential for intact deposits within Park Drive, beneath the existing road bed?

Project Methods

To investigate the research questions outlined above, Arcadis/Dewberry will conduct a systematic Phase IB survey of the Survey Area, excavating along the grass shoulder of Park Drive. The survey will consist of archaeological fieldwork, laboratory analysis, and a synthetic report presenting the results of the field investigation and offering recommendations regarding the project and its potential effects to cultural resources. The Phase IB survey will adhere to LPC's *Guidelines for Archaeological Work in New York* (2018). The following discussion outlines the three components to the Phase IB survey—fieldwork, laboratory analysis, and final report.

Phase IB Field Survey

Following LPC approval of the Phase IB Work Plan and DDC/Parks consultation with the affiliated Tribal Nations, Arcadis/Dewberry will initiate the New York City One-Call Utility mark-outs for the proposed archaeological field-testing program. No subsurface investigations will occur prior to completion of the utility mark-out request.

The Phase IB survey will consist of systematic archaeological survey along the grass shoulder of Park Drive, northeast of City Island Circle, to the termination of the proposed utility corridor. Shovel tests will be spaced at 50-foot (15.2-meter) intervals along a linear transect extending from south to north, parallel to Park Drive northeast of City Island Circle (**Figure 6**). The location of excavated shovel tests will be recorded with handheld GPS units employing sub-meter accuracy. The survey proposes 70 shovel tests to investigate the presence or absence of archaeological resources. Each shovel test will measure between 40 to 50 cm (15.7" to 19.7") in diameter. The shovel tests will be excavated by hand to the terminal depth of proposed ground disturbance, 6.0 feet (1.8 meters) below the surface, unless terminated by a natural or human-made impasse. Shovel tests will be excavated via shovel to a depth of approximately 3.0 to 4.0 feet (0.9 to 1.2 meters) and then subjected to further testing via a hand auger to 6.0 feet (1.8 meters). If intact, potential cultural-bearing soils are uncovered via the auger excavation, the location and depth of the matrix will be noted. Except for the handheld auger, excavation below a depth of 4.0 feet (1.2 meters) is beyond the scope of this Work Plan.

Proposed shovel tests may be offset from their grid location or precluded from excavation due to standing water, exposed bedrock, or evident subsurface disturbance including paved areas and modern features. Photographs will be taken throughout the Phase IB survey to document existing conditions, including areas precluded from testing, and the exposed soil profile.

Excavated soil will be screened through ¼-inch hardware cloth. Artifacts appearing to be 50 years of age and over will be retained, except for common materials (brick, charcoal, etc.), which will be quantified in the field; a sample will be retained, and the remainder discarded. Additional closer interval testing will be conducted around shovel tests positive for potentially significant cultural material. Where possible, four radial tests will be plotted at 3-meter (9.8-foot) intervals along the grid-based cardinal directions from isolated positive shovel tests. Radial testing may also be conducted to delineate boundaries of identified artifact scatters.

Excavated shovel test data will be recorded on handheld tablet computers utilizing ArcGIS Survey123 software. This mobile data collection system includes shovel test transect/number, a stylized profile drawing with a detailed description of strata, soil types, Munsell color descriptions, depth measurements, and a list of cultural material observed and/or recovered. Survey123 data are uploaded to a cloud based sever upon completion of each shovel test, enabling immediate and reliable data entry. Depth measurements will be taken from ground surface and will be tied to the ground surface elevation obtained by a previous topographic survey tied to the North American Vertical Datum of 1988 (NAVD88).

Laboratory Analysis

Recovered artifacts will be transported to Arcadis/Dewberry's archaeological laboratory in Parsippany, New Jersey for processing. Recovered artifacts are assigned a Field Specimen number corresponding to the individual shovel test and layer from which the artifacts originated, or the artifact provenience. The provenience describes where an object was found in relation to other objects on a site and is an important tool when interpreting an archaeological site's context and setting.

Field Specimens are cleaned individually to avoid mixing or comingling artifacts from separate contexts. Artifacts are cleaned according to their material type. Metal material is cleaned using a dry brush to avoid introducing rusting agents. Bone and wood artifacts are also cleaned using a dry brush technique. Precontact ceramics are cleaned with a wet sponge to reduce the potential to damage their friable structure. Most other artifacts, such as glass and historic ceramics, can be submerged in water and scrubbed with a wet toothbrush.

Once the artifacts have been cleaned, Arcadis/Dewberry's archaeologists will inspect the cleaned material and classify the material into categories based upon their material type. Typically, these categories are ceramic, stone, bone, and organic material. Artifacts will be described in more detail in an artifact catalog, or a database of explanatory information used to interpret the prior site activities. The results of the artifact analysis will be included in the Phase IB archaeological report.

After preliminary processing, the collections will be sorted by major material classes: historic ceramics, curved glass (bottle, table, and furniture glass), pipes, small finds/architectural, bone, floral, shell, and aboriginal (precontact), or similar categories. Specialists will then analyze the archaeological material. Excavated artifacts will be temporarily housed at the archaeological consultant's laboratory during the analysis and preparation of the report summarizing the archaeological investigations.

Identification of Artifact Repository

Artifacts removed from the Project will be the property of NYPD as the landowner. Upon the conclusion of the Phase IB, if the recovered artifacts are determined to be insignificant or do not constitute an archaeological site, the artifact assemblage will be returned to NYPD who may then choose to retain and store the collection or may seek out alternative methods of disposal. DDC, as the entity sponsoring the archaeological investigation, will assist NYPD in developing a plan for material storage and/or disposal.

If the artifacts are determined to be part of a potentially significant assemblage or archaeological site, DDC will assist in identifying an appropriate long-term repository accepting of the artifacts, samples, and related project materials for long-term storage and curation. The repository would meet the S*tandards for the Curation of Archaeological Collections*, Section 7, of the *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State* (NYAC 1994), adapted from the Department of the Interior, National Park Service (36 CFR Part 79) and the *Standards of Research Performance of the Register of Professional Archaeologists*. Consultation with LPC and the affiliated Tribal Nations regarding the selection of the repository will be completed as necessary. The Nan A. Rothschild Research Center at the Archaeology Repository is anticipated to accept a significant portion of the assemblage for long-term curation.

Phase IB Report

Following completion of the analysis of the field data, including cleaning and analysis of artifacts, synthesis of shovel test stratigraphic data and delineation of archaeological site(s), if present, Arcadis/Dewberry will prepare a comprehensive report summarizing the results of the Phase IB archaeological survey. The report will be consistent with the LPC *Guidelines for Archaeological Work in New York City* (2018) and will document the presence or absence of archaeological resources in the Survey Area. The report will also describe the potential significance of identified archaeological site(s) and will include a description of field and laboratory results with results integrated into conclusions addressing the research design issues identified in the Work Plan. The report will include, as appropriate,

photographs of the Survey Area, a scaled map of the project area showing where fieldwork occurred, photographs of significant artifacts, and a bibliography of works consulted. The artifact catalog and shovel test results will be presented as appendices to the report.

Protocol for Handling of Human Remains

Given the historic accounts of Indigenous burial grounds on Rodman's Neck, this Work Plan includes procedures which will be adhered to if human remains or suspected human remains (including both intact graves and disarticulated human remains) are identified during the Phase II fieldwork. The Phase II field effort is subject to the "Unmarked Burial Site Protection Act," Part OO of New York State Senate Bill S04005 and will follow policies established by the act in addition to the following procedures (2023).

1. The field archaeologists will stop work immediately in the area of the find to protect its integrity. The location of the find will be flagged or fenced to ensure the safety of the human remains and to avoid potential impacts. No project activities will be allowed within 50 feet (15.2 meters) of potential human remains.

2. The field archaeologists will visually inspect the human remains to evaluate the find's potential temporal affiliation. Efforts will be made to discern if the remains could be affiliated as potentially Lenape/Delaware. If this preliminary evaluation suggests human remains may be of Lenape/Delaware origin, the archaeologists will observe Tribal Nation concerns and follow protocols outlined in Tribal Inadvertent Discovery Policies established by the Delaware Nation and the Stockbridge-Munsee included as Appendix A and B. Other Tribal policies may be added if requested by Tribal Nations consulting with Parks. No photographs will be taken during this preliminary inspection, no documentation will be conducted as part of the visual inspection, and associated cultural material, if present, will not be removed or disturbed.

3. Following this evaluation, the Field Director will notify DDC of the preliminary significance/affiliation of the find.

4. Potential human remains must always be treated with the utmost dignity and respect. The archaeologists will not restart work in the area of the find or within the 50-foot (15.2-meter) buffer until DDC/NYPD has received clearance following consultation with LPC and affiliated Tribal Nations.

5. If the find is determined to be human remains or if the find is ambiguous, the Field Director will notify both NYPD and the Forensic Anthropology Unit of the Office of the Chief Medical Examiner (OCME) of the find, and cooperate with OCME to notify, as required, additional law enforcement agencies, as appropriate.

OCME Contact:	Forensic Anthropology Unit
Telephone:	Primary: 212.447.2030
Address:	520 First Avenue, New York, New York 10016

6. DDC will promptly notify LPC of the find and will, if applicable, contact the affiliated Tribal Nations that have elected to consult on this project.

LPC Contact:	Amanda Sutphin, Director of Archaeology
Telephone:	(212) 669-7823
Address:	New York City Landmarks Preservation Commission 1 Centre Street, 9th Floor, New York, NY 10007
E-mail:	asutphin@lpc.nyc.gov

7. If the appropriate law enforcement agencies determine no modern concerns exist for the remains, DDC will follow procedures developed in consultation with LPC and the affiliated Tribal Nations which may include placement of specific objects with the remains and covering the remains in natural fiber cloth.

8. Work will not resume in the vicinity of the find or within 50 feet (15.2 meters) until appropriate procedures have been developed in consultation with the affiliated Tribal Nations and LPC.

Unanticipated Discovery Protocol

Although the Phase IA identified extensive disturbance across much of the Direct APE, given the documented Indigenous occupation of Pelham Bay Park and its vicinity, this Work Plan includes procedures for the unanticipated discovery of cultural resources during construction activities. The Unanticipated Discovery Protocol consists of provisions for education and training of construction staff prior to ground disturbing activities and procedures for handling archaeological deposits if encountered.

Education and Training

Prior to ground disturbing activities within the Direct APE, a Principal Investigator (PI), meeting the Secretary of Interior qualifications (SOI-qualified) for archeology (36 CFR 61), will conduct an on-site instructional class providing an overview of the cultural resource sensitivity and an introduction to archaeological resources. The instructional session will be designed to assist the construction team in identifying potential cultural deposits and to help foster an appreciation and respect for archaeological resources and the archaeological sensitivity of the project area.

The PI will provide at most three information sessions, scheduled at different times throughout a given day or over the course of multiple days to include construction team staff involved in potential ground disturbing activities. Each information session will be held in a field classroom setting providing technology for visual and hands-on learning. The session will include a presentation with slides detailing the known Indigenous occupation and historic development of the area, descriptions of potential cultural material to be encountered, suggestions for how to identify potential cultural deposits, and guidance on recognizing potential burials or associated funerary items. Slides providing examples of cultural features, including precontact artifacts, historic material, historic features, such as privies or foundations, and precontact features, such as shell middens, will be employed during the information session; culturally sensitive hands-on examples of artifacts may also be presented. The PI will stress the importance for the construction team to contact the on-call archaeologist if they suspect project activities have encountered archaeological resources and the need to treat potential human remains and/or associated burial items with respect and care. The presentation will include a handout outlining contact procedures, including the contact person and procedures for safeguarding the potential cultural find until examination by an archaeologist.

Following each information session, the attendees will be asked to sign a sheet reflecting their participation. The construction team is responsible for confirming staff participating in potential ground disturbing activities attends the information session. The PI should be contacted if there are new team members or other individuals who did not attend the on-site educational meeting and provisions will be made to confirm on-site training prior to those individuals conducting potential ground disturbing activities.

Procedures for Unanticipated Cultural Resources

The construction team will stop work and notify the project Resident Engineer (RE) of a potential cultural find upon initial identification. The RE will then follow the project chain of notification including DDC and the PI to inform them of the potential resource. The construction team will not resume project activities in the location and will install signage and barriers to prevent project activities within 50 feet (15.2 meters)

until an archaeologist has had a chance to examine the potential find. The cultural resource consultant will provide an SOI-qualified archaeologist to investigate the potential find within 24 hours of notification. The archaeologist will have up to two hours to examine the potential resource and make a preliminary assessment of its potential significance. If the archaeologist identifies potential human remains and/or associated funerary items, the Human Remains Protocol will be followed.

During the two-hour review, the archaeologist will investigate and document the potential archaeological deposit and may ask to examine back dirt from the area. This investigation may include hand excavation, screening of excavated soil and/or spoil piles, scaled drawing, photographic documentation, and/or recording of soil color and texture. The archaeologist may also ask the construction team to remove soil to further expose the potential find. If the archaeologist determines the deposit does not represent a significant archaeological find, they will inform DDC and the RE, who will then instruct the construction team to resume project activities in the location. If the archaeologist identifies the deposit as significant, further consultation with LPC, Tribal Nations, and DDC will be conducted to determine project next steps, including potential redesign to avoid potential adverse effects and protect the resource. Project activities will not resume in the location without approval of LPC and the Tribal Nations.

Prior to the onset of construction activities, the construction contractor, DDC, NYPD, and LPC will acknowledge the steps and provisions set forth in both the Human Remains Protocol and the Unanticipated Discoveries Protocol.

Project Management and Timeline

Project Management

Arcadis/Dewberry will provide cultural resource staff to conduct the Phase IB Archaeological Survey. The lead staff and their respective roles in the Phase IB investigation are as follows:

- Zachary Davis, RPA, Cultural Resources Lead, will serve as overall Project Manager throughout the Phase IB survey. Mr. Davis will serve as primary contact with DDC and will participate in kick-off and status meetings. He will provide final QAQC on reports and communications to DDC and for submission to LPC. Mr. Davis may provide on-site education training as Principal Investigator.

- Tina Fortugno, RPA, Senior Archaeologist, will serve as Field Director, overseeing and conducting the Phase IB Archaeological Survey. Ms. Fortugno will be the primary contact in the field throughout the field survey. DDC will be notified if Ms. Fortugno is not on site on a given day and the field contact for that day will be provided. Ms. Fortugno will contribute to the analysis of the field and laboratory results and will be a primary author of the Phase IB Report. Ms. Fortugno may provide on-site education training as Principal Investigator.

- Lauren Cook, RPA, Senior Archaeologist, will participate in the field effort and may serve as Field Director if Ms. Fortugno is off-site. Mr. Cook will contribute to the laboratory and data analysis and to the Phase IB Report. Mr. Cook may provide on-site education training as Principal Investigator.

- Niall Conway, RPA, Archaeologist, will serve as Crew Chief, helping to oversee and conduct the Phase IB Archaeological Survey. Mr. Conway may also operate as Field Director if Ms. Fortugno is off-site. Mr. Conway will contribute to the laboratory and data analysis and to the Phase IB Report.

Additional Arcadis/Dewberry staff will support Ms. Fortugno, Mr. Cook, and Mr. Conway during the Phase IB Archaeological Survey. This support will include field technician assistance, as well as GIS support and technical editing assistance in the production of field maps, synthesis of field data, and completion of the Phase IB Report.

Project Timeline

Within 10 days of LPC's review and approval of the Work Plan and following DDC/NYPD consultation with the Tribal Nations, Arcadis/Dewberry will initiate the Phase IB survey by filing the One-Call Markout request. Following the One-Call clearance, Arcadis/Dewberry will begin and complete the systematic survey within 10 work days. This schedule assumes significant archaeological sites and/or potential human remains are not identified. The presence of such cultural deposits, particularly of potential human remains, may require additional consultation and revisions to the scope of work, resulting in scheduling delays.

Within five days of completion of the Phase IB fieldwork, Arcadis/Dewberry will complete a Field Memo, detailing the preliminary results of the survey, which DDC will provide to LPC for review. Assuming significant archaeological sites and/or potential human remains are not identified, Arcadis/Dewberry will complete the Phase IB Archaeological Survey Report within 30 days of completion of the fieldwork. DDC will provide the Phase IB Archaeological Survey Report to LPC within 45 days of the end of the field investigation.

Project Communications

Zachary Davis, Cultural Resources Lead, will serve as primary contact for the Phase IB Archaeological Survey. Mr. Davis will participate in the kick-off meeting, will regularly communicate with DDC, and with DDC's authorization, will discuss the field effort with LPC and other consulting parties. Arcadis/Dewberry will assist DDC/NYPD in their consultation with the affiliated Tribal Nations throughout the Phase IB effort, including introducing the project and providing updates and reports as provided to LPC. During the field effort, Tina Fortugno, Senior Archaeologist, will be the primary contact in the field and will provide regular updates to Mr. Davis and DDC, as requested.

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Source: Copyright:© 2013 National Geographic Society, i-cubed

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NYC DDC Department of Design and Construction

PROJECT LOCATION

DDC CAPIS ID: PO79ROD

NYPD Rodmans Neck Firearm and Tactics Facility
Bronx, New York

SCALE: 1" = 2000'

DATE: April 2024

Arcadis Dewberry a Joint Venture
27-01 Queens Plaza North, Suite 800
Long Island City, NY 11101

FIGURE 1

BOROUGH OF BRONX

NEW YORK

CT BNDY

EASTCHESTER BAY

US ARMY RSRVTN

JFKL

LONG IS SND SHL

Direct APE

B: 5650
L: 1

PARK DR

EASTCHESTER BAY SHL

LEGEND

- Direct APE
- Tax Parcel Boundary
- Proposed Building
- Proposed Bioretention and Stormwater Planters
- Proposed Landscpe Islands
- Proposed Utility Line

0 100 200 400 Feet

Source: NYS Office of Information Technology Services, GIS Program Office. Nearmap Imagery Online Service, ESRI.
NYC Department of City Planning, Information Technology Division, MapPLUTO 22v1, 2022. Langan Engineering & NYC Department of Design and Construction, 2023

NYC DDC Department of Design and Construction

DETAILED VIEW OF PROPOSED IMPROVEMENTS

DDC CAPIS ID: PO79ROD

NYPD Rodmans Neck Firearm and Tactics Facility
Bronx, New York

SCALE:1 " = 200 ' DATE: April 2024

Arcadis Dewberry a Joint Venture
27-01 Queens Plaza North, Suite 800
Long Island City, NY 11101

FIGURE 2

Path: \\ffx-fs1\Parsippany\Projects-ENV\50085489\50141248 - 030 Rodmans Neck Phase IB\GIS\Mxd\2_DDCRodmansNeck_DetailedViewofProposedImprovement_ImpactAreas.mxd

BOROUGH OF BRONX

ORCHARD BCH BDWK

LONG IS SND SHL

CITY IS BR

CITY ISLAND AV

CITY I

NEW YORK

EASTCHESTER BAY

B: 5650
L: 1

PARK DR

PELHAM LAGOON SHL

CT BNDY

US ARMY RSRVTN

Direct APE

ORCHARD BEACH RD

CITY ISLAND RD

EASTCHESTER BAY SHL

EASTCHESTER BAY SHL

LEGEND

- Direct Area of Potential Effects (APE)
- Tax Parcel Boundary

0 225 450 900 Feet

Source: NYS Office of Information Technology Services, GIS Program Office. Nearmap Imagery Online Service, ESRI.
NYC Department of City Planning, Information Technology Division, MapPLUTO 22v1, 2022. Langan Engineering & NYC Department of Design and Construction, 2023. NYSHPO, 2019.

Path: Q:\150085489\150141248 - 030 Rodmans Neck Phase IB\GIS\Mxd\3_DDCRodmansNeck_DirectAreaofPotentialEffects.mxd

NYC DDC Department of Design and Construction

DIRECT AREA OF POTENTIAL EFFECTS (APE)

DDC CAPIS ID: PO79ROD

NYPD Rodmans Neck Firearm and Tactics Facility
Bronx, New York

SCALE: 1 " = 450 ' DATE: April 2024

Arcadis Dewberry a Joint Venture
27-01 Queens Plaza North, Suite 800
Long Island City, NY 11101

FIGURE 3

BOROUGH OF BRONX

ORCHARD BCH BDWK

LONG IS SND SHL

CITY IS BR

CITY ISLAND AV

CITY I

NEW YORK

EASTCHESTER BAY

PARK DR

PELHAM LAGOON SHL

CT BNDY

US ARMY RSRVTN

Direct APE

ORCHARD BEACH RD

PARK DR

CITY ISLAND RD

EASTCHESTER BAY SHL

EASTCHESTER BAY SHL

Path: Q:\150085489\50141248 - 030 Rodmans Neck Phase IB\GIS\Mxd\4_DDCRodmansNeck_PhaseIBArchaeologicalSurveyArea.mxd

LEGEND

- Direct APE
- Moderate Historic Archaeological Sensitivity
- Moderate Precontact Archaeological Sensitivity
- Survey Area

NOTE: Areas not shaded as Moderate Historic Archaeological Sensitivity or Moderate Precontact Archaeological Sensitivity indicate no archaeological sensitivity in those areas.

0 225 450 900 Feet

Source: NYS Office of Information Technology Services, GIS Program Office. Nearmap Imagery Online Service, ESRI.
NYC Department of City Planning, Information Technology Division, MapPLUTO 22v1, 2022. Langan Engineering & NYC Department of Design and Construction, 2023

NYC DDC Department of Design and Construction

PHASE IB ARCHAEOLOGICAL SURVEY AREA

DDC CAPIS ID: PO79ROD

NYPD Rodmans Neck Firearm and Tactics Facility
Bronx, New York

SCALE: 1" = 450' DATE: April 2024

Arcadis Dewberry a Joint Venture
27-01 Queens Plaza North, Suite 800
Long Island City, NY 11101

FIGURE 4

LEGEND

- Direct APE
- Survey Area

0 225 450 900 Feet

Source: 1905 Topographical Atlas of Bronx NY

Department of Design and Construction

LOCATION OF DIRET APE IN 1905

DDC CAPIS ID: PO79ROD

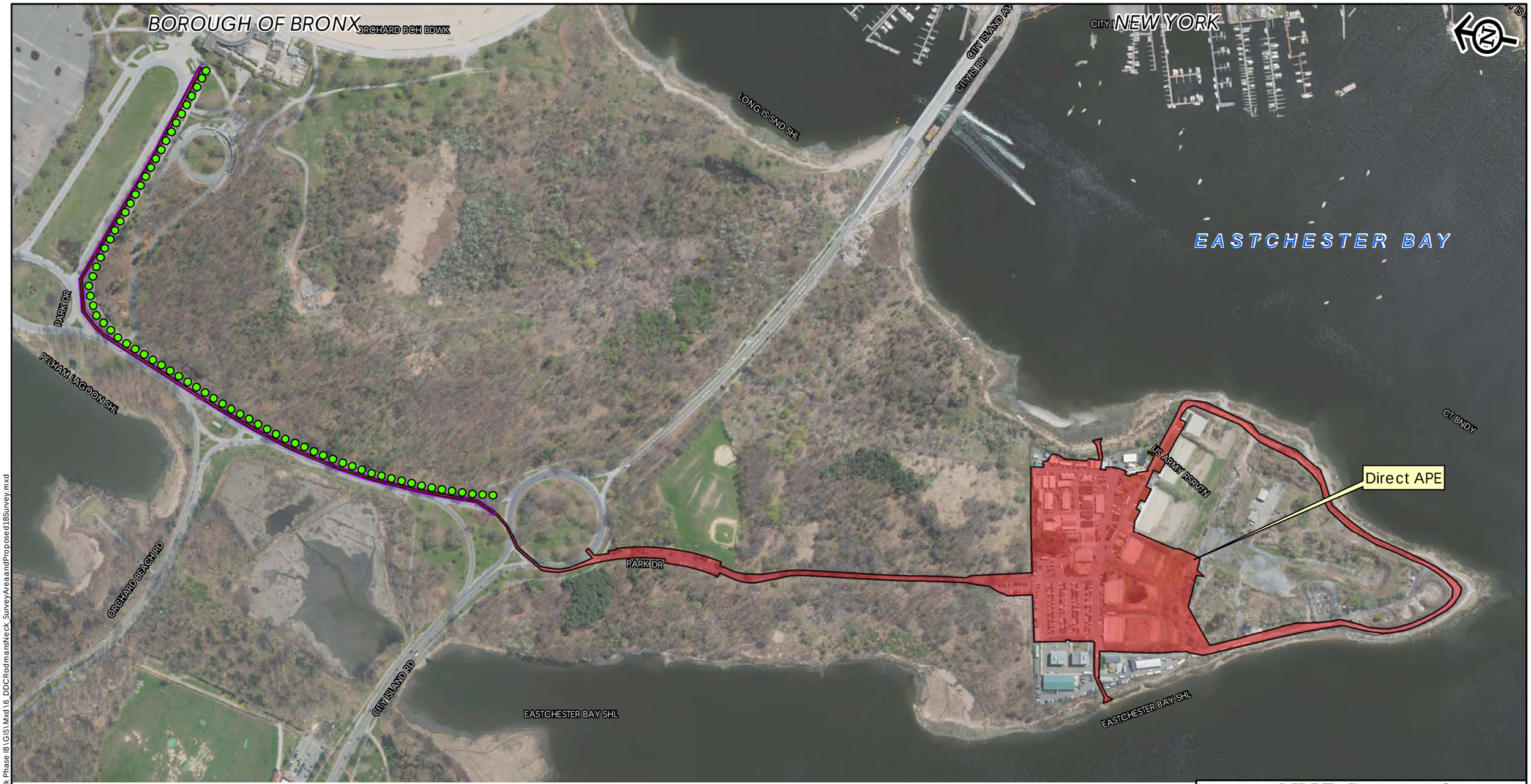
NYPD Rodmans Neck Firearm and Tactics Facility
Bronx, New York

SCALE: 1" = 450' DATE: April 2024

Dewberry

FIGURE 5

Path: Q:\50085489\50141248 - 030 Rodmans Neck Phase IB\GIS\Mxd\15_DDCRodmansNeck_LocationofDirectAPEin1905.mxd



LEGEND

- Direct APE
- Survey Area
- Proposed Shovel Tests

0 225 450 900 Feet

Source: NYS Office of Information Technology Services, GIS Program Office. Nearmap Imagery Online Service, ESRI.
NYC Department of City Planning, Information Technology Division, MapPLUTO 22v1, 2022. Langan Engineering & NYC Department of Design and Construction, 2023

Path: Q:\150085489\150141248 - 030 Rodmans Neck Phase IB\GIS\Mxd\6_DDCRodmansNeck_SurveyAreaandProposed1BSurvey.mxd

NYC DDC Department of Design and Construction

SURVEY AREA AND PROPOSED PHASE IB SURVEY
DDC CAPIS ID: PO79ROD

NYPD Rodmans Neck Firearm and Tactics Facility
Bronx, New York

SCALE: 1" = 450' DATE: April 2024

Arcadis Dewberry a Joint Venture
27-01 Queens Plaza North, Suite 800
Long Island City, NY 11101

FIGURE 6

APPENDIX A

DELAWARE NATION
HISTORIC PRESERVATION DEPARTMENT

INADVERTANT DISCOVERY POLICY

Purpose:

The purpose of this policy is to outline procedures that will be followed by all agencies, contractors, or others in the event of an inadvertent discovery of human remains or cultural materials that are identified as potentially Lenape / Delaware.

Treatment and Disposition of Human Remains and Cultural Items:

1. The federal agency or contractor shall contact Delaware Nation immediately, but no later than three days after the discovery of remains and/or artifacts including all of the contacts listed below:

Carissa Speck, *Director of Historic Preservation*
cspeck@delawarenation-nsn.gov
405-247-2448 ext 1403

Katelyn Lucas, *Tribal Historic Preservation Officer*
klucas@delawarenation-nsn.gov
405-544-8115

2. Place tobacco with human remains and/or funerary objects

3. Cover remains and funerary objects with a natural fiber cloth such as cotton or muslin when possible.

4. Absolutely no photographs are to be taken.

5. The preferred treatment of inadvertently discovered cultural materials and/or human remains is to leave them in-situ (in place) and protect them from further disturbance.

6. Non-destructive "in-field" documentation of the remains and cultural items shall be carried out only in consultation with Delaware Nation, who will determine appropriate methods of recordation depending upon the circumstances.

7. If the remains and cultural items are to remain in-situ, the requirements of 43 CFR 10 Sections 10.4-10.6 will have been fulfilled.

8. The specific location(s) of discovery shall be withheld from disclosure (with the exception of local law officials and tribal officials as described above) and protected to the fullest extent by federal law.

9. If remains and funerary objects are to be removed from the site, specific procedures and considerations will be determined by Delaware Nation in consultation with the federal agency.

APPENDIX B

Stockbridge-Munsee Community
Band of Mohican Indians
Policy for
Treatment and Disposition of Human Remains and Cultural Items
That May be Discovered Inadvertently

Purpose

The purpose of this policy is to outline procedures that will be followed by all agencies, contractors or others in the event of an inadvertent discovery of human remains or cultural materials that are identified as potentially Stockbridge-Munsee (Mohican).

Treatment and Disposition of Human Remains and Cultural Items

1) The federal agency or contractor shall contact the Stockbridge-Munsee Community immediately, but no later than three days after the discovery of the remains and/or artifacts at the contact information below:

updated September 2022

Jeff Bendremer, Tribal Historic Preservation Officer (THPO)	thpo@mohican-nsn.gov	413-884-6029 office 715-881-2254 cell

If unavailable, contact:

Bonney Hartley, Tribal Historic Preservation Manager	Bonney.Hartley@mohican-nsn.gov	413-884-6048 office
Monique Tyndall, Cultural Affairs Director	Monique.Tyndall@mohican-nsn.gov	715-793-4270 office
Linda Mohawk Katchenago, Administrator	Linda.Katchenago@mohican-nsn.gov	715-793-4355 office

2) Place tobacco with human remains and/or funeral objects.

3) Cover remains and funeral objects with a natural fiber cloth such as cotton or muslin when possible.

4) No photographs will be taken.

5) The preferred treatment of inadvertently discovered cultural materials and/or human remains is to leave them *in-situ* (in place) and protect them from further disturbance.

6) Non-destructive "in-field" documentation of the remains and cultural items shall be carried out only in consultation with the Tribe, who will determine appropriate methods of recordation depending upon the circumstances.

7) If the remains and cultural items are to remain *in-situ*, the requirements of 43 CFR 10 Sections 10.4–10.6 will have been fulfilled.

8) The specific location(s) of discovery shall be withheld from disclosure (with the exception of local law officials and tribal officials as described above) and protected to the fullest extent by federal law.

9) If remains and funeral objects are to be removed from the site, specific procedures and considerations will be determined by Stockbridge-Munsee Tribe in consultation with the federal agency.

City of New York Department of Parks & Recreation
Permit to Perform Work on Park Property
P-CON-A-1.5

NYC Parks

Susan M. Donoghue
Commissioner

The Arsenal
Central Park
New York, NY 10065
www.nyc.gov/parks

Thérèse Braddick
Deputy Commissioner
Capital Projects

Olmsted Center
Flushing Meadows
Corona Park
Flushing, NY 11368

Permit# **X039.E.20241114**
Permittee: Dewberry Engineers, Inc.
Attn: Zachary Davis
8401 Arlington Boulevard
Fairfax, VA 22031
Park Name: **Pelham Bay Park**
Borough of **Bronx**

Start Date: 14 November 2024
End Date: 31 December 2024

Parks Interagency Project Manager:
Irene Papadopoulos

Project Title or Purpose: Access to perform archaeological shovel test pits adjacent to the roadbed of Park Drive

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This document constitutes a construction permit ("Permit") issued by the City of New York City ("City") Department of Parks & Recreation ("Parks") to **Dewberry Engineers, Inc.** ("Permittee") to perform certain construction work known as the **Access to perform archaeological shovel test pits adjacent to the roadbed of Park Drive** from 14 November 2024 until 31 December 2024, (the "Term"), in the location known as Pelham Bay Park as more particularly described on the attached map (hereinafter referred to as the "Permitted Premises" and shown on Attachment A).

1. Grant

A. This Permit grants Permittee a non-exclusive license to enter the Permitted Premises, subject to the terms and conditions of this Permit, for the limited purposes set forth herein. Permittee has no ownership interest in the Permitted Premises and shall have no rights with respect to the Permitted Premises except as set forth herein.

B. This Permit authorizes the following activities (hereinafter referred to as the "Work"):

i. Permittee to perform the construction work described in Attachment B in the Permitted Premises during the Term, and

ii. Permittee to restore the Permitted Premises, along with any other Parks premises or systems affected by the Work as directed by Parks and to Parks' sole satisfaction and approval.

C. Special Conditions

i. Permittee shall exercise caution while digging to avoid accidental electrocution from striking subsurface electric lines which may not be reflected on record drawings or in 811 markups.

ii. Permittee shall keep all vehicles on the roadbed of Park Drive.

iii. Permittee shall have flaggers on site to help direct vehicular and pedestrian traffic around the work area, both on Park Drive and along the pedestrian path adjacent to it.

iv. Permittee shall perform all excavations using hand tools only.

v. Permittee shall restore all impacted areas in-kind, immediately upon completion of the shovel pits. Permittee shall not leave any open excavation areas unattended at any time.

2. General Prohibitions

A. Without separate, express written consent from Parks, Permittee is expressly prohibited from:

i. Occupying, using or in any way affecting Parks premises, systems or resources other than that within the Permitted Premises,

ii. Performing any activities within the Permitted Premises other than those described in Attachment B,

iii. Performing any Work or other activities pursuant to the Permit not supported by industry standards, best practices or applicable construction or material codes, and

iv. Using or connecting to any of Parks' utilities, including but not limited to water and electric service. Permittee must independently source its own utility service.

v. Use or application of pesticides, including herbicides and rodenticides, in and around the Permitted Premises without separate written authorization from Parks.

B. The express prohibitions of this Paragraph 2 do not limit or modify any other terms and conditions contained in the Permit.

3. Notifications

Permittee shall notify the Chief of Operations for the Borough in which the Permitted Premises is situated, or the Chief's designee, at least forty-eight (48) hours before starting the Work.

Contact information for the Chief of Operations of each Borough can be accessed at:

http://www.nycgovparks.org/about/people

4. Conditions and Terms of Issuance

A. Permittee shall strictly adhere to all City, state and federal laws, rules and regulations, including but not limited to the Rules and Regulations of Parks. Parks does not approve or authorize any work or other activities except as set forth in this Permit or its attachments.

B. Permittee shall, at its sole cost and expense, restore and improve any City property damaged, disrupted or disturbed by the Work, or any other activities by the Permittee, whether or not such property lies within the Permitted Premises. Any such restoration and improvement is subject to the same terms and conditions as are the Work to Parks sole satisfaction and approval.

C. Permittee shall be responsible for its contractors, subcontractors, consultants, or any other party used by Permittee in connection with the performance of the Work. Permittee's contractors and subcontractors are bound by the terms and conditions of this Permit and Permittee shall be liable for any damages caused by Permittee's contractors and subcontractors.

D. Permittee acknowledges that all Parks utilities, systems and property within and servicing the Permitted Premises are operational prior the commencement of Work. Any action taken by Permittee that affects any Parks utility, system or property whatsoever obligates Permittee to restore such utilities, systems and property to their fully operational and improved condition as reasonable determined by Parks at Permittee's sole expense and within a time period reasonably determined by Parks.

E. Prior to the commencement of the Work, Permittee shall take a complete and thorough set of photographs showing the existing condition of the Permitted Premises and access areas, and shall submit same to Parks' Construction Permit office. Such photographs will be used to determine the scope of restoration requirements. All Work shall be performed exclusively in the areas shown on Attachment A.

5. Expiration, Termination, and Amendment of Permit

This Permit expires automatically on the Expiration Date and is terminable at will at the discretion of the Commissioner of Parks or their designee ("Commissioner") upon twenty-four (24) hours' notice to Permittee. Extension requests must be made in writing thirty (30) days prior to the Expiration Date. Parks reserves the right to amend this Permit at any time to cover new conditions.

6. Coordination

A. In the event that, during the progress of the Work, Parks authorizes parties other than the Permittee ("Authorized Others") to use the Permitted Premises, Permittee shall coordinate the Work with Authorized Others' activities and shall fully cooperate with and carefully coordinate its own Work with Authorized Others' activities as may be directed by the Commissioner. Permittee shall not commit or permit any act which will interfere with the Authorized Others' activities.

B. If the Commissioner determines that Permittee is failing to coordinate its Work with the activities of Authorized Others as directed by Parks, then the Commissioner shall have the right to terminate the Permit and recover damages, including liquidated damages, from the Permittee until Permittee fully complies with such directions.

C. Permittee shall notify the Commissioner in writing if any Authorized Others fail to coordinate their activities with the Permittee's Work. If the Commissioner finds such charges to be true, the Commissioner shall promptly issue directions to such Authorized Others as the situation may require. The City shall not, however, be liable for any damages suffered by Permittee for any Authorized Others' failure to coordinate their activities with the Work or by reason of the Authorized Others' failure to promptly comply with the directions so issued by the Commissioner, or by reason of any Authorized Others' default in performance, it being understood that the City does not guarantee the responsibility or continued efficiency of any party. Permittee agrees to make no claim against the City for any damages relating to or arising out of any directions issued by the Commissioner pursuant to this Paragraph 6 (including but not limited to the failure of any Authorized Others to comply or promptly comply with such directions), or the failure of the Commissioner to issue any directions, or the failure of any Authorized Others to coordinate their work, or the default in performance of any Authorized Others.

7. Other Agencies and Authorities

A. This Permit is issued for construction work on lands under the jurisdiction of Parks. Permittee shall be responsible for securing any and all other permits required to perform any of the Work.

B. Upon the completion of the Work, Permittee shall furnish to Parks and to any other agency or authority involved in the permitting process for the Work plans of such character as may be directed, showing accurately and distinctly the location, size and type of construction, and complete dimensions of the Work erected or installed in connection with this Permit, as well as the location and dimensions of all substructures encountered during the progress of the Work.

C. The Work shall be open at all times to the reasonable inspection of all agencies and authorities involved in the permitting process for the Work as well as all agencies with applicable oversight authority over any portion of the Work.

8. Forestry Requirements

A. If there are any City-owned trees located within 50 feet of the Permitted Premises, or the Work includes planting of City trees, a Tree Work Permit may be required. City-owned trees include trees located within parkland or the public streets and sidewalks. Application for a tree work permit may be made at https://www.nycgovparks.org/services/forestry/tree-work-permit

B. If applicable, Permittee shall comply with all Forestry requirements set forth in the Tree Work Permit(s) (Attachment C).

9. Access and Use Requirements

A. Permittee shall not commence the Work until all required permits and approvals have been obtained from all appropriate agencies and authorities.

B. For any questions regarding the Permitted Premises, Permittee shall contact the Chief of Operations for the Borough in which the Permitted Premises is located.

C. Prior to any excavation, Permittee shall, contact "One Call Users' Council, Inc." at 1-800-272-4480, to obtain information on underground utilities.

D. Access to the Permitted Premises shall be via Parks' Roads and Paths unless otherwise approved by Parks or any other agency with jurisdiction over adjacent routes.

E. Permittee shall maintain all areas used for access to the Permitted Premises, as well as any staging areas, in a condition acceptable to Parks.

F. Permittee shall not permit construction debris to accumulate anywhere on the Permitted Premises and shall clean up the Permitted Premises on a regular basis during the Construction Term. Permittee is required to remove food waste from Permitted Premises daily.

G. Permittee shall use refuse receptacles of a capacity which has been determined by Parks to not be detrimental to the access roads and paths leading to the Permitted Premises.

H. Permittee shall not park private vehicles on Parks' property.

I. Emergency vehicles must always have access through the Permitted Premises.

10. Maintenance and Restoration of Site

A. Permittee shall, at its sole cost and expense, completely replace and restore to their pre-Work conditions or better all Parks property and systems, including but not limited to planted areas, trees, shrubs, existing structures or substructures, utility lines, roads, walks and curbs, that are damaged or destroyed by Permittee, whether in or outside the Permitted Premises to Parks sole satisfaction and approval.

B. Such replacement or restoration work must comply with all applicable laws, rules, and regulations, be completed within the deadline reasonably established by the Commissioner and be approved by Parks' Construction and Forestry Divisions. All replacement and restoration work shall be performed at the direction and to Parks sole satisfaction and approval, and unless otherwise directed by Parks, reference Parks' standard specifications and details.

C. Upon the expiration or sooner termination of this Permit, all temporary structures, equipment and material belonging to Permittee shall be removed from the Permitted Premises.

D. Guarantee (Other Than Tree Plantings). All materials used to restore the Permitted Premises, subject to settlement, which remain on the Permitted Premises upon the expiration of this Permit shall be maintained and guaranteed by Permittee for a period of one year after the final inspection and acceptance by the Parks.

E. Supervision. Permittee shall have qualified supervisory personnel present at the Permitted Premises during all phases of the restoration to ensure that Permittee adheres to all Parks' specifications.

F. Final Inspection. Permittee shall notify Parks after the Construction Term when the Permitted Premises is ready for final inspection to certify that Permittee has restored the Permitted Premises in accordance with the terms of this Permit. Barricaded areas must be inspected by Parks prior to the removal of any barricades.

G. Allowable Work Hours. All work shall be performed on weekdays between the hours of 7am and 6pm and in accordance with Sections 24-222 and 24-223 of the Administrative Code of the City of New York (the "Code"). No Work other than for emergencies, or as otherwise authorized in the Code, or as required by the City or its appropriate agency is to be performed on Parks property before 7am or after 6pm on weekdays and/or on Saturdays, Sundays or Holidays, except by written permission from Parks and in compliance with all City, state and federal laws and the Parks Rules

and Regulations. If work is to be performed after hours, Parks must receive a certification from the Permittee that the Permittee has developed a Noise Mitigation Plan in accordance with the Code. Details on citywide allowable hours of work can be found at: https://www1.nyc.gov/assets/dep/downloads/pdf/air/noise/noise-code-full-version.pdf. In the event there is a conflict between a provision in this permit and the Code, the Code takes precedence.

H. Safety Devices. Barricades, warning devices, signs, flags, lights, shall be provided and maintained as required to insure public safety. Permittee is responsible for the adequacy of the safety devices. Permittee shall, upon direction by Parks, vary and/or increase the safety devices installed on the Permitted Premises. Permittee shall maintain any such devices in good condition throughout the duration of this Permit.

I. Subsurface Investigations. Off-site Disposal of any spoils from subsurface investigations must be in compliance with NYSDEC solid waste regulations (6NYCRR Part 360). The displaced material can be put back in the hole as-of-right. If imported from off-site, boring hole replacement materials must meet restricted residential usage levels as per 6NYCRR Part 375.6.8(b). Further:

   i. In paved or turfgrass areas: holes must be refilled with grout and made flush with the ground surface/existing asphalt or pavers.

   ii. In natural areas and other unpaved areas: drill equipment must be washed off at each location before proceeding to any subsequent locations. Excess cuttings may not be spread onsite.

J. Regardless of prior existing conditions at the Permitted Premises, all Work and restoration must be performed at a level consistent with standard construction procedures for new work.

11. Modifications/Choice of Laws/Venue

A. This Permit constitutes the whole of the agreement between the parties hereto, and no other representation made heretofore shall be binding upon the parties hereto. No modification to this Permit shall be valid unless in writing, signed by the parties hereto. Waiver of any breach or default of any provision hereof shall not be deemed a waiver of any subsequent breach of the same or other provision. This Permit shall be deemed to be executed in New York City, State of New York, regardless of the domicile of the Licensee and shall be governed by and construed in accordance with the laws of the State of New York.

B. The parties agree that any and all claims asserted by or against the City arising under or related to this Permit shall solely be heard and determined either in the courts of the United States located in the City or in the courts of the State located in the City and County of New York. The parties shall consent to the dismissal and/or transfer of any claims asserted in any other venue or forum to the proper venue or forum. If Permittee initiates any action in breach of this Permit, Permittee shall be responsible for and shall promptly reimburse the City for any attorneys' fees incurred by the City in removing the action to a proper court consistent with this Permit.

12. Liability

A. To the fullest extent of permitted by law, Permittee shall defend, indemnify and hold the City and its officials and employees harmless against any and all claims, liabilities, settlements, damages, costs and expenses of whatever nature (including, without limitation, attorneys' fees and disbursements) arising out of or related to any of the operations in connection with this Permit, or Permittee's failure to comply with the law or any of the requirements of this Permit. Insofar as the facts or law relating to any of the foregoing would preclude the City or its officials and employees from being completely indemnified by Permittee, the City and its officials and employees shall be partially indemnified by Permittee to the fullest extent permitted by law.

B. Copyrights and Patents: To the fullest extent of the law, Permittee shall indemnify, defend, and hold the City and its officials and employees harmless against any and all claims, liabilities, settlements, damages, costs and expenses of whatever nature (including, without limitation, attorneys' fees and disbursements), against any of them for infringement or violation of any copyright, patent, trademark, service mark, trade dress, rights of publicity, or other intellectual or proprietary right, or any other property or personal right of any third party, in each case arising out of the use for the purpose of this Permit of any plans, designs, drawings or specifications furnished by Permittee in the performance of this Permit.

C. These indemnification provisions shall survive the termination or expiration of this Permit. These indemnification provisions shall not be limited in any way by any other provision of this Permit.

D. Permittee's construction and restoration activities shall be performed in such manner that the stability of the existing and adjacent areas is not disturbed. Permittee shall be responsible for any damage caused to adjacent Parks areas or appurtenances which result from performance of the Work or the Restoration Work.

13. Insurance

A. Types of Insurance. From the date Permittee is required to provide Proof of Insurance pursuant to Section 13(C) below through the date of completion of all required Work, Permittee, its Contractors and Subcontractors shall maintain the following types of insurance as indicated herein (with the minimum limits and special conditions specified in Section 13(H)):

i. Commercial General Liability Insurance: Permittee shall maintain a Commercial General Liability ("CGL") insurance policy or policies (including umbrella or excess policies, if any) satisfying the requirements of this Section 13. This insurance shall protect the insureds from claims for property damage and/or bodily injury, including death that may arise from any of the operations under this Permit. Coverage shall be at least as broad as that provided by the most recently issued Insurance Service Office ("ISO") Form CG 0001. Such CGL insurance shall name "City of New York, together with its officials and employees," as an Additional Insured with coverage at least as broad as the most recent edition of ISO Form CG 2026. Such CGL insurance shall be primary and non-contributing to any insurance or self-insurance maintained by the City and must be "occurrence" based rather than "claims-made".

ii. Workers' Compensation, Employers' Liability, and Disability Benefits Insurance: Permittee maintain, and ensure that each Contractor and Subcontractor maintain, Workers Compensation, Employers' Liability, and Disability Benefits Insurance as required by New York law.

iii. Comprehensive Business Automobile Liability Insurance: Permittee shall maintain Comprehensive Business Automobile Liability insurance for liability arising out of any owned, non-owned, leased and hired vehicles to be used in connection with this Permit. Coverage should be at least as broad as the most recent edition of ISO Form CA0001.

B. General Requirements for Insurance Policies:

i. All required insurance policies shall be maintained with companies that may lawfully issue the required policy and have an A.M. Best rating of at least A- VII or a Standard and Poor's rating of at least A, unless prior written approval is obtained from the Mayor's Office of Operations.

ii. Permittee (or its contractors) shall be solely responsible for the payment of all premiums for all required policies and all deductibles and self-insured retentions to which such policies are subject, whether or not the City is an insured under the policy.

iii. The City's limits of coverage for CGL insurance shall be the greater of

a) the minimum limits set forth in Section 13(H) or

b) the limits provided to Permittee as Named Insured under all primary, excess and umbrella policies of that type of coverage.

C. Proof of Insurance:

i. Before any Work pursuant to this Permit begins, Permittee shall, for each policy required under this Permit, except for Workers Compensation, Employers Liability and Disability Benefits Insurance, file a Certificate of Insurance with the Commissioner pursuant to 13(I).

ii. All Certificate(s) of Insurance shall be in a form reasonably acceptable to the City and shall certify the issuance and effectiveness of the types of insurance specified in Section 13(A) and 13(H) and be accompanied by either a duly executed "Certification by Broker or Agent" in the form contained in Section 13(I) or completed copies of all policies referenced in the Certificate of Insurance. Where completed policies have not yet been issued, binders are acceptable.

iii. Certificates of Insurance confirming renewals of insurance shall be submitted to the Commissioner prior to the expiration date of coverage of policies required under this Permit. Such Certificates of Insurance shall comply with the requirements of this Section 13.

iv. Permittee shall be obligated to provide the City with a copy of any policy required by this Section 13 upon the demand for such policy by the Commissioner or the New York City Law Department.

D. Operations of Permittee:

i. Permittee shall not commence the Work unless and until all required certificates have been submitted to and accepted by the Commissioner. Acceptance by the Commissioner of a certificate hereunder does not excuse Permittee from securing a policy consistent with all provisions of this Section or of any liability arising from its failure to do so.

ii. Permittee shall be responsible for providing continuous insurance coverage in the manner, form, and limits required by this Permit and shall be authorized to perform Work only during the effective period of all required coverage.

iii. In the event that any of the required insurance policies lapse, are revoked, suspended or otherwise terminated, for whatever cause, Permittee shall immediately stop all Work, and shall not recommence the Work until authorized in writing to do so by the Commissioner.

iv. Where notice of occurrence, accident, claim or suit is required under a policy maintained in accordance with this Section 13, Permittee shall notify in writing all insurance carriers that issued potentially responsive policies of any such event relating to any operations under this Permit (including notice to Commercial General Liability insurance carriers for events relating to Permittee's or its Contractors' employees) no later than 20 days after such event. For any policy where the City is an additional insured, such notice shall expressly specify that "this notice is being given on behalf of the City of New York as Insured as well as the Named Insured." Such notice shall also contain the following information: the number of the insurance policy, the name of the named insured, the date and location of the damage, occurrence, or accident, and the identity of the persons or things injured, damaged or lost. Permittee shall simultaneously send a copy of such notice to the City of New York c/o Insurance Claims Specialist, Affirmative Litigation Division, New York City Law Department, 100 Church Street, New York, New York 10007.

E. Wherever reference is made in this Section 13 to documents to be sent to the Commissioner (e.g., notices, filings, or submissions), such documents shall be sent to the address set forth in Section 17.

F. Materiality/Non-Waiver: Permittee's failure to secure policy(ies) in complete conformity with this Section, or to give the Insurance Company timely notice of any sort required in this Permit on behalf of the City, or to do anything else required by this Section 13 shall constitute a material breach of this Permit. Such breach shall not be waived or otherwise excused by any action or inaction by the City at any time.

G. Other Remedies: Insurance coverage in the minimum amounts provided for herein shall not relieve Permittee of any liability under this Permit, nor shall it preclude the City from exercising any rights or taking such other actions as are available to it under any other provisions of this Permit or as otherwise provided by law.

H. Insurance Schedule

Types of Insurance	**Minimum Limits and Special Conditions**
Workers' Compensation, Employer's Liability, and Disability Insurance	Per Statutory Limits as required by the laws of the State of New York
Commercial General Liability	$1,000,000 per occurrence, $2,000,000 aggregate. Additional Insureds: 1) City of New York, including its officials and employees, **with coverage at least as broad as ISO Form CG 2026**
Comprehensive Business Auto Coverage	$1,000,000 per accident

I. Certificates of Insurance

All certificates of insurance (except certificates of insurance solely evidencing Workers' Compensation Insurance, Employer's Liability Insurance, and/or Disability Benefits Insurance) must be accompanied by one of the following:

(1) the Certification by Insurance Broker or Agent on the following page setting forth the required information and signatures;

-- OR --

(2) copies of all policies as certified by an authorized representative of the issuing insurance carrier that are referenced in such certificate of insurance. If any policy is not available at the time of submission, certified binders may be submitted until such time as the policy is available, at which time a certified copy of the policy shall be submitted.

Form of Certificate appears on the following page.

CITY OF NEW YORK

CERTIFICATION BY INSURANCE BROKER OR AGENT

The undersigned insurance broker or agent represents to the City of New York that the attached Certificate of Insurance is accurate in all material respects.

Marsh USA, LLC

[Name of broker or agent (typewritten)]

1050 Connecticut Avenue NW, Washington DC 20036

[Address of broker or agent (typewritten)]

ashley.oliver@marsh.com

[Email address of broker or agent (typewritten)]

410-347-3631

[Phone number/Fax number of broker or agent (typewritten)]

Oliver, Ashley

Digitally signed by Oliver, Ashley
DN: cn=Oliver, Ashley, ou=WDC
Date: 2024.11.14 11:40:34 -05'00'

[Signature of authorized official, broker, or agent]

Ashley Oliver, Senior Account Representative

[Name and title of authorized official, broker, or agent (typewritten)]

State of Virginia.....)
) ss.:
County of Fairfax.....)

Sworn to before me this 14 day of November 2024

M. Koch

NOTARY PUBLIC FOR THE STATE OF Virginia

MOLLY ANNE KOCH
NOTARY PUBLIC
REGISTRATION # 7811943
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES
MAY 31, 2027

14. Independent Contractors, No Assignment

The parties to this Permit shall be independent contractors, and nothing herein shall be deemed to make the parties hereto joint venturers, partners, agent/principal or otherwise. This Permit shall not be assignable without the other party's prior written consent.

15. Investigations

A. The parties to this Permit shall cooperate fully and faithfully with any investigation, audit or inquiry conducted by a State of New York ("State") or City governmental agency or authority that is empowered directly or by designation to compel the attendance and to examine witnesses under oath or conducted by the Inspector General of a governmental agency that is a party in interest to the transaction, submitted bid, submitted proposal, contract, lease, permit, or license that is the subject of the investigation, audit or inquiry.

B.

i. If any person who has been advised that his or her statement and any information from such statement will not be used against him or her in any subsequent criminal proceeding refuses to testify before a grand jury or other governmental agency or authority empowered directly or by designation to compel the attendance of witnesses and to examine witnesses under oath concerning the award of or performance under any transaction, agreement, lease, permit, contract or license entered into with City, State or any political subdivision or public authority thereof, or the Port Authority of New York and New Jersey, or any local development corporation within City, or any public benefit corporation organized under the laws of the State of New York; or

ii. If any person refuses to testify for a reason other than the assertion of his or her privilege against self-incrimination in an investigation, audit or inquiry conducted by a City or State governmental agency or authority empowered directly or by designation to compel the attendance of witnesses and to take testimony under oath, or by the Inspector General of the governmental agency that is a party in interest and is seeking testimony concerning the award of or performance under any transaction, agreement, lease, permit, contract or license entered into with City, State or any political subdivision thereof or any local development corporation within the City; then

C.

i. The commissioner or agency head whose agency is a party in interest to the transaction, submitted bid, submitted proposal, contract, lease, permit or license shall convene a hearing, upon not less than five days written notice to the parties involved to determine if any penalties should attach for the failure of a person to testify.

ii. If any non-governmental party to the hearing requests an adjournment, the commissioner or agency head who convened the hearing may, upon granting the adjournment, suspend any contract, lease, permit or license pending the final determination pursuant to paragraph (e) below with City incurring any penalty or damage for delay or otherwise.

D. The penalties which may attach after a final determination by the commissioner or agency head may include, but not exceed:

i. The disqualification for a period not to exceed five years from the date of an adverse determination for any person or entity of which such person was a member at the time the testimony was sought from submitting bids for, transacting business with or entering into or obtaining any contract, lease, permit or license with or from City; and/or

ii. The cancellation or termination of any and all such existing City contracts, leases, permits or

licenses that the refusal to testify concerns and that have not been assigned as permitted under this Permit, nor the proceeds of which pledged, to an unaffiliated and unrelated institutional lender for fair value prior to the issuance of the notice scheduling the hearing, without the City incurring any penalty or damages on account of such cancellation or termination; monies lawfully due for goods delivered, work done, rentals, or fees accrued prior to the cancellation or termination shall be paid by City.

E. The commissioner or agency head shall consider and address in reaching his or her determination and in assessing an appropriate penalty the factors in sub paragraphs (i) and (ii) below. He or she may also consider, if relevant and appropriate, the criteria established in sub-paragraphs (iii) and (iv) below in addition to any other information which may be relevant and appropriate:

i. The party's good faith endeavors or lack thereof to cooperate fully and faithfully with any governmental investigation or audit including, but not limited to, the discipline, discharge or disassociation of any person failing to testify, the production of accurate and complete books and records and the forthcoming testimony of all other members, agents, assignees or fiduciaries whose testimony is sought.

ii. The relationship of the person who refused to testify to any entity that is a party to the hearing, including, but not limited to, whether the person whose testimony is sought has an ownership interest in the entity and/or the degree of authority and responsibility the person has within the entity.

iii. The nexus of the testimony sought to subject entity and its contracts, leases, permits or licenses with City.

iv. The effect a penalty may have on an unaffiliated and unrelated party or entity that has a significant interest in an entity subject to penalties under paragraph (d) above, provided that the party or entity has given actual notice to the commissioner or agency head upon the acquisition of the interest, or at the hearing called for in paragraph (c) (i) above gives notice and proves that such interest was previously acquired. Under either circumstance the party or entity must present evidence at the hearing demonstrating the potential adverse impact a penalty will have on such person or entity.

F.

i. The term "license" or "permit" as used herein shall be defined as a license, permit, franchise or concession not granted as a matter of right.

ii. The term "person" as used herein shall be defined as a natural person doing business alone or associated with another person or entity as a partner, director, officer, principal or employee.

iii. The term "entity" as used herein shall be defined as any firm, partnership, corporation, association or person that receives monies, benefits, licenses, leases or permits from or through City or otherwise transacts business with the City.

iv. The term "member" as used herein shall be defined as any person associated with another person or entity as a partner, director, officer, principal or employee.

G. In addition to and notwithstanding any other provision of this Permit the commissioner or agency head may in his or her sole discretion, terminate this Permit upon not less than three days written notice in the event Permittee fails to promptly report in writing to the Commissioner of Investigation of the City of New York any solicitation of money, goods, requests for future employment or other benefit or thing of value, by or on behalf of any employee of the City or other person, firm, corporation or entity for any purpose which may be related to the procurement or obtaining of this Permit by the Permitee, or affecting the performance of this Permit.

16. Submittal of As-Built Drawings Upon Completion of Work

Permittee shall submit a complete set of as-built record drawings showing portions of the project installed on Parks' property, to Parks. One (1) copy of such drawings shall be delivered to:

Director of Interagency Coordination & Construction Permits
The Olmsted Center
117-02 Roosevelt Avenue
Flushing, NY 11368

"As-Built" Record Drawings shall be submitted in all of the following three formats: 1) a digital media containing complete drawings in AutoCAD format, including all attachments and datalinks (eTransmit), 2) files of each sheet in Portable Document Format (PDF), 3) one hard copy produced on minimum 20# Bond Paper, 30" x 42" in size. In lieu of original ink or pencil drawings, Permittee may submit full size signed, stamped, and scanned 300 dpi PDF. Parks will not accept diazo (i.e. sepia) type reproductions as original drawings.

The final "As-Built" Record Drawings shall include the following: Permittee's company name, address and telephone number, project's title, Parks Permit No., drawing date, the word "As-Built", Permittee's signature and a statement certifying that the "As-Built" drawings are accurate and correct.

17. Notices

All notices to Parks shall be sent to the following addresses:

New York City Parks & Recreation
Counsel's Office
The Arsenal
830 Fifth Avenue
New York, NY 10065

Director, Interagency Coordination
& Construction Permits
The Olmsted Center
117-02 Roosevelt Avenue
Flushing, NY 11368

All notices to Permittee shall be sent to following address:

Dewberry Engineers, Inc.
Attn: Zachary Davis
8401 Arlington Boulevard
Fairfax, VA 22031

18. Copyright

Permittee warrants that it has obtained or will obtain prior to the commencement of any portion of the Work all required approvals and permissions to use any and all materials that without such permission or approval would infringe or violate the copyright, trademark, service mark, trade dress, rights of publicity, or other intellectual or proprietary right, or any other property or personal right of any third party.

19. Safety Standards

All installed products, materials and equipment installed must meet the reasonable safety standards of their respective industries.

20. Abandoned Project

If at any time during the course of the Work being performed in connection with this Permit it is determined that the Work cannot be completed due to unforeseen field conditions Permittee shall leave the area in the same or better condition the affected area was in prior to commencement of the Work, and at no cost to the City.

21. No Cost

All the Work performed in connection with this Permit shall be at no cost to the City or Parks.

22. Assignment

Permittee shall not assign, transfer, convey or otherwise dispose of this Permit or of Permittee's rights, obligations, duties, in whole or in part, in connection with this Permit, unless the prior written consent of Parks shall be obtained, which consent shall not be unreasonably withheld or delayed. Any such assignment, transfer, conveyance or other disposition without such consent shall be void.

23. Merger

This written Permit contains all the terms and conditions agreed upon by the parties hereto, and no other permit, agreement, oral or otherwise, regarding the subject matter of this Permit shall be deemed to exist or to bind any of the parties hereto, or to vary any of the terms contained herein.

24. Modification

No modification, amendment, waiver or release of any provision of this Permit or of any right, obligation, claim or cause of action arising hereunder shall be valid or binding for any purpose unless in writing and duly executed by both parties to this Permit.

25. Protection of Property

Permittee assumes the risk of, and shall be responsible for, any loss or damage to property of the City of New York, involved in the Work performed in connection with this Permit, and caused, either directly or indirectly, by the acts, conduct, omissions or lack of good faith of Permittee, or his or her officers, managerial personnel and employees, or any person, firm, company, agency or others engaged by the Permit as expert, consultant, specialist or subcontractor hereunder.

The rights and remedies of the City provided herein shall not be exclusive and are in addition to any other rights and remedies provided by law or by this Permit.

26. Progress Schedule

Prior to the commencement of any the Work to be performed under this Permit, Permittee shall provide the Parks Permit Division and Chief of Operations for the Borough in which the Site is situated with a progress schedule of the Work to be performed.

27. Liquidated Damages

A. If Permittee fails to vacate the Permitted Premises or leave the Permitted Premises in the condition required by this permit by the Expiration Date, Permittee shall be liable for liquidated damages in the cash amount of $1,000.00 per day for every calendar day or part thereof that such failure continues.

B. Permittee acknowledges that said cash amount is reasonable in proportion to the probable damages likely to be sustained by the City for Permittee's failure to vacate the Permitted Premises by the Termination Date or leave the Permitted Premises in the condition required by the Permit.

C. Permittee acknowledges that the amount of actual damages for the loss of use of property sustained by City in the event of such failure is incapable of precise estimation, that the payment of such cash amount by Permittee would not result in severe economic hardship for Permittee, and that such payment does not constitute a penalty or punitive damages for any purposes.

D. Permittee acknowledges that such liquidated damages compensate the City solely for the lost or impaired use of its property and are separate from and in addition to Permittee's liability to compensate the City for any other damages it may have caused.

E. Such liquidated damage amounts due and unpaid by Permittee shall constitute a lien on any property owned by Permittee.

F. This paragraph survives the Expiration Date or of this Permit or any earlier termination by Parks.

~~**28. Security Bond**~~

~~Permittee shall post and maintain, during the term of this Permit and for a period of one year thereafter, a bond or letter of credit in the amount of _____ or more in favor of the City and whose terms and conditions are as shown in Attachment D, which bond or letter of credit may be drawn upon by the City to cover any damages that may occur to the Permitted Premises or other City property as a result of the Work or any of Permittee's activities , and any liquidated damages that the City may be entitled to under this Permit as a result of Permittee's violation of this Permit. This Permit shall not be valid and Permittee shall not commence Work unless and until the bond has been submitted to and accepted by the Commissioner.~~

29. Disposal Fees

Permittee shall cause be solely responsible for any and all disposal fees, fines, penalties and/or violations for the disposal of contaminated and/or hazardous waste at no cost to Parks, including any and all fees assessed by the New York State Department of Environmental Conservation for Work performed pursuant to this Permit, regardless of when assessed. This clause survives the expiration of this Permit.

30. Test Results

The results and/or findings of any tests, which include but are not limited to tests for asbestos, lead, contaminated material and/or hazardous material, shall be used solely by Permittee for the purposes of the Work and the construction of the Site. Such results and/or findings may be disclosed only to those persons required by law and/or necessary to perform and complete the work. Permittee shall furnish a copy of the tests results to Parks within five (5) days of Permittee's receipt of same.

31. Publication

Permittee shall not publicize and/or circulate promotional material regarding this Permit, or the Work without the prior written consent from Parks.

CITY OF NEW YORK / PARKS & RECREATION

Signed: Daniel Grulich

Daniel Grulich
Director of Interagency Coordination & Construction Permits

Accepted and agreed on behalf of:

Dewberry Engineers, Inc. :

(Permittee)

Signature: Zachary J Davis

Print: __Zachary Davis_____

Title: Associate, Cultural Resources Discipline Lead

Date: _11/15/2024_____

cc: Irene Papadopoulos, **Bronx:** L. Scoones, M. Anderson, G. Haber

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 11/14/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
MARSH USA, LLC.
1050 CONNECTICUT AVENUE, SUITE 700
WASHINGTON, DC 20036-5386

CN102736896-7/1-1.1a-24-25 GAWP

CONTACT NAME: Ashley Oliver
PHONE (A/C, No, Ext): 410 347 3631 **FAX (A/C, No):**
E-MAIL ADDRESS: Ashley.Oliver@marsh.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : The Charter Oak Fire Insurance Company	25615
INSURER B : The Travelers Indemnity Company Of America	25658
INSURER C : Travelers Property Casualty Co. Of America	25674
INSURER D : Beazley Insurance Company, Inc.	37540
INSURER E : N/A	N/A
INSURER F :	

INSURED
DEWBERRY ENGINEERS INC.
600 PARSIPPANY ROAD, SUITE 301
PARSIPPANY, NJ 07054-3715

COVERAGES **CERTIFICATE NUMBER:** CLE-007295685-01 **REVISION NUMBER:** 1

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	X **COMMERCIAL GENERAL LIABILITY** [ ] CLAIMS-MADE [X] OCCUR X CONTRACTUAL INS. COV. [ ] (INSURED CONTRACTS) GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY [ ] PRO-JECT [ ] LOC [ ] OTHER:	X		P-630-7792B312-COF-24	07/01/2024	07/01/2025	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG 	$ $ $ $ $ $ $	5,000,000 1,000,000 10,000 1,000,000 5,000,000 5,000,000
B	**AUTOMOBILE LIABILITY** X ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY	X		810-1N788974-24-43-G	07/01/2024	07/01/2025	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) COMP / COLL DED:	$ $ $ $ $	2,000,000 1,000
	[ ] **UMBRELLA LIAB** [ ] OCCUR [ ] **EXCESS LIAB** [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $						EACH OCCURRENCE AGGREGATE 	$ $ $	
C	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N: N **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		UB-6P972264-24-43-G	07/01/2024	07/01/2025	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ $ $	 1,000,000 1,000,000 1,000,000
D	PROFESSIONAL LIABILITY			V11B5E241501 RETRO. DATE: FULL PRIOR ACTS	07/01/2024	07/01/2025	PER CLAIM/AGGREGATE		5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: DEWBERRY PROJECT/JOB/PLN # 50141248, BU2235, WOL-030 RODMAN'S NECK PHASE 1B- ARCHEOLOGICAL WORK; PERMIT# X039.E.20241114

CITY OF NEW YORK, INCLUDING ITS OFFICIALS AND EMPLOYEES, ARE INCLUDED AS ADDITIONAL INSURED WHERE REQUIRED BY WRITTEN CONTRACT WITH RESPECT TO GENERAL LIABILITY AND AUTOMOBILE LIABILITY.

AS RESPECTS THE PROFESSIONAL LIABILITY COVERAGE EVIDENCED ABOVE, IF THIS POLICY IS CANCELLED BY THE INSURER, OTHER THAN FOR NON-PAYMENT OF PREMIUM, THE INSURER WILL PROVIDE 30 DAYS WRITTEN NOTICE TO CERTIFICATE HOLDER. AS RESPECTS THE GENERAL LIABILITY, AUTOMOBILE LIABILITY, AND WORKERS' COMPENSATION COVERAGES EVIDENCED ABOVE, NOTICE OF CANCELLATION WILL BE PROVIDED BY THE INSURER(S) TO THE CERTIFICATE HOLDER PER THE ATTACHED AS REQUIRED BY WRITTEN CONTRACT.

CERTIFICATE HOLDER

NEW YORK CIT DEPARTMENT OF DESIGN AND CONSTRUCTION
ATTN: DEANNA STIMPSON
30-30 THOMSON AVENUE,
LONG ISLAND CITY, NY 11101

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
of Marsh USA LLC

NYC Parks Construction Permit
X039.E.20241114
Attachment A
(Permitted Premises)

BOROUGH OF BRONX NEW YORK

PARK DR

Direct APE

ORCHARD BEACH RD

PELHAM LAGOON SHL

CITY ISLAND RD

CITY ISLAND RD

PARK DR

LEGEND

- Proposed Shovel Tests
- Archaeological APE

0 125 250 500 750 1,000 Feet

Source: NYS Office of Information Technology Services, GIS Program Office. Nearmap Imagery Online Service, ESRI.
NYC Department of City Planning, Information Technology Division, MapPLUTO 22v1, 2022. Langan Engineering & NYC Department of Design and Construction, 2023

Path: Q:\150085489\150141248 - 030 Rodmans Neck Phase IB\GIS\Mxd\2_Permit_DDCRodmansNeck_SurveyArea.mxd

NYC DDC Department of Design and Construction

PROPOSED PHASE IB SURVEY AREA
DDC CAPIS ID: PO79ROD

NYPD Rodmans Neck Firearm and Tactics Facility
Bronx, New York

SCALE: 1 " = 250 ' DATE: July 2024

Arcadis Dewberry a Joint Venture
27-01 Queens Plaza North, Suite 800
Long Island City, NY 11101

FIGURE 2

NYC Parks Construction Permit
X039.E.20241114
Attachment B
(Scope of Work)

Arcadis Dewberry a Joint Venture
27-01 Queens Plaza North, Suite 800, Long Island City, NY 11101

July 30, 2024
Rodman's Neck Firearms and Tactics Facility—Phase IB Archaeology, Part of Block 5650, Lot 1
Rodman's Neck, Bronx, New York

Field Methods for Phase IB Archaeological Survey

Arcadis/Dewberry will initiate the New York City One-Call Utility mark-outs for the proposed archaeological field-testing program. No subsurface investigations will occur prior to completion of the utility mark-out request.

The Phase IB survey will consist of systematic archaeological survey along the grass shoulder of Park Drive, northeast of City Island Circle, to the termination of the proposed utility corridor. Shovel tests will be spaced at 50' (15.2m) intervals along a linear transect extending from south to north, parallel to Park Drive northeast of City Island Circle (**Figure 1**). The survey proposes 70 shovel tests to investigate the presence or absence of archaeological resources. Each shovel test will measure between 40 to 50 cm (15.7" to 19.7") in diameter. The shovel tests will be excavated by hand to the terminal depth of proposed ground disturbance, 6.0' (1.8m) below the surface, unless terminated by a natural or human-made impasse. Shovel tests will be excavated via shovel to a depth of approximately 3.0 to 4.0' (0.9 to 1.2m) and then subjected to further testing via a hand auger to 6.0' (1.8m). If intact, potential cultural-bearing soils are uncovered via the auger excavation, the location and depth of the matrix will be noted. Except for the handheld auger, excavation below a depth of 4.0' (1.2m) is beyond the scope of this survey.

Excavated soil will be screened through ¼-inch hardware cloth. Artifacts appearing to be 50 years of age and over will be retained, except for common materials (brick, charcoal, etc.), which will be quantified in the field; a sample will be retained, and the remainder discarded. Additional closer interval testing will be conducted around shovel tests positive for potentially significant cultural material. Where possible, four radial tests will be plotted at 3m (9.8') intervals along the grid-based cardinal directions from isolated positive shovel tests. Radial testing may also be conducted to delineate boundaries of identified artifact scatters.

Appendix D

Soil Profiles

Shovel Test (ST) Number	Stratum	Depth (cm)	Munsell	Color	Texture	Cultural Materials	Comments
1	I	0-7	10YR 3/2	Very Dark Grayish Brown	silt loam	No Cultural Material (NCM)	Rootmat
	II	7-39	10YR 3/3	Dark Brown	silty clay loam	Debitage flake, flower pot ceramic, porcelain?, key, discarded plastic	
	III	39-50	10YR 3/3	Dark Brown	sandy clay loam	Asphalt, slag	Aphalt Impasse. Termination of Excavation (TOE)
2	I	0-90	10YR 3/2	Very Dark Grayish Brown	silty clay loam	Glass, nail, discarded plastic	Shovel to 90 cm below surface (cmbs), angered to 99cmbs. Refusal at the bottom of excavation (BOE)
	II	90-99	10YR 3/2	Very Dark Grayish Brown	silty clay loam	NCM	Augered from 90 to 99 cmbs. Refusal TOE
Radial STP 1 North 5 meters	I	0-8	10YR 2/2	Very Dark Brown	silt loam	NCM	Grass
	II	8-68	10YR 3/3	Dark Brown	sandy clay loam	Ceramic, glass	Refusal bedrock/rock impasse, TOE
Radial STP 1 West 5 meters	I	0-51	10YR 3/3	Dark Brown	sandy clay loam	Shell, glass, coal, plastic	Bedrock weathering impasse, TOE
3	I	0-7	10YR 2/2	Very Dark Brown	silt loam	NCM	Grass
	II	7-71	10YR 3/2	Very Dark Grayish Brown	silty clay loam	Plastic, glass, ceramic	Water table encountered at 62 cmbs. TOE due to water table
4	I	0-35	10YR 3/2	Very Dark Grayish Brown	sandy clay loam	2 penny coins, precontact flake found around 27cmbs	Roots at the top
	II	35-68	2.5Y 5/3	Light Olive Brown	loamy sand	NCM	
	III	68-80	10YR 4/4	Dark Yellowish Brown	sand	NCM	Toe rock impasse
7	I	0-10	10YR 3/2	Very Dark Grayish Brown	silt loam	NCM	Grass rootmat
	II	10-37	10YR 4/3	Brown	sandy clay loam	Glass	Slight mottling with 2.5y 4/1 Dark Gray
	III	37-54	2.5Y 4/4	Olive Brown	loamy sand	Asphalt, chert, shell	TOE, Rock Impasse
23	I	0-23	10YR 3/2	Very Dark Grayish Brown	silty clay loam	Glass, shell	
	II	23-60	2.5Y 4/4	Olive Brown	loamy sand	Glass	Glass found near the interface at 26 cmbs. TOE weathered schist bedrock impasse
24	I	0-24	10YR 3/2	Very Dark Grayish Brown	loamy sand	Nail, slag, glass	
	II	24-54	2.5Y 3/3	Dark Olive Brown	loamy sand	NCM	Angular cobbles. TOE rock impasse
30	I	0-18	10YR 3/2	Very Dark Grayish Brown	silt loam	NCM	
	II	18-40	2.5Y 4/3	Olive Brown	loamy sand	Asphalt, slag, glass	Slightly mottled with 10YR 3/2 Very Dark Grayish Brown
	III	40-82	2.5YR 4/3	Reddish Brown	loamy sand	Glass	
	IV	82-92	10YR 4/1	Dark Gray	clay loam	NCM	
	V	92-178	10YR 5/4	Yellowish Brown	silty clay	NCM	Water at the bottom. Hydric soils. Redox.TOE
31	I	0-25	10YR 3/2	Very Dark Grayish Brown	silt loam	Asphalt cobbles, plastic, glass	
	II	25-51	2.5Y 4/4	Olive Brown	loamy sand	Shell, nail, glass	
	III	51-90	10YR 3/2	Very Dark Grayish Brown	clay loam	NCM	
	IV	90-168	10YR 4/4	Dark Yellowish Brown	silty clay	NCM	Hydric soils. Augered 90 to 168 cmbs. TOE
40	1	0-10	10YR 2/2	Very Dark Brown	silt loam	NCM	
	2	10-44	10YR 3/3	Dark Brown	sandy loam	Pull tab, glass, ceramic, stoneware, slag	10% slag
	3	44-71	10YR 3/6	Dark Yellowish Brown	loamy sand	Brick fragment	
	4	71-80	10YR 3/2	Very Dark Grayish Brown	loamy sand	NCM	
	5	80-120	2.5Y 4/3	Olive Brown	sandy clay	NCM	Rock impasse
41	1	0-12	10YR 2/2	Very Dark Brown	silt loam	NCM	STP located 2 meters northeast of communication junction box.
	2	12-43	10YR 3/3	Dark Brown	sandy loam	1 large cobble size concrete chunk, slag, glass	15% slag. Compact
	3	43-59	2.5Y 4/3	Olive Brown	loamy sand	Slag	Compact. Rock impasse TOE
51	1	0-6	10YR 3/2	Very Dark Grayish Brown	silt loam	NCM	STP adjacent to a large tree stump. Root impasse. TOE

Appendix E

Artifact Catalog

STP/Unit	Stratum	Depth (cm)	Count	Period	Group	Artifact Class	Artifact Material	Artifact Type	Description	Comments / Measurements / Dates
1	2	7-39	1	Hist/Recent	Activities	Vessel	Redware	Flower Pot	Fragment	Rim
1	2	7-39	1	Historic	Domestic	Ceramic Vessel	Porcelain	Unidentified	Fragment	Base
1	2	7-39	1	Precontact	Lithic	Flake	Jasper	Debitage	Tertiary reduction flake	Broken, proximal portion, shattered platform, bifacial thinning flake, 1-2cm
1	2	7-39	1	Hist/Recent	Structural	Hardware	Copper alloy	Lock key	Whole	"YALE"
1	2	7-39	1	Historic	Structural	Hardware	Iron	Nail	Fragment	Unidentified
1	2	7-39	2	Hist/Recent	Structural	Hardware	Glass	Window	Fragments	
1	2	7-39	1	Historic	Unidentified	Hardware	White metal	Retaining cap	Whole	
1	3	39-50	1	Hist/Recent	Domestic	Container	Glass	Bottle	Fragment	
1	3	39-50	1	Historic	Industrial	Slag	Slag	Slag	Fragment	Discarded in Lab
1	3	39-50	1	Hist/Recent	Structural	Hardware	Glass	Window	Fragment	
1 Radial N 5m	2	8-68	3	Hist/Recent	Activities	Vessel	Redware	Flower Pot	Fragments	Rim
1 Radial N 5m	2	8-68	1	Hist/Recent	Activities	Vessel	Redware	Flower Pot	Fragment	Base
1 Radial N 5m	2	8-68	1	Historic	Domestic	Ceramic Vessel	Cream colored	Flatware	Fragment	Base
1 Radial N 5m	2	8-68	2	Historic	Domestic	Ceramic Vessel	Pearlware	Flatware	Fragments	Base
1 Radial N 5m	2	8-68	1	Historic	Domestic	Ceramic Vessel	White Granite	Hollowware	Fragment	Base; 1840+
1 Radial N 5m	2	8-68	1	Historic	Domestic	Ceramic Vessel	Whiteware	Flatware	Fragment	Base
1 Radial N 5m	2	8-68	1	Historic	Domestic	Ceramic Vessel	Yellowware	Hollowware	Fragment	Body; 1850-1920
1 Radial N 5m	2	8-68	3	Hist/Recent	Domestic	Container	Glass	Bottle	Fragments	
1 Radial N 5m	2	8-68	1	Historic	Domestic	Container	Glass	Bottle	Fragment	Manganese; 1880-1920
1 Radial N 5m	2	8-68	1	Historic	Domestic	Container	Glass	Bottle	Fragment	Amber
1 Radial N 5m	2	8-68	1	Historic	Industrial	Coal	Coal	Coal	Fragment	Discarded in Lab
1 Radial N 5m	2	8-68	1	Historic	Industrial	Slag	Slag	Slag	Fragment	Discarded in Lab
1 Radial W 5m	1	0-51	5	Hist/Recent	Domestic	Container	Glass	Bottle	Fragments	Colorless
1 Radial W 5m	1	0-51	8	Unidentified	Mollusc	Clam	Shell	*Mercenaria*	Fragments	
1 Radial W 5m	1	0-51	1	Unidentified	Mollusc	Oyster	Shell	*Crassotrea*	Fragment	
1 Radial W 5m	1	0-51	3	Historic	Industrial	Coal	Coal	Coal	Fragments	Discarded in Lab
1 Radial W 5m	1	0-51	1	Precontact	Lithic	Flake	Chert	Debitage	Tertiary reduction flake	Microfracturing/edge damage at distal end, 1-2cm
1 Radial W 5m	1	0-51	4	Hist/Recent	Structural	Hardware	Iron	Nail	Fragments	Unidentified
1 Radial W 5m	1	0-51	2	Hist/Recent	Structural	Hardware	Glass	Window	Fragments	
1 Radial W 5m	1	0-51	1	Recent	Unidentified	Unknown	Plastic	Unknown	Fragment	Pink
2	1	0-90	1	Hist/Recent	Activities	Vessel	Redware	Flower Pot	Fragment	Rim
2	1	0-90	3	Hist/Recent	Activities	Vessel	Redware	Flower Pot	Fragments	Body
2	1	0-90	1	Hist/Recent	Activities	Vessel	Redware	Flower Pot	Fragment	Base

STP/Unit	Stratum	Depth (cm)	Count	Period	Group	Artifact Class	Artifact Material	Artifact Type	Description	Comments / Measurements / Dates
2	1	0-90	1	Hist/Recent	Activities	Toy	Plastic	Insect	Whole	
2	1	0-90	1	Historic	Domestic	Ceramic Vessel	Pearlware	Flatware	Fragment	Base 1780-1818
2	1	0-90	7	Hist/Recent	Domestic	Container	Glass	Bottle	Fragments	Colorless Body
2	1	0-90	3	Hist/Recent	Domestic	Container	Glass	Bottle	Fragments	Amber Body
2	1	0-90	1	Historic	Domestic	Container	Glass	Bottle	Fragment	Clorless Mold-Blown Body; 1880-1920
2	1	0-90	1	Historic	Domestic	Container	Glass	Bottle	Fragment	ABM; Base 1902+
2	1	0-90	1	Recent	Domestic	Container	Styrofoam	Cup	Fragment	Discarded in Lab
2	1	0-90	2	Hist/Recent	Domestic	Film	Plastic	Wrapper	Fragments	Discarded in Lab
2	1	0-90	1	Recent	Domestic	Foil	Metal	Wrapper	Fragment	Discarded in Lab
2	1	0-90	4	Unidentified	Mollusc	Clam	Shell	*Mercenaria*	Fragments	
2	1	0-90	1	Historic	Industrial	Coal	Coal	Coal	Fragment	Discarded in Lab
2	1	0-90	2	Historic	Industrial	Slag	Slag	Slag	Fragment	Discarded in Lab
2	1	0-90	1	Hist/Recent	Structural	Brick	Redware	Brick	Fragment	
2	1	0-90	1	Historic	Structural	Hardware	Iron	Nail	Fragment	Cut; 1820-1920
2	1	0-90	1	Hist/Recent	Structural	Hardware	Iron	Nail	Fragment	Wire; Post-1875
2	1	0-90	5	Hist/Recent	Structural	Hardware	Glass	Window	Fragments	
3	2	7-71	2	Hist/Recent	Activities	Vessel	Redware	Flower Pot	Fragments	Body
3	2	7-71	5	Recent	Domestic	Container	Styrofoam	Food Container	Fragments	Discarded in Lab
3	2	7-71	1	Recent	Domestic	Vessel	Plastic	Cup	Fragment	Yellow; Discarded in Lab
3	2	7-71	1	Recent	Domestic	Vessel	Plastic	Cup	Fragment	Colorless; Discarded in Lab
3	2	7-71	1	Hist/Recent	Structural	Hardware	Glass	Window	Fragment	
4	1	0-35	1	Historic	Activities	Cent	Coin	Lincoln Cent	Whole	Wheat penny - 1944
4	1	0-35	1	Historic	Activities	Cent	Coin	Lincoln Cent	Whole	Memorial penny - 1970
4	1	0-35	1	Hist/Recent	Domestic	Container	Glass	Bottle	Fragments	Colorless Body
4	1	0-35	1	Recent	Domestic	Container	Plastic	Cap - Red	Fragment	Discarded in Lab
4	1	0-35	4	Unidentified	Mollusc	Oyster	Shell	*Crassotrea*	Fragment	
4	1	0-35	3	Historic	Industrial	Coal	Coal	Coal	Fragments	Discarded in Lab
4	1	0-35	1	Precontact	Lithic	Flake	Quartz	Debitage	Secondary reduction flake	Cortical platform, 2-3cm
4	1	0-35	1	Hist/Recent	Structural	Hardware	Iron	Nail	Fragment	Unidentified
4	1	0-35	2	Hist/Recent	Structural	Pavement	Concrete		Fragments	Discarded in Lab
4	2	35-68	1	Hist/Recent	Domestic	Vessel	Glass	Drinking Glass	Fragment	Colorless Body
7	3	37-54	1	Unidentified	Mollusc	Oyster	Shell	*Crassotrea*	Fragment	
7	3	37-54	2	Historic	Industrial	Slag	Slag	Slag	Fragments	Discarded in Lab
7	3	37-54	1	Precontact	Lithic	Flake	Chert	Debitage	Secondary reduction flake	early-stage reduction, 2-3cm, cortex >50%

STP/Unit	Stratum	Depth (cm)	Count	Period	Group	Artifact Class	Artifact Material	Artifact Type	Description	Comments / Measurements / Dates
7	3	37-54	1	Precontact	Lithic	Flake	Chert	Debitage	Platform preparation flake	cortical platform, 0-1cm
23	1	0-23	1	Historic	Activities	Vessel	Glass	Milk Glass	Fragment	
23	1	0-23	1	Hist/Recent	Domestic	Container	Glass	Bottle	Fragment	Colorless, Burned
23	1	0-23	1	Unidentified	Mollusc	Clam	Shell	*Mercenaria*	Fragment	
23	1	0-23	1	Unidentified	Mollusc	Oyster	Shell	*Crassotrea*	Fragment	
23	1	0-23	1	Historic	Structural	Tile	Terracotta		Fragment	
23	2	23-54	1	Hist/Recent	Domestic	Container	Glass	Bottle	Fragment	Colorless Lip
23	2	23-54	1	Unidentified	Mollusc	Snail	Shell	Land Snail	Fragment	
24	1	0-24	1	Hist/Recent	Domestic	Container	Glass	Bottle	Fragment	Colorless, Burned
24	1	0-24	1	Hist/Recent	Domestic	Container	Glass	Bottle	Fragment	Amber Body
24	1	0-24	1	Unidentified	Mollusc	Oyster	Shell	*Crassotrea*	Fragment	
24	1	0-24	1	Historic	Industrial	Slag	Slag	Slag	Fragment	Discarded in Lab
24	1	0-24	1	Unidentified	Industrial	Wood	Charcoal		Fragment	Discarded in Lab
24	1	0-24	8	Hist/Recent	Structural	Hardware	Iron	Nail	Fragments	Unidentified
24	1	0-24	1	Historical	Structural	Hardware	Porcelain	Bar Insulator	Fragment	Late 19th-Early 20th c.
30	2	18-40	2	Hist/Recent	Domestic	Container	Glass	Bottle	Fragment	Colorless
30	2	18-40	1	Historic	Domestic	Container	Glass	Bottle	Fragment	Colorless, ABM 1902+
30	2	18-40	1	Unidentified	Mollusc	Oyster	Shell	*Crassotrea*	Fragment	
30	2	18-40	6	Historic	Industrial	Slag	Slag	Slag	Fragment	Discarded in Lab
30	3	76-90	6	Historic	Domestic	Container	Glass	Bottle	Fragments	Blue Aqua, BIM, Embossed "…OP…/…EWER/…EW YORK" Beer, Pre-1920
31	1	0-25	1	Hist/Recent	Activities	Vessel	Redware	Flower Pot	Fragment	Body
31	1	0-25	3	Hist/Recent	Domestic	Container	Glass	Bottle	Fragments	Colorless
31	1	0-25	2	Hist/Recent	Domestic	Container	Glass	Bottle	Fragment	Amber Body
31	1	0-25	1	Hist/Recent	Domestic	Foil	Metal	Seal	Fragment	Discarded in Lab
31	1	0-25	1	Hist/Recent	Domestic	Lid	Plastic	Coffee Cup	Fragment	Discarded in Lab
31	1	0-25	1	Hist/Recent	Domestic	Utensil	Plastic	Spoon-Pink	Fragment	Discarded in Lab
31	1	0-25	1	Hist/Recent	Domestic	Vessel	Plastic	Cup	Fragment	Discarded in Lab
31	1	0-25	2	Unidentified	Mollusc	Clam	Shell	*Mercenaria*	Fragments	
31	1	0-25	1	Hist/Recent	Structural	Tape	Plastic	Electrical-Black	Fragment	Discarded in Lab
31	1	0-25	1	Hist/Recent	Unidentified	Sheet	Plastic		Fragment	Discarded in Lab
31	2	25-51	1	Hist/Recent	Domestic	Container	Glass	Bottle	Fragment	Colorless
31	2	25-51	3	Hist/Recent	Domestic	Container	Glass	Bottle	Fragment	Green Body
31	2	25-51	1	Recent	Domestic	Container	Glass	Bottle	Fragment	Green Lip
31	2	25-51	1	Recent	Domestic	Vessel	Styrofoam	Cup	Fragment	Discarded in Lab
31	2	25-51	1	Unidentified	Mollusc	Clam	Shell	*Mercenaria*	Fragment	
31	2	25-51	1	Hist/Recent	Structural	Hardware	Iron	Nail	Fragment	Unidentified
40	2	10-44	1	Historic	Domestic	Ceramic Container	Stoneware	Bottle	Fragment	Base, White, Beer Bottle, 1850-1920

STP/Unit	Stratum	Depth (cm)	Count	Period	Group	Artifact Class	Artifact Material	Artifact Type	Description	Comments / Measurements / Dates
40	2	10-44	1	Hist/Recent	Domestic	Container	Aluminum	Pull Tab	Whole	1962-1980 Discarded in Lab
40	2	10-44	11	Hist/Recent	Domestic	Container	Glass	Bottle	Fragments	Colorless Body
40	2	10-44	26	Hist/Recent	Domestic	Container	Glass	Bottle	Fragments	Green Body
40	2	10-44	1	Hist/Recent	Domestic	Container	Glass	Bottle	Fragment	Green Base
40	2	10-44	2	Recent	Domestic	Container	Glass	Bottle	Fragments	Cololess Lip Threaded
40	2	10-44	1	Recent	Domestic	Container	Glass	Bottle	Fragment	Colorless Base
40	2	10-44	1	Recent	Domestic	Vessel	Plastic	Cup	Fragment	Discarded in Lab
40	2	10-44	1	Recent	Domestic	Vessel	Styrofoam	Cup	Fragment	Discarded in Lab
40	2	10-44	3	Historic	Industrial	Slag	Slag	Slag	Fragment	Discarded in Lab
40	2	10-44	1	Hist/Recent	Structural	Hardware	Iron	Nail	Fragment	Wire; Post-1875
40	2	10-44	1	Hist/Recent	Structural	Hardware	Glass	Window	Fragment	
40	2	10-44	1	Hist/Recent	Tobacco	Sheet	Plastic	Cigarette pack top	Fragment	Discarded in Lab
40	3	44-71	1	Historic	Industrial	Coal	Coal	Coal	Fragment	Discarded in Lab
40	3	44-71	1	Historic	Industrial	Slag	Slag	Slag	Fragment	Discarded in Lab
40	3	44-71	2	Hist/Recent	Structural	Brick	Redware	Brick	Fragments	
41	2	12-43	1	Hist/Recent	Domestic	Container	Aluminum	Pull Tab	Whole	1962-1980 Discarded in Lab
41	2	12-43	1	Hist/Recent	Domestic	Container	Glass	Bottle	Fragment	Brown Base
41	2	12-43	6	Historic	Industrial	Slag	Slag	Slag	Fragments	Discarded in Lab
41	2	12-43	2	Hist/Recent	Structural	Hardware	Iron	Nail	Fragments	Unidentified
41	3	43-59	1	Hist/Recent	Structural	Pipe	Earthenware	Drain		
Total Artifacts			**247**							

	Indicating Precontact Material

Appendix F

Professional Qualifications

Lauren Cook RPA

CULTURAL RESOURCES SPECIALIST

Lauren Cook is a Registered Professional Archaeologist with extensive experience in archaeology and cultural resources management. He specializes in historical and industrial archaeology and has considerable experience in archaeological monitoring, project management, and report writing and presentation. Lauren meets the Secretary of Interior's Qualification Standards for Historical Archaeology, Prehistoric Archaeology, and History.

EDUCATION

MA • Archaeological Studies • Boston University • 1990

BA • Anthropology • Providence College • 1980

REGISTRATIONS

Registered Professional Archaeologist

OSHA 40-Hour Hazardous Waste Operations Training: Annual Refreshers • U.S.

OSHA 8-Hour Site Supervisor's • U.S.

E/L 0869; Public Assistance Program Delivery Management Course

IS 01016; Environmental and Historic Preservation Considerations/ Compliance for Public Assistance Grants Course

Certified PHMC to conduct Prehistoric, Historic, and Industrial Archaeology projects in PA

PennDOT Cultural Resource Handbook for Business Partners Training

YEARS OF EXPERIENCE

Dewberry • 7

Prior • 33

CHRONOLOGY

Register of Professional Archaeologists

Archaeological Society of New Jersey

Council for Northeast Historical Archaeology

RELEVANT EXPERIENCE

Archaeological Monitoring, Pulaski Skyway Rehabilitation Program, Construction Support, New Jersey Department of Transportation, Contract 7, Newark Ramp, Newark, NJ. Archaeologist responsible for archaeological monitoring of ground-disturbing activities in proximity to the historic location of the Morris Canal, listed in the National Register of Historic Places. This work was conducted as part of a $2-billion rehabilitation of the Pulaski Skyway, a 3.5-mile-long structure connecting Newark to Jersey City.

Program Delivery Management for FEMA-DR-4332-TX Hurricane Harvey, FEMA Public Assistance (PA) Harris County, TX. Program Delivery Manager (PDMG) deployed to assist public entities in preparation and submission of projects for reimbursement.

Cultural Resources Monitoring for FEMA-DR-4407-CA California Wildfires, FEMA Public Assistance (PA) and Individual Assistance (IA) Disaster Operations and Assistance, Butte County, CA. Archaeological Lead and an Archaeological Liaison responsible for archaeological monitoring during demolition of several hundred burned structures and removal of approximately 70,000 dead trees from more than 7,000 properties, as a result of the Camp Fire of November 2018. Activities were conducted in compliance with the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (NHPA), and local regulations. *NISTAC E 19-J-0113*

Archaeological Survey for Hazard Mitigation Grant Program, FEMA, City of Elba, Coffee County, AL. Archaeologist for a Phase I Archaeological Survey of 64 residential properties that are planned to be demolished as part of the FEMA Hazard Mitigation Grant Program. Activities include field survey, archival research, artifact processing and analysis as needed, and preparation of an archaeological report.

Green Street Tunnel Project, FEMA, Selma, AL. Architectural Historian responsible for historic reviews and historic recordation for compliance with Section 106 of the National Historic Preservation Act. The project involved repair to a 19th century sanitation tunnel with outfall running through a ravine to the Alabama River.

Maritime Transportation System Planning and Project Management Services, New Jersey Department of Transportation, Statewide, NJ. Archaeologist for a task order contract to support the NJDOT's Office of Maritime Resources with the State Dredging Program. Responsible for and environmental and historic preservation compliance, including field monitoring of dredging.

Maritime Archaeology, Route 35 Steel Sheet Pile Dune Restoration Project, New Jersey Department of Environmental Protection (NJDEP), Mantoloking Sea Wall, Brick Township, NJ. Cultural Resources Specialist for Dewberry's contract to conduct maritime archaeological recordation and damage assessment for

- **CHRONOLOGY (CONT'D)**
  Professional Archaeologists of New York City

  Philadelphia Archaeological Forum, Vice President 2011-Present

- **PAPERS/PRESENTATIONS**
  "Reading the Sidewalk." Philadelphia Archaeological Forum, Philadelphia, Pennsylvania, 2014

  "Rails across the Delaware: The Port Richmond Car Float Terminal." Philadelphia Archaeological Forum, Philadelphia, Pennsylvania, 2012

  "The Archaeology of Industrial Process." Archaeological Society of New Jersey, Roebling, New Jersey, 2010

  "Industrial Archaeology of the Delaware River Waterfront: Problems and Promise." Oliver Evans Chapter, Society for Industrial Archeology, Philadelphia, Pennsylvania, 2009

  Industrial Archaeology of the Middle Atlantic Region (Session Chair). Council on Northeast Historical Archaeology, Trenton, New Jersey, 2005

the cultural materials (i.e., shipwreck remains) encountered during the installation of steel sheet piles.

Rebuild By Design Hudson River Project, NJ TRANSIT and New Jersey Department of Environmental Protection (NJDEP), Hudson County, NJ. Cultural Resources Specialist for the Feasibility Study and National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS) for a $230-million comprehensive urban water strategy conceived to protect the Hoboken waterfront, as well as parts of Weehawken and Jersey City. Supported historic documentary review and archaeological assessment for proposed project alternatives. (2015-2016)

Washington Square Park Utility Construction, Con Edison, New York, NY. Archaeologist responsible for archaeological monitoring during excavation to identify the presence and location of subsurface utilities, in support of water main upgrades. Archaeological monitoring was required by the NYC Landmarks Preservation Commission.

NYC Build It Back Program, New York City Economic Development Corporation and Mayor's Office of Housing Recovery Operations, New York, NY. Archaeologist for cultural resources reviews to qualify properties for US Department of Housing and Urban Development (HUD) Community Development Block Grant-Disaster Recovery (CDBG-DR) funding. Requires significant coordination with New York State Historic Preservation Office and NYC Landmarks Preservation Commission.

Project Management Contract for Superstorm Sandy Waterway Debris Removal, New Jersey Department of Environmental Protection (NJDEP), NJ. Cultural Resources Specialist/Archaeologist responsible for monitoring maritime archaeological resources and conducting background historical research along the coastal waterways of New Jersey. Dewberry was responsible for supporting the NJDEP in planning and managing a state-level, regionally organized contract to remove and monitor debris from waterways, while maximizing FEMA reimbursement under the Public Assistance Program.

Archaeological and Environmental Planning Technical Support, U.S. Customs & Border Protection, U.S. / Mexico Border. Archaeologist for Dewberry's contract to support the construction of facilities, surveillance towers, fences, roads, and lights. Provided compliance with Section 106 of the National Historic Preservation Act.

Archaeological Monitoring, Delaware and Raritan Canal Outlet Lock Clearing, Lambertville, NJ. Senior Archaeologist responsible for recording resources associated with a canal lock along the Delaware River.

Construction Monitoring, Electric Cable Installation, Battery Park, Manhattan, NY. Senior Archaeologist responsible for recording and assessing deposits associated with Castle Clinton (1808), a waterfront fort.

Construction Monitoring, Ellis Island Fiber Optic Cable Installation. Jersey City, Hudson County, NJ. Senior Archaeologist responsible for recording and assessing a ca. 1890 seawall and other resources.

Industrial Archaeologist, Reading Railroad Car Transfer Float Bridge, Port Richmond, Philadelphia, PA. Archaeologist for the Philadelphia Archaeological Forum. Researched and assessed a facility used by the Reading Railroad to transfer railroad cars to and from barges.

Niall Conway, RPA
ARCHAEOLOGIST

- **EDUCATION**
  MA • Art History - Cultural Heritage and Preservation Studies • Rutgers University • 2017

  BA • Anthropology • William Paterson University • 2005

- **REGISTRATIONS**
  ArcGIS

  Register of Professional Archaeologists

- **YEARS OF EXPERIENCE**
  Dewberry • 1

  Prior • 13

- **AFFILIATIONS**
  Alternate, Montville Historic Preservation Commission 2019

- **CHRONOLOGY**
  2017-2017: New York City Landmarks Preservation Commission

  2016-2016: Paterson Historic Preservation Commission Division

  2011-2013: Gateway Counseling Center

  2007-2010: Peace Corps, Ghana

  2005-2007: The Louis Berger Group

  2004-2005: Langan Engineering and Environmental Services

Niall Conway is an archaeologist specializing in document research including Sanborn/historic maps, NHPA guidelines, deeds, historical census, geo-coding databases, and newspapers. Niall is also experienced in identifying historic architectural resources with specific focus on architectural styles, building materials, and building descriptions.

Environmental Services Term Contracts, NJ TRANSIT, Statewide, NJ. Archaeologist supporting this three-year, $5-million contract for environmental services. Support for cultural resources tasks pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended and Section 4(f) of the U.S. Department of Transportation Act. Specific tasks have involved intensive-level architectural surveys, keeping with the Secretary of the Interior's Standards for the Treatment of Historic Properties, and Phase IA archaeological investigations. Results have led to development of mitigation measures to minimize harm to historic properties. Work has also included the preparation of a HAER style recordation document. Cultural resources analyses and reports include coordination with NJHPO.

Passaic Bus Terminal Environmental Support Services, NJ TRANSIT, Passaic, NJ. Architectural Historian supporting NJ TRANSIT's preparation of environmental documentation for this Federal Transit Administration funded project to construct a new bus terminal in an underused parking median in downtown Passaic. Responsible for the preparation of the Historic Architectural Resources Background Survey (HARBS) for the project. Completed 23 New Jersey Historic Preservation Office historic architecture survey forms to determine National Register eligibility. Applied the Criteria of Adverse Effect to the National Register eligible Erie Railroad Main Line Historic District, finding the proposed project will not affect the historic district.

Penn Street Bridge (SR 2011-A07) Replacement, PennDOT, District 2-0, Millheim, Centre County, PA. Architectural Historian leading the preparation of a Historic Bridge Eligibility Assessment and a Pennsylvania Historical & Museum Commission (PHMC) Abbreviated Historic Resource Survey Form for the Penn Street Bridge crossing the Millheim Race. Determined that the bridge no longer meets National Register eligibility due to significant modifications in the past 20 years and due to its not being a contributing element to either the Millheim Historic District or the Penns Valley & Brush Valley Rural Historic District.

Restoration of SR 61 from I-78 to the Schuylkill County Line Tilden, PennDOT, District 5-0, Berks County, PA. Architectural Historian leading the survey to evaluate the National Register eligibility of historic properties within the projects Area of Potential Effect (APE). Completed PHMC survey forms for a single farmstead with a determination that the property does not meet National Register eligibility.

Port Jervis Mobile Substation Phase IA Archaeological Assessment, ConEd, Port Jervis, NY. Archaeologist for this project, which supports the creation of a proposed mobile substation. Responsible for preparing both a Phase IA Archaeological Assessment, which included a pedestrian reconnaissance, site photographs, a sensitivity assessment, a disturbance summary, archaeological testing recommendations, etc.

Goshen Training Center Improvements, Ecological, Cultural Resources Support, ConEd, Woodbury, NY. Archaeologist for this task, which involved a Phase IA and Phase IB Cultural Resources Study in support of facility improvements to the Goshen Training Center.

Harriman Substation Expansion, Cultural Resources Support, ConEd, Woodbury, NY. Archaeologist for this task, which involved Phase IA and Phase IB Cultural Resources Study in support of the expansion of the Harriman Substation.

Made in NY (MiNY) Campus, New York City Economic Development Corp., Brooklyn,

Niall Conway, RPA

NY. Cultural Resources Specialist for preparation of an Architectural Eligibility Assessment and Phase IA Archaeological Study for a $136-million project partially located in the Bush Terminal Historic District. The project includes major renovations to create a 600,000-square-foot garment manufacturing hub; upgrades to a 180,000-square-foot building; constructing a 100,000-square-foot film and television production facility; and making streetscape improvements, a new plaza space, and utility improvements.

Pulaski Skyway Rehabilitation Program Contract 7 Newark Ramp Construction Support, NJDOT, Newark, NJ. Archaeologist responsible for coordinating the development and implementation of an archaeological monitoring plan for ground-disturbing activities in close proximity to the historic location of the Morris Canal, which is listed in the NR.

Bruckner-Sheridan Interchange Reconstruction, New York State Department of Transportation (NYSDOT), Bronx, NY. Cultural Resources Specialist for a NEPA EIS process that evaluated infrastructure and access improvements between the Bruckner and Sheridan Expressways (I-287 and I-895) and the Hunts Point Peninsula/Hunts Point Food Distribution Center. Conducted historic research in support of the Cultural Resources Screening, Architectural Survey, and Cultural Resources Findings Document for the proposed improvements. Our screening study identified multiple historic properties present within the surrounding area; it also demonstrated the presence of extensive disturbances resulting from prior roadway construction projects since the mid-20th century. Our historic architecture survey inventoried over 200 historic architectural resources throughout the project area and clarified the history of multiple bridges within and along the Bruckner and Sheridan Expressways.

Archaeological Survey for Hazard Mitigation Grant Program, FEMA, City of Elba, Coffee County, AL. Archaeologist for a Phase I Archaeological Survey of 64 residential properties that are planned to be demolished as part of the FEMA Hazard Mitigation Grant Program. Activities include field survey, archival research, artifact processing and analysis as needed, and preparation of an archaeological report.

Environmental Planning Task Order Contract. NJDOT, Statewide, NJ Archaeologist for tasks can include inventories and surveys, fieldwork and photo documentation, archival research, preservation plans, Memoranda of Agreement, use determination, alternatives evaluation, impact assessment, and mitigation plans, as well as monitoring and mitigating construction projects for adverse effects to historic properties. Currently completing a Phase IA Archaeological Study and Intensive Level Architectural Survey, in compliance with Section 106, for the Route 47 Nummytown Mill Pond Dam Slope Reinforcement and Safety Improvement project.

Environmental Assessment Field Contractor for Superstorm Sandy Funded Programs, NJDEP, Various Locations, NJ. Cultural Resources Specialist for NEPA Environmental Assessments and compliance with Section 106 in support of federally-funded projects (CDBG-DR and other programs).

Maritime Transportation System Planning and Project Management Services, New Jersey Department of Transportation, Statewide, NJ. Project Site Archaeologist for a task order contract to support the NJDOT's Office of Maritime Resources with the State Dredging Program. Providing pre-planning coordination, oversight, and real-time archaeological guidance for more than 20 state-owned channels and waterways as an Environmental and Historic Preservation (EHP) field specialist. Compiling EHP Compliance Summary Reports for channels that are eligible for Federal Emergency Management Agency (FEMA) reimbursement.

Zachary Davis, RPA

SENIOR ARCHAEOLOGIST / SENIOR PROJECT MANAGER

Zach Davis is a senior archaeologist and project manager practiced in National Environmental Policy Act (NEPA) and State Environmental Quality Review Act (SEQRA) compliance, as well as Phase IA Archaeological Assessments, Phase IB Archaeological Surveys, and Phase II Archaeological Site Evaluations. Zach has been project manager for over 100 projects in New York, New Jersey, and other Mid-Atlantic States.

Port Jervis Transmission Line Rebuild Project, Orange & Rockland Utilities, Port Jervis, NY. Project Manager for this project, which involved a Phase IA and Phase IB Cultural Resources Assessment in preparation for proposed improvements to a segment of Transmission Line 111 at the right-of-way corridor between Skyline Drive and Park Avenue.

Archaeological Discovery Plan and Archaeological Monitoring for 33R07 Extension, Orange & Rockland Utilities, Tottenville, NY. Project Manager for this 2.5-mile electrical wire installation project. Responsible for developing, revising, and executing an unanticipated archaeology plan, which included a description of the proposed project, any prior archaeological investigations or context; an analysis of the potential for archaeological resources and potential impacts from the proposed project's excavation; the need for the unanticipated discovery plan; human remains discovery protocol; and reporting, including a summary of unanticipated discoveries as well as the results of excavation monitoring.

Skyline Drive Transformer Project Cultural Resources Services, Orange & Rockland Utilities, Port Jervis, NY. Task Manager for this task, which involves preparing a Phase IA Cultural Resources Assessment focused on the roughly 2,000-square-feet area that will be impacted by impacted by the proposed transformer as well as its associated poles and underground wires. The Cultural Resources included a pedestrian reconnaissance, site photographs, a sensitivity assessment, and a disturbance summary.

Port Jervis Mobile Substation Phase IA Archaeological Assessment, Orange & Rockland Utilities, Port Jervis, NY. Task Manager for this project, which supports the creation of a proposed mobile substation. Responsible for preparing both a Phase IA Archaeological Assessment, which included a pedestrian reconnaissance, site photographs, a sensitivity assessment, a disturbance summary, archaeological testing recommendations, etc.

Goshen Training Center Improvements, Ecological, Cultural Resources Support, Orange & Rockland Utilities, Woodbury, NY. Project Manager for this task, which involved a Phase IA and Phase IB Cultural Resources Study in support of facility improvements to the Goshen Training Center.

Harriman Substation Expansion, Cultural Resources Support, Orange & Rockland Utilities, Woodbury, NY. Project Manager/Cultural Resources Specialist for this task, which involved Phase IA and Phase IB Cultural Resources Study in support of the expansion of the Harriman Substation.

Gas Regulator Station, Hunts Point Avenue Right-of-Way, Unanticipated Archaeological Discovery Plan, Con Edison, Bronx, NY. Task Manager supporting the development of an Unanticipated Archaeological Discovery Plan to provide guidance during the construction of a proposed gas regulator station and connections adjacent to a New York City park that consists of a cemetery with burials dating back to the early 19th century.

Passaic Bus Terminal Environmental Support Services, NJ TRANSIT, Passaic, NJ. Cultural Resources Lead supporting NJ TRANSIT's preparation of environmental documentation for this Federal Transit Administration funded project to construct a new bus terminal in an underused parking median in downtown Passaic. Responsible for preparation of a combined Phase IA Archaeological Assessment/ Historic Architectural Resources Background

- **EDUCATION**

  PhD (ABD) • Interdepartmental Doctoral Program in Anthropology • SUNY Stony Brook • 2006

  MA • Anthropology • SUNY Stony Brook • 2000

  MA • Archaeology • University of London • 1994

  BA • Archaeological Studies • Boston University • 1993

- **REGISTRATIONS**

  Registered Professional Archaeologist

  An Advanced Workshop for National Register Nomination Preparers, National Park Service and New Jersey Historic Trust (2012)

  Cultural Resources Best Practices Workshop, 7-Hour Training Program, New Jersey Historic Preservation Office (2006)

  OSHA 40-Hour Hazardous Waste Operations Training (2004); Annual Refreshers: US

  Trenching and Excavation Safety – OSHA Construction Industry Standards, Subpart P (29 CFR 2926. 650-652) (2009)

- **YEARS OF EXPERIENCE**

  Dewberry • 4

  Prior • 22

Zachary Davis, RPA

- **AFFLIATIONS**
  Society for American Archaeology

  Millburn Short Hills Historic Society

  New York Archaeological Council

  Commissioner, Millburn Historic Preservation Commission, 2016-2022.

Survey (HARBS)/Environmental Assessment (EA) that will identify known and identified potential historic resources within the Area of Potential Effect (APE), an archaeological sensitivity of the APE, and anticipated effects that may result from the proposed bus terminal. In the event that the project is found to result in an Adverse Effect under Section 106, we will prepare a Memorandum of Agreement (MOA) documenting the stipulations required to mitigate the project effects.

Made in NY (MiNY) Campus, New York City Economic Development Corp., Brooklyn, NY. Cultural Resources Lead for preparation of an Architectural Eligibility Assessment and Phase IA Archaeological Study for a $136-million project partially located in the Bush Terminal Historic District. The project includes major renovations to create a 600,000-square-foot garment manufacturing hub; upgrades to a 180,000-square-foot building; constructing a 100,000-square-foot film and television production facility; and making streetscape improvements, a new plaza space, and utility improvements.

Requirements Contract for Environmental Assessment HWEARCO4, NYCDDC, Staten Island and Manhattan, NY. Senior Archeologist for a three-year, $10-million joint venture contract. Current work involves implementing a Construction Protection Plan (CPP) for utility upgrades in the Gowanus neighborhood of Brooklyn where inspection and vibration monitoring is being conducted at historic architectural resources within 90 feet of construction.

Roosevelt Island Bike Ramp and Bike Lane, Roosevelt Island Operating Corporation, New York City, NY. Cultural Resources Lead for the design of a new elevated bike ramp and a two-way bicycle lane on Roosevelt Island. The scope of work includes preparation of a Federal Environmental Approval Worksheet, a Short Environmental Assessment Form, a New York City Waterfront Revitalization Program Consistency Assessment Form, and a summary of existing historic resource conditions for the bridge and the surrounding area.

Archaeological Survey for Hazard Mitigation Grant Program, FEMA, City of Elba, Coffee County, AL. Project Manager for a Phase I Archaeological Survey of 64 residential properties that are planned to be demolished as part of the FEMA Hazard Mitigation Grant Program. Activities include field survey, archival research, artifact processing and analysis as needed, and preparation of an archaeological report.

Phase I Archaeological Investigations for Proposed Bridge Replacement Project on SR 3007-015, Pennsylvania Department of Transportation (PennDOT) District 3-0, Woodward Township, Lycoming County, PA. Senior Archaeologist responsible for providing oversight to a Phase I Archaeological Investigations for a proposed bridge replacement project on State Road 3007-015 crossing the Pine Run, between Woodward and Piatt Townships. The majority of the project area was designated a sensitive for prehistoric archaeological resources given the close proximity of the project to the West Branch of the Susquehanna River. Geomorphological cores were retrieved prior to archaeological field work to determine the likelihood for deeply buried archaeological resources. Coring found that deeply buried clay soils did not hold potential for archaeological resources but did confirm the potential for archaeological deposits within a shallow silty veneer stratum. Hand excavated shovel tests were located across the project area and identified a small concentration of late-nineteenth to early-twentieth century artifacts within a plow zone context. The recovered material fails to satisfy Pennsylvania Historical and Museum Commission (PHMC) archaeological site criteria. The investigations demonstrated that the project will have no effect to archaeological sites given the lack prehistoric archaeology and the small scatter of historic artifacts. A Phase I Archaeology Negative Survey Form was completed for the PHMC detailing the project's findings.

Prepared for:

NYC DDC Department of Design and Construction

Prepared by:
Arcadis Dewberry a Joint Venture
27-01 Queens Plaza North, Suite 800
Long Island City, NY 11101

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