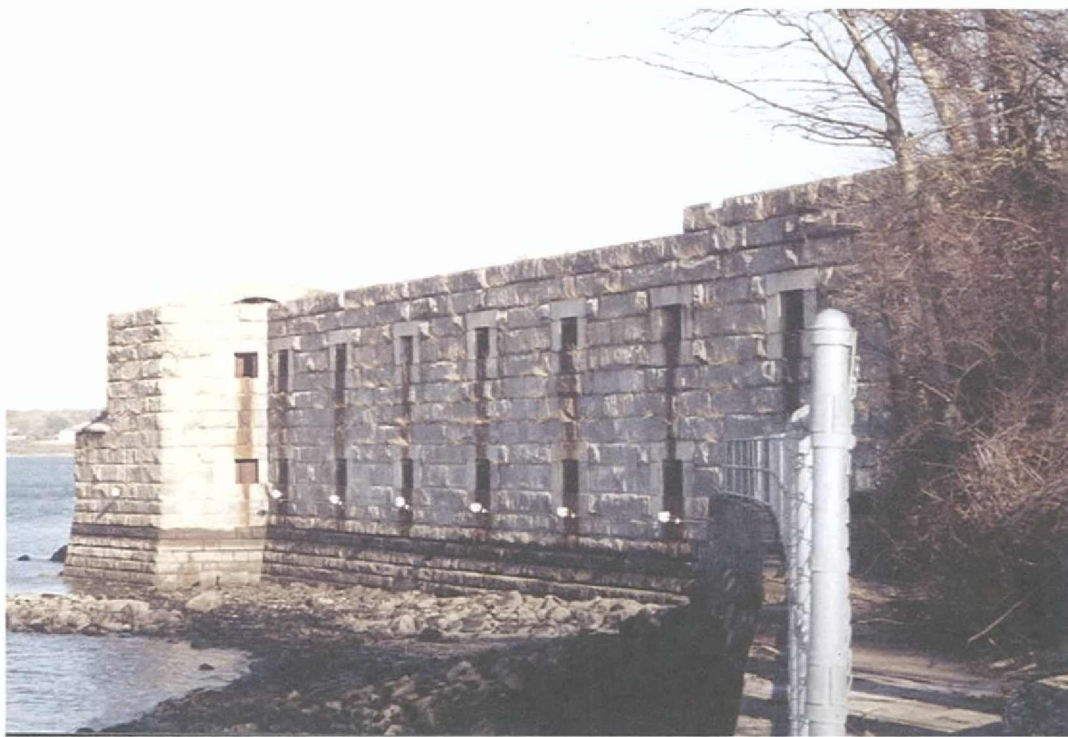


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Stone 2005

REPORT ON PHASE 1B
ARCHAEOLOGICAL TESTING
AT FORT TOTTEN BATTERY
LOCATED AT WILLETS POINT,
NORTH OF THE CROSS ISLAND PARKWAY
AND EAST OF THE THROGS NECK BRIDGE,
QUEENS, NEW YORK



View of historic Fort Totten Battery taken on November 11, 2004, facing east.

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EXECUTIVE SUMMARY

This report on Phase 1B archaeological testing of part of the historic Fort Totten Battery, a National Register of Historic Places eligible site and New York City Landmark, was conducted in conjunction with a project which includes the reconstruction of parts of the property. This archaeological report is being conducted to comply with environmental review regulations and meets the standards of both the New York City Landmarks Preservation Commission and the New York State *Office of Parks, Recreation and Historic Preservation*.

The government purchased the property at Willets Point in 1857. Construction on the water battery at Fort Totten was begun in 1862, but never completed. Other batteries were built later. Previous research concluded part of the property was sensitive for the preservation of archaeological resources and recommended a topographic analysis to determine whether below ground actions would affect them. In the case of the current improvement program, it was determined that a small section of the project area had the potential to contain archaeological remains from the Pre-Contact period.

A series of five shovel tests was done in the exact locations of planned fence and gate posts. No archaeological remains from the Pre-Contact period were identified.

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March 5, 2004

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INTRODUCTION

The City of New York Department of Parks and Recreation (DPR) is in the midst of a reconstruction of parts of the Fort Totten Battery in Bayside, Queens, a New York City Landmark and National Register eligible site (Figure 1). "The fort's surviving structures from various phases of construction vividly depict the changing role of military technology and defense strategy between the Civil War and World War II...Fort Totten is a tangible reminder of New York City's once-powerful harbor defense system which ranged from the inner harbor adjacent to Manhattan Island to the Narrows and Long Island Sound" (NYCLPC 1999). The Fort Totten Historic Preservation and Interpretive Plan recommended any below ground actions planned for the historic battery area be evaluated to see if there is potential for the preservation of archaeological resources (Beyer Blinder Belle 2000:4.5-6). As a result the New York City Parks Department commissioned a topographic analysis to see if the planned impacts from these improvements had the potential to encounter any archaeological resources (Stone 2004-see Appendix A). That analysis determined a small section of the planned DPR work had the potential to affect archaeological resources from the pre-contact period and recommended testing. The recommended archaeological testing was conducted to comply with environmental review regulations.

The below ground project impacts are for fence posts and gate posts at the western end of the battery. The footings for the posts will be two feet deep. Figure 2 is the schematic plan provided by Advance Builders, Inc. and the DPR showing the location of the planned work within the fort property. It should be noted the project originally called for the fence to extend from the gate at the western end of the property toward the east (see Appendix A: Figure 1). This was subsequently reduced (10/27/04) to extend only 35 feet south from the existing retaining wall at the western end of the project area, as reflected in Figure 2.

This report will present the findings of archaeological testing conducted for this Fort Totten project. The work has been done in accordance with the guidelines of both the New York City Landmarks Preservation Commission and the New York State Office of Parks Recreation and Historic Preservation. This report was prepared by Linda Stone, RPA for Advance Builders, Inc.. The archaeological fieldwork described in this report was conducted by Ms. Stone on November 11, 2004. The author would like to acknowledge the assistance of Jafar Gujar of Advance Builders, Inc. and Helen Belner of the NYCDPR for facilitating the project.

SITE HISTORY AND ARCHAEOLOGICAL POTENTIAL

Pre-Contact Period

In discussing the archaeological potential of Fort Totten for preservation of remains from the Pre-Contact period, the Historic Preservation and Interpretive Plan summarizes previous archaeological documentation and states:

The three previous archaeological reports all acknowledge the importance of prehistoric archaeological remains within the project area. Tetra Tech quotes the New York State Museum as having "identified the project area as having 'a high probability of producing prehistoric archaeological data' based on environmental conditions". They go on to say prehistoric use "may have included subsistence activities and possibly lithic procurement. The probability for long-term prehistoric occupation is somewhat compromised by fluctuating salinity levels in the water" (Tetra Tech 1998: 28).

All three reports also feel the property has high prehistoric potential in areas where historic period construction has not disturbed them. This would include areas where the terrain was either not altered or altered by the addition of fill on original ground surfaces, thus potentially preserving prehistoric remains (Beyer Blinder Belle 2000: 4.3).

The topographic analysis for the Fort Totten reconstruction identified a small section of such relatively unaltered land in the area of the gate and fence (Appendix A).

Historic Period

There were no known historic period archaeological resources within the current area of potential effect that the Historic Structures Report considered potentially significant.

METHODOLOGY

The scope of work for archaeological testing is attached as Appendix A. Archaeological work done for this project involved shovel testing in the locations of the planned posts.

Field Testing

A total of 5 shovel tests were placed at roughly eight-foot intervals along the path of the planned fence and gate. Figure 3 depicts the locations of the shovel tests. The contractor marked out the locations of all of the fence and gate posts, a total of seven. Locations 3 and 7 were not archaeologically excavated. Shovel Test 3 would have been located directly abutting the retaining wall adjacent to the asphalt path and that location was assumed to have been cut when the path was originally laid, thereby removing any original ground surface. Shovel Test 7 would have been almost directly above the remains of Battery Baker, the Endicott Period battery located to the west of the water battery. This test was assumed to contain fill from the construction of that battery. Shovel Test 1 was placed within the wooded area between the bulkhead and the asphalt path. Shovel Test 2 was in the northern part of the path. Shovel Tests 4-6 were in the hillside above the asphalt path. All soils excavated from the shovel tests were screened through ¼inch mesh for the recovery of artifacts. Soils, stratigraphy and artifact inclusions were recorded on forms. The stratigraphy of each test is included as Appendix B.

Artifact Processing

Each bag of artifacts recovered from shovel tests was labeled with the test number and level (i.e. 1.2). Artifacts known in the field to be non-diagnostic modern materials or to be associated with known fill deposits were noted in the field and generally either sampled or not retained. They are noted in the stratigraphy summary (Appendix C). All recovered artifacts were washed and rinsed in tap water and left to air dry before labeling and rebagging in clean 4-mil zip-lock bags. All artifact categories, with the main exception being metal and coal, were individually labeled with the project name abbreviation (FT) and the context number (shovel test and level). All zip bags were labeled with the same information.

All ceramic and glass artifacts are considered sherds, unless otherwise noted in the inventory (Appendix C). The New York City Parks Department is the repository for all artifacts recovered during the conduct of work described in this report and will be turned over to them upon acceptance of this report.

RESULTS

Shovel Test 6 encountered concrete in the base of the excavation, about 2.1 feet below ground surface. It is presumed the concrete is somehow related to nearby Battery Baker. Therefore this test was conclusive for the absence of pre-contact period ground surface. The natural ground surface from that period was likely encountered in Shovel Tests 4 and 5. It was found at about 0.2 feet below ground surface and was generally described as brown or dark grayish brown mottled sandy silt. The culturally sterile subsoil was found in all tests. It was generally described as a yellowish brown or brown sandy silt and was found between 0.6 - 0.8 feet below the ground surface.

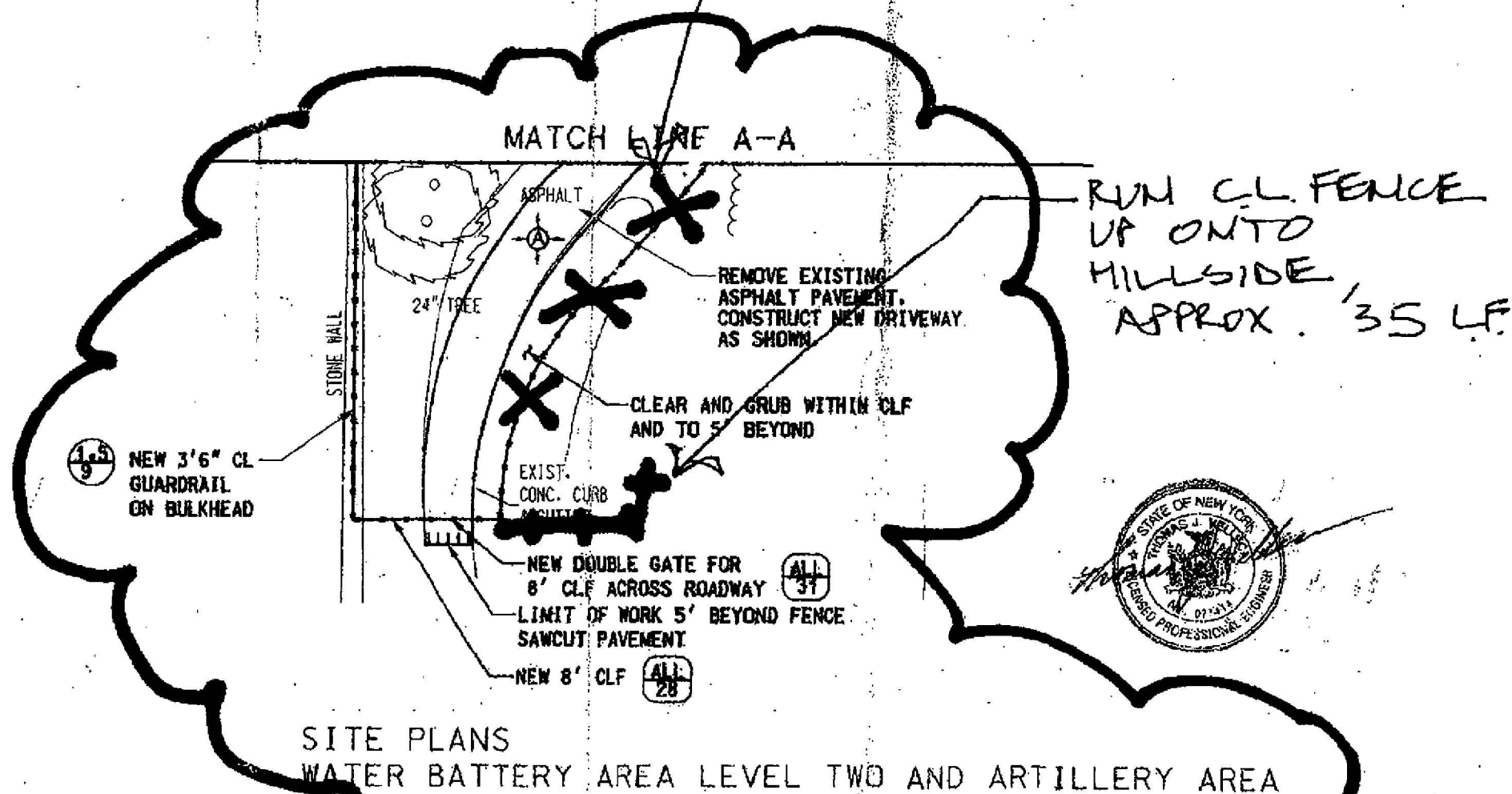
Very few artifacts were found or recovered during screening of the excavated soils. Shovel Test 1 contained a profusion of coal at about 1.6 - 1.8 feet below ground surface. A sample was retained. A small amount of coal was also recovered from Shovel Test 5 at less than 0.6 feet below ground surface. This stratum also contained a small sherd of green bottle-type glass, possibly from a modern beverage bottle. The sherd contained no diagnostic markings. The only other cultural material found was in Shovel Test 2. Several pieces of unidentifiable corroded metal were recovered from stratum 3.

No pre-contact period artifacts were found during shovel testing for the fence and gate posts at Fort Totten.

CONCLUSIONS AND RECOMMENDATIONS

The documentation on Fort Totten indicated a potential for the recovery of material from the Pre-Contact archaeological period. However no remains of this were found during this phase of archaeological testing. It is recommended that any future work in the historic sections of the fort be evaluated to see if topographic conditions would indicate the preservation of archaeological resources. In conclusion, the Fort Totten reconstruction project as described in this report can proceed as planned without concern for further archaeological work.

ELIMINATE CL FENCE
THIS AREA.



IF ALTERATIONS TO THESE PLANS ARE REQUIRED, THE ALTERATIONS SHALL BE MADE IN ACCORDANCE WITH ARTICLE 145 SUBSECTION 1 OF THE NEW YORK EDUCATION LAW.

Figure 2 Revised site plan for Fort Totten showing the updated location of the fence and gate posts.

BIBLIOGRAPHY

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1999

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<http://www.ci.nyc.ny.us/html/lpc/html/designation/summaries/forttottenhd.html>

Appendix A

TOPOGRAPHIC ANALYSIS AND
SCOPE OF WORK FOR
ARCHAEOLOGICAL FIELD TESTING
March 5, 2004

TOPOGRAPHIC ANALYSIS AND
SCOPE OF WORK FOR
ARCHAEOLOGICAL FIELD TESTING
IN ADVANCE OF RECONSTRUCTION OF A PORTION OF THE BATTERY
AT FORT TOTTEN
BAYSIDE, QUEENS, NEW YORK
Contract No. Q-458-101M

March 5, 2004

The New York City Department of Parks and Recreation (DPR) is planning a reconstruction of parts of the Fort Totten Battery in Bayside, Queens that has the potential to affect archaeological resources. Therefore a topographic analysis of the project impacts has been conducted to determine where legitimate concerns exist. The following areas of planned work have been included in this study and are depicted on the site plans (see Figure 1).

1. Excavation for 7 wooden light poles in the area of Building No. 502, with each hole being about 4 feet deep and 2 feet diameter.
2. A conduit trench will be excavated around the perimeter of Building No. 502.
3. Extensive acreage will be cleared, grubbed and graded in both the vicinity of Building No. 502 and near the water battery.
4. A gate at the western end of the water battery and a perimeter construction fence and later a permanent fence.
5. Excavation for 4 new catch basins at the water battery and about 170 linear feet of drain line to connect them. The depth of these excavations is not known at this time, however it is expected to be at least 4 feet below the existing slate tile and about 4 feet in diameter for the catch basins and less for the drain line. It is not clear if a new manhole at the tidal gate inside the fort will require additional excavation.
6. Excavation outside the northern end of the tunnel for the placement of an electrical box and conduit for a distance of about 30 linear feet.

Current conditions were based on the topographic survey included in the contract drawings and the consultant's supplemental survey for the western end of the battery. Historic conditions used included the Engineer Department's 1863 *Plan of Fort at Willet's Pt.* and the 1864 *Plan Showing the Progress of Work on Excavations at Willet's Point* and the Carman-Dunne 1947 *Fort Totten Topographic & Utility Survey*. Maps were scanned and scaled to overlay the project impacts on the historic plans. Figure 2 depicts the composite of some of the historic topography shown on top of the current survey. Table 1 is a compilation of the elevations depicted on these plans in the footprint of the planned project impacts. Areas currently at lower elevations than existed in 1863, prior to development, have been graded, removing the original land surface, generally eliminating archaeological potential. Areas where the elevations are higher were covered with fill, potentially preserving archaeological resources. The project area was previously identified to have archeological potential dating from the pre-contact period in areas where original ground surfaces could be identified. Additionally, military period archaeological potential was considered possible near existing structures to determine construction methods, should the information not be available elsewhere (Beyer Blinder Belle 2000:4.5-6)

Building No. 502 is within the area of excavation of the original pentagonal fort shown on the 1864 plan. This area was excavated to an elevation of 43 feet above sea level and was subsequently further excavated to elevations around 35 feet near the building. The same conditions exist in the entire northern part of the area scheduled for clearing and grubbing around the building, as well as the light poles and conduit. This includes all the land in a line with the southern end of Building No. 502 headed

north, including four of the planned light poles. Therefore there is no longer any archaeological potential associated with the pre-military periods in this area. Additionally, since Building No. 502 is the only military period construction in this vicinity, built in 1900, there is also not archaeological potential associated with the military period of use. While the southern portion of this area was not entirely within the 1864 excavation, it was along the edge of it and while the changes in grade are not as dramatic as to the north and west, soil was removed in this area from an original elevation of about 50 – 57 feet to an elevation of about 40 – 46 feet above sea level. Therefore, no archaeological testing or monitoring is recommended there.

Table 1 – Elevations

FORT TOTTEN ELEVATION HISTORY				
PLANNED IMPACT	1863	1864	1947	CURRENT
BUILDING NO. 502 AREA				
Grading				
E	47	65	40	50
N	50	43	45	36
W	57	43	45	36
SW	57	55	40	51
C	55	43	c.43	35
Lights - from north clockwise	49	44	c.42	40
	50	48	c.40	44
	54	45	40	44
	56	49	40	46
	57	43	43	44
	56	43	47	36?
	53	43	47	36?
BATTERY AREA				
Drainage - Line and Catch Basins				
E	10	10	23	c. 6
N	9	10	23	c. 6
W	40	10	22	c. 6
Electrical Box/Conduit	13/c. 7	13/c. 10	22/22	c. 20/c. 6
Tidal Gate	3	c.12	N/A	c.20
Drainage – Pavement				
E	40 - 64	10-c.40	23	20
C	c.40	c..10	22	20
W	15	15	18	19
Fence Gate W	9-c.15	10-c.30	18	c.14
Grade, Grub & Fence				
NE	10-c.50	15 - 40	10-c.25	c. 15-c. 20
SE	53	40	30	20
S	65	43	30	23
SW	35	35	20	20
W	10	16	18	10-19?

Planned project impacts in the area of the water battery include a drain line and catch basins, an electrical box and conduit and a substantial amount of clearing, grubbing and grading, as well as a fence and gate at the western end of the project area and possibly a new manhole at the tidal gate. The planned drain line and catch basins are within the area of slate tiles just inside the water battery. The elevations in this area are currently about six feet above sea level, representing a decrease of from 3 to over 30 feet since 1863. Therefore no original ground surface remains in this area and no archaeological testing is recommended there. The possible new manhole at the tidal gate is in an area where the elevation has increased from about 3 feet above sea level in 1863 to 12 feet in 1864 and about 20 feet today. Therefore original ground surface may exist. However since a possible manhole will require excavations of about 4 feet, it will not reach the depth of potential archaeological resources and no testing is recommended for this area.

The electrical box will be located in the hillside to the east of the tunnel's northern exit and the conduit will lead from there to about 20 feet toward the north. The elevations in the hillside area are higher than they were in 1863/64, by about 7 - 10 feet, likely from slope wash rather than filling. This depth will not be penetrated by the planned work and therefore no archeological testing is recommended. The conduit will be placed below the slate tile. In this area, the pre-1863 ground surface has been graded down from between 10 to 15 feet to a current 6 feet above sea level, thus eliminating original ground surface and archaeological potential.

The small triangular section of clearing, grubbing and grading planned to the northeast of the water battery, in 1863, ranged in elevation from about 15 feet above sea level along the northern edge to about 50 feet above sea level to the south where the battery is currently located. The same locations showed very little change in 1864. However by 1947, a substantial decrease in the elevations of up to 25 feet in this area was observed, more so closer to the battery. By 1947 the elevations in this area of planned work were about what exists today. Therefore, between 1864 and 1947 a sizable amount of excavation, or possibly erosion, has occurred here and thus this section of the project area does not have the potential for the preservation of pre-historic or pre-military period archaeological resources. Military period archaeological information would not enhance the already existing body of knowledge about the construction of the water battery as evidenced by the photographs and drawings included in the *Fort Totten Historic Preservation and Interpretive Plan* (Beyer, Blinder Belle 2000).

Along the southern edge of the battery, within the area of planned clearing, grubbing and grading and the new fence installation, a substantial amount of soil was removed in 1864 for the construction of the pentagonal fort and was subsequently filled. Therefore this section of the project area also does not have the potential for the preservation of pre-historic or pre-military periods archaeological resources. Any military period archaeology falls within the same category as the area to the east of this.

Moving west of the battery within the project impact area, there was very little change in topography between 1863 and the excavations of 1864. There was a slight decrease in elevation by 1947 from about 25 to 20 feet above sea level near the southern part of this area closer to the battery and no changes to the far west, where the new fence gate will go. Furthermore the same elevations that existed in 1947 persist today. Therefore original ground surfaces may still exist in this area, buried beneath decaying asphalt paving in places, and could contain pre-contact archaeological data. Archaeological testing is recommended for this area which measures about 100 feet east to west and 50 feet north to south.

Presuming there are no unexploded ordinance hazards or hazardous materials contamination of the soils, manual archaeological shovel testing is recommended for the western part of the water battery project impact areas to evaluate for the presence or absence of archaeological materials. Tests will be placed at twenty-foot intervals or thereabouts, depending on site conditions as well as the locations of the fence gateposts. The contractor will mark out the gate post locations and remove the asphalt as needed. The

shovel tests will be about one to one and a half feet in diameter and excavated to the depth of non-artifact bearing subsoil or to bedrock, to evaluate the nature of the soils and the presence or absence of archaeological remains and then backfilled. All soils excavated from the shovel tests will be screened through 1/4 inch mesh for the recovery of artifacts. Soils, stratigraphy and artifact inclusions will be recorded on forms. Shovel test locations will be mapped on the site plan. Photodocumentation and drawings will be done as appropriate.

Standard methods of artifact processing, labeling, identification, evaluation and documentation will be done on the recovered materials. Within one month of completion of all archaeological work specified in this scope, the consultant will provide a written report to Advance Builders, the New York City Parks Department and the Landmarks Preservation Commission detailing the topographic analysis and setting forth the results of the field testing and an assessment of the locations of archaeological resources for which data recovery, if needed, is recommended. Map(s) at a scale of 1"=20' will be provided indicating results from such investigations with locations of shovel tests and of archaeological resource recovered, if any. Any artifacts recovered from this testing will be given to the New York City Parks Department upon acceptance of the final report. *It is recommended these artifacts be transferred to the future visitor center or museum at Fort Totten.*

Should any archaeological resources or any soils with the potential to contain archaeological resources be identified, archaeological evaluation and mitigation excavations may be recommended at that time. This additional evaluation of archaeological resources would *define their significance and extent within the planned impact area.* This potential additional work is not currently planned for by the Parks Department and would require a written change order to commence. The archaeologist would develop a research design and scope of work for archaeological data recovery, analysis, and curation, based upon the findings from the archaeological field testing should it be necessary. Should results of this testing program reveal no finding of effect or impact to *significant archaeological remains,* then no further archaeological work would be recommended.

Appendix B

SHOVEL TEST STRATIGRAPHY

FORT TOTTEN SHOVEL TEST STRATIGRAPHY

Test	Level	Depth	Munsell	Color	Texture	Comments	Artifacts Discarded in Field
1	1.1	0.2	10YR 3/1	very dark gray	loam and root mat		styrofoam
	1.2	1.6	10YR 5/3	brown	fine sandy silt		
	1.3	1.8	10 YR 3/1	very dark gray	sandy silt	profusion of coal	sampled coal
	1.4	2.0	10YR 5/3	brown	stoney fine sandy silt		
2	2.1	0.2			asphalt		
	2.2	0.8			gravel, crushed rock and asphalt		
	2.3	2.2	10YR 5/4	yellowish brown	compact silty clay		
4	4.1	0.3	10YR 2/2	very dark brown	root mat		
	4.2	0.7	10YR 4/3	brown	mottled sand with lots of roots		
	4.3	2.1	10YR 5/4	yellowish brown	cobbly sand, coarser than above		
5	5.1	0.2	10YR 2/2	very dark brown	loam and root mat		
	5.2	0.6	10YR 4/2	dark grayish brown	mottled loamy silt		
	5.2	2.2	10YR 4/3	brown	fine silty sand		
6	6.1	0.4	10YR 3/1	very dark gray	loam and root mat		
	6.2	0.8	10YR 3/2	very dark grayish brown	sandy loam		
	6.3	2.1	10YR 5/4	yellowish brown	sandy silt	encountered concrete in hole at base about 1' in diameter	

Appendix C
ARTIFACT INVENTORY

FORT TOTTEN ARTIFACT INVENTORY

Page 1 of 1

Context #	Material	Identity	Form	Color	Count	Wt.(g)	Description	Date Range
1.3	Coal				13	15		
Total Number of Artifacts for Context # 1.3 (1 record) = 13								
2.3	Metal	iron			1		3/4" diameter chunk, badly corroded	
		iron			1		4 1/4" shaft with 1 1/2" diameter lump at one end & 3/4" diameter lump at other end	
		iron	nail		1		1 3/4" segment, badly corroded	
Total Number of Artifacts for Context # 2.3 (3 records) = 3								
5.2	Coal				1	<5		
	Glass		curved	green	1			
Total Number of Artifacts for Context # 5.2 (2 records) = 2								
Total Artifacts Recovered						18		