

HISTORICAL **PERSPECTIVES** INC.



Phase IA Archaeological Documentary Study
100 Varick Street Project
557 Broome Street, Block 447, Lot 44
66 Watts Street, Block 447, Lot 76
New York, New York

NYCLPC # 12BSA068M

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Prepared For:

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EXECUTIVE SUMMARY

100 Varick Realty, LLC proposes to construct a new residential building on Block 447, Lots 35, 42, 44, and 76, located at the western end of the block bounded by Varick Street on the west, Broome Street on the north, Watts Street on the south, and Avenue of the Americas on the east, in the Borough of Manhattan, New York County, New York (Figures 1 and 2). The proposed residential building, which is slated to cover the entire project site and will be known as 100 Varick Street, will have 14 stories and a cellar, for a total height of 169 feet. There will be 84 dwelling units, two retail stores on the ground floor, and a parking facility in the cellar. As part of the project, the entire site footprint will be excavated to 21 feet below the present grade.

As part of the proposed project, sponsors submitted project materials to the New York City Landmarks Preservation Commission (LPC) for an initial archaeological review in accordance with New York City Environmental Quality Review (CEQR 2010) regulations and procedures. The LPC responded:

LPC review of archaeological sensitivity models and historic maps indicates that there is potential for the recovery of remains from 19th Century occupation for the following Borough, Block and Lot location(s) within the study area: 1004770044, 1004770076. Accordingly, the Commission recommends that an archaeological documentary study be performed for these location(s) to clarify these initial findings and provide the threshold for the next level of review, if such review is necessary (see CEQR Technical Manual 2010). There are no further archeological concerns for the following Borough, Block and Lot location(s) within the study area: 1004770035, 1004770042 (Santucci 2012).

As such, although the project site for this project includes Block 477, Lots 35, 42, 44, and 76, the Area of Potential Effect (APE) is limited to Block 477, Lots 44 and 76. Lot 44 fronts Broome Street and Lot 76 fronts Watts Street.

Archival research concentrating on the specific histories of the project site has revealed a series of occupants on each lot. Archaeological resources, such as domestic artifacts and refuse, associated with these residents may have been deposited in domestic shaft features—such as wells, cisterns, and privies—that were likely located in the rear yards of the lots. Comparative data has shown that these types of archaeological resources frequently are found in urban contexts, particularly in Manhattan. As noted above, privies were located furthest from the houses, often along the rear lot lines, while wells and cisterns frequently (but not always) were located closer to the rear walls of street-fronting buildings or outbuildings. Privies and cisterns could be excavated up to 10-15 feet below grade, while wells would need to be excavated as deep as the water table, which varied according to location. It is assumed that the depth of the historic water table corresponds to the top of the peat layer found in the soil borings (ranging from 14-18 feet below the existing ground surface), which would have represented the top of the marshland.

Public water was available under both Broome Street and Watts Street by 1842; sewers were laid under Broome Street in 1853 and Watts Street in 1868 (Croton Aqueduct Department 1853, 1868). From ca. 1818-1842, before the introduction of piped city water, residents would have relied on rear yard shaft features, such as wells and cisterns. Privies and cesspools would have been used at least until the introduction of municipal sewers. Although it is possible that residents made use of public water and sewers around the time that they were installed, it is also likely that they continued to use rear yard shaft features for a number of years afterwards. Archaeological investigations in the vicinity of the project site have shown that often shaft features were not abandoned and/or sealed off until many years after public water and sewers became available. At the Sullivan Street Site, for example, dates of deposition ranged from 1840 through ca. 1900, with the well and cisterns having the latest dates of deposition, from the 1890s through the early 1900s (Howson 1992-1993:138). At the 81-85 West Third Street site a cistern contained deposits dating to the 1890s (John Milner Associates 2003).

The residences built on the APE lots were constructed in 1822 (Lot 44, Broome Street) and 1818 (Lot 76, Watts Street). Both houses had basements, and it is assumed that any shaft features would have been located in the yard areas of the lots. Although both houses had additions built over portions of the yards, none of the additions had basements, suggesting the possibility that shaft features, or truncated shaft features could still survive under these former additions. It is also possible that other subsurface features, such as sheet middens or former outbuilding foundations, could be preserved as well if disturbance is not extensive. Figure 8 illustrates the areas of potential archaeological sensitivity for the two lots.

Current construction plans indicate that the proposed project will entail excavation of the entire project site footprint to a depth of 21 feet below the proposed ground floor level to remove the entire existing layer of peat, which in places was measured at ca. 4 feet in thickness. Any potential archaeological resources within the APE lots would be affected by this project excavation. Based on this information, HPI recommends archaeological testing within the former rear yard areas of Lots 44 and 76, with specific locations to be determined in consultation with LPC as part of an Archaeological Testing Protocol. The 4-foot wide alley that is now part of Lot 44 was historically west of Lot 44. This narrow thoroughfare bordered by buildings likely was used by residents accessing the rear yard of Lot 44 and other lots adjoining it. It is assumed that the portion of the alley between former buildings would not have had shaft features present, and the degree of disturbance from later construction and demolition on adjacent Lot 35 suggests that more fragile potential archaeological resources, such as sheet middens, probably have been destroyed. However, HPI is labeling the southern extent of the alley as archaeologically sensitive because this portion was located adjacent to an open yard area, and it is possible that residents used this dead end area as an informal extension of their yards, and it is possible that shaft features could have slightly overlapped this narrow area.

Archaeological field testing would involve using a backhoe to remove the existing ground surface (now covered with demolition debris) with the former rear yards of the APE lots (including those areas once covered by building additions with no basements) and any underlying modern fill or debris in order to expose potential archaeological resources. All Phase IB archaeological testing should be conducted according to OSHA regulations and applicable archaeological standards (LPC 2002, CEQR 2010). Professional archaeologists, with an understanding of and experience in urban archaeological excavation techniques, would be required to be part of the archaeological team.

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PHOTOGRAPHS

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1. Project site showing APE on right bordering building and fence. View looking northeast. Source: HPI.
2. Project site showing APE on left bordering buildings and fence. View looking southeast. Source: HPI.
3. Detail of former rear yard of Lot 44, 557 Broome Street. Area against building on left was open yard and area covered by bricks is footprint of former building extension. View looking south. Source: HPI.
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5. Project site and APE during demolition in 2007. Lot 76, 66 Watts Street building is in process of being demolished. View looking south. Source: <http://www.wirednewyork.com>.
6. Former residence at 66 Watts Street during demolition. View looking southeast. Source: <http://www.wirednewyork.com>.
7. Façade of Lot 44, 557 Broome Street in 1999. View looking southwest. Source: NYPL Digital Gallery.
8. Façade of Lot 76, 66 Watts Street in 1999. View looking northeast. Source: NYPL Digital Gallery.

I. INTRODUCTION

100 Varick Realty, LLC proposes to construct a new residential building on Block 447, Lots 35, 42, 44, and 76, located at the western end of the block bounded by Varick Street on the west, Broome Street on the north, Watts Street on the south, and Avenue of the Americas on the east, in the Borough of Manhattan, New York County, New York (Figures 1 and 2). The proposed residential building, which is slated to cover the entire project site and will be known as 100 Varick Street, will have 14 stories and a cellar, for a total height of 169 feet. There will be 84 dwelling units, two retail stores on the ground floor, and a parking facility in the cellar. As part of the project, the entire site footprint will be excavated to 21 feet below the present grade.

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As such, although the project site for this project includes Block 477, Lots 35, 42, 44, and 76, the Area of Potential Effect (APE) is limited to Block 477, Lots 44 and 76. Lot 44 fronts Broome Street and Lot 76 fronts Watts Street.

HPI has conducted this Phase IA Archaeological Documentary Study of Block 477, Lots 44 and 76 to: 1) identify any potential archaeological resources that may be present on the APE, and 2) assess the construction and development history of the APE to determine the potential for archaeological resources on the APE and to evaluate the potential that any such resources may have survived and may remain on the site undisturbed.

This Phase IA Archaeological Documentary Study was prepared to satisfy the requirements of the LPC (LPC 2002, CEQR 2010). The HPI project team consisted of Julie Abell Horn, M.A., R.P.A., who assisted with the research and wrote the report; Christine Flaherty, M.A., who conducted the site visit, the majority of the research, and assisted with the report; and Cece Saunders, M.A., R.P.A. who managed the project and provided editorial and interpretive assistance.

II. METHODOLOGY

The present study entailed review of various resources.

- Historic maps were reviewed at the Map Division of the New York Public Library and online using various websites. These maps provided an overview of the topography and a chronology of land usage for the project site.
- Additional maps and street opening data were provided by the Manhattan Borough President's Office Topographical Bureau (MBPO).
- Photographs of the site over time were reviewed using the New York Public Library's Digital Gallery and other websites.
- Records of the Croton Aqueduct Department were reviewed to ascertain the years when piped city water and sewers became available under adjacent city streets. Both Broome and Watts Streets received piped water by 1842, but sewers were not installed under Broome Street until 1853 and Watts Street until 1868.
- Index books, selected deeds and other records pertaining to the project site were reviewed at the Manhattan Borough City Register's Office with a focus on and nineteenth-century records.

- New York City Department of Buildings (DOB) and nineteenth-century tax assessment records (in roughly 5-year intervals after initial building episodes) for the property were reviewed at the New York City Municipal Archives.
- City directory and federal census records pertaining to the property's former owners and occupants were reviewed at the New York Public Library and using various websites. Of note, only one state census is available for Manhattan, from 1855, and due to the volume of the entries and the lack of index or addresses it was not reviewed.
- Selected historic newspapers were searched for information about former residents of the project site.
- Soil borings were provided by the project sponsor (RA Consultants 2009). These borings are discussed below and are included in their entirety as Appendix A.
- Project plans were provided by Shalimar Management, the firm managing the project.
- Previous archaeological sites and surveys were reviewed using data available from the NYSOPRHP and LPC.
- A site visit was conducted on March 23, 2012 to assess any obvious or unrecorded subsurface disturbance (Photographs 1-4).

III. BACKGROUND RESEARCH

A. CURRENT CONDITIONS

The entire project site, including the two lots that comprise the APE, currently is vacant (Photographs 1-4). The buildings formerly located on the project site were demolished in 2007 (Photographs 5-6).

On Lot 44 (557 Broome Street) the demolished building was a three-story brick building with a cellar under the main part of the structure, and an addition that was three stories but had no basement (DOB records). Photograph 7 shows the front façade of the building in 1999. Historically, Lot 44 measured ca. 21 feet wide and ca. 63 feet deep. However, the Lot 44 boundaries were altered slightly in 2007 to merge former Lot 43, a 4-foot wide concrete-paved alleyway west of Lot 44, with Lot 44 (Figure 2).

On Lot 76 (66 Watts Street) the demolished building was a two and a half story frame building with a brick façade and a two story, one bay brick and concrete addition on the back. Photograph 8 shows the front façade of the building prior to demolition and Photographs 5-6 show the rear of the building as it was being demolished in 2007. Historically, Lot 76 measured ca. 21 feet wide by 80 feet deep on its eastern side and ca. 64 feet deep on its western side, with a narrow segment extending to the alley on the east side. In 2007, Lot 76 also was slightly altered, but only by a few inches at the northern end.

Lots 35 and 42, which fronted Varick Street but are not part of the APE, both had three-story brick buildings prior to demolition in 2007. The building on Lot 35 also had a basement level.

B. TOPOGRAPHY AND HYDROLOGY

According to historic maps (e.g. Ratzer 1766-1767, Montresor 1766, British Headquarters 1782, Viele 1865), the project site was once situated in salt meadows, or marshland surrounding a perennial stream that emptied into the Hudson River north of the modern line of Canal Street. Canal Street itself was named for the series of canals that were built within this drainage area to carry water from the Collect Pond near modern day Foley Square in Lower Manhattan and to drain the marshland of the area (Sanderson 2009:94). The Ratzer map (Figure 3) indicates that one of these canals may have traversed the project site block. The project site block was landfilled in the early 1800s, bringing the block up to its current grade; with the adjacent streets opened in 1807 (Watts) and 1813 (Broome and Varick) (MBPO files).

C. GEOLOGY

Manhattan Island lies within the Hudson Valley region and is considered to be part of the New England Upland Physiographic Province (Schubert 1968:10). The underlying geology is made up of gneiss and mica schist with heavy, intercalated beds of coarse grained, dolomitic marble and a thinner layer of serpentine. During the three

known glacial periods, the land surface in the Northeast was carved, scraped, and eroded by advancing and retreating glaciers. With the final retreat during the Post-Pleistocene, glacial debris, a mix of sand, gravel, and clay, formed the many low hills or moraines that constitute the present topography of the New York City area (USDA 2005).

D. SOILS

The USDA soil survey for New York City maps the project site block and surroundings as “Pavement & buildings, wet substratum, 0 to 5 percent slopes,” described as

Nearly level to gently sloping, highly urbanized areas with more than 80 percent of the surface covered by impervious pavement and buildings, over filled swamp, tidal marsh, or water; generally located in urban centers (USDA 2005:11).

In association with the present project, five soil borings were excavated within the overall project site (RA Consultants 2009). The locations of the borings and the boring logs are included as Appendix A. Boring B-4W was located within the former building footprint at 557 Broome Street and Boring B-3 was located within the former building footprint at 66 Watts Street.

All of the soil borings were situated in parts of the overall site that formerly contained buildings with basements or, in the case of Lot 42, a twentieth century gas station, also. As such, and not surprisingly, all of the borings recorded a thick mantle of fill as the upper stratum, including much brick, some concrete, and other demolition debris to depths of 9-12 feet below grade. Additional fill, with less debris, was found beneath the basement levels, corresponding to materials used to cover the marshland and bring the area up to a standard grade. Borings B-1, B-2W, B-3, and B-5 encountered a layer of black peat either directly beneath the fill or beneath a layer of natural sand. The depth of the peat was 14 feet below grade in Borings B-1 and B-2W, 17 feet below grade in Boring B-3, and 18 feet below grade in Boring B-5. Boring B-4W did not contain peat (natural sands were recorded instead), and it is possible that this area was just at the edge of the marshland and so may not have had the same natural conditions. When the modern water table was noted in the boring logs, it was recorded at about 16 feet below grade, roughly corresponding to the original marshland elevation. The top of the bedrock on the project site was recorded ranging from 69.5 to 91.0 feet below grade, with the shallower depths on the northern side of the block and the deeper depths on the southern side of the block.

E. ARCHAEOLOGICAL SITES WITHIN A ONE MILE RADIUS

Research conducted using data from the NYSOPRHP, the LPC, and the library of HPI revealed no archaeological sites within the APE. However, numerous archaeological sites have been documented within a one mile radius of the APE. These sites are listed below.

NYSM or NYSOPRHP Site Number	Site Name/Description	Location	Site Type/Time Period
NYSM 4059	Shell Point	Near Canal St.	Unknown Precontact
NYSM 4060	N/A	Lower East side vicinity	Unknown Precontact
A06101.001286	Sullivan Street Historic Site	Sullivan Street (NYU campus)	Early 19 th century resources
A06101.001303	Greenwich Mews Site	East side of Greenwich Street between W. 10 th Street and Christopher Street	Historic
A06101.017265	Spring Street Presbyterian Church Cemetery/Vaults	244-266 Spring St	Burials, 19 th century
A06101.015708	97 Orchard Street	97 Orchard Street	School privy
A06010.007671	Broome Street Historic Site	576 Broome Street	Unknown

NYSM or NYSOPRHP Site Number	Site Name/Description	Location	Site Type/Time Period
A06101.001273	Sheridan Square	Christopher Street	18 th /19 th century features
A06101.016915	Washington Square Park Potters Field	Washington Square Park	Burials, 19 th century
A06101.018212	50 Bayard	Bowery Historic District	19 th century
A06101.015243	3-5 Weehawken Street	3-5 Weehawken Street, Far West Village	Unknown
A06101.015244	304 W. 10 th Street	304 W. 10 th Street, 1 Weehawken Street, Far West Village	Unknown
A06101.013209	219-227 W. 4 th Street	219-227 W. 4 th Street	Unknown
A06101.013210	229 W. 4 th Street	229 W. 4 th Street	Unknown
A06101.001285	Washington Street Urban Renewal Project	West and Washington Streets	Early 19 th century
A06101.017777	145-147 Mulberry St former pianoforte factory	Chinatown and Little Italy Historic District	19 th century
A06101.001304	City Hall Park	City Hall Park	18 th -19 th century
A06101.013335	Tweed Courthouse Area Deposits	City Hall Park	Burials, structures, deposits, 19 th century
A06101.006980	African Burial Ground	North of City Hall Park	18 th -19 th century
A06101.015825	Block 100, Lot 1	New York Downtown Hospital	19 th century
A06101.015801	WTC- Vesey Street Site	Vesey Street	Unknown
A06101.018000	WTC-VSC Ship	Vehicular Security Center/World Trade Center	18 th or early 19 th century ship
A06101.000503	<i>Tyger</i>	Greenwich and Dey Streets	Ship, ca. 1613

F. HISTORY OF THE PROJECT SITE

As noted above, historic documents and maps (e.g. Ratzer 1766-1767 [Figure 3], Montresor 1766, British Headquarters 1782, Viele 1865) identify the project site block (Block 477) as being within swampland surrounding a perennial stream that emptied into the Hudson River north of the modern line of Canal Street. The APE was once part of a 70-acre property belonging to Anthony Rutgers that encompassed this swampland. The property was granted to the Governor of New York from King George II in 1731, and conveyed to Rutgers by royal patent in 1733 (Stokes 1928:102). Rutgers died in 1746 and his land was inherited by his wife, Cornelia, and his children, Elsie (wife of Leonard Lispenard), Mary (who afterwards married Henry Barclay), Alletta (wife of Dirck Lefferts), and a grandson also named Anthony Rutgers (Stokes 1928:102). The property then passed to and was divided between the heirs of Anthony Rutgers during the mid-1700s. The first deed on record for the APE lots, in 1767, is from Dirck and Elsie Lefferts to Leonard and Elsie Lispenard; Henry and Mary Barclay, all descendants (through blood or marriage) of Rutgers (Appendix B).

Block 477 and the surrounding area were landfilled just after the turn of the nineteenth century. The adjacent streets, part of the newly created city grid, were opened in 1807 (Watts Street) and 1813 (Broome and Varick Streets) (MBPO files). The next conveyances for the APE were in 1810, when Leonard and Dorothy Ann Lispenard conveyed property (including the still unlotted APE on the block) to Charles McEvers, James Bleecker, and Alexander L. Stewart in a trust deed (Appendix B). By the mid-1810s, the lots on what was now Block 477 had been created.

Since Lots 44 and 76 were owned and occupied by different individuals for much of the remaining nineteenth century, it is useful to address each lot separately for this period. Appendix B presents the data presented below in detailed table format.

Lot 44 (557 Broome Street)

Lot 44 was sold by Alexander and Sarah Stewart to mason John Hulyer in 1821 (Liber 150, 1821:212). Tax assessments show that the lot was vacant in 1821, but by 1822 was developed with a house. John Hulyer was listed as both resident and owner through 1826, along with several other men in any given year, who generally had jobs in the construction or service industries, such as masons, carpenters, saddlers, or cartmen (Appendix B). Although not specifically noted, it can be assumed that these men headed families who also lived in the house, since the building was two stories with a basement, and would have had several separate apartments or living spaces.

Beginning in 1827, a new set of residents began to be listed as living in the house. John Hulyer had died by 1830 and his family appears to have moved to a new residence prior to that, although the family did not sell the Lot 44 property until 1840. From 1827-1840, the most consistent family in the house was that of John Morris, a lumber inspector. Other residents during this time were listed as carpenters or masons (Appendix B).

In 1840, the heirs of John Hulyer sold the lot to John Winant, a smith (Liber 403, 1840:284). Winant and his family (he died in 1843 but his widow and children stayed) lived in the house until at least 1850. Other residents during the 1840s included working class families headed by cabinetmaker, machinist (and later “gold pen” worker) Daniel Lovejoy, blacksmith Joseph Hodgman, and plumber Joseph Hackleman. The 1850s saw a continuation of working class family tenants, some of whom stayed for a number of years. These included the families of butcher Thomas Crane and plumber John Pearce (Appendix B).

In 1862, the heirs of John Winant sold the lot to Samuel White, a plumber who had been listed as living in the house by 1861 (Liber 850, 1862:679, Appendix B). White and his family were listed in the house through 1873, when he was committed to an insane asylum. White’s family continued to rent out the house through the end of the nineteenth century to various tenants, however, with the final deed selling the property out of the family recorded in 1903 (Liber 118, 1903:20, Appendix B).

A review of those nineteenth century maps that showed specific lot development (e.g. Perris 1853 [Figure 4], 1857; Robinson Pidgeon 1885; Sanborn 1894 [Figure 5]; Bromley 1899), tax assessment records, and twentieth century Department of Building records for the lot indicate that the original brick house on the lot was two stories high and measured 21x30 feet in plan. Some maps show that there were one or more small outbuildings behind the house while others show the yard as vacant, suggesting that owners and/or occupants may have constructed sheds or other small structures over time, but that none were especially permanent. At some point, perhaps around the turn of the twentieth century, the house appears to have had a third story constructed, although no building permit was found for this action. A 1909 building permit, however, granted the right to construct an extension off the back of the already three-story with basement house. The extension, which would have no basement, also would be three stories high and measure 13 feet front and rear and 22 feet 8 inches deep from the existing rear line of the building, leaving four feet on either side of the extension open (DOB action ALT 1492-1909). At the same time the interior of the house was altered to change its function to include a store in the basement level of the main building (the depth of the basement here was noted as 4 feet 6 inches below the curb grade). Maps made during the twentieth century (e.g. Bromley 1917 [Figure 6], 1921, 1934, 1955, 1975; Sanborn 1922 [Figure 7], 1951) continued to show the building on Lot 44 was a three-story brick structure, and now illustrated the three-story addition as well. The maps show that new buildings had been constructed on the remainder of the project site after Varick Street was widened and the western end of the block was truncated. In 2007, when the final survey of the project site was made prior to demolition of the buildings (Figure 2), conditions on the two lots that comprise the APE had not changed significantly since the beginning of the twentieth century.

Lot 76 (66 Watts Street)

Lot 76 was sold by Alexander and Sarah Stewart to Moses Dodd in 1818, who then sold the lot to John Fleming in 1819 (Liber 390, 1818:76; Liber 139, 1819:349). Neither Dodd nor Fleming ever lived on the property. Tax assessments show that the lot was vacant in 1817, but by 1818 was developed with a house and had at least one tenant, Mary Winslow. From 1820-1823, tax assessments noted the tenant as a Mrs. Heasey/Hansey/Hersey (Appendix B) and from 1824-1826, records note the tenant as Amaziah Dusenberry, a marshal. Another set of tenants, including carpenters Garit Degraw, David Flanders, and Marcus Houston, as well as several women, lived

in the house from 1829-1834 (Appendix B). Although not specifically noted, it can be assumed that most of these tenants headed families who also lived in the house.

In 1838, John Fleming's heirs sold the lot to Eliza Ann Wildey (Liber 385, 1838:336). A household headed by Caleb Wildey, who was in dry goods, was listed on the lot intermittently through 1847, when Caleb and Eliza Ann Wildey sold the property to Lawrence and Margaret Dufour (Liber 487, 1847:114, Appendix B). Lawrence Dufour was a mason, and his family appears to have lived on the lot at least through 1850. He and his wife sold the lot in 1853 to Frederick Schwartz, who appears to have rented out the house during his family's ownership, through 1865 when they sold the lot to Peter Ponlaye (Liber 616, 1853:627; Liber 922, 1865:332). Occupants during that period included a bookbinder, a mason, and a produce worker (Appendix B).

By far the longest term occupants on Lot 76 were the Peuquet family. Records show that although Peter Ponlaye owned the lot through 1884, the Peuquet family had moved into the house in 1869 (purchasing the property from the Ponlayes in 1884) and continued to occupy and own the lot through the generations until finally conveying it to a corporation in 1939 (Appendix B). Peter Peuquet, the original head of the household, was listed variously as a machinist, a brewery worker, a porter, a bartender, and a bottler. Several family members also were listed as being in the liquor or wine business. There were a number of other tenants in the building during these years, most of whom were not listed for more than one or two years at a stretch, suggesting frequent turnover (Appendix B).

A review of those nineteenth century maps that showed specific lot development (e.g. Perris 1853 [Figure 4], 1857; Robinson Pidgeon 1885; Sanborn 1894 [Figure 5]; Bromley 1899), tax assessment records, and twentieth century Department of Building records for the lot indicates that the original frame house on the lot was two stories high and measured 21 feet 4 inches wide by 36 feet long. By the 1880s the building was shown as having a brick façade along Watts Street or in some cases, was erroneously depicted as all brick. A two story brick addition to the northwest side of the building was constructed by the 1890s, as was a similar frame addition to the northeast side, when maps show them in place. Photographs 5-6 illustrate the rear of the house during demolition in 2007.

Some maps show that there were one or more small outbuildings behind the house while others show the yard as vacant, suggesting that owners and/or occupants may have constructed sheds or other small structures over time, but that none were especially permanent. Department of Building records for the lot only included a few permits for twentieth century interior renovations and plumbing work. Maps made during the twentieth century (e.g. Bromley 1917 [Figure 6], 1921, 1934, 1955, 1975; Sanborn 1905, 1922 [Figure 7], 1951) continued to show similar conditions on the lot, although new buildings had been constructed on the remainder of the project site after Varick Street was widened and the western end of the block was truncated. In 2007, when the final survey of the project site was made prior to demolition of the buildings (Figure 2), conditions on the two lots that comprise the APE had not changed significantly since the beginning of the twentieth century.

G. SUMMARY OF ARCHIVAL RESULTS

The archival research pertaining to the two historic lots that comprise the APE, outlined above, revealed that the dwellings that occupied the project site from the 1830s-1890s had a series of occupants at each of the properties, generally several families per house at any given time. The table below summarizes the longer term occupants on each lot.

Lot	Years of occupation	Occupants
44	1821-1826	John Hulyer, mason, and others
44	1827-1840	John Morris, carpenter/lumber inspector and others
44	1840-1843/1850	John Wynant, smith, and others, widow of Wynant listed through 1850
44	1842-1856	Daniel Lovejoy, cabinetmaker, machinist, pens, and others
44	1856-1861	Thomas Crane, butcher, and others
44	1861-1873	Samuel White, plumber, and others
76	1820-1823	Mrs. Heasey/Hansey/Hersey
76	1824-1826	Amaziah Dusenberry, marshal, and others
76	1829-1834	Garit Degraw, David Flanders, and Marcus Houston, carpenters, and others

Lot	Years of occupation	Occupants
76	1838-1847	Caleb Wildey, dry goods, and others
76	1847-1850	Lawrence Dufour, mason, and others
76	1853-1865	Various tenants, including a bookbinder, a mason, and a produce worker
76	1869-1939	Peter Puequet family, various professions, and others

Although not all the occupants of the properties stayed for long periods, archival data show that each lot had several tenancies of over five years in length. Moreover, the data indicate a similar background for most of the residents: the majority of the household heads had working class professions, including masons, carpenters, smiths, plumbers, and butchers.

H. POTENTIAL FOR ARCHAEOLOGICAL RESOURCE SURVIVAL WITHIN HISTORIC LOTS

Residential Resources

In order to understand the behavior of past peoples, archaeologists rely on locating undisturbed resources that can be associated with a specific group or individual during a particular time period. Evaluating the significance of archaeological resources hinges on two factors: the integrity of the potential features, and if associations with individuals and/or groups can be documented. It is possible that the archaeological examination of these resources can reveal information pertinent to many issues that do not exist in the documentary record. Because of the somewhat elusive nature of these resources and the fact that only a limited number are likely to have survived subsequent development, it is vital that the remaining sites where potential resources may be present are studied. Therefore, the recovery of intact resources in an urban setting is very likely to yield new information pertaining to land use, settlement patterns, socioeconomic status/class patterns, ethnic patterns (potentially), trade and commerce patterns and consumer choice issues.

Archaeologists have found that former residential sites are often sensitive for shaft features, such as privies, wells, and cisterns. In addition, yard scatter and artifact concentrations associated with the domestic population might also yield meaningful data. In New York City and other urban locales, complete or truncated shaft features have yielded rich archaeological deposits. In some cases, subsequent construction episodes have aided the preservation process by covering over the lower sections of these deep features and sealing them below structures and fill layers.

Archaeological research conducted in New York City and other urban locales indicates that the positioning of privies, as well as other shaft features, within a residential lot had become somewhat standardized by the nineteenth century. For those lots containing only one building, privies were located at the extreme back of the lot, farthest from the residence, either in the corner or center of the lot (Cantwell and DiZerega Wall 2001:246-247). In lower income neighborhoods (typically in tenement style housing), where these lots often had two residences per lot, the privy would have been located somewhere between both residences. Some privies were intentionally excavated and the “nightsoil” removed in order to extend the period of viable usage (Roberts and Barrett 1984:108-115). In some cases, wells and cisterns no longer needed for water were used as privies or cesspools. For example, Jean Howson’s research found that following the introduction of an effective water system in Manhattan, wells and rainwater cisterns were reused as privies (1992-3: 141-142). Cisterns were often located closer to the residence and in some cases were directly against the building itself. A cistern found at 109 Waverly Place in 2008 was located immediately adjacent to the rear of a ca. 1839 residence, in an area that was later covered by an extension to the building (Geismar 2009).

Potential Depths of Shaft Features

The depth of shaft features has always been one of the reasons these resources survive subsequent development. Typically, the domestic yard feature that extends to the greatest depth is the drinking water well. The depth of a well is often contingent upon the depth of the water table, the type of excavation method employed, and the construction materials used. In urban locations, where potable water was at a premium, wells often extended to great depths (Garrow 1999:8; Glumac et al. 1998).

Cisterns, built to hold captured rainwater, were not constructed to the same depths as wells. These features are much more common on nineteenth century urban sites than wells (Garrow 1999:12). In some cases, cisterns used by multiple residents of large buildings have extended to depths greater than 10 feet (e.g., Ericsson Place Site and the Long Island College Hospital Site).

Privies, like cisterns, were not typically built to extend to great depths. In urban areas, however, many have been constructed to depths greater than 10 feet. In his review of several nineteenth century privies excavated in Alexandria, Stephen Judd Shepard found several extended to depths between 10 and 26 feet deep (1987:171). In his discussion of privy “architecture,” M. Jay Stottman found that in one neighborhood in urban Louisville the privies examined by archaeologists extended to depths between 11 and 22 feet below the surface (2000:50). In New York City, truncated privy shafts survived subsequent development in many locations (e.g., Sullivan Street, Five Points).

Comparative Sites

Five Points

Archaeological studies conducted in Manhattan and the outer boroughs have found that residentially related shaft features have survived behind, beneath, and adjacent to subsequent construction. One of the most important archaeological studies took place in the Five Points neighborhood. The discovery of numerous shaft features and archaeological deposits in Lower Manhattan has contributed extensively to the collective understanding of one of the poorest and least documented communities in nineteenth century New York. Numerous professional papers (including a session at the 29th Annual Meeting of the Society for Historical Archaeology, Cincinnati 1996) as well as an entire issue of *Historical Archaeology* have been devoted to the archaeological discoveries made within these fourteen lots studied in Lower Manhattan. Archaeologists found that the interconnectedness and subsequent development of the area actually enabled the preservation of these important archaeological sites. According to Rebecca Yamin, “the Courthouse Block yielded 50 backyard features, all of which had been subsequently enclosed within later tenement walls” (2001a:2). Yamin further wrote:

a complex of features on Lot 6...illustrates the intensification of spatial use over time and the degradation of living conditions. Wood-lined privies...apparently served the early residents of the block. They were located well behind a house that would have faced Pearl Street...A more substantial stone-lined privy, Feature B, was constructed further back on the lot, possibly at the same time a cistern, Feature Z, was put in.

This tenement population was served by a sewage system that virtually filled the backyard...All of these features had been filled by 1875. A William Clinton is assessed for the property in that year, its value having increased from \$10,500 to \$15,000, probably as a reflection of a second tenement that had been built at the back of the lot, into and over the edge of the cesspool. (2001b:10-11).

The archaeological investigations at Block 160 demonstrated that truncated features with significant archaeological deposits can be found on lots which were subsequently developed. The resulting studies conducted on the material recovered have made a substantive contribution to the understanding of the history of a working class neighborhood in nineteenth century New York City.

Sullivan Street (NYU campus)

The results of excavations within six lots on Sullivan Street for an NYU expansion project in Greenwich Village also indicate that many nineteenth century shaft features have survived the subsequent intense development of Manhattan. Salwen and Yamin found that:

Although the nineteenth century backyard surfaces were destroyed by construction of Sullivan Street, truncated features were found on all but one of the lots. All were packed with artifactual material (1990).

During the subsurface investigations, archaeologists found a total of five privies, three cisterns, one well, and two "other" features. All of the truncated features were found between 5-9 feet below the modern street elevation, underlying subsequent fill and construction episodes. With the exception of the well, which extended another 20 feet in depth, these truncated features ranged from 1-7 feet in depth. Each of these significant features was found in the location where Sullivan Street had cut through former backyards. Research conducted on the site by Jean Howson also found that although there was a City policy in place that encouraged residents to connect their dwellings into the public sewer system, many continued to utilize their privies for a decade or more after the public sewer was installed (Howson 1992-3:142-143).

Ericsson Place

Excavations conducted by Historical Perspectives, Inc. at the Ericsson Place Site found several undocumented features in the back yards of nineteenth century residential lots.

Excavation revealed several walls and foundations-some were expected, but a few, in the rear lots of the residences along Beach Street, were undocumented. The presence of two nineteenth century cisterns indicate that backyard features relating to the adjacent residences were indeed present as predicted. The most productive area of the site had two features (the foundations of an at-grade twentieth century outbuilding and a nineteenth century cistern) and two concentrations of historic artifacts.

The large double brick cistern found in the rear lot of 126 Hudson Street was most likely introduced to the site before the late 1850s.... The cistern may not have been in use for long and was probably filled in a single dumping episode (1997).

Lower East Side

Excavations in two lots in the Lower East Side unexpectedly encountered a cistern and a series of drainage system features in the location of the former rear yards. The features were discovered under what had been a tailor's shop. Subsequent demolition activity had buried and sealed the features beneath three to five feet of twentieth century debris. A rectangular stone foundation wall that enclosed and post-dated the cistern was also discovered. The find "provided a unique vertically stratified record of early to mid-nineteenth century history within the Lower East side. The features dated from 1840-1867, indicating that water was not connected to residences in this area until after the Civil War "at least a decade after the documentary record has previously suggested" (Grossman 1995:2). Excavations also found a late nineteenth to early twentieth century privy feature and a mid to late nineteenth century pit feature. According to the project archaeologist, the pre-Croton Reservoir water control cistern structure was found to be totally intact and undisturbed by the subsequent 150 years of later nineteenth and twentieth century building and demolition activities at the site. No mixed late nineteenth or twentieth century materials were encountered in association with it, and no later building activities had intruded into, or disturbed, the feature in any way (Grossman 1995).

Lower East Side Girls Club Site

In 2009, Historical Perspectives, Inc. excavated two large trenches at the Lower East Side Girls Club site on Block 377, Lots 35, 41, 42, 43, 47, and 48, located on Avenue D between 7th and 8th Streets in the Lower East Side of Manhattan. Two ca. seven-foot diameter stone lined circular privies were found on the site, both of which had been truncated by later development. Intact deposits in Feature B, the first privy, were found at a depth of 2.5 meters (8.2 feet) below the existing ground surface. Feature E, the second privy, was found at a depth of ca. 2.66 meters (8.7 feet) below the existing ground surface. Beneath the two privies were thick deposits of marshy peat, attesting to the block's former location within marshland that was subsequently filled in to create building lots. Both privies contained assemblages of early nineteenth century residential deposits (Historical Perspectives 2009).

IV. CONCLUSIONS

Archival research concentrating on the specific histories of the project site has revealed a series of occupants on each lot. Archaeological resources, such as domestic artifacts and refuse, associated with these residents may have been deposited in domestic shaft features—such as wells, cisterns, and privies—that were likely located in the rear yards of the lots. Comparative data has shown that these types of archaeological resources frequently are found in urban contexts, particularly in Manhattan. As noted above, privies were located furthest from the houses, often along the rear lot lines, while wells and cisterns frequently (but not always) were located closer to the rear walls of street-fronting buildings or outbuildings. Privies and cisterns could be excavated up to 10-15 feet below grade, while wells would need to be excavated as deep as the water table, which varied according to location. It is assumed that the depth of the historic water table corresponds to the top of the peat layer found in the soil borings (ranging from 14-18 feet below the existing ground surface), which would have represented the top of the marshland.

Public water was available under both Broome Street and Watts Street by 1842; sewers were laid under Broome Street in 1853 and Watts Street in 1868 (Croton Aqueduct Department 1853, 1868). From ca. 1818-1842, before the introduction of piped city water, residents would have relied on rear yard shaft features, such as wells and cisterns. Privies and cesspools would have been used at least until the introduction of municipal sewers. Although it is possible that residents made use of public water and sewers around the time that they were installed, it is also likely that they continued to use rear yard shaft features for a number of years afterwards. Archaeological investigations in the vicinity of the project site have shown that often shaft features were not abandoned and/or sealed off until many years after public water and sewers became available. At the Sullivan Street Site, for example, dates of deposition ranged from 1840 through ca. 1900, with the well and cisterns having the latest dates of deposition, from the 1890s through the early 1900s (Howson 1992-1993:138). At the 81-85 West Third Street site a cistern contained deposits dating to the 1890s (John Milner Associates 2003).

The residences built on the APE lots were constructed in 1822 (Lot 44, Broome Street) and 1818 (Lot 76, Watts Street). Both houses had basements, and it is assumed that any shaft features would have been located in the yard areas of the lots. Although both houses had additions built over portions of the yards, none of the additions had basements, suggesting the possibility that shaft features, or truncated shaft features could still survive under these former additions. It is also possible that other subsurface features, such as sheet middens or former outbuilding foundations, could be preserved as well if disturbance is not extensive. Figure 8 illustrates the areas of potential archaeological sensitivity for the two lots.

V. RECOMMENDATIONS

Current construction plans indicate that the proposed project will entail excavation of the entire project site footprint to a depth of 21 feet below the proposed ground floor level to remove the entire existing layer of peat, which in places was measured at ca. 4 feet in thickness. Any potential archaeological resources within the APE lots would be affected by this project excavation. Based on this information, HPI recommends archaeological testing within the former rear yard areas of Lots 44 and 76, with specific locations to be determined in consultation with LPC as part of an Archaeological Testing Protocol. The 4-foot wide alley that is now part of Lot 44 was historically west of Lot 44. This narrow thoroughfare bordered by buildings likely was used by residents accessing the rear yard of Lot 44 and other lots adjoining it. It is assumed that the portion of the alley between former buildings would not have had shaft features present, and the degree of disturbance from later construction and demolition on adjacent Lot 35 suggests that more fragile potential archaeological resources, such as sheet middens, probably have been destroyed. However, HPI is labeling the southern extent of the alley as archaeologically sensitive because this portion was located adjacent to an open yard area, and it is possible that residents used this dead end area as an informal extension of their yards, and it is possible that shaft features could have slightly overlapped this narrow area.

Archaeological field testing would involve using a backhoe to remove the existing ground surface (now covered with demolition debris) with the former rear yards of the APE lots (including those areas once covered by building additions with no basements) and any underlying modern fill or debris in order to expose potential archaeological resources. All Phase IB archaeological testing should be conducted according to OSHA regulations and applicable archaeological standards (LPC 2002, CEQR 2010). Professional archaeologists, with an understanding of and experience in urban archaeological excavation techniques, would be required to be part of the archaeological team.

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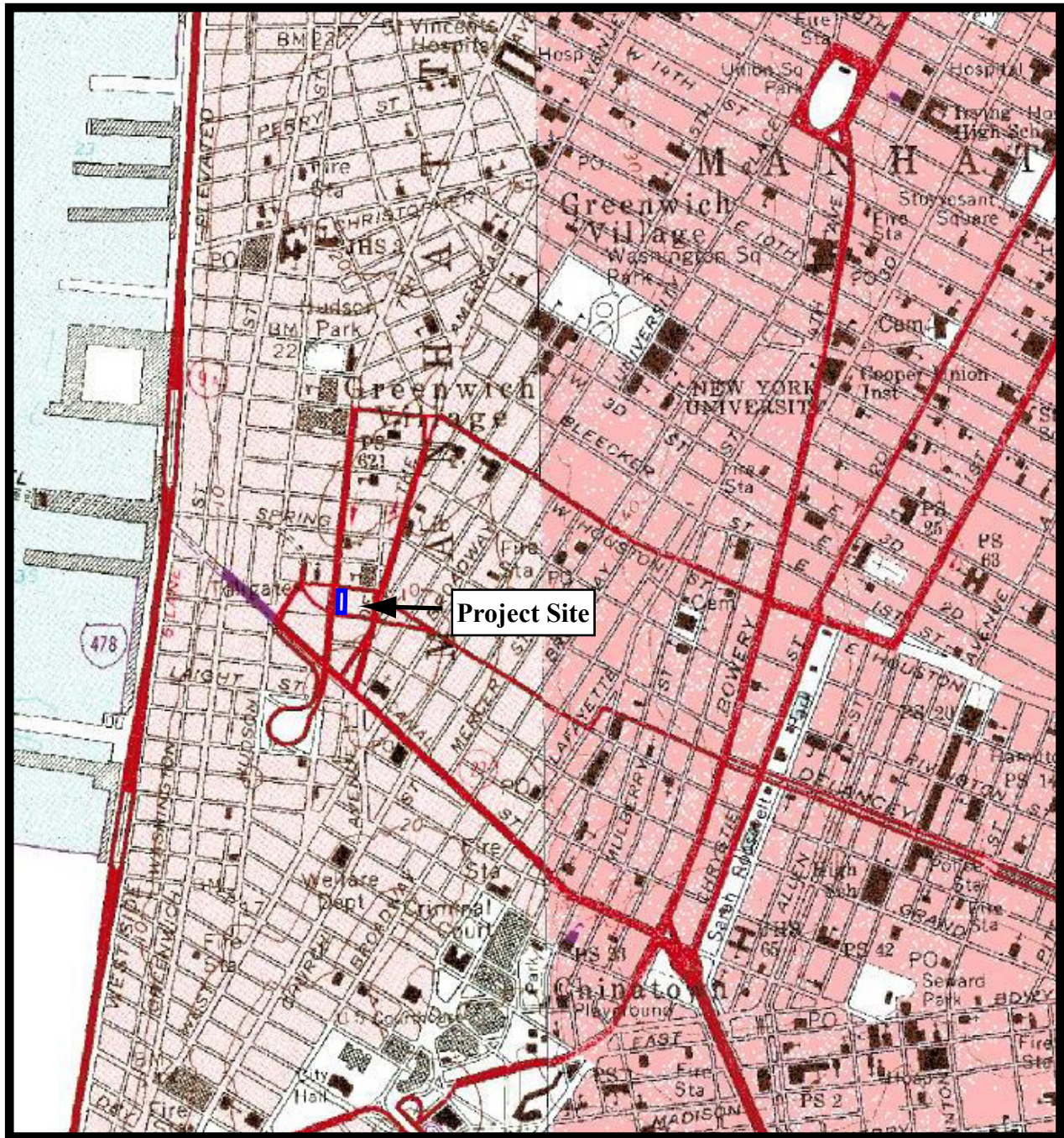
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Phase IA Archaeological Documentary Study
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 66 Watts Street, Block 477, Lot 76
 New York, New York

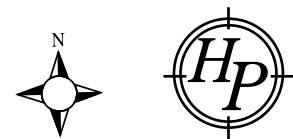
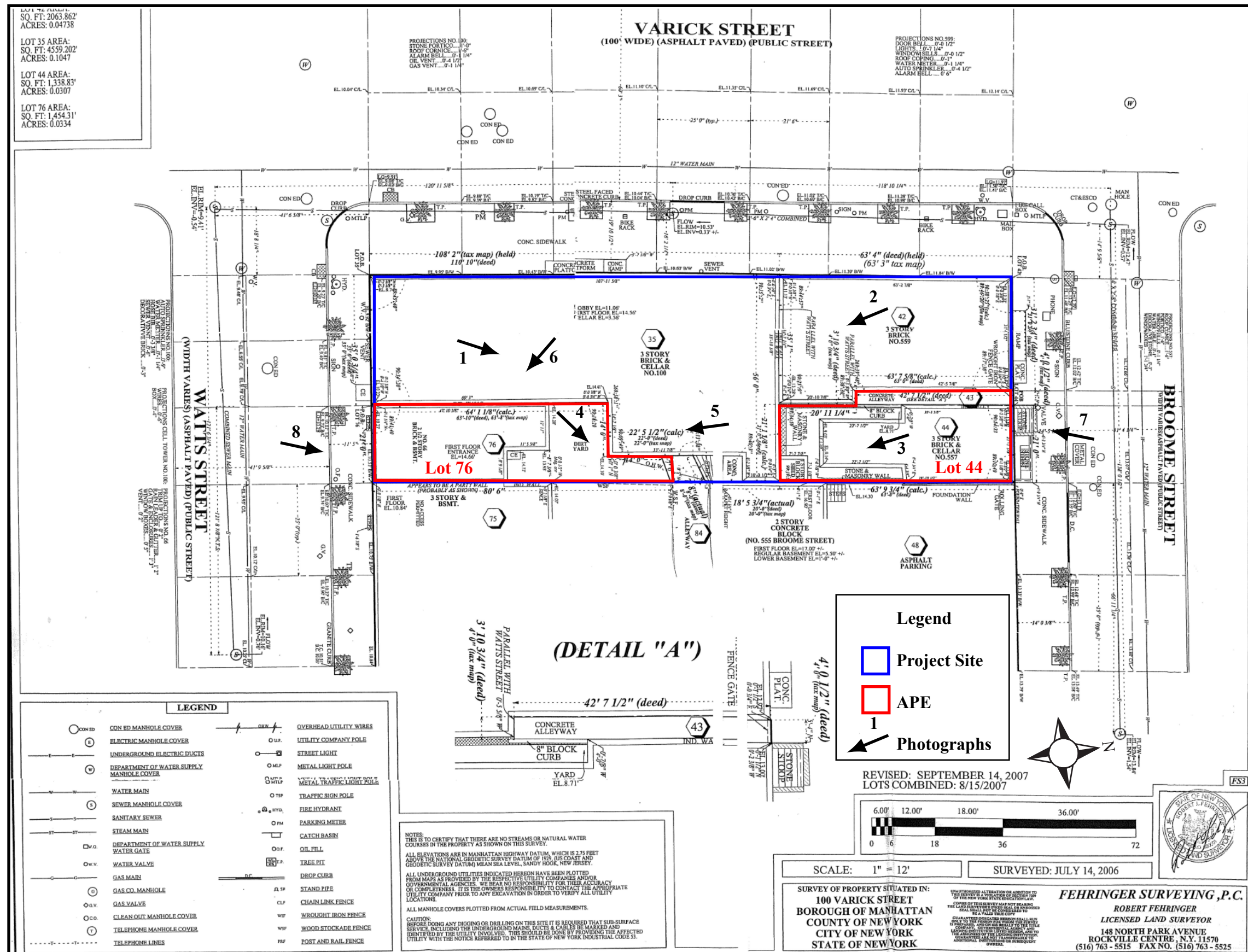
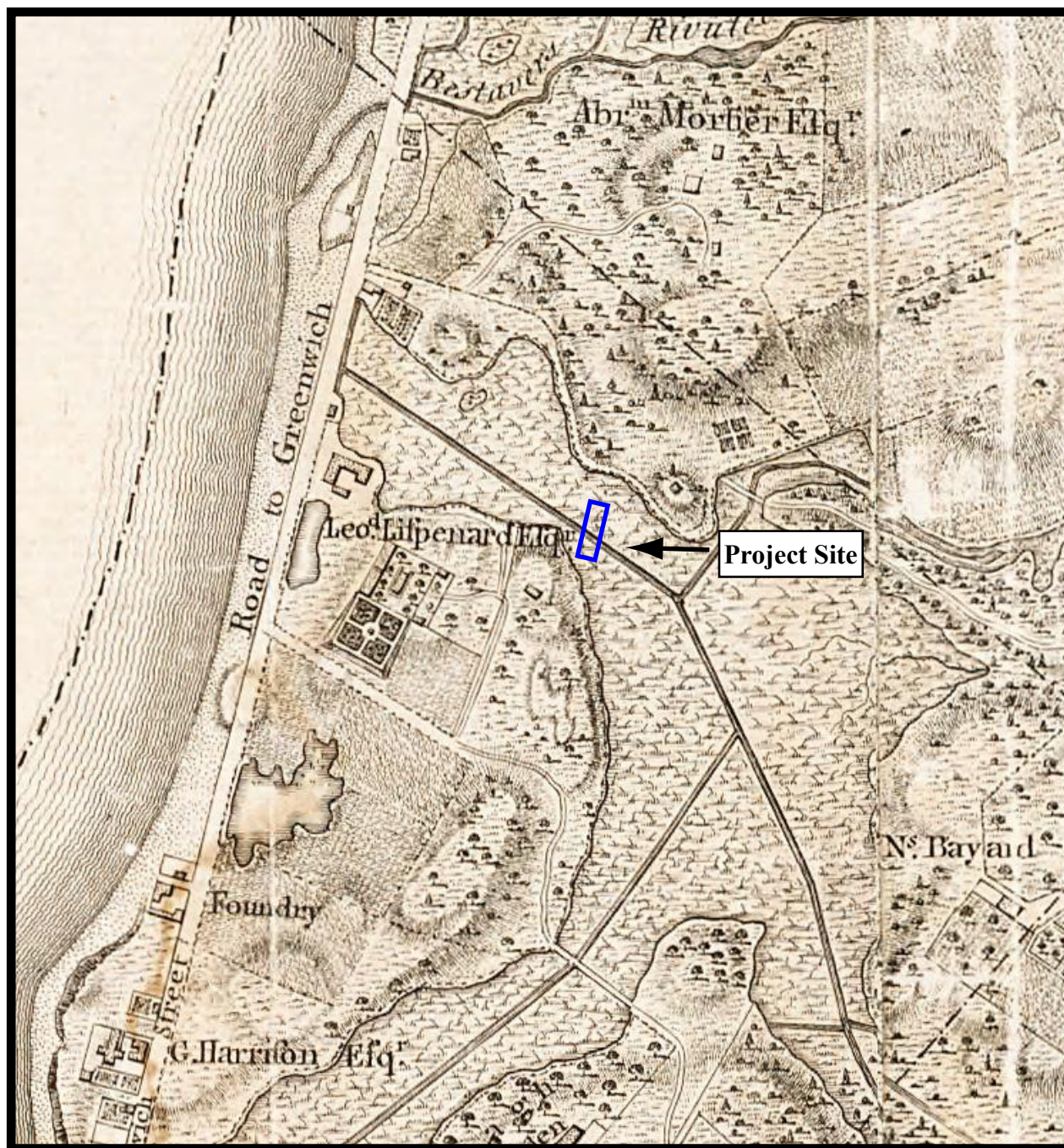


Figure 1: Project site on *Jersey City, N.J.-N.Y.* and *Brooklyn, N.Y.* 7.5 Minute Quadrangles (U.S.G.S. 1981).

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Phase IA Archaeological Documentary Study
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 New York, New York

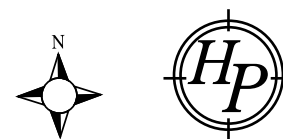
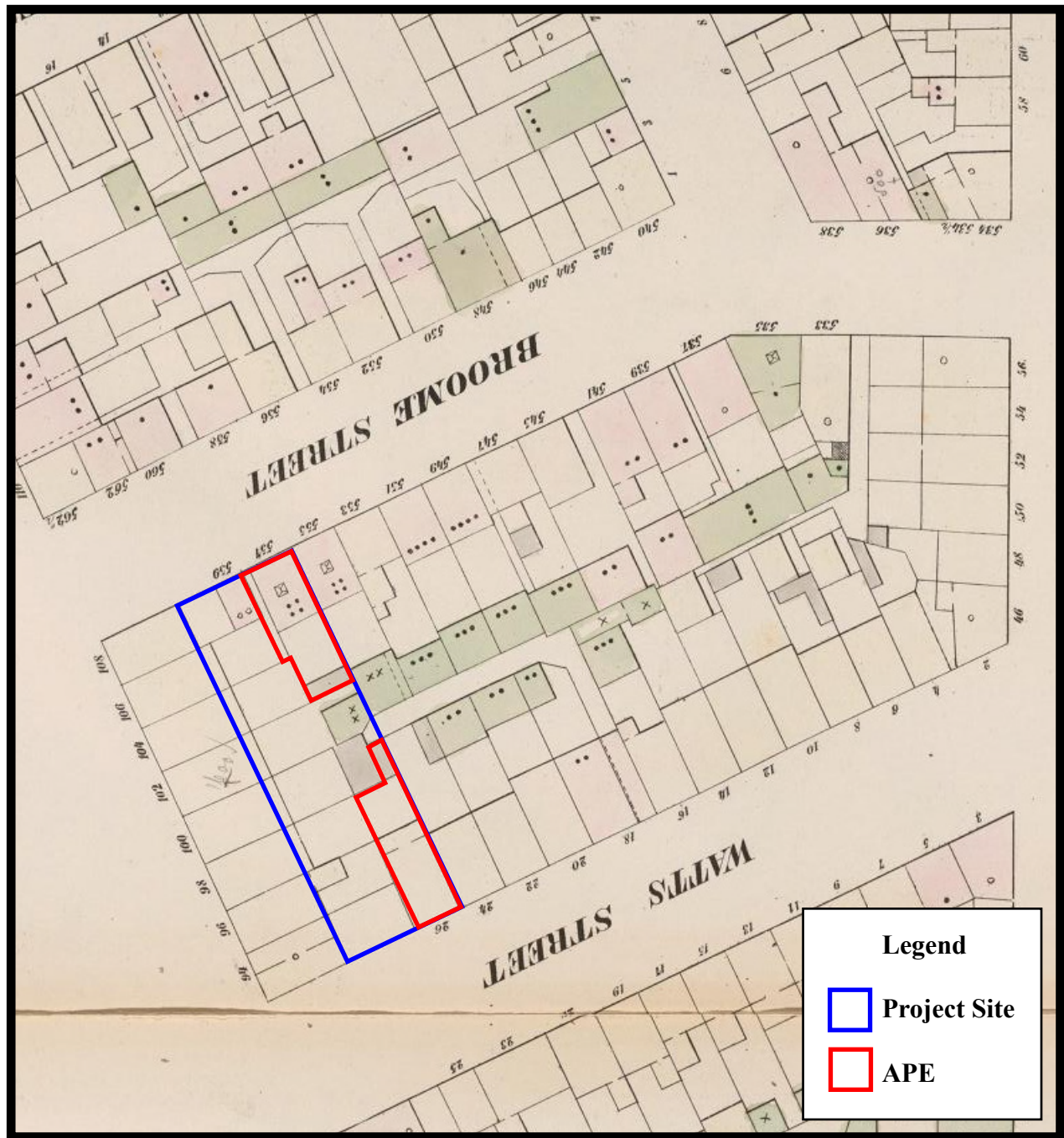


Figure 3: Project site on *Plan of the City of New York, In North America, Surveyed in the Years 1766 and 1767* (Ratzer 1766-7).

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Phase IA Archaeological Documentary Study
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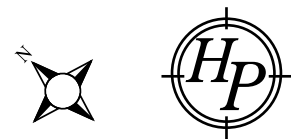
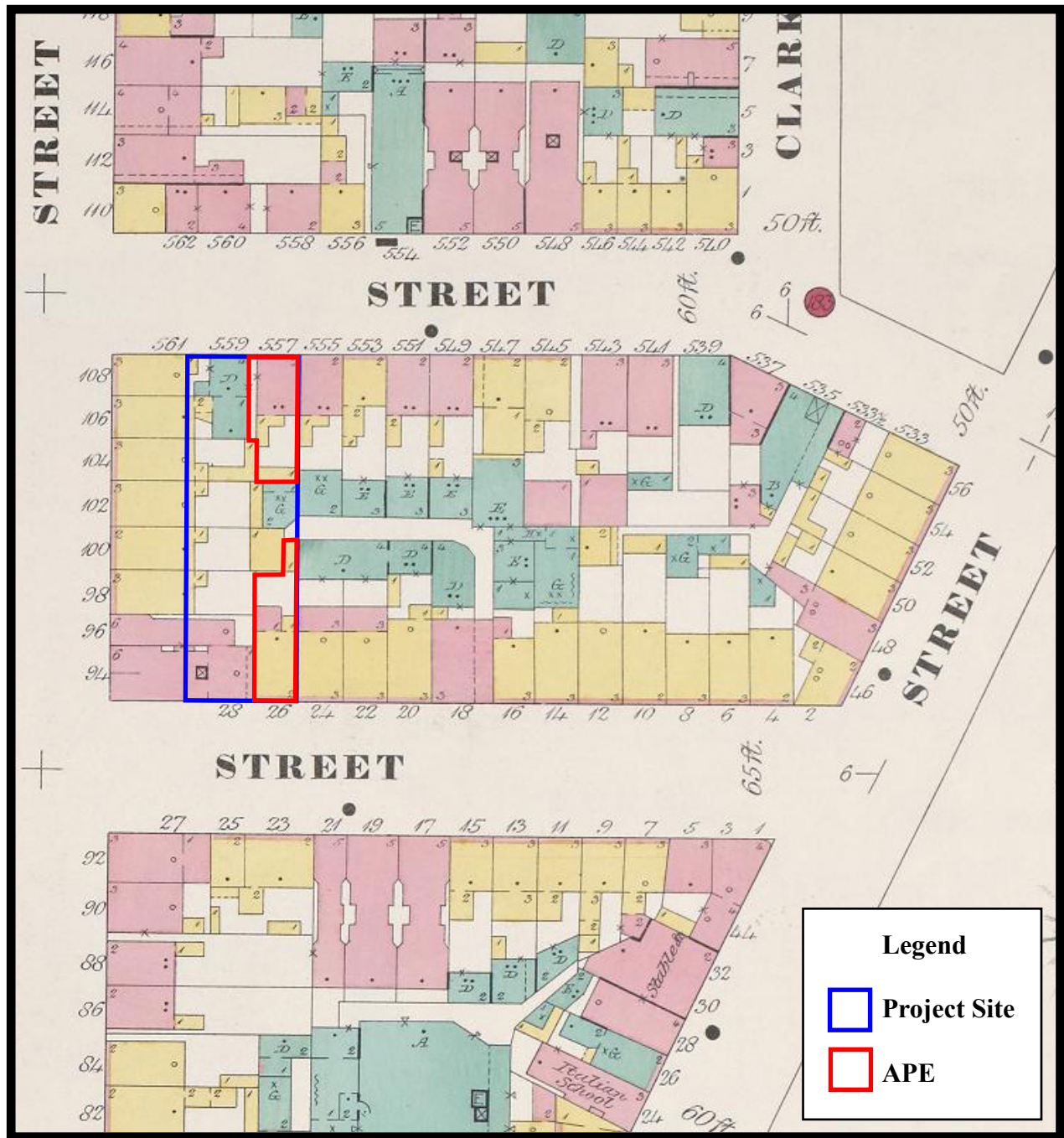


Figure 4: Project site and APE on *Maps of the City of New York* (Perris 1853).

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Phase IA Archaeological Documentary Study
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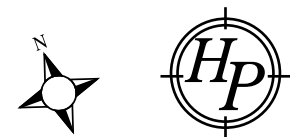
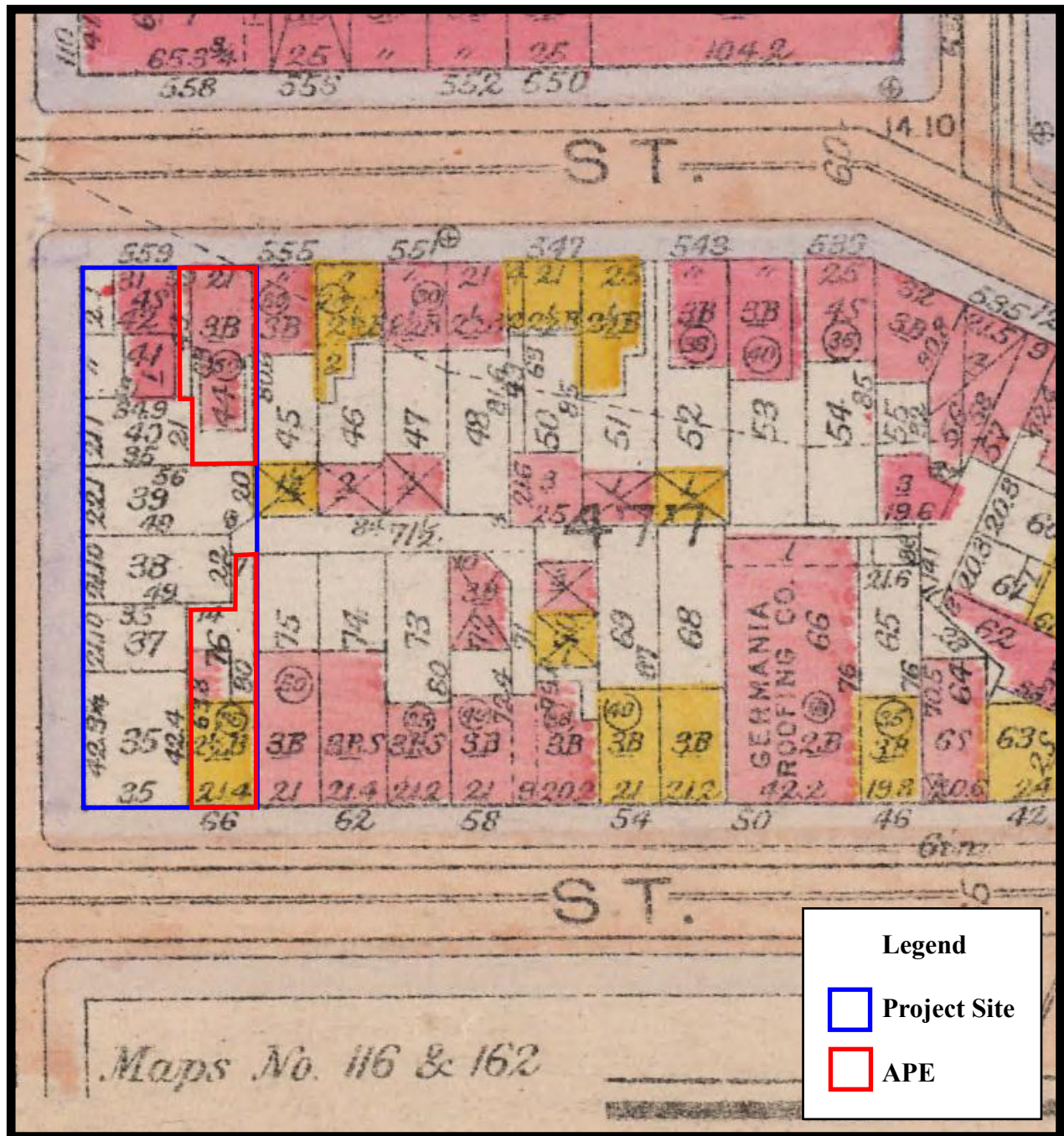


Figure 5: Project site and APE on *Insurance Maps of New York City* (Sanborn 1894).



Phase IA Archaeological Documentary Study
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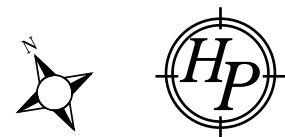
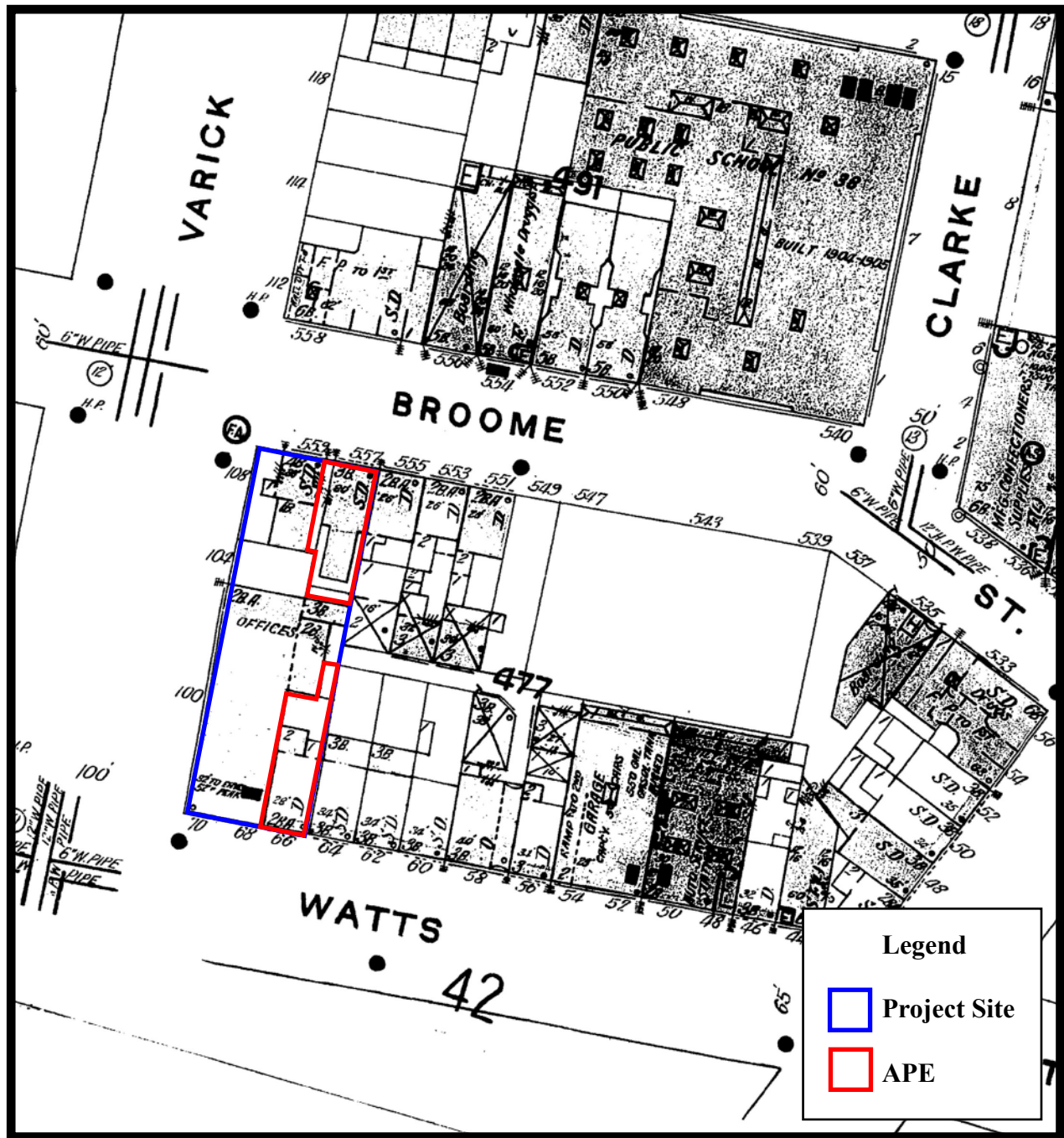


Figure 6: Project site and APE on *Atlas of the City of New York, Borough of Manhattan* (Bromley 1917).

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 66 Watts Street, Block 477, Lot 76
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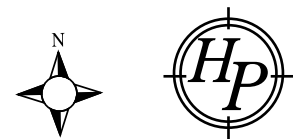


Figure 7: Project site and APE on *Insurance Maps of New York City* (Sanborn 1922).

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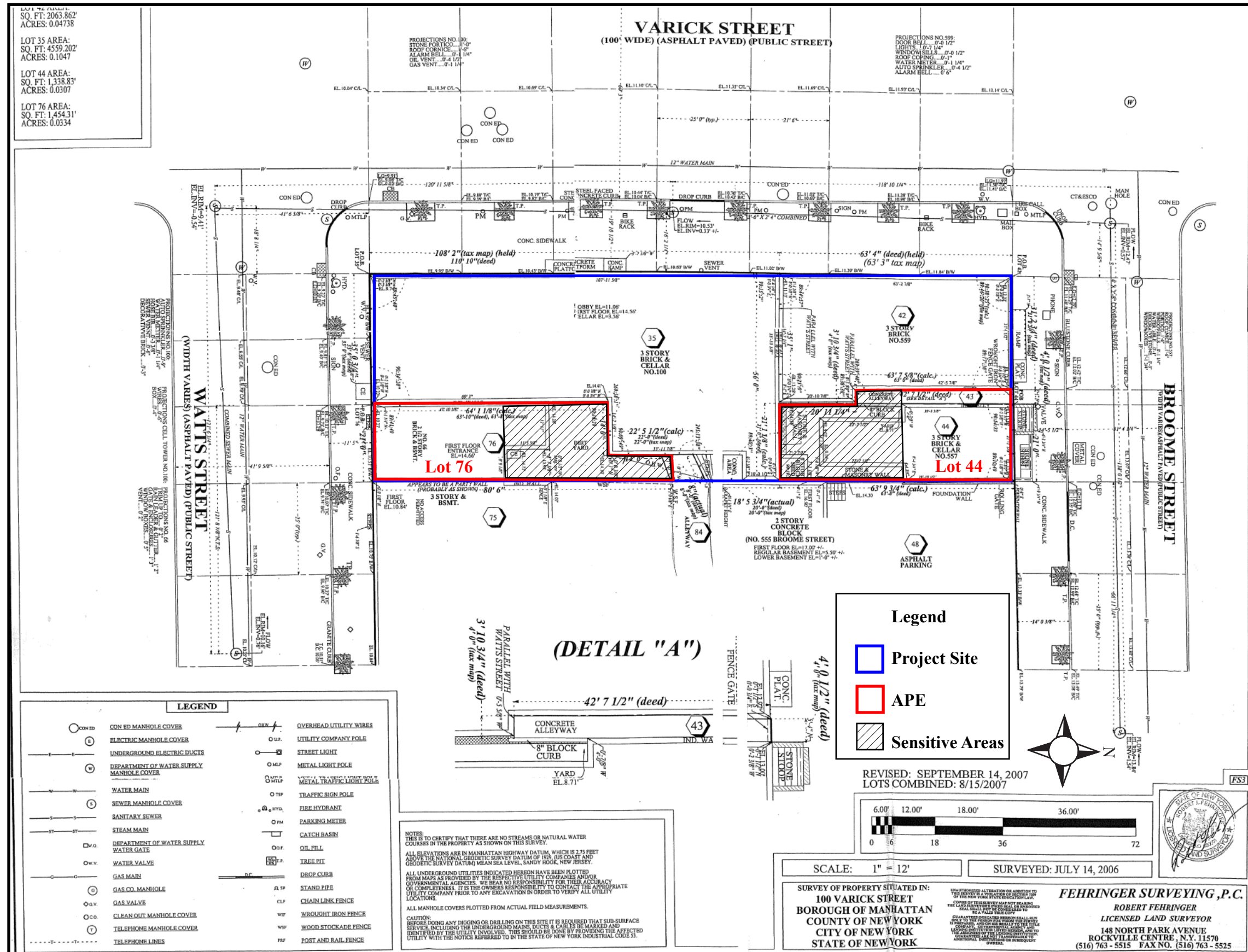


Figure 8: Location of Archaeologically Sensitive Areas on 2007 survey map [buildings are now demolished] (Fehringer Surveying, P.C. 2007).



Photograph 1: Project site showing APE on right bordering building and fence. View looking northeast. Source: HPI.



Photograph 2: Project site showing APE on left bordering buildings and fence. View looking southeast. Source: HPI.



Photograph 3: Detail of former rear yard of Lot 44, 557 Broome Street. Area against building on left was open yard and area covered by bricks is footprint of former building extension. View looking southeast. Source: HPI.



Photograph 4: Detail of former rear yard of Lot 76, 66 Watts Street. View looking northeast. Source: HPI.



Photograph 5: Project site and APE during demolition in 2007. Lot 76, 66 Watts Street building is in process of being demolished. View looking southeast. Source: <http://www.wirednewyork.com>.



Photograph 6: Former residence at 66 Watts Street during demolition. View looking southeast. Source: <http://www.wirednewyork.com>.



Photograph 7: Façade of Lot 44, 557 Broome Street in 1999. View looking south. Source: NYPL Digital Gallery.

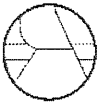


Photograph 8: Façade of Lot 76, 66 Watts Street in 1999. View looking north. Source: NYPL Digital Gallery.

APPENDIX A

Boring Logs





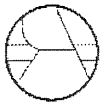
RA CONSULTANTS LLC
Geotechnical Engineering

Log of Boring: B-1

Sheet 1 of 4

PROJECT	100 Varick Street	PROJECT NUMBER	09C1031
LOCATION	Manhattan, NY	ELEVATION & DATUM	+12 +/- BPMD
DRILLING AGENCY	Warren George Inc.	DATE STARTED	9/30/2009 10/1/2009
DRILLING EQUIPMENT	Truck Rig / Acker	COMPLETION DEPTH (FT)	90
SIZE AND TYPE OF BIT	3-7/8 inch tricore	NO. SAMPLES	18
CASING SIZE AND TYPE	4-inch / 3-inch	DIST.	18
CASING HAMMER WEIGHT	300-lb	UNDIST.	-
SAMPLER	2-inch SS	COMPL.	-
SAMPLER HAMMER WEIGHT	140-lb	24HR	-
		FOREMAN	Boby Verpent
		HELPER	Shawn Bigg
		INSPECTOR	N. AbiSaab

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type No.	Recov. FT %	Resist. BL/6" RQD%	water cont. (%)	-200 (%)		
Fill: brick, gravel, some sand (7)	1						Fill	Day 1 – 9/30/09
	2							Moved rig to boring location
	3							Day 2 – 10/1/09
	4							
Fill: Brown fine to coarse sand, some gravel Brick (7)	5						Fill	
	6	SS 1	0.5	2 3 18 4				
	7							
	8							
Fill: Brown fine to coarse sand, trace gravel, Brick (7)	9						14'	
	10							casing to 10'
	11	SS 2	2	7 8 13 12				
	12							
Black peat (Pt) (7)	13	SS 3	2	10 11 14 20			Pt	
	14							
	15	SS 4	2	2 3 3 3				
	16							
Gray sandy lean clay (CL-ML) (4b)	17	SS 5	2	3 4 6 6	21.6		CL-ML	
	18							
	19	SS 6	2	5 5 4 12				
	20							
Top 1.8': same tip of spoon: 2" organics, roots, fibers								

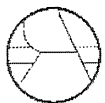


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Log of Boring: B-1

Sheet 2 of 4

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type No.	Recov. FT %	Resist. BL/6" RQD%	water cont. (%)	-200 (%)		
Brown fine to coarse sand with silt (SW-SM) (3b)	21	SS 7	2	5	15.2			
				5				
				11				
				14				
	22							
	23							
	24							
	25							casing to 25'
Brown fine to medium sand (SP) (3a)	26	SS 8	1.5	13				
				16				
				18				
				15				
	27							
	28							
	29							
	30							
Brown fine to coarse sand (SW) (3a)	31	SS 9	1.5	12				
				15				
				16				
				18				
	32							
	33							
	34							
	35							
Brown silty fine sand (SM) (3a)	36	SS 10	2	19			S	
				17				
				9				
				12				
	37							
	38							
	39							
	40							
same SS-9	41	SS 11	2	9				
				11				
				19				
				18				
	42							
	43							
	44							
	45							

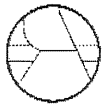


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Geotechnical Engineering

Log of Boring: B-1

Sheet 3 of 4

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type No.	Recov. FT %	Resist. BL/6" RQD%	water cont. (%)	-200 (%)		
Brown fine to coarse sand, trace silt (SP) (3a)	46	SS 12	2	11				
				21				
				25				
				22				
	47							
	48							
	49							
	50							
Brown fine to coarse sand, trace gravel (SP) (3b)	51	SS 13	2	11				
				12				
				13				
				18				
	52							
	53							
	54							
	55							
same	56	SS 14	2	12				
				13				
				15				
				16				
	57							
	58							
	59							
	60							
same	61	SS 15	2	16				
				18				
				18				
				19				
	62							
	63							
	64							
	65							
Brown fine to medium sand, trace silt (SP) (3a)	66	SS 16	2	12				
				18				
				18				
				16				
	67							
	68							
	69							
	70							

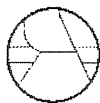


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Log of Boring: B-1

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DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type	Recov. FT	Resist. BL/6"	water cont.	-200		
		No.	%	RQD%	(%)	(%)		
Brown fine to medium sand (SP) (3a)	71	SS 17	2	15 20 18 15			S	
	72							
	73							
	74							
Brown fine to medium sand, trace gravel (SP) (3a)	75							
	76	SS 17	1.5	12 16 17 20				
	77							
	78							
Brown fine to coarse sand, trace gravel (SW) (3a)	79							
	80							
	81	SS 18	1.5	18 17 13 12				
	82							
Medium hard mica schist, vertical jointing (1a)	83							
	84						Rock	
	85							
	86							
	87	C1	90	90				
	88							
	89							
	90						90'	End of Day 2 – 1530 hrs
End of boring	91							
	92							
	93							
	94							
	95							



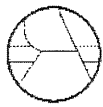
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Log of Boring: B-2W

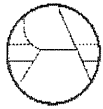
Sheet 1 of 5

PROJECT	100 Varick Street	PROJECT NUMBER	09C1031
LOCATION	Manhattan, NY	ELEVATION & DATUM	+10 +/- BPMD
DRILLING AGENCY	Warren George Inc.	DATE STARTED	9/24/2009
DRILLING EQUIPMENT	Truck Rig / Acker	COMPLETION DEPTH (FT)	106
SIZE AND TYPE OF BIT	3-7/8 inch tricone	NO. SAMPLES	23
CASING SIZE AND TYPE	4-inch / 3-inch	UNDIST.	-
CASING HAMMER WEIGHT	300-lb	CORE (FT)	5
SAMPLER	2-inch SS	WATER LEVEL	FIRST -
SAMPLER HAMMER WEIGHT	140-lb	COMPL.	-
		24HR	below
		FOREMAN	Boby Verpent
		HELPER	Shawn Bigg
		INSPECTOR	N. AbiSaab

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type No.	Recov. FT %	Resist. BL/6" RQD%	water cont. (%)	-200 (%)		
Fill: Brick (7)	1	SS 1	1	11 13 11				Day 1 - 9/24/09 - 1200 hrs
	2			12				Ground Water Table
	3							Date Depth
	4							9/30/2009 13'-3"
	5							10/1/2009 13'-6"
	6							10/2/2009 13'-6"
	7							10/5/2009 13'-6"
Fill: construction debris, concrete, gravel (7)	8							casing to 5'
	9							End of Day 1 - 1300 hrs
	10							Day 2 - 9/25/09
Fill: gravel, brick, some sand (7)	11	SS 3	0.25	100/4"				Boulder or old slab at 8' +/-
	12							
Fill: sand, some brick, gravel (7)	13	SS 4	1	7 5 6				
	14							
Black peat, some fiber, trace sand (Pt/OH) (7)	15	SS 5	2	3 3 4	252		14'	Organic odor
	16						Peat	
Brown silty fine to coarse sand with silt and gravel (SW-SM) (3b)	17	SS 6	0.5	8 7 8 10	23.3		16'	
	18						SW-SM	
Gray sandy lean clay (CL-ML) (4b)	19	SS 7	2	8 8 6			18'	
	20						CL-ML	



DESCRIPTION	DEPTH	Samples			Lab. Results		STRATA	REMARKS										
		Type	Recov.	Resist.	water													
		No.	FT %	BL/6" RQD%	cont. (%)	-200 (%)												
same (CL-ML) (4a)	21	SS 8	2	8	26	6.3	CL-ML											
				16														
	22			22														
				17														
	23																	
24																		
25				25'														
Top 1': Gray fine to medium sand and silt (SM)	26	SS 9	2	2						S								
Bot 1': Brown medium to coarse sand (SP)(3a)	27			3														
	28			10														
	29			22														
	30																	
Brown fine to coarse sand (SP) (3b)	31	SS 10	2	7														
				7														
	32			10														
				13														
	33																	
34																		
35																		
Brown fine to medium sand with silt (SP-SM) (3b)	36	SS 11	2	8													38'	
				10														
	37			9														
				10														
	38																	
39																		
40																		
Grayish brown interlayered deposit of sandy silt, trace clay (ML) (5b)	41	SS 12	2	4				SM/ML										
				5														
	42			10														
				11														
	43																	
44																		
45																		

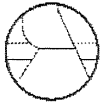


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Log of Boring: B-2W

Sheet 3 of 5

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type No.	Recov. FT %	Resist. BL/6" RQD%	water cont. (%)	-200 (%)		
Brown interlayered deposit of silty fine sand trace clay (SM) (3a)	46	SS 13	1	7			SM/ML	End of Day 2 - 1530 hrs Day 3 - 9/28/09
	47			14				
	48			25				
	49			15			48'	
Brown fine to coarse sand, trace gravel, silt (SW) (3b)	50	SS 14	1	13				
	51			15				
	52			14				
	53			16				
	54							
Brown fine to medium sand (SP) (3a)	55	SS 15	2	18			S	
	56			19				
	57			25				
	58			29				
	59							
same	60	SS 16	2	18				
	61			17				
	62			25				
	63			30				
	64							
same	65	SS 17	2	18				
	66			20				
	67			21				
	68			19				
	69							
	70							



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Log of Boring: B-2W

Sheet 4 of 5

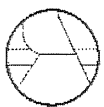
DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type	Recov.	Resist.	water	-200		
		No.	FT %	BL/6" RQD%	cont. (%)	(%)		
same	71	SS 18	2	16 18 20 15			S	
	72							
	73							
	74							
	75							
Brown fine to medium sand, trace gravel, silt (SP) (3a)	76	SS 19	2	21 25 30 27				
	77							
	78							
	79							
	80							
same	81	SS 20	1.5	23 20 24 20				
	82							
	83							
	84							
	85							
Brown gravelly medium to coarse sand (SP) (3b)	86	SS 21	1.5	15 11 13 14				
	87							
	88							
	89							
	90							
Brown fine to medium sand, some silt, trace gravel (SP-SM) (3a)	91	SS 22	1.5	12 18 29 28				
	92							
	93	C1	n/a	n/a				
Boulder. 20% recovery	94							
	95							



Sheet 5 of 5

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS	
		Type	Recov. FT	Resist. BL/6'	water cont.	-200			
		No.	%	RQD%	(%)	(%)			
Rock fragments Hard gray gneissic schist (1a)	96	C1	n/a	n/a			S	Installed 3" casing to 95'	
	97							100'	End of Day 3 - 1530 hrs
	98								Day 4 - 9/29/08
	99	Core barrel got clogged.							
	100	End of Day 4 - 1530 hrs							
	101	Day 5 - 9/30/09							
	102	C2	100	100			Rock	106'	
	103								
	104								
	105								
	106								
End of boring at 106'	107						Installed water well: 1.25" PVC pipe 10' screen and 30' rizer stickup 2'-3" above ground surface backfilled with silica sand all the way		
108									
109									
110									
111									
112									
113									
114									
115									
116									
117									
118									
119									
120									

PROJECT				100 Varick Street				PROJECT NUMBER				09C1031																	
LOCATION				Manhattan, NY				ELEVATION & DATUM				+11 +/- BPMD																	
DRILLING AGENCY				Warren George Inc.				DATE STARTED				9/30/2009				10/1/2009													
DRILLING EQUIPMENT				Truck Rig / CME				COMPLETION DEPTH (FT)				103				ROCK DEPTH (FT)				98									
SIZE AND TYPE OF BIT				3-7/8 inch tricone				SIZE AND TYPE CORE BARREL				NQ double tube				NO. SAMPLES		DIST.		22		UNDIST.		-		CORE (FT)		5	
CASING SIZE AND TYPE				4-inch / 3-inch												WATER LEVEL		FIRST		-		COMPL.		-		24HR		-	
CASING HAMMER WEIGHT				300-lb				DROP		30-in		SAMPLING				FOREMAN				Cemmie Hartley									
SAMPLER				2-inch SS				DROP		30-in		HAMMER TYPE				HELPER				Samuel									
SAMPLER HAMMER WEIGHT				140-lb								<input type="checkbox"/> Safety <input checked="" type="checkbox"/> Donut <input type="checkbox"/> ATH				INSPECTOR				N. AbiSaab									
DESCRIPTION				DEPTH		Samples			Lab. Results		STRATA		REMARKS																
						Type	Recov.	Resist.	water																				
				(ft)	No.	%	BL/6"	cont.	-200																				
							RQD%	(%)	(%)																				
Fill: Concrete (7)				1						Fill		Day 1 – 9/30/09																	
				2																									
				3																									
				4																									
				5																									
				6	SS	0.1	7					Casing to 10'																	
				7	1		7																						
				8			4																						
				9			3																						
				10																									
Brown fine to coarse sand, trace gravel (SP) (6)				11	SS	1.5	7			Sand																			
				12	2		4																						
				13	SS	1	5																						
				14	3		4																						
				15			6																						
Brown medium to coarse sand, trace gravel (SP) (3b)				16	SS	0.3	10																						
				17	4		12																						
				18			6																						
				19	SS	1.5	6																						
				20	5		5																						
Brown fine to coarse sand (SP) (3b)				1			7								17'														
				2			3																						
				3			4		Pt																				
				4			3																						
				5			4																						
Top 1': same				6	SS	0.2	2								19'														
				7	6		3																						
				8			2		SP																				
				9			2																						
				10			3																						
Bot 1': Black peat, some wood, fiber (Pt) (7)				1											CL-ML														
				2																									
				3																									
				4																									
				5																									
Spoon tip: brown fine to coarse sand, trace gravel (SP) (6)				6																									
				7																									
				8																									
				9																									
				10																									
				11																									
				12																									

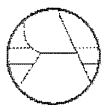


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Log of Boring: B-3

Sheet 2 of 5

DESCRIPTION	DEPTH	Samples			Lab. Results		STRATA	REMARKS		
		Type	Recov.	Resist.	water					
		No.	FT %	BL/6" RQD%	cont. (%)	-200 (%)				
	(ft)									
Gray sandy lean clay, trace fiber (CL-ML) (4b)	21	SS 7	2	10			CL-ML	Casing to 25'		
				6						
	22			6						
				3						
23				23'						
24										
Brown fine to coarse sand, trace gravel (SW) (3b)	25	SS 8	2	11						
	26			10						
	27			7						
				13						
28										
29										
Brown fine to medium sand (SP) (3b)	30	SS 9	2	7						S
	31			8						
	32			9						
				10						
33										
34										
Brown fine to coarse sand(SW) (3b)	35	SS 10	2	9						
	36			9						
	37			8						
				9						
38										
39										
Grayish brown medium to coarse sand (SP) (3b)	40	SS 11	2	9						
	41			9						
	42			10						
				12						
43										
44										
45										

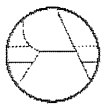


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Log of Boring: B-3

Sheet 3 of 5

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type No.	Recov. FT %	Resist. BL/6" RQD%	water cont. (%)	-200 (%)		
Gray brown fine to coarse sand, trace silt (SP) (3b)	46	SS 12	2	8				
				7				
				7				
				8				
	47							
	48							
	49							
	50							
Gray brown silty fine to medium sand (SP-SM) (3b)	50	SS 13	2	7				
				7				
				10				
				15				
	51							
	52							
	53							
	54							
	55							End of Day 1 – 1530 hrs
Brown fine to medium sand, trace silt (SP) (3b)	55	SS 14	2	16			S	Day 2 – 10/1/09
				14				
				14				
				10				
	56							
	57							
	58							
	59							
	60							
Brown silty fine sand (SP-SM) (3b)	60	SS 15	1	10				
				12				
				14				
				18				
	61							
	62							
	63							
	64							
	65							
Brown fine to coarse sand, trace silt (SP) (3a)	65	SS 16	1	13				
				17				
				20				
				20				
	66							
	67							
	68							
	69							
	70							

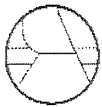


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Geotechnical Engineering

Log of Boring: B-3

Sheet 4 of 5

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type No.	Recov. FT %	Resist. BL/6" RQD%	water cont. (%)	-200 (%)		
same	71	SS 17	2	25				
				21				
				23				
				20				
	72							
same	73							
	74							
	75							
	76			17				
				21				
same	77	SS 18	2	21				
				21				
				29				
	78							
	79							
same	80	SS 19	2	18			S	
				28				
				25				
				24				
	82							
Brown fine to coarse sand, trace fine gravel (SW) (3a)	83							
	84							
	85			17				
				25				
	86			24				
Brown fine to coarse sand, some gravel (SP) (3a)		SS 20	2	27				
	87							
	88							
	89							
	90			28				
		SS 21	2	29				
	91			30				
				25				
	92							
	93							
	94						93'	
	95						G	

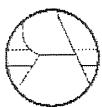


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Log of Boring: B-3

Sheet 5 of 5

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type No.	Recov. FT %	Resist. BL/6" RQD%	water cont. (%)	-200 (%)		
Brown sandy gravel, trace cobbles (GP) (2a)	96	SS 22	1	41			G	
	97			43				
	98			70				
Medium hard mica schist, vertical jointing (1a)	99	C1	85	85			Rock	
	100							
	101							
	102							
	103							
End of Boring	103						103'	End of Day 2 – 1530 hrs
	104							
	105							
	106							
	107							
	108							
	109							
	110							
	111							
	112							
	113							
	114							
	115							
	116							
	117							
	118							
	119							
	120							



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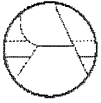
Geotechnical Engineering

Log of Boring: B-4W

Sheet 1 of 4

PROJECT	100 Varick Street	PROJECT NUMBER	09C1031
LOCATION	Manhattan, NY	ELEVATION & DATUM	+13 +/- BPMD
DRILLING AGENCY	Warren George Inc.	DATE STARTED	9/24/2009 9/30/2009
DRILLING EQUIPMENT	Truck Rig / CME	COMPLETION DEPTH (FT)	85
SIZE AND TYPE OF BIT	3-7/8 inch tricone	NO. SAMPLES	DIST. 20
CASING SIZE AND TYPE	4-inch / 3-inch	UNDIST.	-
CASING HAMMER WEIGHT	300-lb	CORE (FT)	2
SAMPLER	2-inch SS	WATER LEVEL	FIRST -
SAMPLER HAMMER WEIGHT	140-lb	COMPL.	-
		24HR	below
		FOREMAN	Cemmie Hartley
		HELPER	Paul Finer / Samuel
		INSPECTOR	N. AbiSaab
			<input type="checkbox"/> Safety <input checked="" type="checkbox"/> Donut <input type="checkbox"/> ATH

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type No.	Recov. FT %	Resist. BL/6" RQD%	water cont. (%)	-200 (%)		
Fill: brick, gravel (7)	1	SS 1	0.5	6 9 13 13				Day 1 - 9/24/09 - 1130 hrs
	2							Ground Water Table
	3							Date Depth
	4							9/30/2009 16'-3"
	5							10/1/2009 16'-3"
	6							10/2/2009 16'-3"
	7							10/5/2009 16'-3"
Fill: red brown brick, gravel, sand (7)	8							
	9							
	10							
Fill: red brown medium to coarse sand, trace gravel, metal (7)	11	SS 3	0.5	3 5 4 9				casing to 5'
	12							
Brown fine to coarse sand, trace gravel, with clay (SP-SC) (6)	13	SS 4	0.5	4 3 5 6			12'	
	14						SP-SC	
Light brown sandy lean clay (CL) (4b)	15	SS 5	2	8 8 14 12			14'	
	16							casing to 15'
	17	SS 6	0.5	18 22 8 3	20.2		CL-ML	End of Day 1 - 1500 hrs
Brown sandy lean clay (CL) (4b)	18						18'	Day 2 - 9/25/09
	19	SS 7	2	4 7 17 21	15.8	38.3		
Brown silty fine to coarse sand (SM) (3b)	20						20'	casing to 20'

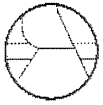


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Log of Boring: B-4W

Sheet 2 of 4

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type No.	Recov. FT %	Resist. BL/6" RQD%	water cont. (%)	-200 (%)		
Brown fine to medium sand (SP) (3a)	21	SS 8	2	24 25 31 37				
	22							
	23							
	24							
same	25							casing to 25'
	26	SS 9	2	32 30 28 22				
	27							
	28						S	
	29							
	30							casing to 30'
Brown fine to coarse sand, trace gravel (SW) (3a)	31	SS 10	1	10 13 31 50/3"				
	32							
	33							boulder likely at 33'
	34						34'	
	35							casing to 35'
Brown medium to coarse sand and gravel (SP-GP)(3a-2a)	36	SS 11	0.5	37 38 8 25				
	37							
	38							
	39							
	40						G	casing to 40'
Gray fine to medium gravel (GP) (2b)	41	SS 12	0.1	12 5 9 39				
	42							
	43							
	44							
	45							casing to 45'



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Log of Boring: B-4W

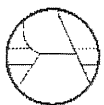
Sheet 3 of 4

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type No.	Recov. FT %	Resist. BL/6" RQD%	water cont. (%)	-200 (%)		
No recovery	46	SS 13	NR	49 48 37 50				
	47							End of Day 2 at 1530 hrs
	48							Day 3 - 9/28/09
	49							hard drilling
	50							casing to 50'
Brown fine gravel and medium to coarse sand (SP-GP) (3b-2b)	51	SS 14	1	10 7 13 10				
	52							
	53							
	54						G	
	55							casing to 55'
No recovery	56	SS 15	NR	17 11 14 15				
	57							
	58							
	59							
	60							casing to 60'
Gray fine to medium gravel (GP) (2b)	61	SS 16	0.2	10 6 7 8				
	62							
	63							
	64							
	65							casing to 65'
Gray fine to medium gravel, some medium to coarse sand (GP) (2a)	66	SS 17	1	23 20 32 14				
	67							
	68							
	69						69' S	
	70							casing to 70'



Sheet 4 of 4

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type	Recov. FT	Resist. BL/6"	water cont.	-200		
		No.	%	RQD%	(%)	(%)		
Brown fine to medium sand (SP) (3a)	71	SS 18	2	15 12 19			S	casing to 75'
	72			14				
	73							
	74							
Brown fine to coarse sand, trace fine gravel (SW) (3b)	75							
	76	SS 19	1.5	17 14 13 12				
	77							
	78							
	79							
	80							
Brown sandy gravel (GP) (2a)	81	SS 20	0.3	14 28 42 56				casing to 80'
	82						82.5'	End of Day 3 - 1500 hrs
Mica schist (1b)	83	C1	100	55			Rock	Day 4 - 9/29/08
	84							Boulder 82' to 82.5'
								Core barrel keeps getting clogged
End of Boring at 84.5'							84.5'	End of Day 4 - 1530 hrs
	85							Installed 1.25" PVC pipe well 10' screen and 30' rizer stickup 2'-3" above ground surface backfilled with silica sand all the way
	86							
	87							
	88							
	89							
	90							
	91							
	92							
	93							
	94							
	95							



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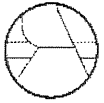
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Log of Boring: B-5

Sheet 1 of 4

PROJECT	100 Varick Street	PROJECT NUMBER	09C1031
LOCATION	Manhattan, NY	ELEVATION & DATUM	+11 +/- BPMD
DRILLING AGENCY	Warren George Inc.	DATE STARTED	10/2/2009 10/5/2009
DRILLING EQUIPMENT	Truck Rig / Acker	COMPLETION DEPTH (FT)	88.5
SIZE AND TYPE OF BIT	3-7/8 inch tricone	ROCK DEPTH (FT)	83.0
CASING SIZE AND TYPE	4-inch / 3-inch	NO. SAMPLES	DIST. 18
CASING HAMMER WEIGHT	300-lb	WATER LEVEL	FIRST -
SAMPLER	2-inch SS	UNDIST.	-
SAMPLER HAMMER WEIGHT	140-lb	COMPL.	-
		24HR	-
		FOREMAN	Boby Verpent
		HELPER	Shawn Bigg
		INSPECTOR	N. AbiSaab

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type No.	Recov. FT %	Resist. BL/6" RCD%	water cont. (%)	-200 (%)		
	1							Day 1 - 10/2/09
	2							
	3							
	4							
	5							
	6						Fill	
	7							
	8							
	9						9'	
	10							casing to 10'
Brown fine to coarse sand, trace gravel (SW) (3b)	11	SS 1	2	6				
	12			11				
same	13	SS 2	2	5				
	14			6				
No recovery	15	SS 3	NR	10				
	16			8				
Brown medium to coarse sand, trace gravel (SP) (3b)	17	SS 4	0.2	11				
	18			11				
Top 6": Black peat	19	SS 5	2	10				
Bottom 18": Gray lean clay trace fiber (CL-ML) (4c)	20			9				
				5				
				3				
				3				
				3				
				6				
				4				
				7				
				13				
				2			18'	
				3			Pt	
				3			18.5'	
				3			CL-ML	
				3				

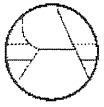


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Log of Boring: **B-5**

Sheet 2 of 4

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type No.	Recov. FT %	Resist. BL/6" RQD%	water cont. (%)	-200 (%)		
Gray lean clay (CL-ML) (4b)	21	SS 6	2	4 9 13 21	13.3	3.9	CL-ML	sand in tip of the spoon
	22						22'	
	23							
	24							
Brown gray medium to coarse sand, trace gravel (SP) (3a)	25	SS 7	2	20 30 35 29				
	26							
	27							
	28							
Gray brown medium to coarse sand (SW) (3a)	29	SS 8	2	10 12 14 13				
	30							
	31							
	32							
Dark brown fine to medium sand, some silt (SP-SM) (6)	33	SS 9	1.5	3 2 2 3			S	
	34							
	35							
	36							
Brown fine to coarse sand, trace gravel (SW) (3a)	37	SS 10	1	18 26 25 23				
	38							
	39							
	40							
	41							casing to 40'
	42							
	43							
	44							
	45							

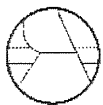


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Log of Boring: B-5

Sheet 3 of 4

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type No.	Recov. FT %	Resist. BL/6" RQD%	water cont. (%)	-200 (%)		
Brown medium to coarse sand, trace fine gravel (SP) (3a)	46	SS 11	0.5	16				End of Day 1 - 1500 hrs Day 2 - 10/5/09
	47			15				
	48			56				
	49			100/2"				
Brown silty fine sand (SM) (3b)	50	SS 12	2	13			S	Hard drilling possibly through boulder
	51			10				
	52			11				
	53			13				
Brown silt and fine sand (SM-ML) (3a)	54	SS 13	2	10				
	55			10				
	56			11				
	57			12				
Brown silty sand (SM) (3a)	58	SS 14	2	15	23.9	46.3		
	59			17				
	60			14				
	61			15				
Brown medium to coarse sand, trace gravel (SP) (3a)	62	SS 15	1	12				
	63			14				
	64			16				
	65			16				
	66							
	67							
	68							
	69							
	70							



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Log of Boring: B-5

Sheet 4 of 4

DESCRIPTION	DEPTH (ft)	Samples			Lab. Results		STRATA	REMARKS
		Type No.	Recov. FT %	Resist. BL/6" RQD%	water cont. (%)	-200 (%)		
same No Recovery	71	SS 16	1	11 16 13 12				
	72							
	73							Hard drilling
	74							
	75							
	76	SS 17	NR	11 15 11 11			S	
	77							
	78							
	79						79'	
	80							casing to 80'
Brown fine sandy silt, trace clay, gravel (ML) (5b)	81	SS 18	0.5	12 12 17 14			ML	
	82							End of Day 2 - 1500 hrs Day 3 - 10/6/09
	83						83'	
	84							
	85							
	86	C1	100	100			R	
	87							
	88							
	88.5'							End of Day
End of Boring	89							
	90							
	91							
	92							
	93							
	94							
	95							

APPENDIX B: INDIVIDUAL LOT HISTORIES

h=home, RE=Real Estate, PE=Personal Estate, M=male, F=female

Block 477, Lot 44, 557 Broome Street						
Year	Grantor	Grantee	Directory	Census	Tax Assessment	Remarks
1767	Dirck & Elsie Lefferts	Leonard & Elsie Lispenard; Henry & Mary Barclay				Not lotted. Lease and release. Liber 38, 1767:105 and 110
1810	Leonard & Ann Dorothy Lispenard	Charles McEvers, James Bleecker, Alexander L. Stewart (trust deed)				Not lotted. Liber 86, 1810:235
1819					Lots owned by Alexander L. Stewart or Trinity Church	
1820				Property not developed		
1821	Alexander L. & Sarah Stewart	John N. Huyler			John W. Heyler, 1& ½ lots (RE=\$600 & \$400)	Liber 150, 1821:212
1822			John W. Huyler, mason, Broome n Varick		John W. Heyler, house & ½ lot (RE=\$1800); Daniel Christy in house (PE=\$100)	
1823			John W. Huyler, mason, 557 Broome; Jotham Gathwaite, mason		John W. Heyler, house & ½ lot (RE=\$1800);Jotham Gathwaite in house (PE=\$100); Cornelius Ackerman in house (PE=\$100)	
1824			John W. Huyler, mason; Abraham Kipp, carpenter		John W. Huyler, house & lot (RE=\$1700); Abraham Kip in house (PE=\$100)	
1825			John W. Huyler, mason; Abraham Kipp, carpenter; Henry Zabriskie, saddler; Abraham Kipp, carpenter		John W. Huyler, house & lot (RE=\$1800); Abraham Kip in house (PE=\$100)	
1826			John W. Huyler, mason			
1827			John I. Morris, carpenter, h; Richard Brinckerhoff, cartman; Ebenezer Nichols			
1828					John Hiler (<i>sic</i>), house & ¾ lot (RE=\$2000); occupants no longer listed	
1829			Elizabeth Christie, widow; John I. Morris, lumber inspector; William Tucker, mason			
1830				John Morris, Broome St, Ward 8, 1 M <5, 1 M 40-50, 1 F 5-10, 1 F 10-15, 2 F 15-20, 2 F 40-50, 1 F 80-90 William Tucker, 1 M<5, 1 M 20-30, 2 F 20-30	John Huyler, house & ¾ lot (RE=\$2700)	John Huyler appears to be dead by 1830 as his widow Huldah is listed as head of household on Spring St. in 1830 census
1834			John I. Morris, lumber inspector			

APPENDIX B: INDIVIDUAL LOT HISTORIES

Block 477, Lot 44, 557 Broome Street						
Year	Grantor	Grantee	Directory	Census	Tax Assessment	Remarks
1835					John Huyler, house & lot (RE=\$2700)	
1837			John I. Morris, lumber inspector; Asbury Armstrong, carpenter, h			
1839			John I. Morris, lumber inspector; Asbury Armstrong, carpenter, h			
1840	William Huyler, John Huyler Jr, Catharine Fredericks, Jacob Huyler, Sarah Lyon, David Huyler, Eliza Van Buskirk (heirs of John W . Huyler), Eve, Aletta, & Magdalen Huyler, Henry Fredericks, Sarah Huyler, & Alvan Lyon	John M. Winant		John M. Wynant, Ward 8, 2 M <5, 1 M 20-30, 1 F <5, 1 F 15-20, 1 F 20-30 John Morris, 1 M 10-15, 1 M 20-30, 1 M 50-60, 1 F 10-15, 2 F 15-20, 2 F 20- 30, 1 F 50-60	John W. Winant, house & lot (RE=\$4100)	Liber 403, 1840:284
1842			Daniel Lovejoy, cabinetmaker; John M. Wynant, smith, h			
1843						John M. Winant dies March 10, 1843 of consumption (NY Tribune)
1845					Est. John W. Winant, no description, (RE=\$3900)	
1848			Mary A. Winant, widow of John M.; Joseph Hodgman, blacksmith; Daniel Lovejoy, machinist			
1850				Daniel Lovejoy, 39, gold pens; Aveline, 37; Daniel B, 14; Mary A, 10; Lavinia, 7; Debra, 4; Elisha, 5/12ths; John P. Fairchild, 41, shoemaker; Debora Fairchild, 61 Mary A. Wynant, 30; Catherine, 14; Albert, 12; Adolphus, 10 Joseph Hackleman, 29, plumber, Elisabeth, 24	Est. J. W. Winant, house & ½ lot, (RE=\$3400)	
1855					Est. John W. Winant, house & lot, (RE=\$3400)	

APPENDIX B: INDIVIDUAL LOT HISTORIES

Block 477, Lot 44, 557 Broome Street						
Year	Grantor	Grantee	Directory	Census	Tax Assessment	Remarks
1856			Thos. Crane, butcher, h; Daniel Lovejoy, pens, h			
1859			Thomas Crane, butcher, h; John Pearce, plumber, h			Crane is member of local fire dept., listed as living at 557 Broome
1860			Thomas Crane, butcher, h	Theoph Crane, 34, butcher; Susan Crane, 25; Ellen Casey, 15; Danl E. Winans, 21, clerk; No ? Cheser, 50, clerk	Estate of Winant, lot 21'x63', house 21'x30', 2 stories, (RE=\$3400)	
1861			Thos. Crane, butcher, h; Samuel White, plumber			
1862	Catherine B., Albert S., & Adolphus B. Winant (heirs of John M. Winant)	Samuel White				Liber 850, 1862:679
1865					Estate of Winant, lot 21'x63', house 21'x30', 2 stories, (RE=\$3400)	
1869			George A. Corning, machinist, h; Samuel White, plumber, h			
1870				Samuel White, 46, Croton agent; Elizabeth White, 42, keeping house; Frank White, 13; Samuel White, 27, broker; Vesey White, 23 George Cornock, 47, engineer; Susan Cornock, 27, keeping house; Emily, 7; Georgiana, 2	Estate of Winant crossed out, Samuel White, lot 21'x63', house 21'x30', 2 stories, (RE=\$5000)	
1871			Samuel White, plumber, h			
1872			Samuel White, plumber, h			
1873						Samuel White committed to insane asylum (New-York Daily Tribune, 4/5/1873)
1875			Joseph Godwin, flour, h		Samuel White, lot 21'x63', house 21'x30', 2 stories, (RE=\$4000)	
1877			Mary Connelly, h			

APPENDIX B: INDIVIDUAL LOT HISTORIES

Block 477, Lot 44, 557 Broome Street						
Year	Grantor	Grantee	Directory	Census	Tax Assessment	Remarks
1880			Hiram P. Beede, engineer, h; Ray Gau, engineer, h	Hiram Beede, 46, engineer; Mary Beede, 45, Everett Beede, 23 Ray Gull, 35, engineer; Jennie Gull, 21 John Wind, 35, bookkeeper, Mary Wind, 36 John Gabelhouse, 30, milkman; James Crolus, 40, bookbinder Lewis Welding, 36, hotel; Philippe Gervig, 25, laborer John Brasted, 55, roofer; Ella Brasted, 50	Samuel White, lot 21'x63', house 21'x30', 2 stories, (RE=\$4000)	
1882			Hiram P. Beede, engineer, h ; John Gabelhouse, driver, h; Robert Patterson, boxes, h			
1884	Frank W. White (heir of Samuel White) & Ella A. White	Harriet E. Graham	Hiram P. Beede, engineer, h; Nelson Genie, porter, h; John Gablehouse, milk, h			Liber 1783, 1884:349 (1/2 interest) No evidence that Graham ever lived in the house. She is daughter of Samuel White.
1885					Samuel White, lot 21'x63', house 21'x30', 2 stories, (RE=\$4000)	
1888			Ann Brennan, bdgh; George Franklin, steam & hydraulic pipe work, h.			
1890					S. White, lot 21'x63', house 21'x30', 2 stories, (RE=\$4000)	
1891			Anthony Moran, h; Ellen Somerville, wid. Sam'l, express, h			Daniel & Nellie McPeak residing (The Sun, Nov. 11, 1891)
1894			John R. Ward, engineer, h			
1895			Gustav Schermer, clerk, h; Edw'd V. Brown, clerk, Criminal Ct. bldg, h		S. White, lot 21'x63', house 21'x30', 2 stories, (RE=\$4000)	

APPENDIX B: INDIVIDUAL LOT HISTORIES

Block 477, Lot 44, 557 Broome Street						
Year	Grantor	Grantee	Directory	Census	Tax Assessment	Remarks
1900				Margaret Shea, 27, boarding house (renter); Michael, 23, porter; Lizzie, 25, seamstress; Marey, 22, ladies maid; Patrick, 24, day laborer; plus 12 boarders		
1903	Harriet E. Graham, Frank W. White, Elle A. White	Isaac Sakolski				Liber 118, 1903:20
1907	Isaac Sakolski	Harris Mandelbaum, Fisher Lewine				Liber 164, 1907:268
1909	Harris & Annie Mandelbaum, Fisher & Esther Lewine	Nathan Bassoff				Liber 191, 1909:130
1909	Nathan Bassoff	Rebecca Shkolnikoff				Liber 190, 1909:166
1911	Adam Wiener (referee), Susan van Prag, plaintiff ag. Nathan Bassoff et al, defendants	Max Keve				Liber 205, 1911:136
1911	Max & Sadie Keve	Lena Brandenburg				Liber 204, 1911:320
1915	Lena Brandenburg	Giuseppe Russo, James Bianculi				Liber 244, 1915:43
1951	Joseph and Vincent A. Bianculi	Teresa Bianco				Liber 4716, 1951:644

APPENDIX B: INDIVIDUAL LOT HISTORIES

h=home, RE=Real Estate, PE=Personal Estate, M=male, F=female

Block 477, Lot 76, 66 Watts Street (old addresses 26 and 48 Watts)						
Year	Grantor	Grantee	Directory	Census	Tax Assessment	Remarks
1767	Dirck & Elsie Lefferts	Leonard & Elsie Lispenard; Henry & Mary Barclay				Not lotted. Lease and release. Liber 38, 1767:105 and 110
1810	Leonard & Ann Dorothy Lispenard	Charles McEvers, James Bleecker, Alexander L. Stewart (trust deed)				Not lotted. Liber 86, 1810:235
1817					Alexander L. Stewart owns most lots on north side of Watts within block	
1818	Alexander L. & Sarah Stewart	Moses Dodd			Moses Dodd, house & lot on Watts (RE=\$3500); Mary Winslow living in house (PE=\$3000)	Liber 390, 181:76
1819	Moses Dodd	John Fleming			Moses Dodd, house & lot on Watts (RE=\$3500); Mary Winslow living in house (PE=\$3000)	Liber 139, 1819:349
1820				Neither Dodd nor Fleming are living in Ward 8, Mrs. Heasy/Hansey/Hersey not found	48 Watts: Moses Dodd, house & lot, (RE=\$3000); Mrs. Heasy (?) living in house (PE=\$500)	
1821					48 Watts: Moses Dodd crossed out, John Fleming, house & lot (RE=\$2200); Mrs. Hansey (?) living in house (PE=\$300)	
1822					48 Watts: John Fleming, house & lot (RE=\$2200); Eliza Hersey (?) living in house (PE=\$300)	
1823					48 Watts: John Fleming, house & lot (RE=\$1800); Eliza Hersey living in house (PE=\$300)	
1824			48 Watts: Amaziah Dusenberry		48 Watts: John Fleming, house & lot (RE=\$1800); Amaziah Dusenbury living in house (PE=\$200)	
1825			48 Watts: Amaziah Dusenberry; James Dusenberry, grocer, John S. Dusenberry, marshal		48 Watts: John Fleming, house & lot (RE=\$2000); Amaziah Dusenbury living in house (PE=\$200)	
1826			48 Watts: Amaziah Dusenberry, marshal			
1827			24 Watts: Amaziah Dusenberry, marshal; Hannah Lambert, widow of William			
1828					26 Watts: John Fleming, house and ¾ lot (RE=\$2300); occupants are no longer listed	

APPENDIX B: INDIVIDUAL LOT HISTORIES

Block 477, Lot 76, 66 Watts Street (old addresses 26 and 48 Watts)						
Year	Grantor	Grantee	Directory	Census	Tax Assessment	Remarks
1829			Garrit Degraw, carpenter; Margaret Ridley; Rebecca Sayer			
1830				Garrit Degraw, Watts Street, 8 th Ward, 3 M 15-20, 1 M 30-40, 1 F<5, 1 F 5-10, 1 F 15-20, 2 F 20-30 Margaret Ridley, 1 F 50-60	John Fleming, house & ¾ lot (RE=\$2100)	
1834			David Flanders, carpenter; Marcus K. Houston, carpenter			
1835					John Fleming, house & ¾ lot (RE=\$2700)	
1837			Nicholas Bicker, U.S.N.; Mary Bicker widow of Henry K..			
1838	John Fleming (Exrs. of)	Eliza Ann Wildey				Liber 385, 1838:336
1839			John O. Gale, saddler, h.			
1840				Caleb Wildey, Ward 8, 1 M 30-40, 1 F 20-30, 1 F 10-24 free colored	Caleb Wildey house and ½ lot (RE=\$3200, PE=\$2000)	
1842			Caleb Wildey, dry goods, h.			
1845					Caleb Wildey house and 3/5 lot (RE=\$3200, PE=\$2000)	
1847	Caleb & Eliza Ann Wildey	Lawrence & Margaret Dufour				Liber 487, 1847:114
1848			Lawrence Dufour, mason			
1850				Lewis Dufour, 44, mason; Mary, 43; Margaret, 19; Eliza, 15; Louisa, 9; John W., 5; Agnes, 1; Anna Betts, 60; Alexander Hall, 41; Mary Hall, 38	Caleb Wildey house and 3/5 lot (RE=\$3200)	
1853	Lawrence & Margaret Dufour	Frederick Schwartz				Liber 616, 1853:627
1855					Caleb Wildey house and lot (RE=\$3200)	
1856			Julia F. Purse, wid. Henry, h; Thomas Jewesson, bookbinder, h; Benjamin F. Sherman, mason, h			
1859			Margaret Fowler, wid. George, dressmaker, h; Edwin Rowland, produce, h			

APPENDIX B: INDIVIDUAL LOT HISTORIES

Block 477, Lot 76, 66 Watts Street (old addresses 26 and 48 Watts)						
Year	Grantor	Grantee	Directory	Census	Tax Assessment	Remarks
1860			Edwin Rowland, produce, h	Edward Rowland, 26, huckster; Hannah Rowland, 23; Mary Davis, 24; H.N. Stephens, 27, clerk; Kate Ryan, 12	Caleb Wildey lot 21'4"x80', 2-story house 21'4"x36' (RE=\$3200)	
1861			Edwin Rowland, produce, h			
1865					Caleb Wildey lot 21'4"x80', 2-story house 21'4"x36' (RE=\$3200)	
1865	Frederick W. & Sophie Boell	Peter Ponlaye				Liber 922, 1865:332
1865	Frederick, Henriette, & Julius Schwartz	Peter Ponlaye				Liber 928, 1865:213
1869			Peter Pequet, machinist, h; Albert Sievert, engineer, h; William Smith, machinist			
1870			Michael Holly, broker, h	Peter Peuquet, 43, works in brew f[?]; Mary, 43, keeps house; Justin, 20, j[?] engineer; Alfred, 12; Leontine, 15; Camille, 5 Mick Hawley(?), 38, exchange broker; Mary, 30, keeps house, Abeline, 12; Hana Coakley, 19, domestic Mary Busby, 53, seamstress	Peter Ponlaye, lot 21'4"x80', 2-story house 21'4"x36' (RE=\$5000)	
1875			John Dunn, clerk, h; Peter Peuquet, h		Peter Ponlaye, lot 21'4"x80', 2-story house 21'4"x36' (RE=\$5000)	
1877			Peter Peuquet, machinist, h; Michael Feagan, clerk, h			
1878			Peter Peuquet, porter, h; Benjamin Waldron, printer, h			

APPENDIX B: INDIVIDUAL LOT HISTORIES

Block 477, Lot 76, 66 Watts Street (old addresses 26 and 48 Watts)						
Year	Grantor	Grantee	Directory	Census	Tax Assessment	Remarks
1880			Peter Peuquet, bartender, h; Hugh McNeely, clerk, h	Peter Peuquet, 54, bottler; Mary, 55; Justin, 29, clerk; Leontine, 23, dressmaker; Alfred, 22; Camille, 15; Cellini, 14 Abraham Benson, 28, soap manuf.; Sarah, 20, wife John Deshay, 24, clerk; Mary, 32, dress maker; Nellie, 15, dress maker; Maggie, 43, dress maker	Peter Ponlaye, lot 21'4"x80', 2-story house 21'4"x36' (RE=\$5000)	
1882			Peter Peuquet, porter, h; Abraham Benson, soap, h			
1884	Peter & Marie Clara-Lavigne Ponlaye	Marie Penquet	Peter Peuquet, h; William Bulger, liquors, h			Liber 1840, 1884:253
1885			Peter Peuquet, h; Robert Ross, h		Peter Ponlaye, lot 21'4"x80', 2-story house 21'4"x36' (RE=\$5000)	
1888			Justin Peuquet, h; James Sullivan, driver			
1889			Peter Peuquet, h; Justin Peuquet, wines, h			
1890			Peter Peuquet, h; Justin Peuquet, wines, h ; John Pope, carrier, h		Peter Ponlaye, lot 21'4"x80', 2-story house 21'4"x36' (RE=\$5000)	
1891			Pierre Peuquet, h; Justin Peuquet, wines, h; Fred. Duncan, clerk, h; John May, carpenter, h; Chas. Thomas, printer, h			
1895			John W. May, carpenter, h; Peter Peuquet, h		Peter Ponlaye, lot 21'4"x80', 2-story house 21'4"x36' (RE=\$5000)	
1896			John W. May, carpenter, h; Harry May, h; Pierre Peuquet, h			

APPENDIX B: INDIVIDUAL LOT HISTORIES

Block 477, Lot 76, 66 Watts Street (old addresses 26 and 48 Watts)						
Year	Grantor	Grantee	Directory	Census	Tax Assessment	Remarks
1900				John May, 56, carpenter; Mary, 58 Marie Peuquet, 74 (owner); Justin, 49, wholesale liquors; Leontine, 44; Alfred, 41, bookkeeper; Camille 34, music teacher; Justin W., 24, shipping clerk Annie Price, 30, shirt- maker		
1904	Marie Penquet	Leontine Penquet				Liber 129, 1904:162
1939	Camille Pouquet	Duff Corp. Inc.				Liber 4000, 1939:49
1953	Duff Corp. Inc.	Jaime & Sara Rivas				Liber 4844, 1953:317
1954	Jaime & Sara Rivas	Thomas & Tina Sciarrino				Liber 4904, 1954:406