HISTORICAL PERSPECTIVES INC.



Phase IB Archaeological Field Investigation

Construction of Storm Water Best Management Practice BMP NC-6 at Boundary Avenue Part of Block 3696, Lot 1 Staten Island, Richmond County, New York

New York City Department of Design and Construction Contract MIBBNC04A NYSOPRHP No. 10PR02085 LPC No. 07DEP063R Phase IB Archaeological Field Investigation Construction of Storm Water Best Management Practice BMP NC-6 at Boundary Avenue Part of Block 3696, Lot 1 Staten Island, Richmond County, New York New York City DDC Contract MIBBNC04A NYSOPRHP No. 10PR02085 LPC No. 07DEP063R

Prepared For:

DiFazio Industries 38 Kinsey Place Staten Island NY 10303

And:



30-30 Thomson Avenue Long Island City, NY 11101

Prepared By:

Historical Perspectives, Inc. P.O. Box 529 Westport, CT 06881

Authors:

Elizabeth Eibert, M.A. Sara Mascia, Ph.D., RPA

August 2023

MANAGEMENT SUMMARY

SHPO Project Review Number (if available): 10PR02085

Involved State and Federal Agencies:

Phase of Survey: Phase IB Archaeological Field Investigation

Location Information

Location: **Part of Block 3696, Lot 1** Minor Civil Division: **08501, Staten Island** County: **Richmond**

Survey Area

Length: varies Width: varies Number of Acres Surveyed: Total footprint BMP NC-6 is ca. 3 acres; testing area is ca. 0.5 acre

USGS 7.5 Minute Quadrangle Map: The Narrows

Archaeological Survey Overview Number & Interval of Shovel Tests: **8 STs judgmentally placed** 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: **None**

Report Authors(s): Elizabeth Eibert, M.A. and Sara Mascia, Ph.D., RPA, Historical Perspectives, Inc.

Date of Report: August 2023

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Photographs

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I. Introduction

The New York City Department of Environmental Protection (DEP) has developed a drainage plan for the stormwater management of the New Creek Watershed in Staten Island, New York (Figure 1). The New Creek Watershed is approximately 2,249 acres in size and generally bounded by Miller Field and New Dorp Lane to the southwest. The northwestern boundary extends northeast to southwest through and incorporating portions of Richmond County Country Club and the Reeds Basket Willow Swamp Park (the northwestern limits being Ocean Terrace). Seaview and Burgher Avenues form the northeastern boundary and Lower Bay is the southeastern boundary. The proposed stormwater management plan includes storm sewers to collect runoff and Best Management Practices (BMPs) at the points where runoff discharges into the wetlands.

In 2011, Historical Perspectives (HPI) completed a Phase IA Archaeological Documentary Study for 19 BMP locations in the Staten Island Bluebelt's New Creek watershed (Figure 1). Of the 19 BMPs in the DEP Bluebelt study, only BMP NC-6 and BMP NC-4 were recommended for Phase IB archaeological field testing due to sensitivity for possible Indigenous Peoples occupation (Figures 2 and 3) . Currently, the New York City Department of Design and Construction (DDC) is moving forward with improvement plans for BMP NC-6, which is located within New York City parkland on Block 3696, Lots 1, 30, and 35. A portion of Lot 1 was determined to be archaeologically sensitive in the 2011 report. Since 2011, project plans have been refined, and the BMP footprint has been slightly modified from its initial shape and a revised APE was established (Figure 4).

In accordance with 36 CFR 800.4(a)(1), the Area of Potential Effect (APE) was defined for the proposed project based on the scope of work described above. Within the APE, an area representing potential direct effects from physical alterations or ground disturbance associated with the project was identified, including locations in which the proposed project has the potential to affect potential archaeological resources. The APE for BMP NC-6 was noted in 2011 as limited to a possibly intact landform in the south-central portion of the proposed BMP (Figure 3). As noted above, this area corresponds to a portion of Block 3696, Lot 1. The previously identified sensitive area is bounded on the north by a former transportation easement that connected Lincoln Avenue with Midland Avenue (now known as Block 3696, Lot 30) and on the south by the southern bank of the creek channel. The horizontal APE includes the general area on both the north and south sides of the creek channel (Figure 4). The vertical APE extends from the existing ground surface to sterile subsoil, which is expected to be within 1-2 feet of the ground surface.

HPI was retained to conduct the Phase IB archaeological testing according to applicable archaeological standards (New York Archaeological Council 1994, NYSOPRHP 2005; LPC 2018; CEQR 2020). The subsurface testing for archaeological resources was limited to the portion of the project area that was identified as sensitive and that will be impacted by the proposed BMP development (Figures 3 and 4).

Prior to initiating fieldwork, HPI prepared an Archaeological Work Plan (June 2023). The plan was submitted to, and accepted by, NYSOPRHP and LPC (06/22/23; 06/23/23). The HPI project team consisted of Cece Saunders, MA, RPA, the Principal Investigator; Sara Mascia, Ph.D., RPA, the Project Manager and Laboratory Manager; and Archaeologists Rosita Tirado, RA, and Elizabeth Eibert, MA.

II. Phase IB Field Methodology

Phase IB fieldwork, the testing phase of a standard archaeological evaluation, is designed to ascertain the presence/absence, type, and relative extent of archaeological resources. Testing was planned in the area identified as archaeologically sensitive within the portion of the site to be affected by the new project development, or APE, as shown on Figure 3.

In the approved archaeological work plan, the field methodology was described as follows:

Potential precontact period resources will be investigated using hand excavated shovel tests. Standard shovel tests are hand-excavated pits that generally measure approximately 40 cm in diameter and can extend up to approximately 1 meter in depth. Soil excavated from shovel tests is screened through 1/4-inch wire mesh in order to retrieve any artifacts. Based on the extent of the areas of archaeological sensitivity at BMP NC-6, as shown on the sensitivity map, it is expected that approximately 10-15 shovel tests will need to be completed on the northwest bank of the creek to ensure adequate coverage on a 30-foot grid, which is the testing interval requested by LPC. This number and/or the actual placement of shovel tests may be altered and/or limited in the field based on existing conditions such as visible disturbance from recent woodland clearing and soil testing. However, it is anticipated that one transect or its equivalent will be established on the northwest side of the existing creek. Judgmental placement of shovel test locations will occur in areas where conditions do not allow a straight transect. In addition, if indicated by a positive test, an array of verification STs must be excavated to assess the extent of cultural remains. HPI will work with the project team to establish a permanent datum that adheres to the North American Datum 1983— NAV83 with a vertical datum of Borough of Staten Island Sewer Datum, which are the data used on the contract drawings. Professional standards for excavations, screening, recordation, labeling, mapping, photography and cataloging will be observed. Each ST will be immediately backfilled but pin flags will be left in place, as necessary for mapping (HPI 2023).

All field investigations were under the direction of an archaeologist who is a certified Registered Archaeologist (RA), meets the qualifications of the National Park Service (48 FR 44716), and understands and has experience in archaeological excavation techniques. Field testing was implemented according to applicable archaeological standards (NYAC 1994, NYSOPRHP 2005, LPC 2018).

III. Field Testing Results

A. Current Conditions

Though the area was wooded at the time of HPI's Phase IA study of the proposed BMP NC-6 parcel in 2011, clearing of the parcel occurred in the spring of 2023, followed by soil sampling. This resulted in visible disturbance to much of the ground surface (HPI 2023). Currently, the ground surface in the western portion of the sensitive area is covered with wood chips and other debris associated with the recent woodland clearing (Photograph 1). The ground surface in the eastern portion of the APE near the banks of the stream was uneven and was covered in thick vegetation (see Photographs 5 and 10). Further, in numerous locations within the APE, standing water was present. Below is a discussion of the results of the Phase IB excavations within the APE.

B. Shovel Test Results

The Phase IB excavation was carried out on July 28, 2023. The southeastern portion of the sensitive area was avoided due to the presence of the stream, as mentioned above (Photographs 6, 8, and 9). In the remaining area identified as sensitive, obvious surface disturbance and standing water made it difficult to adhere to the proposed grid. Instead, a total of 8 STs were placed judgmentally, in order to cover as much of the APE as possible (Figure 4). All the STs measured approximately 40 cm in diameter and were excavated to undisturbed or non-artifact bearing subsoil, except in cases where obstructions prevented further excavation or the ST filled with water. Figure 4 illustrates the locations of the STs. The topographic base map was made prior to the site clearing, but at that time the locations where the STs were placed ranged from approximately 2-3 feet in elevation (Elevations shown on Figure 4 reference the Borough of Staten Island Sewer Datum which is 3.190 feet above mean sea level as established by the U.S. Coast and Geodetic Survey at Sandy Hook, New Jersey).

Testing revealed a significant amount of prior disturbance across the sensitive area, including the western portion, which in a few locations appeared potentially unaltered from its natural landform. The disturbance was largely characterized by the addition of fill soils, which were deposited over a previously graded ground surface in the western portion of the sensitive area, and more haphazardly over the eastern portion. On the northern banks of the stream, these fill strata were especially thick. Photographs 12 and 13 show the soil profiles of ST4 and ST2 that display the thick strata of fill with the natural B soil horizon beneath. It appears that during a previous clearing of the site, grading activity took place that likely removed both the shallow A-horizon and some of the B-horizon soils. Subsequent fill deposition occurred, with the soils spread across the surface, potentially further affected when the site was inundated over time by the stream and groundwater. The presence of push piles, including one large one, appears to confirm this activity (Photograph 2).

There were three distinct fill strata identified during testing (see Appendix). Fill 1, which made up the surface level, was a very dark grayish brown loam containing the wood-chipped remnants of the trees cleared away in the spring of 2023 and some surface refuse. Beneath this were two more types of fill soils. Fill 2 was also very dark grayish brown in color, but was a loamy sand. Fill 3 was a mixed yellowish brown and brown coarse sandy clay loam, which contained less organic materials and a significant amount of modern refuse. Beneath these levels was the natural B soil horizon, a dark yellowish brown sandy loam. The B horizon was encountered from approximately 1.5 to 2.75 feet below the existing ground surface, or at approximate elevations of 0.5 to 1.5 (Borough of Staten Island Sewer Datum).

The northern half of the sensitive area was especially wet, with standing water visible on the ground surface or just below the surface (Photograph 2). In many cases, the excavation of STs through the fill levels and into the natural soil horizons was not possible due to the presence of significant groundwater at approximately 30-65 cm below ground surface (Appendix). In some cases (STs 1, 3, 5, and 8), groundwater halted excavation at less than 35 cm below ground surface (Photographs 3 and 4). However, judging by the general topography of the area, it appeared that these shallower STs would have likely displayed very similar stratigraphy to those STs that were excavated to deeper levels. Table 1 shows what is assumed to be the typical stratigraphy of the APE.

Level/Horizon	Description
Fill 1	very dark grayish brown (10YR3/2), loam
Fill 2	dark grayish brown (10YR4/2), loamy sand
Fill 3	yellowish brown (10YR5/6) mixed with dark brown (10YR3/3), coarse sandy loam
В	dark yellowish brown (10YR4/4), sandy clay loam

Table 1: Typical stratigraphy of STs throughout archaeologically sensitive area

C. Cultural Material

No precontact or historic era artifacts or features were found throughout the Phase IB testing area. All cultural material found was deemed to be modern refuse, which was found in relatively high quantities in the fill levels. These materials included plastics, bottle glass, corroded metal, slag, and ceramic or metal utility pipe fragments. Photograph 14 shows an example of one of the bottle glass fragments mixed with the modern refuse.

IV. Conclusions and Recommendations

During the Phase IB field investigation 8 Shovel Tests (STs) were excavated in the project APE, which had recently been disturbed from site clearing, grading and filling. The groundwater table was high, with six of the eight STs inundated with water during excavations. The majority of the soils consisted of introduced fill, and much of the natural stratigraphic profile had been graded away. No artifacts or features from the historical or precontact periods were identified. Overall, in five of the STs investigated, the fill strata contained only modern refuse and three of the STs contained no cultural material. The modern artifacts found in the STs lack association, and therefore, potential significance. Further, no evidence of any potential features was identified during the field investigation of the APE. Therefore, no further investigation of this location is recommended.

V. References

Historical Perspectives, Inc. (HPI)

- 2011 New York City Department of Environmental Protection, Staten Island Bluebelt, Mid-Island of Staten Island's South Shore, New Creek Watershed, Phase IA Archaeological Documentary Study. NYSOPRHP No. 10PRO2085, LPC No. 07DEP063R. Prepared for AKRF and DEP Bluebelt Program.
- 2023 Archaeological Testing Protocol/Work Plan, Construction of Storm Water Best Management Practice BMP NC-6 at Boundary Avenue, Part of Block 3696, Lot 1 Staten Island, Richmond County, New York. New York City Department of Design and Construction Contract MIBBNC04A, NYSOPRHP No. 10PR02085, LPC No. 07DEP063R. Prepared for DiFazio Industries and NYC DDC.

Landmarks Preservation Commission (LPC)

2018 Landmarks Preservation Commission Guidelines for Archaeological Work in New York City.

New York Archaeological Council (NYAC)

1994 Standards for Cultural Resource Investigations and the Curation of Archaeological Collections. New York Archaeological Council.

New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) 2005 Phase I Archaeological Report Format Requirements

United States Geological Survey (U.S.G.S.)

2019 The Narrows, N.J.-N.Y. 7.5 Minute Topographic Quadrangle.

Figures



Figure 1: New Creek Watershed and BMP Locations on *The Narrows, N.Y.-N.J.* 7.5 Minute Topographic Quadrangle (U.S.G.S. 1981).







Figure 2. BMP NC-6 Location on *The Narrows, N.Y.-N.J.* 7.5 Minute Topographic Quadrangle (U.S.G.S. 2019).







Photographs



1. Archaeologically sensitive area, facing east.



2. ST1, push pile seen in background, facing north.



3. Water-filled ST1, facing east.



4. Water-filled ST3, facing northeast.



5. Digging ST6, creek seen in background, facing southeast.



6. Creek next to ST6, facing northeast.



7. ST8 during excavation, facing north.



8. Ca. 15m south of ST8, on bridge over creek, facing west.



9. Creek as seen from Lincoln Avenue, facing east.



10. Sensitive area: note thick vegetation covering much of eastern half, facing east.



11. Surveyor standing at ST8: note downward slope, facing south.



12. ST4 profile.



13. ST2 profile.



14. Sample of modern refuse from ST4.

Appendix: Phase IB Record of Shovel Tests

ST No.	Level	Horizon	Depth (cm)	Soil Color	Description	Cultural Material	Termination
							terminated due to
1	1	Fill 1	0-33	10YR3/2 very dark greyish brown	LO	modern refuse- plastic	groundwater
2	1	Fill 1	0-23	10YR3/2 very dark grevish brown	10	NCM	
	2	Fill 2	23-43	10YR4/2 dark grevish brown		NCM	
	~	1 111 2	20 40		20 0/1		root impasse. ST photo
	3	В	43-64	10YR4/4 dark yellowish brown	SA	NCM	taken
							terminated due to
3	1	Fill 1	0-35	10YR3/2 very dark greyish brown	LO	NCM	groundwater
						modern refuse- plastic,	
4	1	Fill 1	0-37	10YR3/2 very dark greyish brown	LO	bottle glass	
						modern refuse- plastic,	
	2	Fill 2	37-64	10YR4/2 dark greyish brown	LO SA	bottle glass	
				10YR5/6 yellowish brown mixed	coarse SA CL		
	3	Fill 3	64-84	with 10YR3/3 dark brown	LO	modern refuse- slag	
							root impasse, ST photo
	4	В	84-90	10YR4/4 dark yellowish brown	CL SA	NCM	taken
5	1	Fill 1	0-15	10YR3/2 very dark greyish brown	LO	modern refuse- plastic	
						modern refuse, plastic,	
				10YR5/6 yellowish brown mixed	coarse SA CL	ceramic water pipe	terminated due to
	2	Fill 3	15-30	with 10YR3/3 dark brown	LO	fragment	groundwater
							ST offset 5m north due to
6	1	Fill 1	0-23	10YR3/2 very dark greyish brown	LO	modern refuse- plastic	creek
	2	FIII 2	23-40	10YR4/2 dark greyish brown	LO SA	modern refuse- plastic	
				10YR5/6 yellowish brown mixed	coarse SA CL	modern refuse- slag,	terminated due to
	3	FIII 3	40-67	with 10YR3/3 dark brown	LO	bottle glass, plastic	groundwater
						modern refuse- bottle	
7	1	Fill 1	0-30	10YR3/2 very dark greyish brown	LO SA	glass	
				10YR5/6 yellowish brown mixed	coarse SA CL	modern refuse- corroded	terminated due to
	2	FIII 3	30-63	with 10YR3/3 dark brown	LO	metal	groundwater
							terminated due to
8	1	Fill 1	0-25	10YR3/2 very dark greyish brown	LO	NCM	groundwater

CL - Clay SA - Sand

LO - Loam NCM - No Cultural Material