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STAGE 1A ARCHAEOLOGICAL ASSESSMENT

BETH RIVKA SCHOOL FLATBUSH, BROOKLYN, NEW YORK

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EXECUTIVE SUMMARY

The New York City Board of Education, School Construction Authority (SCA) is considering utilizing the site of the Beth Rivka school in the Flatbush section of Brooklyn. The school, located on Lot 58, Block 5103 at the southwest intersection of Bedford Avenue and Church Avenue, is currently vacant. Surrounding the school on the west, south, and east sides, is a bituminous pavement historically used as a play area.

As part of the development process, a preliminary archaeological assessment was completed by Historical Perspectives, Inc. (HPI), which concluded that the project site may potentially host archaeological resources from both the prehistoric and historic periods. In order to further assess the archaeological potential of the Beth Rivka property, a Stage 1A Archaeological Assessment was completed to determine the likelihood that prehistoric and historic archaeological resources were deposited on the site and have remained undisturbed by historic and modern development. Background research included a review of primary and secondary sources to document the prior usage of the project site, cartographic analysis, site file reviews of previous pertinent archaeological findings, informant interviews, and field visits.

Documentary Research found that the project site has only a minimal sensitive for prehistoric archaeological resources, and a high potential for a variety of historic archaeological resources. Specifically, the western side yard of Beth Rivka school is potentially sensitive for the following resources:

- Early Dutch homelot/farmstead features
- Slave burials
- Privies, cisterns, wells ca. 1842-1878 Public School No. 1
- School yard 1842-1878 Public School No. 1
- Privies, cisterns, wells ca. 1865-1890 Washington Engine & Hook and Ladder House
- Privies, cisterns, wells ca. 1878-1898 Public School No. 90/Beth Rivka
- ca. 1905-1936 water closet Public School No. 90/Beth Rivka
- School yard 1878-1960s Public School No. 90/Beth Rivka.

The eastern side yard of Beth Rivka is potentially sensitive for the following resources:

- Early Dutch homelot/farmstead features
- Slave burials
- Privies, cisterns, wells ca. 1878-1898 Public School No. 90/Beth Rivka
- School yard 1878-1960s Public School No. 90/Beth Rivka.

And finally, the southern end of the project site is sensitive for the following:

- Privies, cisterns, wells ca. 1873-ca. 1890 G. W. Jarrett House

Stage 1B investigations are clearly warranted prior to any subsurface disturbance on the property. This should include completing topic-intensive research on the slave cemetery, the fire house, and

Public School No. 1 (1842-1878), and establishing the archaeological potential of the ca.1905 water closet via a review of annual Borough President report, laws pertaining to schools in Brooklyn, and pertinent sanitation reports. It may be that documentation on emptying the water closet will establish a lack of archaeological potential.

In conjunction with the topic intensive research, Stage 1B field investigations would be necessary. This would entail removing the macadam around the existing building, and conducting systematic subsurface investigations in the form of shovel test pits and possibly machine-aided excavation. A formal research and testing plan would be established in conjunction with SHPO prior to the commencement of this stage of research.

INTRODUCTION

The New York City Board of Education, School Construction Authority (SCA) is considering utilizing the site of the Beth Rivka school in the Flatbush section of Brooklyn. The school is located on Lot 58, Block 5103 at the southwest intersection of Bedford Avenue and Church Avenue (Figures 1, 2). The Beth Rivka school, a three story, hipped roof Richardsonian Romanesque building, is currently vacant. Surrounding the school on the west, south, and east sides, is a bituminous pavement play area.

As part of the development process, a preliminary archaeological assessment was completed by Historical Perspectives, Inc. (HPI). The assessment concluded that the project site may potentially host archaeological resources from both the prehistoric and historic periods. In order to further assess the archaeological potential of the Beth Rivka property, a Stage 1A Archaeological Assessment was warranted.

The Stage 1A documentary study was completed to determine the likelihood that prehistoric and historic archaeological resources were deposited on the site and have remained undisturbed by historic and modern development. Background research included a review of primary and secondary sources to document the prior usage of the project site, cartographic analysis, site file reviews of previous pertinent archaeological findings, informant interviews, and field visits.

RESEARCH GOALS AND METHODS

Background research is designed to address two major questions:

- What is the specific level of potential for prehistoric and historical archaeological resources of significance to exist in the project site; and
- What is the likelihood that such resources have survived the subsurface disturbances concomitant with construction episodes, utility line installations, landscaping activities, and playground construction.

Sufficient information must be gathered to compare, both horizontally and vertically, the prehistoric past, the historical past, and the subsurface disturbance record. In order to answer these questions background research was conducted, including reviews of primary and secondary sources, cartographic analyzes, site file reviews, informant interviews, and field visits.

Review of Primary and Secondary Sources

Primary and secondary source material was researched in order to document the prior usage of the project site. These resources included pertinent archaeological reports as well as local and regional source material for data on prehistoric and historical settlements, and manuscripts and newspaper articles held by the New York Public Library. Particularly valuable were local historians' accounts, and prehistoric archaeological research work conducted by both professional and amateur archaeologists. Building records were also sought at the Brooklyn Building's Department in order to further document construction and disturbance episodes.

Cartographic Analysis

Historical maps and atlases were obtained from the Map Division of the New York Public Library. These were compared for early and later land use, topography, historical events, and documented subsurface disturbance episodes. Early maps helped to provide an account of land-use modifications and episodes of construction over the course of the last two centuries.

Site Files Review

Site file reviews were conducted at the New York State Office of Parks, Recreation, and Historic Preservation (SHPO), and the New York State Museum (NYSM), to determine if prehistoric or historical materials had previously been reported in the vicinity of, or within, the project site.

Informant Interviews

Long-term residents were sought and questioned regarding personal knowledge of land-use history. Local historians and archaeologists were able to provide information regarding construction episodes which may have impacted archaeologically sensitive areas and also reported areas where cultural resources had been previously identified and/or collected.

Field Visits

Field visits were conducted in April 2000. Photographs were taken of current conditions in the project site and obvious signs of disturbance were recorded. Historical features were also documented (Photographs A - C).

SITE LOCATION AND CONDITIONS

The Beth Rivka school site is located on Lot 58, Block 5103 at the southwest intersection of Bedford Avenue and Church Avenue (Figures 1, 2). The extant structure, a three story, hipped roof Richardsonian Romanesque building, is currently vacant. Surrounding the school on the west, south, and east sides, is a bituminous pavement play area (Photographs A-C). Abutting the south lot line is the imposing gothic complex of Erasmus Hall High School, whose current building, erected in the first quarter of the twentieth century, encloses the original 1787 frame, Federal style school. The original academy is both a City and National landmark.

The site is situated in the commercial heart of the Flatbush section of Brooklyn. Historically, Flatbush was part of Long Island, and later Kings County before becoming incorporated into Brooklyn.

Geologically, Long Island is the top of a Coastal Plain ridge formation that is covered with glacial drift, in reality an elevated sea bottom demonstrating low topographic relief and extensive marshy tracts. In the last million years, as glaciers advanced and receded three times, the surficial geology of the island, including the vicinity of the project site, was profoundly altered. "The glacier was an effective agent of erosion, altering the landscape wherever it passed. Tons of soil and stone were carried forward, carving and planing the land surface. At the margins of the ice sheet, massive accumulations of glacial debris were deposited, forming a series of low hills, or terminal moraines" (Eisenberg 1978:19). Circa 18,000 years ago, the last ice sheet reached its southern limit, creating the Harbor Hill moraine that traverses the length of Long Island.

Not far from the project site, the ridges that slant from the northern tip of the Botanic Garden across Prospect Park are part of a terminal moraine which marks the furthest advance of the stupendous ice sheets. The glaciers, carrying an enormous volume of rock and gravel, gouged off the fringes of valleys by their unyielding force.

When glaciers melted, the heavier rocks stayed where they were dropped, while sand and fine gravel were swept along in the flood of ice water to form what is called an outwash plain, characterized by the level ground on which the southern section of Prospect Park, just northwest of the project site, was created. Before extensive alteration of the landscape during the 19th and 20th centuries, this gently-sloping plain could be visible seen south of the moraine. It underlies Flatbush and the project site, continuing further south to the sandy shore at the shallow edges of Gravesend Bay and the Coney Island barrier beach.

During the height of the last ice age, sections of the continental shelf were exposed and served as Long Island's Atlantic shoreline from c.12,000 to 10,000 years before present (B.P.). As sea levels rose rapidly over the subsequent years (ca.4,000 to 2,000 B.P.), the shoreline was pushed further inland. By about 2,000 B.P. the rate of inundation had slowed and the shoreline established itself not far from where it lies today.

PREHISTORIC BACKGROUND

The prehistoric era of western Long Island is traditionally divided into time periods based on prehistoric people's adaptations to changing environmental conditions. These are generally known as the Paleo-Indian (c.12,000 to 9,500 B.P.), the Archaic (c.9,500 to 3,000 B.P.) and the Woodland (c.3,000 to 500 B.P.). In order to be able to assess the potential of the project site for prehistoric exploitation, it is first necessary to review these time periods and their associated settlement patterns.

- Paleo-Indian Period (ca.12,000 B.P. - 9,500 B.P.)

Toward the end of the Wisconsin Glaciation, during the Late Pleistocene Epoch, the first humans wandered across the exposed land bridge which connected Siberia and Alaska. These small groups of hunters were probably following the roaming herds of megafauna which were their chief prey. The most distinctive weapon in their chipped-stone tool kit was the fluted point, which has been found in association with mammoth, mastodon, bison and horse remains at various sites in the southwestern United States. Although none of these "kill sites" is located east of the Mississippi, the discovery of campsites such as that at Port Mobil, Staten Island, suggest a scattered, highly mobile population in bands of approximately 20 individuals, who ranged across a vast area necessary to support lifeways organized around the hunting of migratory game (Ritchie 1980:1-3, 13).

In the Northeast, the glacially-lowered sea level exposed the broad coastal plain of which Long Island was a part, indicating that the project area would have been dry land during this period. "This large area apparently contained abundant big game resources and provided access along the entire length of the south shore to the area that is present day Long Island" (Saxon 1978:251).

The lanceolate points, two to five inches in length with a concave base and channelled or fluted faces, presumably to facilitate hafting, exhibit a considerable range in shape and size. They were usually made from a high-grade silicious stone, often exotic to the region in which they are recovered, a function of their makers' seasonal migrations. Other artifacts in the Paleo-Indian tool kit include scrapers, knives, borers and graters, tools which indicate extensive handiwork in wood, bone and leather (Ritchie 1980:3,6).

From the locations of recorded sites in the Northeast, Paleo-Indians exhibited a marked preference for well-elevated situations. However, 30% of sites were found on or near the margins of swampy ground. Environmental characteristics which appear to have been attractive to Paleo-Indians include the proximity of major waterways, large fertile valleys and the coastal plain, where the densest population of desired food animals was supported (Ritchie 1980:7). However since 10,000 years ago, the rise in sea level estimated to be from 75 to 80 feet, has submerged large numbers of these sites.

The retreat of ice from Long Island approximately 18,000 B.P. and a global warming trend c.14,000 B.P., encouraged Paleo-Indian settlement in the Northeast. The post-glacial environment of spruce and pine underwent a gradual modification in favor of deciduous hardwoods such as oak and hickory, which have greater importance in terms of nutritional value to both animals and humans than do conifers. By 10,000 years ago, these deciduous species dominated forests along the eastern seaboard. In addition, the

megafauna on which Paleo-Indian diet was based "were rapidly becoming extinct, and were being replaced by the temperate-climate fauna that are indigenous today" (Gwynne 1982:190-191).

- Archaic Period (ca.9,500 B.P. - 3,000 B.P.)

The warming trend at the end of the last glaciation completely transformed the northeastern coastal environment from tundra and conifer-dominated forests, to the present deciduous woodlands with generally modern distributions of fauna. Due to the dwindling contribution of meltwater from disappearing glaciers, the reduced flow of streams and rivers promoted the formation of swamps and mudflats. These wetlands created a congenial environment for migratory waterfowl, and a host of edible plant species and shellfish. The new mixed hardwood forests of oak, hickory, chestnut, beech and elm attracted such mast-eating fauna as white-tailed deer, wild turkey, moose and beaver.

Although the Archaic diet was still based on hunting and gathering, due to the greater variety of plants available and exploited, excavated Archaic sites yield a wide array of plant processing tools, including grinding stones, mortars and pestles. The diagnostic tool was the grooved ax. In the coastal areas of New York, have been found numerous, small "nearly always multi-component sites variously situated on tidal inlets, coves and bays, particularly at the heads of the latter, and on fresh-water ponds on Long Island." By the Late Archaic, these areas provided shellfish, small game, fish, salt hay and tuberous grasses making larger more permanent settlements possible. Semi-nomadic life is still indicated, but wandering occurred within well-defined territorial limits, with seasonal movements between camps near exploitable resources. A dietary shift to shellfish in coastal New York near the end of the Archaic suggests a scarcity of large game, and a change from the early Archaic inland adaptation of forest hunting. Coastal sites show a principal reliance upon shellfish, especially oysters, hard and soft shell clams and bay scallops, which were easily gathered all around Long Island (Ritchie 1980:142-143).

In contrast to conditions during the Paleo-Indian, Early and Middle Archaic, "by Late Archaic times sea level was so close to present levels that its subsequent small rise has failed to obliterate much of what remains on Long Island from that period" (Gwynne 1982:192). Hence the Late Archaic Wading River complex, four sites on the north shore of Suffolk County, was found at the edge of a salt marsh, on dry ground ranging only two to seven feet above mean high water (Wyatt 1982:71).

The Transitional or Terminal Archaic (4,000 to 3,000 B.P.) is a pre-ceramic stage, highlighted by the production of ground and polished soapstone vessels. Characteristic of the Transitional Archaic were "fish-tailed" projectile points (Ritchie 1980:150, 166, 167, 171).

- Woodland Period (c.3,000 B.P. - 500 B.P.)

Pottery use became widespread following the introduction of soapstone vessels in the Transitional Archaic, and although copper tools were utilized during that period, the earliest copper ornaments, tubular beads, made their appearance during the Woodland. Stone or clay smoking pipes were also an Early Woodland innovation (Ritchie 1980:179-180)

Settlement patterns were substantially altered with the introduction of agriculture, the systematic cultivation of maize, beans and squash possibly beginning as early as A.D. 1000. During this time large villages within palisaded enclosures were developed and occupied by semi-sedentary inhabitants. Groups moved seasonally, depending on exploitable food resources, between villages and camps of varying population concentrations. Preferred village/camp sites were in protected, elevated locations at the confluence of two water systems. "Nearly all the permanent sites are situated on tidal streams and bays on the second rise of ground above water" (Smith 1950:101). Despite the advent of agriculture, shellfish and small game remained an important component of the Woodland diet. Shellfish refuse heaps, termed "middens," reached immense proportions, covering from one to over three acres. Deer, turkey, raccoon, muskrat, ducks and other game were stalked with bow and arrows, replacing the spear and javelin, while dug-out boats, bone hooks, harpoons and nets with pebble sinkers were employed in fishing (Ritchie 1980:180,267).

- Contact Period (ca.500 B.P. to 300 B.P.)

Native American settlement patterns at the time of contact incorporated seasonal hunting and gathering. Semipermanent villages or hamlets, containing oval and round mat-covered structures, were established near planting fields. Large subsurface pits were dug nearby to store dried meat, fish and corn, and were eventually filled with trash. Although fields were commonly burned at the end of the planting season to encourage floral and faunal repopulation, settlements centered on agricultural land were generally moved every ten to twenty years as soil fertility, firewood supplies and game resources were depleted (Salwen 1975:57).

At the time of the first European contact with Native Americans, Kings County, at the western end of Long Island, is generally believed to have been inhabited by Munsee-speaking Canarsee Indians, or subgroups of the Canarsee, members of the Delaware or Lenape culture group. Although most native groups within Kings County were traditionally identified as Canarsee, it is probable that affiliation was somewhat less monolithic, both geographically and temporally. Historical documents give only three direct references to the Canarsee, and these are restricted to the vicinity of the present Canarsie section of southeastern Kings County, and then only during the mid-17th century (Grumet 1981:6).

Nevertheless, historical narratives written by European travelers and settlers provide eyewitness descriptions of Indian customs and lifeways during the 17th century. Johannes de Laet, in his *New World, or Description of West India*, published in Holland in 1625 observed:

They were clothed in the skins of elk, foxes and other animals. Their canoes were made out of the bodies of trees; their arms were bows and arrows, and the arrows had sharp points of stone fastened to them with hard pitch (Thompson 1918:93-94).

Some lead a wandering life, others live in bark houses, their furniture mainly mats and wooden dishes, stone hatchets, and stone pipes for smoking tobacco (Bolton 1922:16).

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Contact with Europeans had far-reaching effects on Native American cultures. European goods such as metal and glass began to replace traditional materials, while warfare and European-introduced diseases against which the Indians had no protection decimated the population in the New York City area. This caused many groups to merge and remerge in complex ways in order to maintain viable communities. In 1670, Daniel Denton observed that the six towns on western Long Island had been reduced to two small villages (Thompson 1918:103). According to some local historians and most archaeologists, the principal Canarsee village was in the present Canarsie neighborhood, centered on East 92nd Street and Avenue J, about 3.2 miles southeast of the project site. However, conflicting reports place their main settlement further to the west and somewhat closer to the project site (see below).

Archaeologist Reginald Pelham Bolton noted a major Indian trail running from northwest to southeast through Brooklyn, starting at Jamaica Bay, running through Flatbush, and ending at New York Bay above the Narrows (Bolton 1922:237). The trail was later approximated by Flatbush Avenue (Grumet 1981:70). However, near the project site the original pathway actually ran somewhat west of what is now Flatbush Avenue. According to Bolton, "on its way over the range of hills on which Prospect Park is situated, the present Flatbush Avenue is laid out somewhat to the west of the course of the old path." (Bolton 1922:142). While it's not clear if this implies that south of Prospect Park this is also the case, there is the possibility that the path ran close to or within the project site, but this is pure speculation.

South of the project site near the intersection of the above-mentioned trail and another Indian trail, now represented by the intersection of Kings Highway and Flatbush Avenue, the Native village of Keshaechquereren, or Keskachane, was reported to have once stood (Figure 3). Reports contend that *this* was the principal settlement of the Canarsee group (Ibid.:18).

Identified as a village containing one longhouse in the 1639 Manatus Map, this settlement was evacuated by its Native tenants sometime between 1639 and 1641, when it was listed as Dutch property. Events connected with the opening phase of the Governor Kieft War (1640-1645) evidently compelled the inhabitants of this major settlement to remove further eastward on Long Island for the duration of the conflict.

MacCleod suggested that the planting fields of Castuteeuw were associated with the village of Keskachane. Neither Keshaechquereren nor its gardens was reoccupied by the former Native inhabitants following the end of the Governor Kieft war. Most of the people probably joined the Canarsee group at the Flatlands section of southeastern Brooklyn. (Grumet 1981:19)

Following Indian land sales and the later Dutch/Indian wars of the 1640s, known as the Governor Kieft's War, the Canarsee consolidated themselves and were joined by the Marechkawieck group (from the downtown Brooklyn area) and other groups migrating eastward (Grumet 1981:6,27; Van Wyck 1924:79).

When the Canarsee were last mentioned in 1684 they were joined with the Rockaway and Massapequa groups. Although the Massapequa eventually moved farther east on Long Island, a number of Canarsee lingered on at the fringes of European settlements until well into the 19th century (Grumet 1981:6-7).

Inventoried Sites in the Vicinity

Nineteenth and 20th-century research, survey and excavation have revealed a strong Native American presence in the Borough of Brooklyn. Archaeologist Arthur C. Parker noted that "without a doubt . . . it was occupied in nearly every part, and was once an important place of Indian travel and traffic" (Parker 1920:582). Most are recorded and described in the inventories of the New York State Museum (NYSM) and the New York State Office of Parks, Recreation and Historic Preservation (OPRHP).

Despite the extensive prehistoric presence in Brooklyn, only one previously recorded prehistoric site was inventoried at the NYSM within a one-and-a-half-mile radius of the project site (See Appendix). Site NYSM 3612, a shell midden was reported by Arthur C. Parker in 1922 as somewhere in the southern half of Prospect Park, about five blocks north of the project site.

Directly west of the project site, archaeological excavations completed at Erasmus Hall did encounter prehistoric material (Bankoff and Winter 1987:17). One prehistoric projectile point was found but it was within a disturbed context, as it was clearly associated with later historic material (Ibid.). Although one projectile point does not constitute a "site," it does establish a prehistoric presence within the immediate vicinity of the project site.

HISTORICAL BACKGROUND

The first purchase of land in what is now Brooklyn took place in 1636. Shortly thereafter, a group of Walloons built their houses on Wallabout Bay, and by 1642 a ferry to Long Island from Manhattan to the settlement of Brooklyn, then Breuckelen, had been established. In 1646 the Village of Breuckelen was officially authorized by the Dutch West India Company and became the first municipality in what is now New York State, preceding the City of Nieuw Amsterdam (1653) by some seven years. In 1683, almost 20 years after the English gained rule from the Dutch, the General Assembly of Freeholders reorganized the governmental structure in all of the province of New York into 12 counties, each of which was subdivided into towns.

When the county/town system was established in 1683, the project site fell within Flatbush, one of the six towns in Kings County. The towns of Brooklyn, Bushwick, Flatlands, Gravesend and New Utrecht formed the remainder of the county. Flatbush was purchased by the Dutch from the Canarsee Indians and was chartered in 1652. After the purchase, Eskemoppas, Sachem of the Rockaway Indians, declared that Flatbush actually belonged to them and therefore could not be conveyed by the Canarsee. The Dutch acquiesced and paid for the land a second time. Settlement commenced but boundary disputes with adjacent villages ensued (Manbeck 1998:117).

Settlement in Flatbush centered along a previously established Indian trail, which generally followed the path of present day Flatbush Avenue. No formal plans for the village layout were imposed, so large farmsteads were easily established. Numerous parcels on the west, north, and east sides of the town were left as common land, and remained this way for years (Stiles 1884:214).

The name Flatbush was derived from the Dutch word, "vlackebos" which translates to "wooded plain" (Manbeck 1998:117). The town fell within the area known as the middle woods, which was distinguished from the villages that comprised the east woods. Characterized for decades as a rural farming community, Flatbush grew to form a religious, educational and cultural center by the end of the 1700s. In 1658 the first public school was built in the "Midwout" or Middle Woods by the New Netherlands Colony, southwest of the project site near Flatbush Avenue (Willensky and White 1988:696). The current Flatbush Reformed Dutch Church (890 Flatbush Avenue) was completed in 1796, but the original church on the same site was built in 1654 by the order of Dutch Governor Peter Stuyvesant (WPA 1982:493). Flatbush's importance was further heightened by the construction of a courthouse in 1686. Rural farms and windmills dotted the landscape through the eighteenth century.

The years during the American Revolution witnessed a series of battles in the area, most notably the Battle of Brooklyn. In March 1776, George Washington, after being appointed Commander and Chief of the Continental Army, entered New York City and entrenched himself in New York and Brooklyn. In Brooklyn he engaged Nathaniel Greene and Rufus Putman (Israel Putman's cousin) who laid out a series of earth works around Brooklyn Heights that sloped gradually into the plains of Flatlands and Flatbush.

Defense lines were established north and west of the project site in what is now northwestern Prospect Park. A series of low wooded hills, demarcating the northern limit of Flatbush, served as a natural barrier to troop movement, and formed a defensive line manned by troops under Colonials Miles, Parsons,

Sullivan, and Sterling (Field 1869). Here, an army redoubt was created, and, according to a map of the Positions and Movements of the American and British Armies in 1776, Colonel Hand's skirmishes took place on the 23rd and 26th of August 1776 (Field 1869).

Ten thousand British troops, under General Howe, marched around the fortifications, and after camping for five days in Flatbush, continued east on an unguarded route. Unopposed they proceeded to Bedford, where they attacked from behind Washington's defensive line. Washington's men fled in all directions, and many were chased up Flatbush Avenue into the woods which are now Prospect Park. On August 29th, Washington decided to withdraw from Brooklyn and pursue defensive lines elsewhere. After the war, Flatbush remained as farmland for decades.

Adjacent to the project site, Erasmus Hall, the first secondary school chartered by the Regents of the University of the State of New York, was constructed in 1787 as a prestigious private boys' academy and was regarded as the "Eton of Long Island." It took the place of the former public school dating to 1658 (Willensky and White 1988:696).

In 1854 the village, and subsequent city of Brooklyn grew to encompass the townships of Williamsburg and Bushwick. The Flatbush area remained largely rural through most of the nineteenth century until a series of events changed the landscape. The development of Olmstead and Vaux's Prospect Park after the Civil War transformed Flatbush from a colonial village to one of Brooklyn's first suburbs. The Flatbush and Coney Island Railroad, built in 1878, further promoted suburban development which rapidly transformed the countryside. In 1896 Brooklyn expanded again to include the towns of New Lots, Flatbush, New Utrecht, Gravesend, and Flatlands. Two years after this major expansion, Brooklyn - including Flatbush - became an official borough of New York. Flatbush was transformed permanently from its status as a farming community to a typical suburban enclave.

Flatbush was eventually subdivided into a series of city blocks which were not all laid out in the typical grid fashion as adopted in many other sections of New York. Since each of the six towns in Kings County were independent municipalities, each purposely created street systems with different naming schemes that did not align with systems used in adjoining cities or towns. As a result, Flatbush contained some areas with typical rectangular city blocks, while other sections had angular streets creating blocks which were shaped like slanted parallelograms.

A local grocer is credited as the first to embark on large-scale development in Flatbush. Henry Meyer established the Germania Land and Improvement Company in 1892, laid out a grid across 65 acres of land, which was formerly the Vanderveers potato farm, and built rows of single family Queen Anne cottages (Rawson 1995:416). Following his lead, acres of single family row houses and larger Victorians were built along side streets in distinguished developments given names like "Beverly Square," "Vanderveer Park," and "Manhattan Terrace."

Between the 1920s and 1940s, dozens of four to six-story apartment buildings were constructed around the previously established neighborhoods. Cheaper housing led to an influx of immigrants, which further increased the local population.

Site History and Cartographic Overview

Early cartographic sources depict the project area as undeveloped land situated about one block east of Flatbush Avenue, which generally followed the path of an established Indian trail and later served as a colonial thoroughfare. The mid-seventeenth century witnessed the establishment of a colonial village at Flatbush, centered around the first Reformed Dutch Church, built in 1654 at the intersection of Flatbush Avenue and Church Street, one block west of the project site. Clustered around the church, the early Dutch settlement accommodated a small group of wooden houses (WPA 1982: 493). A detailed map of Flatbush created in 1666 shows that there are three buildings on the south side of Church Avenue east of Flatbush Avenue. Their exact location and proximity to the project site is unclear given the lack of a definable scale on the map, but presumably they were at least close enough to the project site to a be potential archaeological concern (Hubbarde 1666).

By the eighteenth century, the number of settlers had grown and farm houses had been built along either side of Flatbush Avenue and Church Lane (a.k.a. East Broadway). For many decades, Flatbush Avenue served as the main route connecting Washington Avenue from the Wallabout Bay to the plantations at Flatlands. Consequently, during the Revolutionary War it served as the "position of 8,000 Hessians under General de Heister" (Field 1869; Figure 4). While no specific war related activities were depicted within the project site, Howe's troop of 10,000 men did camp somewhere in Flatbush (Faden 1877; Field 1869; Figure 4).

Few maps could be found of the late eighteenth century depicting the project site. A 1790 map of Flatbush centered on the village community to the west, but did not extend far enough east to show details of the project site (Gunnison 1908). An 1842 map of Flatbush showed the project site vacant, with most of the residential development centered directly on Flatbush Avenue to the west (Strong 1842). Houses had been built on the north side of East Broadway by that time, across the street from the project site.

By 1844 Bedford Avenue had still not been laid out, and a building had been constructed directly adjacent to the project site within what is now the East Broadway roadbed (U.S. Coast Survey 1844; Figure 5). This was the Town of Flatbush School No. 1, which had been built two years earlier, in 1842, directly northwest of where the current school stands (Dripps 1869; Beers 1873; Figures 6-7). The school was built on land formerly owned by the estate of Mr. Stryker, and was also used for an assembly place, a court house, a voting place, and a recruiting station (Stiles 1884:252; Snyder 1945:137). Apparently, the school was built over a former slave cemetery.

The plot of ground had formerly been a burying place for colored people who had served as slaves in the homes and fields of their Flatbush masters. While excavating for the cellar a large number of bones were brought to the surface all of which were gathered together and reinterred into what is now Holy Cross Cemetery. (Snyder 1945:138)

This may have been a slave cemetery associated with the Stryker family, former landowners within the project site. It was common for Long Island farmers to maintain a small group of slaves to work on the farm.

In 1866 the project site appeared unchanged and Bedford Avenue had not been laid out yet (U.S. Coast Survey 1866). By 1869 Prospect Park had been completed, and the project site had two structures built

directly adjacent to it within what is now the Church Avenue roadbed as later maps more clearly depict (Dripps 1869; Figure 6). One of these was Public School No. 1 discussed above, and the second was a fire house built adjacent to the project site. According to early accounts of the fire house,

In 1865 public interest in the fire company was aroused and a commodious double brick building, with ample room for the old and new engine, a hook and ladder, and hose jumper, was erected. The building adjoined the present schoolhouse No. 90 on Church Avenue [now Beth Rivka] and has only recently been razed to provide for the straightening of the thoroughfare on which it faced. Because the church bell served as the fire alarm and the church sexton was very deaf, a tower had at some time been constructed in the rear of the 'engine house' and equipped with a large bell.

(Gunnison 1908:166)

The 1869 map showed that, as described by Gunnison, Church Avenue was not in its current configuration (Figure 6). Instead it was angled so that the northern border of the project block formed a shallow inverted V. It wasn't until the early 20th century that the road was straightened to form the thoroughfare visible today.

In 1869 Locust Street, now Bedford Avenue, was not yet created (Dripps 1869; Figure 6). However, Stiles stated that in 1865 - four years earlier - four acres of land owned by the Dutch Reformed Church was laid out in city lots, and Locust Street was opened through the property (Stiles 1884:232). He further stated that the property sold quickly, and a number of houses were soon built upon it. Cartographically, this was not evident until after 1869 (Dripps 1869; Beers 1873: Figures 6-7).

The 1873 atlas showed a dwelling belonging to G. W. Jarrett at the south end of the project site on the newly formed Locust Avenue (Beers 1873; Figure 7). The school and the fire house still stood within the footprint of East Broadway directly adjacent to the project site (Figure 7). Although neither of these two structures actually fell within the current project area, the back yards of both would have been within what is now Beth Rivka's playground west of the school (Beers 1873; Figure 7). The westernmost building was labeled as the Washington Engine House Hook and Ladder building, the public firehouse discussed above (Ibid.). The front half of the firehouse stood within what is now the East Broadway roadbed while the back half stood on what is now Lot 50 adjacent to Beth Rivka, out of the project site. However, the back yard of the fire house clearly lay within what is now the playground of Beth Rivka.

In 1878 the frame structure of School No. 1 was removed and replaced by a brick structure built slightly southeast of the first school within the project site and out of the street bed. According to local historian Herbert Gunnison, the new school, which was first Public School No. 1 and later No. 90, was built in 1878 at the intersection of East Broadway and Bedford Avenue and was expanded over the years. It was...

First comprised of an assembly room and six class rooms, only four of which were occupied. In 1886 it became necessary to have more room for the increasing school population, when an addition was built, making in all, eleven rooms and an assembly

room. On February 1902 Balzer Hall¹ was hired by the Board of Education as an annex to No. 90, and there eight classes were accommodated. The school at this time had 17 teachers and about 700 pupils. (Gunnison 1908:34)

In 1890 the newer Public School 1 stood within the project site, as did the house at the southern end of the project site on Locust Avenue. At the western end of the house lot was a one-story framed shed whose function is unknown, but it may have served as a shed or privy since public utilities did not appear to have become available (Robinson 1890; Figure 8). Directly west of the project site the building which served as a fire house was standing, but was labeled "heirs of Susan Canton" (Robinson 1890). It is unclear if it still functioned as a fire house by this time, or had been converted to a private residence. The labeling suggests the latter.

By 1898, Public School No. 1 had an addition built at its south end and had been renamed Public School No. 90. The addition extended onto the house lot over the site of the former dwelling on Locust Avenue, which had been removed. The framed building at the western end of its lot was also razed. No other structures were shown within the project site, although two wood framed buildings stood fronting Church Avenue on Lots 13 and 14 adjacent to the current playground on what is now Lot 50 (Hyde 1898: Figure 9). The 1898 atlas was the first to depict water lines in the street beds, with a 12" line in each Locust Avenue (now Bedford Avenue) and East Broadway (now Church Avenue) (Ibid.; Figure 9). Apparently water and sewer lines were installed in the streets sometime between 1890 and 1898 (Robinson 1890; Hyde 1898; Figures 8-9).

An insurance map of the project site in 1905 showed the layout of the school at that time, and also revealed a double water closet detached and to the west of the school building (Sanborn 1905; Figure 10). The water closet continued to appear on the 1906, 1921, and 1929 atlases as well (Hyde 1906, 1921, 1929; Figure 11), and was removed in 1936 (Permit No. 3628, 1936). The facade of Beth Rivka has minimally changed over the last century, although the building is much larger than its original configuration (Figure 12, 13).

Although attempts were made to determine exactly when public utilities were available to the residents within the project site, no building records or sewer connection dates for any of the structures within or adjacent to it were available for review (Brooklyn Building's Department, Brooklyn, New York; Brooklyn Department of Sewers, Brooklyn, New York).

¹No information on the whereabouts of Balzer Hall could be found. It is assumed to be outside of the project site, since it was not depicted on any cartographic sources as within the project site.

ARCHAEOLOGICAL POTENTIAL

Prehistoric Potential

Prehistoric and contact period settlement patterns documented in the greater New York area, including the terrain around the project site, demonstrates a preference for well-drained slightly elevated ground near fresh water. Landforms displaying these topographic features would have been utilized for resource procurement and processing, short-term encampments, and more permanent settlements which are highly visible archaeologically². While there were no documented fresh water sources in direct proximity to the project site, it is an area of known prehistoric activity.

A review of previously reported prehistoric habitation sites and trails in the Flatbush area has found at least one site, a prehistoric shell midden, not far from the project site. The midden was reported about five blocks to the north in Prospect Park. A Native American trail formerly ran either within or extremely close to the project site and the Prospect Park midden, connecting New York Bay with Jamaica Bay to the south - presumably the source of shellfish. It is quite possible, and even plausible, that Native peoples traversing this trail camped along its route within or adjacent to the project site. Certainly, throughout prehistory, the project site would have been ideal for camping and/or more extensive habitation since it was level land in proximity to both coastal and inland resources. The projectile point encountered during archaeological excavations at Erasmus Hall directly west of the project site, although found within a disturbed context, confirms a Native American presence within proximity to the project site.

Prehistoric archaeological resources in the Metropolitan New York area are generally shallowly-buried, usually within three or four feet of the pre-development surface. Consequently, historic development can often serve to disturb prehistoric site integrity. Some sections of the project site have been extensively disturbed by modern and historic construction. The very activities which would have created a historical archaeological component at the site would have served to obliterate any previously deposited prehistoric resources. These include the building of Public School 1/90 - now Beth Rivka, and water closets with their underground vaults. Any 20th century modernization, e.g. installing subsurface wiring, drainage, and modern pipes, would have caused further damage to the prehistoric surface and thus compromised the integrity of potential prehistoric resources.

Where deep excavations have not occurred, there is the issue of the property's use as a school yard and the disturbance that this would have caused. Years of school children trampling on the surface prior to its macadamization may have further compromised prehistoric potential. The very act of leveling and grading to allow paving may have caused further damage. Therefore, there is only a minimal potential for prehistoric resources to exist within the project site in those areas that have not experienced subsurface disturbance with the construction of the building and/or installation of any buried utilities associated with it and the detached water closet.

²Archaeological visibility is defined as a site's ability to produce buried resources which have retained their integrity, and could address potentially meaningful research issues.

Historic Potential

The archaeological study of historic sites varies depending upon the type of resources anticipated. Privy, cistern, and well shafts which are often filled with contemporary refuse related to the dwellings and their occupants, schools and their pupils and employees, or businesses and their workers and managers, provide important stratigraphic evidence and usually survive all but the deepest post-depositional disturbance and frequently provide the best remains recovered on sites, including animal bone, seeds, glass, metal, stone, ceramics, and sometimes leather, cloth, wood and even paper. By analyzing such artifacts, archaeologists can learn much about the diet, activities, customs and technology of the former occupants, and attempt to combine this data with what the documentary record tells us about their ethnicity, socioeconomic status, gender, environment, etc. Since the first recorded sewer lines were installed throughout the area between 1890 and 1898 (Figure 9), and the earliest detailed real estate maps available show development directly adjacent or within the project site dating to 1844, there was a considerable period of time when these shaft features would have been necessary.

The historic use of the project site is complex and extensive. The project site falls close to the earliest Dutch settlement in Flatbush which centered around the church one block to the west. Early maps dating to the 1660s show several structures in the vicinity of the project site, but their location on the landscape is not directly identified given the lack of a scale and modern reference points (Figure 5). Therefore, the project site may host archaeological remains relating to this early Dutch settlement. Given that the exact location of early dwellings is unknown, the spectrum of potential resources in the project site relating to this period ranges from house and outbuilding/farm foundations, to yard scatter and shaft features which functioned as a necessary part of early colonial life (i.e., privies, cisterns, and wells).

At some point during its history, at least part of the site may have been employed as a slave burial ground. The 1842 excavations for School No. 1, which stood in the Church Avenue roadbed directly northwest of Beth Rivka School, encountered skeletal material from these interments while excavating a basement. Since it is highly possible that the burial grounds extended into the current project site, wherever modern disturbance has not impacted the landscape, the project site is considered potentially sensitive for slave burials.

What was formerly the back yard of Public School No. 1 falls within the side yard of Beth Rivka, this section of the project site is potentially sensitive for several different types of resources. Since Public School No. 1 was built in 1842 long before public utilities were available in this section of Flatbush, the back yard of the school is potentially sensitive for associated privies, cisterns, and/or wells which serviced the school until it was razed in 1878. Furthermore, the former playground which may also have been behind the school is considered sensitive for archaeological resources. Research at this type of site could be directed toward noting prevailing educational trends, resources available to pupils, and the effects of community economics. Deposition patterns could address site layouts including the locations of privies, wells, and play areas.

Likewise, there is the possibility that shaft features associated with the ca.1865 fire house which were once located in its backyard, now fall within the project site. By 1890 the firehouse building

was probably converted to a private residence as it was under the ownership of the heirs of Susan Canton (Robinson 1890). The building was razed sometime in the early twentieth century between 1898 and 1908. Presumably since sewer and water lines were available in the 1890s, shaft features which may be present west of the Beth Rivka school within the project site would date to the period of occupation between 1865 and the 1890s.

After the original School No. 1 just north of the project site was dismantled in 1878, the current school building was constructed on the project site. Although maps and atlases from the late nineteenth century do not depict privies or water closets on the property, they were certainly in use since public sewer and water was not available until sometime between 1890 and 1898 (Robinson 1890; Hyde 1898). Therefore, the yard areas surrounding the extant school are sensitive for privies, wells, and cisterns associated with the school dating between 1878 and ca.1898.

When Public School 1/90/Beth Rivka was built in 1878, the land directly surrounding it functioned as a play area for school children, except where privies and/or water closets were established. As discussed above, current research into the archaeological potential of playgrounds indicates that tremendous amounts of information on the daily lives of school children lies buried within them. Archaeological excavations completed at the adjacent Erasmus Hall demonstrated...

The presence of well-preserved and extensive sub-surface archaeological remains on the site. Preliminary review [of artifacts] indicates that they include materials from all phases of the school's history.

(Bankoff and Winter 1987:17)

The current project site has the potential to yield similar archaeological resources.

In addition, a 1905 map clearly shows a double water closet, probably each serving a different gender, in the western side yard of the school - now the playground of Beth Rivka (Figure 10). The water closet was portrayed on maps as late as 1929, and was removed in 1936. The archaeological potential of this early twentieth water closet is debatable. In 1887 New York State passed "An Act in relation to Health and Decency in Public Schools (Chapter 558, Laws of 1887), which dictated where and how water closets or privies must be constructed at schools, and requiring that they be kept clean. They also required that owners take direct measures to prevent improper substances from entering them to prevent accumulation (Laws of 1896:109-110). Of course, this provision was frequently neglected.

Most likely, the ca.1905 water closets on the project site were connected to the public sewer and water lines which had been installed in Church Avenue between 1890 and 1898 which would have allowed for flush toilets, as was preferable. In fact, in 1936 when the water closet was removed, provisions were made for seal the plumbing connections gas tight, further supporting the argument that these were simply outdoor flush-toilet lavatories (Permit 3628, 1936). However, a more detailed investigation of Brooklyn President and Superintendent reports for the years between 1878 and 1905, which provide specific sanitary reports for individual schools, would help to determine the archaeological potential of this feature and if prior to the availability of sewers that privies were utilized. Since the exact nature of the water closets needs further documentary study, they are considered potentially sensitive until proven otherwise.

To the south of the school building, a house belonging to G. W. Jarrett first appeared on maps ca. 1873, and was razed sometime between 1890 and 1898. At the western end of the former house lot stood a small unlabeled wood framed structure. Somewhere on the lot there was probably a privy and well since public utilities were not available until sometime between 1890 and 1898. Therefore, the south end of the project site is sensitive for these types of features.

In summary, the western side yard of Beth Rivka school is potentially sensitive for the following resources (Figure 14):

- Early Dutch homelot/farmstead features
- Slave burials
- Privies, cisterns, wells ca. 1842-1878 Public School No. 1
- School yard 1842-1878 Public School No. 1
- Privies, cisterns, wells ca. 1865-1890 Washington Engine & Hook and Ladder House
- Privies, cisterns, wells ca. 1878-1898 Public School No. 90/Beth Rivka
- ca. 1905-1936 water closet Public School No. 90/Beth Rivka
- School yard 1878-1960s Public School No. 90/Beth Rivka.

The eastern side yard of Beth Rivka is potentially sensitive for the following resources (Figure 14):

- Early Dutch homelot/farmstead features
- Slave burials
- Privies, cisterns, wells ca. 1878-1898 Public School No. 90/Beth Rivka
- School yard 1878-1960s Public School No. 90/Beth Rivka.

And finally, the southern end of the project site is sensitive for the following (Figure 14):

- Privies, cisterns, wells ca. 1873-ca. 1890 G. W. Jarrett House

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

The Stage 1A documentary research for the Beth Rivka project site found that it has only a minimal sensitive for prehistoric archaeological resources, and a high potential for a variety of historic archaeological resources.

Prehistoric Resources

A review of previously reported prehistoric habitation sites and trails in the Flatbush area has found at least one site, a prehistoric shell midden, about five blocks to the north in Prospect Park. Furthermore, a Native American trail formerly ran either within or extremely close to the project site. It is quite possible, and even plausible, that Native peoples traversing this trail camped along its route within or adjacent to the project site. While the projectile point encountered during archaeological excavations at Erasmus Hall directly west of the project site confirms a Native American presence nearby, extensive historic disturbance to much of the project site has probably compromised potential site integrity.

Some sections of the project site have been extensively disturbed by modern and historic construction and therefore lack any prehistoric potential. Further disturbance to fragile prehistoric resources may have resulted from years of school children treading on the surface prior to its macadamization. The very act of leveling and grading for paving may have caused further damage. Therefore, there is only a minimal potential for prehistoric resources to exist within the project site in those areas that have not experienced subsurface disturbance with the construction of the building and/or installation of any buried utilities associated with it and the detached water closet which stood on the property in the early twentieth century.

Historic Resources

The historic use of the project site is complex and extensive. The project site falls close to the earliest Dutch settlement in Flatbush (ca.1650s) which centered around the church one block to the west, and therefore it may host remnants of early Dutch homelots/farmsteads. At some point during its history, at least part of the site may have been employed as a slave burial ground. The 1842 excavations for School No. 1, which stood in the Church Avenue roadbed directly northwest of Beth Rivka School, encountered skeletal material from these interments while excavating a basement. Since the cemetery's boundaries are unknown, it may extend into the project site.

By 1842 property west of Beth Rivka within the project site was used as a back yard for a school (1842-1878), and by 1865 it was the back yard of a fire house (1865-1890). Feature from both these historic structures may be located within the project site, including deeply buried shafts from wells, cisterns, and privies. The playground for this early school may also lie within the project site, and is considered a potentially important archaeological resource.

Land around Beth Rivka surely hosted similar shaft features dating to its early use, before public utilities became available (1878-1890s). By 1905 a double water closet was built in the western yard, and this stood through at least 1929. While its research potential is unclear, it is considered a potential archaeological resource.

To the south of the school building, a house belonging to G. W. Jarrett first appeared on maps ca. 1873, and was razed sometime between 1890 and 1898. Somewhere on the lot there was probably a privy and well since public utilities were not available until sometime between 1890 and 1898. Therefore, the south end of the project site is sensitive for these types of features.

In summary, the western side yard of Beth Rivka school is potentially sensitive for the following resources (Figure 14):

- Early Dutch homelot/farmstead features
- Slave burials
- Privies, cisterns, wells ca. 1842-1878 Public School No. 1
- School yard 1842-1878 Public School No. 1
- Privies, cisterns, wells ca. 1865-1890 Washington Engine & Hook and Ladder House
- Privies, cisterns, wells ca. 1878-1898 Public School No. 90/Beth Rivka
- ca. 1905-1936 water closet Public School No. 90/Beth Rivka
- School yard 1878-1960s Public School No. 90/Beth Rivka.

The eastern side yard of Beth Rivka is potentially sensitive for the following resources (Figure 14):

- Early Dutch homelot/farmstead features
- Slave burials
- Privies, cisterns, wells ca. 1878-1898 Public School No. 90/Beth Rivka
- School yard 1878-1960s Public School No. 90/Beth Rivka.

And finally, the southern end of the project site is sensitive for the following (Figure 14):

- Privies, cisterns, wells ca. 1873-ca. 1890 G. W. Jarrett House

RECOMMENDATIONS

The Stage 1A documentary research established minimal prehistoric and extensive historic archaeological resource potential for the project site. Stage 1B investigations are clearly warranted prior to any subsurface disturbance on the property. This should include completing topic-intensive research on the slave cemetery, the fire house, and Public School No. 1 (1842-1878), and establishing the archaeological potential of the ca. 1905 water closet via a review of annual Borough President report, laws pertaining to schools in Brooklyn, and pertinent sanitation reports. It may be that documentation on emptying the water closet will establish a lack of archaeological potential.

In conjunction with the topic intensive research, Stage 1B field investigations would be necessary. This would entail removing the macadam around the existing building, and conducting systematic

subsurface investigations in the form of shovel test pits and possibly machine-aided excavation. A formal research and testing plan would be established in conjunction with SHPO prior to the commencement of this stage of research.

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FIGURE 1

Project Site Location
U.S.G.S. Brooklyn, N.Y. Quadrangle 1979

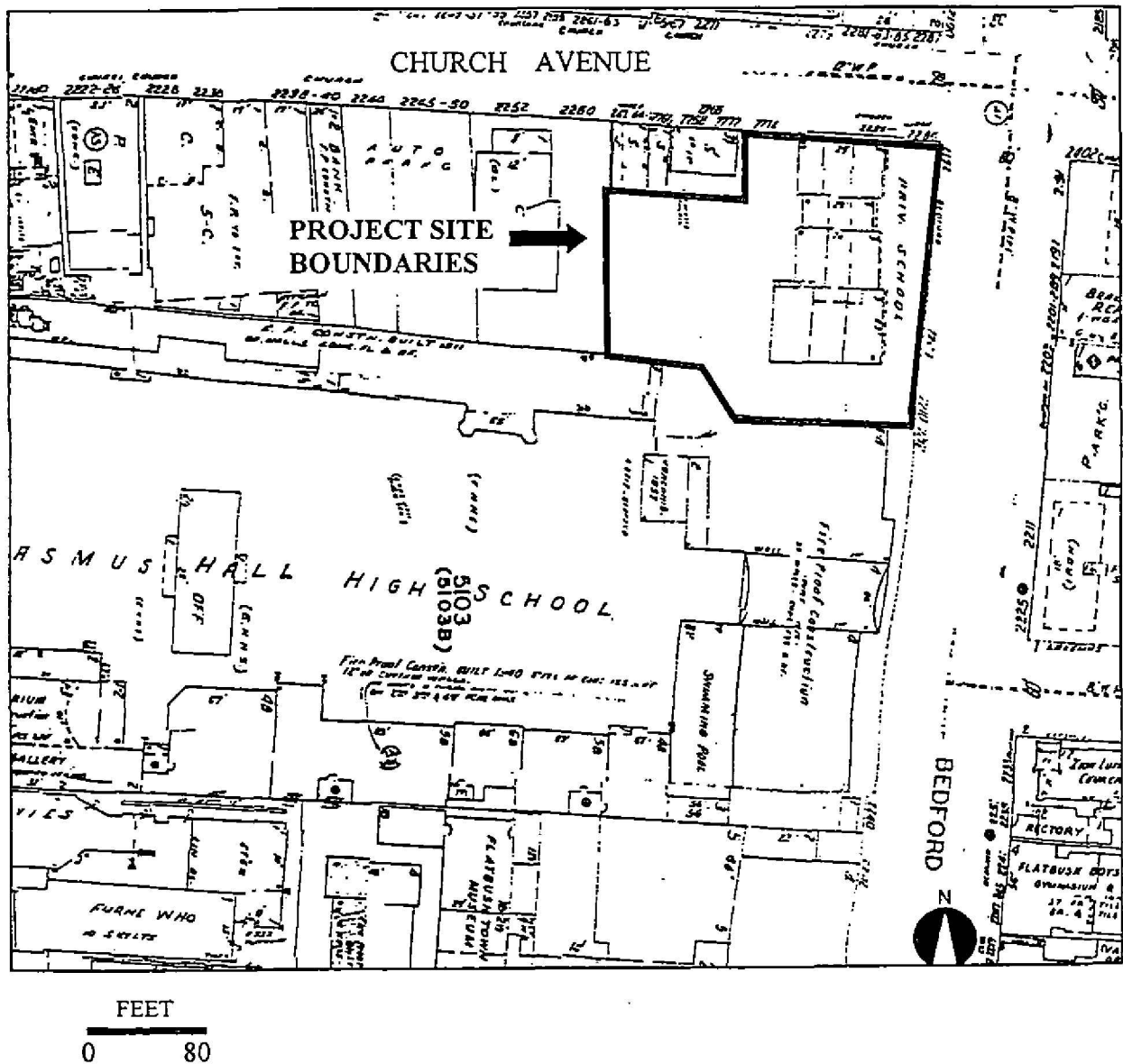


FIGURE 2

Project Site Boundaries
Base Map: *The Sanborn Building and Property Atlas of Brooklyn, NY*
1999

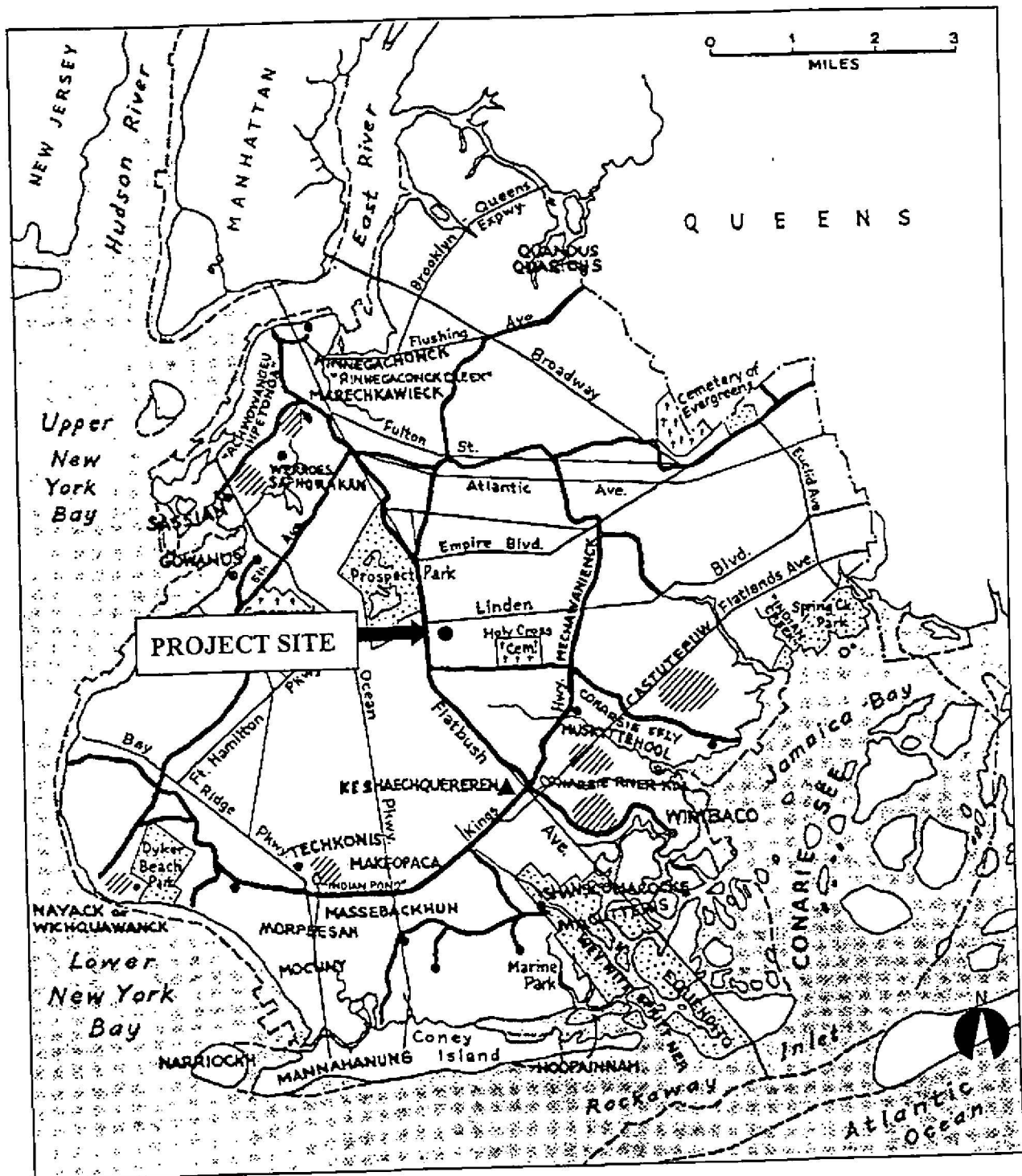


FIGURE 3

Native American Place Names in New York City
Grumet, 1981

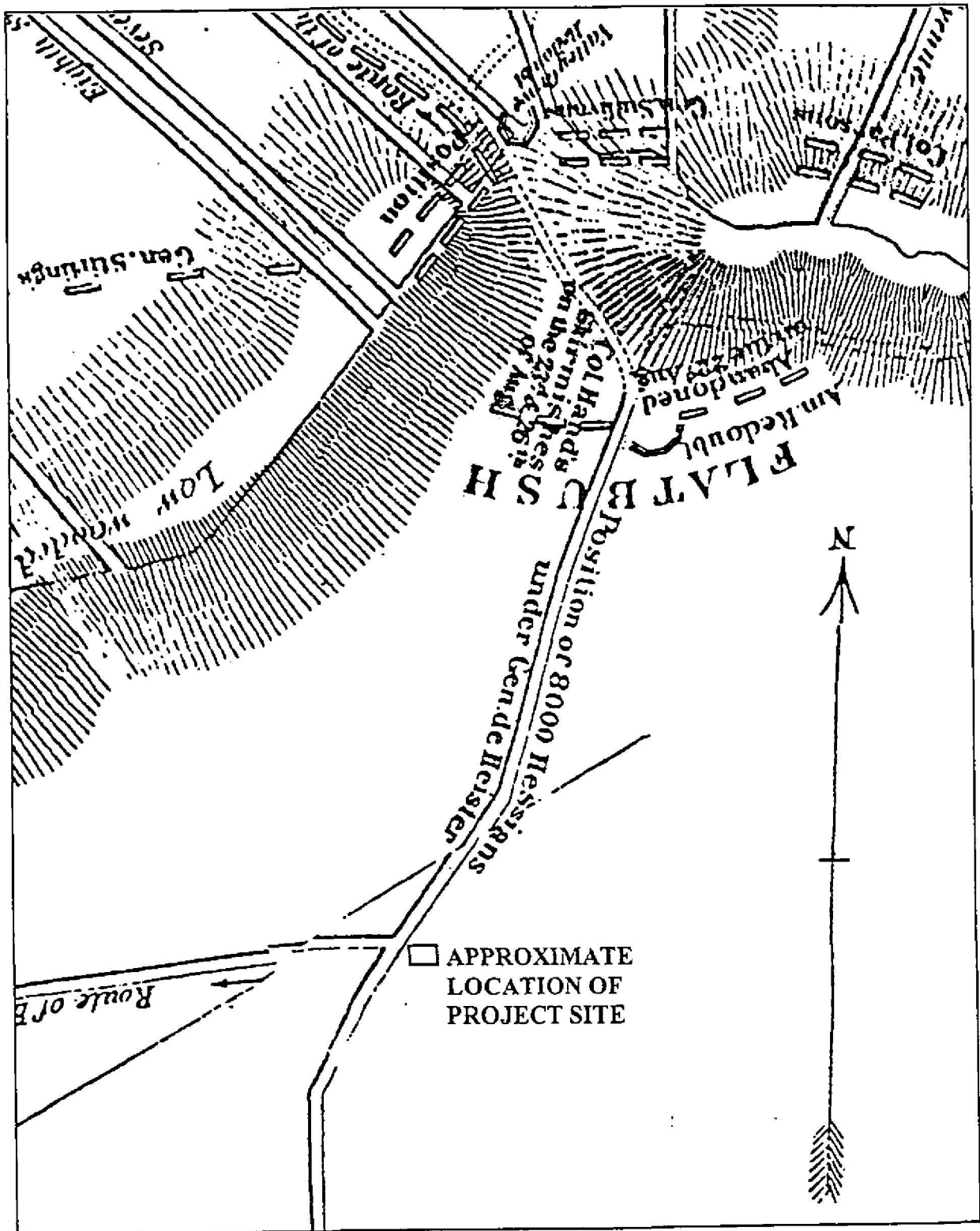


FIGURE 4

*Plan of the Positions and Movements of the British and American Army
on the 26th and 27th of August, 1776. Field, 1869
No Scale*

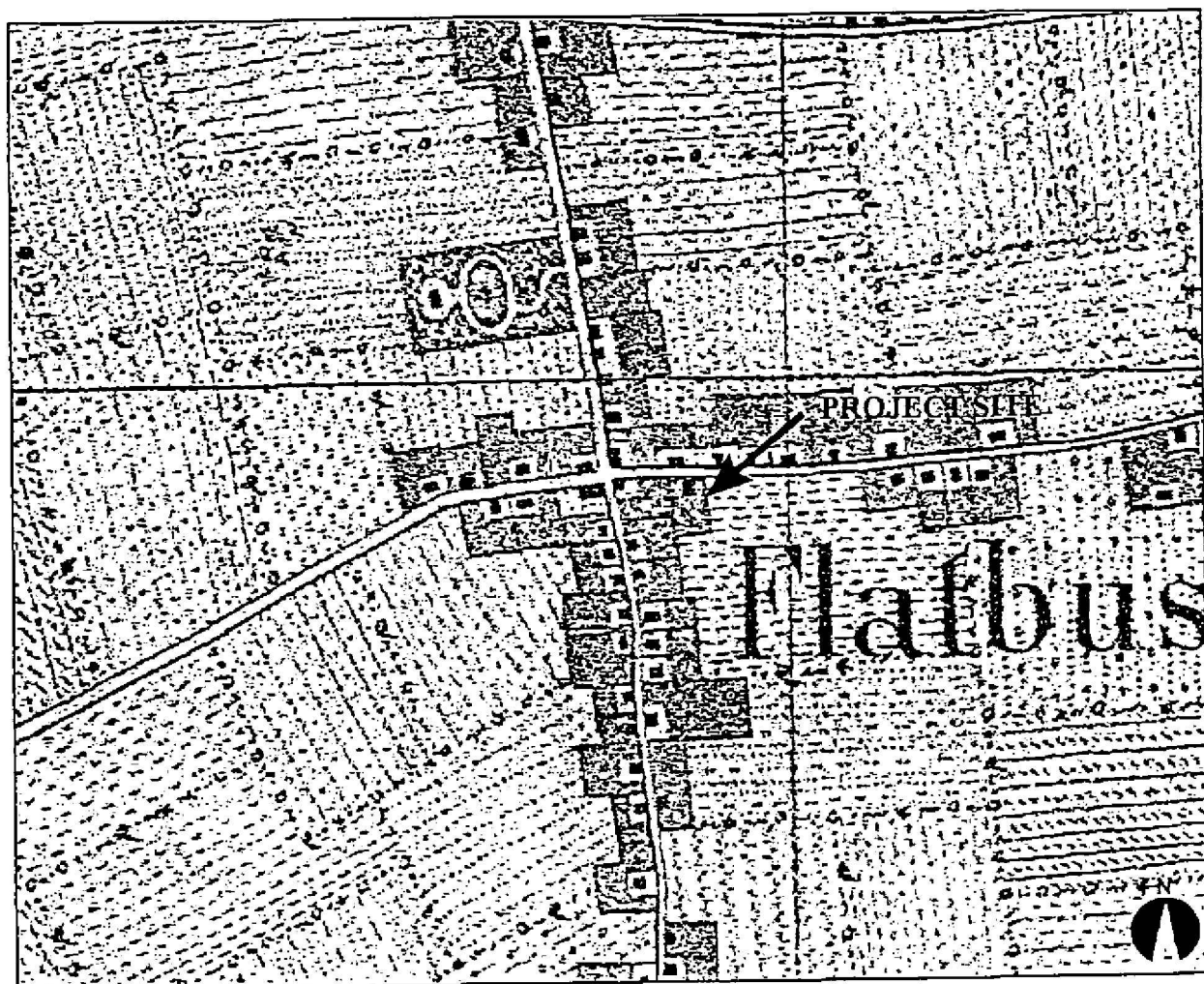
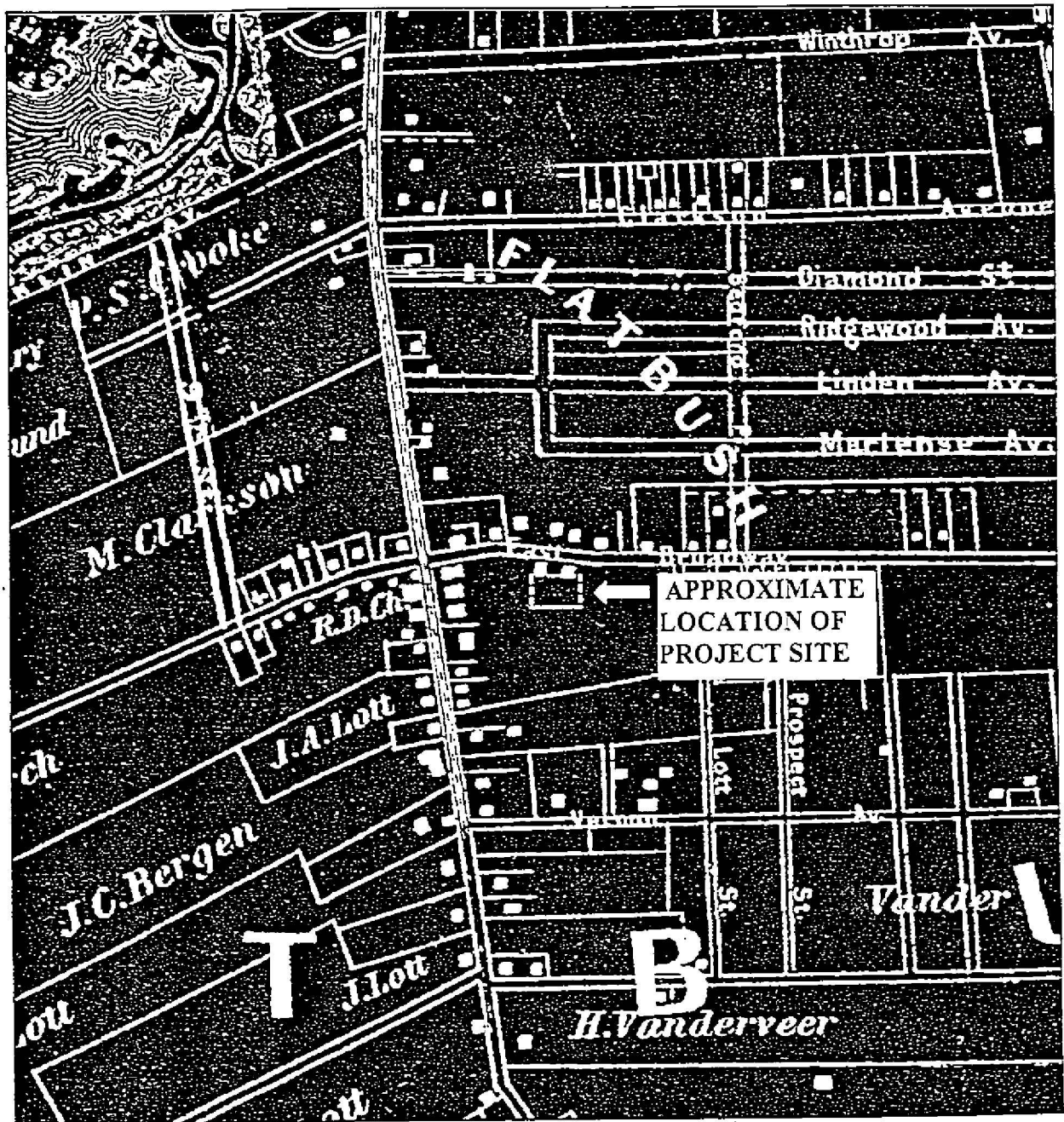


FIGURE 5

Map of New York Bay and Harbor and the Environs
U.S. Coast Survey, 1844
No Scale



FEET
0 360

FIGURE 6

Map of Brooklyn and Vicinity
Dripps, 1869

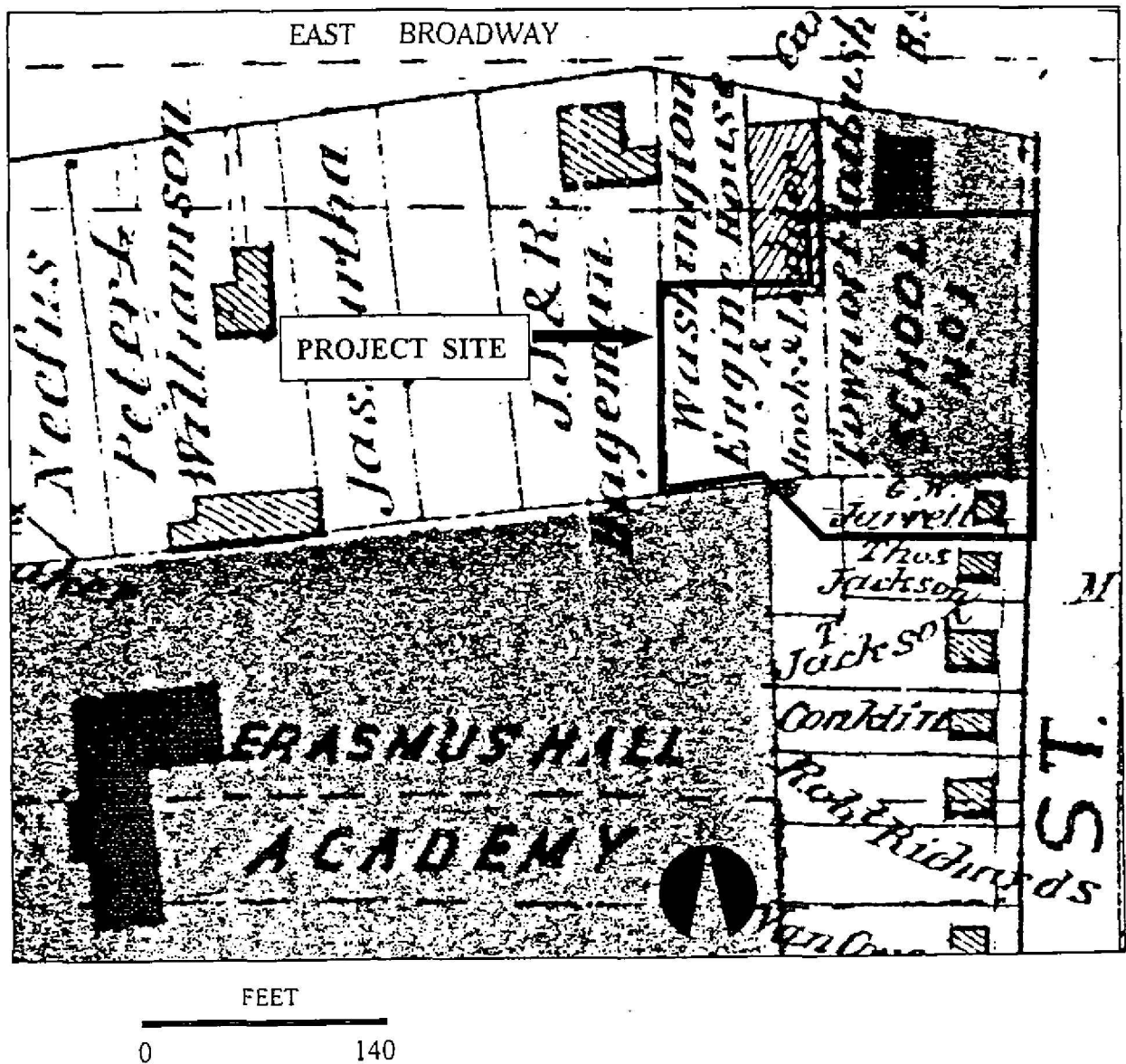


FIGURE 7

Atlas of Long Island, New York. Plate 25.
Beers, 1873

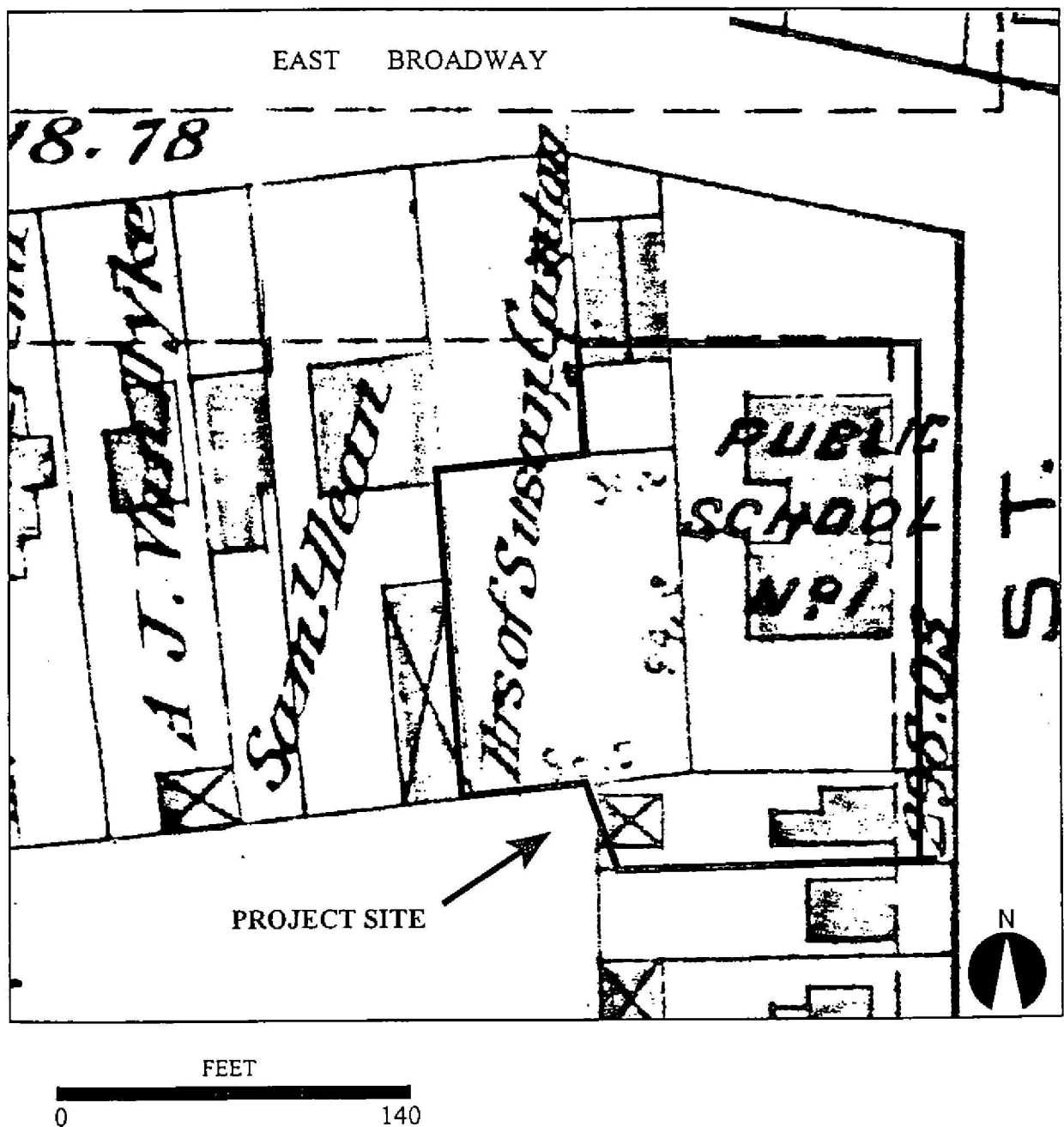


FIGURE 8

Atlas of Kings County. Plate 2.
Robinson, 1890

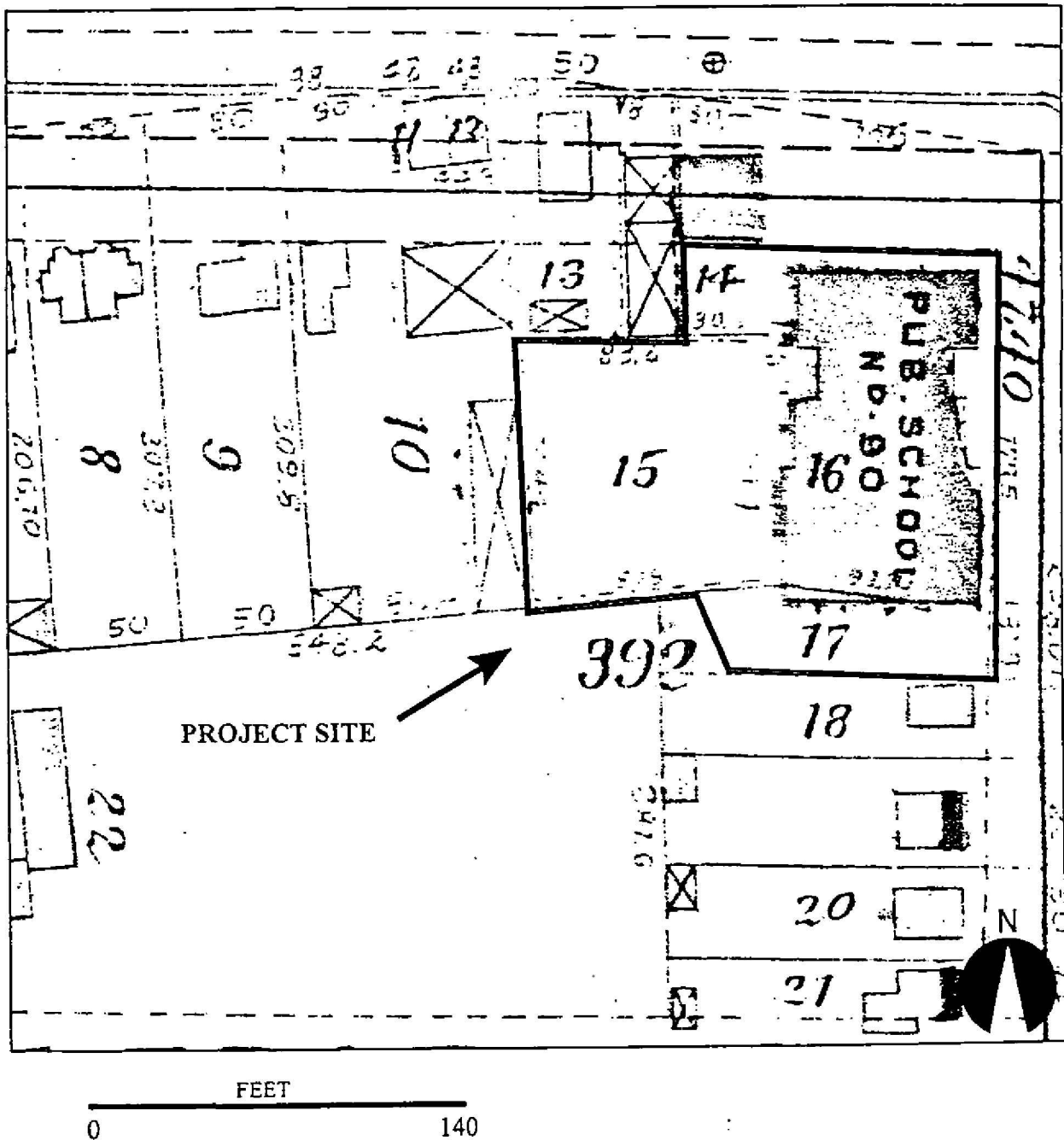


FIGURE 9

Atlas of the Borough of Brooklyn. Volume 2, Plate 7
Hyde, 1898

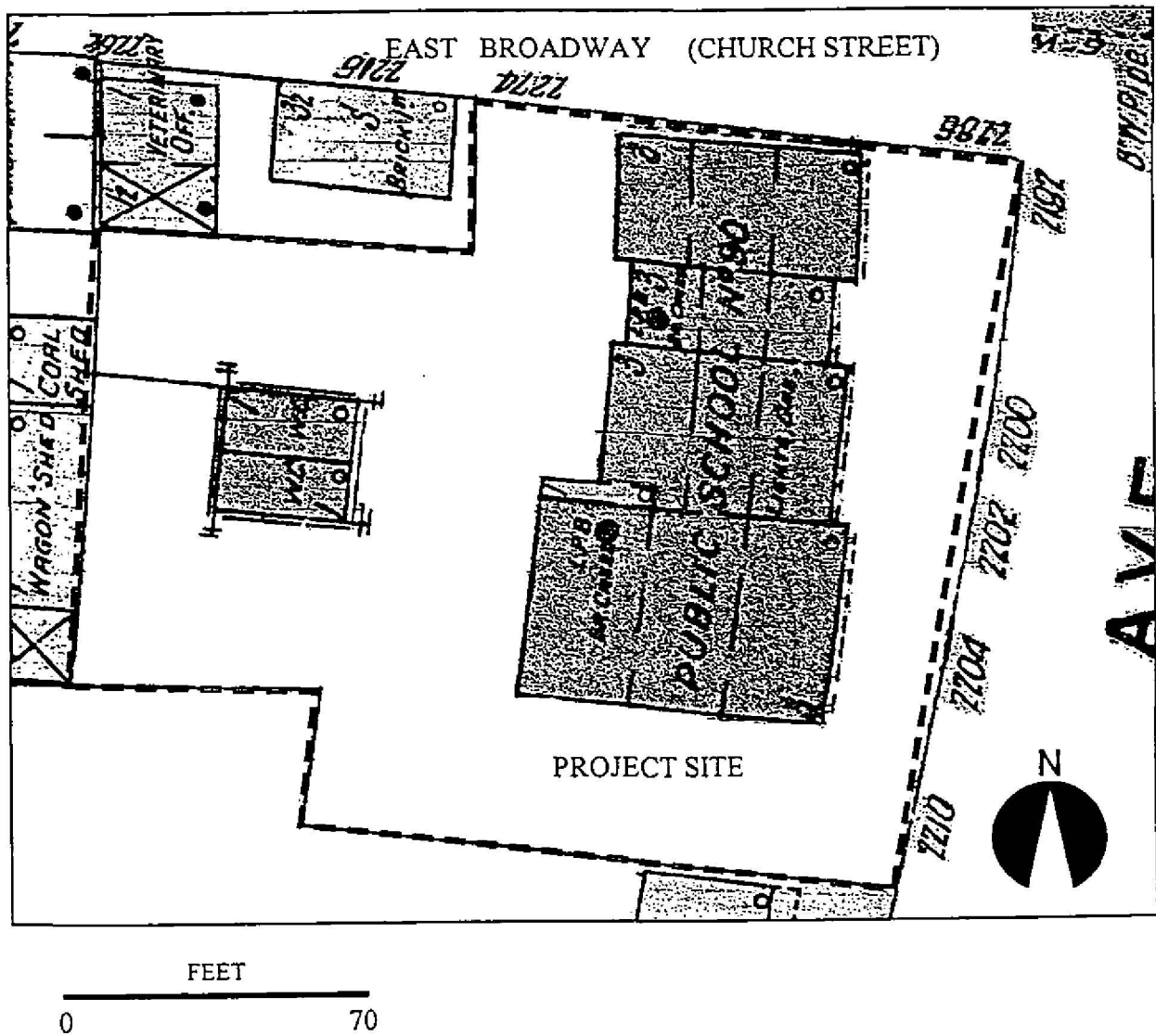


FIGURE 10

Insurance Maps of Brooklyn, New York.
Sanborn, 1905

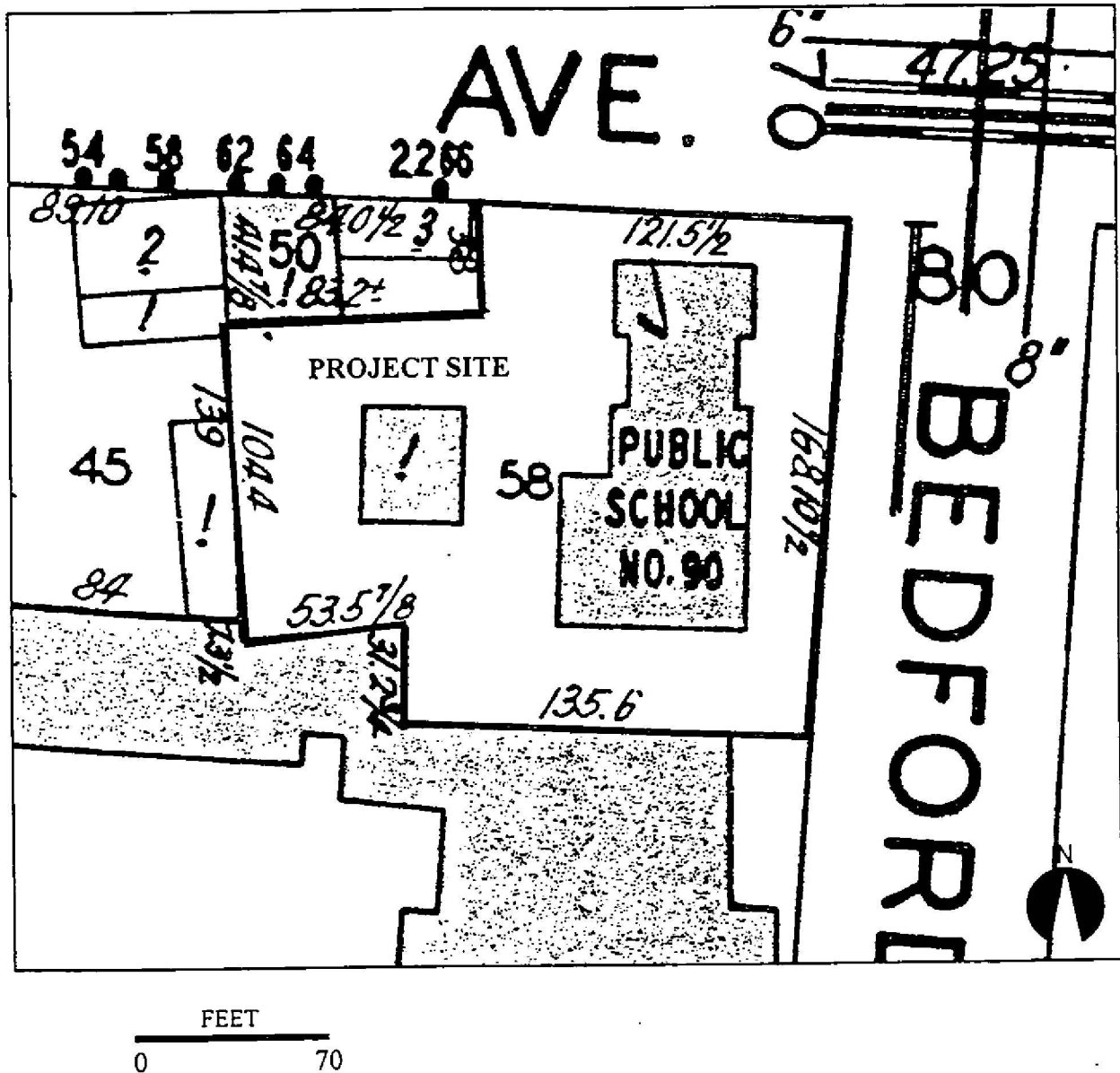


FIGURE 11

Atlas of the Borough of Brooklyn
Hyde, 1929

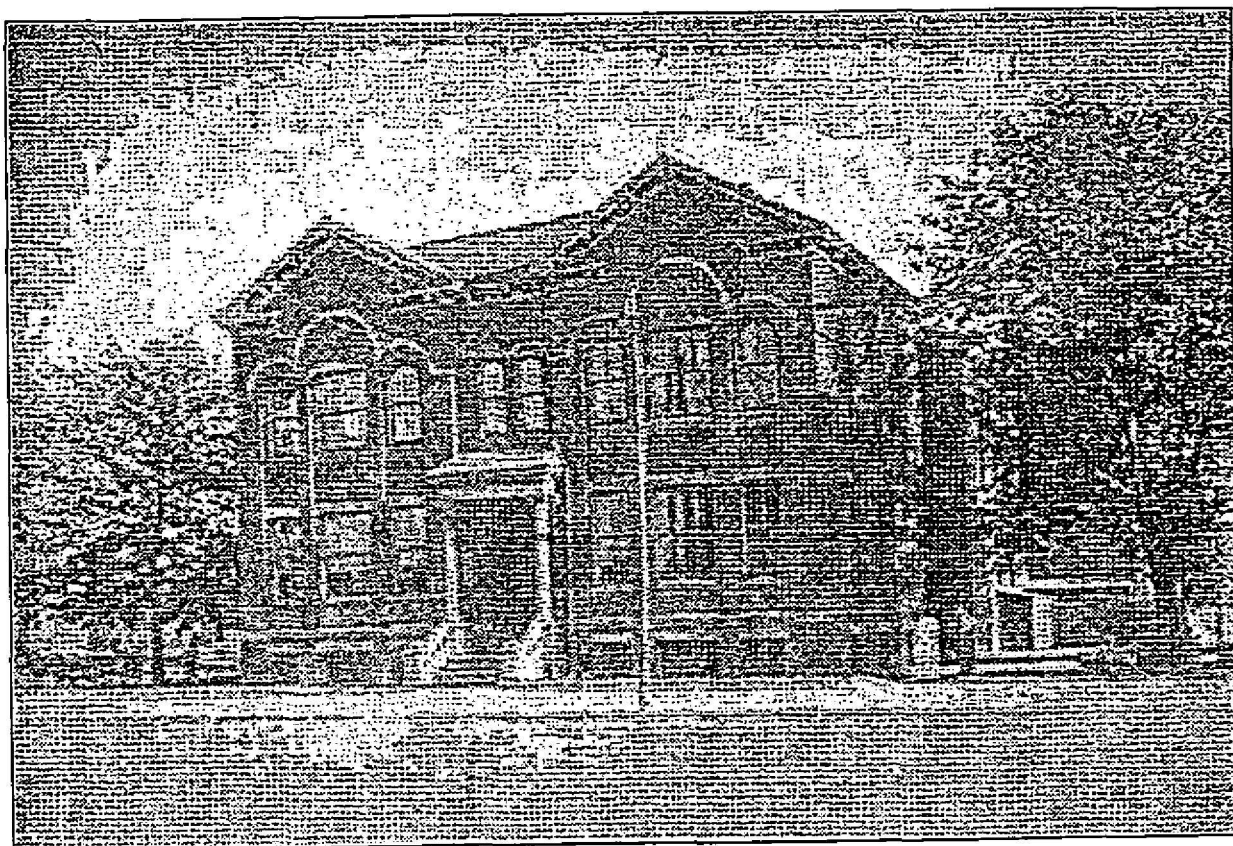


FIGURE 12

Beth Rivka School facing southeast from Church Street
Playground area to right
ca.1900

Repository: Brooklyn Historical Society

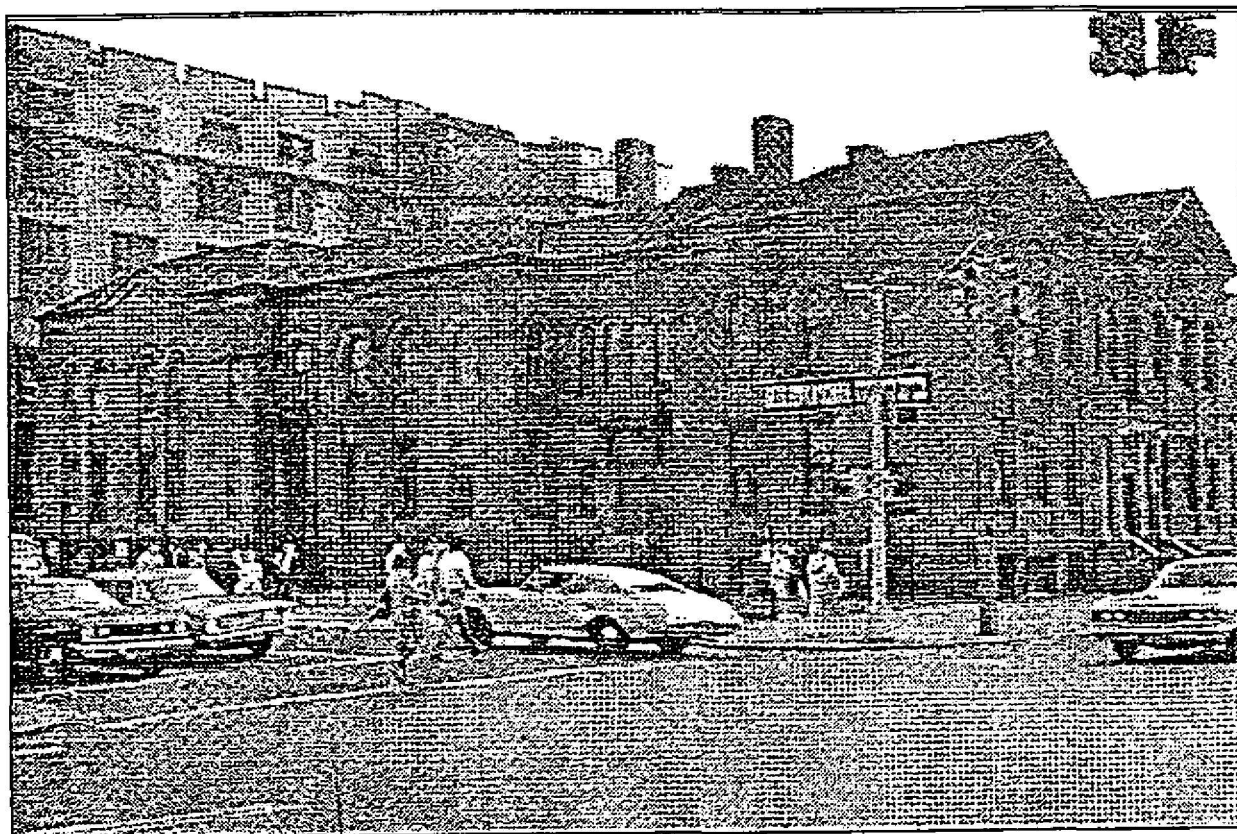
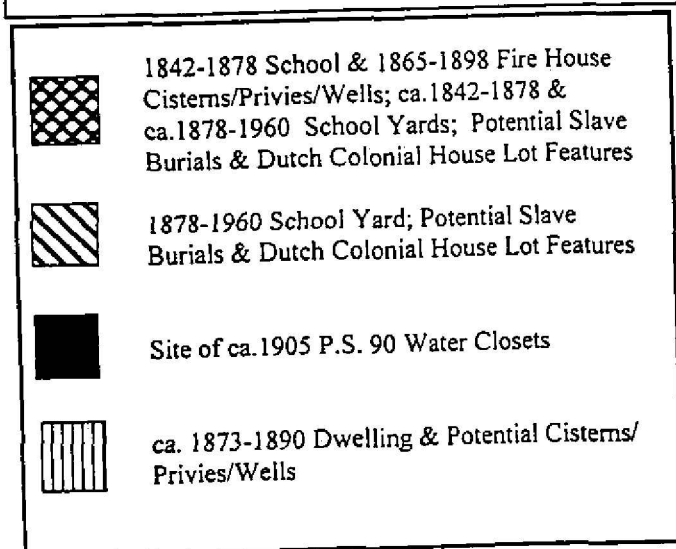


FIGURE 13

Beth Rivka School facing southwest from intersection of
Church Street and Bedford Avenue
ca. 1975

Repository: Brooklyn Historical Society



Historic Archaeological Sensitivity

APPENDIX

Site File Search

New York State Museum and

New York State Office of Parks, Recreation and Historic Preservation

Project Name: SCA/Beth Rivka

HAA Project Number 1542

Client

Willing:

Town Brooklyn

Country

• 900.001.1000-85

NEW YORK STATE MUSEUM

conducted by:

Kim Creswell

1644

 $4.13 \cdot 10^3$

Site Sensitivity requested

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// Site5
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[illegible]

Brooklyn Quad

