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ARCHAEOLOGICAL DOCUMENTARY STUDY

240-244 WEST BROADWAY BLOCK 190, LOT 44 MANHATTAN, NEW YORK



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240-244 WEST BROADWAY BLOCK 190, LOT 44 MANHATTAN, NEW YORK

Prepared for:

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EXECUTIVE SUMMARY

The proposed development of 240-244 West Broadway by 240 West Broadway LLC requires review under the New York City Environmental Quality Review (CEQR), which mandates the consideration of potential impacts to historic resources. The proposed project has been reviewed by the New York City Landmarks Preservation Commission (LPC) as a function of the CEQR process. LPC has requested an archaeological documentary study (2/5/07). Specifically, LPC noted potential sensitivity for 19th century occupation on the project site.

The LPC Guidelines for Archaeological Work in New York City outlines specific steps to determine whether a proposed action could affect areas of potential archaeological sensitivity. The Area of Potential Effect (APE) for the 240-244 West Broadway project is defined as the portion of the site that will experience subsurface impacts that may disturb areas of potential archaeological sensitivity.

Documentary research concluded that the 240-244 West Broadway APE has no potential for precontact archaeological resources, but it may be potentially sensitive for historical archaeological deposits, especially truncated shaft features. Resources potentially buried in the APE include early 19th century domestic and commercial deposits and features that would predate the availability of municipal sewer and water (1837 and 1842, respectively), below the depths of foundations later 19th and 20th century additions. Only portions of the APE are potentially sensitive for these resources, the rest having been disturbed by the construction of three-story buildings with basements.

The proposed project will require excavation of up to 14 feet across the entire APE, and will extend to 19.11 feet below current grade across portions of the APE. This depth of impact could disturb potential archaeological deposits that date to the early and mid-19th century. If these impacts cannot be avoided, then an archaeological field testing program should be designed in coordination with LPC.

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INTRODUCTION

The proposed development of a nine-story residential building at 240-244 West Broadway by 240 West Broadway LLC requires review under the New York City Environmental Quality Review (CEQR), which mandates the consideration of potential impacts to historic resources. The proposed project has been reviewed by the New York City Landmarks Preservation Commission (LPC) as a function of the CEQR process. LPC has requested an archaeological documentary study (2/5/07). Specifically, LPC noted potential sensitivity for 19th century occupation on the project site.

The LPC Guidelines for Archaeological Work in New York City outlines specific steps to determine whether a proposed action could affect areas of potential archaeological sensitivity. The Area of Potential Effect (APE) for the 240-244 West Broadway project is defined as the portion of the site that will experience subsurface impacts that may disturb areas of potential archaeological sensitivity.

The proposed project is located at 240 to 244 West Broadway, on the west side of West Broadway between North Moore Street and Walker Street (Figures 1, 2). The site is located on City Block 190, Lot 44. Lot 41 borders the APE to the north, and Lot 47 borders to the west. Historically the site was designated as City Lots 44-46 at 240, 242, and 244 West Broadway, and 1, 3, and 5 North Moore Street.

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RESEARCH GOALS AND METHODS

This Archaeological Documentary Study, as clarified by the LPC guidelines (2002), addresses the area within the proposed development site that will be subject to direct construction activities, which is defined as the APE. This encompasses the entirety of Lot 44 (Figure 2).

In order to address the archaeological potential of the 240-244 West Broadway APE, sufficient information was gathered to assess the subsurface disturbance record, both horizontally and vertically, and to establish the potential for precontact period and historical archaeological resources. Prior archaeological studies and surveys that were undertaken for areas either within or directly adjacent to the project site provided an invaluable data base from which to complete the current assessment.

This documentary study, which also entails a cartographic analysis of the 240-244 West Broadway APE through time, is designed to address the concerns of LPC for potential resources from a 19th century occupation.

HPI's protocol adheres to a conservative and phased approach. It relies on a series of tasks to identify which – if any – of the 240-244 West Broadway APE parcels would require invasive testing to satisfy the applicable environmental review regulations. These tasks are described below.

Task 1:

Primary source material, which helps to establish a site-specific framework in which to assess the APE, was reviewed in order to identify historic land use through time. This includes reviewing the Minutes of the Common Council, conveyance records on file at the City Register's Office, tax, directory, and census records, where relevant. Atlases, maps, and other pertinent primary records were also reviewed.

Task 2:

In order to place the 240-244 West Broadway APE in a broader historical context, local and regional histories were reviewed.

Task 3:

Paralleling the research to determine the archaeological and historical sensitivity was research to determine the likelihood that resources are extant, having survived the normal destructive forces of urban development. Building records were sought as episodes of late 19th and 20th century construction may have eradicated archaeological potential in discrete locations.

Historical atlases and Sanborn Fire Insurance Maps were reviewed to establish construction episodes, building heights, and the presence of basements, which are indicators of subsurface disturbance. Cartographic comparisons were critical in demonstrating elevation changes over the last 150 years.

Task 4:

Pertinent archaeological reports for the surrounding vicinity were reviewed to establish a comparative framework for potential archaeological resources.

Task 5:

A walkover of the 240-244 West Broadway APE and a photographic record of the current conditions were completed in April 2007. Anomalies and areas of obvious ground disturbance were noted on the site sensitivity map.

SITE LOCATIONS AND CONDITIONS

Site Location and Current Condition: The proposed project is located 240 to 244 West Broadway, on the west side of West Broadway between North Moore Street and Walker Street (Figures 1, 2). The site is located on City Block 190, Lot 44. Lot 41 borders the APE to the north, and Lot 47 borders to the west. Historically the site was designated as City Lots 44-46 at 240, 242, and 244 West Broadway, and 1, 3, and 5 North Moore Street. At present, the project site is blacktopped and used as a parking lot, and slopes gently downhill from west to east (Photographs 1-4). The surface elevation at the intersection of West Broadway and North Moore Streets is 7.6' Above Sea Level (ASL).

Recent geotechnical work was conducted at the site; two test borings were completed in the locations of former structures (Borings B-1 and B-2). Boring B-1 was taken on historical Lot 44 at its northeastern corner near West Broadway (see Appendix B). Boring B-2 was completed on the southern end of historical Lot 46, near North Moore Street (see Appendix B) Both borings found that fill extended to roughly 9' below grade, while groundwater was encountered at approximately 14.5' below grade (Oweis Engineering Inc. 2006:4). However, the report noted that the groundwater levels likely fluctuate depending upon climatic factors, drainage conditions, and other causes (Ibid.:5).

Predevelopment Conditions: The historical development of Manhattan has been influenced, in part, by topographic and ecological conditions. Establishing the project site's geological and ecological history is necessary toward understanding land-use history.

Manhattan Island lies within the Hudson Valley region and is considered to be part of the New England Upland Physiographic Province (Schuberth 1968:10). The underlying geology, much like that of the Bronx and lower Westchester County, is made up of "gneiss and mica schist with heavy, intercalated beds of coarse grained, dolomitic marble and thinner layer of serpentine" (Scharf 1886:6-7). During the three known glacial periods, ice was sometimes as thick as 1,000 feet over Manhattan. Advancing and retreating glaciers carved, scraped, and eroded the land surface in the Northeast. 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. Along these low hills many rivers, streams, lakes, and ponds were formed. The constant flow of these rivers and streams as well as the corresponding rise in sea level continued to mold the landscape. Manhattan, a low-lying island marked by hills, is surrounded by rivers and a large, protected deep water bay, and was formed following the last of the three glacial periods.

The project site falls within the embayed section of the Coastal Plain, which extends along the Atlantic Coast and ranges from 100 to 200 miles wide. The Manhattan prong, which includes southwestern Connecticut, Westchester County, and New York City, is a small eastern projection of the New England uplands, characterized by 360 million year old, highly metamorphosed bedrock (Schuberth 1968:11). The Manhattan ridge generally rises in elevation toward the north, and sinks toward the south. South of 30th Street, the bedrock dips down several feet beneath the earth's surface, and south of Washington Square Park it plunges down below 100 feet, forming a subterranean valley.

The prevalent gneissoid formation underlying the project site is Hudson River metamorphosed rock. Manhattan is characterized by a group of gneissoid islands, separated from each other by depressions which are slightly elevated above tide and filled with drift and alluvium. The area consists of drift with underlying crystalline rocks including stratified gneiss, mica schist, hornblendic gneiss, and hornblende schist with some feldspar and quartz (Gratacap 1909:27).

Historical development has altered many of the natural topographic features that once characterized Manhattan, including the early historic shoreline (Gratacap 1909:5). Before the imposition of the street grid and the subsequent residential development of the project site neighborhood in the early decades of the 19th century, the project site was situated at the southern end of a low-lying marsh or meadowland, known as Cripplebush Swamp, and later as Lispenard Meadow. The project area marsh was also subject to flooding from the Hudson, which introduced salt water, sometimes penetrating as far west as the Collect Pond itself (Dunshee 1952:176-177).

During the late precontact and early historical periods, the Hudson River shoreline staggered between present day Greenwich and Washington Streets, about 1,200 feet west of the APE (Viele 1865; Figure 3). West of the project site, the river shoreline was characterized by bluffs with beaches below them (Stokes 1918:157). Landfill operations extended the shoreline an additional 1,000 feet westward and filled in the meadow in the beginning of the 19th century.

Eighteenth- and early 19th-century maps record a small stream which drained the area into the Hudson River running from the Collect Pond through a valley just north of the approximate line of present Canal Street, while another small stream ran through the project block (Viele 1865; Figure 3). The Collect Pond was a freshwater pond whose nearest banks were about 1,300 feet southeast of the project site, the pond itself centered on current Centre and Leonard Streets. Surrounded by wooded hills, the Collect was a popular fishing spot, and source of shellfish well into the 18th century, until it became too polluted and was filled.

New York's urban developers took little note of existing topographical features, truncating hills and filling in marshes and valleys to create a generally uniform, level area for the laying out of a street grid and the construction of buildings. The vicinity of the project site was no exception, and surrounded as it was by hills to the east and west, conveniently furnished its own fill. Evidence of the filling efforts undertaken in the vicinity of the project site is an 1828 observation that refers to the drained Cripplebush Swamp and the "fresh water pond," and reports that "several large hills or mounds of earth that environed the pond . . . have all been leveled, and the ground thrown into the ponds" (Stokes 1926:1,671, 1,828).

[&]quot;Collect" or the Fresh Water, as it came to be called, is derived from the original Dutch names, Der Kolck (meaning eddying or rippling water) or the Versche water (fresh water).

ARCHAEOLOGICAL POTENTIAL

Historical Land Use

During the first 200 years of European settlement and development of Manhattan Island, the terrain in the vicinity of the project site, was considered an inconvenience and barrier by the inhabitants. The 240-244 West Broadway project site was part of a large marsh that covered about 70 acres, and was covered with stunted bushes. The marsh, known variously as Cripplebush Swamp and later as the Lispenard Meadows, received fresh water from the Collect Pond, an inland pond which was formerly about 1,300 feet to the southeast. The Collect drained through the meadows into the Hudson by a small, slow stream which ran approximately along the line of Canal Street, and on some maps, crossing the project lots (Figure 3). Another source of inundation was the Hudson River, 2,000 feet to the west, which introduced salt water, penetrating as far west as the Collect itself (Valentine 1856:442; Dunshee 1952:176-177).

Originally a beautiful pond surrounded by wooded hills, the Collect was also a favorite fishing spot, but as New York City grew, tanneries, potteries and other industries established themselves around the Collect, and the pond became increasingly polluted as the 18th century progressed (Valentine 1856:442; Stokes 1918:562).

The title to the project site can be traced to a patent issued by King George II to Anthony Rutgers in 1732. Rutgers received 70 acres which included an area extending from the pond on the east to the Hudson shore on the west. The grant was conditional on Rutgers' draining the swamp and the now noxious Collect Pond (McCoun 1909). Rutger proceeded to do this, by channeling the water to the Hudson through a ditch which followed the small stream on or near present Canal Street. This action increased the discharge so greatly that the tanneries around the Collect Pond were threatened, so Rutgers simply stopped draining the Collect, but continued to drain the surrounding meadows, which included the project site (Stokes 1918:560-562; 1928:102-103). With Rutger's death in 1746, the land immediately west of the project site passed to Rutger's daughter, who had married into the Lispenard family, and the swamp became known as Lispenard's Meadow. The Lispenards continued to own the project site through the end of the 18th century.

With the end of English occupation at the close of the American Revolution, the population of Manhattan continued its steady increase, and real estate became ever more scarce and valuable. Because of its proximity to the settled parts of the growing city, Lispenard's Meadow, the Collect and surrounding hills, barriers to development, became prime targets for removal. Another important concern was public health. Various waves of cholera, yellow fever, and typhus, spreading from the untreated sewage and contaminated water which collected in low-lying areas, plagued the city for many decades into the 19th century.

Development of the project site was delayed when compared to land to the north, south, east, and west. Early historical maps and plans dating to the 18th and 19th centuries show that there was no development in or near the project site through at least 1808 (Hinton 1776; Montresor 1767; Ratzer 1767; British Headquarters Map 17782; Hills 1782; McComb 1789; Taylor-Roberts 1797; Bridges 1803; Wilson 1851; Longworth 1808; Figures 4-6). These early maps show a pattern of development that avoided the swamps and hills in the vicinity of the project site, while streets were

laid out surrounding the low-lying wetlands (Figures 4-6). The City finally undertook the drainage of the meadows and pond between 1800 and 1817, filling in the low-lying areas with soil taken from the leveling of the nearby hills (Baugher-Perlin, et al. 1982:59-60; Citizen's 1865:34). Unfortunately, although the pond and swamp were filled in, the natural springs remained, causing the filled land to settle unevenly, with water and muck oozing up through the fill. As a result, streets in the vicinity were impassable, and new building cellars were flooded (Burrows and Wallace 1999:359). Furthermore, as late as 1817 the residents in the vicinity were still complaining about the "noxious situation of Lispenard's Meadow" (MCC April 21, 1817 Vol. 9:107).

Canal Street – now about two blocks north of the APE - was not laid out before 1800, but in preparation for street construction, the City Council and its committees had begun negotiations with the landowners, and meetings with engineers as early as 1797. In 1800, a rough roadway, partly inundated with water, called Duggan Street, corresponded to a section of present Canal Street. According to the index files of the Manhattan Bureau of Sewers, a Canal Street ditch was operating between the still-extant Collect and the Hudson River in 1811. When the post-filling drainage problems of the Collect and marshes became apparent, the Council had the ditch widened to eight feet, to drain the excess water into the Hudson. This caused another problem. Because the water did not flow swiftly enough, Canal Street became a reeking open sewer. After reviewing various plans for Canal Street modernization, one of which included a navigable canal bordered by roads, a covered brick sewer with a roadway for Canal Street, was finally completed and opened in 1819. The path of Canal Street and its sewer runs in a straight line south of the original ditch, which had curved northward toward the Hudson (Stokes 1918:560-562). Unfortunately, the engineers provided no air traps when they bricked over the ditch, and they simply replaced a stinking open sewer with a stinking closed sewer (Burrows and Wallace 1999:360).

The streets bordering the project lot were laid out and regulated in the late 18th and early 19th centuries. West Broadway (formerly Chapel or Chapple Street) was regulated between Leonard and Lispenard Streets in 1810 (Stokes Vol. III 1918:996). In 1814 residents on Chapel Street were complaining that their cellars could not be kept clear of water until the conduit under Chapel Street was opened and cleared (MCC May 2, 1814 Vol. 7:739). Two years later, the street was improved, enlarged, and opened near Leonard Street (Stokes Vol. III 1918:996). North Moore Street was laid out west of Varick Street by 1797, but it was not until 1808 that it was laid out as far west as West Broadway and regulated. Like North Moore Street, Beach Street was laid out at the end of the 18th century west of Varick Street. It was named for Paul Bache, the son-in-law of Anthony Lispenard, who owned Lispenard Meadows, and did not extend eastward to West Broadway until ca. 1810 (Stokes Vol. III 1918:1011). Walker Street was laid out and regulated between West Broadway and Varick Streets in 1811 (Ibid.). Varick Street, at the western end of Block 190, was laid out by 1797, and north of North Moore Street was ceded by Trinity Church in 1808 (Stokes Vol. III 1918:1011; Vol. VI 1928:601). It was officially regulated in 1809 (Ibid.).

There are no instruments of record for land transfers on what is now Block 190 prior to 1805, suggesting that the lack of regulated streets bordering the block hindered development (City Register, Conveyance Index Block 190). As streets were laid out, the block was subdivided and in 1805 Anthony and Sarah Lispenard began selling individual building lots (Ibid).

Lot Histories

What is now Lot 44 on Block 190 was historically divided into three distinct building lots, designated as building Lots 44, 45, and 46. Each had a unique address, and development history. Therefore, the following discussion of the historical development of the project site is subdivided into a discussion of each of these individual lots, as outlined in Table 1 below.

TABLE 1: BLOCK 190 LOT NUMBERS AND ADDRESSES IN THE APE

Lot Number	1852-1894 Street Address(es)	1899-2007 Street Address(es)
44	124, 126 West Broadway 1 North Moore Street	240,242, 244 West Broadway 1 North Moore Street
45	3 North Moore Street	3 North Moore Street
46	5 North Moore Street	5 North Moore Street

The following discussion provides an overview of the development of these lots, and references the ca.1899-2007 lot numbers (See Sanborn 1951, Figure 13 for the lot locations).

Lot 44

Lot 44 is located at the southeastern corner of Block 190, at the northwest intersection of West Broadway and North Moore Street. The street addresses associated with the lot have changed numerous times over the last 200 years as indicated below:

- Prior to the 1830s, the lot was numbered as 120, 122, 124, and 126 Chapel (or Chappel) Street and 1 North Moore Street.
- In 1834 it was numbered as 148 and 150 Chapel Street, and 1 North Moore Street.
- By 1852 the lot was numbered as 124 and 126 West Broadway and 1 North Moore Street
- It was later renumbered as 240, 242, and 244 West Broadway and 1 North Moore Street (ca.1899) its current designation.

Sources: Undated Tax Maps, pre 1834, Tax Map 1834; Dripps 1852; Perris 1852; Bromley 1879, 1891, 1897, 1899, 1930, 1955; Robinson 1885; Sanborn 1894, 1905, 1922, 1951 (see Figures 7-13).

Discussion of Data from Census/Tax/Directory/Minutes of the Common Council

In addition to the changing street addresses, the configuration of the lot has also changed. When the lot was originally created in the early 19th century, it was actually two individual lots: the first was a relatively rectangular lot that predominantly fronted onto North Moore Street, with its southeastern corner angled toward West Broadway, and a second was a small triangular lot fronting North Broadway. The small triangular lot was eventually split in half – the northern half falling outside of the APE, and the southern half being added to the rectangular lot to form Lot 44. These early 19th century lot-lines have been added to the 1852 Perris map for illustrative purposes (see Figure 8).

Lot 44 was undeveloped in 1804, and was sold together with six additional lots fronting North Moore Street by Anthony and Sarah Lispenard to Thomas Rich and John Disbrow in 1805 (Wilson 1851; Liber 69:514). The following year Lots 43 and 44 were conveyed or leased by Elizabeth and Charles Poirier to James Vincent, and later that year they passed from James and Margaret Vincent to John Poole (Liber 72:471; Liber 73:361; see Appendix A). In 1807 John Poole petitioned the City of New York for additional time to pay an assessment on his property located at Chapel Street, suggesting he may have indeed owned a parcel in or near the APE at that time (MCC 11:63). There was another transaction that included Lot 44 between the Lispenards and Charles Poirier (a.k.a. Poynier) later in 1808, although Pool(e) appeared to own at least a portion of Lot 44 with a house on it when it was assessed for taxes that same year (Liber 80:291; Tax Assessment 1808; see Appendix A). Another conveyance entry for the lot also dated to 1808 when Thomas Rich, a merchant "taylor," conveyed at least part of it (possibly the rectangular section of the lot) to John Disbrow, together with adjacent Lots 45 and 46 fronting North Moore Street, also in the APE (Liber 272:609; see Appendix A).

The 1809 Directory entry for Lot 44 indicates that John Place resided in a house on Chapel Street (West Broadway) at the corner of North Moore Street on what is now Lot 44 (Directory 1809; see Appendix A). A second entry for the same location is for John Disbrow, John Taylor, and Christopher Ludlow (Ibid.). It appears that there were two dwellings on the lot by at least 1809, which may reflect the lot's early division into two distinct lots (one rectangular and one triangular - see Perris 1852, Figure 8). In 1810 the directory lists John Poole and John Clem in one house at the corner of these two cross streets, and John Disbrow and Joseph Cheeseman at another in the same location (Directory 1810; see Appendix A). The 1810 U.S. Census lists John Poole directly next to John Clem, and John Disbrow, next to Thomas Rich – all on the same page (U.S. Census 1810; see Appendix A). This suggests the close proximity of occupancy of the four. However, the Census records to not record addresses at such an early date, so their exact locations are not reported. Disbrow and Pool continued to be associated with the lot (or lots) in the directories and tax assessments through at least 1823 (see Appendix A). However, from 1811 onward, additional names are also associated with the two houses including John Mead, Peter Erickson, Peter Sloat, Siles De Hunt, and Benjamin Lynt – who ran a grocery store at the corner of North Moore and Chapel.

The executors of John Pool's (sic) estate (John Poillon, John Archey, David Ackerman, John Pool and their respective spouses and children) conveyed or leased at least a portion of the lot to Isaac Styles in 1823 (Liber 164:458). The directory for that year lists John Disbrow in one house at North Moore Street, the estate of John Poole in one house at 126 Chapel Street, and Isaac Styles in one house at 124 Chapel Street (Directory 1823; see Appendix A). Later in 1823, the same executors of Pool's estate (minus John Archey) sold or leased a portion of the lot to John Archey (Liber 170:50). In 1827, Disbrow's estate, and Roe and Elmendorf were listed in one house on the lot, while Isaac Styles and John Van Ness were listed in another (Directory 1827; see Appendix A). In both 1829 and 1831, Isaac Stiles/Styles was cited by the City Inspector for the nuisance of a noxious privy for a lot at 150 Chapel Street, an address associated with the triangular lot that is now partially in Lot 44 (MCC Vol. 16 1829:129; Vol. 17 1831:579; Tax Map 1834).

The 1829 directory places Jacob Elmendorf, a painter, at 1 North Moore Street and while the 1830 Census places Sarah Elmendorf, with a family of five, at 148 Chapel Street – both addresses being Lot 44 (U.S. Census 1830; Directory 1829/30; see Appendix A). Furthermore, an undated Tax Map that post-dates Disbrow's death in 1823, but predates 1834, indicates that James Munroe was assessed for the lot at 1 North Moore Street (the rectangular lot), while the Corporation of the City of New York was assessed for the triangular lot fronting Chapel Street (undated Tax Map; see Appendix A).

In 1833 Stephen and Richard Disbrow conveyed a portion of the lot to Phebe Emmans (Liber 297:21). In 1834 Isaac Styles sold his interest in the lot to the City of New York. The City reportedly operated an engine house from the lot for a brief period of time. That same year, Phebe Emmans and Samuel Cowdrey (Master in Chancery) entered into a dispute over a portion of the lot with John Mason (Liber 885:510). Emmans must have won the dispute, as in 1846 she conveyed the lot to William Grayson, Lourdes Brown, and Samuel Fox, trustees for Elizabeth May Monroe – presumably a relative of James Munroe (Liber 481:102). During this time, Jacob Elmendorf continued to be listed as a resident of the house at 1 North Moore Street through at least 1840. After this, James Monroe was assessed for the house on the lot from 1843 through 1847. However, in 1849, the house was occupied by Abram Post, a mason, Ramers Veldran, a commissioner merchant, and John Meyer, a shoemaker (1849 Directory; see Appendix A). The John Meyer, Ramer Veldran, and Abraham Post families were all listed on the same page in the 1850 U.S. Census (U.S. Census 1850).

In 1847 the trustees for Elizabeth Monroe conveyed the lot or a portion of the lot to the Mayor Alderman and the Common Council of the City of New York (Liber 491:309). In 1855 the Mayor reconveyed a portion of the lot to George Archer and Francis George (Liber 683:50). Archer conveyed his interest in the lot to Francis George in 1866 (Liber 900:681). In 1857 and 1859 Archer and George operated a livery service out of a stable two lots north of the APE. Only Francis George lived in the APE at that time (Trow 1857:36, 37, 310; 1859:197).

In 1858 when the lot was assessed it contained an engine house on Lot 44, with Archer assessed for one house at 1 North Moore Street (Tax Assessments; see Appendix A). The size of the lot at that time was described as 13.10' by 52.11', with the three-story house covering its entirety (Ibid.).

Cartographic Review

Maps dating to 1808 show the entire block vacant, but by 1817 the block is hachured, indicating that some degree of development had occurred (Longworth 1808, 1817). The tax records indicate that there was at least one house on the lot as early as 1808. However, the first map to show specific development on the lot dates to 1852, when a triangular shaped building is shown on the southern half of the lot at the corner of West Broadway and North Moore Streets (Dripps 1852; Figure 7). The more detailed 1852 and 1857-62 Perris maps show that the building at the corner of the lot is constructed of wood, and that there is an extension on the northern part of the lot, so that the entirety of the lot fronting West Broadway is covered by a structure (Perris 1852, 1857-62; Figure 8). A small area at the northwestern part of the lot is undeveloped (Ibid.). The

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1879 atlas does not show building details, but the 1885 and 1891 atlases shows the same level of development indicated in 1852 and 1857-62 (Bromley 1879, 1891; Robinson 1885; Figure 9).

From 1894 through 1951, the portion of the lot fronting both Broadway and North Moore Streets is shown covered by a three-story building with a basement. The structure contains stores, with dwellings above. There is a two-story addition covering the northwestern corner of the lot, and a one-story addition on the portion of the lot that was previously undeveloped (Sanborn 1894, 1905, 1922, 1951; Bromley 1899, 1911, 1916, 1922, 1955; Figures 10-13). In 1900 when an alteration permit was issued for the building, it functioned as a "saloon and furnished room house." At that time the lot was 44' wide and 16' deep, and the building measured the same size, being three stories in height. Furthermore, it had an 8' deep stone foundation with 18" thick walls, while the upper walls were brick (Building Department ALT #1757:1900). Sometime after 1955, the building on the lot was razed, and it was converted to a parking lot.

Summary

In summary, Lot 44 hosted at least one dwelling by 1808, and appeared to have a second dwelling on it by 1809. There were multiple owners and occupants of the lot during the early 19th century, likely a reflection of the fact that the street level of the three-story structure on the lot served for commercial use, while the upper stories served for residential purposes. Most of the residents were transient, with the exception of several longer-term residents such as John Pool, a baker (ca.1811-1823), Peter Erickson (ca.1812-1817), and Jacob Elmendorf, a painter (ca.1827-1840). Although there were several long-term owners of portions of the lot (e.g., Poole, Disbrow, Munroe), they did not appear to reside on the lot (see Appendix A).

The difficulties in tracking the lot's earliest inhabitants was compounded by the fact that street addresses changed multiple times, and lot lines changed at least once. A portion of Lot 44 was known to contain privies in the late 1820s, as indicated by a reference to a noxious privy at 150 Chapel Street in the Minutes of the Common Council (see Appendix A). Most likely, there were multiple privies to serve the multiple residents. However, what was originally the backyard area of the lot in the early 19th century, has since been removed from Lot 44 and incorporated into Lot 43, out of the APE. The portion of the lot in the APE was continually occupied by a three-story structure with a one-story addition from at least 1852 onward. Only the very small northwestern corner of the lot that had a one-story addition with no basement may be potentially sensitive for truncated shaft features due to the lack of extensive subsurface disturbance.

Lot 45

Lot 45 is a rectangular shaped lot and has been designated as 3 North Moore Street since at least 1834 (Tax Map 1834; Perris 1852; Bromley 1879, 1891, 1897, 1899; Robinson 1885; Sanborn 1894, 1905, 1922, 1951, Figures 7-13).

Discussion of Data from Census/Tax/Directory/Minutes of the Common Council

Lot 45 was undeveloped in 1804 (Wilson 1851), and in 1805 it was conveyed by Anthony and Sarah Lispenard to Thomas Rich and John Disbrow (Liber 69:514). In 1808 the block appeared

to remain undeveloped, although John Disbrow, a merchant "taylor," had purchased Rich's share of the lot (Liber 272:609; Longworth 1808; 1808 Tax Assessments; see Appendix A). The first mention of a house on the lot in the tax assessments dates to 1810 when John Disbrow, Lewis Rogers, and John Richards were assessed for a house and lot (Tax Assessments; see Appendix A). Disbrow continued to be assessed for the lot with a house through 1824, together with a number of other people including Joseph Wood, Warne Willet – a resident in 1812, Charles Rollinson, Henry Wilcox, and James, Charles, or Henry Sands – residents from ca. 1826 through 1840 (see Appendix A). Disbrow lived on a lot outside of the APE at 9 North Moore Street in 1815, and probably purchased the lot for investment purposes (1815 Directory; see Appendix A).

In 1831 the executors of John Disbrow's estate conveyed the lot to John Van Aulen (a.k.a. Van Allen and later Allen), a coachmaker (Liber 272:614; see Appendix A). No additional 19th century conveyance information was recorded in the Block Abstracts at the City Register's office. Van Allen was assessed for taxes on the house and lot through at least 1858 when the lot was described as 18.9' by 75' with a two-story house measuring 18.9' by 34'. During Van Allen's ownership of the house and lot, Sands continued to live on it through at least 1839, but by 1849 it was occupied by Samuel Reynolds (1849 Directory; see Appendix A). Reynolds, a police captain, lived in a household with his wife, Elizabeth, and another couple: Lydia and Thomas Negus (U.S. Census 1850; see Appendix A). Reynolds was affiliated with the lot through at least 1851. Directory research failed to place the Van Allen family on the lot (see Appendix A).

Cartographic Review

In 1852, the first year that maps delineate specific structure on the lot, there was an "L" shaped building covering the southern end and the middle part of the lot along its western boundary (Dripps 1852; Figure 7). The slightly more detailed Perris 1852 map shows this to be a building of wood construction, as does the Perris 1867-62 map (Figure 8). No building details are depicted in 1879, but in 1885 and 1891 the lot appears to have remained unchanged (Robinson 1885; Bromley 1891; Figure 9).

By 1894 the one-story addition along the western boundary of the lot was expanded slightly to the east, and what appeared to be a separate one-story structure was built along the northern boundary of the lot (Sanborn 1894; Figure 10). However, the 1899 atlas depicts the structure as it appeared in 1891, without the expanded additions (Bromley 1899). In 1905 the main building at the south end of the lot is depicted as a three-story structure with a basement, which contained both stores and dwellings (Sanborn 1905; Figure 11). The expanded additions were again depicted, and they extended as far north as the one-story building at the north end of the lot. Also, another one-story structure had been built along the eastern section of the lot (Sanborn 1905). The resulting effect was for a dumbbell-shaped area to have remained undeveloped in the center of the lot (Figure 11). In 1922 the building on the lot appeared unchanged (Bromley 1922; Sanborn 1922; Figure 12). When a Certificate of Occupancy was issued for the building on Lot 45 in 1929, it was listed as a three-story building with a store, and a cellar used for storage (Building Department CO #15359:1929).

By 1951 the entire lot appeared to be covered by a structure that was three-stories in height, with a basement beneath the southern half of the building (presumably the original structure depicted on earlier maps and atlases), with a one-story addition constructed across the entirety of the remainder of the lot (Sanborn 1951; Figure 13). The lot appeared unchanged in 1955 (Bromley 1955). In 1964 when a demolition permit was issued for the lot, it contained a three-story building that served as a two-family dwelling with a store. The three-story building measured 18'9" wide by 34' deep, while a one-story addition measured 18' wide by 40' deep (Building Department DEM #58:1964). Since that time, the lot has served for vehicular parking (Building Department ALT #362/64:1964). The creation of the parking lot entailed grading and compacting Lot 45 in order to equal the elevation of adjacent Lot 46 (Ibid.).

Summary

In summary, Lot 45 was purchased by John Disbrow as an investment in 1808, and was developed with one house between 1809 and 1810. Warne Willet lived on the lot in 1812, and members of the Sands family lived on the lot between ca. 1826 and 1839. The lot was sold to John C. Van Aulen in 1831, and the family retained the lot through at least 1858, and possibly longer.

The southern end of the lot had a three-story building with a basement from ca.1852 onward. The northern half, or back yard of the lot, had never hosted more than a one-story addition without a basement. This portion of the lot may be potentially sensitive for truncated shaft features due to the lack of extensive subsurface disturbance.

Lot 46

Lot 46 is a rectangular shaped lot that has been designated as 5 North Moore Street since at least 1852 Perris 1852; Bromley 1879, 1891, 1897, 1899; Robinson 1885; Sanborn 1894, 1905, 1922, 1951, Figures 7-13).

Discussion of Data from Census/Tax/Directory/Minutes of the Common Council

Lot 46 was undeveloped in 1804 (Wilson 1851), and in 1805 it was conveyed by Anthony and Sarah Lispenard to Thomas Rich and John Disbrow (Liber 69:514). In 1808 the block appeared undeveloped, although John Disbrow, a merchant "taylor," had purchased Rich's share of the lot (Liber 272:609; Longworth 1808; 1808 Tax Assessments; see Appendix A). The first mention of a house on the lot in the tax assessments dates to 1810 when John Disbrow and Thomas Richards (Rich) were assessed for a house and lot (Tax Assessments; see Appendix A). Disbrow, or his estate, continued to be assessed for the lot with a house through 1827, together with a number of other people including Richards, George Long, William Hastty, a resident in 1815, and Henry Zanngle (see Appendix A).

During the early 19th century, residents changed frequently, with most being skilled laborers or professionals (e.g., physicians, cabinet makers, carpenters, etc...see Appendix A). In 1831 the estate of John Disbrow sold the lot to John C. Van Aulen (a.k.a. Van Allen and Allen), who had also purchased Lot 45 to the east (Liber 272:614). No conveyance information was recorded in

the Block Abstracts at the City Register's office for the period between 1831 and 1864 when Margaret Stewart and the heirs of John Allen conveyed the lot to Edward Folger, Mary Alfred, and Emmeline Bryant (Liber 889:367). However, by 1837 Van Allen was no longer assessed for the lot. Instead, Benjamin Folger was assessed for the house and lot. In 1843 the estate of John Disbrow, together with Peter Frevell, was assessed for the lot once again, suggesting that Van Allen no longer retained ownership.

During the mid-19th century, there was one long-term resident; Peter Frevell (or Frewell) who was listed as residing at 5 North Moore Street between ca.1842 and 1853 (1842, 1844, 1849, 1851 Directories; see Appendix A). In 1850 he was listed as a broker that lived on the lot with his wife, Anglea, and three non-relatives; Mary La Garde, Julia Faure, and Mary Duffy (U.S. Census 1850; see Appendix A). The implication being that small flats or rooms were let to unrelated women.

In 1869, the New York Herald ran an advertisement for employment for a 40 year old male living at 5 North Moore Street "who speaks French, German, English and Spanish; he wishes a situation. Understands cooking and waiting" (New York Herald December 3, 1869:11). The structure on the lot held a continuously changing population.

Cartographic Review

Lot 46 follows a similar development history to Lot 45. In 1852 the southern one-third of the lot was covered with a structure which had an extension to the north along the western side of the lot (Dripps 1852; Figure 7). The Perris maps indicate that this was a brick-faced wooden building (Perris 1852, 1857-62; Figure 8). By 1885 the addition at the rear of the building had been extended to the northern boundary of the lot, so that it covered the western half of the lot (Robinson 1885). The lot appeared unchanged in 1891 and 1894 (Bromley 1891; Sanborn 1894; Figures 9, 10). However, in 1899 the extension at the rear of the lot appeared as it did on earlier atlases (Bromley 1899). The 1905 Sanborn map shows the main building as a three-story structure containing stores and dwellings, but no basement. The addition to the north on the western half of the lot was segmented with one section being two-stories and the other being one-story (Sanborn 1905; Figure 11). Only a narrow area along the eastern half of the lot remained undeveloped. The lot appeared unchanged in 1922 (Bromley 1922; Sanborn 1922; Figure 12). When a Certificate of Occupancy was issued for the building on Lot 46 in 1930, the lot was occupied by a three-story building with restaurants and stores, and a cellar utilized for storage (Building Department CO #16531:1930).

In 1938, a demolition permit was issued for the building on Lot 46. At that time it contained a three-story structure measuring 18' in width by 34' in depth (Building Department DEM #14:1938). By 1951 the lot was used as parking (Building Department CO #39152:1951; Sanborn 1951; Bromley 1955; Figure 13). The permit for the parking lot was reissued in 1964 (Building Department CO #59817:1964).

Summary

In summary, Lot 46 was developed sometime between 1809 and 1810, probably by John Disbrow who invested in a row of lots on the block. Early residents changed frequently, and Disbrow never actually resided on the lot. The only long-term resident associated with the lot was Peter Frevell who resided on it from ca.1842 through ca. 1853. The lot was occupied by a three-story structure from ca.1852 onward. There is no indication that the main part of the structure fronting North Moore Street ever had a basement, and certainly the one and two-story additions on the rear of the lot did not. The northern half of the lot may have once hosted privies, and is sensitive for truncated features that may have remained undisturbed beneath a one-story addition. A long strip along the eastern side of the north half of the lot was never built on, and is also potentially sensitive for shaft features.

Historical Archaeological Potential

The lots within the APE were developed in the early 19th century, and changed ownership several times (see Appendix A). By the mid-19th century, the structures served both commercial and residential use, possibly served as both a residence and workplace. The buildings had stores and restaurants below, with apartments and flats and single rooms above.

Historical archaeological resources relating to dwellings and commercial structures are often preserved in privies, cisterns, wells, and cesspools, which in the days before the construction of municipal services - namely sewers and a public water supply - were an inevitable part of daily life. Prior to the availability of potable water, hand excavated wells were dug to serve individual or multiple lots, and sometimes even neighborhoods. Another measure undertaken to provide water for household use was through the collection of run-off from house roofs during rainstorms. Water was collected in cisterns or barrels, and used for purposes not requiring potable water, such as washing (Kieran 1959:31). Also, without piped water to accommodate flush toilets, privies were necessary. These were commonly situated in back yards, and sometimes drained into a communal cesspool.

Noxious conditions in the 19th century inspired ordinances regulating the depth and cleaning of privies. A city ordinance passed in 1823 required that privy vaults be constructed of stone or brick, although earlier ones were occasionally constructed of wood. They were also required to extend at least five feet below ground surface (Goldman 1988:45). Lime was placed in vaults to counteract some of the noxious gases, and contents were required to be emptied periodically. After sewer pipes were installed in the street beds, water closet connections to the sewer system were utilized (Ibid.:64). In some cases, earlier privies were retrofitted with sewer pipes to allow for the new system of flush toilets. In 1856 an ordinance was passed requiring that new construction be limited to lots served by sewers "unless a sink or privy was erected" (Ibid.:72).

Archaeological and documentary research has shown that at numerous sites in Manhattan, these wells, privies, cisterns, and cesspools were continuously used even long after municipal utilities were available (see Grossman 1995:29; Pulling 1864) Shaft features became convenient receptacles for all sorts of trash, providing a valuable time capsule of stratified deposits for the modern archaeologist. They frequently provide the best domestic remains recovered on urban

sites. Truncated portions of these shaft features are often encountered on homelots (as well as commercial and industrial lots) because the shafts' deeper and therefore earlier layers remain undisturbed by subsequent construction. In fact, construction often preserves the lower sections of these features by sealing them beneath structures and fill layers.

The potential depth of shaft features throughout Manhattan is varied, and depends, in part, on the subsurface conditions at the time they were excavated. Wells would have been excavated at least as deep as the water table (ca.14' below grade in the APE), and possibly deeper to access potable water. For example, once the water from the Collect Pond in Lower Manhattan was no longer potable, having been declared "stagnant and mephitic" in 1796, deeper wells were dug throughout the city to access clean water (Kieran 1959:31). At Bleecker Street near Broadway, in 1832 a well was bored to a depth of 448', of which 400' was through solid rock (Ibid.). However, this was not the typical depth for wells hand excavated in backyards throughout the city prior to the availability of high pressure steam engines (ca.1815) which allowed for deep drilling. These would typically have extended through soil to the water table, at whatever depth that was encountered, and possibly deeper to access a more reliable supply of cleaner water.

The anticipated depth of privies is also difficult to estimate, given that subsurface conditions, such as soil permeability and the number of households served would have affected the size and depth of vaults. Geismar notes that a possible privy identified at 17 State Street extended 13' below the grade that existed at the time it was constructed, and that this depth coincided with the depth of a privy excavated at the Augustine Heerman warehouse site on the block bounded by Whitehall, Broad, Bridge, and Pearl Streets, also in Lower Manhattan (Geismar 1986:44). As noted above, by 1823 they were required to be at least five feet deep (Goldman 1988:45). The depth of potential shaft features on Block 190 within the 240-244 West Broadway APE are further going to be influenced by the depth of fill and the water table since it was once part of the Cripplebush Swamp.

The documentary research found that the 240-244 West Broadway APE lots were developed between 1808 and 1810, long before the availability of municipal sewer and water. Although water pipes were clearly present around the APE in 1842 following the construction of the Croton Water System (Endicott 1842), it is possible that municipal water was available at an earlier date. Unmapped wooden water mains were installed in many of lower Manhattan's streetbeds from 1799 through 1827. After that date, wooden pipes were replaced with cast-iron ones (Geismar 2005a:3). In 1834 iron water pipes were present on Varick Street to the west of Block 190, but none were mapped on either West Broadway (then Chapel) or North Moore Street (Firemen's Guide 1834).

According to the Aqueduct Commissioners Report of 1857, new sewer pipes were laid in West Broadway between Thomas and Canal Streets – including the portion of the street adjacent to the APE - in 1837 (Aqueduct Commissioners 1857:129). However, sewers were installed in West Broadway as early as 1821 when John Pool petitioned for an extension of time to pay for an assessment on his property in Chapel Street for erecting a sewer (MCC May 28, 1821 Vol. 11:63). This earlier sewer was designed to address the drainage problem that was pervasive in the area, and probably did not provide an outlet for household waste.

The 1827, 1829, and 1831 MCC records state that the owner and/or occupant of 150 Chapel Street on Block 190 had a privy that was a nuisance, indicating that the early sewer on Chapel Street was probably not an outlet for household sewage (MCC February 26, 1827 Vol. 16:129; January 12 1829 Vol. 17:579; February 21, 1831 Vol. 19:502). Likewise, noxious privies were reported for blocks to the north and south of the APE, indicating that privies were in use in the area through at least the early 1830s, and probably through at least 1837 when sewer lines were available to accommodate waste. Most likely, the three lots in the APE contained privies from their date of first occupation in the early 19th century (ca.1809) through at least the 1840s.

Due to the likely presence of shaft features, portions of the APE are potentially sensitive for commercial and domestic deposits dating from ca. 1808 through the 1840s when municipal utilities became available (Figure 14).

POTENTIAL IMPACTS

The proposed development is for a nine-story residential building to be located at 240-244 West Broadway. The project site is approximately 4,200 square feet. The footprint of the building above grade will be approximately 2,500 square feet, and a 1,204 square-foot courtyard will remain open at the rear of the lot (FLAnk Architects, Drawings A004, A200:February 26, 2007). The structure will have one subsurface cellar level that will cover the entirety of the lot, and this will be constructed on a raft foundation. The bottom of the matt slab will be at approximately 14'1" below the sidewalk level, while the proposed elevator pit and ejector pit will be deeper (19'11" maximum) in discrete locations. In addition, underpinning may be required for adjacent buildings bordering the northern and western lot boundaries (Oweis Engineering Inc. 2006:8). Subsurface work may also entail installing a drainage system consisting of a network of drainage pipe with crushed stone around the perimeter of the foundation walls (Ibid.:11).

CONCLUSIONS AND RECOMMENDATIONS

The 240-244 West Broadway APE was found to be potentially sensitive for historical archaeological deposits, especially truncated shaft features. Resources potentially buried in the APE include early 19th century domestic and commercial deposits and features that would predate the availability of municipal sewer and water (1837 and 1842 respectively), below the depths of foundations of subsequent 19th and 20th century additions. Only portions of the APE are potentially sensitive for these resources, the rest having been disturbed by the construction of three-story buildings with basements (see Figure 14).

The proposed project will require excavation of up to 14' across the entire APE, and will extend to 19.11 feet below current grade in discrete portions of the APE. This depth of impact could disturb potential archaeological deposits that date to the early and mid-19th century. If these impacts cannot be avoided, then an archaeological field testing program should be designed in coordination with LPC.

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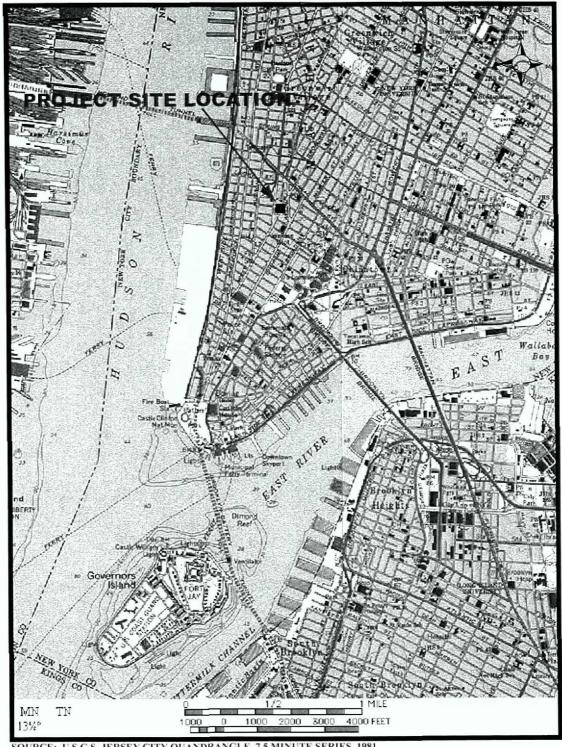
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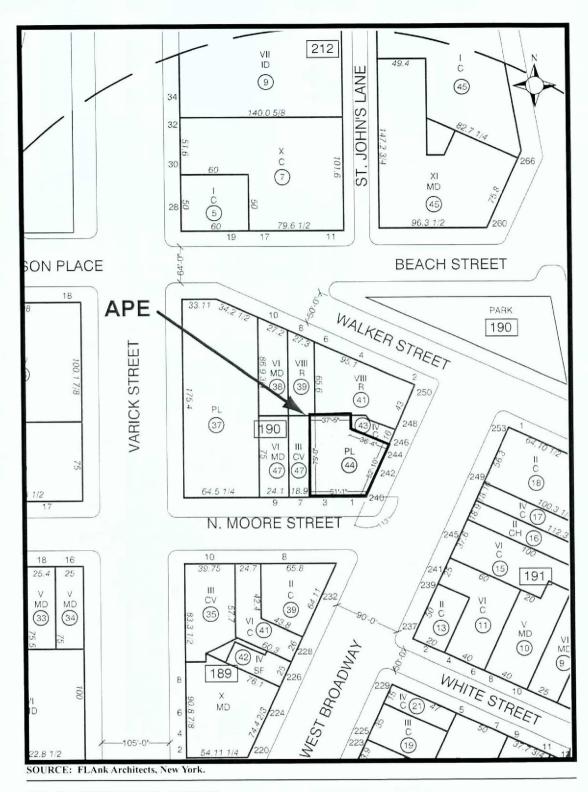
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SOURCE: U.S.G.S. JERSEY CITY QUANDRANGLE, 7.5 MINUTE SERIES, 1981.

240-244 WEST BROADWAY

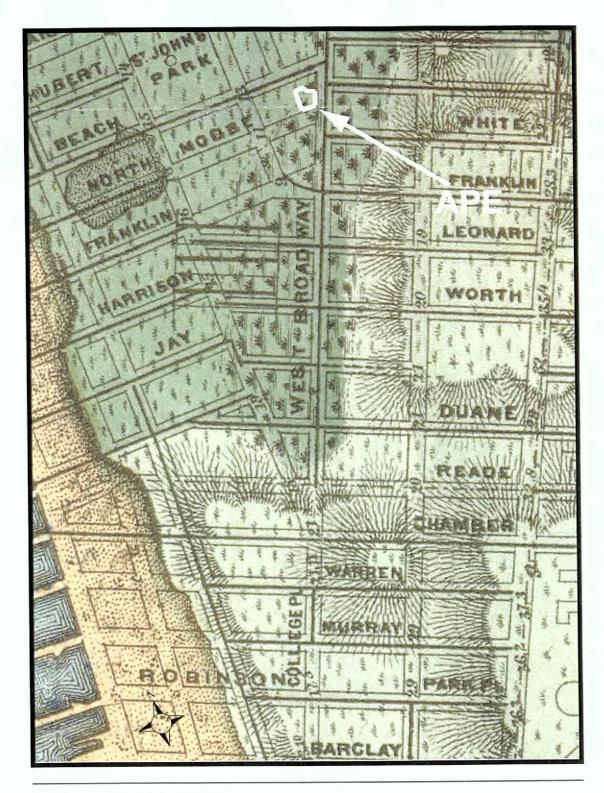
FIGURE 1: PROJECT SITE LOCATION



240-244 WEST BROADWAY

FIGURE 2: PROJECT SITE BOUNDARIES AND AREA OF POTENTIAL EFFECT (APE).





240-244 WEST BROADWAY

FIGURE 3: Map of the City of New York from the Battery to 80th Street Showing the Original Topography of Manhattan Island. Viele, 1865.

(Hp)

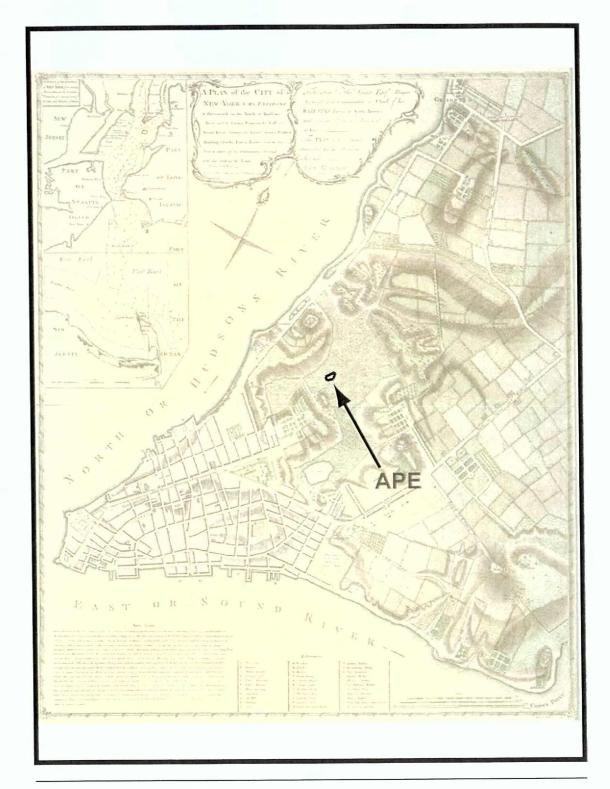


FIGURE 4: A Plan of the City of New-York & its Environs to Greenwich on the North or Hudson River. Montresor, 1767.

No Scale.



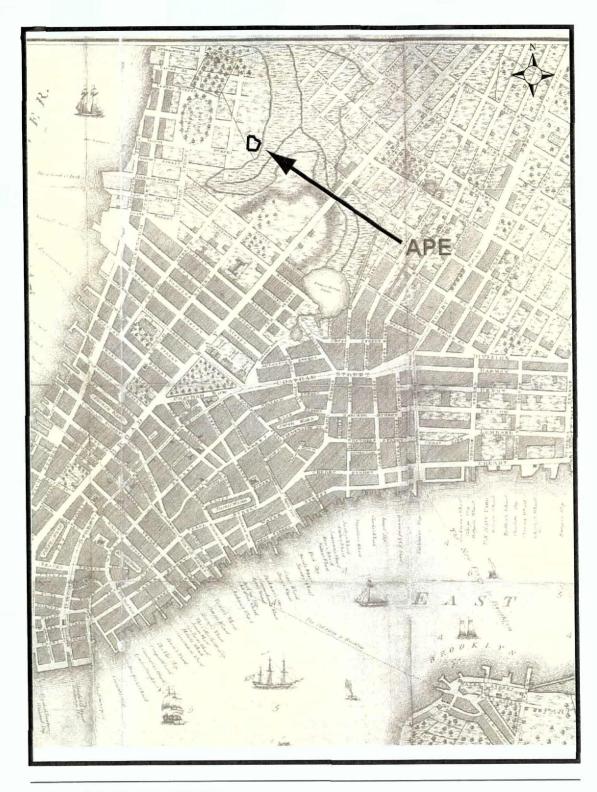
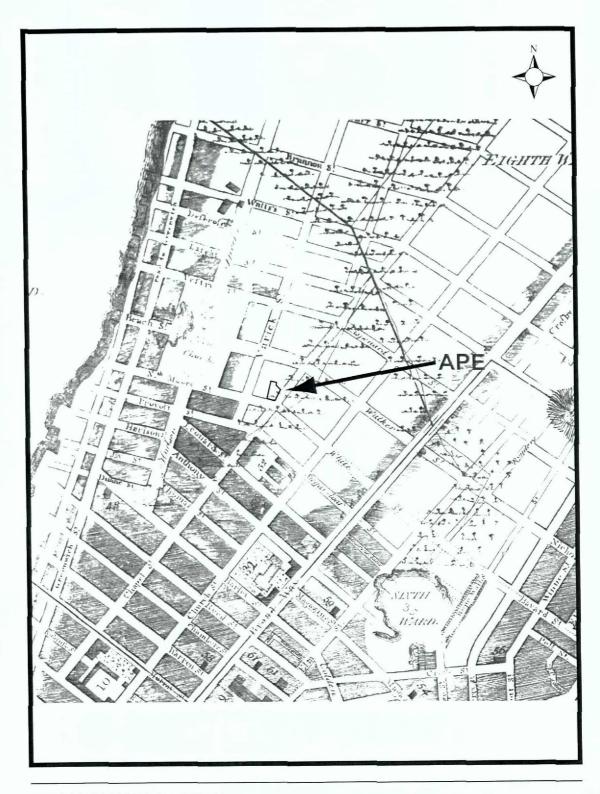


FIGURE 5: A New and Accurate Plan of the City of New York. Taylor-Roberts, 1797. No Scale.





240-244 WEST BROADWAY

FIGURE 6: Plan of the City of New York. Longworth, 1808.

No Scale.



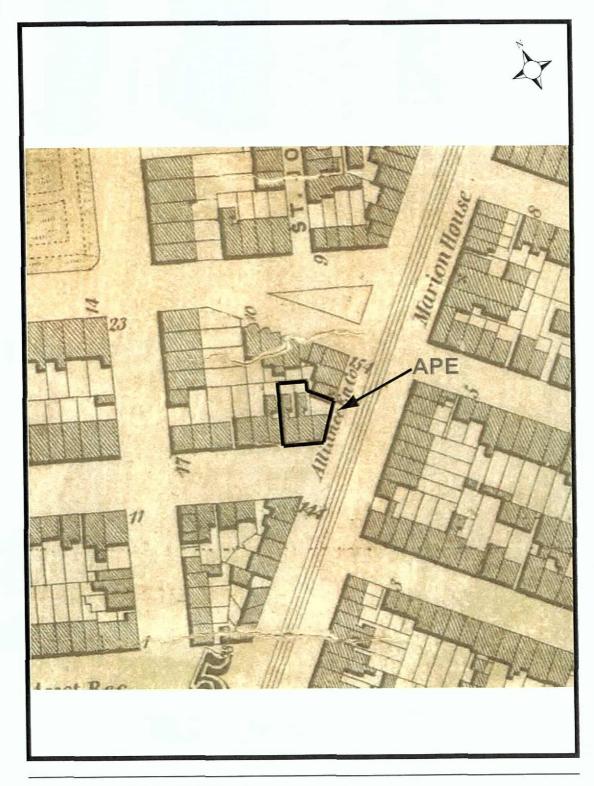
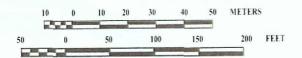


FIGURE 7: Map of the City of New-York Extending Northward to Fiftieth Street. Dripps, 1852.





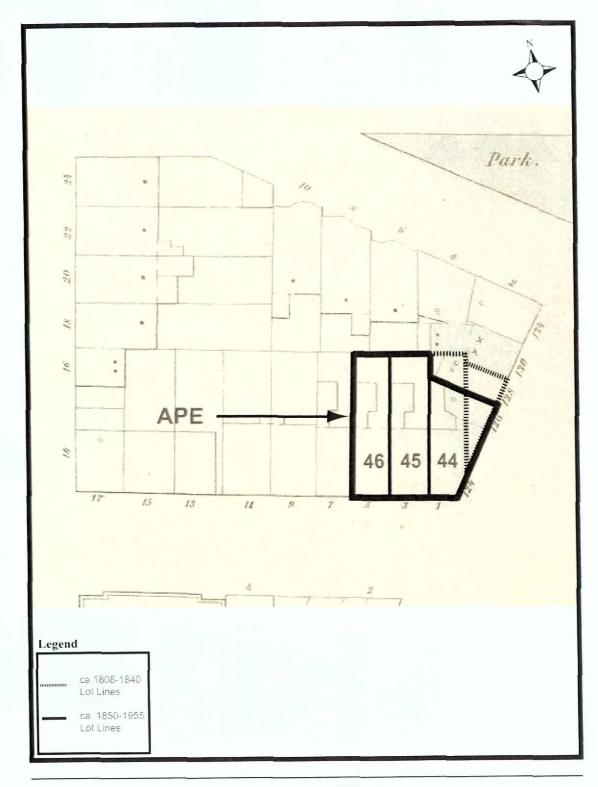
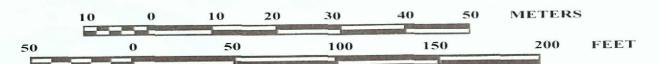


FIGURE 8: Maps of the City of New-York. Perris, 1852.





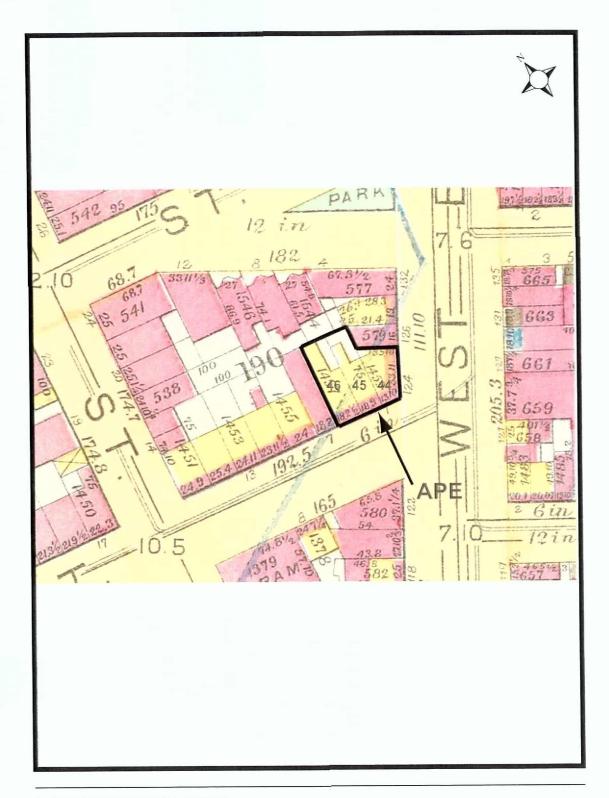
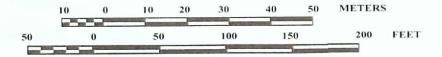


FIGURE 9: Atlas of the City of New York, Borough of Manhattan. Bromley, 1891.





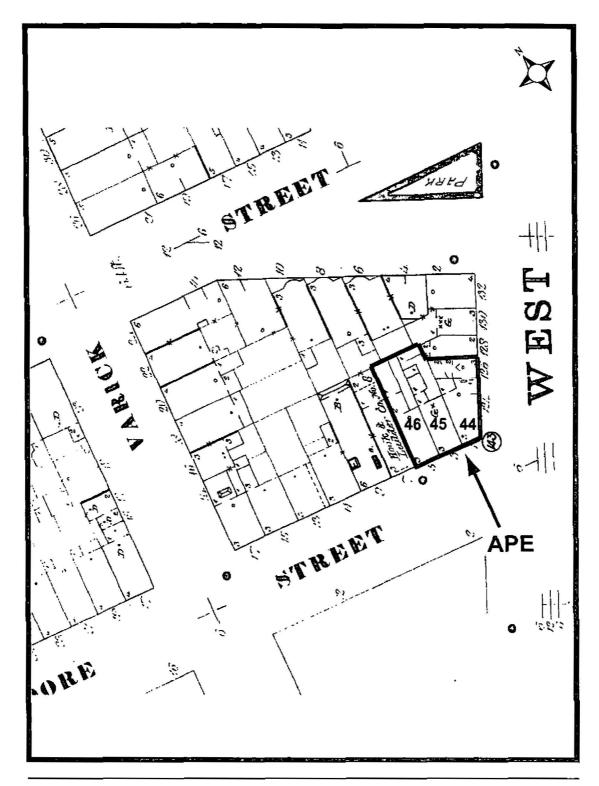
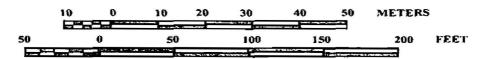


FIGURE 10: Insurance Maps of the City of New York. Sanborn, 1894.





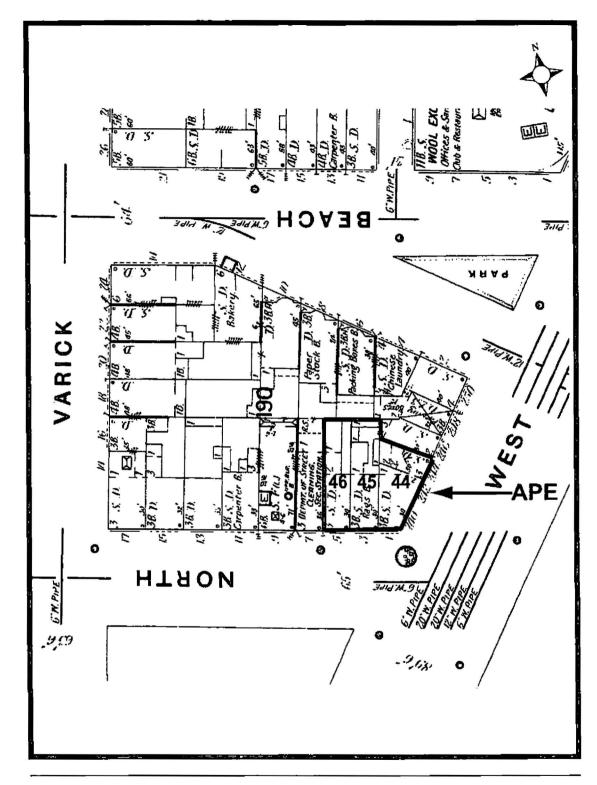
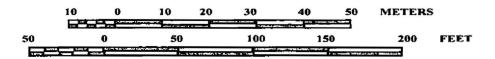


FIGURE 11: Insurance Maps of the City of New York. Sanborn, 1905.





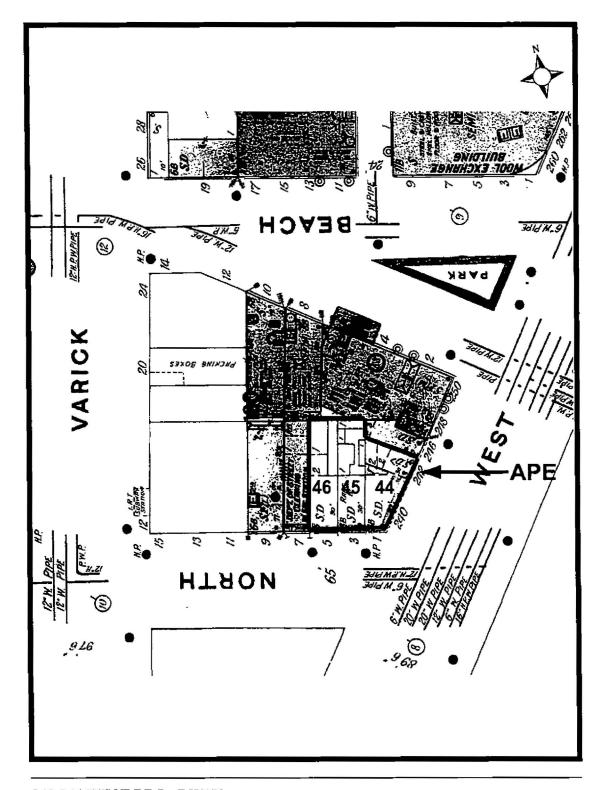
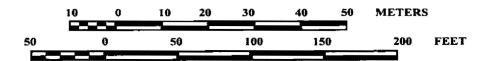


FIGURE 12: Insurance Maps of the City of New York. Sanborn, 1922.





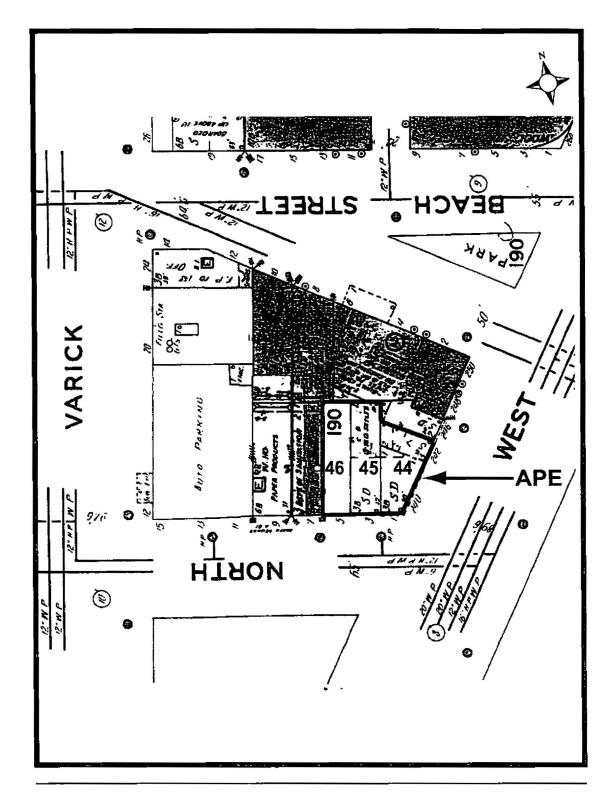
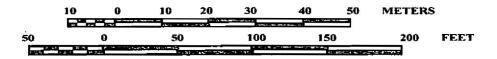


FIGURE 13: Insurance Maps of the City of New York. Sanborn, 1951.





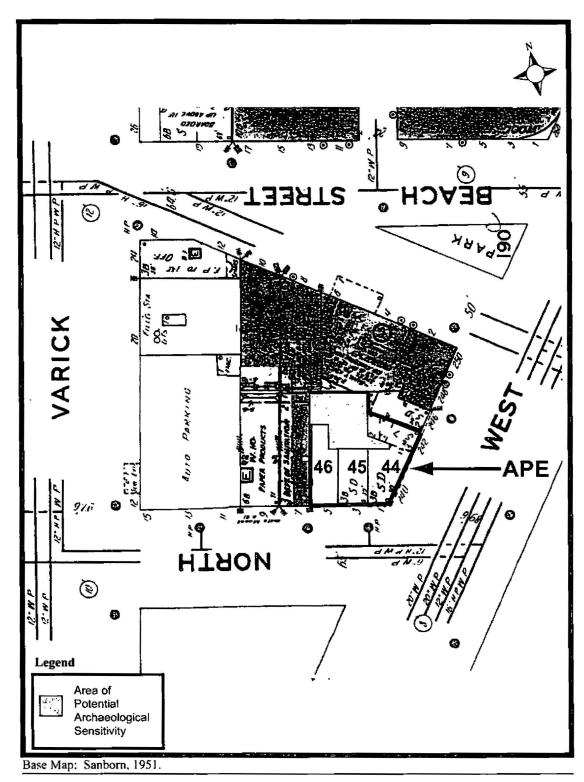
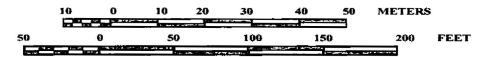


FIGURE 14: Area of Potential Archaeological Sensitivity.



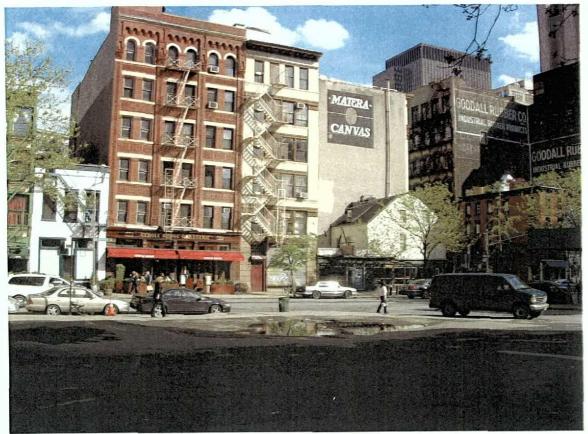




Photograph 1: 240-244 West Broadway APE, facing west from the northeast corner of West Broadway and North Moore Street.



Photograph 2: 240-244 West Broadway APE, facing northwest from the east side of West Broadway.



Photograph 3: 240-244 West Broadway APE, facing southeast from the northwest corner of the APE.



Photograph 4: South end of 240-244 West Broadway APE, facing west along North Moore Street.

Year	Grantor	Grantee	Lot#	treet (ca.1830-1848) Census	Tax Assessment:	Directories and MCC
654	NIOR	- Orantee	44	Celisus	1 ax Assessment	Directories and Mee
o 1702	Mok					
1704	NIOR		44			
o 1725						
1727	NIOR					· · ·
to 1766_	-	_				
1768 to 1803	NIOR		44			
1803		-				No listing in APE
1805	Lispenard, Anthony,	Rich, Thomas S L,	43-49 Incl.			No listing in Ai L
1003	Esq. Sarah	Merchant Taylor Disbrow, John, Merchant Taylor L69/P514	45.47 4151.			
1806	Poirier, Charles P Elizabeth	Vincent, James L72/P471	43, 44			
1806	Vincent, James Margaret	Poole, John L73/P361	43, 44			
1807						Poole, John – petition the CC for extra time to pay assessment on property on Chapel St. for erecting a sewer (MCC 11:63)
1808	Lispenard, Leonard Sarah	Poynier, Charles W L80/P291	41-44, Incl., 53		Pool, John One house, corner lot on North Moore Street	
1808	Rich, Thomas L Merchant Taylor Rachel	Disbrow, John, Merchant Taylor (referred to in 1831 L272/P609)	44, 45. 46			
1809					Place, John One house, Chapel Street, corner North Moore Street	
					And/or	
					Disbrow, John Taylor, John in Ludlow, Christopher 1/3 in One house, North Moore Street at Chapel Street	
1810				Poole, John next to Clem, John 5th Ward John Disbrow next to Rich, Thomas 5th Ward	Pool, John Clem, John in One house & lot Chappell Street near North Moore Street And/or	
				(both p.11)	Disbrow, John Cheeseman, Joseph B. in. North Moore Street, comer of Chappell	

¹ NIOR - No Instruments of Record

Year	Grantor	Grantee	Lot#	Census	Tax Assessment:	adway (ca. 1849-1891) Directories and MCC
1811	-			-	Disbrow, John	
		i		1	Errickson, Peter in	
					Parks, James	
		ľ		1	North Moore Street,	
	7	1	Î	1	corner of Chappel	
					Street	
					1	
		1	1	1	And/or	1
	ļ					
					Pool, John	
			Į.	,	Clem, John in	
	Į		Ĭ		Bersch, Christopher	1
					One house	
		i			Chappel Street	
1812					Poli, John	Errickson, Peter, 1 N. Moore
				1	Mead, John H. in	
					One house	Sloat, Peter,
				1	Chappel Street,	Chapel near North Moore
	(Listed in both the 1812 reverse
	1				Disbrow, John	and obverse directories.
		}			Erickson, Peter in	
				1	Sloat, Peter in	Both Errickson and Sloat are
		1			One house	also listed at 140 Chapel Street
				1	North Moore c of	in 1812 reverse directory.
		1		l	Chapple Street	
1813			7		Disbrow, John	
	1				De Hunt, Siles	
	1				One house	
	1	1		4	1 North Moore	
			,	1	Street, corner of	
					Chappel	1
1815						Disbrow, John (owner),
	1			1		Lynt, Benjamin (occupant)
				1		North corner N. Moore &
					ì	Chapple (MCC 8:276)
						Chappie (MCC 0.270)
	1					Lynt, Benjamin, grocer
				1		North Moore Street c Chapel
					1	North Moore Sheet e Chaper
		1				Place, John, oyster h
	1			1		78 Wall and Chapel near
			1			North Moore
					l	North Moore
		l.				Pool, John, baker
	1					Chapel /North Moore
1817	+	 	 -	-	Disbrow, John	Chaper morth wrote
1017		ļ			Erickson, Peter	}
]		l	One house	
	ì			1	1 North Moore Street	
			1		1 HOLLI MOOIE SUCC	
					and maybe	1
		1		1	and mayor	
					Pool, John	
					One house	
		1		1	Chapel Street	1
1820	 -	1	-+	Poole John (n 0)	Chaper street	
1040			1	Poole, John (p.9) Disbrow, John (p.49)		Į.
1823	Paul John	Styles less-	12.44	Disolow, John (p.49)	Disbrow, John	
1043	Pool, John	Styles, Isaac	43, 44			
	(Execs. of)	L164/P458			One house	
	Poillon, John Jr.			k	North Moore, corner	
	Mary	1		1	Form of D. 1.1.	1
	Archey, John			1	Estate of Poole, John	
	Sophia	1	1	1	one house	
	Ackerman, David J			1	126 Chappel	
	Elsey	1				
	Pool, John			1	Styles, Isaac	
	Adeline		1	1	one house 124	1
-	Joseph	1	1	ļ	Chappel	1
	Jannet T	L L				

Year	Grantor	Grantee	Lot#	Census	Tax Assessment:	Directories and MCC
823	Pool, John	Archey, John	44			
	(Execs. of)	L170/P50			e:	
	Poillon, John Jr.	ļ				
	Mary			Į.		
	Ackerman, David J Eisey				1	
	Pool, John					
	Adeline					
	Joseph					}
	Jane J					
1827					Disbrow. John est.of	Styles, Isaac - cited for
]	Roe & Elmendorf One house	noxious privy at 150 Chappel Street (MCC:129)
					1 North Moore	Street (MCC:129)
		1			Street, corner	
					Styles, Isaac	1
	\				Van Ness, John	
1020/	<u></u>			0. 151 4.6	150 Chapel Street	look Plant 6
1829/ 1830				Sarah Elmendorf, w/ family of 5: 148 Chapel		Jacob Elmendorf, painter, 1 N. Moore Street
1824-	 	 		taning of 5. 146 Chapet	Munroe, James	I IN. MICONE SHIELE
1831 (NSD)					1 North Moore	
(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					Corporation City of	
			l		NY - 150 Chapel	
1831	-			<u> </u>	(tax map)	Styles, Isaac - cited for
1031						noxious privy at 150 Chappel Street (MCC:579)
1833	Disbrow, Stephen-	Emmons, Phebe	44		Disbrow, John, est.of	
	-Rich	1.297/P21			One house	
				1	I North Moore	
					Street, comer Chapel	
	1		Ì		Elmendorf, James B.	ì
					(no street #)	
1834	Styles, Isaac	Mayor, Aldermen &	44		1 North Moore, 148	
	Elizabeth	Commonality of the	ļ		& 150 Chapel (Tax	ļ
		City of New York L314/P226		ŀ	Map)	
1835		L314/1 220		-		Elmendorf, Jacob B., painter -
101-0-1			Į			I North Moore Street
1837			1		Elmendorf, Jacob A.	
				ļ	1 North Moore	
					Street, corner Chapel	
					Street	
1838	Cowdrey, Samuel	Mason, John	44			
	(Master in Chancery)	L385/P510			1	
	Phebe Emmans, et al Defendants	1	l ₁		· ·	
1839/	Detendants	 		-	_	Elmendorf, Jacob, painter -
1840						148 Chapel Street
1840		1		Elmendorf, Jacob B.	· 	
				5th Ward (p182)		
1843					Monroe, James	
					One house	
		1			l North Moore Street, corner of	
					Chapel Street	
1846	Emmans, Phebe	Grayson, William	44		Monroe, James	•
	entraction and media/PSE/ in security/Sim (5)	Brown, Lowndes		1	One house	Į.
		Fox, Samuel M			1 North Moore	1
		Trustees for		1	Street, corner of	
		Monroe, Elizabeth-			Chapel Street	
	1	-May L481/P102		1	l .	

Year	Grantor	Grantee	Lot #	Street (ca.1830-1848); Census	Tax Assessment:	Directories and MCC
1847	Emmans, Phebe	Fox, Samuel M Brown, Lowndes Trustees for Munroe, Elizabeth -Mary L491/P308	44	CCHOMP	Monroe, James One house 1 North Moore Street, corner Chapel Street	Directories and in Co
1847	Fox, Samuel M Brown, Lowndes Trustees for Monroe, Elizabeth Monroe, James Elizabeth -Mary	Mayor, Aldermen & Commonality of the City of New York L491/P309	44			
1849						Post, Abram, mason Veldran, Ramers, commissioner merchant Meyer, John, shoemaker 124 W. B'way
1850			-	Meyer, John (bootmaker) - Louisa - William - Robert (p.114)		
		-		Valdran, Ramers (commissioner merchant) - Mary - Adeline		
				- Ramer (jr) Burnham, Mary Post, Abraham (mason) - Alicia - Caroline - Armenta (p.118)		
1851						Post, Abram, mason Veldran, Ramers (home), commissioner merchant Meyer, John, shoemaker 124 W. B'way
1853 1855	Mayor, etc	Archer, George W George, Francis L683/P50	44			Post, Abram – 124 W. B'way
1857					Archer One house 1 North Moore Street	George, Francis h.124 W. Broadway
					RE value for 1 North Moore Street is 5500.	
					N.B.: Corporation of the City listed for brick building, N ½ Lot 44	

	20-126 Chapel Stree	Grantee			Tax Assessment:	
<u>Year</u> 1858	Grantor	Grantee	Lot #	Census	"Engine House" on Lot 44 Size of lot:17 ½ x? Archer, One house 1 North Moore Street Size of lot: 13.10 x 52.11 Size of house: 13.10 x 52.11 Stories high: 3	Directories and MCC
1866	Archer, George W Frances- -Elizabeth	George, Francis L900/P681	44			
1899	George, Francis	George, Mary J L56/P372	44			

Year	Grantor	Grantee	Lot#	Census	Tax Assessment	Directories and MCC
1654	NIOR ²		45	<u> </u>	,	
to 1702						
1704	NIOR		45			
to 1725	ļ	Ì				
1727	NIOR					
to 1766						
1768	NIOR					
to 1803						
1803						No listing
1805	Lispenard, Anthony Sarah	Rich, Thomas S Disbrow, John L69/P514	43-49 Incl.			
1808	Rich, Thomas L., Merchant Taylor Rachel	Disbrow, John, Merchant Taylor (referred to in 1831 L272/P609)	44, 45, 46			
1808				T	Disbrow, Richard L.	
			1		3 Lots (no houses)	
1809					Disbrow, John	
	1				Richards, John W.	ł
					Morrison, John	
1810			1	John Richard, Thomas	Disbrow, John	
				Rich & John Disbrow,	Rogers, Lewis	
				5th Ward (p. 11)	Richards, John W.	1
			ļ	ļ	One house	
			 		3 North Moore Street	
1811					Disbrow, John	1
			1	Į	Wood, Joseph	
				İ	One house 3 North Moore Street	
1812	 		 		Warne, Willet	Warne, Willet
1012					Disbrow, John	Only reverse directory
			1		One house	Only reverse directory
			1		3 North Moore Street	
1813	 	 -	+~~	-	Disbrow, John	
1013	1		i		Arden, Francis	
				1	3 North Moore Street	
1815	 		+	+	, moral moore succi	Disbrow, John, merchant
1917		1				9 North Moore Street (out o
			i	1	1	APE)

² NIOR – No Instruments of Record

Year	Grantor	Grantee	Lot#	Census	Tax Assessment	Directories and MCC
817	Granes	drame.	LOCK II		Disbrow, John Rollinson, Charles One house 3 North Moore Street	Division de una medi
820				Widow Wilcox Disbrow, John (p.49)		
1823					Disbrow, John Wilcox, Henry one house 3 North Moore Street	
826						Sands, James, 3 N. Moore Measurer of grains (MCC 15:411)
1827					Disbrow, John, est.of Sands, Charles One house 3 North Moore Street	
1829/ 1830						Sands, Charles, 3 N. Moore, corner of Chapel
1830				Sands, Charles w/family of 5: 3 N. Moore (p.157)		
1831	Disbrow, John L, deceased (Exec. of)	Van Aulen, John C, coachmaker L272/P614	45, examine 46			
1824- 1831 (NSD)					Van Allen, John C (tax map)	
1833					Van Allen, John C. One house 3 North Moore Street	,
1835						Sands, Charles, 3 N. Moore
1837					Van Allen, John C. One house 3 North Moore Street	
1839/ 1840						Sands, Henry, U.S. Inspector, 3 N. Moore
1840				John C. Van Allen 5th Ward (Just and Sands not in)		
1843	3				Van Allen, John Just, John one house 3 North Moore Street	
1846					Van Allen, John C. One house 3 North Moore Street	
					Just, John Personal estate at 3 North Moore Street	
1847					Van Allen, John C. One house 3 North Moore Street	
					Just, John Personal estate at 3 North Moore Street	
1849				D 14 C1		Reynolds, Samuel, 3 N. Moor
1850				Reynolds, Samuel (Police Captain) - Elizabeth Negus, Lydia		
		1	{	- Thomas (chronometer maker) (p.114)		

Year	Grantor	Grantee	Lot #	Census	Tax Assessment	Directories and MCC
1853					Van Allen, John C.	
	1				One house	
					3 North Moore Street	Ì
	1]		RE value increased	
				_	from 3200 to 3500	
1857					Van Allen, John C.	
	1				One house	
					3 North Moore Street	
1858			1		Van Allen, John C.	
					One house	y.
	1				3 North Moore Street	
					Size of lot:	1
				1	18.9 x 75	1
	1				Size of house:	1
					18.9 x 34	
					Stories high: 2	
1916	No conveyances listed		45			
	between 1831 and					
	1916					1

Year	Grantor	Grantee	Lot#	Census	Tax Assessment	Directories and MCC
1654 o 1702	NIOR ³		45			
704 o 1725	NIOR		45			
727 o 1766	NIOR					
1768 to 1803	NIOR					
1803 1805	Lispenard, Anthony Sarah	Rich, Thomas S L Disbrow, John L69/P514	43-49 Incl.			
1808	Rich, Thomas L., Merchant Taylor Rachel	Disbrow, John, Merchant Taylor (referred to in 1831 L272/P609)	44, 45, 46			
1808					Disbrow, Richard L 3 Lots (no houses)	
1810				Rich, Thomas Rich & Disbrow, John 5th Ward (p. 11)	Disbrow, John Richards, Thomas One house 5 North Moore Street	
1811	-				Disbrow, John Long, George One house 5 North Moore Street	George Long, Printer – 5 N. Moore (MCC 6:704)
1812					Disbrow, John One house 5 North Moore Street	Moore, William
1813					Disbrow, John Hastty, William One house 5 North Moore Street	

³ NIOR - No Instruments of Record

Year	Grantor	Grantee	Lot#	Census	Tax Assessment	Directories and MCC
815						Disbrow, John, merchant 9 North Moore Street (out of APE)
						Hastie, Isabelle 5 North Moore Street
1817					Disbrow, John Zanngl, Henry One house 5 North Moore Street	
1819						
1820 1823				Disbrow, John (p.49)	Disbrow, John Folger, Benjm One house 5 North Moore Street	
1825						
1826					_	Cook, William, Carpenter – 5 N. Moore (MCC 15:754)
1827					Disbrow, John, est.of Davis, Wm. One house 5 North Moore Street	Ackerman, Richard, Mason – 5 N. Moore (MCC 16:27)
1829/ 1830				Shirdivert (sic), Charles H. w/family of 7, 5 N. Moore		Dean, Charles, physician – 5 N. Moore
1830						Ruckel, Daniel Edgar, Cabinetmaker ~ 5 N. Moore (MCC 18:632)
1831	Disbrow, James A. (Exec. of John L Disbrow estate)	Van Aulen, John C. 1.272/P614	45, examine 46			
1833					Van Allen, John C. One house 5 North Moore Street	
1837		!			Folger, Benjamin One house 5 North Moore Street	
	<u> </u>				(with Ch L Rogers in pencil in margin)	
1840				John C. Van Allen 5th Ward		
1842						Freval, Peter E 5 N. Moore
1843					Disbrow, John, est.of Frevell, Peter E. One house	
1844	-		+		5 North Moore Street	Freval, Peter E. 5 - N. Moore
1846					Disbrow, John, est.of One house 5 North Moore Street	Titvai, Feld E. 3-14. Moore
	į				In personal estate: Frevell, Peter E. 5 North Moore	
		<u> </u>			Street, between Varick and Chapel	
1847					Disbrow, John, est.of One house 5 North Moore Street	
					Frevell, Peter C. Personal estate at 5 North Moore Street	
1849	-	1	T			Frewell, Peter E 5 N. Moor

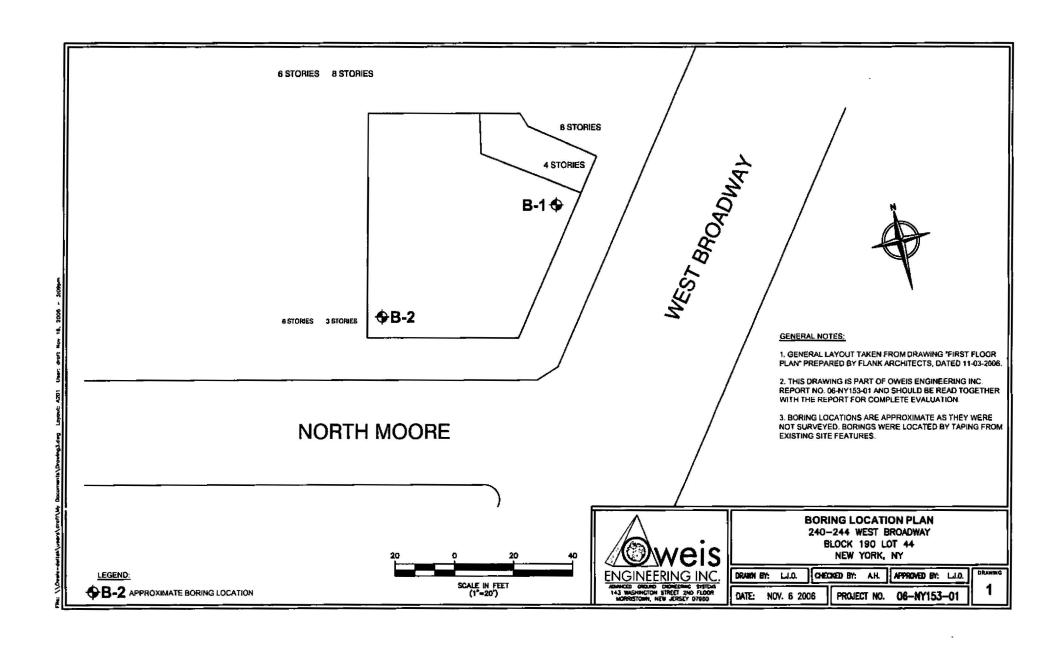
Year	Grantor	Grantee	Lot #	Census	Tax Assessment	Directories and MCC
1850				Freval, Peter E., (broker) - Anglea		
				La Garde, Mary		
				Faure, Julia		İ
			1	Duffy, Mary	\	
				(p.114)		
1851						Frewell, Peter E., baker 5 N. Moore
1853					Disbrow, John, est.of	
			1		One house 5 North Moore Street	
)			3 North Moore Street	
					Trevul (sic), Peter E.	
					Personal estate at	
					5 North Moore Street	ļ
					RE value increased	
					from 3200 to 3500	
					the extension?	
1857			1		Disbrow, John, est.of	· I
				ĺ	One house 5 North Moore Street	
1858	-		 		Disbrow, John, est.of	
1050					One house	
					5 North Moore Street	
					Size of lot:	
					18.7x75 Size of house:	
			1		18.7x34	
					Stories high:2	
1864	Stewart, Margaret,	Folger, Edward F.				
	widow only child and	Alford, Mary	Į			_
	heir-in-law	Bryant Emmeline		ł		
	of John Allen	D., only children and heirs-at-law of				
		Mrs. Ann Folger				
		deceased (daughter	1			
		of said John	1			
		Disbrow deceased				
		and late of				
	1	BuffaloNY L889/P367				1

NSD - No Specific Date

Directories searches were performed for the following dates: 1803, 1808, 1812, 1815, 1825, 1829, 1835, 1839, 1842, 1844, 1845, 1847, 1849, 1851, 1853, 1855, and 1857.

Tables lacking directory data for these dates had no successful resident matches.

APPENDIX B: SOIL TEST BORING LOGS



	MAJOR DIVISI	ons	LETTER SYMBOL	TYPICAL DESCRIPTIONS
	GRAVEL AND	CLEAN GRAVELS	GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
COARSE	GRAVELLY SOILS	(LITTLE OR NO FINES)	GP	POORLY-GRADED GRAVELS, GRAVEL- SAND MIXTURES, LITTLE OR NO FINES
GRAINED SOILS	MORE THAN 50%	GRAVELS WITH FINES	GM	SILTY GRAVELS, GRAVEL-SAND- SILT MIXTURES
	OF COARSE FRAC- TION RETAINED ON NO. 4 SIEVE	(APPRECIABLE AMOUNT) OF FINES)	GC	CLAYEY GRAVELS, GRAVEL-SAND- CLAY MIXTURES
	SAND AND SANDY SOILS	CLEAN SAND (LITTLE	sw	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
MORE THAN 50%		OR NO FINES)	SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
OF MATERIAL IS LARGER THAN NO. 200 SLEVE SIZE	MORE THAN 50% OF COARSE FRAC-	SANDS WITH FINES	SM	SILTY SANDS, SAND-SILT MIXTURES
	TION PASSING NO. 4 SIEVE	OF FINES)	SC	CLAYEY SANDS, SAND-CLAY MIXTURES
			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
FINE GRAINED	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50	CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
		_	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
			МН	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50	СН	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			он	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
	HIGHLY ORGANIC	SOILS	PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS.

SOIL CLASSIFICATION CHART

UNIFIED SOIL CLASSIFICATION SYSTEM

10	D.W	eis	NGINEE	RING	NC.	1	ESI	BO	RING	i LO	G	BORING NO. B-1
PRC	JECT	Propos	sed 9 story b	ouilding		1	LOC	ATION T	ibeca, N		SHEET. NO. 1 of 3	
			chitects									PROJ. NO. 06-NY-153-01
BO	RING (CONTRA	ACTOR Migo	on Drillin	g, Inc		_	LING RI				ELEVATION
		ROUND	WATER DAT			CASING	SAMPLE	CORE	TUBE	HAMMER	<u> </u>	DATUM
DAT	E	TIME	DEPTH	CASING	TYPE	_	SS				SAFETY	DATE START 10-26-06
					DIA.	_	2"				DOUGHNUT	DATE FINISH 10-26-06
			1		WT.	_	140#				TRIP	DRILLER S. Miggliaccio
			<u> </u>		FALI		30"				L	OEI REP. W. Ring
E .	CASING	SAMPLE NO.	SAMPLER BLOWS PER 6 IN.	REC IN INCHES	SYMBOL	IDENTIFICATION					REMARKS	
			13			Fill: Brow			k cinder	s, brick		
1-		S-1	7 5 4	8"		fragment	s (11-65	5)				Dry
2- 3-		S-2	1 2	16"		Fill: Lt. bi and ash	Fill: Lt. brown siltym-f sand w/ brick fragments and ash (11-65)					
4⊣ 5–		S-3	1 1 2	10"		Fill: same	e as abo	ove				
6- 7-		S-4	2 1 3 3	6"		Fill: same	e as abo	ove				
8- 9- 0-		S-5	3 4	24"		Fill: Sam (MH) Lt. (10-65)	Brown,[Ork yelio				Moist
1- 2-		S-6	5 5 6	12"		(MH) Mo						
- 3- 4-		S-7	7 10 11 14	18"		(SM) Re	d brown	silty m-	sand (7	'-65)		w (water content)=15.5%
5-		S-8	24 37 27 34	18"		(SM) Re	d brown	n silty c-f	sand(7	-65)		
6- 7-												Wet
8- 9-												
:0- :1-		S-9	10 12 13 15	12"		(SP) Red	d brown	silty c-f	sand wi	h gravel	l(7-65)	Wet

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			ENGINE		77	TEST BORING LOG	BORING NO. B-1			
			sed 9 story chitects	building		LOCATION Tribeca, NY	SHEET. NO. 2 of 3 PROJ. NO. 06-NY-153-01			
		_	SAMPLER	REC	ᅱ		PROJ. NO. 06-NY-153-01			
DEPTH FT.	CASING BLOWS	SAMPLE NO.	BLOWS PER 6 IN.	IN INCHES	SYMBOL	IDENTIFICATION	REMARKS			
23-										
24-										
25-		0.40	13 13	611		(SP) Red brown silty c-f sand with gravel (7-65)				
26- 27-		S-10	13 9	6"			Wet			
28-										
29-										
30-			9			Same as above				
31-		S-11	9	12"						
33-										
34-										
35-			10			Same as above				
36- 37-		S-12	8	8" 			Wet			
38-				ı						
39-										
40-			45 24			Same as above				
41-		S-13	19 12	10"			Wet			
43-										
44-										
45-			12			(SP) Brown c-f sand, trace silt (7-65)				
46-		S-14	5 7	10"		(=-) =				
47-			7							

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			ENGINE	_	NC		BORING NO. B-1
			sed 9 story chitects	building		LOCATION Tribeca, NY	SHEET. NO. 3 of 3 PROJ. NO. 06-NY-153-01
DEPTH FT.	CASING BLOWS	SAMPLE NO.	SAMPLER BLOWS PER 6 IN.	REC IN INCHES	SYMBOL	IDENTIFICATION	REMARKS
48- 49-				i			
50-							
51-		S-15	10	2"		(SP) Brown c-f sand, trace gravel, trace silt (7-65)	Gravell in tip of spoon
52-		_	19			Boring completed @ 52'	
53-							
54-			ļ				
55-							
56-							
57-							
58-							
59-							
60-							
61-							
62-							
63-							
64-							
65-							
66-							
67-)			
68-							
69-							
70-							
71-							
72-							

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PROJECT: Proposed 9 Story Building								LOC	ATION:	A 15129 A	BORING NO. B2							
				,								, out on the		: 06-NY153-01				
CLIENT: FLAnk Architects BORING CONTRACTOR: Migcon Drilling, Inc								DRII	LING RI	G: CME	75		ELEVATIO					
			ATER DA		1	,	C. DRILLING RIG: CME-75 CASING SAMPLE CORE TUBE HAMMER				DATUM:							
DAT	_	TIME	DEPTH	_	SING T	YPE	F.J.	SS	NX			SAFETY		RT: 10-25-06				
0-25	_	1.06pm	14.6'	_		DIA.	4"	2"	-			DOUGHNU		SH: 10-25-06				
	-+					WT.	· · · ·	140#			<u> </u>	TRIP		S. Migliaccio				
	寸				F	ALL		30"					QEI REP.:					
F.	CASING	SAMPLE NO.	SAMPL BLOW PER 6	15	REC IN INCHES	SYMBOL		IDI	ENTIF	ICAT	ION			REMARKS				
1-		S-1	13 14 8 6		19		Fill: D		wn mf sa ash, red					Dry				
3-		S-2	5 5 6		8				rown sil		nd with	sand	Brick	fragment in tip of spoon				
4			3								Fill: S	SAA with	gray as	h (11-6	5)			Dry
5-		S-3	4		6	ı								Moist				
š —			5				Fill: S	SAA (11	-65)									
7-		S-4	4		3													
3-			3						· .		p 4" grad own (mo			± (11-65)	·			
9- 0-		S-5	2		18		(MH)	(10-65)	own (mc				_	Wet				
1 –		S-6	4 3 4 6		20		SAA (MH)	(10-65)										
2-			 									12.5'±	_	Strong odor				
3- 4-														4" casing to 14'				
5- 6-		S-7	13 13 10 9		22		(SP- 65)	SM) Re	d brown	c-f sand	, trace	silt (7-	w (1	water content)=19.5 %				
7- 8-																		
9-																		
0-		S-8	11 9 12		10		(SM)	Red bro	own c-f s	and with	grave	el (7-65)						

K	 Dw	eisen	GINEERII		_	TEST BORING LOG	BORING NO. B2		
			ed 9 Story Bu		-:	LOCATION: 240-244 West Broadway	SHEET. NO. 2 of 4		
		FLAnk Arc		mung		LOCATION . 240-244 West Broadway	PROJ. NO.: 06-NY153-01		
DEPTH FT.	CASING BLOWS	SAMPLE NO.	SAMPLER BLOWS PER 6 IN.	REC IN INCHES	SYMBOL	IDENTIFICATION	REMARKS		
23-							Loosing drilling fluid		
24- 25-									
26-		S-9	7 7	12		(SP) Red Brown cf sand with gravel (7-65)	Wet		
27-			6						
28- 29-									
30-			7			Same as above			
31- 32-		S-10	7 7 8	14					
33-									
34-									
35- 36-		S-11	7 9	12		Same as above	Wet		
37-			10	'-			***************************************		
38-									
39- 40-			10			Same as above			
41-		\$-12	9 14 9	12		Same as appre			
42-									
44-									
45-			10		:	Same as above			
46- 47-		S-13	10 7	10			Wet		

	ń.						
		4	GINEERII		Ξ:	TEST BORING LOG	BORING NO. B2
		FLAnk Arc	d 9 Story Bu	ilding		LOCATION: 240-244 West Broadway	SHEET, NO. 3 of 4 PROJ. NO.: 06-NY153-01
DEPTH FT.	CASING BLOWS	SAMPLE NO.	SAMPLER BLOWS PER 6 IN.	REC IN INCHES	SYMBOL	IDENTIFICATION	REMARKS
48- 49-							
50-			40		U		
51-		S-14	13 14 19	20		Same as above	
52-			24		ľ		
53-							
54-							
55-			16			(SP) Brown c-f sand, trace f. gravel (7-65)	
56-		S-15	19 18 19	12			Wet
57-			15				
58-							
59-							
60-	-		14			(SP) Brown c-f sand with gravel grading to	
61-		S-16	50-2"	6		weathered rock(cf sand with mica) (7-65 to 5-65)	Wet
62-							
63-							
64-		Run #1	5 Min.	58"		Genissic Schist: Gray to black speckled rock, moderatly to close fractured, slightly rough, slightly to moderately	RQD=95%
65-			5 Min.			weathered, intermediate to medium hard (3- 65 to 2-65)	
66-			4 Min.				
67-			4 Min.				
68-			5 Min.				
69-		Run #2	7 Min.	60"		enissic Schist: Gray to black speckled rock, moderatly to close fractured, slightly rough, slightly to moderately	RQD=95%
70-			5 Min.			weathered, intermediate to medium hard (3- 65 to 2-65)	
71-			7 Min.				
72-			8 Min.		Ш		

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10	Ðw	ęisen	GINEERII	NG INC	Z:	TEST BORING LOG	BORING NO. B2
			ed 9 Story Bu	uilding		LOCATION: 240-244 West Broadway	SHEET. NO. 4 of 4
		FLAnk Are	nitects	· · · · · ·			PROJ. NO.: 06-NY153-01
DEPTH FT.	CASING	SAMPLE NO.	SAMPLER BLOWS PER 6 IN.	REC IN INCHES	SYMBOL	IDENTIFICATION	REMARKS
73-			8 Min.				
74-						boring completed @ 73.5	
75-							
76-							
77-							
78-							
79-							
80-							
81-							
82-							
83-							
84-							
85-							
86-							
87-							
88-							
89- 90-							
91-							
92-							
93-							
94-							
95-							
96-							
97-							

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Project No.: 31737844-611

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Owelss #06NY153-01

LABORATORY TESTING DATA SUMMARY

BORING	SAMPLE	DEPTH	IDENT	FIFICATION 1	ESTS	REMARKS
NO.	NO.	(ft)	WATER CONTENT (%)	USCS SYMB. (1)	SIEVE MINUS NO. 200 (%)	
B-1	S-7	12-14	15.5	SM	44.4	
B-2	S-7	15-17	19.5	SP-SM	6.9	

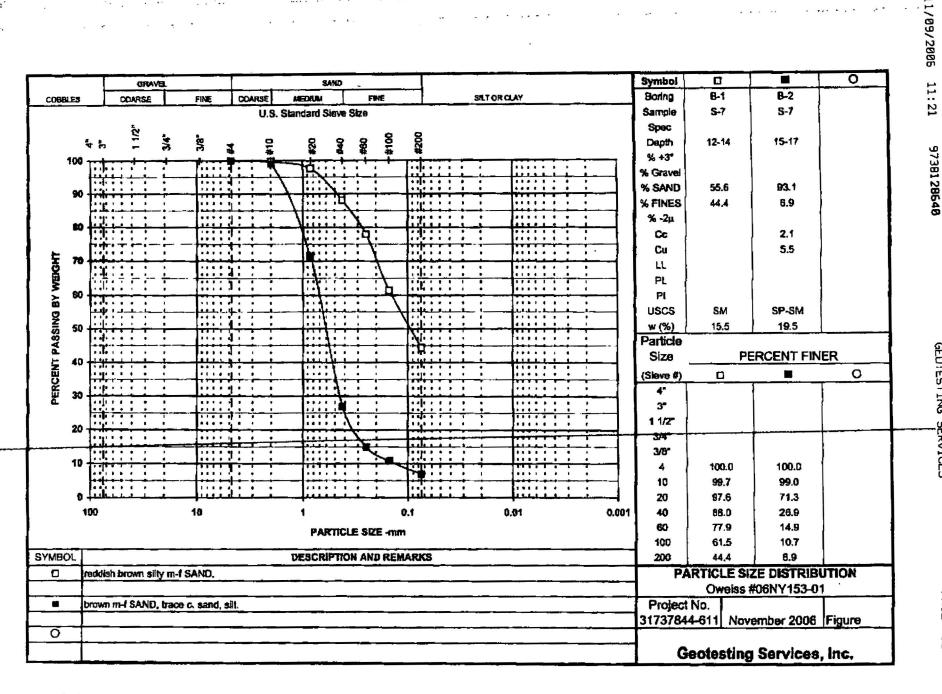
Note:

(1) USCS symbol based on visual observation and Sieve reported.

Prepared by: RV

Reviewed by:

Date: 11/9/2006



GEOTESTING

SERVICES

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