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ENVIRONMENTAL REVIEW

# Chelsea Vocational High School Project

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LANDMARKS PRESERVATION - COMMISSION

**CEQR** 88-118 M

PHASE 1A **ARCHAEOLOGICAL ASSESSMENT** REPORT 1988



# PHASE 1A ARCHAEOLOGICAL ASSESSMENT

FOR THE

CHELSEA VOCATIONAL HIGH SCHOOL PROJECT

MANHATTAN

CEQR #88-118 M

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#### INTRODUCTION

The New York City Board of Education wishes to use Lot 3, Block 491 in lower Manhattan on which to build an addition to the existing Chelsea Vocational High School which is adjacent to the site. (See Figure 1) The Landmarks Preservation Commission (LPC) has determined that Lot 3 may have archaeological potential and requires the Board of Education to prepare an archaeological documentary study. The project parcel is bounded on the north by Dominick Street, on the west by Varick Street, on the south by Broome Street and on the east by Chelsea Vocational High School property.

The purpose of the following Phase 1A Archaeological Assessment Report, prepared by Historical Perspectives, Inc., is to determine the type, extent, and significance of potential cultural remains on the Chelsea School site. It utilizes documentary research to ascertain the probability of the presence of archaeological remains and their sensitivity to the subsequent physical alterations to the area.

#### ENVIRONMENTAL SETTING

Not visible on today's landscape are the hillocks, fastflowing streams, and marshy wetlands that dotted the island of Manhattan before human manipulation evened out the terrain. scouring and pushing action of the glacial ice during the Pleistocene time period left its mark on the landscape as did the warming trend during the subsequent Holocene time period. The earliest maps clearly show the resulting irregular terrain of the project area. (See Figure 2) The surface of the island was originally broken by ridges of gneiss and hornblendic state. "The s. [sic] part of the island was covered in drift and boulders, presenting conical hills, some of which were 80ft. above the present grade of the streets." (French, 1980:418) hillock of this type is depicted on Viele's 1874 map (Figure 2) on the eastern section of the project block. The project parcel itself, the western section of Block 491, is generally shown on early maps as abutting the large swamp through which runs today's Canal Street. The reader should compare the maps on Figures 2, 3, 4, 5, and 6 keeping in mind that an exact location on today's streetscape based on these early cartographic depictions is virtually impossible. The historical record is replete with references to draining, filling, and grading, which should account for the relatively level condition in the immediate vicinity of the project site. For example, in 1811 the New York EVENING POST voiced its concern about "leveling and regulating the adjacent grounds" near Canal Street "after leveling most of the surrounding eminences, lowering one street and raising another, then again elevating the former and reducing the latter..." (Quoted in Stokes, 1909; Vol. 3,562) (See Figure 7, the 1979 USGS map) This kind of activity would presumably have been necessary to make the parcel suitable for construction.

All 19th and 20th century buildings which once stood on the project site have been razed to make way for a vehicular parking lot whose surface is blacktop. A small attendant's booth is located at the corner of Varick and Dominick. The eastern portion of Block 491 is occupied by the Chelsea Vocational High School which was built in 1905. Along the southern half of the block not covered by the school - that is, along Broome Street - there are five and six story buildings which have very deep basements. One can walk along the southern boundary of the parking lot and look down into spaces behind these buildings and estimate that they are at least twelve feet below grade. (See Photographs 1-6)

The entrance to the Holland Tunnel is across Varick Street, west of the project site.

## PREHISTORIC POTENTIAL

## A. Prehistoric Cultural Periods

The Chelsea Vocational School site is geographically part of the Manhattan Prong that extends from New England to the southern tip of Manhattan Island and is the result of 1,100 million years of geologic history. The ice age which began almost one million years ago was the last in a series of geologic events which shaped New York and directly affected the city's natural water drainage system. (Greenhouse, 1984:3) final glacial retreat began about 12,500 years ago and was directly associated with significant changes in sea level and a long period of climatic warming. The release of melting ice water and increased rainfall, between 12,500 and 7000 years Before Present (B.P.), resulted in rising seas. (Raber, et. After approximately 7000 B.P. the melting ice no al., 1984:10) longer poured large amounts of meltwater into local rivers and streams. The slower stream flow allowed the growth of marsh area and mud flats that encouraged the influx of migratory waterfowl and the growth of numerous edible plant species and shellfish. Between 4000 and 2600 B.P. the sea attained a level of approximately 10 feet below the current level. (Kearns, et. al., 1987:7)

Human settlement in the southern New York area prior to 12,500 B.P., the end of the Pleistocene, has not been documented and such a discovery is not anticipated. However, archaeological evidence does indicate human occupation of coastal New York by 12,500 to 10,000 B.P. Native Americans continuously occupied the metropolitan area until after European settlement in the seventeenth century. Although there is no extant, specific knowledge that the Chelsea Vocational School site ever hosted Native American activities, we must assess the likelihood that the project site did, at one time, host prehistoric human activity. In order to evaluate this potential, we must (1) analyze the topographical, biotic, and climatic characteristics of the project area through time and (2) assess the likelihood that Native Americans would have exploited the environmental niches provided by the project area through time.

Regional Amerind culture history includes four major chronological periods: PaleoIndian, Archaic, Woodland, and a Contact or historic period defined and terminated by European colonization. Each of these cultural periods is represented by a distinct settlement pattern and diagnostic tools.

## PaleoIndian Period (12,000 - 9500 B.P.)

The PaleoIndian period represents the earliest known human occupation in the Northeast. During this time period, approximately 12,000 to 9500 B.P., an open spruce woodland with scrub birch and alder dominated the post glacial environment. Artifacts attributed to the PaleoIndian tradition and collected from sites throughout the Northeast include diagnostic Clovistype fluted points and processing tools such as end and side scrapers, gravers, and drills. PaleoIndian lithic technologies reflect a preference for highly siliceous materials, primarily cherts from eastern New York and jasper from Pennsylvania and New Jersey. The presence of these exotic materials from sources outside of the immediate region suggests extensive travel or well-defined trade networks in operation during this period.

Relatively little is known of this period in the southern New York area. Sites are rare and those that have been identified are often located in topographic locations which were once shores of glacial lakes, and upon elevated areas along large river drainages. Due to the post-glacial changes in topography, habitation sites are difficult to locate, although spot finds of diagnostic artifacts are more common. Additional and ongoing research continues to assist in developing models of subsistence and settlement. (Schneiderman-Fox, 1988:7)

## Archaic Period (7000 - 1000 B.P.)

Environmental changes during the Archaic state brought about concurrent changes in Indian culture. With the warmer and drier climate, the tundra and spruce forests disappeared and deciduous woodlands gradually appeared. The Pleistocene biggame either became extinct like the mammoth and mastodon, or moved northward like the caribou and musk ox. The oak and hickory woodlands of coastal New York attracted mast-eaters like the white-tailed deer and wild turkey. As described above, marsh and wetland resource-rich biomes developed during this warming period. From approximately 5500 to 4000 B.P. Late Archaic cultures flourished across the study area. By 3000 B.P. the sea level had reached its present level and the coastline was much as it is today.

The subsistence and settlement systems of Archaic groups were apparently based on a restricted wandering system which consisted of seasonal movements to and from base camps located near these newly emerging resources. The number of Late Archaic shell midden sites along the lower Hudson Valley and Long Island coastline attests to the increased exploitation of the estuarine environments.

Three cultural traditions persisted in the Northeast during the final 1000 years of the Archaic Period. These traditions, based on distinct projectile point types, appear to have differing settlement patterns that represent utilization of specific resource environments. Whether these distinct groups result from the migration of new people into the area, or the spread of technologically new ideas, has yet to be determined. (Schneiderman-Fox, 1988:9)

## Woodland Period (3000 - 500 B.P.)

From approximately 3000 to 500 years ago the Woodland period persisted in the Northeast. The early Woodland era (3000 to 1700 B.P.) is marked by the introduction of ceramic vessels as part of the material culture. Through the Woodland period settlement systems changed as a result of the desire to exploit alternative resources. Coastal resources providing year round stability were often sought, while upland hunting and gathering remained an important activity. Fish runs in rivers provided a stable and reliable resource.

During this period, maize was introduced from meso-America and horticultural practices were slowly adapted into the lifeways of local Indians. The nature and extent of the use of maize prehistorically has been of much debate to archaeologists working in the Northeast. Originally it was thought that the introduction of maize prompted a major shift in the economy to an agriculturally based subsistence pattern. Research on Long Island suggests that this is not the case as agriculture does not appear to have become popular until European contact. Uplands do provide better soils than coastal areas, and may have been utilized earlier and to a larger extent for agricultural purposes.

By the late Woodland period, 1200 to 500 years ago, the climate was similar to what it is today. Sites of this period are known to be located in a number of environmental settings including inland rockshelters, coastal and island sites, inland sites on major drainages, and others located near swamps and along streams. (Schneiderman-Fox, 1988:10)

## Contact Period (500 - 300 B.P.)

The period from 500 to 300 B.P. is called the Contact period and is typified by the first contact between Native American groups and Europeans, probably Spanish, Portugese and English explorers. With increasing contact, settlement and subsistence patterns changed substantially from the Woodland period pattern as European materials, including metals and

weapons, were introduced. Shell beads and wampum were produced by the Native Americans in large quantities as the medium of exchange. As a result, many Indian groups settled along the shore to gain control of wampum production.

In the seventeenth century a number of factors operated to cause a breakdown of native sociopolitical organization. The influence of prized trade goods and the desire to obtain them caused stress between tribal groups. The plagues of 1616-1620, introduced by Europeans, depopulated many groups, with population losses in southern New England estimated between 70 to 90 percent. (Schneiderman-Fox, 1988:11, 12)

# B. Known Archaeological Sites on Lower Manhattan Island

Native Americans were inhabiting Manhattan Island at the time of European settlement. Ethnographic accounts and nineteenth and early twentieth century artifact collections testify to this presence. According to Alanson Skinner's research at the turn of this century, in southern Manhattan there had been Indian settlements and large shell middens at the Collect Pond along the east end of Canal Street, on Corlears Hook at the East River near Grand Street, and "Sapokanikan" which was situated on the Hudson River just south of 14th Street. His estimation was that the only Indian remains left on Manhattan Island apparently (Skinner, 1926: were located at the extreme northwestern end. Skinner continued to note, however, that the preponderance of findings from northern Manhattan is a reflection of both lower Manhattan's earlier development and northern Manhattan's relatively late occupation by Native Americans. Although Manhattan's early and intensive urbanization has destroyed many prehistoric resources, in situ prehistoric artifacts have been reported from lower Manhattan in the last ten years. (Baugher-Perlin, et al, 1982:64)

Kardas and Larabee's 1977 assessment of this paucity of recorded sites in lower Manhattan took into consideration not only the early and rapid urban development of the area but also the relatively inhospitable environment (e.g., lack of fresh water resources and the rugged terrain) available during the prehistoric period. (Kardas and Larabee, 1977:16) Kardas and Larabee's research, based on Bolton's writings, did yield two more possible lower Manhattan sites: (1) "Kaspee" is an Indian place name that may refer to the tidal rock area at the tip of Manhattan and (2) "Rechtanck" situated at Corlears Hook.

Grumet's 1981 research, based in large part on Reginald Bolton's earlier studies, details the known Native American sites in lower Manhattan. Grumet does not place a habitation

site south of "Sapokanikan" on the lower west side nor does he place a trail or planting field south of Houston Street on the lower west side. Northwest of the Chelsea Vocational School site he shows the confluence of the Hudson River with Minnetta, a brook, also known as "Bestavaers Killejte," that ran from Gramercy Square south to the Hudson at about West Houston Street. (See Figure 8.) This stream is depicted on other early maps of lower Manhattan (See Figures 1 & 2.) "Ishpatena," a name not of Indian origin, was applied to a hill, leveled in the nineteenth century, south of the project site. (Grumet, 1981:16, 34)

Both the New York State Historic Preservation Office and the Anthropological Services Division of the New York State Museum were contacted for their assessment of prehistoric sensitivity for the Chelsea School site. A search of SHPO/ Field Services Bureau files did not locate any known sites in the area; the State Museum reply identified two known sites (See Appendix). Arthur C. Parker's 1922 THE ARCHAEOLOGY OF NEW YORK, in conjunction with his unpublished maps, is used by State offices in Albany as a major resource in establishing potential archaeological sensitivity. The State Museum has loosely identified a Parker village site a number of blocks southeast of the project area in Chinatown. NYRK, unnumbered: Museum #4060) Another Parker village site is imprecisely located near the intersection of Canal Street and the Avenue of the Americas. It could have been found anywhere within a three or four block radius which would include the project site (ACP-NYRK-9: Museum #4059). As can be seen by the appended correspondence, the State Museum considers the Chelsea Vocational High School to have a high sensitivity rating "if original deposits remain intact." This assessment, based on a sensitivity model, relies on a comparison of current geographical and topographical features of known, mapped site locations with the threatened locations that have undocumented histories. (Philip Lord, personal communication, 5/2/88) However, on the current USGS map, used by the State agencies, it is impossible to detect the site's probable pre-twentieth century marchland condition.

## C. Chelsea Vocational Site Potential

Prior to the nineteenth century the Chelsea Vocational High School site was on the northern edge of Lispenard's Meadow, an approximately 70 acre marsh covered with stunted bushes that received fresh water from an inland pond to the southeast and was inundated by river tidal action from the west. This marsh, also labeled on certain maps as Cripplebush Swamp, served as a natural barrier between what is now the very tip of the island and lower Manhattan. (Valentine, 1856:442) According to French's 1860 Gazatteer, the Meadow was an irregular tract on both sides of West Broadway from Reade to near Spring Street and along Canal Street from the Hudson to Orange Street. (French, The fresh water pond that was to the east of the 1860:419) marsh and greatly contributed to its wet condition was of considerable importance in the growth of Manhattan. This pond of fresh water once stood roughly within the present bounds of Canal, Pearl, Mulberry, and Elm Streets. The pond "...was a beautiful spot, originally wooded hills surrounding a placid body of water that was thought to be without bottom. Near it was a point of land which when first seen by the Dutch was covered with shell left by the Indians who used them for making wampum, their money. The Dutch called it kloch, meaning "shell point" which was gradually changed to Collect and finally applied to the little lake itself." (Ulmann, 1901:36) sluggish stream, approximately along the line of the present Canal Street, furnished an outlet from the Collect into the North, or Hudson River. (Real Estate Record Association, There were hills to the east, west, and south of the 1898:30) Collect and the associated marsh which later during the historic era hosted individual farms. During the mid 1700s the water from the Collect and meadow was drained, through a channel system, into the Hudson River. In the early 1800s when Canal Street and the Canal Street sewer were laid out there was extensive leveling of the hills surrounding Lispenard's Meadow and filling of the low-lying marsh. (Stokes, Vol. III:557-562)

The earliest maps of lower Manhattan vary as to the exact association of the project site and Lispenard's Meadow. the exact location of Block 491 on these early maps, such as "The Montresor Plan" of 1766 and Ratzer's "Plan of the City of New York", is problematical. As can be seen on Figure 3, from the late 1700s, the project area neighborhood is a combination of meadow, cultivated plots, and drainage ditches and it is impossible to confidently pinpoint the project block and lot. The Goerck Mangin Map of 1799 shows the project site as dry land bounded on the south by a small stream and the wetlands. Viele's topographic map of 1874 (Figure 2) shows a Figure 4.) hillock on the eastern half of Block 491 and the marsh extending up Varick Street as far north as Block 491 but the actual project area is not labeled in any manner. Stokes' "Original Grants and Farm Map" (Figure 6 ) places Block 491 on the upland edge of Lispenard's Meadow.

These early maps and descriptions indicate that the Chelsea Vocational High School site was on the margin of a vast lowlying, tidal marsh. Yet, there is no evidence to indicate, however, that the western half of Block 491 was an elevated and/ or well-drained knoll/terrace/hillock. Changes through time in the exploitation of different ecological zones by various cultural groups, e.g., high ground adjacent to a marsh, as well as modification in the ecology itself account for the presence or absence of archaeological sites in specific areas. fore, the seminal factor determining the potential for archaeological resources on the Chelsea Vocational High School site will be the differing use of the wetland margin zone through time. An understanding of wetland margin zone exploitation by prehistoric groups for an extended time period constitutes the basis for finding sites and interpreting the meaning and significance of these archaeological resources. Estuarine locations afforded aboriginal hunters and incipient agriculturists numerous and valuable floral and faunal resources (e.g., fish, water fowl, tuberous plants and grasses). Foraging activities and hunting within these waterside ecological biomes - as the site area was before 1800 - was undoubtedly most common.

There is no question that there was exploitation of lower Manhattan's resources by prehistoric peoples and that evidence of such habitation, hunting activities, and food processing would have been left behind. Also we can be certain that the resources of Lispenard's Meadow would have afforded Native Americans many benefits, as in fact, it did in later years for Dutch and English farmers.

There are, however, certain limiting factors to the possible full-scale exploitation of the west side of Block 491. Minetta Brook, approximately five blocks north of the project site, would have afforded Native Americans a constant, nonseasonal supply of fresh water which may not have been the case of the small feeder stream shown on the early maps. NYCLPC's "Predictive Model" map of high potential for prephistoric sites does include the Minetta Brook watercourse but does not include the more southerly marsh lands and project Also, if we accept Viele's topographic map as geographically precise, the elevated east half of Block 491, rather than the project site west half of the block, would have been a more preferred habitation, processing, and burial location for Native Americans. A study of the current topographic features of the Spring, Dominick, Broome, and Varick Street area suggests that possibly Block 491 was not part of an elevated knoll. If the elevated areas on today's lower Manhattan landscape can be accepted as vestiges of an earlier, more pronounced knoll topography, the project site was immediately south of elevated land that stretched to just below Spring Street at its intersection with Varick Street. (See Figure 9.)

Currently, the structures fronting on Broome Street have very deep basements (12-15 feet) which may indicate that the pre-eighteenth century natural topography was well-drained and elevated. However, these deep basements may also be evidence of the successful filling of the drained marsh. These standing structures are only the latest disturbances visited on Block 491. The following section details the historic era record of the project site, more clearly defining sections of Lot 3 that possibly have not experienced severe subsurface disturbances. Without evidence of such disturbances it can be argued that intact archaeological resources of the prehistoric era might be extant.

#### Recommendations

From the Late Archaic through the Contact Period we know that Native Americans exploited the varied and rich resources of marsh biomes in southern New York. We also know that their preference for habitation, burial, and large-scale processing sites was well-drained, elevated land. Before historic manipulation of the landscape the project site was on the edge of a large, tidal marsh. Although it does not appear from cartographic sources to be so, we cannot confidently state that the project site was not itself within the inundated, low-lying lands. On the other hand, but again unclear, the project site does not appear to have been part of an elevated hillock. The

degree of potential for prehistoric archaeological resources on the Chelsea Vocational High School site is reduced by the possibility that the site was within the marsh and not on the abutting, slightly elevated shoreline where the Native Americans would have left concentrations of cultural material. It is very likely that the random artifact from the hunting and gathering of resources in the marsh would have been accidently left in the marsh itself. However, further investigations for such serendipitous finds would be untenable.

Until efforts are made to more clearly define the actual pre-eighteenth century topography/environmental conditions of the project site we do not recommend archaeological field investigations. Rather, we recommend that soil borings, to be taken in the research design phase for the proposed high school, be analyzed by a professional archaeologist, and paleo-geologist if necessary, for evidence of the marsh margin zone ecological biome that would have hosted habitation, burial, and or large-scale processing activities during the prehistoric period.\* As has been the case in New York State projects (e.g., the Kelly Island Sewer Project) and in New York City projects (e.g., Tibbett Gardens) soil borings data can be useful in defining the perimeters of a realistic testing field.

<sup>\*</sup>If necessary, additional borings, to archaeological specifications, may need to be taken.

## HISTORICAL PERIOD

Shortly after their arrival in 1626 to what is now Manhattan, the Dutch settlers managed to evict the Native Americans. They soon established the village of New Amsterdam at the southern tip of the island. "In 1633, while most of the island north of Wall Street was still a wilderness, Governor Van Twiller was cultivating [near the project site] a large tobacco plantation - Bossen Bouerie (Farm in the Woods) - and built his home at the foot of the present Charlton Street." (WPA, 1939: In 1636 Van Twiller made a land grant of 62 acres to Roeloff Jansen (or Jans). (Stokes, Vol. 3:145-6) Jansen's death, his widow Anneke (Anetze, Anna) married a clergyman, Dominie Bogardus, and the whole parcel was thence called "Dominies' Bouwery." The property bounds were approximately from Warren Street north along Broadway to Duane Street "thence northwest a mile and a half to Christopher Street thus forming a sort of triangle." (French, 1860:79) After Annek's death in Albany in 1663, her heirs conceded the farm parcel to the English crown by way of Governor Lovelace on March 9, 1671. It remained crown property until 1705 when Queen Anne's representative, Viscount Cornbury, deeded it in perpetuity to Trinity Episcopal Church. (Kirkorian and Tidlow, 1884:5)

To the east and north of this large tract of which the project site was a part were other great farm parcels. One area became known as "Greenwich (Green Village), a name that first appeared in city records in 1713." (Wright, 1983:180) was leisurely since the village was completely separated from the bustling community concentrated at the lower tip of the island; its stature, though, rose suddenly in the 1730s with the land purchases of socially prominent naval Captain Peter (White and Willensky, 1978:62) "An epidemic of small Warren." pox in 1739 in the Battery region gave impetus to the first hasty migration of the well-to-do to the healthier climate of the Village." (WPA, 1939:125) The village grew steadily until the last quarter of the 19th century with most of its residents being of middle and upper class American stock. But as the city pushed northward, "an area so central could not escape the ever encroaching poorer classes." (Ibid, 1939:126) Waves of Irish, Negro, and Italian immigrants crowded the narrow twisting streets so that "by 1910...the American Ward had become Ward 9, a foreign ward, leading its life of pushcart, cafe, fiesta, and bar, its land values...cheap." (Ibid:128) Then came the transition to a literary/arts neighborhood which tapered off after World War I. Since that time, mass transportation lines and real estate development have altered the section, though it still retains its lively and tolerant aura.

As for what is now called SoHo and officially begins one block east of the project site at 6th Avenue, "its great farms were first subdivided and developed as a quiet residential suburb in the years after the Revolution." (Wright, 1983:155) It was densely populated by 1825, residentially fashionable in the 1840s, host to factories and warehouses for the second half of the 19th century, and finally a slum before its most recent incarnation as a stylish artists' enclave. The remaining warehouses, many of cast-iron construction, are protected by landmark designation. The landmarked district stops at West Broadway which is three blocks east of the project site.

"Richmond Hill, a country mansion built in 1767, once enjoyed magnificent views from its 100-foot-high mound near today's intersection of Charlton and Varick Streets [three blocks north of the project site]. George Washington briefly used it as his headquarters during the Revolution; John Adams occupied it as vice-president, later when the city was the nation's capital; Aaron Burr still later bought the elegant structure...It was Burr who recognized the value of the surrounding 26 acres. He had them mapped into 25 by 100 foot lots in 1797 and, after this and other Village hills were leveled by the Commissioners' Plan of 1811 to their present flatness, saw the development by John Jacob Astor of the row houses still extant in the Charlton-King-Vandam district." (White and Willensky, 1978:72) Many of the buildings are Federal-style dating from the 1820s, with some later Greek Revival structures. The southern boundary of the landmarked district is Vandam Street, two blocks of the project site.

Returning to the Trinity Church property of which the project area was once a part, "for many years Trinity land was ignored by builders because of its leasehold status, and not until the Lower East Side of Manhattan had been built up did they turn to this section. In 1803 the streets from Warren to Canal were laid out. Four years later, St. John's Church, a chapel of Trinity Parish, was erected on Varick Street near Beach, and St. John's Park, named for the chapel, was set up on the block bounded by Varick, Hudson, Laight, and Beach Streets," four blocks south of the project site. "From 1825-50 this district was the home of the city's wealthy aristocrats." (WPA,1939:79)

As for the project site itself, its attractivness for potential development was limited by its leasehold status and its inhospitable topography. (See Pages 7-8 above.) But after the beginning of the 19th century, change was in the air as witnessed by the two developments described above. Hudson Street, one block west of the project site had been laid out before 1797, and it was ceded from Trinity Church

to the city in 1808. (Moscow,1979:61) Canal Street was opened by 1808 and paved by 1820. (Wolfe,1988:164) In 1808, Trinity Church having offered to cede to the city a street 50 feet in width called Clark [eastern boundary of project block], in preference to a continuation of Dominick St. through the land of Anthony Boworowson, the c[ommon]c[ouncil] agrees to accept the cession." (Stokes,Vol.V:1499) Dominick Street was ceded by Trinity in 1813. (Ibid,Vol.III:998) Varick Street was opened between Spring and Vandam in 1806 (Ibid,Vol.V:1444), ceded in 1808 (Ibid,Vol.V:1483), and regulated in 1809 (Ibid,VolV:1507). Broome Street was paved in 1809. West Road's name was changed to 6th Avenue in 1811 (Ibid,Vol.VI:599).

This activity clearly presaged the completion of the City Commissioners' Map in 1811 which prepared the present gridiron of Manhattan's streets. But there was evidently a lag time between the grid's creation and its implementation as a development tool. An 1811 description of the area north of the present Canal Street by a city street worker indicates the lack of development in the area:

"...[going north] cross a ditch cut through Lispenard's salt meadow on a plank laid across it about midway between a stone bridge on Broadway and an excavation then being made, and said to be for the foundation of the present St. John's Chapel in Varick Street. From the plank crossing over the ditch a well-beaten path led to the Village of Greenwich. ...open and partly fenced lots, not at that time under cultivation.

... no dwelling house except for Aaron Burr's country seat, Richmond Hill. (Stokes, Vol. V.: 1480)

The first known structure in the immediate vicinity of the project site was the Spring Street Presbyterian Church whose cornerstone was laid in 1810. (Ibid, Vol. V:1522).

In order to be suitable for building, the low lying portions of the study area had to be filled and "the commissioners had their way with the hills; leveling them all by 1811, and taking with them the grandeur of the old estates. These properties were then easily divisible into small city lots," (White and Willensky,1978:62) often 25 by 100 feet. Typically the construction of buildings began in the 1820s, and "typically the structures in Ward 8 were tenements, apartments, and stables many of them containing retail stores on the ground floor." (Kearns and Kirkorian,1983:7) The project site generally followed that pattern. See Figures 11 and 12 which are atlases of 1853 and 1870. Note also on Figure 13, an 1877 atlas, the presence of three stables (marked by an X) on the project block.

## Historic Era Potential

Prior to the 19th century, the Chelsea School site was in or adjacent to the large swamp/marsh land known as Lispenard's Meadow. There is no documentary evidence of any kind of use whatsoever before the division of the area into city blocks and lots in the early part of that century. It was not part of a farm estate such as Richmond Hill nearby, nor part of a hamlet such as Greenwich Village to the northeast, nor part of a planned development such as St. John's Park to the south. This may have been because of its topography, but whatever the reason, development seems to have been spotty and piecemeal. For example, on the 1841 tax rolls, at least four of the ten lots which at that time comprised the project site contained no structures. The first available land use atlas is for 1853 and shows a hodge-podge of small brick and frame dwellings and stores. That pattern persisted throughout the century and no especial uses (e.g. foundry or pottery) were found.

Therefore, the only category of historic era archaeological resources which might exist on this site are limited to backyard deposits. Undoubtedly, the first buildings were erected before city utilities were available. And there is no reason to think that when water/sewer first became available - for a fee - the residents of this block were in a financial position to avail themselves of the services. Thus, there must have been many decades when privies and cisterns were used by the occupants of the buildings on the project site. The following three sections of this report document the land uses and disturbances upon which the recommendation as to whether or not there is the potential for significant cultural resources had to be made.

# SITE SPECIFIC BUILDING HISTORY

The following description of historic development within the project site is presented chronologically, in numerical order by lot number. Lot numbers referenced are those shown on the 1870 Perris and Brown Atlas. (See Figure 11)

LOT 3

114 Varick Street: In 1853 there was a second class brick or stone dwelling on the western portion of this lot, fronting Varick Street. (See Figure 12) In addition, on the eastern portion of the lot was a framed dwelling. A vacant yard appéared between this building and the brick structure fronting Varick Street. By 1877 the eastern structure extended to the eastern boundary of the lot, and the yard between it and the western building still existed. (See Figure 13) An 1899 atlas shows the western building as a four story brick structure with a full basement, and the eastern building as a three story framed structure. (Bromley, 1899) By the 1920s the lot was vacant. (See During the 1920s Varick Street was expanded, removing 35' from the western side of the lot. In 1931 a portable wagon with a rear extension was constructed on Lots 3 and 4, fronting Varick Street (NB206). At that time, Trinity Church owned the parcel. The 40' x 26' building had a foundation of concrete built on course sand. The structure was completed in 1932 and was in the approximate location that the previous structure on the western side of the lot had been. The structure has since been removed. Therefore, according to the written record a backyard, formerly between the two standing structures on the east and west portions of the lot, remained undeveloped.

LOT 4

116 Varick Street: In 1853 a brick first class dwelling was located on the western half of this lot, fronting Varick Street. (See Figure 12) The eastern portion of the lot was not developed at any time. In 1877 the building is shown as a four story structure with a basement. (See Figure 13) The structure stood through the 1920s, when Varick Street was widened. (See Figure 14) At that time, 35' on the western portion of the lot were removed. In 1931 a portable wagon with a rear extension was constructed on the western portion of the lot, fronting Varick Street, while the rest of the lot remained vacant. The 40' x 26' structure, built on sand, straddled Lots 3 and 4 (NB206). The temporary structure was subsequently removed. In 1937 a small field office was constructed on the northwest corner of the lot fronting Varick Street, adjacent to the approximate location of the previous portable wagon (NB105). (See Figure 15) small structure straddled Lots 4 and 5 and eventually became an office for the surrounding parking lots. The structure has since been removed, and the lot has remained vacant.

LOT 5

118 Varick Street: In 1853 the only structure on Lot 5 was a first class brick or stone building located on the eastern end of the lot. (See Figure 12) Later this structure was used as a stable. By 1870 a 3 story framed structure was on the western side of the lot, fronting Varick Street and an open yard remained between the two structures. (See Figures 11 & 13) There is nothing to indicate whether or not either of the buildings had basements. Both of the structures were removed by the 1920s. (See Figure 14) During the 1920s Varick Street was expanded, removing 35' from the western portion of the lot. In 1929 a one story corrigated steel 9' x 10' building was constructed fronting Varick Street (NB635). The temporary one story real-estate office building, owned by the Varick/Dominick Corporation, was connected to existing sewer lines. Footings for this building were 4' below grade. Later in 1929 a portable steel lunch wagon was put in its place, adding a small kitchen to the existing structure. By 1930 the lot appeared vacant. (Bromley, 1934) 1937 a field house was constructed by Trinity Church, straddling Lots 4 and 5 (NB105). (See Figure 15) The 9' x 7' building has since been removed.

LOT 6

 120 Varick Street: In 1853 a wooden framed dwelling was located on the western portion of this lot, facing Varick Street. At that time there was nothing located on the eastern portion of the lot. (See Figure 12) In 1877 the lot had a three story building with a basement fronting Varick Street. (See Figure 13) Originally, this lot ran in an east to west direction, fronting Varick Street. However, during the 1920 expansion of Varick Street, the western portion of the lot was removed and the lot was changed to a north-south orientation, fronting Dominick Street. (See Figure 14) At that time the lot was vacant, and remained that way until the 1930s. In 1933 a Gasoline Station was constructed which extended onto this lot. While the actual service station was housed to the east on adjacent Lot 7, the exit and egress, as well as gasoline pumps were located on this lot. (See Figure 16) In 1973 the gasoline station was razed, and paved over as a parking lot (DM348, CO74531-1974).

LOTS 7-10

122 Varick Street/16-20 Dominick Street: In 1853 Lot 7 had an east-west orientation and was situated at the corner of Varick and Dominick Streets. At that time there was a framed dwelling on the western portion of the lot directly at the corner of Varick and Dominick Streets, and a brick one story building directly to the east. (See Figure 12) By the 1870s the entire lot was developed. (See Figures 11 & 13) Lot 8 had a framed dwelling on it in 1853 fronting Dominick Street, as did Lots 9 and 10. (See Figure 12) In 1870 these structures appeared as three story brick dwellings fronting Dominick Street, and in 1877

they appear to have basements. (See Figures 11 & 13) During the 1920s Varick Street was widened, removing 35' from the western portion of Lot 7. At that time Lot 7 was realigned to a north-south orientation, fronting onto Dominick Street, and the previous building was removed. In 1926 the buildings on Lots 8, 9, and 10 were also removed, and the lots were combined and renumbered as Lot 7. Later in 1926 a gas station was constructed at 16 Dominick Street (DM272, NB462). The building, with a backfilled cellar and subsurface grease pits, spanned all of Lot 7. Gas pumps and tanks were located on adjacent Lot 6 to the west. (See Figures 16 & 17) The gas station remained on the lot until 1973 when it was razed, and paved over for parking (DM491).

## LOT 11

14 Dominick Street: The 1853 atlas shows a framed dwelling on the north portion of this lot bordering Dominick Street, with an addition on the southwesterly rear of the building. Figure 12) In addition, a first class building existed at the southern end of the lot. In 1872 the building on the northern portion of the lot was described as a two-and-a-half story second class dwelling, approximately 175 feet from the corner of Varick This wooden structure, owned by G. B. LaBaron, had a stone foundation and a full basement (ALT160). Part of the 25' x100' lot remained undeveloped as the northerly building was 20' x 26', and the southerly building was considerably smaller. that time two families occupied the building fronting Dominick Street, while the rear building was used as a stable. In 1877 the rear building is not shown, (See Figure 13) however it reappears on the 1899 atlas. (Bromley, 1899) The stable no longer appeared on atlases after the 1920s, and in 1936 the frame dwelling was razed (DM12). (See Figure 14) Shortly thereafter the lot was paved, and functioned as a parking lot.

## LOT 12

12 Dominick Street: An 1853 atlas shows a second class brick dwelling on this lot fronting Dominick Street. In addition there is another second class brick dwelling at the southern end of the lot. (See Figure 12) An 1899 atlas shows the northern building fronting Dominick Street as a three story brick structure with a basement. (Bromley, 1899) A 1934 permit (P&D678) portrays a building on this lot as a Class A multidwelling, tenement house. The building, owned by Trinity Church, had over five families living in it (ALT1210-34). At that time it was proposed to "...discontinue the use of 3 water closets now located in rear yard and remove the same from premises". The rear building no longer appears on atlases in the 1920s, and in 1936 a 25' x 40' three story brick dwelling was demolished on this lot (DM12). (Bromley 1934) In 1937 a tool shed was constructed on the northeastern corner of the lot. (See Figure 15) The small shed, subsequently utilized as a parking attendants office, has since been removed, and the lot has remained vacant.

# AREAS OF ARCHAEOLOGICAL POTENTIAL

Based on the findings described in the previous sections, areas of undisturbed lots have been identified. The review documented historic subsurface disturbance including below grade basements, grease-pits and subsurface gasoline tanks. The majority of the parcel has experienced such sub-surface disturbance. However, review of cartographic data and information acquired at the Building Department, Block and Lot files, suggests that there may be existing undisturbed areas.

Lot 3 retained an undeveloped section in the middle of the lot, between two buildings. This vacant section functioned as a backyard during the historic utilization of the site. While the western portion of the lot possessed a building with a basement, the building documented on the eastern portion of the lot does not appear to have had a basement.

Lot 4 also retained an undeveloped backyard. A large portion of the eastern section of the lot was not constructed upon. The front of the lot, bordering Varick Street, had a building with a basement. However, the backyard to this building was not developed.

Lot 5 appears to have an undeveloped area which was previously between the building on the western half of the lot, and the building on the eastern half of the lot. The parcel was utilized as a backyard for the adjacent dwelling. Neither of the buildings have documentation to support the presence or absence of basements, therefore the land beneath them may have also remained undisturbed.

Lots 6 through 10 have all experienced extensive subsurface disturbance. Prior to the widening of Varick Street, Lot 6 was covered by a building with a basement, as were lots 7, 8, 9, and 10. Subsequently, the buildings were removed, and replaced by a gasoline station. The subsurface disturbance associated with the activities of this service station, including grease pits and the installation of storage tanks, has been documented. There are no potentially undisturbed areas on any of these lots.

Lot 11 had a building with a basement on the northern part of the lot, fronting Dominick Street. However, behind this was an undeveloped backyard. In addition, at the southernmost end of the lot was a stable that apparently did not have a basement. The undeveloped portion of the parcel, and the area beneath the stable may not have experienced subsurface disturbance.

Lot 12 also retained an undeveloped segment behind the northern building fronting Dominick Street. This backyard section remained vacant through history. In addition, a small building at the southern end of the lot does not appear to have had a basement, and thus may have remained undisturbed.

## Homelot Archaeological Potential

In an effort to determine the likelihood of the existence of significant 19th century backyard deposits, the general land use record was traced which revealed several apparently undisturbed areas. (See preceding two sections.) On other projects, LPC's concern about homelot resources requires that certain conditions be met before potential can be assumed. That is, research must identify one decade of continuous occupancy by a special affinity group about whom data is scarce, such as a Black or Oriental family. Residency by a single family for at least twenty years is another criterion for further investigation. These periods of occupancy must occur prior to the availablilty of municipal sewer and/or water supplies, which, of course, obviated the need for backyard privies, wells, and cisterns.

Lots 3, 4, 5, 11, and 12 were identified as having possibly undisturbed backyard areas where features such as privies, cisterns, and wells dating from the 19th century could exist. The next task was to find out if the occupancy pattern for each of the lots held the potential to contain resources which would fit LPC's criteria for significance. Several archival tools are available for this kind of re-The names of the owners of the lots in 1841 and in 1857 were procured from Tax Assessments Lists. of registered voters residing at the pertinent addresses in 1877 and 1880 were found. (Unfortunately, the record for this block in the 1890 "Police" census of Manhattan was unaccountably missing.) Then, yearly business directories for Manhattan, which give home addresses, were used to trace these names backward and forward in time in order to establish continuity of residence. In only one case -George Welsh at 116 Varick (Lot 4) - was the owner also an occupant, and his residency was for only a few years. no instances were any of the dwellings for one family only. For example, at 114 Varick (Lot 3) there were nine voters in 1877 and eleven voters in 1880. The voters were all male, of course, so obviously a number of resident families are represented. Even in the multi-familiy dwellings, no long-term occupants could be traced. It can be concluded, therefore, that from at least the mid-19th century the lots in question hosted multiple tenant houses. Thus, no backyard archaeological resources could be associated with a particular person of affinity group for a sufficient period of time after c.1850.

Of the five lots which may have been undisturbed enough to have retained backyard deposits, two of them - Lots 5 and 12 - had no dwellings on them as late as 1841 according to the tax assessment lists. And since the transient, multi-family pattern is applicable soon thereafter, they

may be omitted from futher consideration. As for Lots 3, 4, and 11, it is possible, though not probable, that they could have had single family homes built on them as early as the 1820s and that they could have housed one family for several decades. If that were the case, they would surely have had cisterns and privies in the rear spaces behind the dwellings. The record shows that sanitary facilites were located in backyards as late as 1934 (Lot 12), though they were presumably hooked into sewer lines for disposal of the waste. Also, during the 19th century, at least periodic cleanings of privies were mandated by law. Therefore, by one means or another, the earliest deposits which might be associated with one particular affinity group would have been removed. (The backyard areas were too small for additional privies to be dug after previous ones were filled.) Based on comparable research on utility usage in Manhattan, it is reasonable to assume that within a block with a tenement/shop character such as this one, a dependence on cisterns for at least part of the water supply would persist well into the second half of the 19th century if not longer. It is logical that those who were using the water would not throw much in the way of trash into their own receptacles. Thus, when the cisterns or wells fell into disuse, and if they were filled with debris to prevent a safety hazard, it would have been long past the time when the material could be associated with an early tenant of long residence.

# CONCLUSIONS AND RECOMMENDATIONS

Apparently the historical development that took place on the project site may not have caused subsurface disturbance in all However, it must be noted that the actual construction of buildings causes a degree of subsurface disturbance, as does the subsequent demolition of such buildings. Documented historic disturbance also includes the presence of water closets at a late date in the backyard of Lot 11, which were probably hooked into sewer lines. In addition, the site was turned into a parking lot during the 1930s which caused a degree of disturbance. undated plan for proposed parking says that the "entire plot will be leveled off and finished with cinders stamped down". (Undated plan in Block and Lot file) This suggests that the entire parcel was graded to create a smooth level surface for parking. activities - construction, demolition, sewer line connections and grading - would have disturbed potential prehistoric remains, as they often occur in shallow deposits. Based on the nature and extent of subsurface disturbance documented, and the lack of clear evidence to support the presence of prehistoric populations, the potential to recover prehistoric in situ cultural remains is low.

However, it is recommended that efforts be made to determine the actual pre-eighteenth century topography/ environmental conditions of the project site. When soil borings are taken in the design research phase for the proposed school addition, we recommend that they be monitored and/or analyzed by an archaeologist - and paleogeologist if necessary - for evidence of the marsh margin zone ecological biome that would have hosted habitation, burial, and/or large-scale processing activities during the prehistoric period. It may be advisable that some borings designed to archaeological specifications be taken. has been proven in other instances that soil borings data can be useful in defining the perimeters of a realistic testing field. In this case it is hoped that borings would not only help ascertain the geologic make-up of earlier land surfaces, but if and to what extent they may have been disturbed by historic era earth-moving activities.

Potential historic archaeological resources are limited to nineteenth century backyard remains. However, the fact that undeveloped areas existed behind dwellings on Lots 3,4,5,11, and 12, does not necessarily mean that they contain significant historic features. The initial development of these lots occured prior to the 1850s, almost certainly before sewer

and water lines were available. Backyard features that would be found from that time would be primarily privies, cisterns, and wells. As privies were pumped out on a regular basis by the middle of the nineteenth century, the chance to recover fill indicative of historic lifeways of an earlier period is low. There is the possibility of recovering capped wells and cisterns. However, the inhabitants of the tenement buildings associated with these backyards when the features would have been sealed, are probably unrelated and transient. Research has not been able to establish the long term presence of a particular family or affinity group. Therefore, the potential to recover capped wells and cisterns does not guarantee their archaeological significance. We recommend that no further archaeological investigations of the historic era be undertaken.

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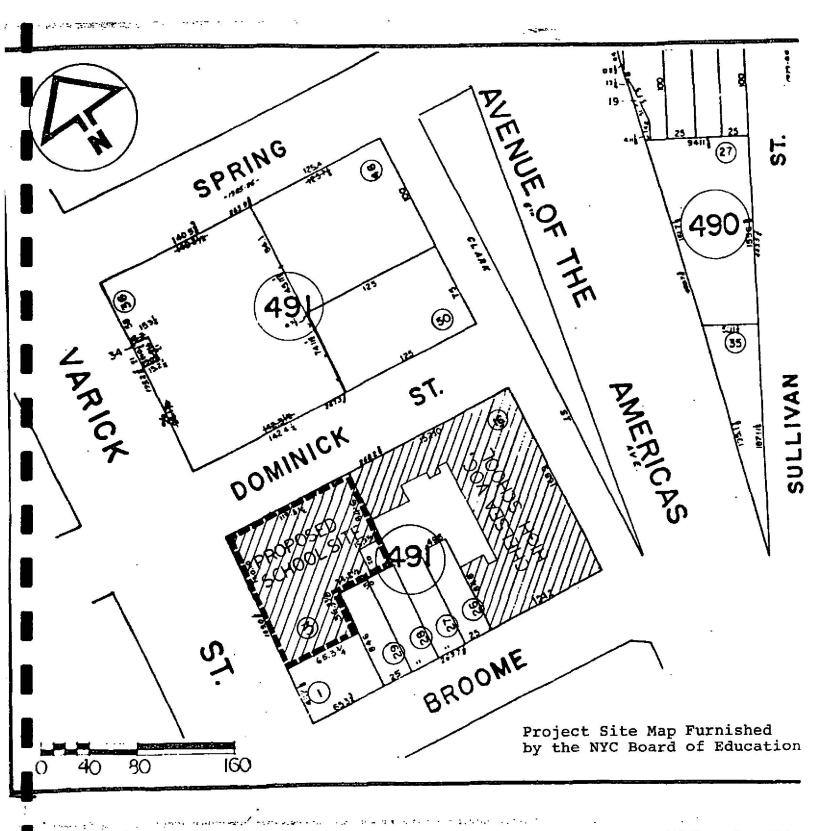
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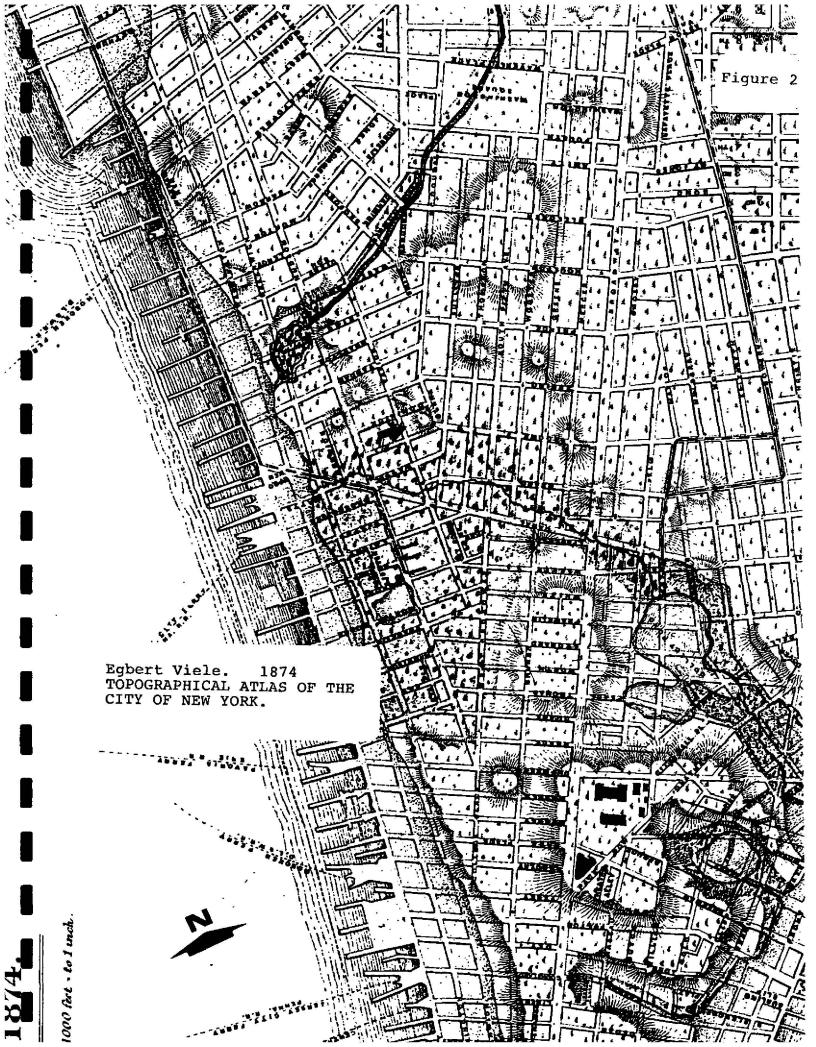
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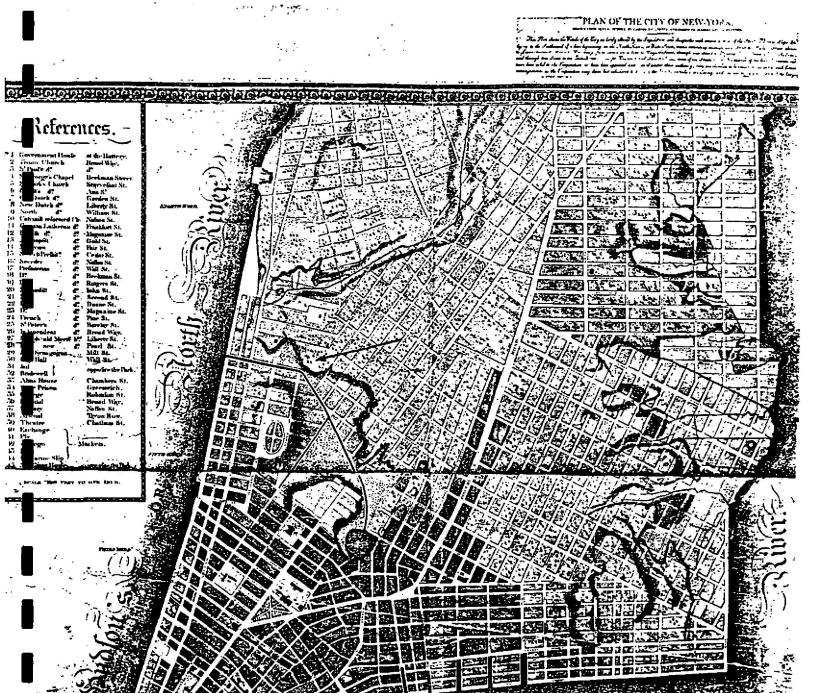
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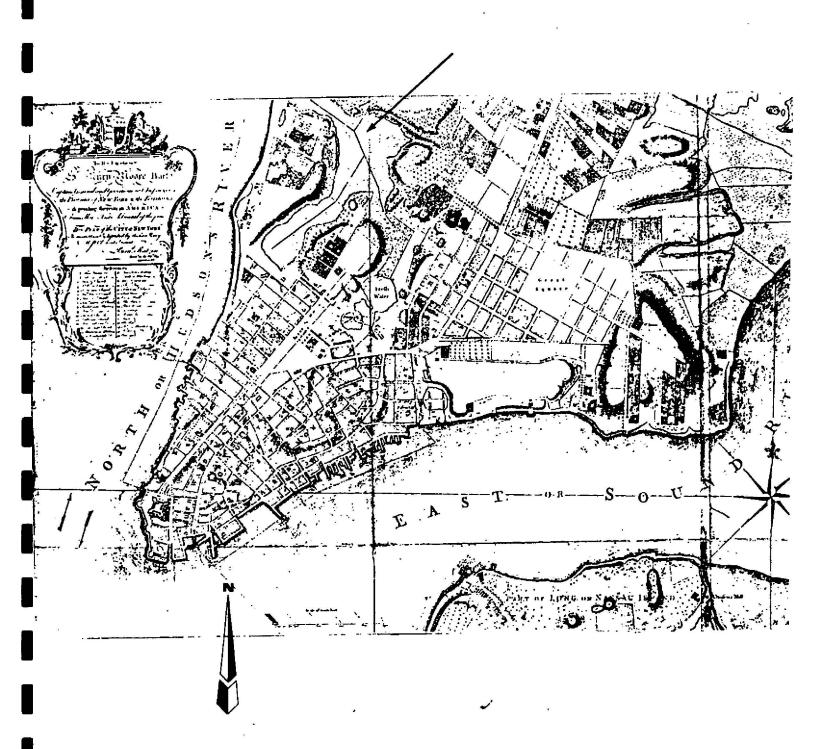




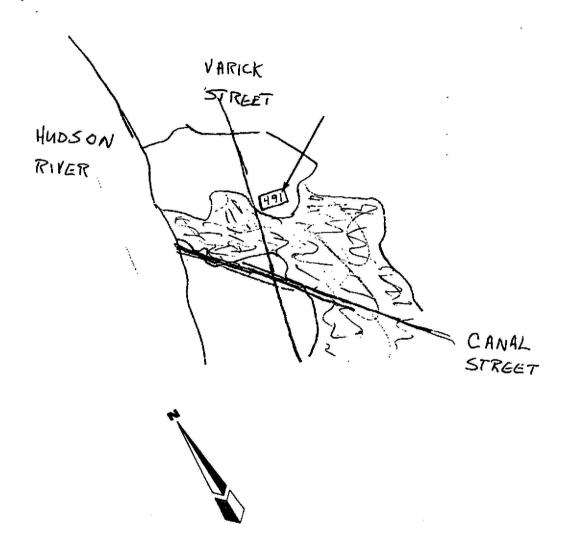
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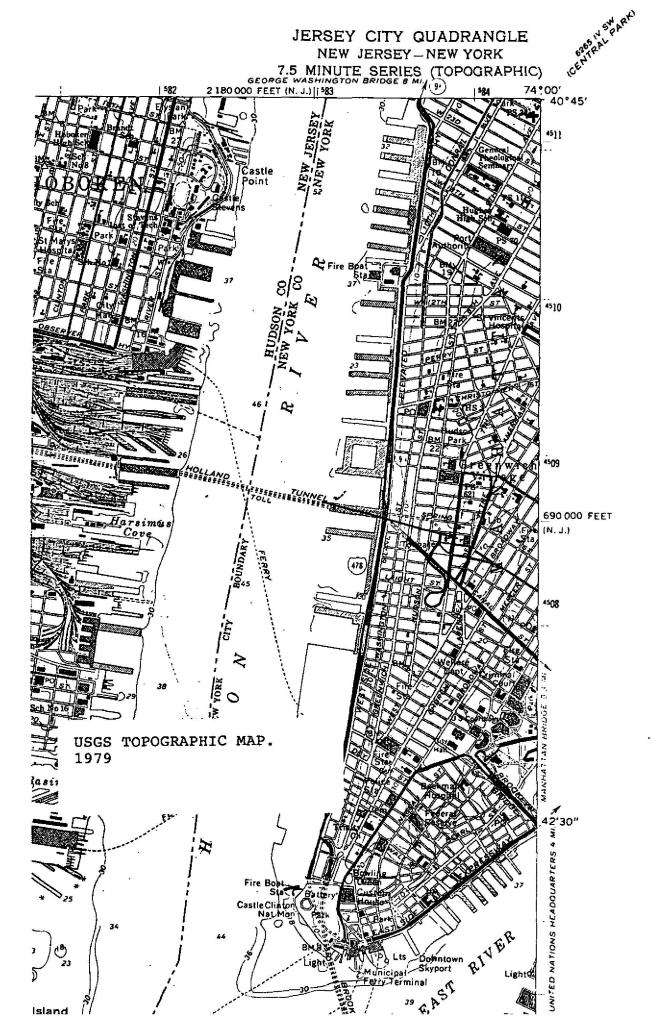
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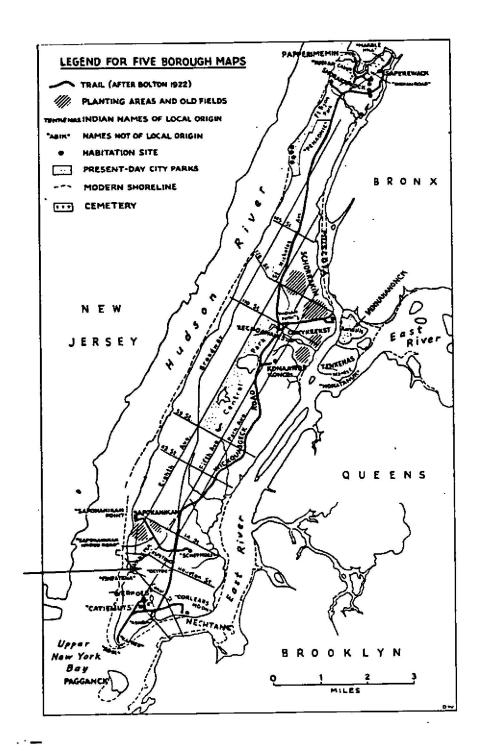


PLAN OF THE CITY OF NEW YORK \_\_\_\_\_ Ratzer, 1766-7 from Stokes, Vol. 1: plate 42



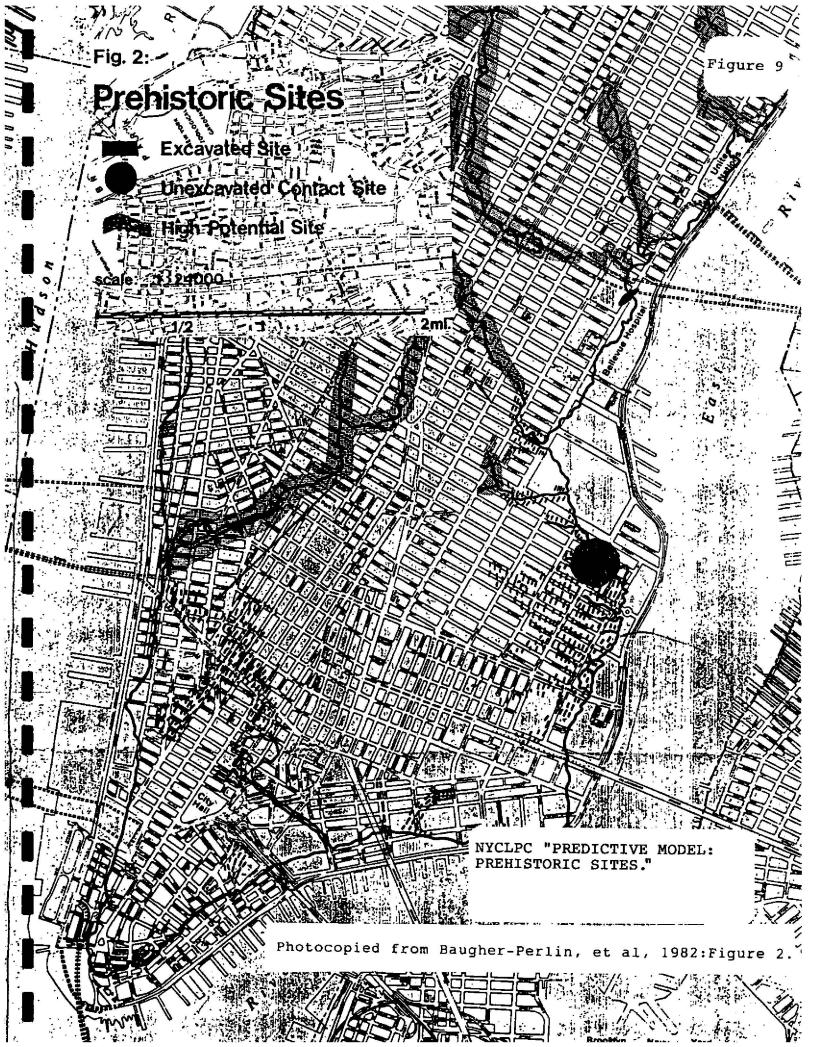
ORIGINAL GRANTS AND FARMS. I.N.P. Stokes. Vol.VI, Plate 843-b (Tracing)

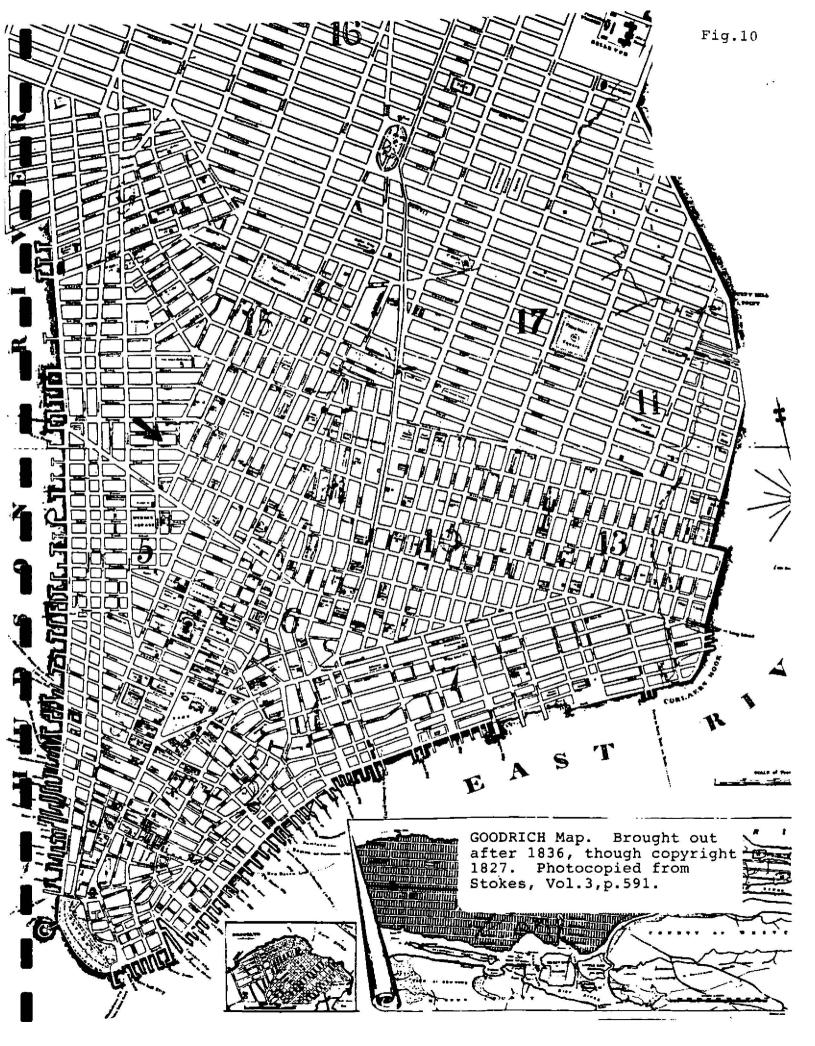


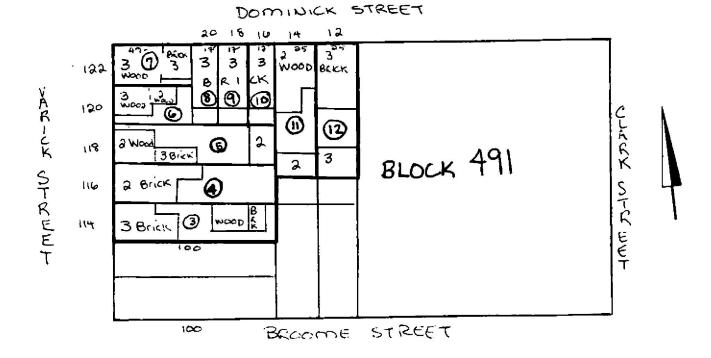


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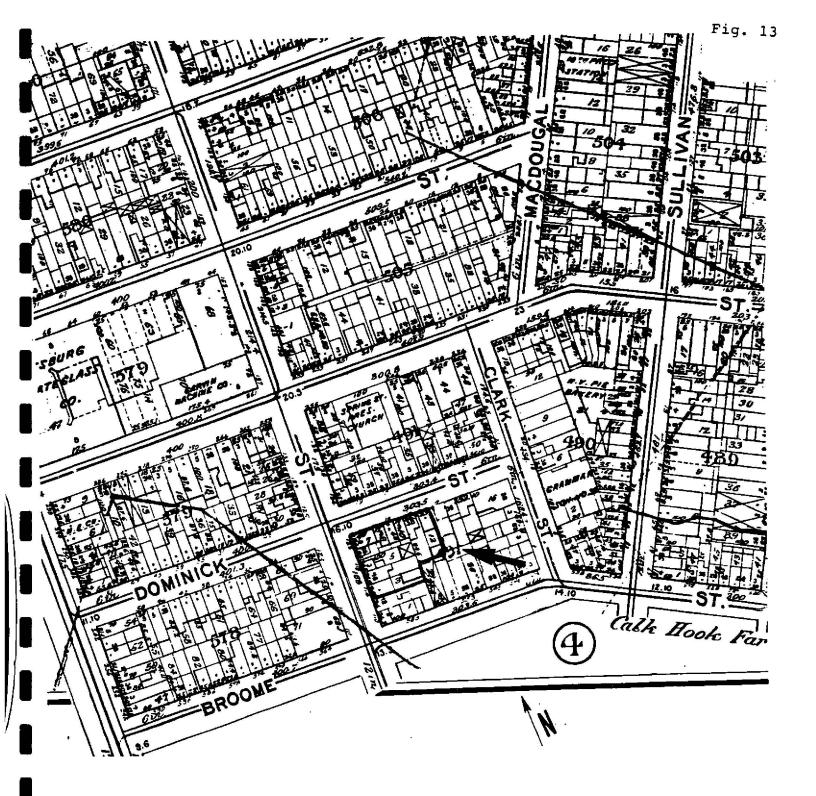


1870 Perris & Brown Atlas of the City of New York

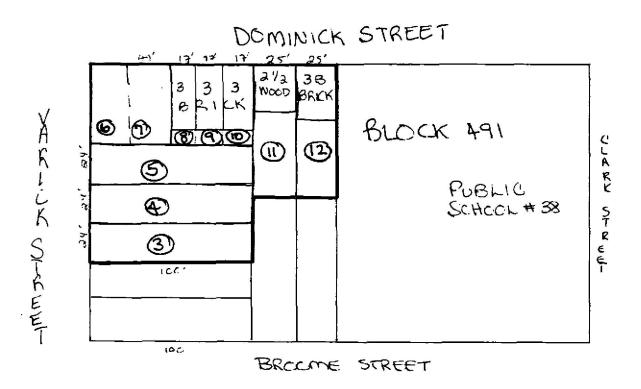
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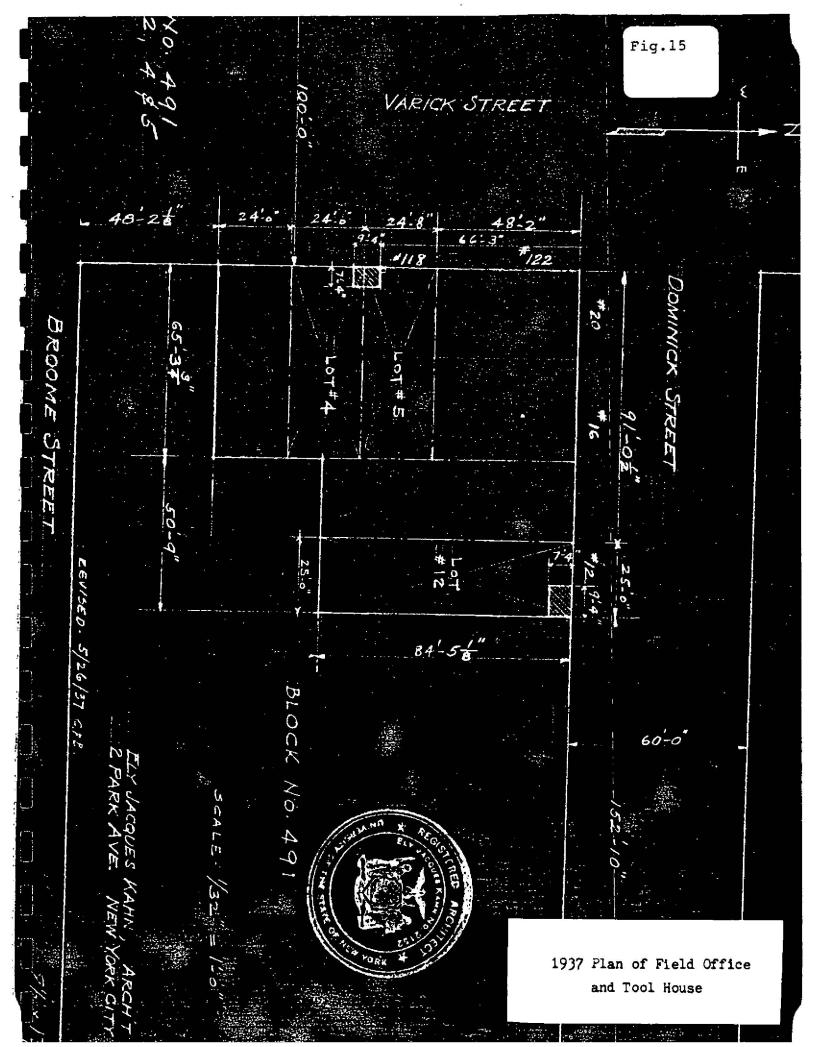
1853 Perris Map of the City of New York Plate 35 (Tracing)



1877 Bromley Atlas of the City of New York



192? Browley Atlas of the City of New York (Tracing)



Plan of Gas Station Lot 7



Photograph 1: Broome Street. Looking northeast from the south side of Broome Street. Chelsea Vocational High School is at the far right.

RIGHT Photo 2: Corner of Broome and Varick.
Looking east from the west side of Varick.

BELOW Photo 3: Project site. Looking southeast from northwest corner of Varick and Doninick.







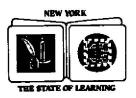
ABOVE Photo 4: View of project site from west side of Varick Street. Looking east.

RIGHT Photo 5: Project site. Looking northeast toward Dominick Street from Varick Street.





Photo 6: Chelsea Vocational High School. Looking northwest from Avenue of the Americas



THE STATE EDUCATION DEPARTMENT / THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, N.Y. 12230

NEW YORK STATE MUSEUM DIVISION OF RESEARCH AND COLLECTIONS

## Search Results:

## NEW YORK STATE MUSEUM Prehistoric Site File

Date: August 24, 1988

To: Cece Kirkorian

Historical Perspectives

P.O. Box 331

Riverside, Connecticut 06878

Area Searched: Chelsea Vocational Site, (see attached map).

In response to your request our staff has conducted a search of our data files\* for locations and descriptions of prehistoric archaeological sites within the area indicated above.

The results of the search are given below. Please refer to the NYSM site identification numbers when requesting additional information.

If specific information requested has not been provided by this letter, it is likely that we are not able to provide it at this time, either because of staff limitations or policy regarding disclosure of archaeological site data.

Any questions regarding this reply can be directed to Philip Lord,  $Jr_{\bullet}$ , at (518) 473-1503 or the above address, mark as Atten: Site File.

\*[NOTE: Our files normally do not contain historic period sites or architectural properties. Contact: The Survey Registration & Planning Unit, Office of Parks, Recreation & Historic Preservation, Agency Building #1, Empire State Plaza, Albany NY, at (518) 474-0479 to begin the process of collecting data on these types of sites.]

## RESULTS OF THE FILE SEARCH:

The following sites are located in or adjacent to the project area:

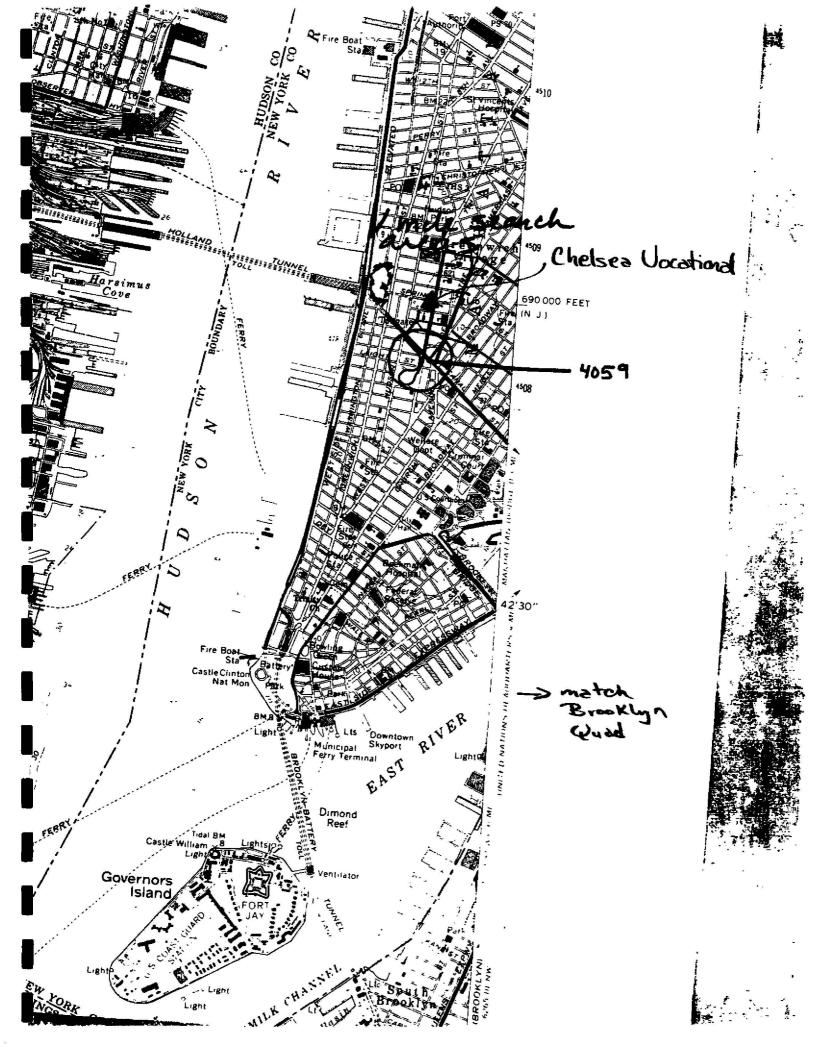
See attached list.

Please show project area on copy of named 7.5. U.S.G.S. topo map.

Code "ACP" = sites reported by Arthur C. Parker in The Archeology Of New York, 1922, as transcribed from his unpublished maps.

SEARCH CONDUCTED BY: B.W. (initials)

Staff, Office of the State Archaeologist



EVALUATION OF ARCHAEOLOGICAL SENSITIVITY FOR PREHISTORIC (INDIAN) SITES Examination of the data suggests that the location indicated has the following sensitivity rating:

- [ V] HIGHER THAN AVERAGE PROBABILITY OF PRODUCING PREHISTORIC ARCHAEOLOGICAL DATA.
- [ ] AVERAGE PROBABILITY OF PRODUCING PREHISTORIC ARCHAEOLOGICAL DATA.
- [ ] LOWER THAN AVERAGE PROBABILITY OF PRODUCING PREHISTORIC ARCHAEOLOGICAL DATA.
- [ ] MIXED PROBABILITY OF PRODUCING PREHISTORIC ARCHEOLOGICAL DATA.

The reasons for this finding are given below:

- [ ] A RECORDED SITE IS INDICATED IN OR IMMEDIATELY ADJACENT TO THE LOCATION AND WE HAVE REASON TO BELIEVE IT COULD BE IMPACTED BY CONSTRUCTION.
- [ ] A RECORDED SITE IS INDICATED SOME DISTANCE AWAY BUT DUE TO THE MARGIN OF ERROR IN THE LOCATION DATA IT IS POSSIBLE THE SITE ACTUALLY EXISTS IN OR IMMEDIATELY ADJACENT TO THE LOCATION.
- [ ] THE TERRAIN IN THE LOCATION IS SIMILAR TO TERRAIN IN THE GENERAL VICINITY WHERE RECORDED ARCHAEOLOGICAL SITES ARE INDICATED.
- [ ] THE PHYSIOGRAPHIC CHARACTERISTICS OF THE LOCATION SUGGEST A HIGH PROBABILITY OF PREHISTORIC OCCUPATION OR USE.
- [ ] THE PHYSIOGRAPHIC CHARACTERISTICS OF THE LOCATION SUGGEST A MEDIUM PROBABILITY OF PREHISTORIC OCCUPATION OR USE.
- [ ] THE PHYSIOGRAPHIC CHARACTERISTICS OF THE LOCATION ARE SUCH AS SUGGEST A LOW PROBABILITY OF PREHISTORIC OCCUPATION OR USE.
- [ ] EVIDENCE OF PRIOR DESTRUCTIVE IMPACTS FROM CULTURAL OR NATURAL SOURCES SUGGESTS A LOSS OF ORIGINAL CULTURAL DEPOSITS IN THIS LOCATION.
- [ ] THE PHYSIOGRAPHIC CHARACTERISTICS OF THE LOCATION ARE MIXED, A HIGHER THAN AVERAGE PROBABILITY OF PREHISTORIC OCCUPATION OR USE IS SUGGESTED FOR AREAS IN THE VICINITY OF STREAMS OR SWAMPS. LOW PROBABILITY IS SUGGESTED FOR AREAS OF EROSIONAL STEEP SLOPE. OTHER AREAS WITHIN THE PROJECT SUGGEST AVERAGE PROBABILITY OF USE.

## COMMENTS:

PROBABILITY IS HIGH IF ORIGINAL DEPOSITS REMAIN INTACT.

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ARCHAEOLOGICAL SITE FILE SEARCH NEW YORK STATE MUSEUM CULTURAL EDUCATION CENTER ALBANY, NEW YORK

5	NYSM ITE #	OTHER SITE #'S	SITE NAME			SOURCE OF DATA		7.5' QUAD NAME	REPORTER NAME	PROJECT NAME OR #
	4059	ACP	NO.	NO NO	VILL	<b></b>	STATON	JERSEY	PARKER	NO INFO
		NYRK-9	INFO	INFO	AGE		ISLAND QUAD	CITY QUAD		
	4060	ACP NYRK-(UN NUMBERED )	NO INFO	NO INFO	VILL AGE		BROOKLYN QUAD	BROOKLYN QUAD	PARKER	NO INFO

