United States Department of the Interior

NATIONAL PARK SERVICE
Northeast Region Archeology Program
115 John St., Fourth Floor
Lowell, MA 01852

TECHNICAL MEMORANDUM
Phase I Archaeological Survey
Statue of Liberty Secondary Screening Facility
Statue of Liberty National Monument
New York, New York.

PMIS 224171
NRAP Project No. STLI 2016 A
Accession No. STLI-03978

January 3, 2017

INTRODUCTION

This technical memorandum presents results of the Phase I archaeological investigations conducted in support of the proposed Statue of Liberty Secondary Screening Facility. The investigations were completed by the Northeast Region Archaeology Program (NRAP) on Liberty Island, Statue of Liberty National Monument (STLI), New York.

The archaeological investigations were focused on the proposed location of an approximately 40x 40 foot locker area on the north side of the wing walk, to fulfill cultural resource compliance responsibilities under Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (Figure 1). The purpose of the archaeological testing was to ensure that ground disturbance required for construction did not result in the loss of valuable archaeological data.

The fieldwork for the project was conducted October 26th and 27th, 2016. NRAP archaeologist involved in the project included Joel Dukes and James Nyman. The following technical memorandum describes the results of the archaeological investigations and provides management recommendations based on those findings. Artifact analysis and cataloging was overseen by Alicia Paresi, Museum Curator and Archaeologist at the Northeast Museum Services Center.

BACKGROUND

Liberty Island is part of the Statue of Liberty National Monument (STLI) located in New York County, New York. The Stature of Liberty was designated a national monument in 1924, incorporated into the National Park System in 1933 and designated a World Heritage Site in 1984. The island is a 12.7-acre landform in New York Harbor, .35 miles east of the coast of Jersey

City New Jersey, and 1.65 miles southwest of Manhattan. Previous archaeological studies and associated background research have uncovered the magnitude of the landscape changes at Liberty Island over the last two and a half centuries. The first modifications took place during the Woodland Period (3000 BP-550 BP) when Native American Inhabitants created a large shell midden. The first European settlement on the island is unknown, but by the 1740's it was the site of a quarantine station. A variety of structures including a lighthouse were located on the island throughout the latter half of the 18th century. The first fortification built to defend New York Harbor was constructed during the 1790's. These fortifications continued to be modified and enlarged up to the construction of the star shaped Fort Wood in the early 1800's. Beginning with the Civil War, the grounds around the fort were altered with multiple cycles of construction and demolition of a variety of structures and defensive works.

Structures and landform modification have been documented south of the wing walk within or in proximity to the proposed project area on the northeast side of Fort Wood (Figure 2). In this area there was a ditch, approximately 30 feet wide, with a depth 22 feet below the parapet of the fort. The bottom of the ditch was approximately 15 feet above the high water mark and a 15 foot high masonry counterscarp ran along its perimeter (URS, 2010: 4.41) The project area remained undeveloped apart from the fortifications themselves (counterscarp, moat, parapet, and glacis), until sometime after 1900. The Army graded the area circa 1907 by removing the counterscarp and filling the ditch. Overlapping the screening facility APE a large structure, Building #25 Post Exchange, was constructed during the First World War (Figure 2). This building is thought to have been constructed with a basement and was demolished circa 1939. Another large structure, Building #16 Officers Quarters, was constructed during WWI approximately 35 east of the proposed locker area (Figure 2). Building #16 was also torn down around 1939.

Bill Griswold excavated 15 shovel test pits in the vicinity of the proposed locker site to investigate anomalies that had been identified during a geophysical survey of the island (Griswold 2001) [Figures 3 & 4]. At approximately 30cm below ground surface Griswold identified an extensive earlier ground surface composed primarily of very compact clay containing few artifacts. He believed this surface post-dates the 1939 demolition of military structures by the NPS. Attempts to distinguish sandy fills from true geological subsoils in the shovel tests were inconclusive. In 2010 URS excavated 30 STPs and three 1x1 m units in and around the screening facility project area (Figure 3). Stratigraphy across the project area was defined as significantly disturbed with multiple fill layers capping a fine loamy sand deposit at depths between 40 to 80cm below the surface. Machine assisted archaeological excavations for a proposed 20x30 foot generator pit at the northeast corner of the fort were carried out in 2012 by PAL (Figure 3). Three trenches within the area revealed the concrete remains of a ca. 1985 cooling tower pit, modern utility lines, and structural debris from the 1939 demolition of the World War I era Post Exchange Building #25. A 3000 gallon underground storage tank was removed from the project area between the eastern wing walk and the fort wall close to the salient that is next to the main entry and plaza in 2013 (Figure 3). Results of archaeological monitoring the UST removal were documented by NRAP archaeologist Joel Dukes. The southern end of a new waterline installed in 2013 is located within the project area and was monitored by Hunter Research (Figure 3). In the midst of massive utility disturbances they identified the footing for the counterscarp. It is worth noting that Hunter Research also documented a 4 foot deep soil profile 40 feet north of the wing walk. In that profile lamellae

banding was identified in a medium sand B horizon starting at 1.3 feet below surface with bands appearing every 0.45 feet to the depth of excavation. Lamellae bands are typically representative of undisturbed subsoil.

PROJECT DESCRIPTION

The NPS is proposing to construct a secondary screening facility on Liberty Island to replace the existing security screening tent. The security screening facility would contain four screening lanes and be located east of the main pedestrian mall (the east yard) aligned with the east wing walk. Lockers for personal items not allowed in the Statue of Liberty would be constructed on the opposite (north) side of the wing walk (Figure 2).

Prior archaeological investigations have already identified the site of the proposed screening facility as significantly disturbed. The archaeological investigations documented in this report took place in the proposed locker area and were conducted by NRAP archaeologists Joel Dukes and James Nyman on October 26th and 27th, 2016. Laboratory work was conducted by the Northeast Region Museum Services Center in Charlestown, MA. All archaeological materials and supporting documentation were prepared for curation and cataloged to NPS Northeast Region Archaeology Program standards. Project materials were returned to the Statue of Liberty National Monument Curator, at Ellis Island.

SITE CONDITIONS

The project area is located on the north side of the eastern wing walk. The screening facility is located on the south side while a locker storage area and drain field are located on the north side. The site is currently a mown lawn with mature London Plane (*Platanus x acerifolia*) trees (Figures 5 & 6). A recessed concrete lighting pit was recently removed from the northern edge of the project area during the Hurricane Sandy Recovery project. An electrical drop-box is still located where the pit was removed and a tree was also planted there (Figure 7).

The natural subsoils of Liberty Island are glacial tills overlain by a mixture of silts, sands, and shell deposited during the retreat of the Wisconsin ice sheet. By the time of European contact in the early seventeenth century, Liberty (Bedloe's) Island was a tear-shaped landform ringed by a sandy beach visible at low tide and surrounded by shallow, oyster-bed rich waters. At that time, its natural topography probably rose no more than 15–20 feet above mean sea level. The surficial soils of the island are a mixture of natural strata and fills associated with land alterations beginning in the late eighteenth century. These land alterations transformed the roughly 10.7-acre landform into the 12.7-acre island now known as Liberty Island (Berg 1999:1,7).

FIELD METHODS

The Shovel Test Pits were fully excavated in 10cm intervals and natural stratigraphic layers to culturally sterile subsoils, or 1 meter (ca. 3 feet), whichever came first. Excavated soil was hand screened through ¼ inch hardware cloth. All cultural materials remaining in the screen were bagged and tagged by level within each test pit and the types of recovered cultural material were noted on standard NRAP profile or excavation unit forms. An accession number (STLI-

03978) was assigned to the project and appears on all field forms, photographs, artifact bags, soil samples, field notes, etc. All data, archival or artefactual, bear this number from the point of collection in the field. Profile drawings, including depths of soil horizons, colors, and textures were also prepared for each test unit. All shovel tests were backfilled and the ground surface was restored to its original contour following excavation. Digital images were taken to document the general project area, excavation progress, and any significant features, and a record of the images was maintained on standard NRAP Photograph Log Forms. A daily record of observations and procedures was maintained by the project archeologist. Soil types and Munsell color codes were referenced in soil and strata descriptions. Fill soils were anticipated in most of the project area due to the proximity of structures built by the military and torn down by the NPS in the 1930s. In those cases, only artifacts of special significance or from primary context were collected. Physical locations of the STPs and landscape features were documented through use of sub-meter Trimble Geo XH GPS (Table 1).

RESULTS

During subsurface testing NRAP excavated six 50-x-50cm shovel test pits (STP's) in areas where project impacts are proposed (Figure 7) STPs 1-3 were placed 3m from and parallel to the wing walk wall at 5m intervals. STP's 4-6 were positioned on the east, west, and north sides of the project area. Six soil contexts were identified during the investigations for the screening facility (Figure 8). Context I was encountered in the top 13cm of all units and is a 10yr 3/3 dark brown silt loam. A wide variety of historic items including coal, brick, oyster shell, glass, and aluminum pull tabs were recovered in the C-I soils (Appendix A). A 1984 US dime was found in STP-3 and STP-2 had a 1992 US penny and a 1980 US dime. A section of ½ inch thick metal pipe was found in C-I of STP-6 (Figure 9). Context II was also found in all units 13 to 26cm below the surface and consisted of a silt loam that was more compact than C-I and was mottled 10yr 5/4 yellowish brown and 10yr 4/2 dark greyish brown (Figure 8). Artifacts in C-II are similar to those found in C-I (coal, oyster, brick, plastic glass, nails, and slag). A 1963 Canadian penny was found in STP-6 in C-II. Context III soils were only encountered in STP's 1-3 and consisted of an ashy 10yr 5/2 greyish brown silt loam located at approximately 30cm below the surface and ranging in thickness from 4-16cm (Figure 8). STP-3 was the only test with cultural materials in C-III. Seven fragments of glazed ceramic that might be from a drain pipe. Context four was varying thickness across the project area (12-40cm) and typically was encountered at approximately 30cm below the surface. C-IV is a hard compact 10yr 5/6 yellowish brown sandy clay that was identified as a ground surface by Griswold in units adjacent to the project area (Griswold, 2001). C-IV soils in STP's 1-4 did not have cultural materials. STP's 5 and 6 both had building debris including large stones, concrete, plastic and brick in C-IV soils. A fragment of a brick, probably labeled FITZ-G, was manufactured by the J. Fitzgerald & Sons Brick company in Coxsackie, NY in the early 20th century and was recovered in C-III of STP-5 (Figure 10). A buried tar coated metal pipe was located in C-IV soils at 64cmbs in STP 6 (Figure 11). Context V soils are culturally sterile 10yr 6/4 light yellowish brown sandy silt soils located approximately 45-70cm below the surface. At approximately 70cmbs the Context V soils became finer and transitioned to a 10yr 5/6 yellowish brown. C-VI was only encountered in STP-1 (Figure 8).

INTERPRETATIONS and RECOMMENDATIONS

Phase I excavations in the Liberty Island Screening Facility APE revealed substantial landscape disturbances and fill deposits. The depth, color and consistency of C-IV soils encountered during this investigation are consistent with the potential post NPS 1930's demolition ground surface that was identified by Griswold in nearby units (Griswold 2001). Additionally the colors and textures of C-V and C-VI soils are broadly similar to fill layers identified by URS during their test excavations immediately south of the current APE (URS 2010). Disturbances in the project area are probably associated with the installation and the ca. 1939 demolition of the World War I-era Post Exchange Building #25 and Officer's Quarters Building #16. More recent utility line disturbances associated with park lighting installation and demolition also crosscut the project area. While the brick, stone and concrete materials identified in STP's 5 and 6 are almost certainly related to the WWI structures, their highly compromised stratigraphic context, documented as part of this survey and others, effectively precludes their potential significance.

No pre- or postcontact cultural materials or features potentially eligible for listing in the National Register of Historic Places were identified during subsurface testing within the Liberty Island Secondary Screening Facility APE; no additional archeological excavations are recommended in advance of the construction phase of the Secondary Screening Facility Project.

REFERENCES

Berg, Shary Page
1999 *Cultural Landscape Report for Liberty Island, Statue of Liberty National Monument: History, Analysis & Treatment Recommendations*. Olmstead Center for Landscape Preservation, National Park Service, Boston, Massachusetts.

Butchko, Joshua, James S. Lee, Patrick Harshbarger, and Richard W. Hunter
2013 *Archaeological Monitoring, Life and Safety Upgrades, Statue of Liberty National Monument, Liberty Island, New York City, New York*. Hunter Research Inc.

Dukes, Joel
2013 *Monitoring Report, Removal of Underground Storage Tanks, Statue of Liberty National Monument, Liberty Island, New York, New York*. Northeast Region Archaeology Program No. STLI 2012 D.

Gillis, Nichole A. and Kristen Heitert
2012 *Archaeological Investigations in Support of the Life and Safety Upgrades to the Statue of Liberty Project, Statue of Liberty National Monument, New York County, New York*. Public Archaeology Lab.

Griswold, William A.
2001 *Ground Truthing The Geophysical Investigations: An Evaluation of the Remaining Archaeological Resources, Liberty Island National Monument, New York, New York*. Archaeology Branch, NPS Northeast Region.

McNichol, Anthony J., Eileen Krall, Ingrid Wuebber, and Rick Affleck
2010 *Phase IA – IB/II Archaeological Assessment Install Power and Communication Lines for the Perimeter Security Project, Statue of Liberty National Monument. New York, New York*. URS Corportation.

FIGURE 1. Liberty Island Project Area

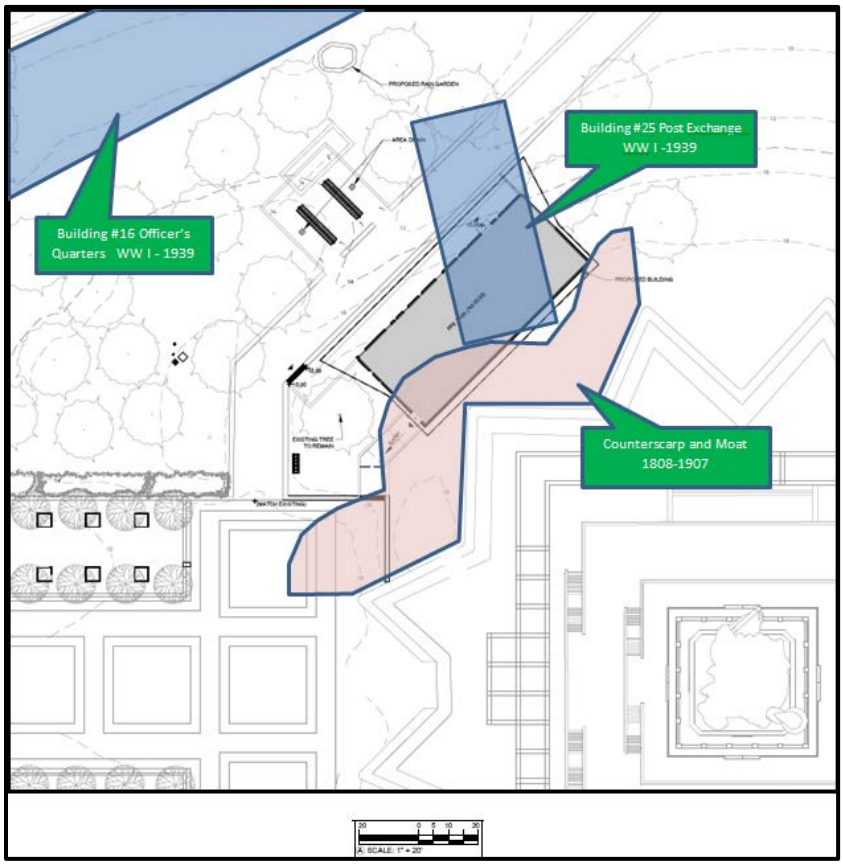

FIGURE 2. Previous structures in and adjacent to the project area.

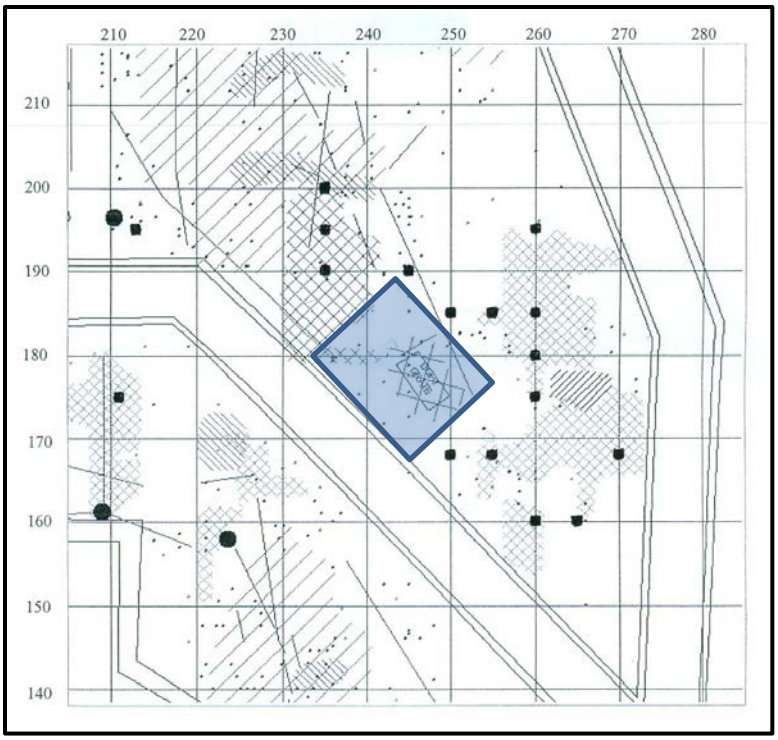

FIGURE 3. Geophysical Anomalies Shovel Tested by Griswold. (Griswold, 2001, Fig.4.8)

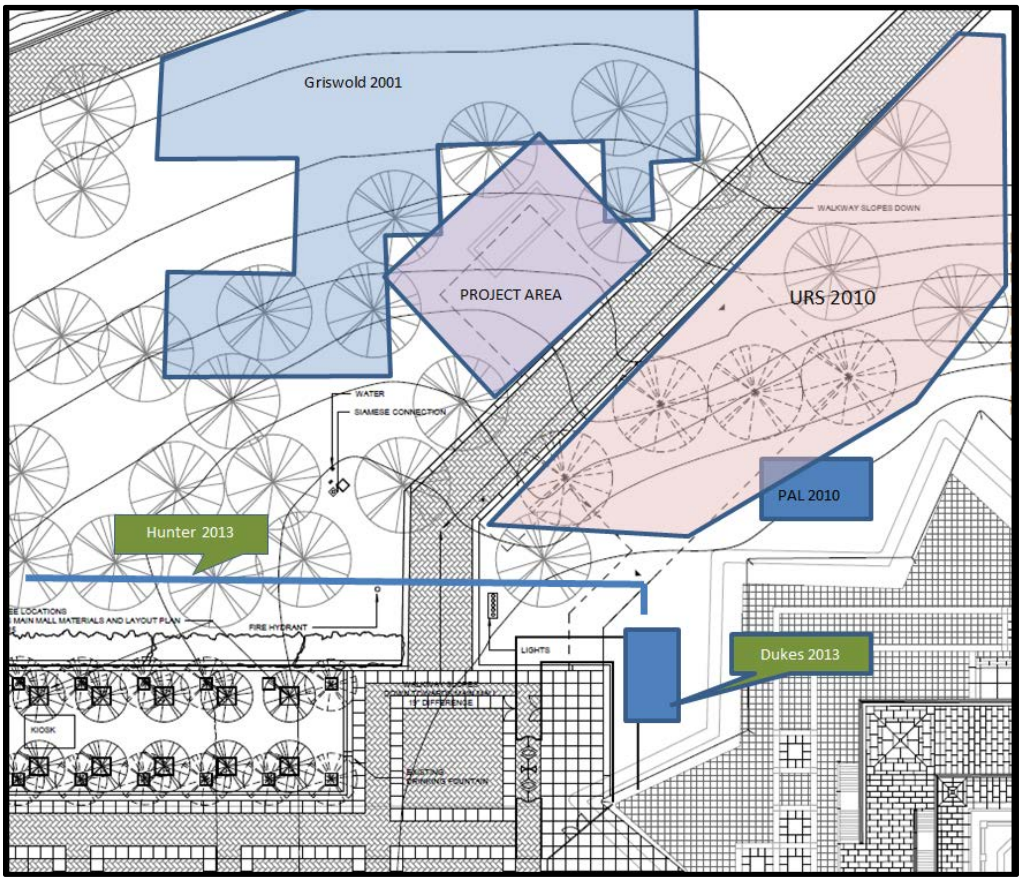

FIGURE 4. Previous Archaeological Investigations

FIGURE 5. Facing southeast across project area.

FIGURE 6. Facing north across wing-walk toward project area.

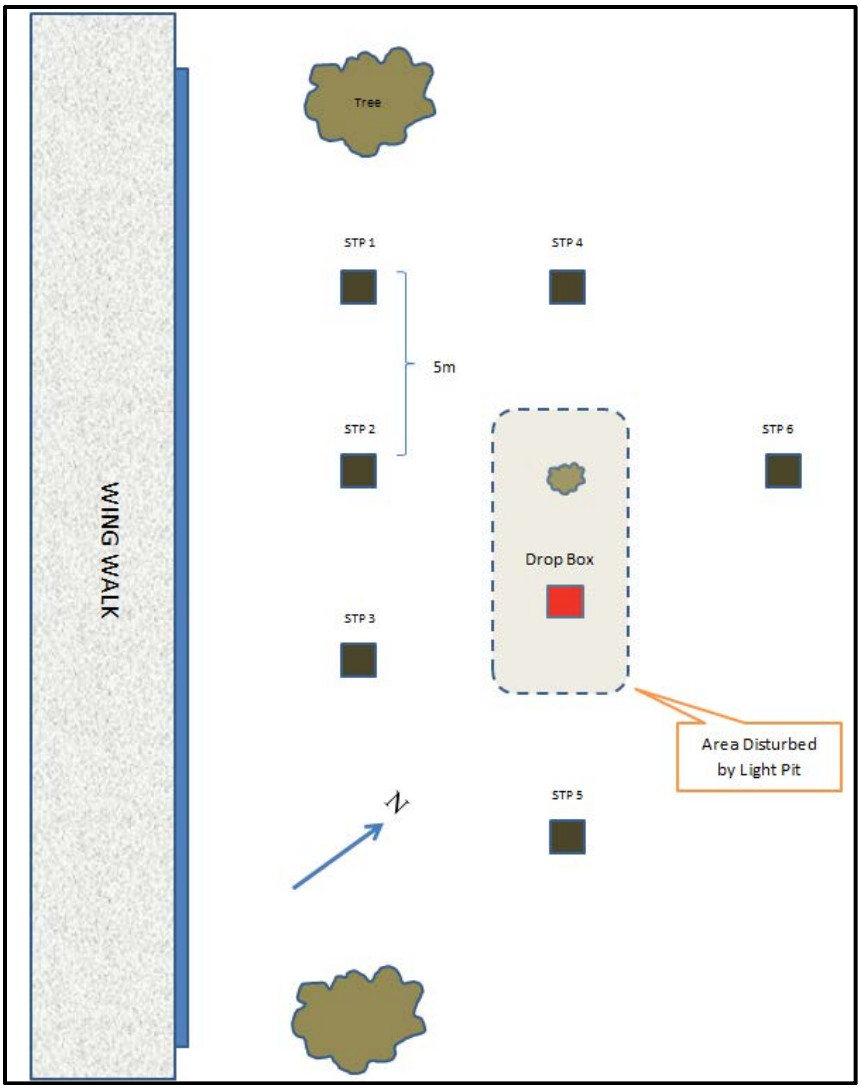

FIGURE 7. Project Area

Zone 18, STP	Easting	Northing
STP-1	580745	4504778
STP-2	580750	4504775
STP-3	580754	4504775
STP-4	580747	4504783
STP-5	580760	4504780
STP-6	580751	4504786

TABLE 1. UTM Coordinates for Shovel Test Pits

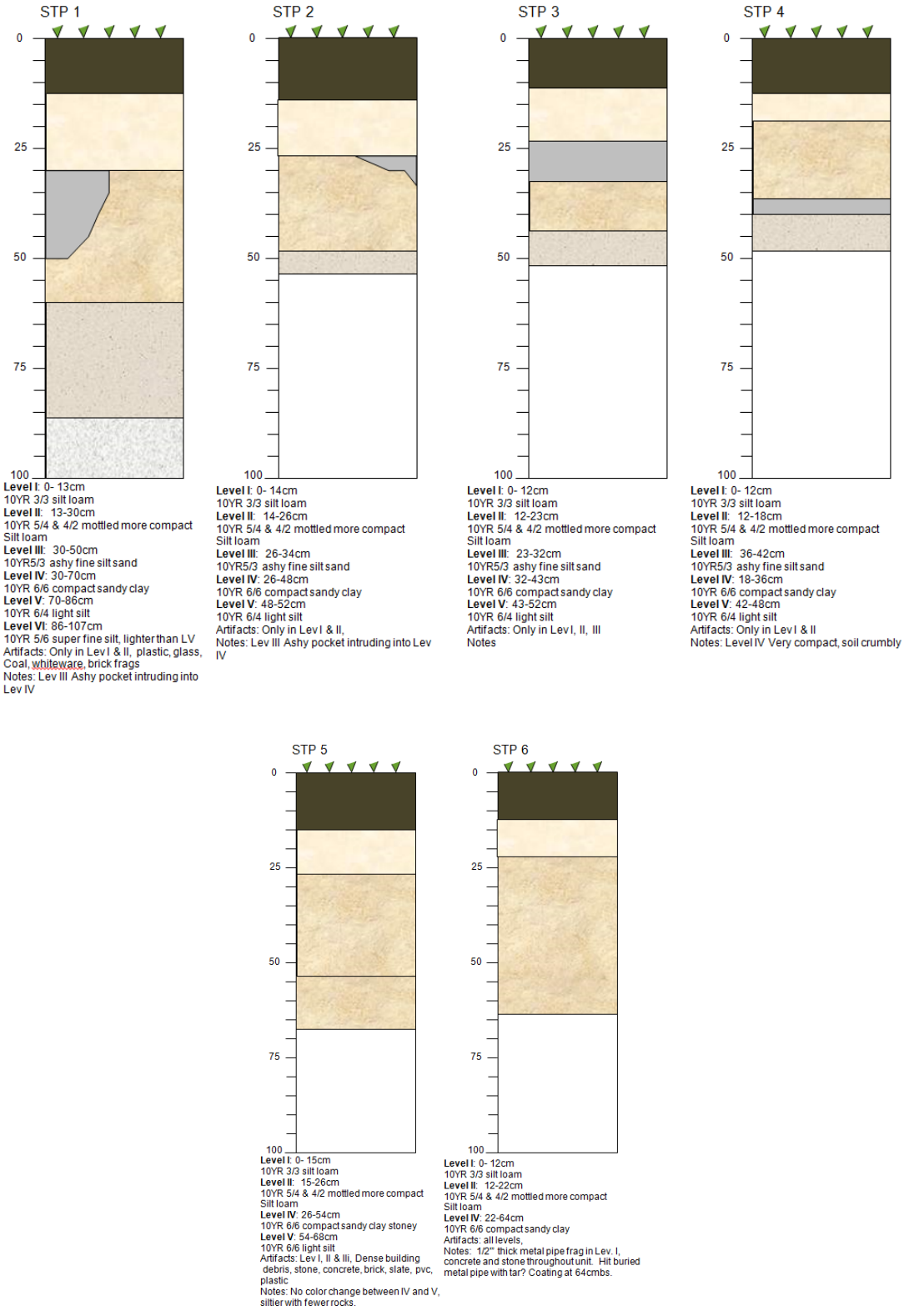

FIGURE 8. Soil Profiles (Note: Levels correspond with Soil Contexts)

FIGURE 9. Metal pipe fragment in STP-6


FIGURE 10. Brick fragment from STP-5

FIGURE 11. Pipe at base of STP-6

APPENDIX 1
Artifacts

STP	Context	Count	Material	Description
STP-1	C-I	1	Glass	Window, clear
		1	Glass	Bottle, clear
		1	Glass	Bottle, aqua
		4	Coal	
		1	Slag	
	C-II	1	Ceramic	White ware
		1	Slag	
		1	Metal	Nail fragment
		2	Shell	Oyster fragment
	Total	**13**		
STP-2	C-I	1	Metal	1980 US Dime
		1	Metal	1992 US Penny
		1	Plastic	Metallic button
		1	Plastic	Clear fragment
		2	Coal	
		1	Hardened tar?	
		1	Ceramic	Albany red ware
		1	Slag	
	C-II	2	Coal	
		1	Slag	
		1	Glass	Clear
		2	Shell	Oyster frag
	Total	**15**		
STP-3	C-I	1	Metal	1984 US Dime
	C-II	1	Coal	
		1	Metal	Aluminum pull tab
		1	Ceramic	Drain pipe?
	C-III	7	Ceramic	Drain pipe?
	Total	**11**		
STP-4	C-I	1	Plastic	Utensil handle?
		1	Plastic	Toy truck tire?
		1	Coal	
		1	Shell	Eroded fragment
	C-II	4	Slag	
		1	Metal	Nail
		2	Coal	
		1	Glass	amethyst
		1	Glass	aqua
	Total	**13**		
STP-5	C-I	2	Slate	
		1	Coal	
		1	Glass	Bottle, brown
		2	Glass	Bottle, clear
	C-II	3	Metal	Nails
		1	Coal	
	C-IV	1	Slate	
		1	Metal	nail
		1	Glass	clear
		1	brick	
		1	Shell	Clam
		1	Tar	Roof Shingle frag.
	Total	**16**		
STP-6	C-I	1	Brick	
		1	Metal	Strap
		1	Metal	Aluminum pull tab
		3	Coal	
		1	Plastic	Small lens

	C-II	1	Metal	Wire nail
		1	Metal	1963 Canadian penny
		1	Metal	1967 US Dime
		1	Shell	Clam frag
		1	Shell	Oyster frag
		1	Slag	
	C-IV	5	Coal	
		1	Bone	Mammal?
		3	Slag	
		3	Metal	Nail frags.
		1	Glass	Bottle, aqua
		1	Glass	Bottle, clear
		4	Shell	Clam fragments
		6	Shell	Indet.
		1	Shell	Snail
		1	Ceramic	Polychrome whiteware
	Total	**39**		
TOTAL		**107**		