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2008
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Phase 1B Archaeological Survey

Burling Slip

New York, New York

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March 2008

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This archaeological testing report addresses the open space area at Burling Slip, located along John Street between Front and South Streets. The area of potential effect (APE) (see Figures 1 and 2) is situated on Block 74, and includes portions of Lots 20 and 1. As part of the City of New York's proposed Fulton Street Corridor Revitalization project, to be undertaken with partial funding from the Lower Manhattan Development Corporation (LMDC), a playground would be constructed within the Burling Slip APE, which now serves as a municipal parking area. Construction of this playground will include excavation to install wall supports and various utilities and will impact to a depth of up to 6 feet below ground surface.

The Burling Slip APE is located within the boundaries of the South Street Seaport Historic District, which is a New York City Landmark (NYCL) and is listed on the State and National Registers of Historic Places (S/NR).

As described in the Phase 1A study, at the time of European contact, the entire APE was under the East River. As New York City expanded during the 18th century, Burling Slip was gradually filled in and the shoreline pushed further out to the south and east. The Phase 1A study determined that the Burling Slip APE was sensitive for fill that was deposited by the City of New York in ca. 1835-36 when the slip's use was discontinued, and possibly a wharf or other landfill retaining devices on the northeast side of the APE that would have been constructed between 1789 and 1833. The only portion of the APE that was considered to lack potential for historical archaeological deposits was a narrow corridor where a large (ca. 5-foot by 4-foot) sewer line, installed in the 1890s, is buried. The Phase 1A concluded that impacts to a depth of over 3 feet below ground surface (bgs) may impact potentially significant archaeological resources. Therefore, the Phase 1A recommended archaeological testing in advance of construction in order to determine the presence or absence of archaeological resources.

LMDC subsequently retained AKRF to conduct the Phase 1B investigation recommended by the New York State Historic Preservation Office (NYSHPO) and the New York City Landmarks Preservation Commission (LPC). Prior to initiation of the survey, AKRF prepared a testing protocol and submitted it to the NYSHPO and LPC for their review and concurrence. Testing involved the excavation of several large backhoe trenches to depths of between 4 and 9 feet bgs. Though no evidence of bulkheads or piers was encountered in any of these trenches, they did contain several deposits of fill apparently associated with the filling in of this slip during the 19th century. In addition, foundation remains of a c. late 1920s warehouse and a possible early 20th century comfort station were also identified. None of the fills or foundation remains is considered to be archaeologically significant and no additional testing is recommended. The present report presents the results of subsurface testing within the above referenced APE and includes a summary of the historic filling in of this slip and construction that occurred in the area during the early 20th century.

Burling Slip Phase 1B Archaeological Survey

The goal of a Phase 1B survey is to determine the presence or absence of archaeological resources that may be impacted by proposed development and involves a level of subsurface testing and artifact collection sufficient to draw conclusions regarding the potential for significant resources to be present in a project site. The Phase 1B completes the identification process initiated during a Phase 1A survey, which identifies areas of archaeological potential through background research and a site visit, but does not involve subsurface testing. The New York Archaeological Council (NYAC) has published standards for the performance of Phase 1B surveys (NYAC 2000).

A. RESEARCH DESIGN

Based on the specific conclusions presented in the Phase 1A report and the recommendations of the NYSHPO and LPC, the primary objective of the present Phase 1B survey is to determine the presence or absence of landfill retaining structures and landfill dating to the late 18th through mid-19th centuries. The following research topics were developed in the testing protocol and are specific to the types of potential archaeological resources that could be encountered on Lots 1 and 20.

Landfilling episodes have been archaeologically documented in several other locations in Lower Manhattan, other parts of New York City, and in several other cities. In addition, archaeologists have been able to date individual landfilling episodes to specific periods of time, based both on the artifacts used in the fill and the technology used in the retaining devices. The Phase 1A concluded that the identification and analysis of landfilling devices at Burling Slip had the potential to contribute to the growing body of research on the subject. They could both confirm and clarify documentary resource information concerning the development of Burling Slip, contribute to our knowledge of the City's development, and possibly add to our knowledge of the strategies employed in land reclamation during the early 19th century.

Timber bulkhead construction took a range of forms dependent upon available materials and logistical considerations; there were not well-defined regional patterns before ca. 1840 (HPI 2005:48). For the era prior to more standardized designs, variations in timber joining methods have been identified as sources of potentially significant information (LBA, Inc 1990). "Surviving original vernacular design components below contemporary mean low water levels could include timber construction, joinery, and filling methods, or systems of cribwork bottoms support, and could be potentially eligible for the National Register under criteria C and D" (HPI 2005:50). The wood superstructure of wharves and landfill retaining devices could be constructed in a number of different ways. In many cases, wood cribbing would be constructed, then sunk, and filled with fill material. Both primary documentary sources and previous archaeological investigations have shown that the deliberate sinking of ships represented another method of retaining fill. Wharves were most often constructed by sinking multiple wooden piles, filling the spaces between them, and constructing a wood platform atop them.

Cribwork bottoms should be regarded as important because they are highly variable, poorly documented, and tend to remain well-preserved below the water. It has been found that upper components of bulkheads and landfill retaining devices have more frequently been subject to decay or subsequent replacement (Green 1917:52). However, upper components have in some cases been preserved beneath later landfilling projects; and when intact, may yield significant data.

The fill material with which retaining devices were filled may also yield significant data. Archaeologists have theorized two broad categories of fill strata: primary fill and secondary fill. Primary fill, the first-deposited, and largest of the stratum, would be the landfill placed within the cribbing interstices. Few artifacts are to be expected in this stratum, because through time, decaying, artifact-rich garbage would compress unevenly, settle at varying rates, and cause instability. Although the activity is poorly documented, various references suggest that clean landfill material was generally obtained from regrading and construction projects in other parts of Manhattan. Secondary fill is utilized to cover the rough and rocky primary landfill, providing a working surface for construction. It contains less rock than primary landfill, and is where most of the artifacts recovered by excavations are found. This corresponds to recorded historical observations of the filling of waterlots by their owners. Fill material used in timber bulkheads was probably varied and possibly included industrial, commercial and domestic refuse. Fill size and material often reflected the design of fill-retaining structures, and sample fill documentation could inform our understanding of waterfront substructure designs. In addition, this fill could provide important time-markers for the study of the project area waterfront structures, shoreline development, and urban history (HPI 2005:50).

In order for this Phase 1B survey to conclude that archaeological methods have the potential to address the above topics, the following three conditions must be met:

1. Archaeological features such as bulkheads or timber cribbing associated with the use and reclamation of Burling Slip must be present.
2. These features must be intact and must not have been significantly disturbed by subsequent activities that have taken place on the property.
3. The features must contain identifiable elements and/or diagnostic artifacts to indicate the period of time during which they were deposited, created, or used.

In the absence of results meeting these conditions, this survey will conclude that no historic resources will be affected by the proposed action.

B. SURVEY METHODS

This survey involved completion of three primary tasks: conducting supplemental research to identify documentation of construction activity within Burling Slip, subsurface testing to determine the presence or absence of archaeological resources, and the laboratory analysis of collected artifacts.

RESEARCH METHODS

During the course of fieldwork, substantial quantities of concrete and a brick foundation were encountered. As the Phase 1A concluded that there has never been any construction within Burling Slip, additional documentary and cartographic research was conducted. Research was conducted at the New York Public Library, the New York City Department of Buildings, the

Municipal Archives, the City Hall Library, the Art Commission, and the South Street Seaport Museum. In addition, a search of relevant historical documents was conducted via the Internet.

FIELD METHODS

Prior to initiation of field investigations, the archaeological team was apprised of any safety concerns to insure their protection and that all required OSHA regulations are followed. A backhoe with a hammer attachment was utilized to remove thick layers of asphalt and concrete. Diagnostic artifacts were retained on a selective basis to assist in determining the chronology of fill deposits. The backhoe was used to excavate the soil within each trench under the direction of the archaeologist in relatively small increments of one (1) foot or less until potential archaeological resources are encountered.

Subsurface testing at Burling Slip was planned to consist of the excavation of six (6) backhoe trenches under the direction of an archaeologist. Trenches were to have a length of at least 25 feet and a width of at least 5 feet. Proposed individual trench locations were depicted on a figure and submitted to the LPC and SHPO for their concurrence in a testing protocol. The proposed trench locations avoided known utilities, which include water, sewer, electric, gas, and telephone lines and were expected to provide a sample of the landfill and landfilling devices used to fill Burling Slip. It was also hoped that one or more of these trenches would expose the bulkheads depicted on either the 1797 Taylor-Roberts map or the 1833 Hooker map included in the Phase 1A study (HPI, 2006).

If features were encountered, it was expected that they would be relatively large and easily identifiable. The primary method of exposing landfill-related features would be through excavation with the backhoe. Hand clearing of features would be conducted if possible, given the depth of the feature, the amount of water in the trench, and the stability of the trench walls. If it was determined in the field that hand excavated units would contribute to the documentation of encountered features, they would be excavated in accordance with professional standards. However, the excavation of units proved unnecessary during the course of fieldwork. Exposed resources and stratigraphy were drawn, mapped, and photographed as appropriate. Artifacts associated with archaeological resources were collected and bagged in polyethylene bags with the provenience marked on the outside of the bag in waterproof ink.

LABORATORY METHODS

Artifacts collected in the field were transported to the AKRF laboratory where they were logged in and the artifacts washed in a solution of warm water and mild detergent. Fragile artifacts (e.g. some bone, soft shell, mortar, plaster) were dry brushed. Artifacts were dried on metal drying racks. They were subsequently repackaged in clean, 4 ml acid-free, polyethylene bags that were marked with the site name, date of recovery, and provenience in indelible ink. The bags were vented to provide ventilation and to prevent mold.

To the extent possible, recovered artifacts were identified as to material, temporal or cultural/chronological association, function, and style following the standard archaeological references. The artifact analysis included the identification of the Terminus Post Quem (TPQ) of artifacts for each context and the generation of mean beginning and end dates for each artifact when known. This information was used to ascertain the contemporaneity of contexts and to establish which assemblages represented primary or secondary deposits.

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A modified form of Stanley South's (1977) approach to organizing historical archaeological data was used for this project. All artifacts were categorized by group: Activities, Architectural, Clothing, Furniture, Kitchen, Personal, Tobacco and Unidentified. Artifacts were also identified by Class, (e.g. Nails, Window Glass, Unidentified, Decorative Furnishings, Container, Dishes, Ethnofaunal, Ethnobotanical, etc.). Artifacts were also categorized by material (e.g. glass, slate, Fe, Cu alloy, bone, etc.), although the term, "Ware Type" (e.g. plain whiteware, grey salt-glazed stoneware) was used with regard to ceramics. The artifacts were further identified, when possible, by Function (e.g. floor tile, chamberpot, wine/liquor bottle, wire nail, mirror, etc.) and Part (e.g. base, rim, finish, etc.). Beyond these basic groupings, artifacts were also described appropriately (e.g. decorative motifs, color, and manufacturer) under "Comments." The complete artifact catalogue is located in Appendix A.

A. CURRENT CONDITIONS

The Burling Slip APE is located within an open space known as Burling Slip (also known as John Street), bounded by South Street to the south and Front Street to the north. The APE's dimensions are approximately 240 feet from Front Street to South Street and 80 feet from the eastern side of the Slip to John Street (Figure 1). It is located within City Block 74 and includes portions of Lots 20 and 1. The site is currently paved in asphalt and used as a parking lot for municipal vehicles. A concrete median oriented north-south runs along the western edge of the project site. John Street, located immediately west of Burling Slip, and historically part of Burling Slip, is currently a mapped street open to vehicular traffic. For the purposes of the archaeological field survey, a chain-link construction fence was erected along the perimeter of the APE (Figure 2).

B. TOPOGRAPHY, SOILS, AND GEOLOGY

The island of Manhattan is found within a geographic bedrock region known as the Manhattan Prong of the New England (Upland) Physiographic Province. This region is composed of heavily metamorphic and sedimentary rock (including quartzite, dolomitic marble, marble, schist, and gneiss) that dates to the Cambrian and Ordovician ages. These hard rocks, which are oriented northeast-southwest, are interspersed with softer Inwood marble (New York State Office for Technology [NYSOFT], 2004). The bedrock slopes downward from north to south, and has been found to be approximately 100 feet below the earth's surface at the southern end of Manhattan.

There are a number of deposits which overlay the bedrock region, but nearly all of Manhattan is covered by anywhere from 3 to 164 feet of glacial till. There are also some lacustrine sediments covering a 1.5-square mile area between the Manhattan and Williamsburg Bridges (NYSOFT 2004). These deposits were left behind by massive glaciers up to 1,000 feet thick that retreated from the area towards the end of the Pleistocene. There were four major glaciations that affected Manhattan until roughly 12,000 years ago when the Wisconsin period—the last glacial period—came to an end. The glacial movements also brought about the creation of hundreds of sand hills, or kames, some of which were nearly one hundred feet tall. These hills were contrasted by many small streams, rivers, and lakes that were fed by the glacial runoff. As temperatures increased and glacial runoff ceased, smaller water courses evolved into swamps and marshlands. Almost the entire area north of the Burling Slip APE was marshland.

Manhattan had a much narrower and more irregular shape in the days before systematic landfilling created the regimented shoreline of piers and promenades that we see today. The southern tip of Manhattan, known as *Kapsee*, was a rocky point jutting out into the harbor forming a small cove that was possibly used as a canoe landing by Native Americans. In the vicinity of Burling Slip, the original shoreline was situated near modern Pearl Street.

C. UTILITIES

The installation of various utility lines has generated disturbance within Burling Slip. A combined sanitary and stormwater sewer line measuring 4 feet 6 inches in diameter runs through the western side of the project site at a depth of 8 to 9 feet bgs surface. Several stormwater catch basins are located in the southeastern portion of the project site and are presumably located at depths similar to the sewer. Multiple 12-inch diameter water lines are located within the Burling Slip streetbed. Water lines are usually installed at a depth of approximately 5 feet bgs. Gas and electricity lines run parallel to the slip in the northern and southern ends of the project site and through the concrete medians to supply power to the streetlights located in the area. There are also various communication lines crossing the slip. Figure 2 provides a depiction of known utilities provided to AKRF by the City of New York Department of Parks and Recreation. Additional utilities were discovered during the course of fieldwork and are indicated on Figure 10.

The following summary of the history of the Burling Slip APE was extracted from the Phase 1A survey (HPI 2006). The Phase 1A should be referenced for more detail and additional historic maps of the area.

At the time of European contact, the East River shoreline was about one and a half blocks west of Front Street, and thus the entire Burling Slip APE was under water. As New York City expanded during the late 17th, 18th, and 19th centuries, the City of New York and private owners gradually improved the East River shoreline with wharves, docks, and slips. The shoreline was built increasingly further out into the East River responding to pressures for new commercial real estate, and in order to address the poor conditions of existing waterfront infrastructure. Methods of constructing landfill varied according to period and location, but typically consisted of timber crib-work containing stone and other fill materials such as sand, soil, gravel, and rubbish. Bulkhead faces had a variety of treatments ranging from granite ashlar to wood retaining elements.

The East River shoreline in lower Manhattan was characterized by an almost continuous network of slips, which allowed ships to dock between protective wharves. Burling Slip, located at the terminus of John Street, was known for periods as Lyons Slip, Rodman's Slip, and Van Clyffe Slip. The northernmost portion of Burling Slip (north of the APE) was created prior to 1692, when two wharves were constructed on either side of the 24-foot wide docking place on the property of Mrs. Van Clyffe. The Slip was maintained by the City, and by 1730, landfilling had occurred there to allow for the construction of Water Street (north of the APE) along the inner edge of the Slip.

The Montgomery Charter resulted in the granting of water lots to private individuals during the 18th century in order to improve and expand Manhattan's waterfront. In 1736, the City granted James Alexander and Archibald Kennedy a water lot on the west side of Burling Slip; and in 1737, granted Henry Van Borsom a water lot on the east side of the Slip, part of which was subsequently passed to John Riker. Another water lot along the east side of Burling Slip was granted to David Provoost in 1749; Provoost was responsible for building a wharf along the eastern edge of Burling Slip terminating roughly half way between Water and Front Streets. In 1749, a wharf had also been built along the west side of Burling Slip as far south as Front Street (immediately north of the APE). Common Council minutes suggest that between 1773 and 1777, Jacob Brewerton, who then owned the water lot immediately east of Burling Slip, constructed a "wharf or street" extending between present-day Front and South Streets (immediately east of the APE). In 1786, a petition was filed to extend the wharf along the west side of Burling Slip to the same point; minutes from the years that followed suggested that construction along the west side moved sluggishly.

The water rights to the Slip itself were retained by the City. In 1761, John Sackett was retained to fill Burling Slip as far south as Water Street. Several petitions recorded in the Common Council Minutes from 1788 to the mid-19th century request that Burling Slip be filled so that Front Street could be continued across it. Historic maps of the late 18th and early 19th centuries

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contribute conflicting evidence of the state of construction of slips and the flanking wharves, however, all show Burling Slip still open for the passage of vessels as far north as Water Street as late as 1832.

In 1801 the City had passed an act that encouraged proprietors of lots adjoining streets or wharves along the river to fill intermediate spaces, such as portions of slips, in return for ownership of the filled area. Owners of land adjacent to Burling Slip between present-day Front and South Streets in the early 19th century included George Codwise, George Bowne, Peter Schermerhorn, Peter Van Zandt, and others.

According to the Phase 1A, 'In early 1835 the Common Council moved to have the slip filled. At that time a State Commissioner presented a 'draft of an ordinance for building a bulkhead across Burling Slip, continuing the drain to South Street, and filling up the said Slip' (MCC 1835 8:112-113). The bulkhead was constructed on the south side of South Street to allow for its creation. The work to accomplish this was not permitted to begin until March 1 of that year (Ibid.)' (HPI 2006: 9). Historic maps (Hooker 1833; and Colton 1836) show that Burling Slip was entirely filled as far south as South Street between 1833 and 1836. The Phase 1A speculates that if the slip was not entirely filled by 1835, as delinquent assessments for the work suggest, debris from the Great Fire of 1835 (which took place in early December of that year and destroyed hundreds of buildings in lower Manhattan) may have been used in filling the slip.

Following the City's filling of Burling Slip to South Street (including the entirety of the APE), the Phase 1A observes that based on historic map research, the APE remained vacant through the entirety of the 20th century, serving as vehicular access to South Street. The 19th century width of the slip from water lot line to water lot line was 142.1 feet at South Street and 139.1 feet at Front Street. Today, the Slip is the same approximate width from building line to building line.

A. ADDITIONAL RESEARCH

METHODS OF FILLING SLIPS

Numerous archaeological studies, both documentary analyses and field surveys, have been undertaken in waterfront locations in lower Manhattan and Brooklyn, and provide a wealth of comparative information on historical land-making processes and materials. However, previous studies in these areas have tended to focus on pier and wharf construction, with a secondary emphasis on landfill stratigraphy and artifact content, rather than the process and methods of filling in slips (see for example, Pickman and Rothschild 1981; Geismar 1983; LBA 1990; and Kardas and Larabee 1991). This may be because a larger number of archaeological investigations have occurred in former wharf locations, which are now typically the locations of buildings, while fewer studies have occurred in former slips, which are now typically open spaces or streets. Even in archaeological surveys that do include locations of former slips, however, attention tends to be focused on the characteristics of adjacent bulkheads or the construction methods of adjacent piers rather than features relating to slips themselves. Thus, little previous inquiry has been made into slip filling methodology. The question of how slips were filled and of how the process differed from that of constructing piers or other forms of made land has never been formally addressed; nor is it well understood if methods of filling slips were standard and consistent chronologically and geographically.

As referenced in the Phase 1A study for this project, the minutes of the Common Council in early 1835 note that a State Commissioner presented "a draft of an ordinance for building a bulkhead across Burling Slip, continuing the drain to South Street, and filling up the said Slip" (MCC 1835 8:112-113). No further information is given regarding methods or materials for constructing the bulkhead or for filling the inundated area between the head and mouth of the slip. The word drain was often used interchangeably with 'sewer' in the 19th century (as defined, for example, in the 1828 edition of Webster's Dictionary) and likely refers to continuing a sewer or storm water pipe which would empty into the slip.

Common Council Minutes contain numerous references to the filling and repair of slips, varying little from the late 18th century through the first decades of the 19th century. While these accounts lack detail, it is clear that most slips in lower Manhattan were filled using roughly the same basic methods during this period. A reference is made in the Common Council Minutes from February 1784 to March 1785: "It being represented to the Board that a Breast Work across this Slip at Deys Street is necessary & as those at the Old and Beekmans Slips are directed to be done at the Corporation Expence, it was agreed that the Board will also provide for defraying the Expence of that at Dey's Slip." The same volume also reports: "A Petition of several of the Inhabitants at Pecks Slip praying that a Bulkhead may be made accross the said Slip in a manner similar to those at Beekmans & the old Slip ... and that they be authorized to direct such Alteration & Improvements to the said Slip as to them shall appear proper and necessary."

Further references in the volume include mention of accounts payable to various individuals for “clearing & filling Beekmans Slip;” “laying a wharf across Beekmans Slip;” and “making a Bulkhead across Deys Slip.”

The Common Council Minutes of 1804 note that:

owing to a nuisance at the head of Vezey Slip the Corporation have thought proper to have it filled up... Upon conversing with several persons that live in the neighborhood of that Slip, they are of opinion that the most speedy and effectual way of removing this nuisance would be for the Corporation to make a bulkhead across the Slip at the lower end of Ellis's dock to the Corporation dock which is about fifty feet. The water is shallow and it could be done at a small expence. The Slip then could be readily filled up and the nuisance removed in 2 or 3 weeks... Resolved that the Street Commissioner be directed to cause a Bulkhead to be made across Vezey Slip from the lower end of Ellis's dock, and that he contract with suitable persons to fill up the Slip with good and wholesome earth... (MCC 1804 15: 560).

These excerpts reveal that the first step in slip-filling was the construction of a ‘bulkhead,’ ‘breastwork,’ or ‘wharf,’ across the mouth of slip. The material and design of the bulkhead is not specified in these accounts, however, it appears that a relatively simple shallow-water job could be accomplished in the space of a few weeks. The accounts further testify to the fact that while “docking out” or “wharfing out” (extending wharves further out into the river) was generally the financial responsibility of the private water lot owner, sometimes in concert with the City, filling slips was the privilege of the City, was paid for either fully or partly by the City, and supervised by the Street Commissioner.

These arrangements, codified in the Act of 1813 and earlier acts, resulted in numerous legal cases, which also contain references to slip filling, and provide a small amount of additional information regarding methods of construction. An 1835 case (Ross vs. The Mayor, &c.), focusing on a slip of the Hudson River waterfront in Manhattan, is one of many containing similar references: “a bulkhead was ordered to be built in and across the slip or basin at the foot of Spring street, on the westerly line of West street, and that the space between the present bulkhead and the one to be built be filled in, under the direction of the Street Commissioner.” The method is echoed for Pike Slip, Market Slip, and Rutgers’ Slip (Hoffman 1862: 250).

The Corporation took action in 1833 when:

the Committee on Wharves, &c., reported in favor of filling up Peck Slip, and building a new bulkhead across it, on the south line of South street. They stated that the bulkhead which formed the head of the slip at Front street had been erected when the water was much deeper, and that the wash and other causes had gradually diminished it, so that it fell bare at low tide (Hoffman 1862: 251).

The fact that the tides had “diminished” the bulkhead seems to suggest that the bulkhead was constructed of filled timberwork rather than stone. However, no further detail on the construction method is given. The Committee directed that in filling an additional section of the slip, “the sewer in Peck Slip be extended, by a wooden truck, to the outside of the new bulkhead to be built, and that all the intermediate space between the present bulkhead and the southerly side of South Street be filled up and properly regulated” (ibid.).

Like New York, Boston contains vast amounts of “made land” constructed from the 17th century through the present. Throughout the 17th and 18th century, land-making in Boston followed the same basic pattern as New York of “wharfing out,” whereby wharves were extended into the water creating slips for the docking of vessels. Later, these slips were filled in, and the wharves were extended still further into the water (Seasholes 2003: 3). While documentary and archaeological field studies have yielded much information on methods of wharf construction, the details of slip filling in Boston do not appear to be well understood. A ca. 1837 plan does exist, however, for a seawall (or bulkhead) to be constructed between Central and Long Wharves in order to fill the intervening slip. The plan shows what appears to be a stone seawall running from wharf to wharf. Interestingly, the seawall takes the form of an inverted ‘V,’ rather than a straight line. Sewers are shown running along the inner edge of the former wharves that straddled the slip, letting out at the junction of the seawall and the wharf extensions, and draining into the slip (Seasholes 2003: 56). The apparent use of stone in this Boston example, however, does not likely have implications for the use of stone in New York, since stone was more commonly used in most Boston seawall applications by the early 19th century, while in New York, wood retaining structures were still standard (Seasholes 2003: 56).

Therefore, while information on slip-filling methods is lacking from the historic and archaeological record, limited documentary sources outline several basic patterns that seem to have characterized the process in late 18th through early 19th century New York. In all documented cases, slips were filled by building a bulkhead across the mouth of a slip, from wharf to wharf. The materials and construction techniques used in building the bulkhead are unclear, but it is likely that in New York, a system of filled timber cribbing was used. No sources have been found indicating that any additional fill retaining structures were used within the slip, between the wharves and the bulkheads at head and mouth. Sewers, which apparently drained into slips, were frequently extended within or at the edge of slips to the new waterline at the time that the slip was being filled. Lastly, construction of bulkheads across slip mouths was under the supervision of the Street Commissioner and was often financed in whole or in part by the City of New York.

COMFORT STATION AND 20TH CENTURY STRUCTURES IN APE

Until the mid 1890s, public baths and comfort stations were completely lacking in New York City. Long dominated by Tammany Hall corruption, the city’s provision of amenities lagged far behind that of other cities. However, popular outcry for improved sanitation and public facilities finally achieved results during the reform administrations of the turn of the century. Mayor William L. Strong (1895-7) established a commission to investigate the question of public baths and comfort stations, and sent commissioners to Paris and London to observe the systems in place in those cities (New York Tribune February 15, 1902). During Strong’s administration, construction began in 1895 on the first public bath in the city, located on Rivington Street. The first public comfort station followed in 1897, located on Mail Street (City Hall Park). Plans were begun for several additional baths and comfort stations and legislation was put in place authorizing funding for the projects.

These plans came to a standstill during the Tammany-supported administration of Mayor Robert Anderson Van Wyck (1898-1902), the first mayor to preside over the consolidated five boroughs of New York City. Strong’s reform initiatives were decisively brought to fruition, however,

during the mayoralty of Seth Low¹ (1902-3). Low swiftly attained Board of Estimate and Apportionment approval for the appropriation of funding for the construction and maintenance of baths and lavatories, and created a commission to study the public bath and comfort station infrastructure in Boston, Philadelphia, Baltimore, and Buffalo (*New York Tribune*, February 21, 1902). In 1902, the Borough of Manhattan's Committee on Public Baths and Comfort Stations partnered with the Association for the Improving the Condition of the Poor to plan a series of public comfort stations. Designs for these structures were commissioned from the respected New York City architectural firm Renwick, Aspinwall, and Owen (*Report of the President of the Borough of Manhattan for the Year 1902: 27*), designers of many high-style residences, churches, and public buildings in the metropolitan area. The architectural firm designed all of the comfort stations built or planned during Low's mayoralty; and the firm does not appear to have designed any comfort stations outside of Low's administration.

The New York City Art Commission, which approves designs for public spaces in the five boroughs, reviewed the plans for comfort stations. Art Commission archives document the City's May 3, 1903 submittal of plans for identical comfort stations to be located at Burling Slip and on Vesey Street. The designs show a rectangular-plan building clad in white glazed brick with a hipped roof and cupolas. The Art Commission approved the design for the West Street location, but disapproved it for the Burling Slip location for unstated reasons on May 12, 1903.

In response, the City submitted new plans for a comfort station in Burling Slip on June 10, 1903 (see Figures 3, 4, and 5). These plans, which were approved three days later, show a rectangular-plan structure measuring 69'2" by 20'8" with an arched roof and classical ornamentation. The application describes the structure: "Exterior of granite and iron. Floors to be either of white marble or white vitrified tile upon concrete foundation. Walls to be lined with white enameled glazed brick." Plans included in the submission show the foundation walls averaging 1'8" thick (Figure 5). The structure is divided into men's and women's toilets respectively; each with a separate entrance. The men's section occupies the majority of the interior, with thirteen toilet stalls, twenty-three urinals, and ten sinks. The women's section contained three toilet stalls and three sinks. The building also accommodates a large "coke heater," two closets, and an attendant's room. A location plan shows the building oriented north-south, with its east foundation wall located roughly 30' from the curb of Burling Slip, and its south foundation wall located roughly 25' from the north curb of South Street (Figure 3).

The *New York Times* carried brief notices of each public comfort station for which plans were filed with the Buildings Department. A total of ten planned comfort stations are reported in the *New York Times* during Low's administration, at the following locations:

- Greeley Square at Broadway, Sixth Avenue, and 33rd Street (*NYT* June 21, 1903)
- West Street between Fulton and Vesey Streets (*NYT* June 21, 1903)
- Chatham Square, near Center Street (*NYT* July 12, 1903)
- Burling Slip, near South Street (*NYT* July 12, 1903)
- Park Avenue at 125th Street (*NYT* July 26, 1903)

¹ Interestingly, Low was owner or co-owner of the A.A. Low & Bothers building at 176-171 John Street, immediately adjacent to the project site, on the east side of Burling Slip. Low's father, Abiel Abbott Low, constructed the building in 1849-50, establishing a very successful business there dealing China trade goods. The building remained in the family into the early 20th century (Fletcher 1999:13).

- Long Acre Square (Times Square) at 42th Street (*NYT* August 23, 1903)
- Hanover Square at Pearl Street (*NYT* August 23, 1903)
- Sheriff Street between Delancey and the Williamsburg Bridge approach (*NYT* October 23, 1903)
- Greeley Square at Broadway, Sixth Avenue, and 32nd Street (*NYT* October 29, 1903)
- Grand Street and East Broadway (*NYT* November 20, 1903).

According to the *New York Times*' July 12, 1903 notice, the city filed plans for two single-story public brick comfort stations, one to be constructed at Chatham Square (now Kim Lau Square) and the other in "Burling Slip, near South Street." The Burling Slip comfort station was to measure 21.8 feet by 70.2 feet, and would be designed by Renwick, Aspinwall, and Owen at the cost of \$50,000.

The quarterly reports of the Manhattan Borough President's Office during the first decade of the 20th century, on file at the City Hall Library, include status reports from the Superintendent of Public Baths and Comfort Stations. Reports from 1904 indicate that a total of eight comfort stations were standing or in the process of construction in Manhattan at that time, including the one on Mail Street (City Hall Park) constructed during Mayor Strong's administration. The first quarterly report of that year states: "There are eight comfort stations in various conditions, the ones at One Hundred and Twenty-fifth street and Sheriff street being farthest advanced. Others are only excavated and walls partly up." The third quarterly report updates the information: "The new comfort station at One Hundred and Twenty-fifth street and Park avenue is practically completed; Delancey street and Sheriff, three-quarters completed, and all should soon be open for use. Those at Greeley Square, Chatham Square, Long Acre Square, and Hanover Square are progressing slowly, being underground and difficult of construction." While the progress is recorded on six of the comfort stations, no reports are made regarding the additional two of the eight total structures mentioned in the annual report (or the additional four of the ten total structures mentioned in the *New York Times*).

The final quarterly report of the year notes:

"A comprehensive system of Public Comfort Stations will be open to the public within a short time. They are located as follows:

City Hall, open

One Hundred and Twenty-Fifth Street and Park Avenue, open.

Sheriff and Delancey Streets open.

Chatham Square, not open.

Battery Park, not open.

Greeley Square, not open.

Hanover Square, not open.

Long Acre Square, not open" (*Annual & Quarterly Reports* 1904: 81).

These eight stations do not correspond exactly to those listed in the *New York Times*. The quarterly report's mention of a comfort station in Battery Park is not replicated in the newspaper; while the quarterly report makes no mention of four of the comfort stations noted in the *Times*:

Burling Slip; Greeley Square (above-ground station); West Street between Fulton and Vesey Streets; and Grand Street at East Broadway.

No documentary evidence has been found to suggest that the comfort station planned for Burling Slip was ever constructed. A Sanborn map dated 1905 does not depict any structures in Burling Slip, nor do Bromley atlases dated 1909 and 1911. Historic photographs on file at the New York Public Library and the Municipal Archives dating as early as 1914 show Burling Slip between South and Front Streets clearly devoid of structures. Instead, the Slip is shown as an open space accommodating vehicular parking along the center (see Figure 6).

Historic photographs dating to 1928 and 1930 show a large rectangular-plan structure occupying much of the center of Burling Slip between Front and South Streets (see Figures 7 and 8). While the structure cannot be seen with clarity in the photographs, the building appears to be clad with corrugated metal and to have a concrete foundation; it has a peaked roof with several small vent pipes. Three large tanks of unknown function and a large doorway are discernable on the north (gable-end) façade. Multiple small rectangular-plan structures that appear to be temporary are aligned perpendicular to the larger structure at the south end of Burling Slip, close to South Street. These unidentified structures, which appear utilitarian and/or light industrial appear to have had a short life span. Photographs dating to 1924 and 1931 (Figures 6 and 9) clearly show that no buildings occupy the site, which appears once again to serve the exclusive functions of thoroughfare and parking lot.

B. RESULTS OF FIELDWORK

In advance of initiating fieldwork at Burling Slip, a testing protocol was prepared and submitted to the LPC and the SHPO for their concurrence (both agencies concurred with the protocol). The testing protocol included a figure indicating the location of proposed backhoe trenches. Trench locations were intended to both maximize the likelihood of encountering land filling features and sampling the entirety of the fenced-in portion of the APE, since the presence of utilities precluded testing in much of the remaining portion of the APE.

AKRF archaeologists conducted fieldwork at Burling Slip during the month of December 2007. Initial logistical tasks consisted of enclosing the approximately 50 foot by 200 foot portion of the APE where backhoe trenching was to occur within a chain link fence, marking out all known utilities, marking out trench locations, and discussing basic safety and working procedures with the machine operator and crew. During the course of fieldwork, the actual location of individual trenches was changed to accommodate the discovery of utilities and other field information. Figure 10 presents the location of each of the six trenches excavated, as well as the location of utilities discovered within some of the trenches.

Fieldwork consisted of the excavation of six backhoe trenches, numbered 1 through 6 (see Figures 10 and 16). Trench 3 was longest, measuring 48 feet from north to south, and Trench 2 was shortest, measuring only 10 feet (this trench was abandoned due to the presence of shallow utility lines, most likely electrical, that were not shown on the utility maps nor marked out by the utility companies before initiation of fieldwork). Trenches 1, 3, 4, 5, and 6 were each excavated to at least 5 feet bgs. Trenches 3, 4, and 6 were each excavated in places to over 8 feet below pavement. Figures 16 through 24 provide photographs of these trenches.

All excavation was monitored by a project archaeologist who would periodically enter the excavated trench to hand clear possible resources, collect artifacts, or document the progress of work. A total of 737 artifacts were recovered during fieldwork, though a great deal of additional

artifacts were observed but not collected. The collected artifacts are a representative sample of the observed artifact classes. Large artifacts such as bricks and wood were either sampled to a lesser extent or not sampled at all. A summary of each trench is provided below followed by a description of the collected artifacts in the following section. Each trench's dimensions and location is summarized in Table 1.

Table 1
Summary of Trenches

Trench	Distance (feet) from N side of South Street	Length (feet)	Width (feet)	Closing Depth (Approx.)	Notes
Trench 1	30	25	3'9"	9'	Utility line at 3 feet oriented east west along the center of the trench
Trench 2	70	10.5	7	3.25	Discontinued at a depth of just over 3 feet after encountering electrical lines oriented north south along the center of this trench.
Trench 3	80	48	5-14	9.5	The northwest corner of a brick foundation was encountered. Several hundred domestic artifacts recovered in adjacent fills.
Trench 4	200	32	6-9	8	Fills to over 8 feet bgs. A timber below concrete
Trench 5	100	25	6.5	5	Large iron pipe at a depth of 3 feet., timber at 4 feet
Trench 6	150	25	6'	8.5	Fills to 8.5

Between 4 and 8 inches of asphalt were encountered in each backhoe trench. In all but one of the trenches, between 6 and over 30 inches of concrete were encountered beneath the asphalt. In some trenches the concrete appears to have been deposited in more than one episode. A hammer attachment to the backhoe was necessary to penetrate this substantial concrete layer. Below the concrete, multiple layers of generally horizontally deposited sandy fill were encountered. Fills were relatively clean, with only occasional bricks or wood or other debris and generally only small quantities of artifacts were observed. The fills were variable from one trench to the next with some trenches containing more individual soil deposits than others. The fill deposits also varied vertically alternating between lighter sands and thinner darker deposits containing more organic material. Profile drawings and photographs of the backhoe trenches are provided in the figures section.

TRENCH 1

Trench 1 was located closest to South Street, at the southern edge of the fenced-in area (see Figures 10 and 16). Beneath a one-foot-thick layer of asphalt and 2 feet of sandy fill, an east-west oriented utility line was encountered along the center of this trench at a depth of approximately 3 feet below pavement. This utility was not depicted on the utility maps provided to AKRF at the initiation of fieldwork and was not marked out by the utility companies in

advance of construction. This utility makes a 90 degree turn to the north at the west end of the trench and it may be a water or steam line. The utility line was supported by a series of wooden posts (Figure 17, Photo 3) and was buried within a sandy deposit. A small number of artifacts were collected from this sandy fill. Excavation in this trench was stopped at a depth of just over 3 feet due to the presence of the utility line. Trench 1 was the only trench that did not contain a substantial layer of concrete below the asphalt. It is possible that concrete may have been removed from the area during installation of this utility line.

TRENCH 2

This trench was excavated approximately 20 feet north of Trench 1, on the east side of Burling Slip (see Figures 10 and 16; and Figure 17, Photo 4). At a depth of approximately 3 feet below asphalt, the backhoe encountered another utility and the floor of the trench was hand cleared. A series of at least four north-south oriented PVC/fiber glass pipes were encountered at a depth of 3 feet 6 inches below asphalt. The pipes were intermittently enclosed within concrete tiles, apparently placed to protect the lines. The lines were located within clean sandy fill that contained brick fragments, gravel, wood, and small quantities of ceramic. In addition, the fill had a creosote odor. As with Trench 1, these utilities were not indicated on the City's utility maps nor were they marked out by the utility companies before initiation of fieldwork. This trench was discontinued due to the presence of the utility line.

TRENCH 3

Trench 3 was excavated to the north of both Trench 1 and 2 in the southern half of the fenced-in area (see Figures 10 and 16; and Figures 18 through 22). Soon after initiation of the excavation of this trench, a portion of a substantial brick feature was encountered immediately below the asphalt and concrete layers. Although initially thought to be a utility vault, since research conducted for the Phase 1A report failed to identify any structures on this lot, subsequent expansion of the trench to the south revealed that the feature was the northwest corner of a brick foundation wall. The northern face of this foundation was exposed at approximately the midpoint of Trench 3. Expansion of the trench to the south revealed the inner northwest corner of the foundation. The western face of the foundation was obscured by the presence of concrete, which made excavation very difficult. However, the western, outer, face of the foundation was oriented along the west side of the trench. An approximately 25-foot expanse of the eastern, inner, face of the western wall was exposed during excavation. The trench could not be expanded to the east due to the proximity of a water line, therefore, only a 6 foot expanse of the northern foundation wall was exposed.

The north wall of the brick foundation has a width of about 38 inches and the west wall has a width of about 16 inches. The top of the wall is located 9 inches below the asphalt layer and immediately below 4-5 inches of concrete. The wall extends to a depth of between 2 feet 8 inches and 3 feet 2 inches, where it has been constructed on top of a slightly wider and somewhat irregular concrete foundation. The concrete foundation for the brick wall extends to a depth of at least 4 feet bgs. The bricks are mortared with a hard cementitious mortar.

The top of the brick foundation is covered with concrete. This concrete is not part of the wall but appears to have been deposited at the same time as the cement across much of the rest of the site was deposited. Removal of the concrete from the top of the wall by the backhoe resulted in damage to the wall. In addition, installation of a 2 inch thick east-west oriented iron pipe about 5 feet south of the northern face of the wall resulted in the removal of a section of the wall to a

depth of about 20 inches below pavement. The pipe appears to be an electrical line and may be providing power to the street light located about 10 feet to the west of Trench 3 on the raised concrete median. Aside from where the wall has been recently disturbed, the top of the wall shows no sign of the demolition of the above ground portion of a structure and is completely level. The absence of any signs of building demolition may suggest that the building that the foundation was constructed to support, presumably the comfort station discussed in the previous section, may never have been built. This possibility is further supported by the absence of any type of floor within the interior of the foundation. Within the southern end of Trench 3, the backhoe excavated to a depth of over 6 feet and did not encounter any trace of a floor or the high quantities of brick, wood, rubble, and glass expected at the site of a demolished building.

Figures 11, 12, and 13, and corresponding Photographs 8, 9, and 10 (Figures 19 and 20), depict the relationship between the foundation walls and the adjacent soils: Figure 11 shows the soils on both the north and south sides of the northern foundation wall at the point where it meets the eastern wall of Trench 3; Figure 12 presents the soils on the west (outer) side of the foundation at the northwest corner of the foundation; and Figure 13 depicts the soils within the foundation on the eastern side of the western wall at the southern end of Trench 3. Given the complexity of the fills that comprised Burling Slip at the time this foundation was constructed, and the disturbance created by the excavation and redeposition of fills before and after its construction, it is difficult to ascertain which soil deposit represents the ground surface before hand. Considering Figures 11 and 12, it appears that excavation associated with construction of the wall may have intersected the previously existing deposits at a depth of about 1 foot 2 inches below asphalt. There appears to be a builder's trench visible on the outer wall profile on the eastern wall of Trench 3, adjacent to the northern face of the wall (Figure 11) and on the outer (west) face of the western wall (Figure 12). Based on Figure 13, it appears that the interior of the foundation had been excavated to a depth of about 2 feet 9 inches when a trench was excavated at that depth to pour the concrete base of the foundation wall. If this is an accurate interpretation, then the upper 2 feet 9 inches of soil within the foundation's interior would have been redeposited some time after completion of the wall. Interestingly, there also appears to be a builder's trench on the inside of the foundation on the south side of the northern foundation wall (Figure 11). If this is the case, then this portion of the foundation may have been constructed differently from the western wall further to the south.

A great deal of artifacts were observed and sampled during hand clearing of soils from both the inside and outside of the foundation wall. The overwhelming majority of these artifacts were ceramics and many of the ceramics and other artifacts showed signs of having been burned. These ceramics and other artifacts such as shell, bone, and shoe leather were collected both from within the possible builder's trenches and from the soils outside of the builder's trench and from deeper soils. A particularly high concentration of burned ceramics was observed at a depth of about 4 feet below pavement within the foundation, though clearly beneath the depth of the wall (Photo 11 on Figure 21). It is improbable that these artifacts were associated in any way with the foundation but were instead present within the fill at the time the wall was constructed.

Excavation in the northern half of Trench 3 proceeded to a depth of approximately 9.5 feet bgs. Multiple layers of sandy, relatively clean fill were observed. The soils were loose leading to the gradual collapse of the trench walls. A large timber oriented from west to east was observed in the northern half of the trench. This timber appears to be associated with the substantial layer of concrete and may have served as a form or brace. No additional timbers were observed in association with this one.

TRENCH 4

Located furthest to the north of all of the trenches, Trench 4 was oriented north south and was excavated along the western edge of the fenced-in area, as close as possible to Front Street (see Figures 10 and 16). It was felt that the positioning of this trench made it likely that it would encounter remains of the bulkhead depicted on the 1833 Hooker map (HPI, 2006), which may have run east-west through this general location. Once again, however, no remains of bulkheads or piers were encountered within this trench. Beneath a 6 inch layer of asphalt and from 1 to over 2 feet of concrete, several layers of urban fills were encountered until substantial quantities of water began to accumulate in the trench at a depth of 8 feet below the asphalt. A 2 foot section of Trench 4's east wall profile is included as Figure 14.

A single substantial wooden timber was observed in this trench approximately 4.5 feet north of the trench's southern end (Figure 23, Photo 15). This timber was oriented from west to east, perpendicular to the trench, at a depth of approximately 3 feet. This timber was located within the bottom of the concrete layer. No additional timbers were observed below or adjacent to this one. The timber seems to have been part of the process of laying the very substantial deposit of concrete encountered immediately above the timber, perhaps as a mold or form. Only a small number of artifacts were observed and sampled from this trench.

TRENCH 5

North-south-oriented Trench 5 was excavated along the east side of Burling Slip, several feet north of Trench 2 ((see Figures 10 and 16; and Figure 23, Photo 16). Excavation encountered a 4 inch layer of asphalt and a 1 foot layer of concrete, followed by several layers of sandy fill containing a range of artifacts and partial and whole bricks. At a depth of 2.5 feet below pavement, an approximately 9-inch-diameter pipe was encountered, which appeared to be a water pipe. The pipe was oriented north-south and was located at the mid point of the trench. Though there was very limited room to expand the trench due to the presence of other mapped utilities, excavation was able to proceed to a depth of 5 feet along the east side of the pipe. At a depth of approximately 4.5 feet below pavement, a large timber was partially exposed. Due to the presence of water and slumping trench walls, it was impossible to clearly expose this piece of wood. A relatively large concentration of miscellaneous historic artifacts was recovered from the fill at a depth of between 3.5 and 4 feet bgs.

TRENCH 6

Trench 6 was oriented north-south and was located toward the northern edge of the fenced-in area (see Figures 10 and 16; and Figure 24). The northern edge of Trench 6 was only a few feet south and to the east of the southern edge of Trench 4. The location of this trench provided another opportunity to encounter the bulkhead indicated on the 1833 Hooker map. Once again, no evidence of bulkheads or cribbing was observed in this trench. The trench was excavated to a depth of 8.5 feet below pavement and revealed several layers of sandy fill. This trench appeared to contain more layers of fill than Trench 4. Several pieces of ceramic and a large mammal mandible (cow) were recovered from a depth of about 4 feet bgs. Figure 15 provides a profile drawing of a portion of this trench's west wall.

C. RESULTS OF LABORATORY ANALYSIS

A total of 737 artifacts from the Burling Slip site were collected, processed, catalogued and analyzed. These artifacts are a representative sample of the kinds of artifacts present in the six backhoe trenches. The majority of these artifacts were spot finds collected during monitoring of the backhoe or during the hand clearing of trench walls or features. These artifacts were bagged with a general provenience, usually the approximate depth of the artifact. The remaining artifacts were collected from the back piles and were only bagged according to the trench from which they came if known. The complete artifact catalogue is located in Appendix A.

This section has been organized by trench and by level or depth within each trench. Trench 3 has been further broken down by whether the artifact was collected from the inside or outside of the foundation. A summary of this information is presented in Table 2.

TRENCH 1

Trench 1 had been disturbed by modern utility pipe installation (see Trench 1 discussion above). Six representative types of artifacts were collected: oyster shell, brick, window glass and ceramics. The ceramic sherds (3) consisted of one sherd each of red earthenware, oriental porcelain and whiteware. The TPQ was 1820 based on the presence of whiteware, however, no depth was recorded for these random artifacts, and the trench was badly disturbed. It is not known if the fragmentary brick and window glass was relatively modern. Therefore, this TPQ is not a valid indicator for this trench.

TRENCH 3

A total of 660 artifacts was collected from Trench 3. For the purpose of this analysis Trench 3 has been divided into areas inside and outside of the brick foundation wall. These artifacts have been further broken down by the general area within or outside of the foundation, whether or not they were recovered from a possible builders' trench, and by the level or depth of the find.

INSIDE FOUNDATION, NORTH, BUILDER'S TRENCH

Only 5 artifacts were collected from two points (Levels 1 and 2) within a possible builder's trench located on the south side of the northern foundation wall. Level 1 artifacts consisted of architectural construction debris: a single fragment of concrete and 3 badly corroded nail fragments. No TPQ could be established for this level.

Level 2 was located at a depth of 27 inches bgs and had only one artifact: the base of a large white granite ware vessel, worn, burned and stained. This sherd provided a TPQ of 1840.

INSIDE FOUNDATION, NORTH, LEVELS 1-4

A total of 34 artifacts were collected from four depths (Levels 1-4) within the soil deposits located just outside of the possible builder's trench discussed above, also on the south side of the northern foundation wall. Level 1 was located 1 foot 4 inches bgs, inside the brick wall (south of the corner), below a layer of concrete and above a layer of compact black soil. Eleven artifacts were recovered, including oyster shell, animal bone, a lump of iron conglomerate, and ceramics. The ceramics included a red earthenware chamberpot rim, oriental and hard paste porcelain, red bodied stoneware, whiteware, and a possible pearlware sherd. One sherd of hard paste porcelain

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Table 2
Artifact Totals by Class and Context

	Location	Architectural	Unidentified	Activities	Clothing	Kitchen	Household	Personal	TPQ	Furniture	Tobacco	Manufact.	Prehist.	Total
Trench 1	Along Pipe and Wood	2		1	0	3	0	0	1820	0		0		6
Trench 3	Inside foundation -N- Builder's trench-Level 1	4		0	0	0	0	0		0		0		4
Trench 3	Inside foundation -N- Builder's trench-Level 2	0		0	0	1	0	0	1840	0		0		1
Trench 3	Inside foundation -N- Level 1	1		2	0	6	2	0	1850	0		0		11
Trench 3	Inside foundation -N- Level 2	0		2	0	4	0	0	1840	1		0		7
Trench 3	Inside foundation -N- Level 3	0		0	4	11	0	0	1820	0		0		15
Trench 3	Inside foundation -N- Level 4	0		0	0	0	0	0	1620	0	1	0		1
Trench 3	Inside foundation -S- Level 1	1		2	1					0	0	1		5
Trench 3	Inside foundation -S- Level 2	1		0	0	25	2	0	1840	0	0	0		28
Trench 3	Inside foundation -S- Level 3	4		0	0	73	2		1840			0		79
Trench 3	Outside foundation -2' -3'	5		1	3	8	0	0	1840	0	0	0		17
Trench 3	Outside foundation -2' 6" - 2' 9"	2		16	1	27	0	0	1840	0	0	0	1	47
Trench 3	Outside foundation -2' 6" -4'	17		55	3	193	0	0	1840	0	1	0	3	272
Trench 3	Outside foundation -3' 3"	1	0	0	0	0	0	0	1880	0	0	0		1
Trench 3	Outside foundation -3' 6"	0		4	34	16		1	1840					55
Trench 3	Outside foundation - 4' -4'-7"	4		3	0	12	0	0	1840	0	0	0		19
Trench 3	Outside foundation -NW - Level 1	3		1	0	1	0	0	1840	0	0	0		5
Trench 3	Outside foundation -NW - Level 2	5		3	0	12	0	0	1850	0	0	0		20
Trench 3	Outside foundation -NW - Level 3	9		14	0	14	0	0	1920	7	0	0		44
Trench 3	Outside foundation -NW - Level 4	7	1	3	0	11	0	0	1840	3	0	0		25
Trench 3	Back dirt	0	0	1	1	2	0	0	1840	0	0	0		4
Trench 3 Total														660
Trench 4	Back dirt	0	0	0	1	0	0	0		0	0	0		1
Trench 4	2' -4'	0	0	1	0	4	0	0	1840	0	0	0		5
Trench 4 Total														6
Trench 5	44" & deeper	2	0	1	1	22	1	0	1840		1	0		28
Trench 5	4'	0	0	4	1	6	0	0	1780	0	0	0		11
Trench 5	3'	0	0	0	0	6	0	0	1795	0	0	0		6
Trench 5	Back dirt	0	0	0	0	4	0	0	1795	0	0	0		4
Trench 5 Total														49
Trench 6	Back dirt	0	0	0	0	1	0	0	1840	0	0	0		1
Trench 6	4'	0	0	0	3	5	0	0	1840	0	0	0		8
Trench 6	7' 3"	0	0	3	0	0	0	0		0	0	0		3
Trench 6 Total														12
Back Dirt Back dirt														4
Grand Total		68	1	117	53	471	7	1		11	3	1	4	737
% of Total		9.23%	0.14%	15.88%	7.19%	63.91%	0.95%	0.14%		1.49%	0.41%	0.14%	0.54%	

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decorated with a gilded rim provided a TPQ of 1850 but the remainder of the ceramics appeared to be earlier. One sherd of whiteware was decorated with blue transfer printing on the interior and black transfer print on the exterior, provided a TPQ of 1825 for that sherd while the other artifacts had 18th century TPQs.

Seven artifacts were recovered from Level 2 at a depth of 2 feet bgs and at the northwest corner of the wall, below the concrete fill. Artifacts included a large, decorated red earthenware flowerpot rim, window glass, blue transfer printed whiteware and white granite ware sherds, and one possible sherd of mocha. Two of the ceramic sherds were burned. The TPQ was 1840 based on the white granite ware sherd.

The 15 artifacts collected from Level 3 at 26 to 32 inches bgs (black soil at the inner northwest corner of the foundation wall), included scraps of shoe leather, dark green glass wine/liquor bottle fragments, and several burned unidentifiable ceramic sherds. One burned sherd, however, appears to be stoneware with cobalt blue decoration and another is possibly porcelain. The TPQ of 1820 is based on the presence of two sherds of whiteware in this deposit.

Only one artifact was recovered from Level 4 at 3 feet 3 inches bgs (an area just outside the builders' trench). This was a single white ball clay pipestem with an 8/64 inch bore diameter. Based on this stem, the TPQ would be 1620, although pipes with this size smoke hole were popular until circa 1680.

As a whole, the artifacts on the north side of the inside foundation wall consisted of a mixture of 17th, 18th and 19th century household and construction/demolition debris. Several of the ceramic sherds were burned suggesting debris from a fire (possibly the Great Fires of 1835 or 1845) or simply burned household trash that was collected elsewhere and used as fill. The TPQ for this assemblage is 1840.

INSIDE FOUNDATION, SOUTH, LEVELS 1-3

A total of 112 artifacts were retrieved from three depths (Levels 1-3) during hand clearing of the southern wall of Trench 3, an area that would have been inside of the foundation. Five artifacts were recovered 3 feet 2 inches bgs on the inside of the foundation wall. These consisted of a stoneware kiln pad or spacer, partly covered with glaze, evidence of ceramic manufacture. There was also a fragment of unidentifiable animal bone, a hickory nut shell, piece of wire, and a scrap of shoe leather. A TPQ could not be determined.

Just 2 inches below the upper level, 28 artifacts were recovered. Most were burned. These included a possible machine cut nail fragment, olive green bottle glass and many burned unidentifiable ceramic sherds. The ceramics consisted of blue hand painted chinoiserie porcelain as well as other burned porcelain sherds, blue transfer printed whiteware, pearlware and black transfer printed white granite ware rims. The pearlware sherd was scalloped, blue shell edge and had an impressed mark on the base. There were also 2 chamberpot rims: one made of grey salt-glazed stoneware with cobalt blue decoration and the other a burned and unidentifiable type sherd with a transfer printed rim. The TPQ for this Level was 1840 based on the white granite sherds.

Level 3 was at a depth of 3 feet 5 inches bgs. Seventy nine artifacts were recovered and included architectural materials such as red brick, wood and machine cut nail fragments, none of which could be dated. Kitchen items included burned and therefore unidentifiable bottle glass, and many burned unidentifiable ceramic sherds. Of those ceramics that could be identified were underglazed handpainted polychrome pearlware, green and black transfer printed floral and

landscape decorated white granite wares, and porcelain. Household goods included 2 fragments of the rim of a burned and unidentifiable as to type, chamberpot. These particular chamberpot sherds mended. The TPQ of this Level was 1840 based on the white granitewares.

The fragmentary nature, similarities between Levels 2 and 3, and the number of burned artifacts inside the southern portion of the foundation suggest that these artifacts represented a single fill episode consisting of mostly household trash that had been burned.

OUTSIDE FOUNDATION – MISCELLANEOUS FINDS

Artifacts were collected from the soils outside of the foundation at six separate depths or ranges of depths during hand clearing along the northern side of the north foundation wall. A total of 411 artifacts were collected.

Two to 3 Feet Bgs

The 17 artifacts collected from this depth consisted of clam shell, mortar, partially finished shoes (soles and heels), rim of a blue transfer printed floral ironstone platter, blue transfer printed whitewares and white granitewares, and burned unidentifiable ceramic sherds. In addition a buff-bodied slipware typical pie plate sherd with a crimped rim and trailed lines was collected.

Two Feet 6 Inches to 2 Feet 9 Inches Bgs

Artifacts totaled 47 and included a double hafted cutlery handle made of bone with part of the iron blade intact between the hafts. Other remains included oyster and burned clam shells, slag, a galvanized nail window glass, and a leather shoelace fragment. Ceramic sherds included burned and unburned whiteware, white granite wares, buff-bodied slipware, and painted polychrome pearlware of a style popular between 1795-1820s, and some badly burned porcelain and stoneware sherds. Five ceramic sherds were melted together but least two of these appeared to have cobalt blue decorations. Badly devitrified dark green wine/liquor bottle glass was also present as well as a small soda/mineral water bottle sherd. A possible jasper core was also present, however, the appearance of workmanship was not altogether convincing. The cutlery handle could not be dated unfortunately, therefore the TPQ is 1840 based on white granite wares.

Two Feet 6 Inches to 4 Feet Bgs

At this depth outside of the foundation and alongside the brick wall, 272 artifacts were recovered. These included mammal tooth fragments and butchered bones, including the pelvis of a horse or cow, mammal ribs and a scapula. Burned oyster and clam shell were also present.

Most of the architectural materials were burned and included slag with melted ceramics attached as well as red brick some of which was burned black. Mortar, wood and corroded nail fragments were also present. A leather shoe sole and scraps of leather were present as were both table and bottle glass. One green flat glass sherd might have been from a gin bottle. Ceramics included numerous burned sherds, many unidentifiable as to type. Those that could be identified included red bodied slipware, salt glazed stoneware, soft and hard paste porcelain, blue shell edge and blue, red, purple, brown and black transfer printed, as well as mocha decorated whitewares were present, as well as red transfer printed white granite wares. An ironstone ewer or pitcher handle and rim were present as was yellowware and several sherds of yellow slipware. The single pipestem had a 4/64" bore diameter. Lithic materials were also present and included a single

possible dark gray chert flake, a 2 possible cores: one of gray chert and one of jasper. These might have been worked.

Three Feet 3 Inches Bgs

Only one artifact was retrieved from this depth, a whole red brick with a frog with illegible letters. The presence of the frog provides a tentative TPQ of 1880, which was when this manufacturing style began to be widely used.

Three Feet 6 Inches Bgs

Fifty-five artifacts were recovered at this depth. These artifacts consisted of ethnofaunal zoological detritus such as: deer, medium mammal, bird and oyster. A deposit of shoe leather including a large partial sole of a shoe or slipper with sew holes, tongue and other leather scraps, 2 square-toed soles, approximately 11 inches long, a heel with its iron shoe nails and 26 iron shoe nail fragments. Ceramics included white salt-glazed stoneware, plain white granite ware, overglaze and underglaze hand painted porcelains and Oriental porcelain. There was also a blue and white, barrel-shaped glass trade bead that could date anywhere between the 17th and early 19th centuries. The TPQ is 1840 based on the white granite wares.

Four Feet 7 Inches Bgs

A sample of 19 artifacts was retrieved from this level. The artifacts included food remains such as mammal and unidentifiable bones, clam and oyster shells, construction materials such as red brick and also household ceramics. Red transfer printed whitewares of a type popular between 1840-1880, underglaze blue painted pearlware, plain and blue transfer printed whiteware. Leather scraps were also present. The TPQ was 1840 based on the red transfer printed white granite ware.

In general, there was such a mixture of artifacts dating from the 17th through late 19th centuries outside the foundation wall that the entire deposit might be looked at as an entire dumping episode of redeposited fill. Burned materials were seen throughout, as well, also suggesting one episode.

OUTSIDE FOUNDATION – NORTHWEST CORNER

During hand clearing of the outer northwest corner of the foundation, 94 artifacts were collected from four separate depths (Levels 1-4).

Level 1

Level 1 contained five artifacts: a horse tooth, window glass and a plain white graniteware sherd. The TPQ is 1840.

Level 2

Level 2, the reddish fill above the black layer at the northwest wall corner, contained 20 artifacts. Oyster and clam shells were present, as were architectural materials such as window glass, concrete, and a wire nail fragment. Kitchen wares included part of a clear, scalloped glass serving dish, dark green bottle fragments, and ceramics. Blue transfer printed white granite, plain, blue, red and purple handpainted whiteware and burned black transfer printed whitewares melted together by glaze were also present. The TPQ was 1850 based on the presence of the wire nail fragment.

Level 3

The 44 artifacts in Level 3 included slag and coal, large, small and unident mammal bone as well as clam and oyster shell. Construction materials such as concrete, wood, a washer and a possible machine cut nail were present. Household artifacts included lamp/chimney glass, a large flower pot, red earthenwares, polychrome pearlware, and unidentifiable burned ceramics, plain and blue transfer printed whiteware, salt-glazed stoneware and both green and clear bottle glass. The TPQ was 1920 based on the modern clear glass.

Level 4

Twenty-five artifacts were present in this sample. Included were coal, yellow brick, concrete, slate and iron conglomerates, simply clumps of rust, plaster and stones. Household goods included mammal bone, a flowerpot, dark green wine/liquor bottle glass fragments, badly devitrified, and ceramics. Blue transfer printed shallow bowl fragments of whiteware were present and mended. Other similar whiteware fragments did not mend. Also present were plain undecorated whitewares and white granite wares. Some sherds were burned. One sherd of whiteware could be mocha. It was a reddish brown with black marbelling on the exterior and black splotches on the interior. These also mended. One mysterious thick chunk of glass was badly shattered. Its use is unknown. The TPQ for Level 4 is 1840 based on the white granite ware.

BACKDIRT

Four artifacts were pulled from Trench 3's back dirt pile. They include a pig incisor, the sole of a shoe, plain white and dark blue underglazed painted white granite ceramics. The TPQ is 1840 based on the 2 sherds of white granite.

TRENCH 4

BACKDIRT

A single artifact—a shoe sole, 10.5 inches long with stitching holes was present. It could not be dated.

TWO TO 4 FEET BGS

Five artifacts were present including an oyster shell. Red transfer printed white granite sherds were present, as was creamware and red bodied slipware. This mixture of 17th through 19th century artifacts is clearly composed of redeposited fill.

TRENCH 5

FORTY-FOUR INCHES BGS AND DEEPER

A sample of 28 artifacts was collected. These included the usual clam shell as well as architectural remains: an entire yellow Dutch brick and red brick fragment. Leather was also present. A single 18th century wine-liquor bottle base along with other 18th century ceramics was included in the sample. These 18th century sherds consisted of stonewares, hand painted blue and polychrome painted pearlwares, buff-bodied slipware and green shell edged creamware. However, early 19th century ceramics were also present and included blue shell edged whiteware and both plain and black transfer printed granite ware. One creamware

chamberpot rim was present, as was an undecorated and unmarked pipestem with a 5/64" bore diameter. The TPQ was 1840 based on the white granite ware present in this sample.

4 FEET BGS

Due to the high density of artifacts in this layer, a representative sample of 11 artifacts was taken. These included shell (oyster), leather, glass and ceramics. Dark green bottle glass fragments probably originally from a wine/liquor bottle, were badly devitrified. The ceramics included grey salt-glazed stoneware, underglaze blue hand painted pearlware, and plain creamware. The TPQ is 1780 based on the single sherd of pearlware.

3 FEET BGS

Artifacts were sampled from a pocket of ceramics in Trench 5. They included Jackfield style refined red earthenware, plain creamware, underglaze blue painted pearlware as well as green shell edge and yellow and brown polychrome painted pearlware. The TPQ is 1795 based on the presence of polychrome pearlware which was popular between 1795 and 1820.

BACK DIRT

Four artifacts were recovered from this trench's back dirt pile. These included plain creamware polychrome painted whiteware or pearlware. The sherd was discolored and could not be identified. A TPQ of 1795 is hesitantly given based on the polychrome painted piece that might be pearlware.

TRENCH 6

4 FEET BGS

Eight artifacts were present in this sample which included leather and ceramics. Two large flat leather scraps and one smaller one were probably refuse from a shoemaker's shop. The ceramics include blue transfer printed whiteware and brown transfer printed white granite ware. The TPQ is 1840 based on the white granite ware sherd.

7 FEET 3 INCHES BGS

Three artifacts were found. A single piece of oyster shell, the long bone of a large bird (Goose, turkey) and a cow mandible with many of its molars in place. No TPQ could be established.

BACKDIRT

A single brown transfer printed white granite fragment with a TPQ of 1840 was present.

GENERAL BACK DIRT

Four artifacts were retrieved by the backhoe operator from various back dirt piles around the site that could not be attributed to one trench or the other. There were only four such artifacts but these included one of the most interesting found at the site: the rim, handle and body of a gray salt-glazed stoneware storage jar or crock marked: C. CROL/MANUFACT/MANHATTAN-W/NEW-YORK. This artifact tentatively dates between 1800 and 1815 (M. Janowitz, personal communication). Janowitz reasons that sherds marked "Manhattan Wells" date between 1800,

when Crolius' son Clarkson, Jr. took over the pottery and circa 1815 when the business moved to Bayard St. and the firm stopped marking pots with the Manhattan Wells address (Ibid).

Also present was a sherd of burned stoneware, this one with a buff-colored body. A sherd of white granite ware decorated with a brown transfer print floral pattern (1840-1915) and a sherd of polychrome painted pearlware of a type popular between circa 1795 through the 1820s and found throughout the site, were also in the backdirt.

ARTIFACT SUMMARY

The fragmentary nature of the artifacts suggests they were part of fill soils. Most of the artifacts were from secondary (i.e. redeposited) household refuse; all are under 10 percent complete, an identifying characteristic of secondary refuse. When Burling Slip was filled, refuse from different sources became mixed together, as can be seen by the variety of artifact manufacturing dates, which range from the 17th through the late 19th centuries. The small number of recovered late 19th century artifacts was recovered from the upper 2-3 feet of fill and could have been introduced during excavation associated with construction of the brick foundation, and were not part of the original fill. Artifacts with 17th through 18th century manufacturing dates (for example, British slip-decorated earthenware dishes [buff bodied slipwares]) that could have been made anytime between the late 17th and the late 18th centuries, most likely were first discarded at other locations and then transported along with their surrounding soils to the slip. All of the ceramics are very fragmentary and most vessels are only represented by one sherd.

White granite wares with printed designs were recovered from various depths across the site. These ceramics began to be imported in quantities in the early 1850s, although they were being produced as early as 1840. The presence of this ceramic type indicates that Burling Slip may have been filled sometime after 1850, a filling date more than 10 years later than suggested by documentary research (see Section 4).

A number of shoe parts were observed and sampled across the site at depths ranging from 2 to 6 feet bgs. Several previous archaeological excavations in landfill areas in lower Manhattan have also observed the presence of shoe fragments and leather scraps in fill (Cantwell and Wall 2001: 189). "Shoemaker's Pasture" was located in an area that surrounded John Street. In 1695, tanners from Beaver Street moved to a district covering several blocks between Maiden Lane and Ann Street, east of Broadway. They later moved to "the Leather Swamp" an area above Beekman Street, near Gold Street. These areas are all in the vicinity of Burling Slip and thus it is likely that detritus from the tanneries and shoe maker's shops were deposited along the waterfront.

The number of burned artifacts from this site and the presence of many sherds of white granite ware (TPQ 1840) is suggestive of the use of fill from the Great Fire of 1845 or another fire, to fill in the Slip. The small size of the ceramic sherds, however, suggests that this is secondary mostly household refuse, and household trash is often incinerated as a matter of course.

Field work involved the excavation of six backhoe trenches, varying in length from 10 to 48 feet, in width from 6 to 14 feet, and in depth to between 3 and 9 feet bgs. Unmapped 20th century utilities were unexpectedly encountered in multiple trenches, which limited the depth and area of excavation in certain locations. Roughly 700 artifacts were collected. In many of the trenches, archaeologists encountered a thick concrete layer beneath the asphalt surface layer. Beneath the concrete, most trenches contained a layer of relatively clean brown silty sand above multiple layers of compact black and dark gray brown soil containing high concentrations of ceramic fragments as well as sporadic deposits of oyster and clam shells and fragments of brick, coal, and wood. Underlying these compact artifact-rich layers were thick levels of fill extending to below the water level, composed of looser sandy soils containing some cultural materials including ceramic fragments, shoe parts, bricks, shells, bone, and wood. While some timbers were encountered at various elevations in multiple trenches, none appeared to be part of a crib-work system or other landfill retaining device. No evidence of bulkheads, wharves, piers, or other retaining structures was identified.

A brick wall was encountered in Trench 3, a 48-foot-long trench varying in width from ten to fourteen feet, oriented north-south through the central portion of the APE. The brick wall, which appeared to be of late 19th or early 20th century construction extended from roughly 9 inches bgs to roughly 2 feet 6 inches bgs and was roughly 2 feet 10 inches thick. The feature could only be partly excavated due to the location of nearby utilities and other site restrictions, and therefore, the horizontal extent (plan dimensions) of the feature could not be ascertained. A corner (apparently the northwest corner of the foundation wall) was exposed in the approximate center of the trench; the west wall of the structure was exposed to a length of 28 feet and the north wall was exposed to a length of roughly seven feet. The upper surface of the exposed wall was generally intact and showed no signs of demolition and excavation within the foundation and outside of it failed to recover the quantities of demolition debris typically encountered when a building has been demolished.

The Phase 1A documentary study documented no structures built in the Burling Slip APE, and therefore, additional documentary research was undertaken to elucidate the origins of the structural remnants encountered during field testing. Research revealed that in 1903, the City filed plans with the Department of Buildings and the Art Commission for a one-story brick comfort station to be built at Burling Slip near South Street (Art Commission Files June 10, 1903; *New York Times*, July 12, 1903). Historic maps and photographs, however, indicate that if the comfort station was built; it stood for no more than two years. Photographs on file at the New York Public Library dating to 1928 and 1930 show a different building, a large concrete-founded, corrugated metal-clad structure located in John Street and Burling Slip, apparently overlapping with the APE. Based on a comparison of physical and documentary evidence, it was determined likely that the brick foundation is a remnant of the early 20th century comfort station (the construction of which may never have been completed). Unusually thick layers of concrete beneath the asphalt ground surface are likely associated with the ca. 1928 corrugated metal structure pictured in historic photographs.

Burling Slip Phase 1B Archaeological Survey

Field testing concluded that wharf and landfill retaining structures were not present within the interior of Burling Slip where testing was conducted. However, based on the cartographic evidence and research conducted on the filling of slips such as Burling Slip, it is likely that wharf and retaining structures are only present along the perimeter of the slip (outside of the APE). Such features, if present, would not be impacted by the proposed action. Fill material dating to the period at which the slip was filled, however, was encountered, and was sampled and documented. The artifactual evidence places the filling of Burling Slip at some time after 1850 although documentary and cartographic sources suggest filling took place during the 1830s. Further field investigation would not be likely to produce additional meaningful data relating to the features encountered. In coordination with the LPC, it was determined that no additional testing was required.

References

References

Annual and Quarterly Reports of the President of the Borough of Manhattan

1904 New York: Mail and Express Company.

Art Commission of the City of New York

5/6/1903 Submission 113, Series 74: "Washington Market and Burling Slip Public Comfort Stations."

6/10/1903 Submission 126, Series 84: "Burling Slip Public Comfort Station."

Bromley, G. W. and Co.

1909 *Atlas of the City of New York: Borough of Manhattan.*

1911 *Atlas of the City of New York: Borough of Manhattan.*

Cantwell, Anne-Marie and Diana diZerega Wall

2001 *Unearthing Gotham.* New Haven: Yale University Press.

Colton, J. H.

1836 *Topographical Map of the City and County of New York.*

Fletcher, Ellen

1999 *Walking Around in South Street.* Stony Creek: Leete's Island Books, Inc.

Geismar, Joan G.

1983 The Archaeological Investigation of the 175 Water Street Block, New York City. Report on file with LPC.

Greene, Carleton

1917 *Wharves and Piers: Their Design, Construction, and Equipment.* Third Edition. New York: McGraw-Hill Book Company, Inc.

Historical Perspectives, Inc. (HPI)

2006 *Phase IA Archaeological Documentary Study: Lower Manhattan Development Corporation, Fulton Street Redevelopment Project, Burling Slip, Manhattan, New York.* Prepared for AKRF, Inc.

2005 *Phase IA Archaeological Assessment: Brooklyn Bridge Park Project, Draft DEIS.* Prepared for AKRF, Inc.

Burling Slip – Phase 1B Archaeological Survey

Hoffman, Murray

1862 *Treatise upon the City of New York as Proprietors. Volume 1, Second Revised Edition.*
New York: Edmund Jones & Co.

Hooker, William

1836 *Hooker's new pocket plan of the city of New York / compiled & surveyed by William Hooker, engraver, No. 179 Water Street, New York, house, Willoughby St., Brooklyn.*
[New York Public Library American Shores Digital Map Collection]

Kardas, Susan and Edward M. Larrabee (Historic Sites Research)

1991 *Summary Report of 1981-1983 Archaeological Excavation, The Schermerhorn Row Block.* For: Bureau of Historic Sites, New York State Office of Parks, Recreation, and Historic Preservation and New York City Public Development Corporation.

On file at the New York City Landmarks Preservation Commission.

Louis Berger and Associates, Inc.

1990 *The Assay Site Historic And Archaeological Investigations of the New York City Waterfront. [Block 35] For: HRO International, Ltd. New York, New York. (Revised from December 1988) CEQR 83-229M. On file at LPC.*

Minutes of the Common Council

1675-1776 Volumes 1-8

1784-1831 Volumes 1-19

New York State Office for Technology [NYSOFT]

2004 *Draft Generic Environmental Impact Statement (DGEIS) New York Statewide Wireless Network (SWN).* Prepared by Deorsetz Stinziano Gilberti Heintz and Smith, P.C., Spectra Environmental Group, Inc., and CASmith, LLC., New York.

New York Times

6/21/1903 "The Building Department: List of Plans Filed for New Structures and Alterations."

7/12/1903 "The Building Department: List of Plans Filed for New Structures and Alterations."

7/26/1903 "The Building Department: List of Plans Filed for New Structures and Alterations."

8/23/1903 "The Building Department: List of Plans Filed for New Structures and Alterations."

10/23/1903 "The Building Department: List of Plans Filed for New Structures and Alterations."

10/29/1903 "The Building Department: List of Plans Filed for New Structures and Alterations."

11/20/1903 "The Building Department: List of Plans Filed for New Structures and Alterations."

New York Tribune

1/21/1902 "For More Public Baths." p. 6

References

Pickman, Arnold and Nan A. Rothschild

1981 *64 Pearl Street: An Archaeological Excavation in 17th Century Landfill*. Sponsored by the New York City Landmarks Conservancy.

Report of the President of the Borough of Manhattan of the City of New York.

1902 New York: Mail and Express Company.

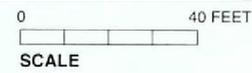
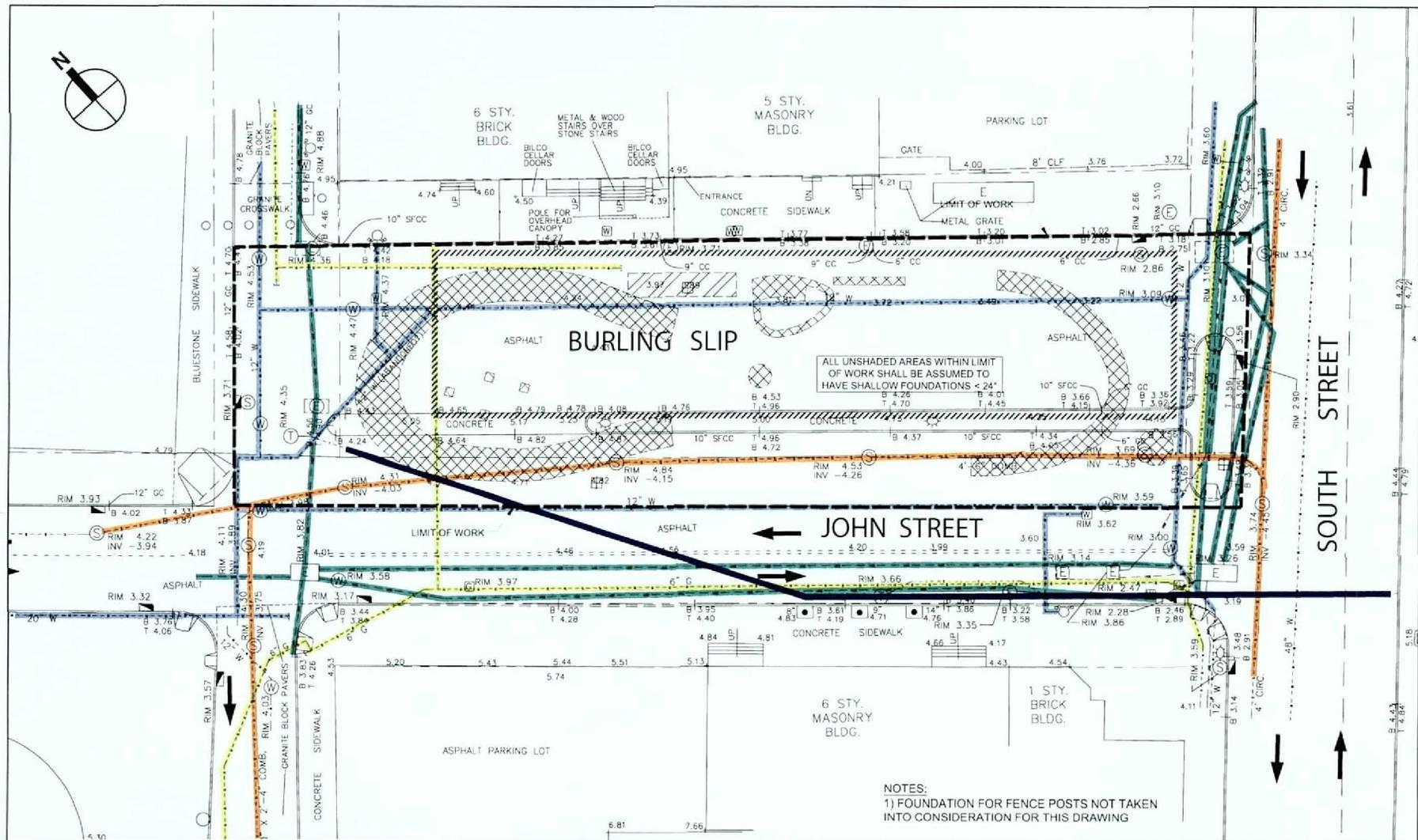
Sanborn Map Company

1905 Insurance maps of the City of New York

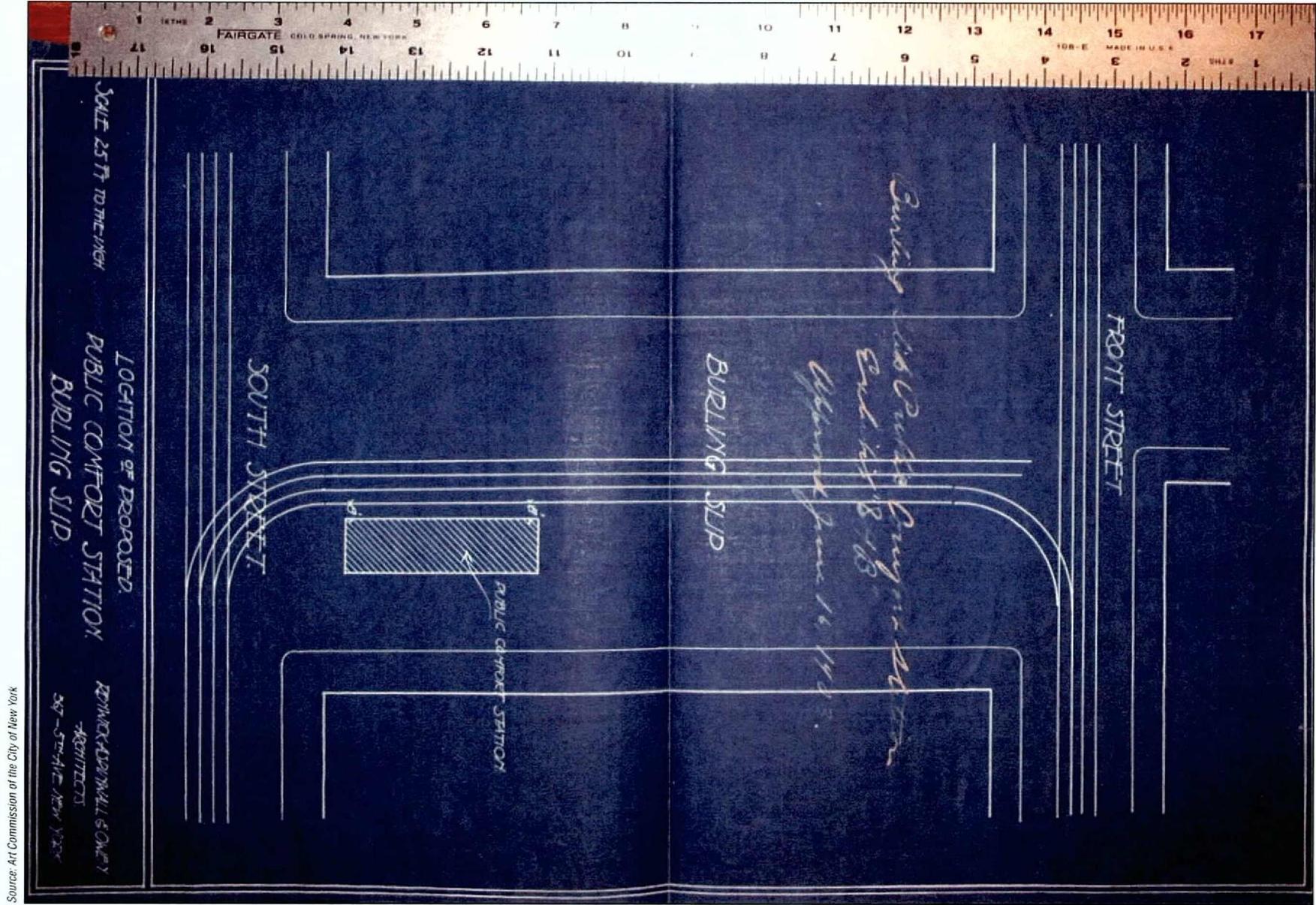
Seasholes, Nancy S.

2003 *Gaining Ground: A History of Landmaking in Boston*. Cambridge: The MIT Press. *

Figures



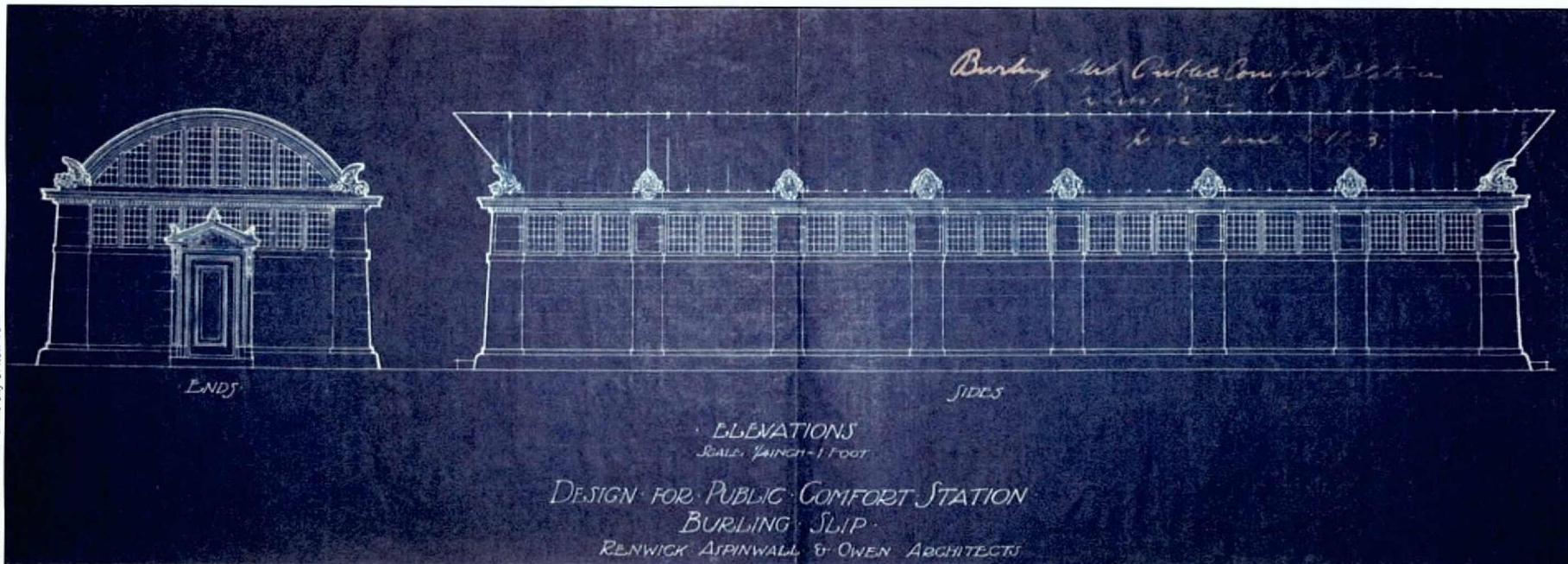
Plan of Burling Slip APE Showing Existing Utilities and Proposed Disturbance
Figure 2



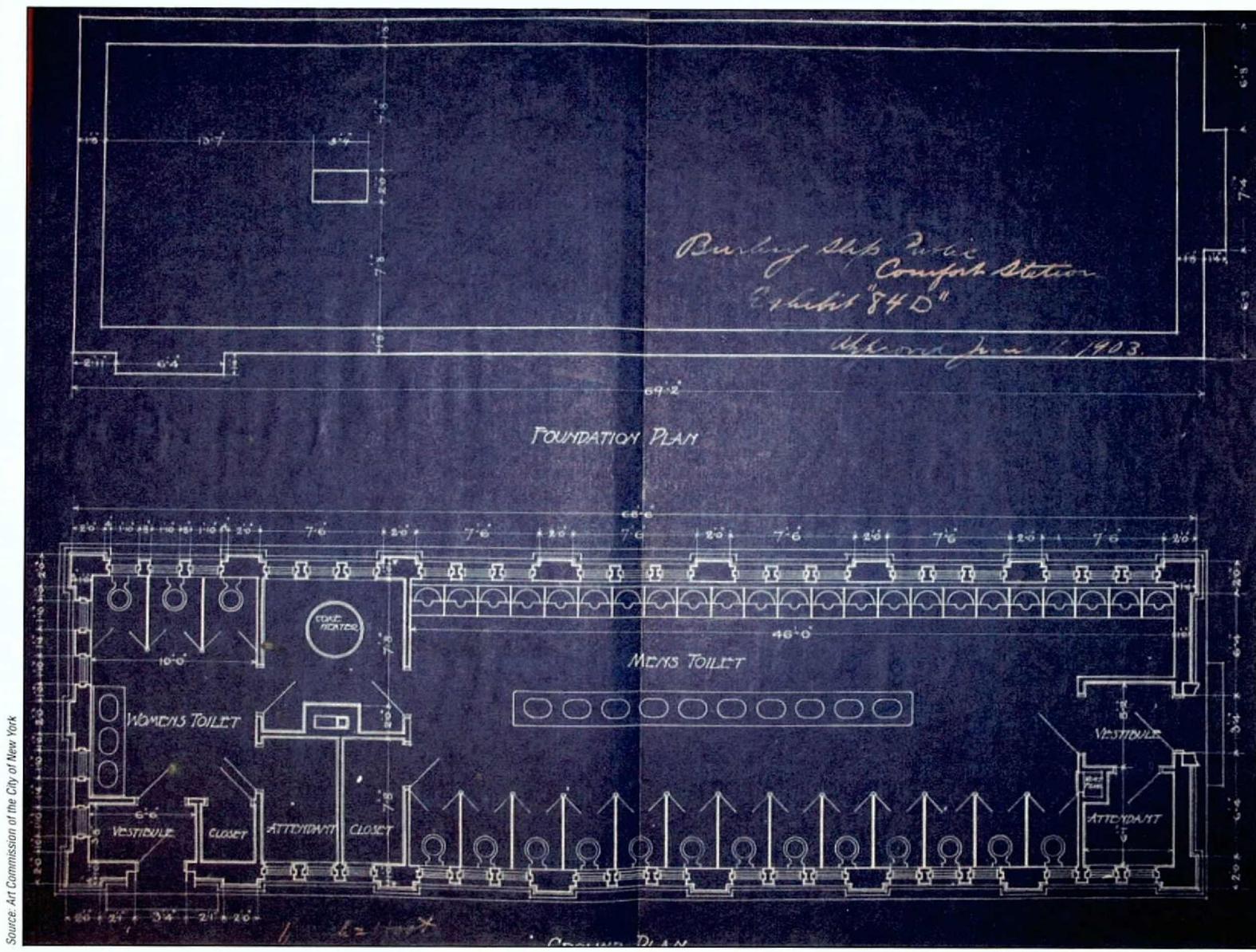
Source: Art Commission of the City of New York

BURLING SLIP Phase 1B Archaeological Testing

Figure 3
Location Map for Burling Slip Comfort Station, 1903



Source: Art Commission of the City of New York



Source: Art Commission of the City of New York

Figure 5
Plans for Burling Slip Comfort Station, 1903



A 1914 view of Burling Slip, looking northwest from roughly the center of the Slip. No structures are visible in the Slip, and based on the vantage point of the photograph, it appears that no comfort station existed in Burling Slip at this time. Note the horse cars and trolley tracks running through the center of the Slip. 1



A 1924 view of Burling Slip, looking northwest towards the intersection of John and Front Streets from the southeastern portion of the Slip. No structures are visible in the Slip, and based on the vantage point of the photograph, it appears that no comfort station existed in Burling Slip at this time. The former ship chandlery at 170-176 John Street, now the Yankee Clipper restaurant, is the granite faced building pictured on the left. 2



A 1928 photograph looking south from Water Street towards John Street/Burling Slip. The large pitch-roofed structure on the left fronts on South Street and appears to occupy a portion of the project site. The structure appears to be sided in corrugated metal; two cylindrical tanks are visible on the building's exterior.

3

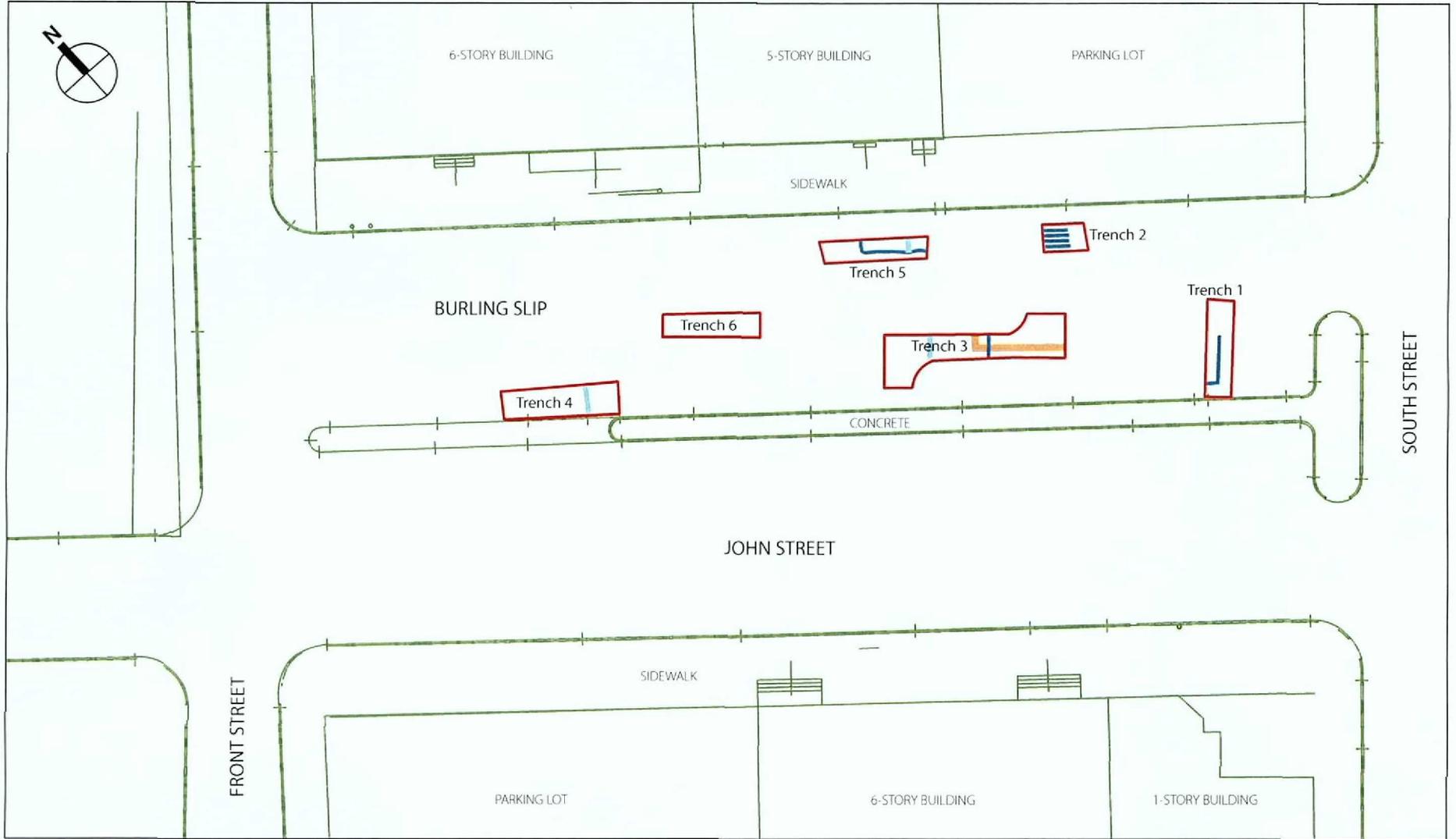


An aerial view showing Burling Slip and the East River, taken in 1930. The corrugated metal structure is still present, and is shown occupying a large portion of Burling Slip and John Street between Front and South Streets (including a large portion of the APE). Several smaller structures, possibly trailers, are also shown, located immediately south of the larger building, near South Street.

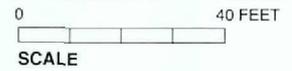
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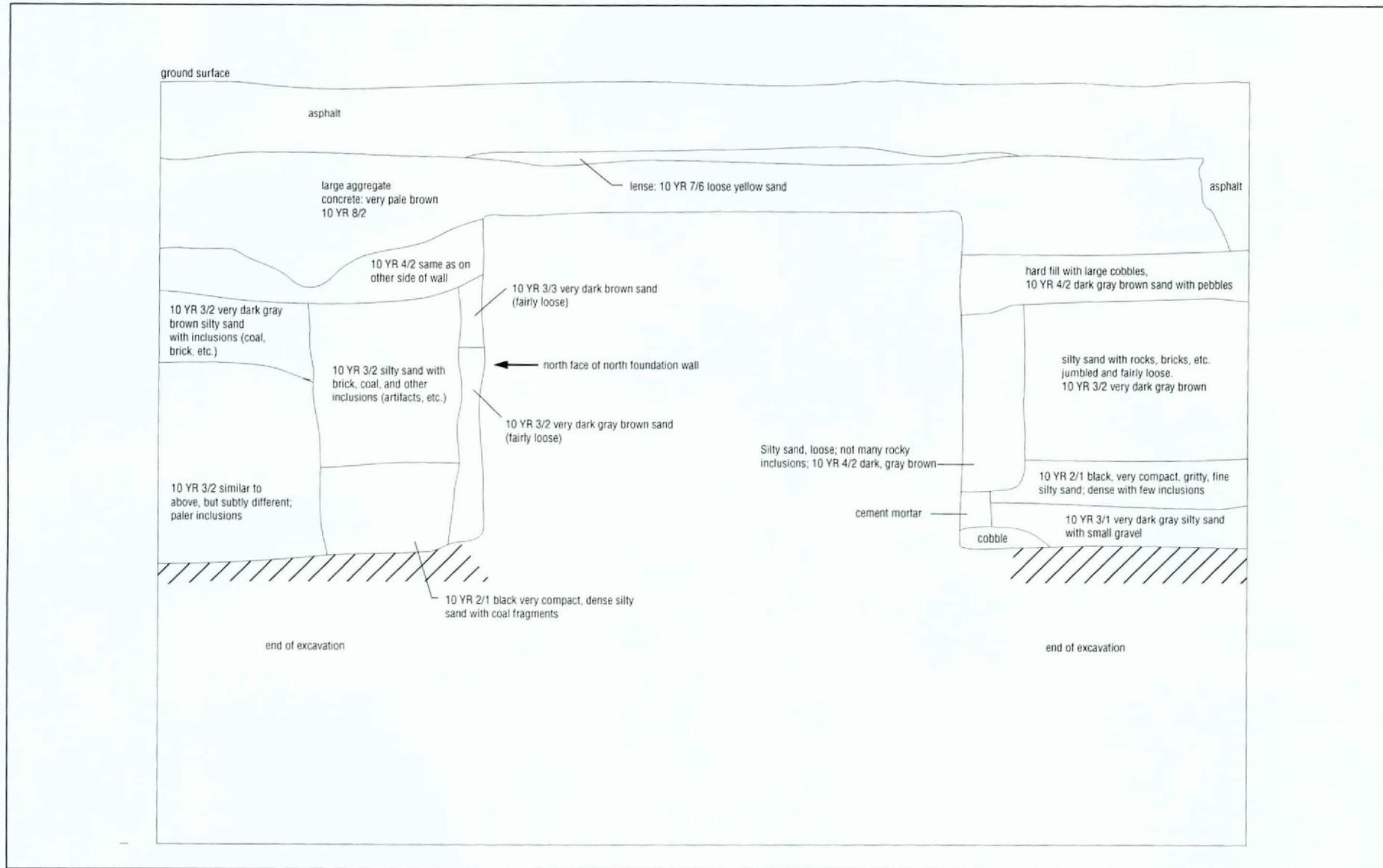


A 1932 photograph of Burling Slip, looking north from South Street towards Front Street. This view shows that the large corrugated metal structure shown in the 1928 and 1930 photographs is no longer standing. No structures occupy the Slip at this time. 5



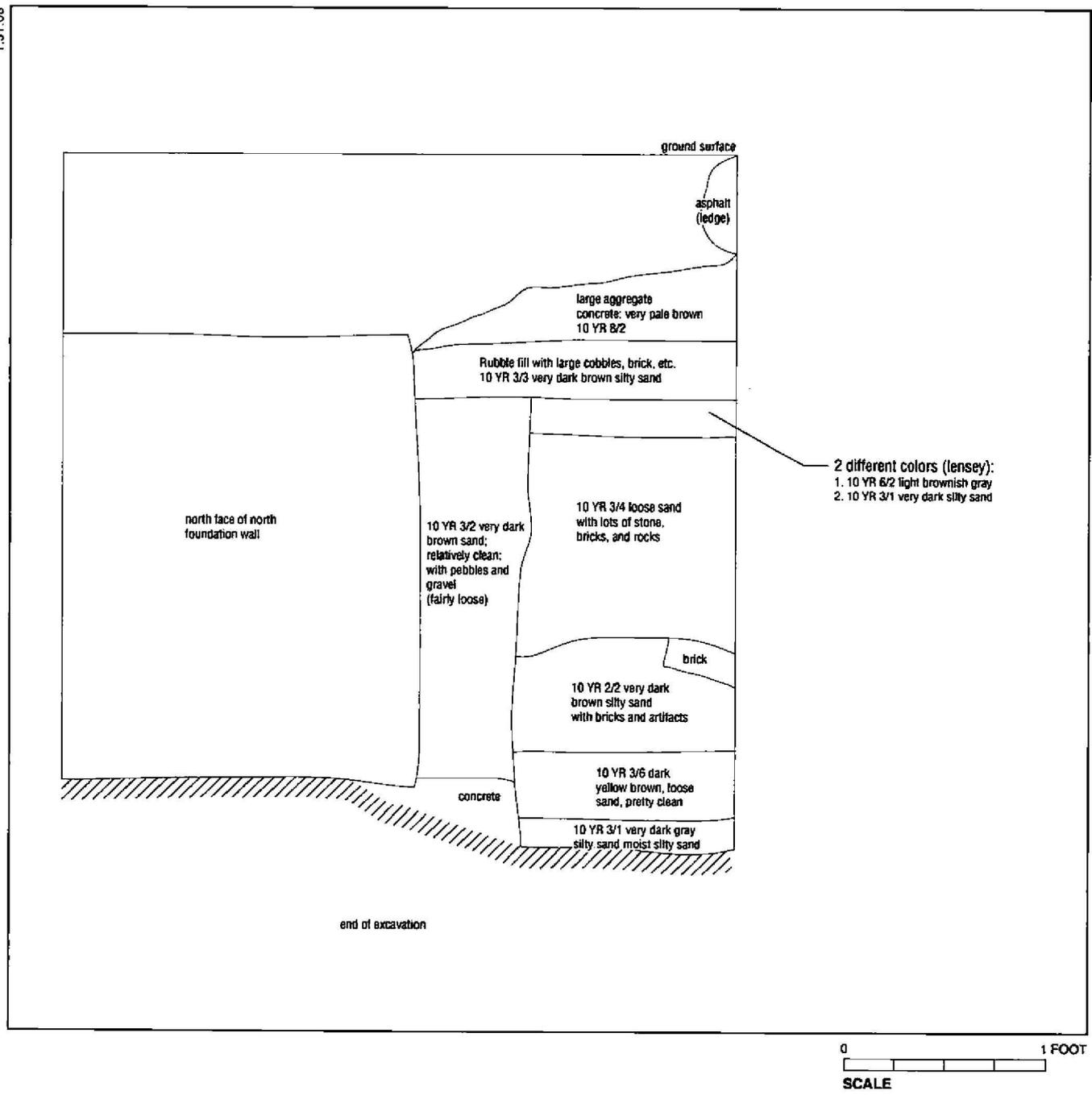
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- Utility Line
- Brick Wall





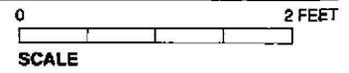
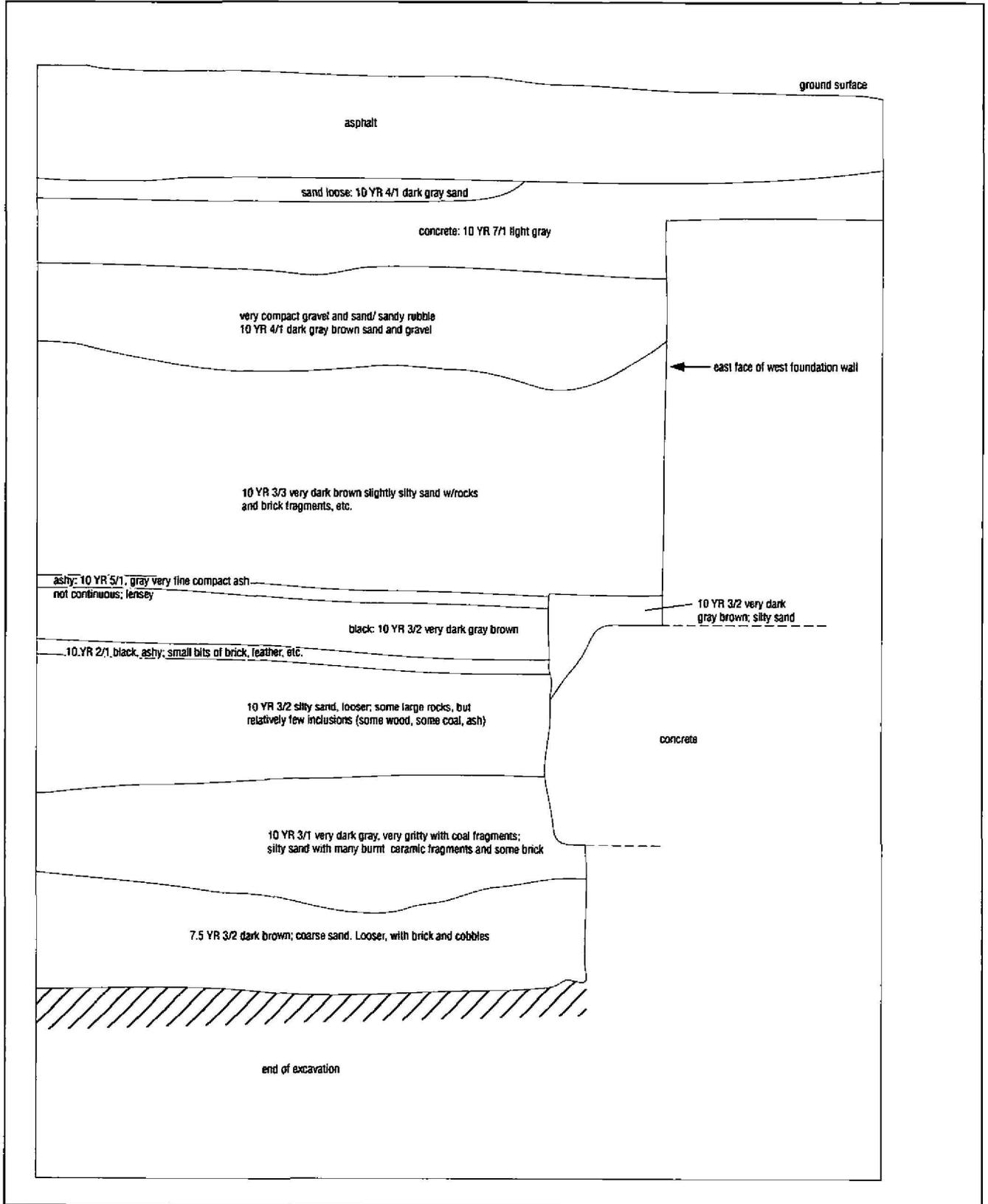
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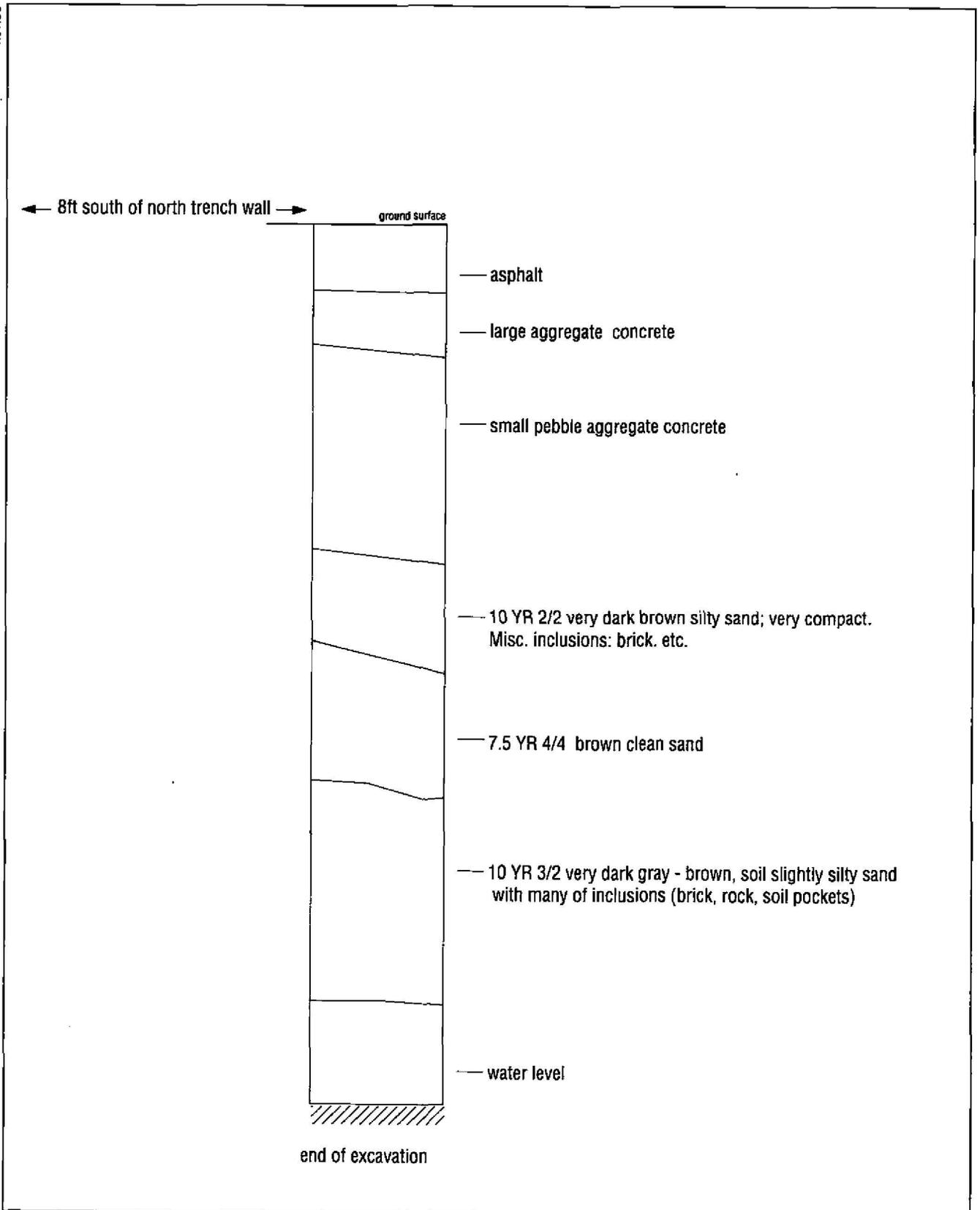


Trench 3: North Face of North Foundation Wall
Figure 12

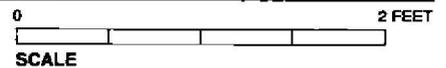
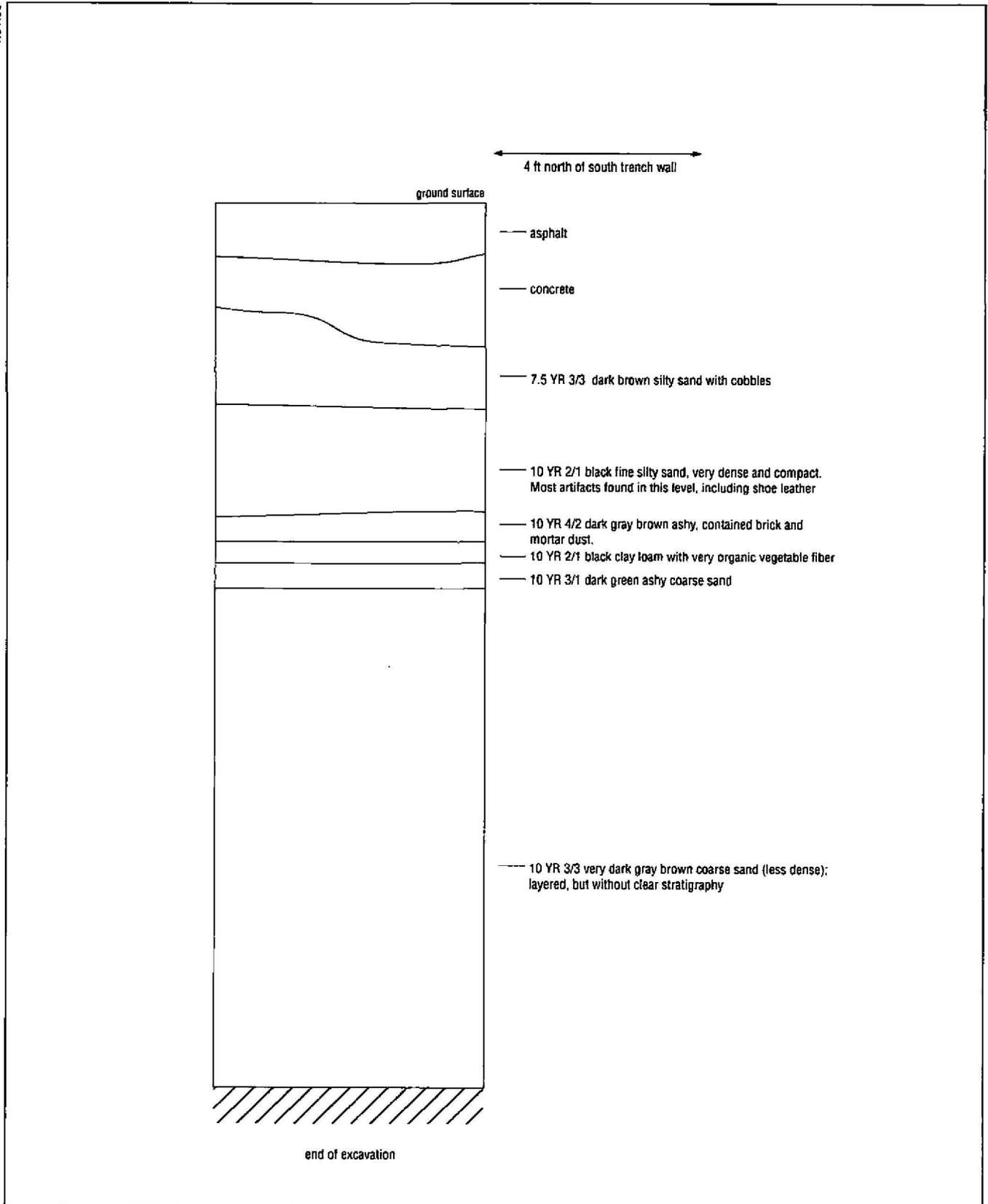
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A view of the south half of the project site, looking southwest from the upper story of a building on the east side of Burling Slip. John Street is visible in the background. Excavation trenches shown are (from left to right) Trench 1, Trench 2, Trench 3, and Trench 5. Note the northwest corner of the brick wall visible in Trench 3

1



A view of the north half of the project site, showing (from left to right) Trench 6 and Trench 4

2



Looking west towards Trench 1, a view showing the unanticipated utility encountered in the trench, believed to be a water or steam line. The utility is partly supported by wood members

3



A view looking north at Trench 2, the excavation of this trench was ended upon encountering an unmapped electrical line. Note the thick layer of concrete in the upper portion of the trench

4



Looking northwest at the northern portion of Trench 3 during excavation. Note the very thick layer of concrete immediately below the asphalt ground surface. A timber oriented east-west and located at the bottom of the concrete layer is visible at the north end of the trench

5



Looking south at Trench 3 during excavation, showing the north façade of the north wall of the brick foundation. Note the concrete visible in the deeper excavation area along the face of the wall

6



A view of the west wall of Trench 3 at the brick foundation's north wall, showing the stratigraphy of the trench wall, including a deeper excavation area. Note the narrow builders' trench along the wall

7



A view of the east wall of Trench 3 at the brick foundation's north wall. A soil change along the wall has been demarcated

8



Looking south at the north face of the north wall of the brick foundation in Trench 3. Note the builders' trench along the west side of the wall (the exterior of the building)

9



The south wall of Trench 3, with the east face of the west foundation wall (the interior of the building) visible to the right

10



A view looking west at the east face of the west foundation wall in Trench 3, showing the high density of ceramic fragments found in the compact dark brown fill levels in that location **11**



Looking northwest towards Trench 3, showing the extent of the excavated portions of the brick foundation wall. Note the northwest corner of the foundation wall in the northern (upper) portion of the trench **12**



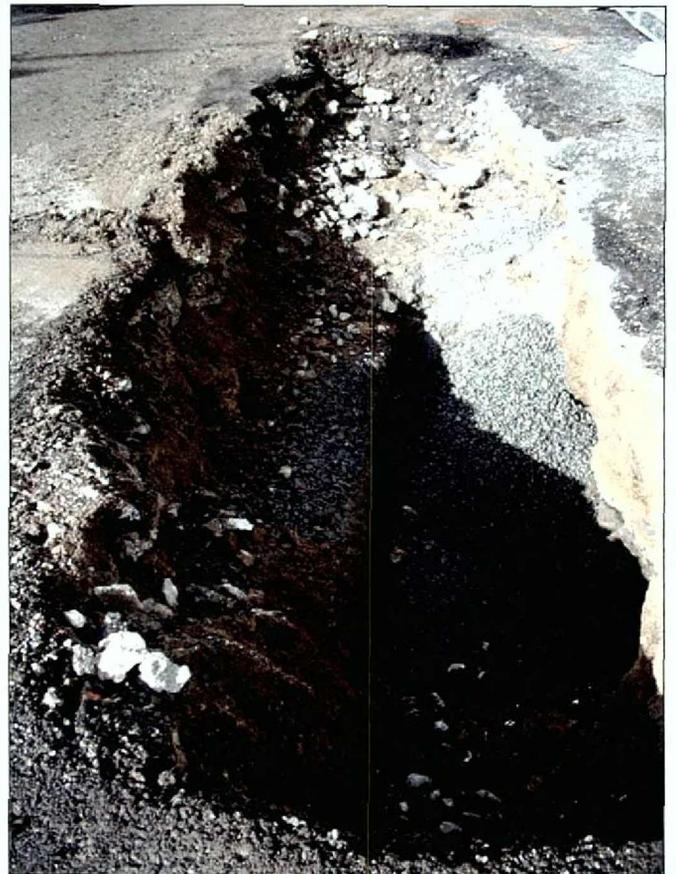
Looking north towards Trench 3, showing the extent of the excavated portions of the brick foundation wall 13



A close-up view, looking north, towards the northwest corner of the brick foundation wall in Trench 3. An unanticipated utility running east-west is visible in the foreground. A portion of the brick wall was apparently destroyed during the installation of this utility 14



A view of Trench 4, looking northwest towards the west wall of the trench. Note the very thick layer of concrete below the top asphalt layer. Also note the timber (left), running east-west, at the bottom of the concrete layer. The gravel shown at the bottom of the trench was used to backfill the trench **15**



Looking north towards Trench 5, the excavation of which was abandoned after encountering an unmapped utility. The gravel shown at the bottom of the trench was used to backfill the trench **16**



A view of Trench 6, looking northwest 17

Appendix

Appendix A: Artifact Inventory

Trench	Location	Depth	Group	Artifact TPQ	Class	Ware Type	Material	Function	Parts	Total	Remarks
1	Trench 1, Along Pipe and Wood	1-3'	Activities		Ethnofaunal zoological		oyster shell			1	
1	Trench 1, Along Pipe and Wood	1-3'	Architectural		Construction materials		terra cotta	brick		1	
1	Trench 1, Along Pipe and Wood	1-3'	Architectural		Architectural glass		glass	window pane		1	pale green
1	Trench 1, Along Pipe and Wood	1-3'	Kitchen		Dishes	Red Earthenware				1	reddish brown lead glaze on one side
1	Trench 1, Along Pipe and Wood	1-3'	Kitchen	1790-1880	Dishes	Oriental Porcelain				1	underglaze blue exterior, plain interior
1	Trench 1, Along Pipe and Wood	1-3'	Kitchen	1820-present	Dishes	Whiteware				1	undecorated
Trench 1, Along Pipe and Wood Total										6	
3	Inside foundation - N - Builder's trench - Level 1	1'2" below top of wall	Architectural		Construction materials		concrete			1	
3	Inside foundation - N - Builder's trench - Level 1	1'2" below top of wall	Architectural		Nails				fragmts	3	
Inside foundation - N - Builder's trench - Level 1 Total										4	
3	Inside foundation - N - Builder's trench - Level 2	27"	Kitchen	1840-Present	Dishes	White granite/ironstone			base	1	large vessel, worn, burned, stained
Inside foundation - N - Builder's trench - Level 2 Total										1	
3	Inside foundation - N - Level 1	1'4"	Activities		Ethnofaunal zoological		oyster shell			1	

Appendix A: Artifact Inventory

Trench	Location	Depth	Group	Artifact TPQ	Class	Ware Type	Material	Function	Parts	Total	Remarks
3	Inside foundation - N - Level 2	2'	Kitchen	1840-1915	Dishes	White granite			base/body	1	blue t.p. with floral dec. interior and plain exterior; burned
Inside foundation - N - Level 2 Total										7	
3	Inside foundation - N - Level 3	26"-32"	Clothing		Shoes		leather		scraps	4	
3	Inside foundation - N - Level 3	26"-32"	Kitchen		Container		glass	wine/liquor bottle	base and kick-up	4	bases mend and kick-up mends; all belong to the same bottle; devitrified; narrow bottle
3	Inside foundation - N - Level 3	26"-32"	Kitchen		Container		glass	wine/liquor bottle	body	1	devitrified; possibly belongs to bottle above but does not mend
3	Inside foundation - N - Level 3	26"-32"	Kitchen		Dishes	Unident			body?	2	badly burned
3	Inside foundation - N - Level 3	26"-32"	Kitchen		Dishes	Unident			body	1	badly burned but looks like bold cobalt blue decoration on the exterior; sherd is thick like delft or Stoneware.
3	Inside foundation - N - Level 3	26"-32"	Kitchen	1820-present	Dishes	Whiteware			body	2	plain, undecorated; one has ridge
3	Inside foundation - N - Level 3	26"-32"	Kitchen		Dishes	Porcelain?			base/cavetto	1	burned
Inside foundation - N - Level 3 Total										15	
3	Inside foundation - N - Level 4	3'3"	Tobacco	1620	Pipe		white ball clay	smoking	stem	1	8/64" bore
Inside foundation - N - Level 4 Total										1	
3	Inside foundation - S - Level 1	3'2"	Activities		Manufacture		Stoneware	kiln Furniture		1	kiln pad, spacer or roll. Parts covered with glaze.
3	Inside foundation - S - Level 1	3'2"	Activities		Ethnofaunal zoological		bone		rib	1	large mammal, butchered
3	Inside foundation - S - Level 1	3'2"	Activities		Ethno-botanical		nut shell	hickory nut		1	

Appendix A: Artifact Inventory

Trench	Location	Depth	Group	Artifact TPQ	Class	Ware Type	Material	Function	Parts	Total	Remarks
3	Inside foundation - S - Level 2	3'-4'	Kitchen	1763-1820	Dishes	red bodied Stoneware			body	1	clear lead glaze on one side, yellow glaze on the other; could possibly be refined Red Earthenware
3	Inside foundation - S - Level 2	3'-4'	Kitchen		Dishes	Porcelain			base	1	blue h.p. chinoiserie pattern w/pagoda
3	Inside foundation - S - Level 2	3'-4'	Household		Hygiene	Burned Unidentifiable		chamber pot		1	transfer printed rim
3	Inside foundation - S - Level 2	3'-4'	Household		Hygiene	Stoneware		chamber pot	rim/body	1	grey salt-glazed with cobalt blue decoration
Inside foundation - S - Level 2 Total										28	
3	Inside foundation - S - Level 3	3.5'	Architectural		Construction materials		wood			1	burned
3	Inside foundation - S - Level 3	3.5'	Architectural		Construction materials		terra cotta	brick		1	red
3	Inside foundation - S - Level 3	3.5'	Architectural	1830	Nails		Iron	machine cut		2	
3	Inside foundation - S - Level 3	3.5'	Kitchen		Containers	Burned Unidentifiable	glass	bottle	bases	3	burned glass, melted; 2 appear to be dark green, 1 is Unident color
3	Inside foundation - S - Level 3	3.5'	Kitchen		Containers	Burned Unidentifiable	glass	bottle	Unident	1	burned, melted; dark green
3	Inside foundation - S - Level 3	3.5'	Kitchen		Dishes	Burned Unidentifiable			rims, bases, bodies, etc.	45	
3	Inside foundation - S - Level 3	3.5'	Kitchen	1795-1820s	Dishes	Pearlware			body	1	u.g. h.p. polychrome, red flower, brown stem on exterior
3	Inside foundation - S - Level 3	3.5'	Kitchen	1840-1915	Dishes	White granite			body	2	green t.p. flower; this might be a 20th century revival; burned
3	Inside foundation - S - Level 3	3.5'	Kitchen		Dishes	Burned Unidentifiable			bodies, rims, bases	13	transfer prints, mostly floral

Appendix A: Artifact Inventory

Trench	Location	Depth	Group	Artifact TPQ	Class	Ware Type	Material	Function	Parts	Total	Remarks
3	Outside foundation - 2' - 3'	2'-3'	Kitchen	1840-Present		White granite			body	1	blue underglaze painted
3	Outside foundation - 2' - 3'	2'-3'	Kitchen			Burned Unidentifiable			body	1	possibly black t.p.
3	Outside foundation - 2' - 3'	2'-3'	Kitchen	1670-1795	Dishes	Buff bodied slipware		pie plate	rim	1	crimped rim, trailed lines, yellow with brown lines; unglazed exterior
Outside foundation - 2' - 3' Total										17	
3	Outside foundation - 2' 6"-2' 9"	2' 6"	Kitchen		Tableware		bone/iron	cutlery handle	handle	1	Double hafted rounded handle with chamfered sides. Three screws hold the handle together.
3	Outside foundation - 2' 6"-2' 9"	2' 6"-2' 9"	Activities		Ethnofaunal zoological		oyster shell			7	
3	Outside foundation - 2' 6"-2' 9"	2' 6"-2' 9"	Activities		Ethnofaunal zoological		clam shell			8	some are burned
3	Outside foundation - 2' 6"-2' 9"	2' 6"-2' 9"	Activities	1831	Specialized Activities		slag			1	
3	Outside foundation - 2' 6"-2' 9"	2' 6"-2' 9"	Architectural	1830	Nail		Galvanized Iron? (Fe/Zinc)	nail		1	machine cut
3	Outside foundation - 2' 6"-2' 9"	2' 6"-2' 9"	Architectural		Window glass		glass			1	pale green
3	Outside foundation - 2' 6"-2' 9"	2' 6"-2' 9"	Clothing		Shoes		leather			1	possible shoelace fragment
3	Outside foundation - 2' 6"-2' 9"	2' 6"-2' 9"	Kitchen	1820	Dishes	Whiteware		plate	base	2	mend; ribbing near base on exterior; very badly burned
3	Outside foundation - 2' 6"-2' 9"	2' 6"-2' 9"	Kitchen	1820-present	Dishes	Whiteware			body	1	dark brown glaze int. and ext.
3	Outside foundation - 2' 6"-2' 9"	2' 6"-2' 9"	Kitchen	1840-present	Dishes	White granite			body	1	undecorated
3	Outside foundation - 2' 6"-2' 9"	2' 6"-2' 9"	Kitchen	1820-present	Dishes	Whiteware			body	1	brown and white stripe exterior and plain interior

Appendix A: Artifact Inventory

Trench	Location	Depth	Group	Artifact TPQ	Class	Ware Type	Material	Function	Parts	Total	Remarks
3	Outside foundation - 2' 6"-2' 9"	2' 6"-2' 9"	Kitchen		Container		glass	wine/liquor bottle		2	dk. Green; badly devitrified
3	Outside foundation - 2' 6"-2' 9"	2' 6"-2' 9"	Kitchen	1820	Container		glass	soda/mineral water bottle?		1	small aqua sherd
3	Outside foundation - 2' 6"-2' 9"	2' 6"-2' 9"	Kitchen		Unident		glass	Unident	Unident	1	badly devitrified; appears blue with incised lines or bands at one end that are of a different color but could be result of glass degradation. Very tiny sherd
3	Outside foundation - 2' 6"-2' 9"	2' 6"-2' 9"	Prehistoric?		Flake?		Jasper	Core		1	This may not be Prehistoric. It could be natural
	Outside foundation - 2' 6"-2' 9" Total									47	
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Activities		Ethnofaunal zoological		bone/enamel	tooth		2	fragments
3	Outside foundation - 2' 6"-4'	2' 6"-4"	Activities		Ethnofaunal zoological		bone			1	large mammal (horse or cow); pelvic bone with socket for femur; butchered
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Activities		Ethnofaunal zoological		bone		frags.	7	mammal; includes 2 rib frags and 1 scapula frag.
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Activities		Ethnofaunal zoological		clam shell			14	burned
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Activities		Ethnofaunal zoological		oyster shell			19	burned
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Activities	1831	Specialized Activities		slag/ceramics			12	9 are attached to badly burned ceramics of various sorts: possible Stoneware, Porcelain and earthenwares red; burned black
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Architectural		Construction materials		brick	brick		1	

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Trench	Location	Depth	Group	Artifact TPQ	Class	Ware Type	Material	Function	Parts	Total	Remarks
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Porcelain			body	1	plain white
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Porcelain			rim	1	badly burned
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen	1820-1860	Dishes	Burned Unidentifiable			base	1	underglaze h.p. polychrome, green leaves, red flower, brown stem; burned or a second
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen	1820-1860	Dishes	Burned Unidentifiable			rim	1	underglaze h.p. polychrome, green leaf, brown thin band below rim on interior; burned.
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen	1820-1860	Dishes	Whiteware?			rim	1	underglaze polychrom h.p., with thin brown band below rim on exterior and brown band and red flower on interior
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen	1820-1860	Dishes	Whiteware?			rim	1	underglaze h.p. polychrome with thick brown band, pink and blueflowers, and brown stems on interior; plain exterior.
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen	1840-1880	Dishes	Whiteware?		platter?	rim	12	red t.p. on interior, thick sherds. Scalloped rims with white dots and flowers. Body of ware has floral decorations; 4 mend
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen	1840-1880	Dishes	Whiteware?			rim	9	red t.p. identical to above but much thinner; 2 mend
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen	1840-1880	Dishes	Whiteware?			rim	1	red t.p., very thin different design than above but too fragmentary to determine. Dec. int.

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Trench	Location	Depth	Group	Artifact TPQ	Class	Ware Type	Material	Function	Parts	Total	Remarks
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable			body	18	badly burned
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable			rim	4	badly burned
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable			rim	1	t.p.
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable			body	2	t.p.
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable			rim	1	red t.p. interior, embossed or molded on both sides; badly burned
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable		cup		1	cobalt blue? decoration on exterior; badly burned
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen	1820-1900	Dishes	Whiteware			rim	1	blue shell edge
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable			cavetto	1	t.p., probably blue but burned badly; opposite side is a drab tan color, probably caused by the fire
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable			body	6	blue t.p. on interior, plain ext.; burned
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable			rim	1	blue t.p. int., badly burned exterior
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen	1820-1915	Dishes	Whiteware			body	1	blue t.p. int. Unident t.p. dec. ext.
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable			rim	1	green shell edge, burned
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable			body	3	green stripe on one side; burned
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable			body	1	has some green glaze on ext. spalled ext.; burned

Appendix A: Artifact Inventory

Trench	Location	Depth	Group	Artifact TPQ	Class	Ware Type	Material	Function	Parts	Total	Remarks
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable			body	3	looks like brown glaze but could just be burned; incised lines around exterior
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable			rim	1	same vessel as above; looks brown but could just be burned; incised lines below rim
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable			base	1	Dark brown glaze.
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Burned Unidentifiable			body	4	Dark brown glaze. Same vessel as above. Some burned.
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen	1825-1915	Dishes	Whiteware			rim	1	Purple transfer print floral with triangle and dot border below rim. Plain exterior
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Kitchen		Dishes	Unident			body	1	Purple? Transfer print; burned, discolored
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Tobacco	1710	Pipe		white ball clay	smoking	stem	1	4/64" bore
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Prehistoric?		Flake		dk grey chert			1	possible flake
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Prehistoric?		Flake		grey chert	core?		1	possibly worked
3	Outside foundation - 2' 6"-4'	2' 6"-4'	Prehistoric?		Flake		jasper	core?		1	possibly worked
Outside foundation - 2' 6"-4' Total										272	
3	Outside foundation - 3' 3"	3'3"	Architectural	1880	Construction Materials		terra cotta	brick		1	whole red brick with frog; writing illegible
Outside foundation - 3' 3" Total										1	
3	Outside foundation - 3'-6"	3'-6"	Activities		Ethno-historical zoological		bone		long bone	1	medium mammal; marrow removed
3	Outside foundation - 3'-6"	3'-6"	Activities		Ethno-historical zoological		bone		radius	1	deer?

Appendix A: Artifact Inventory

Trench	Location	Depth	Group	Artifact TPQ	Class	Ware Type	Material	Function	Parts	Total	Remarks
3	Outside foundation - 3'-6'	3'-6'	Kitchen		Dishes		Oriental Porcelain?	bowl	bases	4	2 mend but others probably belong to the same vessel or represent another identical vessel. H.p. u.g. blue bands on the interior; exterior has blue bands with lines and squiggles; chinoiserie; very thick
3	Outside foundation - 3'-6'	3'-6'	Kitchen		Dishes		Oriental Porcelain?		rim	1	h.p. u.g. 2 thin blue lines below rim interior, exterior painted with squiggly lines and blue band below rim, possibly same set as above Porcelain, although thinner. Brown band atop rim
3	Outside foundation - 3'-6'	3'-6'	Kitchen		Dishes		Oriental Porcelain?		body	2	bold designs, squiggles as above in thinner pottery on exterior, plain interior
3	Outside foundation - 3'-6'	3'-6'	Kitchen	1790-1880	Dishes		Oriental Porcelain		rim	2	Late o.e.p., with sloppy "Canton" border on int. and ext.
3	Outside foundation - 3'-6'	3'-6'	Personal	17th-19th c.	Personal ornamentation			Glass bead		1	Barrel shaped blue and white bead; faceted; possible trade bead
Outside foundation - 3'-6' Total										55	
3	Outside foundation - 4'-4' 7"	4'-4' 1"	Activities		Ethnofaunal zoological		bone		long bone frags.	2	mammal
3	Outside foundation - 4'-4' 7"	4'-4' 1"	Architectural		Construction Materials		brick	brick		1	red
3	Outside foundation - 4'-4' 7"	4'-4' 1"	Kitchen	1840-1880	Dishes		White granite		rim	1	red t.p. floral interior, plain ext.
3	Outside foundation - 4'-4' 7"	4'-4' 1"	Kitchen	1840-1880	Dishes		White granite		body	4	red t.p. floral interior, plain exterior; possibly all the same vessel as above but do not mend

Appendix A: Artifact Inventory

Trench	Location	Depth	Group	Artifact TPQ	Class	Ware Type	Material	Function	Parts	Total	Remarks
3	Outside foundation - NW - Level 2	1'4"-22"	Activities		Ethnofaunal zoological		clam shell			1	
3	Outside foundation - NW - Level 2	1'4"-22"	Architectural		Construction materials		concrete/stone			1	
3	Outside foundation - NW - Level 2	1'4"-22"	Architectural		Architectural glass		glass	window pane		1	aqua
3	Outside foundation - NW - Level 2	1'4"-22"	Architectural	1850	Nails		Iron			3	1 wire nail frag.; 2 Unident. frags.
3	Outside foundation - NW - Level 2	1'4"-22"	Kitchen		Tableware		glass	Unident		1	clear, scalloped
3	Outside foundation - NW - Level 2	1'4"-22"	Kitchen		Container		glass	bottle	frags	2	dark green
3	Outside foundation - NW - Level 2	1'4"-22"	Kitchen	1840-1915	Dishes	White granite				3	blue transfer printed
3	Outside foundation - NW - Level 2	1'4"-22"	Kitchen	1820-present	Dishes	Whiteware				1	blue u.g. h.p. circles and lines
3	Outside foundation - NW - Level 2	1'4"-22"	Kitchen	1820-1900	Dishes	Whiteware				2	2 frags melted together by glaze; black t.p.
3	Outside foundation - NW - Level 2	1'4"-22"	Kitchen	1820-Present	Dishes	Whiteware			rim	1	plain, undecorated
3	Outside foundation - NW - Level 2	1'4"-22"	Kitchen	1825-1915	Dishes	Whiteware				1	purple t.p. interior; plain exterior
3	Outside foundation - NW - Level 2	1'4"-22"	Kitchen	1840-1880	Dishes	Whiteware				1	red t.p., flattered/filled in
Outside foundation - NW - Level 2 Total										20	
3	Outside foundation - NW - Level 3	22"-36"	Activities	1831	Specialized Activities		slag			6	
3	Outside foundation - NW - Level 3	22"-36"	Activities	1831	Specialized Activities		coal			1	
3	Outside foundation - NW - Level 3	22"-36"	Activities		Ethnofaunal zoological		bone		rib	1	large Mammal

Appendix A: Artifact Inventory

Trench	Location	Depth	Group	Artifact TPQ	Class	Ware Type	Material	Function	Parts	Total	Remarks
3	Outside foundation - NW - Level 3	22"-36"	Kitchen		Dishes	Stoneware?			body	1	burned; thin; appears gray salt-glazed but paste is white; cobalt decoration with leaf pattern on ext., plain interior.
3	Outside foundation - NW - Level 3	22"-36"	Kitchen		Dishes	Unident			body	1	burned
3	Outside foundation - NW - Level 3	22"-36"	Kitchen	1820-present	Dishes	Whiteware			body	1	blue t.p. floral decoration on interior; plain exterior
3	Outside foundation - NW - Level 3	22"26"	Kitchen	1820-present	Dishes	Whiteware			body	1	plain, undecorated;
3	Outside foundation - NW - Level 3	22"-36"	Kitchen	1820-present	Dishes	Whiteware			rim/cave tto	1	plain, undercoated; yellowish tinge
3	Outside foundation - NW - Level 3	22"-36"	Kitchen		Dishes	Unident earthenware			body	1	badly burned; glazed interior and exterior
3	Outside foundation - NW - Level 3	22"-36"	Kitchen		Dishes	Stoneware			body	1	gray s.g. exterior; brown slip interior.
3	Outside foundation - NW - Level 3	22"-36"	Kitchen		Dishes	Stoneware?			body	1	burned or mis-fired or possibly just a rock
3	Outside foundation - NW - Level 3	22"-36"	Kitchen		Container		glass	bottle	body	1	dark green
3	Outside foundation - NW - Level 3	22"-36"	Kitchen	1920?	Container		glass	bottle	neck	1	clear glass
3	Outside foundation - NW - Level 3	22"-36"	Kitchen		Container		glass	Unident	body	1	very small and badly devitrified
Outside foundation - NW - Level 3 Total										44	
3	Outside foundation - NW - Level 4	36"-42"	Activities	1831	Specialized Activities		coal	coal		1	burned
3	Outside foundation - NW - Level 4	36"-42"	Activities		Ethnofaunal zoological		bone		frags.	2	mammal
3	Outside foundation - NW - Level 4	36"-42"	Architectural		Construction materials		concrete			1	

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Trench	Location	Depth	Group	Artifact TPQ	Class	Ware Type	Material	Function	Parts	Total	Remarks
3	Outside foundation - NW - Level 4	36"-42"	Kitchen	1820-1900	Dishes	Whiteware?			body	2	possibly mocha; reddish brown with black "marbling" on exterior and black splotches on interior; paste is super white; meds.
3	Outside foundation - NW - Level 4	36"-42"	Unident		Unident		glass		thick chunk	1	badly broken; too thick for a bottle.
Outside foundation - NW - Level 4 Total										25	
3	Trench 3, back dirt		Activities		Ethnofaunal zoological		enamel/bone	Tooth		1	pig, lower incisor
3	Trench 3, back dirt		Clothing		Shoe		leather	Shoe sole		1	part of a sole with sew holes for stitching
3	Trench 3, back dirt		Kitchen	1840-present	Dishes	White granite			body	1	plain white
3	Trench 3, back dirt		Kitchen	1840-Present	Dishes	White granite			body	1	dark blue u.g. painted
	Trench 3, back dirt Total									4	
4	Trench 4, back dirt		Clothing		Shoe		leather	shoe sole	sole	1	10 1/2" long; has stitching holes
Trench 4, back dirt Total										1	
4	Trench 4, 2'-4'	2'-4'	Activities		Ethnofaunal zoological		oyster shell			1	
4	Trench 4, 2'-4'	2'-4'	Kitchen	1840-1880	Dishes	White granite				1	red t.p. on int.
4	Trench 4, 2'-4'	2'-4'	Kitchen	1840-1880	Dishes	White granite		cup or bowl		1	red t.p. ext.
4	Trench 4, 2'-4'	2'-4'	Kitchen	1762-1820	Dishes	Creamware				1	plain
4	Trench 4, 2'-4'	2'-4'	Kitchen	1670-1850	Dishes	Red bodied slipware				1	clear reddish brown glaze with yellow lines of varying thicknesses
Trench 4, 2'-4' Total										5	
5	Trench 5, 44" & deeper	44" & deeper	Activities		Ethno-faunal zoological		clam shell			1	
5	Trench 5, 44" & deeper	44" & deeper	Architectural	17th-early 18th c.	Construction Materials		brick	Dutch brick		1	Dutch yellow brick, 7" X 3 1/4" X 1 1/4"

Appendix A: Artifact Inventory

Trench	Location	Depth	Group	Artifact TPQ	Class	Ware Type	Material	Function	Parts	Total	Remarks
5	Trench 5, 44" & deeper	44" & deeper	Kitchen		Dishes		Discolored Unidentifiable		body	1	plain
5	Trench 5, 44" & deeper	44" & deeper	Kitchen	1840-Present	Dishes		White granite?		base	3	plain
5	Trench 5, 44" & deeper	44" & deeper	Kitchen	1840-Present	Dishes		White granite?		rim	2	plain
5	Trench 5, 44" & deeper	44" & deeper	Kitchen	1840-Present	Dishes		White granite?		body	1	plain
5	Trench 5, 44" & deeper	44" & deeper	Kitchen	1840-1915	Dishes		White granite		body	1	black t.p. floral int, plain ext
5	Trench 5, 44" & deeper	44" & deeper	Household	1762-1820	Hygiene		Creamware	chamber pot	rim	1	plain
5	Trench 5, 44" & deeper	44" & deeper	Tobacco	1680	Pipe		white ball clay	smoking	stem	1	5/64" bore
Trench 5, 44" & deeper Total										28	
5	Trench 5, 4'	4'	Activities		Ethnofaunal zoological			oyster shell		4	
5	Trench 5, 4'	4'	Clothing		Shoe		leather	sole	sole	1	apx. 7" long; very narrow
5	Trench 5, 4'	4'	Kitchen		Container		glass	bottle	body	2	dark green; devitrified
5	Trench 5, 4'	4'	Kitchen		Dishes		Stoneware		body	1	grey salt-glazed ext.; brown slip interior
5	Trench 5, 4'	4'	Kitchen		Dishes		Discolored Unidentifiable		rim	1	blue shell edge; possibly Pearlware
5	Trench 5, 4'	4'	Kitchen	1780-1840	Dishes		Pearlware	bowl	base	1	underglaze blue hand painted; possibly chinoliserie
5	Trench 5, 4'	4'	Kitchen	1762-1820	Dishes		Creamware		body	1	plain
Trench 5, 4' Total										11	
5	Trench 5, 3'		Kitchen	1740-1850	Dishes		refined Red Earthenware		body	1	Jackfield style

Appendix A: Artifact Inventory

Trench	Location	Depth	Group	Artifact TPQ	Class	Ware Type	Material	Function	Parts	Total	Remarks
6	Trench 6, 4'	4'	Kitchen	1840-1915	Dishes	White granite			body	4	brown transfer printed on one side, plain on other; probably from the same vessel, floral and landscape design; one sherd is paneled
6	Trench 6, 4'	4'	Kitchen	1820-1915	Dishes	Whiteware			body	1	blue transfer print floral int., plain ext.
Trench 6, 4' Total										8	
6	Trench 6, 7' 3"	7' 3"	Activities		Ethnofaunal zoological		oyster shell			1	
6	Trench 6, 7' 3"	7' 3"	Activities		Ethnofaunal zoological		bone	long bone		1	Large bird?
6	Trench 6, 7' 3"	7' 3"	Activities		Ethnofaunal zoological		bone/enamel	mandible		1	cow mandible with molars in place
Trench 6, 7' 3" Total										3	
	Back dirt		Kitchen	1800-1815	Storage	Stoneware		storage jar or crock	rim, body, handle	1	marked: C.CROL/MANUFACT /MANHATTAN-W/NEW-YORK. Gray salt glazed Stoneware exterior, brown slipped interior. Blue and brown splotches on front of vessel.
	Back dirt		Kitchen		Dishes	Stoneware				1	buff-bodied, burned
	Back dirt		Kitchen	1840-1915	Dishes	White granite		plate	base	1	brown transfer print floral pattern on interior, plain ext.
	Back dirt		Kitchen	1795-1820s	Dishes	Pearlware		bowl	base	1	underglaze hand painted polychrome; blue line and blue flowers with ochre leaves.
Back dirt Total										4	
Grand Total										737	
Notes: Sources:											