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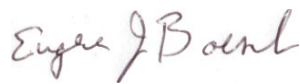
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To: Mr. Tommy Kim AIA, Project Architect, MBB Architects, 48 W 37th Street, #14, New York, New York 10018

From: Eugene J. Boesch, Ph.D., R.P.A., Principal Investigator

Date: January 19, 2025



Re: Archaeological Investigation of the Area of Potential Effect for Septic System Upgrade Project at the Bartow-Pell Mansion Museum; 895 Shore Road, Pelham Bay Park, The Bronx, New York

1.0 Introduction

This letter report presents the results of archaeological monitoring on January 9, 2025 of three 6-inch diameter mechanized soil borings (SB1, SB2, and SB3) and two 12-inch diameter and about 24 inch deep, hand dug auger percolation tests (PA, PB) conducted for the design of a septic system upgrade project at the Bartow-Pell Mansion Museum (BPMM), located at 895 Shore Road in Pelham Bay Park, The Bronx, New York (Figures 1-2). The current proposed upgrade location is within an approximately 105ft by 55ft area that constitutes the project's archaeological Area of Potential Effect (APE) as defined in the October 3, 2024 testing protocol and proposal. The work was conducted east of an existing garden area and southeast of the Carriage House at the BPMM facility. The soil borings and percolation tests were conducted as part of the evaluation of APE soils suitability for the septic upgrade (Figures 3-5). The archaeology was done in conjunction with that environmental work. The archaeology assessment was based on the results of the sub-surface soils work. Archaeological shovel testing was not conducted for the project. The archaeology was undertaken for Mr. Tommy Kim AIA, Project Architect, MBB Architects, 48 W 37th Street, #14, New York, New York 10018 at the request of New York City Department of Parks (Parks). All archaeology work was undertaken by Eugene J. Boesch, Ph.D., R.P.A who served as the Principal Investigator (PI) for the archaeology portion of the project. The archaeology conforms to the guidelines for cultural resource investigations currently adopted by the New York City Landmarks Preservation Commission (LPC; NYCLPC 2018) and Parks. Both agencies will review this letter report and comments received addressed by the PI. Representatives of Federally-recognized tribes were contacted by Parks and invited to observe the project activities. Observation by tribal representatives did not occur.

The APE consists of relatively level to gently sloping ground (Figures 6-7). The location may have been filled historically as a noticeable decrease in terrain elevation is to the immediate east transitioning into a wetland which may have extended into the APE (Figure 8). Potential impacts due to septic upgrade will result from construction of a new leaching field, piping, pump, and tank. A new equalization tank also will be installed. Movement of heavy equipment and storage of supplies and equipment within the APE also will occur.

The septic upgrade project is located within the National Register of Historic Places (NRHP) listed Bartow-Pell Mansion and Carriage House property (Figures 7 and 9; NRHP 90NR00074; New York State Office of Parks, Recreation and Historic Preservation [OPRHP] Unique Site Number [USN] 00501.000013). The property is part of the Pelham Bay Park Historic District (USN 11961.000020). OPRHP's Cultural Resource Information System (CRIS) also includes the APE within an area it defines as an Archaeological Buffer Zone indicating that, in undisturbed contexts, archaeological sites can be found anywhere within it. Although previously identified Pre-

Contact period, Contact period, or Historic period archaeological sites have not been identified within the APE, there are three known sites in close proximity. The closest known site is a Pre-Contact/Late Woodland to Contact period habitation site located immediately south of the Mansion House and parking area, about 450 feet south-southwest of the current APE (Bolton 1922:124 and Map VII B; Parker 1922:488; Boesch 1996:104). A second Pre-Contact/Late Woodland to Contact period occupation area is located near the north side of the entrance gate to the BPMM, just southeast of Shore Road, approximately 500 feet north of the APE (Bolton 1922:124 and Map VII B; Parker 1922:488; Boesch 1996:104). The third known Pre-Contact site located nearby is another habitation site but which contains human remains (USN 00501.000013). It is located about 1,200 feet to the west-southwest of the APE near Shore Road. The presence of these and other past Native American sites near Shore Road is not surprising since that thoroughfare served as a major Native American path during the Contact period and likely had some time depth (Bolton 1922). Many other Pre-Contact and Contact period sites are located within Pelham Bay Park (Bolton 1922; Boesch 1996). One OPRHP CRIS inventoried Historic period archaeological site, the Pell Family Cemetery (USN 00501.003468), is located about 500 feet south of the APE.

The objectives of the septic project's archaeology were to: 1) determine whether potentially significant Historic Properties (archaeological resources), particularly Pre-Contact period, Contact period, and/or Historic period deposits, features, or buried former ground surfaces are potentially present within the APE; 2) depth of fill, if any within the investigated area; 3) extent of prior ground disturbance; 4) provide Parks and the project architects with enough information to design and implement the septic system upgrade project without adversely affecting historic properties; and 5) develop recommendations as to the need for further work within the current APE or in other BPMM facility locations if septic design plans and/or system locations change.

2.0 Methodology

The soil borings were performed by Universal Drilling & Boring, Inc. (UDB; West Babylon, New York) using a continuous Standard Penetration Test (SPT) method. The equipment used for the soil borings were a CME 45C w/Auto SPT Hammer, a 2018 Ford F550 Support Truck, and BR1000 Rubber Rack Limited Access. A total of 18 feet was drilled due to refusal and nine SPT Split Spoon Samples recovered. UDB encountered soils it described in soil logs as generally consisting of Medium Dense to Dense, Silty Sands, with traces of Clay, underlain by fairly shallow bedrock. Bedrock was encountered at a depth of ± 4 -feet in Boring #1, ± 8 -feet in Boring #2, and ± 6 -feet in Boring #3 (UDB 2025)

Peter Parent, P.E. of CHA, Consulting, Inc. (CHA; Albany, New York, Rocky Hill, Connecticut) conducted and witnessed the percolation tests and observed the soil borings (CHA 2025). Seasonal high groundwater was apparent just below the topsoil layer (± 10 -12-inches below grade) in PA and PB (CHA 2025).

The PI recorded the soils revealed in the three soil borings, PA, and PB to the extent possible given the field methods employed and collected select soil samples from each. Soils were placed in labeled plastic bags and returned to the archaeology laboratory where they were screened through quarter inch hardware cloth (mesh) to detect the presence of cultural materials. No cultural materials were recovered from the collected samples or noted during the field work in the borings or percolation tests.

3.0 Archaeological Results

Soil Boring 1

The initial 12 inches below the ground surface (bgs) in SB1 consisted of dark brown to dark gray brown clay mixed with sandy silt that represents the relatively recently developed modern surface and underlying leaching zone layers (Stratum I). Underlying those soils was an approximately 12 inch thick layer of brown sandy silt (Stratum II) that likely represents fill or disturbed subsoil. The layer, at least in part, may be re-deposited subsoil used to raise the area which likely was part of the wetland adjoining to the east. If disturbed subsoil, the matrix may have derived during construction of the Mansion or Carriage House foundations. Beneath Stratum II, at about 24 inches bgs, was seen a layer of light brown sandy silt with some rust brown sandy silt mottling (Stratum III) that extended to about 36 inches in depth. The layer likely represents the naturally occurring subsoil that has been occasionally water saturated through time. Soil boring refusal occurred at about 48 inches bgs due to apparent bedrock (Stratum IV).

Soil samples were recovered from Strata I-III and subsequently screened through a quarter inch hardware cloth. No cultural materials were recovered from the samples nor were any artifacts noted in SB1 during the field work.

SB1	Stratum	Depth bgs (inches)	Description	Context	Cultural Material
1	I	0-12	Dark Brown to Dark Gray Brown Clay mixed with Sandy Silt	Modern surface and underlying leaching zone soil	None
1	II	12-24	Brown Sandy Silt	Fill/Subsoil	None
1	III	24-36	Light Brown Sandy Silt with Rust Sandy Silt mottling	Subsoil with occasional water saturation	None
1	IV	36	STP Refusal	Bedrock	None

Soil Boring 2

The initial 24 inches bgs in SB2 consisted of dark brown to dark gray brown clay mixed with sandy silt that represents the relatively recently developed modern surface and underlying leaching zone layers (Stratum I). Underlying those soils was an approximately 24 inch thick layer of brown sandy silt (Stratum II) that likely represents fill or subsoil. The layer, at least in part, may be re-deposited subsoil used to raise the area which likely was part of the wetland adjoining to the east. Beneath Stratum II was seen a layer of light brown sandy silt with some rust brown sandy silt mottling and weathered rock (Stratum III) that extended to about 96 inches in depth. The layer likely represents the naturally occurring subsoil with adjoining bedrock exposure that has been occasionally water saturated through time. Soil boring refusal occurred at about 96 inches bgs due to apparent intact bedrock (Stratum IV). Soil samples were recovered from Strata I-III and subsequently screened through a quarter inch hardware cloth. No cultural materials were recovered from the samples nor were any artifacts noted in SB2 during the field work.

SB2	Stratum	Depth bgs (inches)	Description	Context	Cultural Material
2	I	0-24	Dark Brown Clay mixed with Sandy Silt	Modern surface and underlying leaching zone soil	None
2	II	24-48	Brown Sandy Silt	Fill/Subsoil	None
2	III	48-96	Light Brown Sandy Silt with Rust Sandy Silt mottling and weather rock	Subsoil with occasional water saturation	None
2	IV	96	STP Refusal	Bedrock	None

Soil Boring 3

The initial 24 inches bgs in SB3 consisted of dark brown to dark gray brown sandy silt mixed with clay that represents the relatively recently developed modern surface and underlying leaching zone layers (Stratum I). Underlying those soils was an approximately 28 inch thick layer of light brown to brown sandy silt with weathered rock (Stratum II) that likely represents the naturally occurring sub-soil. SB3 was placed slightly up slope near a bedrock outcrop and further from the wetland area to the east so the occasional water saturated layer seen as Stratum III in SB1 and SB2 was not encountered in SB3. Soil boring refusal occurred at about 52 inches bgs due to apparent intact bedrock (Stratum III). Soil samples were recovered from Strata I-II and subsequently screened through a quarter inch hardware cloth. No cultural materials were recovered from the samples nor were any artifacts noted in SB3 during the fieldwork.

SB3	Stratum	Depth bgs (inches)	Description	Context	Cultural Material
3	I	0-24	Dark Brown to Dark Gary Brown Sandy Silt mixed with Clay	Modern surface and underlying leaching zone soil	None
3	II	24-52	Light Brown to Brown Sandy Silt with weathered rock	Subsoil	None
3	III	52	STP Refusal	Bedrock	None

Percolation Test A

The initial about 20 inches bgs in Percolation Test A consisted of dark brown to dark gray brown sandy silt that represents the relatively recently developed modern surface and underlying leaching zone layers (Stratum I). Underlying those soils was observed 6 inches of light brown to brown sandy silt (Stratum II) that likely represents possibly redeposited subsoil. PA was terminated at about 26 inches in depth. Seasonally high ground water encountered between 10-12 inches bgs. Excavated soils from Strata I-II were screened through quarter inch hardware cloth. No cultural materials were recovered from the layers.

PA	Stratum	Depth bgs (inches)	Description	Context	Cultural Material
PA	I	0-20	Dark Brown to Dark Gray Brown Sandy Silt Seasonally high ground water encountered between 10-12 inches bgs	Modern surface and underlying leaching zone soil	None
PA	II	20-26	Light Brown to Brown Sandy Silt	Fill/Subsoil	None

Percolation Test B

The initial about 20 inches bgs in Percolation Test B consisted of dark brown to dark gray brown sandy silt that represents the relatively recently developed modern surface and underlying leaching zone (Stratum I). Underlying that layer was observed 8 inches of light brown to brown sandy silt (Stratum II) that likely represents possibly redeposited sub-soil. PB was terminated at about 26 inches in depth. Seasonally high ground water encountered between 10-12 inches bgs. Excavated soils from Strata I-II were screened through quarter inch hardware cloth. No cultural materials were recovered from the layers.

PB	Stratum	Depth bgs (inches)	Description	Context	Cultural Material
PB	I	0-20	Dark Brown to Dark Gray Brown Sandy Silt Seasonally high ground water encountered between 10-12 inches bgs	Modern surface and underlying leaching zone soil	None
PB	II	20-28	Light Brown to Brown Sandy Silt with Rust Sandy Silt mottling	Subsoil with occasional water saturation	None

4.0 Conclusions and Recommendations

No Pre-Contact/Contact period or potentially significant Historic period deposits, features, or individual artifacts were observed or recovered by the soil borings or percolation tests conducted for the BPMM septic upgrade project. Deeply buried former ground surfaces also were not identified by the work. The borings were only able to penetrate between about 3 and 7.5 feet before refusal caused by bedrock. Relatively recently developed topsoil/humus and underlying leaching zone layers overlying apparent fill and subsoil were identified by the soil borings and percolation tests. Some grading may have occurred prior to the fill deposition which likely occurred during the Historic period possibly in association with the construction of the Mansion and/or Carriage House (Figures 7 and 9). Indications for occasional, possibly seasonal, water saturation of the subsoil also were observed in some of the tests. The presence of a wetland to the east of the APE, which likely formerly extended into at least part of the investigated area, likely accounts for the presence of the fill to raise the location and the underlying water saturated stratum. A noticeable drop in elevation to the east with a wetland present which may have formerly extended into the soil boring area supports this conjecture. No artifacts were noted to depth in the 6 inch soil borings or 12 inch percolation tests or from the soil samples recovered from the tests.

Based on the results of the soil borings and percolations tests, construction of the BPMM septic field upgrade will not impact archaeological resources. If design plans change and the septic upgrade construction needs to be relocated, similar archaeological investigation of the new design area reported on in this document may be warranted.

5.0 References Cited

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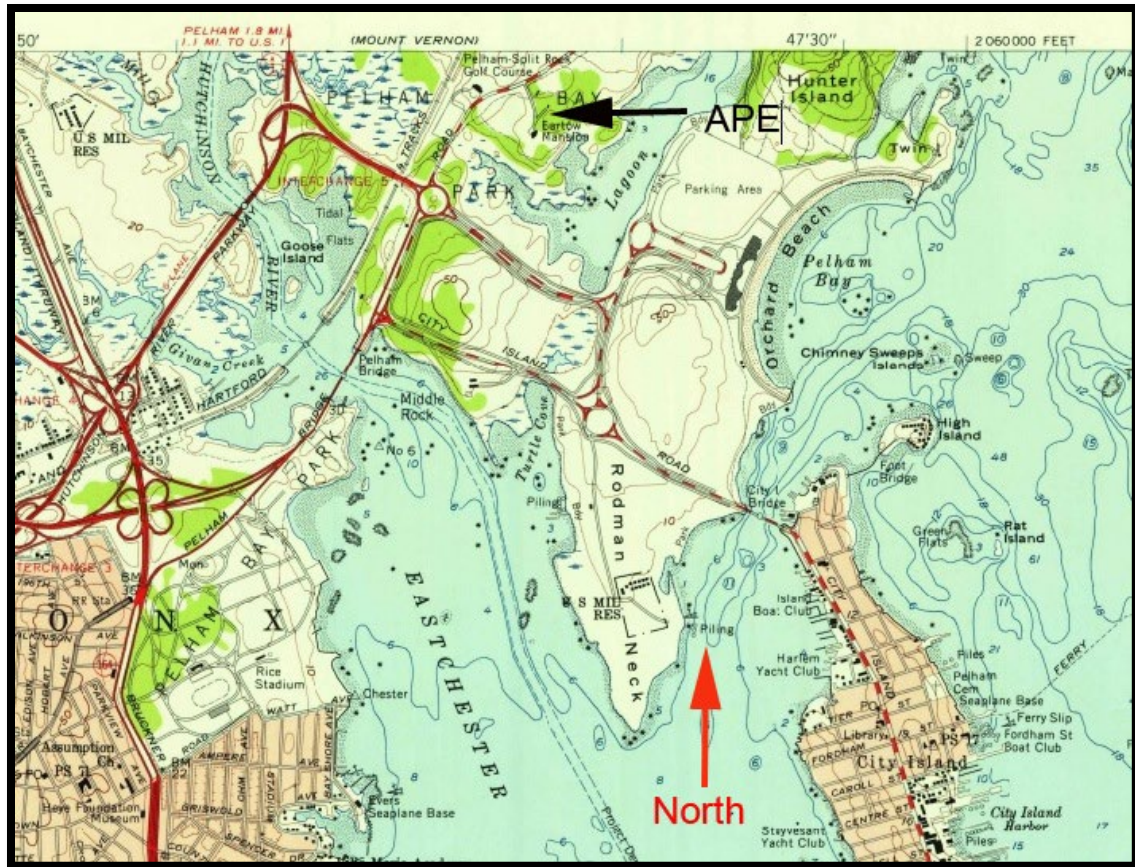


Figure 1

Bartow-Pell Mansion Museum Septic System Upgrade Archaeological Area of Potential Effect
Base Map Source: United States Geological Survey 1975
Scale: 1:24,000



Figure 2

Aerial View Showing Locations of Soil Borings B-1 to B-3 and Percolation Tests A and B within the Approximate Location of the Archaeological Area of Potential Effect for the Bartow-Pell Mansion Septic Upgrade Project. Also Shown are Locations of Bartow-Pell Mansion Museum, Carriage House, and Garden

Base Image for Figure 2 is Revised from 2025 CHA Soil Testing Report Image



Figure 3

UDB Soil Boring Rig

(CME 45C w/Auto SPT Hammer, a 2018 Ford F550 Support Truck, and BR1000 Rubber Rack Limited Access) – View is to the South



Figure 4

Typical Soil Boring Split Spoon Tube Sample



Figure 5

Percolation Test B



Figure 6

**Bartow-Pell Mansion Museum Septic System Upgrade Archaeological Area of Potential Effect -
View is to the North**



Figure 7

**Bartow-Pell Mansion Museum Septic System Upgrade Archaeological Area of Potential Effect.
Bartow-Pell Mansion in the Background -
View is to the South**



Figure 8

**Hand Held Auger Percolation Test B in Lower-Lying Portion of the APE with Wetland in Background -
View is to the East**



Figure 9

**Carriage House with Septic System Upgrade Location East and South of Garden -
View is to the North**