PHASE IB ARCHAEOLOGICAL TESTING ADDENDUM

CROTON WATER TREATMENT PLANT MOSHOLU GOLF COURSE, VAN CORTLANDT PARK BRONX, NEW YORK DEP/98DEP027X



PHASE IB ARCHAEOLOGICAL TESTING ADDENDUM

CROTON WATER TREATMENT PLANT MOSHOLU GOLF COURSE, VAN CORTLANDT PARK BRONX, NEW YORK DEP/98DEP027X

Prepared For:

AECOM 605 Third Avenue, New York, NY 10158

On behalf of New York City Department of Environmental Protection

Prepared By:

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

Primary Author:

Faline Schneiderman, RPA

Date:

October, 2014

MANAGEMENT SUMMARY

SHPO Project Review Number (if available): OPRHP 06PR02855

Involved State and Federal Agencies: NYSDEC

Phase of Survey: Phase IB Archaeological Testing Addendum

Location Information Location: Van Cortland Park Minor Civil Division: 00501 County: Bronx

Survey Area Length: **varies** Width: **varies** Number of Acres Surveyed:

USGS 7.5 Minute Quadrangle Map: Flushing

Archaeological Survey Overview Number & Interval of Shovel Tests: **67** 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): Faline Schneiderman, M.A., R.P.A., Historical Perspectives, Inc.

Date of Report: October, 2014

CONTACTS:

Mark N. Page, Jr., Managing Director New York City Department of Environmental Protection Bureau of Environmental Planning & Analysis Environmental Impact Analysis & Technical Review 59-17 Junction Blvd, 11th Floor Flushing, New York 11373 Email: mpage@dep.nyc.gov Phone: 718-595-4395

Filolie. /16-393-43

Erin Guire, Environmental Scientist AECOM 605 Third Avenue New York, NY 10158 Email: <u>erin.guire@aecom.com</u>

Phone: 732-361-7809

Toni Cioffi, New York State Department of Environmental Conservation Division of Environmental Permits 625 Broadway, 4th Floor Albany, NY 12233-1750 Email: <u>txcioffi@gw.dec.state.ny.us</u> Phone: 518-402-8109

TABLE OF CONTENTS

EXECUTIVE SU	MMARYiii
INTRODUCTION	۷1
FIELDWORK MI	ETHODS1
FIELDWORK RE	2SULTS
CONCLUSIONS	AND RECOMMENDATIONS
BIBLIOGRAPHY	
FIGURES	
PHOTOGRAPHS	
APPENDICES:	
А.	Record of Excavations
В.	Artifact Inventory

LIST OF FIGURES

- 1. Project Site on Yonkers, New York 7.5 Minute Topographical Quadrangle (U.S.G.S. 2013).
- 2. Proposed Croton Water Treatment Plant at Mosholu Golf Course, 2004.
- 3. Area of Potential Effect Showing Locations Tested in 2004 and 2014.
- 4a. Results of Phase IB Addendum Testing in Areas 1, 4, and 5, 2014 Area of Potential Effect.
- 4b. Results of Phase IB Addendum Testing in Area 2, 2014 Area of Potential Effect.
- 4c. Results of Phase IB Addendum Testing in Area 3, 2014 Area of Potential Effect.

PHOTOGRAPHS

Photograph A:	Area 1 in Van Cortland Park facing northwest to the WTP construction site. Feature 1, an "L" shaped line of stones, is in the foreground and continues northwest to the right of the meter stick.
Photograph B:	North wall profile of ST S30W30 in Area 1 with two fill levels over a Buried A and B horizon.
Photograph C:	Driving range at north end of Area 2, facing southeast toward Line of Alienation surrounding WTP construction site.
Photograph D:	South wall profile of Area 2 Shovel Test S90E30 that yielded two chert flakes in the uppermost 30cm (12ins) fill level, above a buried A horizon.
Photograph E:	Area 4 in the WTP construction site facing northwest. Note the stacks of pipes that caused testing to be offset.

Photograph F: Area 5 facing northwest. Note the extent of landscaping and man-made depression at the right.

EXECUTIVE SUMMARY

The New York City Department of Environmental Protection (NYCDEP) is in the process of building the Croton Water Treatment Plant (WTP) to provide filtration and disinfection of the Croton Water System. The project includes the construction of new raw water and finished water tunnels to connect the WTP to the New Croton Aqueduct (NCA), and improvements and rehabilitation of structures related to distribution connections at and near Jerome Park Reservoir (JPR). The WTP is being constructed at the Mosholu Golf Course and Driving Range within Van Cortlandt Park in the Borough of the Bronx, New York, which caused the temporary displacement of the golf course west into the Park and north into the Shandler Recreation Area. The WTP site is bound by the Mosholu Parkway and Major Deegan Expressway to the west and north, Jerome Avenue and the Interborough Rapid Transit (IRT) No. 4 elevated subway (the Woodlawn station) to the east, and West Gun Hill Road to the south.

In compliance with the City Environmental Quality Review (CEQR) process as set forth in Executive Order 91 of 1977 and its amendments creating the Rules of Procedure for CEQR, adopted by the City Planning Commission on June 26, 1991 and revised in October 2001 and the State Environmental Quality Review Act (SEQRA) (Section 8-0113, Article 8 of the Environmental Conservation Law) as set forth in 6NYCRR Part 617, a series of environmental studies were completed for the project site. Historical Perspectives, Inc. (HPI) was retained to complete the cultural resources assessment of the WTP site in 2004 prior to the start of construction.

The Phase 1A study undertaken by HPI in 2004 found that the project site is in an area of high sensitivity for precontact resources (HPI 2004a). Furthermore, documentary research also revealed that there was a dwelling at the southwestern corner of the project site built sometime prior to 1851 and razed between 1882 and 1893. The vicinity of the dwelling was deemed potentially sensitive for associated shaft features. The Phase 1A study recommended Phase IB field testing to establish the presence or absence of cultural resources.

A Phase IB testing protocol was prepared by HPI and approved by the New York City Landmarks Preservation Commission (LPC) and the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) in July, 2004. All testing was undertaken in accordance with the testing protocol and a later addendum (7/28/04).

A total of 388 hand excavated shovel test (STs) were completed in the 2004 Area of Potential Effect (APE) at the site of the Mosholu Golf Course as it existed at that time (HPI 2004b). No intact precontact or historical deposits were encountered in any of the test locations. That study concluded that the Mosholu Golf Course APE required no further field investigation. However, since that time the APE has been expanded into previously untested locations where additional below ground impacts are planned. The proposed work includes the installation of wetland cells, an irrigation system, parking pads, roads, and landscaping. After consultation with OPRHP and NYCDEP, it was determined that Phase IB testing was also required for these additional locations as per the 2004 protocol.

For the 2014 study, 67 STs were completed on transects and in judgmental locations in what were designated as Areas 1-5. Almost all of the STs completed bore evidence of a disturbed "A" horizon, and most lacked a distinct "plow zone," despite the fact that the property had been farmed in the 19th century. Instead, early 20th century and modern debris was found in this level, occasionally mixed with a single precontact period flake or piece of potential shatter. In some locations this uppermost level of soil was quite deep, while in others it was virtually missing. These findings were consistent with the conditions observed in 2004, which were the result of the extensive landscaping involved with the original creation of the golf course as well as subsequent upgrades.

Some of the STs encountered buried pipes from early and later sprinkler systems as there were several episodes of pipe installation in the 20th century. Overall, the upper levels of most STs contained modern 20th century material which was introduced when the golf course was originally created and subsequently re-landscaped. Due to the lack of any precontact deposition beyond a few isolated flakes and shatter, and the lack of historical archaeological deposits, the Mosholu Golf Course APE requires no further field investigation, and no further archaeological work is recommended.

INTRODUCTION

The New York City Department of Environmental Protection (NYCDEP) is in the process of building the Croton Water Treatment Plant (WTP) to provide filtration and disinfection of the Croton Water System. The project includes the construction of new raw water and finished water tunnels to connect the WTP to the New Croton Aqueduct (NCA), and improvements and rehabilitation of structures related to distribution connections at and near Jerome Park Reservoir (JPR). The WTP is being constructed at the Mosholu Golf Course and Driving Range within Van Cortlandt Park in the Borough of the Bronx, New York, which caused the temporary displacement of the golf course west into the Park and north into the Shandler Recreation Area. The WTP site is bound by the Mosholu Parkway and Major Deegan Expressway to the west and north, Jerome Avenue and the Interborough Rapid Transit (IRT) No. 4 elevated subway (the Woodlawn station) to the east, and West Gun Hill Road to the south (Figures 1 and 2).

In compliance with the City Environmental Quality Review (CEQR) process as set forth in Executive Order 91 of 1977 and its amendments creating the Rules of Procedure for CEQR, adopted by the City Planning Commission on June 26, 1991 and revised in October 2001 and the State Environmental Quality Review Act (SEQRA) (Section 8-0113, Article 8 of the Environmental Conservation Law) as set forth in 6NYCRR Part 617, a series of environmental studies were completed for the project site. Historical Perspectives, Inc. (HPI) was retained to complete the cultural resources assessment of the WTP site in 2004 prior to the start of construction.

The Phase 1A study undertaken by HPI in 2004 found that the project site is in an area of high sensitivity for precontact resources (HPI 2004a). Furthermore, documentary research also revealed that there was a dwelling at the southwestern corner of the project site built sometime prior to 1851 and razed between 1882 and 1893. The vicinity of the dwelling was deemed potentially sensitive for associated shaft features. The Phase 1A study recommended Phase IB field testing to establish the presence or absence of cultural resources.

A Phase IB testing protocol was prepared by HPI and approved by the New York City Landmarks Preservation Commission (LPC) and the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) in July, 2004. All testing was undertaken in accordance with the testing protocol and a later addendum (7/28/04).

A total of 388 hand excavated shovel test pits (STs) were completed in the 2004 Area of Potential Effect (APE) at the site of the Mosholu Golf Course as it existed at that time (HPI 2004b). The uppermost level of virtually all STs bore evidence of prior disturbance caused by the original construction of the golf course. However, seven STs contained a precontact modified lithic – either quartz or chert – in the undisturbed "B" horizon. In addition, one ST contained a precontact incised ceramic sherd with a chevron design in the "A" horizon from an undisturbed context. Arrays of eight additional STs were completed around these eight positive locations, but no additional precontact material was recovered. No intact historical deposits were encountered in any of the test locations.

The 2004 Phase IB study concluded that the Mosholu Golf Course APE required no further field investigation. However, since that time the APE has been expanded into previously untested locations where additional below ground impacts are planned (Figure 3). The proposed work includes the installation of wetland cells, an irrigation system, parking pads, roads, and landscaping. After consultation with OPRHP and NYCDEP, it was determined that Phase IB testing was also required for these additional locations as per the 2004 protocol. HPI completed the additional testing as per LPC and OPRHP standards, the results of which are presented in this addendum.

RESEARCH GOALS AND METHODS

Prior to commencing Phase IB field work, on-site surveyors demarcated the location of the five previously untested areas; designated as Areas 1-5 for management purposes (Figure 3). Site archaeologists completed a walkover survey of these five areas accompanied by the survey team and construction manager William Brodsky. HPI archaeologists also reviewed site plans to establish the extent of work completed since 2004 in connection with the temporary relocation of the Mosholu Golf Course. Locations of disturbance, either enacted prior to 2004 with the original creation of the park, or since 2004 with the relocation of the golf course, were noted (Photographs A and B). Field testing was then undertaken to identify the presence of cultural resources and/or to confirm the extent of prior disturbance.

Hand excavated STs were completed in each of the five Areas, with STs placed on a 15m (49ft) grid or in judgmental locations. Where subsurface disturbance was anticipated, i.e. where the glacially deposited "C" horizon was visible on the surface or greens were recently created, subsurface testing was either completed on transects at greater testing intervals (30m or 98.5ft) or at judgmental locations. This allowed archaeologists in the field to confirm prior disturbance and move on to test in locations without suspected disturbance. Obviously disturbed areas, such as paved golf cart paths, tee boxes, and existing parking areas were not subjected to field testing. Excessive slopes and areas within the APE that are to remain undisturbed and fenced off during construction were also avoided.

Most STs were excavated until two sterile levels or the underlying "C" horizon was encountered. Relevant data about each ST was recorded, such as location, stratigraphy, depth, soil color and composition, anomalies, and artifact content. All cultural material collected was washed, analyzed, and catalogued. All prehistoric artifacts were then classed according to their source material and type. Specific attributes for any historical artifacts were also recorded including composition, form, and function. Photographs were taken of the fieldwork in progress, and maps of the testing locations and results were prepared.

FIELDWORK RESULTS

Phase IB archaeological field testing was completed at the Mosholu Golf Course by HPI between March 28 and April 12, 2014 as weather permitted. Faline Schneiderman, Dawn Brown, and Christine Flaherty served as field directors, with field technicians Michael Reifeiss, Brian Williams, and Chris Conley.

In total, 67 hand excavated STs were completed on transects and in judgmental locations. The following table provides the number of STs by Area (see Figure 5).

Area	# of STs
1	23
2	21
3	13
4	3
5	7
TOTAL STs	67

Almost all of the STs completed bore evidence of a disturbed "A" horizon, and most lacked a distinct "plow zone," despite the fact that the property had been farmed in the 19th century (Appendix A). Instead, early 20th century and modern debris was found in this level, occasionally mixed with a single precontact period flake or piece of potential shatter (Appendix B). In some locations this uppermost level of soil was quite deep, while in others it was virtually missing (e.g., STs S60W15 and S60E15 in Area 1; see Appendix A). Some of the STs encountered buried pipes from early and later sprinkler systems as there were several episodes of pipe installation in the 20th century (e.g., ST S30E0 in Area 2, see Appendix A). These findings were consistent with the conditions observed in 2004, which were the result of the extensive landscaping involved with the original creation of the golf course as well as subsequent upgrades.

The following detailed results are presented by Area.

Area 1:

Area 1 is an irregularly shaped parcel located south of the WTP construction site in Van Cortland Park immediately west of Jerome Avenue (Figure 3). This location had previously been used as a fairway as part of the original Mosholu Golf course, but is now part of the park. Buried sprinkler lines that previously served the golf course are evident. Portions of this Area contain large and medium sized trees, while most of it is open grassy parkland. Along Jerome Avenue, the terrain slopes somewhat steeply down to a sidewalk, while the remainder of the Area slopes gently downward to the south. The north end of this Area abuts the Line of Alienation that demarcates the construction zone for the WTP construction site (Photograph A).

A total of 23 STs were completed on a 15m (49ft) grid in Area 1 where obvious signs of disturbance, such as paved walkways or old tee-boxes, were not evident (Figure 4a). Many of the STs contained relatively modern material in the uppermost level, such as plastic, soda and beer bottles, coins, and wire nails (Appendices A and B). At least one ST had two fill levels over a buried A horizon (see ST S30W60 in Appendix A and Photograph B). A secondary quartz reduction flake was found in ST S15W15 in a level with green bottle glass and a 1977 nickel, and a piece of quartz debitage was found in ST S15W60 together with a 1990 penny. Neither precontact artifact was considered to represent an intact deposit since they were each found in a disturbed context.

No definitively historical artifacts were recovered in undisturbed strata in Area 1, and no evidence of a definitive historical feature, other than an "L" shaped line of stones designated as Feature 1, was encountered. ST J1 was excavated immediately north and east of Feature 1, however it only yielded late-20th century bottle glass, a piece of sewer pipe, a small fragment of shell, and a 2002 penny in the upper stratum (Appendix A and Photograph A). Excavation of the ST also revealed that there were no associated stacked stones present below ground, as would be expected with a historic foundation or shaft feature. Likely, Feature 1 was associated with the 20th century use of this area as part of the golf course, perhaps as part of a tee box. Ultimately, no intact historical or precontact deposits were encountered in any of the STs in Area 1.

Area 2:

Area 2 is a crescent shaped parcel west of the WTP construction site, outside of the Line of Alienation in what is now the driving range for the relocated Mosholu Golf Course (Photograph C and Figure 3). Most of this Area appears to have been leveled for the driving range, although sections of it west of a paved golf cart path slope downward to the west and south. Bedrock outcrops are visible on the surface at the southern end of Area 2, and there is evidence of buried sprinkler lines.

A total of 21 STs were excavated on a 15m (49ft) grid across the level portion of Area 2 (Figure 4b). Sloped and graded terrain west of the cart path was not tested. Several of the STs contained modern debris in the uppermost levels, or evidence of added fill (e.g., ST N0W15 in Appendix A). In some locations, fill was found directly above bedrock (e.g., STs S60W15 and S60E15 in Appendix A). In one ST, S30E0, a PVC water pipe for the existing sprinkler system was encountered (Appendix A).

In one ST, S90E30, three precontact artifacts were encountered in the uppermost fill level: two chert tertiary reduction flakes and one cordmarked pottery sherd (Appendices A and B). The precontact material was recovered from a fill stratum above an A/B horizon that yielded one cut nail (Appendix B and Photograph D). Thirty meters (98ft) to the west, ST S90E0 yielded a smoky quartz piece of shatter (from stone tool making) at the base of the fill level, and ST S75E15 yielded a brown chert tertiary reduction flake from within the fill (Appendices A and B). Although these three STs were located within a 30m (98ft) radius, no precontact material was found beneath the upper fill or A horizon in any of them. Lower levels were either sterile or contained a single historical artifact. Likely, the precontact material was introduced to the site with the fill that was used to cover this area. The similarity between the pottery sherd found in ST S90E30 and the pottery sherd found in 2004 roughly 100 meters to the east suggest that they may be from the same site, the location of which has since been eradicated. No intact undisturbed precontact or historical deposits were encountered in any of the STs in Area 2.

Area 3:

Area 3 is located immediately west of Jerome Avenue at the entrance to the WTP construction site, in what was historically a pedestrian access way to the Mosholu Golf Course (Figure 3). It falls within the Line of Alienation but outside the construction site. The area is characterized by mature trees and pedestrian paths, and contains a minimal number of buried utilities that were demarcated by the survey team.

Testing in Area 3 consisted of completing 13 STs on a 15m (49ft) grid, offsetting STs where necessary due to the presence of pavement or trees (Figure 4c). No precontact artifacts were found in Area 3, and most material recovered dated to the 20th century (e.g., modern bottle glass and a 1963 quarter in ST N15E0, see Appendix A). Other artifacts recovered included ABM (automatic bottle machine) bottle glass, window glass, wire nails, whiteware, and one fragment of a redware vessel with yellow glazing and brown banding (see ST N60W30 in

Appendix B). The same ST produced slag, a porcelain (bisque) doll fragment, a fragment of a milk glass container lid (possibly a cosmetic container), and a zinc carbon battery core. No intact historical deposits were encountered.

Area 4:

Area 4 falls within the Line of Alienation at the south end of the project site, immediately to the northwest of Area 1 (Figure 3). In 2004 Area 4 was in a location with no planned disturbance, and as such was not tested (HPI 2004b). For this study, STs were placed immediately to the north, west, and south of Area 1 and all lacked significant deposits. As part of the WTP construction site, this Area has been used for stockpiling resources and is adjacent to a series of construction trailers and a dirt parking lot.

Testing was limited in this Area due to the presence of stockpiled utility pipes (Photograph E). The three STs that were excavated found either fill or modern material in the upper A horizon (Appendix A and Figure 4a). Artifacts included slag, whiteware, and coal (Appendix B). Testing also revealed an undisturbed B and C horizon in two of the STs, but no precontact or intact historical deposits were present.

<u>Area 5:</u>

Area 5 is also within the Line of Alienation at the south end of the project site, but is located further west than Area 4 (Figure 3). STs were excavated to the immediate north, east, and south of Area 5 in 2004 and no significant deposits were encountered (HPI 2004b). Like Area 4, no work was planned directly within Area 5 and it was not subjected to field testing at that time.

A total of seven STs were excavated on a 15m (49ft) grid in Area 5 (Figure 4a). No testing was completed at the extreme western end of the Area due to prior disturbance in the form of a landscaped depression (Photograph F). Of the seven STs completed, several contained historical cultural material in the uppermost levels. Whiteware fragments, one small possible pearlware fragment, and a hand-blown wine glass fragment were recovered in the A horizon of ST N0W45, but not within an undisturbed context (see Appendices A and B). Historical manipulation of the landscape in this area, during the construction of the Mosholu Golf course, appears to have compromised the subsurface conditions (Appendix A).

CONCLUSIONS AND RECOMMENDATIONS

The 67 additional STs completed at the WTP in Areas 1-5 lacked intact precontact or historical archaeological deposits. None of the precontact material recovered amounted to more than an isolated flake or piece of shatter in the A horizon or fill, and no clusters of positive STs were observed. In fact, the closest two positive pits were at least 20m (65ft) apart, and both contained modern material mixed in the same level as the precontact material (Figure 4b; Appendix B). In all likelihood, the isolated precontact material found at the Mosholu Golf Course represents only limited use of the site for short term hunting and/or limited lithic retouch. No specific activity areas were identified. It appears that Native Americans were not utilizing the site for extended periods of occupation, but were probably accessing it sporadically for resource procurement, creating and sharpening stone tools as necessary. That is, if the precontact material found at the site actually originated at the site. Fill levels evident in many of the STs may have originated on-site or been introduced from off-site locations. With the extent of prior land manipulation for the creation of the golf course, and landscaping associated with two upgrades in the 20th century, little is left of the original subsurface stratigraphy.

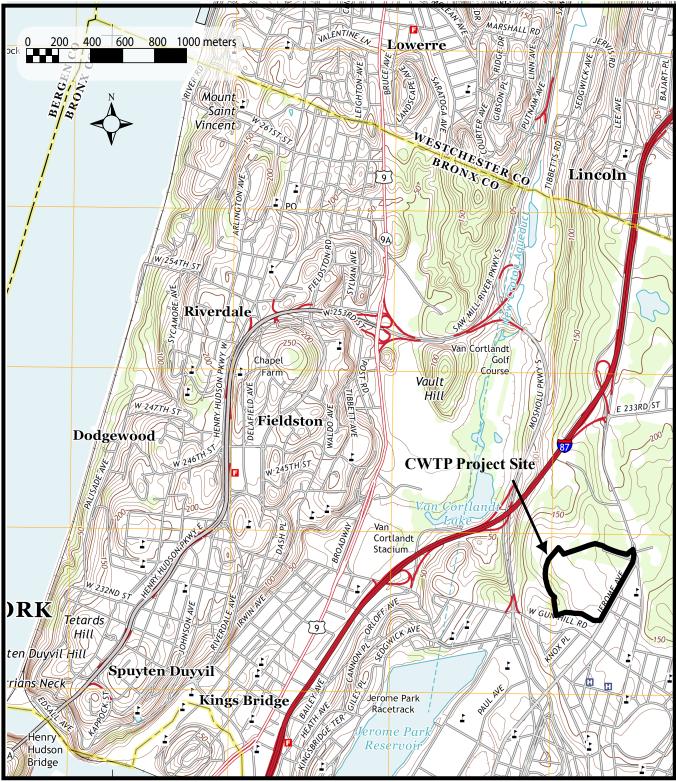
The historical cultural material found in the APE was consistent with field scatter associated with the property's farming past, mixed with an intrusion of modern material when the golf course was created and later modified (Appendix B). No discrete deposits of historical material were encountered, and no remnants of features associated with a mid-19th century dwelling that formerly stood near the southwest corner of the property were found. Modern fill was also encountered in many of the STs, where land was elevated to tee boxes and putting greens.

Overall, the upper levels of most STs contained modern 20th century material, which was introduced when the golf course was originally created and subsequently re-landscaped. Due to the lack of any precontact deposition beyond a few isolated flakes and shatter, and the lack of historical archaeological deposits, the Mosholu Golf Course APE requires no further field investigation, and no further archaeological work is recommended.

BIBLIOGRAPHY

Historical Perspectives, Inc.

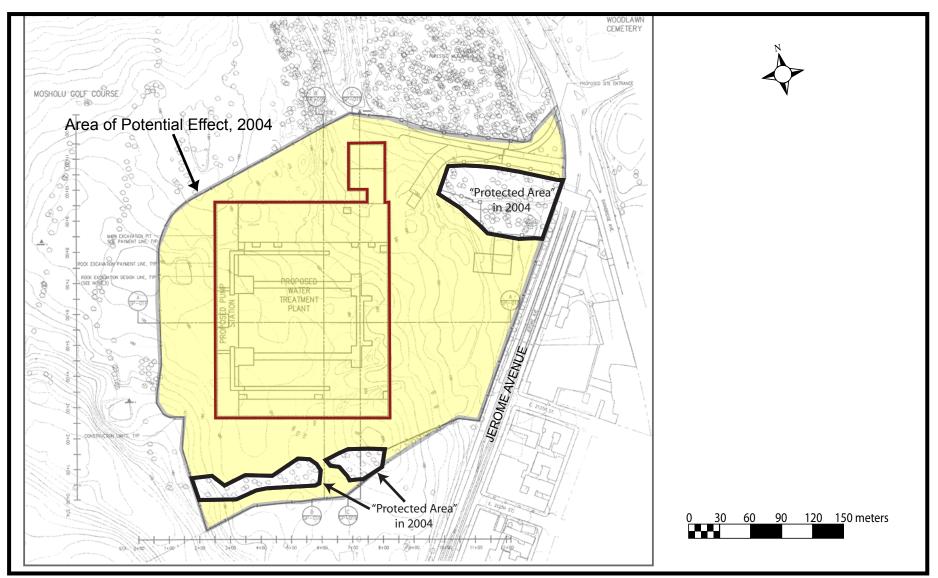
- 2004a Cultural Resource Assessment, Croton Water Treatment Plant, Mosholu Golf Course, Van Cortlandt Park, Bronx, New York DEP/98DEP027x. Prepared for Joint Venture of Metcalf & Eddy of New York, Inc., and Hazen and Sawyer, P.C., New York.
- 2004b Stage IB Archaeological Testing, Croton Water Treatment Plant, Mosholu Golf Course, Van Cortlandt Park, Bronx, New York DEP/98DEP027x. Prepared for Joint Venture of Metcalf & Eddy of New York, Inc., and Hazen and Sawyer, P.C., New York.



Phase IB Archaeological Testing Addendum Croton Water Treatment Plant, Mosholu Golf Course Van Cortlandt Park Bronx, New York DEP/98DEP027X



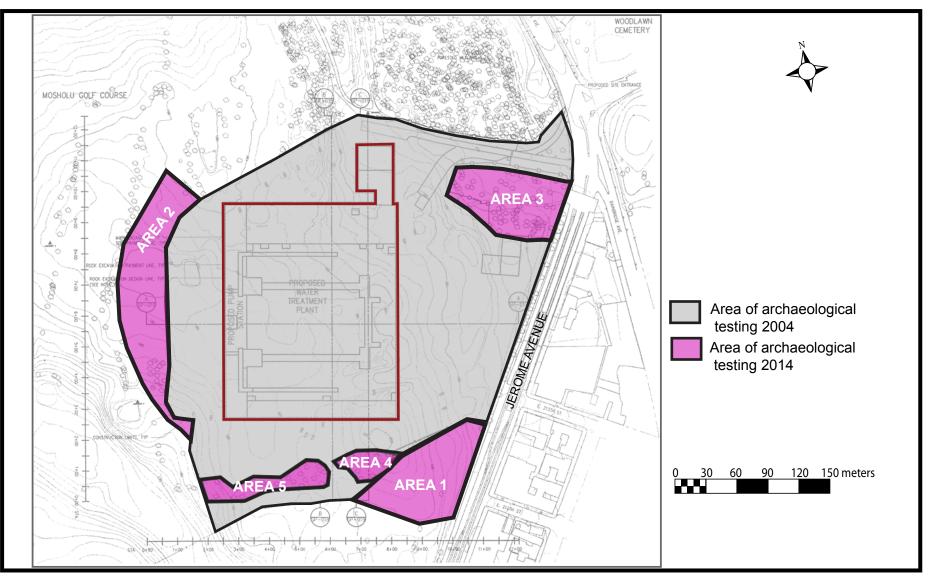
Figure 1: CWTP Project Site on Yonkers, New York 7.5 Minute Topographical Quadrangle (U.S.G.S. 2013).



Phase IB Archaeological Testing Addendum Croton Water Treatment Plant, Mosholu Golf Course Van Cortlandt Park Bronx, New York DEP/98DEP027X



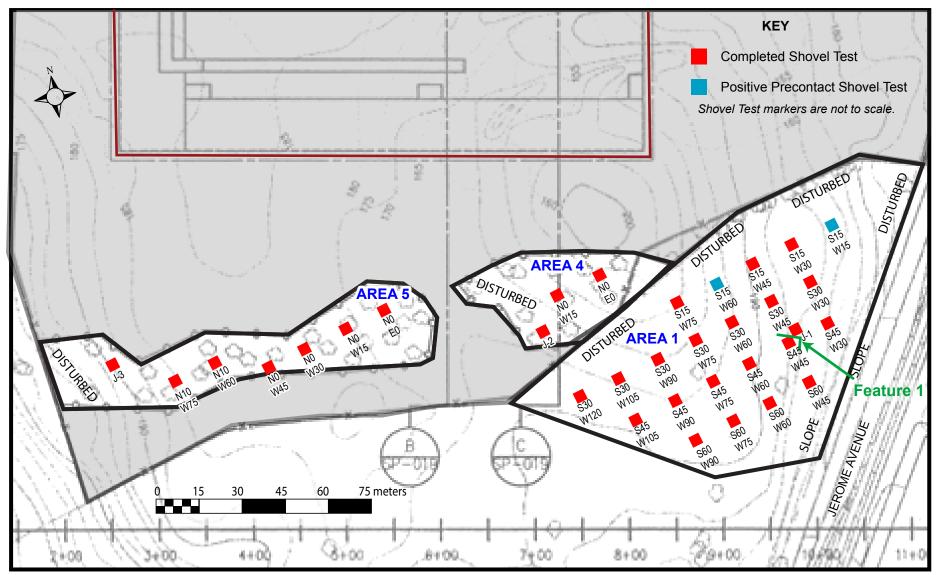
Figure 2: Proposed Croton Water Treatment Plant at Mosholu Golf Course, 2004.



Phase IB Archaeological Testing Addendum Croton Water Treatment Plant, Mosholu Golf Course Van Cortlandt Park Bronx, New York DEP/98DEP027X



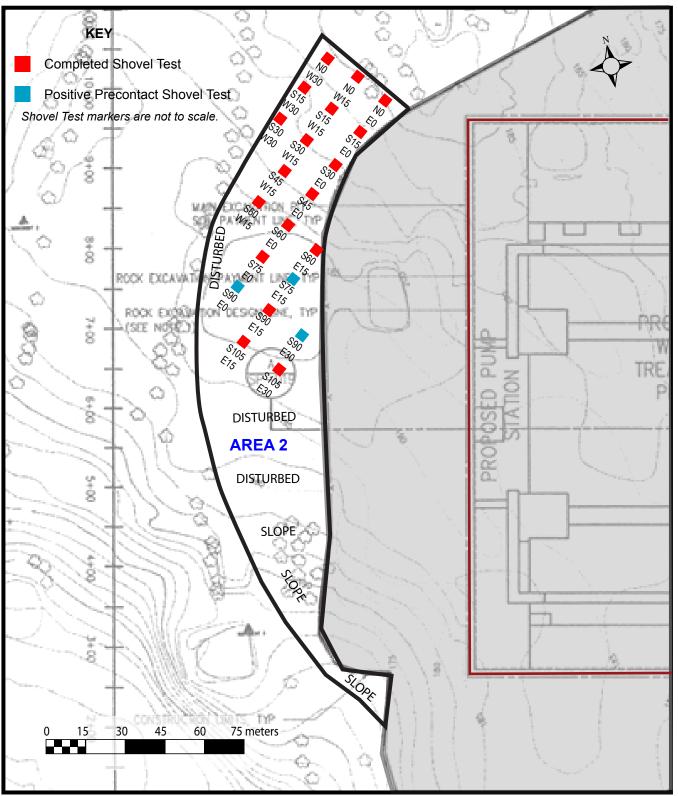
Figure 3: Area of Potential Effect Showing Locations Tested in 2004 and 2014.



Phase IB Archaeological Testing Addendum Croton Water Treatment Plant, Mosholu Golf Course Van Cortlandt Park Bronx, New York DEP/98DEP027X



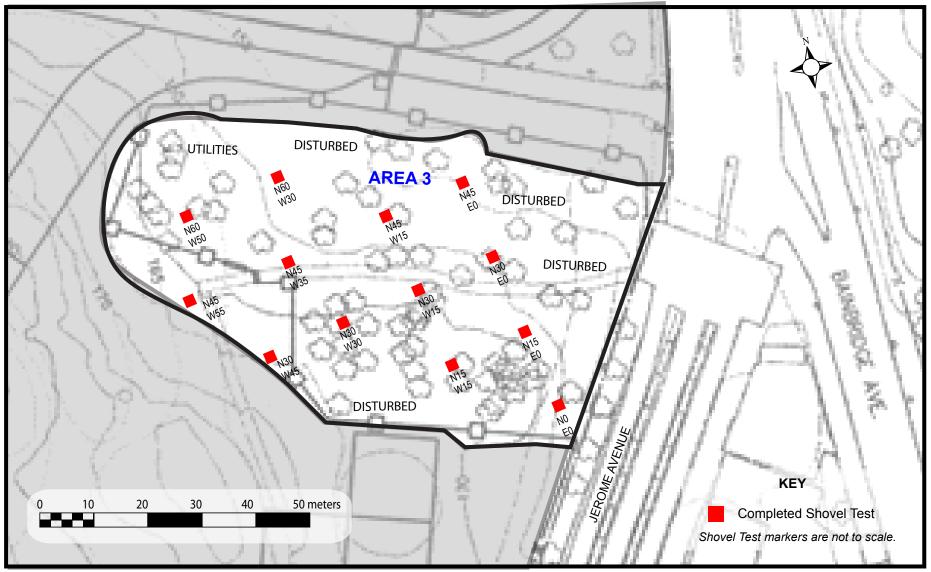
Figure 4a: Results of Phase IB Addendum Testing in Areas 1, 4, and 5, 2014 Area of Potential Effect.



Phase IB Archaeological Testing Addendum Croton Water Treatment Plant, Mosholu Golf Course Van Cortlandt Park Bronx, New York DEP/98DEP027X



Figure 4b: Results of Phase IB Addendum Testing in Area 2, 2014 Area of Potential Effect.



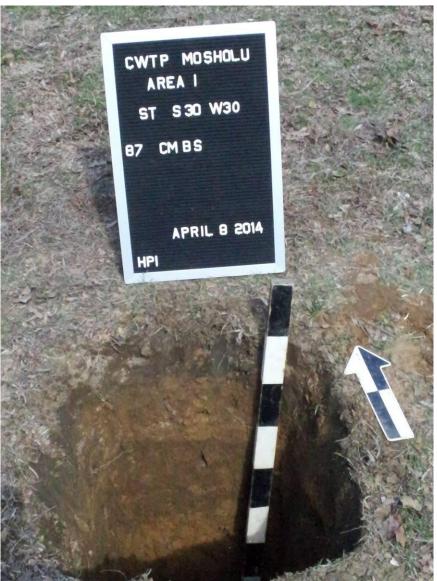
Phase IB Archaeological Testing Addendum Croton Water Treatment Plant, Mosholu Golf Course Van Cortlandt Park Bronx, New York DEP/98DEP027X



Figure 4c: Results of Phase IB Addendum Testing in Area 3, 2014 Area of Potential Effect.



Photograph A: Area 1 in Van Cortland Park facing northwest to the WTP construction site. Feature 1, an "L" shaped line of stones, is in the foreground and continues northwest to the right of the meter stick.



Photograph B: North wall profile of ST S30W30 in Area 1 with two fill levels over a Buried A and B horizon.



Photograph C: Driving range at north end of Area 2, facing southeast toward Line of Alienation surrounding WTP construction site.



Photograph D: South wall profile of Area 2 Shovel Test S90E30 that yielded two chert flakes in the uppermost 30cm (12ins) fill level, above a buried A horizon.



Photograph E: Area 4 in the WTP construction site facing northwest. Note the stacks of pipes that caused testing to be offset.



Photograph F: Area 5 facing northwest. Note the extent of landscaping and man-made depression at the right.

Area	ST No.	Level	Horizon	Depth in cm	Soil Color	Soil Description	Cultural Material	Comments/ Reason for Termination
							modern bottle glass,	on N side of possible
							2002 penny, sewer pipe,	stone wall or foundation
	J1		fill	0-41	10YR 3/2	Sa Si	1 pc shell (all NS)	(Feature 1)
1	J1		В	41-78	10YR 5/6	Sa Si	NČM	rock obstruction
1	S15 W15	1	A/fill	0-36	10YR 3/2	Si Sa Lo	doll head	very wet throughout
					10YR 3/2			
					mottled w/			artifacts found at A/B
	S15 W15	2	B1	36-78	10YR 4/6	Si Lo	poss quartz flake, glass	transition
1	S15 W15	3	B2	78-97	10YR 4/6	Si Sa Lo	NCM	sterile subsoil
	0 / -) / / 0 0						bottle glass, whiteware	
1	S15 W30	1	fill 1	0-27	10YR 2/2	Sa Si w/ Gr	(NS)	
								possibly changing into
						Gr Sa Si w/		natural B at bottom, but
		0	611 O	07.00			noile, gloss (NS)	glass found @60cmbs
	S15 W30		fill 2	27-93	10YR 4/6	some rocks	nails, glass (NS)	-
1	S15 W45	1	A/fill	0-29	10YR 3/2	Si Sa Lo	bottle glass (NS)	damp soil
					10YR 3/2			
		0		00.00	mottled w/		NOM	
	S15 W45		B1 B2	29-60	10YR 4/6 10YR 4/6	Si Lo Si Sa Lo	NCM NCM	sterile subsoil
1	S15 W45	3	BZ	60-70	101K 4/0	SI SA LU		
			^	0.00			1990 penny, poss quartz	
1	S15 W60	1	A	0-26	10YR 2/2 10YR 4/6	Lo Sa Si	flake, plastic	large rocks
		0	A /D	00.00	mottled w/	mottled w/		
	S15 W60		A/B	26-60	10YR 2/2	Sa Lo	charcoal, glass (NS)	
	S15 W60 S15 W60		B C	60-80 80-87	10YR 4/6 10YR 5/6	Sa Si Fi Si Sa	NCM NCM	sterile subsoil
	315 100	4	C	00-07	10111 3/0	110104	lot of bottle glass, alum	
1	S15 W75	1	A/fill1	0-13	10YR 3/2	Sa Lo	pop tabs (NS)	
- '	010 1070			0 10	10YR 3/2	Sa Lo		
					mottled w/	mottled w/	whiteware, shell, nail,	
1	S15 W75	2	fill 2	13-22	10YR 4/4	Si Sa	bot glass (glass NS)	roots
-	010 1170	2	1111 2	10 22			bot glass (glass 110)	10010
1	S15 W75	3	A2/fill3	22-33	10YR 3/3	Sa Lo	NCM	roots, possible buried A
								just coming onto C at
1	S15 W75	4	В	33-76	10YR 3/6	Si Sa	NCM	bottom, sterile subsoil
							bottle glass, coal,	3 whiteware spalls,
1	S30 W105	1	A	0-28	10YR 3/2	Lo	whiteware (NS)	undecorated, 1 rim
1	S30 W105		В	28-92	10YR 4/6	Fi Sa Si	NCM	sterile subsoil
							beer bottle cap, glass	
1	S30 W120	1	A/fill	0-28	10YR 3/2	Sa Si	(NS)	
1	S30 W120	2	В	28-70	10YR 5/6	moist Sa Si	NCM	sterile subsoil
1	S30 W30	1	fill 1	0-12	10YR 3/2	Sa Si	bottle glass, plastic (NS)	
	S30 W30		fill 2	12-26	10YR 4/4	Sa Si	bottle glass, plastic (NS)	
1	S30 W30	3	А	26-49	10YR 3/3	Sa Si	whiteware	possible buried A
	• • • • • • • •						Nov	
1	S30 W30	4	В	49-87	10YR 4/6	damp Sa Si	NCM	sterile subsoil

Area	ST No.	Level	Horizon	Depth in cm	Soil Color	Soil Description	Cultural Material	Comments/ Reason for Termination
1	S30 W45	1	A/fill 1	0-15	10YR 3/2	Si Sa Lo	bottle glass (NS)	
					10YR 3/2			
					mottled w/		porcelain, glass, nails,	
1	S30 W45	2	fill 2	15-89	10YR 4/6	Gr Si Lo	coal	
					10YR 3/2			
					mottled w/			
1	S30 W45	3	В	89-106	10YR 4/6	Gr Si Lo	NCM	rock obstruction
							porcelain, glass, mod	
							bottle glass (modern	
1	S30 W60	1	A/fill 1	0-34	10YR 3/2	Si Sa Lo	NS)	
					10YR 3/2			
					mottled w/		stoneware, metal, bot	
1	S30 W60	2	fill 2	15-89	10YR 4/6	Gr Si Lo	glass (glass NS)	
					10YR 3/2			
					mottled w/			
1	S30 W60	3	В	89-106	10YR 4/6	Gr Si Lo	NCM	rock obstruction
	S30 W75	1	A	0-20	10YR 3/4	Sa Si	bottle glass, plastic (NS)	
1	S30 W75	2	В	20-82	10YR 4/6	Si Sa w/ Gr	NCM	sterile subsoil
							bottle glass, coal,	
	S30 W90		A	0-23	10YR 3/2	Sa Lo	plastic, nail (NS)	
	S30 W90		В	23-82	10YR 4/6	Sa Si	NCM	
1	S30 W90	3	С	82-92	10YR 5/6	Gr Si Sa	NCM	sterile subsoil
1	S45 W105	1	A/fill	0-41	10YR 3/2	Sa Si	coal, whiteware	add't'l coal NS
1	S45 W105	2	В	41-78	10YR 5/6	moist Sa Si	NCM	sterile subsoil
						slightly Sa	bottle glass, alum pop	
	S45 W30		A	0-14	10YR 3/1	Si	tabs (NS)	
1	S45 W30	2	A/B	14-31	10YR 3/3	Sa Si	bottle glass (NS)	
	• • • • • • • • • • • • • • • • • •		_			slightly Sa	NOM	us als als atmostly a
1	S45 W30	3	В	31-54	10YR 4/6	Si	NCM	rock obstruction
	_						plastic, mod. bot. glass,	
1	S45 W45	1	A1/fill	0-25	10YR 3/3	Si Sa Lo	trash (all NS)	next to Feature 1
	_							at 25cmbs, layer of
1	S45 W45	2	A2/fill	25-58	10YR 3/4	Si Sa Lo	plastic (NS)	modern trash
					10YR 3/4			
	o · · · · =	_	<i></i>		mottled w/			al a ra the
	S45 W45		fill 3	58-92	10YR 4/6	Si Lo	bot. glass (NS)	depth
	S45 W60		A/fill	0-20	10YR 3/2	Sa Si	beer bottle cap, glass	us als als atms: C
	S45 W60	2	В	20-71	10YR 5/4	Sa Si	NCM	rock obstruction
			A /6:11.4	0.4.4			hattle glass - statte (NO)	
1	S45 W75	1	A/fill1	0-14	10YR 3/2	Lo	bottle glass, plastic (NS)	
					10YR 4/6			
			611 O	11.10	mottled w/			
1	S45 W75	2	fill 2	14-18	10YR 3/2	Lo	NCM	buried A, 10-20cm
						So Low!	nonsible out nover store	-
				10.10	1000 2/2	Sa Lo w/	possible cut paver stone	
1	S45 W75	3	A2	18-42	10YR 3/3	large rocks	(NS)	obstruction
			^	0.04			bottle glass, coal, cut	
	S45 W90	1	A	0-21	10YR 3/3 10YR 4/6	Si Lo Sa Si	nail (NS) NCM	sterile subsoil
1	S45 W90	2	В	21-80		5a 5i		

Area	ST No.	Level	Horizon	Depth in cm	Soil Color	Soil Description	Cultural Material	Comments/ Reason for Termination
							beer & soda bottles,	
							wing nut, 1 coal frag (all	
1	S60 W45	1	A/fill	0-27	10YR 2/2	Sa Si	NS)	
	S60 W45		В	27-49	10YR 5/6	Fi Sa Si	NCM	rocks
	S60 W45			49-72	10YR 5/4	Co Sa Si	NCM	rock obstruction
							bot. glass, plastic,	
							styroforam, furnace	
1	S60 W60	1	A/fill	0-37	10YR 3/2	Sa Si	scale (NS)	
					10YR 5/4			
					and 10YR			
1	S60 W60	2	В	37-68	5/6	Sa Si	NCM	rock obstruction
-		_	-	0.00			modern bottle glass,	
1	S60 W75	1	A/fill	0-38	10YR 3/2	Sa Si	plastic (all NS)	
	S60 W75		B	38-82	10YR 5/6	Fi Sa Si	NCM	
	000 1170	2	5	00 02	1011(0/0	Co Sa Si w/		
1	S60 W75	3	С	82-91	10YR 5/8	pebbles	NCM	sterile subsoil
	000 1110	0	0	02 01		pennee	pop-top, mod. bot.	
							glass, plastic, 1 coal (all	
1	S60 W90	1	A1/fill	0-18	10YR 3/2	Sa Si	NS)	
	S60 W90 S60 W90		A 1/111 A2/fill	18-42	10 FR 3/2 10 YR 3/3	Sa Si Sa Si	NCM	root
								root
	S60 W90		B C	42-74	10YR 5/6 10YR 5/8	Sa Si Co Sa Si	NCM NCM	sterile subsoil
1	S60 W90	4	с С	74-81	1011 3/0			
-						sod/Si Sa		
2	N0 E0	1	fill 1	0-25	10YR 2/2	Lo	NCM	
2	N0 E0	2	fill 2	25-46	10YR 5/4	damp Sa Lo	NCM	
					10YR 4/4			
			_		mottled w/			
2	N0 E0	3	В	46-74	10YR 5/4	damp Si Sa	NCM	sterile subsoil
						sod/Si Sa		
	N0 W15		fill 1	0-45	10YR 2/2	Lo	NCM	
	N0 W15		fill 2	45-51	10YR 5/4	V. Fi Sa Lo	NCM	large rocks
2	N0 W15	3	B1	51-79	10YR 5/8	V. Fi Sa Lo	NCM	
					10YR 4/4			
					mottled w/			
	N0 W15		B2	79-100	10YR 5/4	Si Sa	NCM	sterile subsoil
2	N0 W30	1	fill 1	0-33	10YR 2/2	Sa Si w/ Gr	NCM	some large rocks
								many large rocks,
					10YR 3/4			could be B horizon,
					mottled w/			stopped rock
2	N0 W30	2	fill 2	33-57	10YR 2/2	Sa Si w/ Gr	NCM	obstruction
						sod/Si Sa		
2	S105 E15	1	fill	0-30	10YR 3/2	Lo	NCM	
								large rocks, sterile
2	S105 E15	2	В	30-65	10YR 4/4	Fi Sa Lo	NCM	subsoil
	S105 E30		A/fill	0-30	10YR 3/3	Sa Si	glass	
_						damp Fi Sa	<u> </u>	
2	S105 E30	2	В	30-100	10YR 4/6	Si	NCM	sterile subsoil
	S15 E0		A	0-31	10YR 2/2	Sa Si	NCM	
	S15 E0 S15 E0		B	31-39	101R 2/2 10YR 4/6	Sa Si	NCM	decaying bedrock
2	SIJEU		ט	51-38				actuaring bearbor

Area	ST No.	Level	Horizon	Depth in cm	Soil Color	Soil Description	Cultural Material	Comments/ Reason for Termination
						sod/Si Sa		
	S15 W15		fill	0-27	10YR 2/2	Lo	NCM	
	S15 W15		B1	27-74	10YR 5/8	V. Fi Sa Lo	NCM	large rocks
	S15 W15		B2	74-88	10YR 4/4	Si Sa	NCM	sterile subsoil
2	S15 W30	1	fill	0-31	10YR 2/2	Sa Si	coal, cig butt (NS)	
2	S15 W30	2	В	31-80	10YR 4/6	damp Sa Si	NCM	sterile subsoil
2	S30 E0	1	fill 1	0-9	10YR 3/2	Fi Sa Si	NCM	
					10YR 4/6			
					mottled w/			
2	S30 E0	2	fill 2	9-54	10YR 3/2	Sa Si	screw (NS)	PVC pipe (pipe trench)
	S30 W15		fill	0-26	10YR 3/3	Fi Sa Lo	NCM	
	S30 W15		B1	26-72	10YR 5/8	V. Fi Sa Lo	NCM	large rocks
2	S30 W15	3	B2	72-78	10YR 5/4	Sa	NCM	sterile subsoil
2	S30 W30	1	fill	0-26	10YR 3/2	Fi Sa Si	NCM	
2	S30 W30	2	B1	26-63	10YR 5/8	Sa Si	NCM	
2	S30 W30	3	B2 or C	63-74	10YR 5/6	damp Fi Sa Si	NCM	sterile subsoil
						slightly Sa		
2	S45 E0	1	A	0-42	10YR 2/2	Si	NCM	
2	S45 E0	2	В	42-87	7.5YR 4/6	Sa Si	NCM	cored to 100cmbs, no change in horizon, stopped sterile subsoil
	S45 W15		fill	0-28	10YR 3/3	Fi Sa Lo	coal, brick (NS)	
	545 1015	•		0-20	10YR 3/3	1100 20		
					mottled w/			
2	S45 W15	2	B1	28-52	10YR 5/4	Fi Sa Lo	NCM	large rocks
	S45 W15		B1 B2	52-81	10YR 5/4	Fi Sa Lo	NCM	sterile subsoil
		<u> </u>	22	02 01		sod/Si Sa		
2	S60 E0	1	fill	0-33	10YR 2/2	Lo	whiteware, nail	
	S60 E0		B1	33-85	10YR 5/4	Fi Si Sa Lo	NCM	large rocks
	S60 E0		B2	85-103	10YR 4/4	Sa Lo	NCM	sterile subsoil
	S60 E15		fill	0-18	10YR 3/2	Fi Si Lo	NCM	bedrock
	000 = 10			0.0				disturbance, rock
2	S60 W15	1	fill	0-36	10YR 5/8	Fi Sa Lo	NCM	obstruction
						slightly Sa		
2	S75 E0	1	А	0-45	10YR 2/2	Si	whiteware spall (NS)	some large rocks
								cored to 100cmbs, no change in horizon,
	S75 E0		В	45-85	7.5YR 4/6	Sa Si	NCM	stopped sterile subsoil
	S75 E15		fill	0-32	10YR 2/2	Fi Sa Si	1 chert flake	
2	S75 E15	2	В	42-87	10YR 4/6	Sa Si	NCM	sterile subsoil
2	S90 E0	1	A	0-38	10YR 3/2	Gr Sa Si	2 win glass, whiteware spall (NS)	
	S90 E0		В	38-102	7.5YR 4/6	Gr Co Si Sa	poss quartz shatter	Qtz in A/B transition; not definitively in B. Stopped at sterile subsoil
_			-			sod/Si Sa		
2	S90 E15	1	fill	0-30	10YR 3/2	Lo	nail	
	S90 E15		B	30-65	10YR 4/4	Fi Sa Lo	NCM	large rocks

Area	ST No.	Level	Horizon	Depth in cm	Soil Color	Soil Description	Cultural Material	Comments/ Reason for Termination
2	S90 E15	3	С	65-88	10YR 4/3	Fi Sa	NCM	sterile subsoil
							1 precontact pottery, 2	
2	S90 E30	1	fill	0-30	10YR 3/4	Sa Si	chert flakes	
					10YR 4/6			
					mottled w/			
2	S90 E30	2	A/B	30-40	10YR 3/4	Sa Si	cut nail	
2	S90 E30	3	В	40-70	10YR 4/6	Fi Sa Si	NCM	
2	S90 E30	4	С	70-85	10YR 5/8	Gr Sa	NCM	sterile subsoil
							nail, metal (glass and	
3	N0 E0	1	А	0-18	10YR 3/2	Sa Si	brick NS)	
					10YR 4/6			
					mottled w/	Sa Si w/		root and rock
3	N0 E0	2	В	18-46	10YR 3/6	cobbles	NCM	obstruction
						slightly Sa	1963 quarter, bottle	
3	N15 E0	1	А	0-14	10YR 2/2	Si	glass (NS)	
3	N15 E0	2	A/B	14-34	10YR 3/4	Sa Si	NCM	
								root obstruction/sterile
3	N15 E0	3	В	34-69	10YR 5/6	Fi Sa Si	NCM	subsoil
							porcelain, glass metal,	
3	N15 W15	1	А	0-21	10YR 2/2	Sa Si	brick (all NS)	
					10YR 5/6			
					mottled w/			
3	N15 W15	2	A/B	21-63	10YR 2/2	Sa Si	NCM	only slightly mottled
3	N15 W15	3	В	63-94	10YR 5/6	Co Sa Si	NCM	sterile subsoil
								offset 1m N due to tree
3	N30 E30	1	А	0-25	10YR 3/2	Gr Fi Sa Lo	bottle glass, coal (NS)	roots
								large roots, artifacts in
						Rocky Fi Sa		B due to root
3	N30 E30	2	В	25-56	10YR 4/4	Lo	bottle glass (NS)	movement
3	N30 W15	1	А	0-23	10YR 3/2	Fi Si Lo	coal, bottle glass (NS)	
3	N30 W15	2	B1	23-46	10YR 4/4	Fi Sa Lo	NCM	
3	N30 W15	3	B2	46-59	10YR 4/4	Fi Si Lo	NCM	rock obstruction
							bottle glass, metal,	offset 1m E due to
3	N30 W30	1	А	0-23	10YR 2/2	Sa Si	plastic (NS)	roots
3	N30 W30		В	23-56	10YR 5/6	Sa Si	NCM	
3	N30 W30	3	С	56-64	10YR 5/3	V. Co Si Sa	NCM	sterile subsoil
							bottle glass, metal, coal,	offset 1m E due to
	N30 W45		А	0-31	10YR 2/2	Sa Si	whiteware (NS)	roots
	N30 W45	2	В	31-62	10YR 5/6	Sa Si	NCM	
3	N30 W45	3	С	62-76	10YR 5/4	Si Sa	NCM	sterile subsoil
								thin layer of fill on
								surface from
						slightly Sa	plastic, bottle glass,	neighboring
	N45 E0	1	А	0-19	10YR 2/2	Si	slag, brick, coal	construction
3	N45 E0	2	В	19-74	10YR 5/6	Sa Si	NCM	sterile subsoil
						Fi Sa Lo w/		
3	N45 W15 1 A/fill 1 0-32 10YR 3/2 Gr bottle glass, coal (N		bottle glass, coal (NS)					
	N45 W15		fill 2	32-52	10YR 4/4	Fi Sa Lo	nails	large rocks

Area	ST No.	Level	Horizon	Depth in cm	Soil Color	Soil Description	Cultural Material	Comments/ Reason for Termination
								soil cored additional
								16cm, same horizon,
3	N45 W15	3	В	52-66	10YR 5/6	Fi Si Sa Lo	NCM	stopped sterile subsoil
		0	2	02 00			bottle glass, plastic, coal	
3	N45 W35	1	A/fill 1	0-7	10YR 2/2	Sa Si	(NS)	next to asphalt walkway
						Co Sa Si w/	bottle glass, plastic, coal	
3	N45 W35	2	fill 2	7-19	10YR 3/3	gravel	(NS)	
						V. compact	hattle slave slavtic seel	
3	N45 W35	3	fill 3	19-27	10YR 4/6	Co Si Sa w/ gravel	bottle glass, plastic, coal (NS)	too compact
	1145 1155	5	1111 3	19-21	1011(4/0	graver		B immediately below @
								41cmbs, stopped root
3	N45 W55	1	A	0-41	10YR 2/3	Sa Si	bottle glass, coal (NS)	obstruction
						Fi Sa Lo w/		
	N60 W30		fill 1	0-12	10YR 3/2	Gr	bottle glass (NS)	
3	N60 W30	2	fill 2	12-21	10YR 4/4	Sa fill	bottle glass (NS)	
						Sa fill/ash,	coal, coal ash, slag, glass, ceramics, brick,	
3	N60 W30	3	fill 3	21-69	10YR 3/2	coal	metal	
	100 1100			21.00	101110/2			additional soil core to
						V. Fi Si Sa		98cmbs, no change,
3	N60 W30	4	В	69-75	10YR 4/4	Lo	NCM	sterile
			 .			Fi Sa Lo w/		
	N60 W50		fill 1	0-19	10YR 3/2	Gr Sa fill	NCM	
	N60 W50 N60 W50		fill 2 A	19-33 33-56	10YR 4/4 10YR 3/2	Fi Sa Lo	bottle glass NCM	large rocks
5		5	^	55-50	1011(0/2			
								sterile subsoil, soil
3	N60 W50	4	В	56-62	10YR 4/4	Fi Sa Lo	NCM	cored additional 11cm
							bottle glass, whiteware	
	10		^	0.07		compact Sa	spall, plastic, coal (all	
4	J2	1	A	0-27	10YR 2/2 10YR 5/6	Si	NS)	
					mottled w/	V. compact		
4	J2	2	B1	27-58	10YR 2/2	Co Sa Si	NCM	
						compact Co		
4	J2	3	B2	58-72	10YR 5/8	Sa Si	NCM	sterile subsoil
			A /6'11 4	0.4.4			whiteware, coal, slag,	
	N0 E0 N0 E0		A/fill 1 fill 2	0-14 14-29	10YR 2/2 10YR 3/3	Sa Si Sa Si	plastic, glass, metal whiteware	next to asphalt walkway
- 4		2	1111 Z	17-23	10111 3/3		bottle glass, plastic, coal	
4	N0 E0	3	В	29-39	10YR 4/4	Co Sa Si	(NS)	rock obstruction
	N0 W15	1	А	0-23	10YR 3/3	Fi Sa Lo	coal (NS)	
	N0 W15		В	23-49	10YR 4/6	Fi Sa Lo	NCM	rocks
4	N0 W15	3	С	49-58	10YR 4/4	Fi Sa Lo	NCM	sterile subsoil
	10		^	0.00		Fi Sa Lo w/	and plantin (NO)	
	J3 J3	1 2	A B	0-30 30-47	10YR 3/6 10YR 4/6	Gr Fi Sa Lo	coal, plastic (NS) NCM	small rocks
	J3	2	ь С	47-60	10YR 4/6	Sa	NCM	rock obstruction
	N0 E0		A	0-29	10YR 3/3	Fi Si Sa Lo	ceramics	
	N0 E0		B	29-47	10YR 4/4	Fi Sa Lo	NCM	rock obstruction
	N0 W15		A/fill 1	0-27	10YR 3/2	Lo	coal, nail, glass (NS)	

				Depth		Soil		Comments/ Reason for
Area	ST No.	Level	Horizon	in cm	Soil Color	Description	Cultural Material	Termination
								many large cobbles
								and rocks, deposited,
	N0 W15		fill 2	27-60	10YR 4/6	Sa Si	NCM	not natural
5	N0 W15	3	В	60-72	10YR 5/6	Fi Sa Si	NCM	rock obstruction
	N0 W30		A	0-28	10YR 3/3	Fi Si Sa Lo	coal (NS)	
5	N0 W30	2	В	28-53	10YR 4/4	Fi Sa Lo	NCM	rock obstruction
							wineglass, ceramic,	
	N0 W45		A	0-32	10YR 2/2	Sa Si	(coal NS)	
5	N0 W45	2	В	32-68	10YR 4/6	Sa Si	NCM	
						Sa Si w/		
	N0 W45		С	68-77	10YR 5/4	some gravel		sterile subsoil
	N10 W60		А	0-24	10YR 3/3		nail	
5	N10 W60	2	В	24-28	10YR 4/4	Fi Sa Lo	NCM	root obstruction
							whiteware spall, slag,	
							coal, plastic, glass (all	
5	N10 W75	1	А	0-32	10YR 2/2	Gr Sa Si	NS)	
						slightly Sa		
5	N10 W75	2	A/B	32-68	10YR 3/3	Si w/ Gr	NCM	
						Gr slightly		
5	N10 W75	3	В	68-77	10YR 4/4	Sa Si	NCM	root obstruction
KEY								
	and/Sandy							
	It/Silty							
	oam/Loamy							
Fi=Fi								
	Coarse							
	Fravel/Grave	llv						
	Bedrock	, 						
	=No cultural	materi	al					
	Not saved							

HPI

Croton Water Treatment Plant, Mosholu Golf Course

Phase IB Addendum

Area	ST #	Level/ Strata	No.	Functional Group	Class	Material	Туре	Object	Part	Description
1	S15W15	1	1	personal	ceramic	porcelain	bisque	doll head	fragment	painted eyes
1	S15W15	1	1	personal	metal	alloy	•	coin	whole	1977 nickle
1	S15W15	2	1	tool	lithic	white quartz	secondary reduction	flake	fragment	platform. 31mm x 20mm x 8mm thick.
1	S15W15	2	1	food related	glass	green		bottle	fragment	
1	S15W60	1	1	tool	lithic	white quartz	debitage	flake	fragment	15mm x 10mm x 3mm thick
1	S15W60	1	1	personal	metal	copper alloy	U	coin	fragment	1990 penny
1	S15W75	2	1	architectural	metal	iron	wire	nail	fragment	
1	S15W75	2	1	architectural	clay			brick	fragment	
1	S15W75	2	2	food related	ceramic	earthenware	whiteware	vessel	fragment	
1	S15W75	2	1	food remains	organic	shell	whelk	shell	fragment	
1	S30W45	2	2	architectural	metal	iron	wire	nail	fragment	
1	S30W45	2	1	food related	ceramic	porcelain	hard paste	vessel	fragment	rim, gilt edge decoration
1	S30W45	2	2	food related	glass	colorless		bottle	fragment	
1	S30W45	2	1	unaffiliated	other		anthracite	coal	fragment	
1	S30W60	1	2	food related	ceramic	stoneware	grey bodied	crock	fragment	clear exterior, brown glaze interior, base
1	S30W60	1	1	food related	glass	colorless	ABM	bottle	fragment	base, embossed 6224/21/MTC
1	S30W60	2	1	food related	ceramic	stoneware	grey bodied	vessel	fragment	mottled black and brown exterior
1	S30W60	2	1	unaffiliated	metal	aluminum		unidentified	fragment	1cm square beveled
2	S105E30	1	1	food related	glass	colorless		bottle	fragment	
2	S105E30	1	1	food related	glass	green		bottle	fragment	
2	S60E0	1	1	architectural	metal	iron	cut	nail	complete	3.5" long
2	S60E0	1	1	food related	ceramic	earthenware	whiteware	vessel	fragment	base, trace of crown backstamp
2	S60E0	1	1	food related	ceramic	earthenware	whiteware	vessel	spall	

Croton Water Treatment Plant, Mosholu Golf Course

Phase IB Addendum

Area	ST #	Level/ Strata	No.	Functional Group	Class	Material	Туре	Object	Part	Description
							tertiary			
2	S75E15	1	1	tool	lithic	brown chert	reduction	flake	fragment	14mm x 11mm x 1mm thick
2	S90E0	2	1	tool	lithic	smoky quartz	debitage	shatter	fragment	25mm x 15mm x 11
2	S90E15	1	1	architectural	metal	iron		nail	fragment	
2	S90E30	1	1	tool	lithic	light gray chert	tertiary reduction	flake	fragment	8mm x 7mm x 1mm thick
2	S90E30	1	1	tool	lithic	black chert	tertiary reduction	flake	fragment	13mm x 9mm x 3mm thick
2	S90E30	1	1	food related	ceramic	clay	cord marked	pot sherd	fragment	Native American Middle-Late Woodland
2	S90E30	2	1	architectural	metal	iron	cut	nail	fragment	
3	N0E0	1	1	architectural	metal	iron	wire	nail	fragment	
3	N0E0	1	1	unaffiliated	metal	alloy		connector	fragment	wire attacher
3	N45E0	1	1	architectural	clay			brick	fragment	
3	N45E0	1	1	food related	glass	colorless	ABM	bottle	fragment	embossed "BR/BEVER/406- 41/NE
3	N45E0	1	1	food related	glass	dark green		bottle	fragment	
3	N45W15	1	1	architectural	metal	iron	cut	nail	complete	2.5"
3	N45W15	1	1	architectural	metal	iron		nail	fragment	
3	N60W30	3	1	architectural	glass	light green tint	flat	window	fragment	
3	N60W30	3	1	architectural	stone	marble		tile	fragment	1/2" x 1"
3	N60W30	3	3	architectural	metal	iron	wire	nail	fragment	
3	N60W30	3	1	architectural	clay			tile	fragment	
3	N60W30	3	3	architectural	clay			brick	fragment	
3	N60W30	3	1	food related	glass	colorless		bottle	fragment	embossed "WASH/ET" embossed "W.
3	N60W30	3	1	food related	glass	colorless		bottle	fragment	11ST./STERED"

Croton Water Treatment Plant, Mosholu Golf Course

Phase IB Addendum

		Level/		Functional						
Area	ST #	Strata	No.	Group	Class	Material	Туре	Object	Part	Description
3	N60W30	3	2	food related	glass	brown		bottle	fragment	
3	N60W30	3	1	food related	glass	dark green		bottle	fragment	
						light green				
3	N60W30	3	1	food related	glass	tint		bottle	fragment	melted
3	N60W30	3	1	food related	glass	white		bottle	fragment	
3	N60W30	3	5	food related	ceramic	earthenware	whiteware	vessel	fragment	1 rim
3	N60W30	3	1	food related	ceramic	earthenware	whiteware	vessel	fragment	ironstone, scalloped rim
3	N60W30	3	1	food related	ceramic	earthenware	whiteware	vessel	fragment	gilt edge decoration
										yellow glaze with brown
3	N60W30	3	1	food related	ceramic	earthenware	redware	vessel	fragment	banding
3	N60W30	3	1	food remains	organic	shell		shell	fragment	
										probably lid to cosmetics
3	N60W30	3	1	personal	glass	white		lid	fragment	container
3	N60W30	3	1	personal	ceramic	porcelain	bisque	doll body	fragment	tinted pink
3	N60W30	3	1	unaffiliated	other			slag	fragment	
3	N60W30	3	2	unaffiliated	other	carbon		battery core	fragment	
						light green				embossed "L
3	N60W55	2	3	food related	glass	tint	ABM	bottle	fragment	ORM/CO/ST"
						light green				embossed "Coc", (Coca
3	N60W55	2	1	food related	glass	tint	ABM	bottle	fragment	Cola lettering)
										embossed
										"S/GISTER", with
3	N60W55	2	2	food related	glass	colorless	ABM	bottle	fragment	wavy hatch pattern
4	N0E0	1	1	food related	ceramic	earthenware	whiteware	vessel	spall	
4	N0E0	1	1	unaffiliated	other			slag	fragment	
4	N0E0	1	1	unaffiliated	other		anthracite	coal	fragment	
4	N0E0	2	1	food related	ceramic	earthenware	whiteware	vessel	spall	
5	N0E0	1	2	food related	ceramic	earthenware	whiteware	vessel	fragment	base, mends

Croton Water Treatment Plant, Mosholu Golf Course

Phase IB Addendum

Area	ST #	Level/ Strata	No.	Functional Group	Class	Material	Туре	Object	Part	Description
5	N0W45	1	1	food related	ceramic	earthenware	whiteware	vessel	fragment	possibly pearlware
5	N0W45	1	1	food related	ceramic	earthenware	whiteware	vessel	fragment	ironstone, rim
5	N0W45	1	1	food related	ceramic	earthenware	whiteware	vessel	spall	
5	N0W45	1	1	food related	glass	colorless	hand blown	wine glass	fragment	stem, base of bowl
5	N10W60	1	1	architectural	metal	iron	cut	nail	fragment	