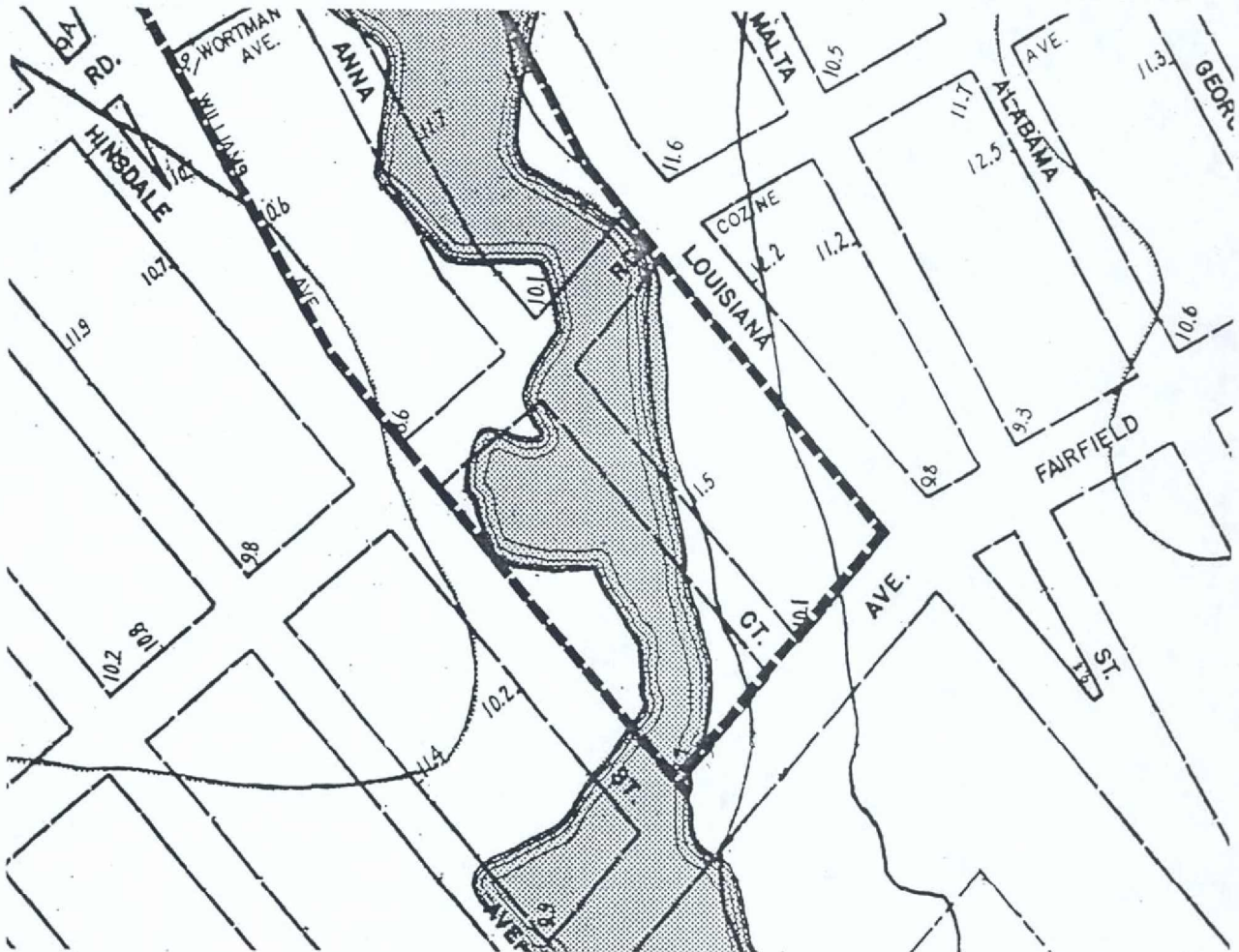


1999 USF 1107K  
Geismar

**Jamaica CSO - Fresh Creek North Project (Block 8158, Lots 40 and 150),  
Brooklyn, New York, Archaeological Assessment**

CEQR No. 94 DEP 109K



1905-1910

Prepared for O'Brien & Gere Engineers, Inc.

Prepared by Joan H. Geismar, Ph.D.

May 1994

165

RECEIVED  
ENVIRONMENTAL DIVISION

AUG 19 1994

LANDMARKS PRESERVATION  
COMMISSION

**Jamaica CSO - Fresh Creek North Project (Block 8158, Lots 40 and 150),  
Brooklyn, New York, Archaeological Assessment**

CEQR No. 94-DEP 109K

Prepared for O'Brien & Gere Engineers, Inc.

Prepared by Joan H. Geismar, Ph.D.

May 1994

## ABSTRACT

The Jamaica CSO (Combined Sewer Overflow) - Fresh Creek North Project in the Flatlands/ New Lots (East New York) Section of Brooklyn (Block 8158 Lots 40 and 150) is a subterranean combined sewer overflow facility that will be built on a site that, prior to filling in 1952, was mainly covered by a mill pond created from a tidal creek in the late seventeenth century, a meandering creek, and a marsh. Based on historical documentation and soil borings from immediately adjacent areas, it appears that there would be no impact on prehistoric archaeological sites despite the identified potential sensitivity of the area. Moreover, there are no documented historical concerns although a grist mill and homestead farm complex dating from the late-seventeenth century were erected just to the west and south. While the exact location of the mill dam is a question, deeds and maps suggest it was situated south of the project site. Although no field work is recommended at this time, site-specific soil boring data should be reviewed, and it is possible that soil borings addressing archaeological concerns may be called for.

## TABLE OF CONTENTS

ABSTRACT	
INTRODUCTORY SUMMARY	1
PREHISTORIC CONSIDERATIONS	7
HISTORICAL CONSIDERATIONS	11
Land Ownership History to 1906	13
TWENTIETH CENTURY DEVELOPMENT OF THE PROJECT SITE	24
SOIL BORINGS	24
CONCLUSIONS AND RECOMMENDATIONS	25
BIBLIOGRAPHY	26
APPENDICES	
A. DGS Soil Boring Locations and Logs 1969	31
B. DGS Soil Boring Locations and Logs 1984	34
FIGURES	
1. Project Location	2
2. Site Location	3
3. View across site from Flatlands Ave.	4
4. View from intersection of Glenwood and Williams Aves.	4
5. View south on Williams Ave. from P.S. 260I (Breukelen School)	4
6. Looking east toward possible ventilator site	6
7. The Fresh Creek Basin from vacant lot on Flatlands Ave.	6
8. Project Site in Relation to Indian Trails and Sites	9
9. U.S.G.S. Survey Map 1908, detail	10
10. Map of the New Lots	12
11. Map of Town of Flatbush 1797	14
12. The Battle of Long Island (1776)	15
13. Walling 1860, detail	18
14. Beers et al 1873, detail	19
15. Robinson 1886, detail	20
16. Rock Line Map 1935 (Surveyed 1905-1910), detail	22
17. Hyde 1929, detail	23

Graphics: Amy Geller    Photos: Joan H. Geismar



## INTRODUCTORY SUMMARY

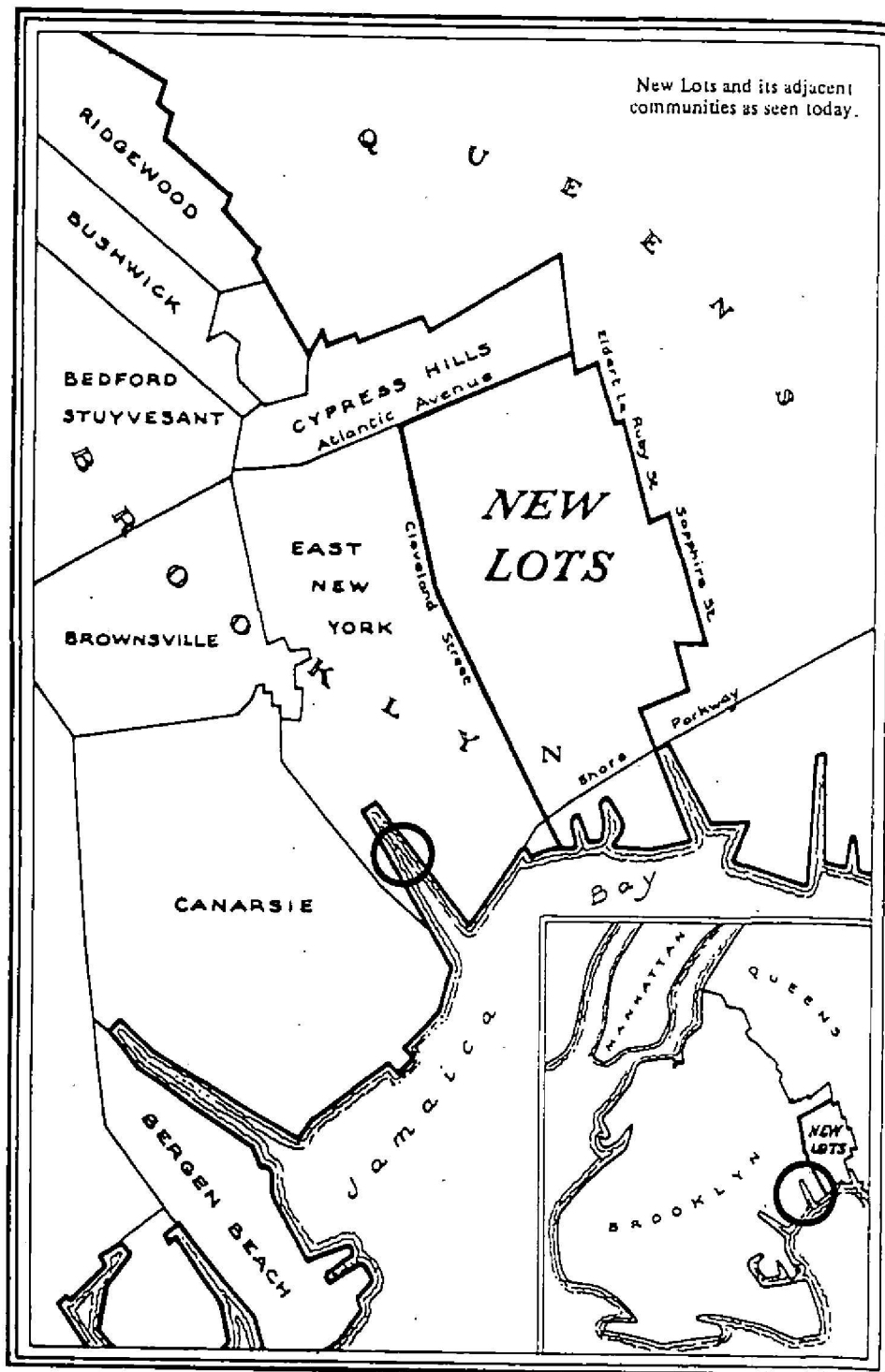
This report presents documentation of the Jamaica CSO Project - Fresh Creek North Site, a subterranean Combined Sewer Overflow (CSO) facility that will be situated on approximately 13.5 acres, designated Block 8158, Lots 40 and 150, in the Flatlands/New Lots (East New York) section of Brooklyn (Figures 1 and 2). The research was undertaken to fulfill part of a city environmental review (CEQR No. 94-DEP 109K), and its aim was to determine the site's history and archaeological potential.

The project site comprises a park bounded east by Louisiana Avenue, south by Flatlands Avenue, west by Williams Avenue (formerly Hindsdale Avenue or 110th Street), and north by the school yard of P.S. 260, also known as the Breukelen School. To the west are the three- to seven-story apartment buildings of the Breukelen Housing Project, a New York City Housing Authority property; to the east and south are scattered commercial properties, including a Pathmark shopping center situated on the south side of Flatlands Avenue (Figures 3-6). The area immediately south of the intersection of Flatlands and Williams Avenues, the proposed location of an air exhaust site for the CSO, was also considered (see Figure 2).

The New York State Museum has identified the project area as being potentially sensitive for prehistoric sites, and two were documented in the vicinity of Fresh Creek in the 1920s. Their exact location and site types are questions. Moreover, past site conditions--a meandering tidal creek set in a marsh prior to the creation of a mill pond in the late seventeenth century--suggest they would not have been located directly on the project site. However, this assessment requires site-specific subsurface data for verification. 7 ✓

The site's historical record indicates it was originally part of the old Dutch town of Flatbush, but by the mid-nineteenth century the project area was located both in the newly incorporated town of New Lots and in the older town of Flatlands. In 1886, New Lots was annexed to the city of Brooklyn, becoming its 26th Ward, while Flatlands was designated Ward 32 in 1896. With incorporation of the five boroughs in 1898, the project area became part of the East New York Section of the Borough of Brooklyn.

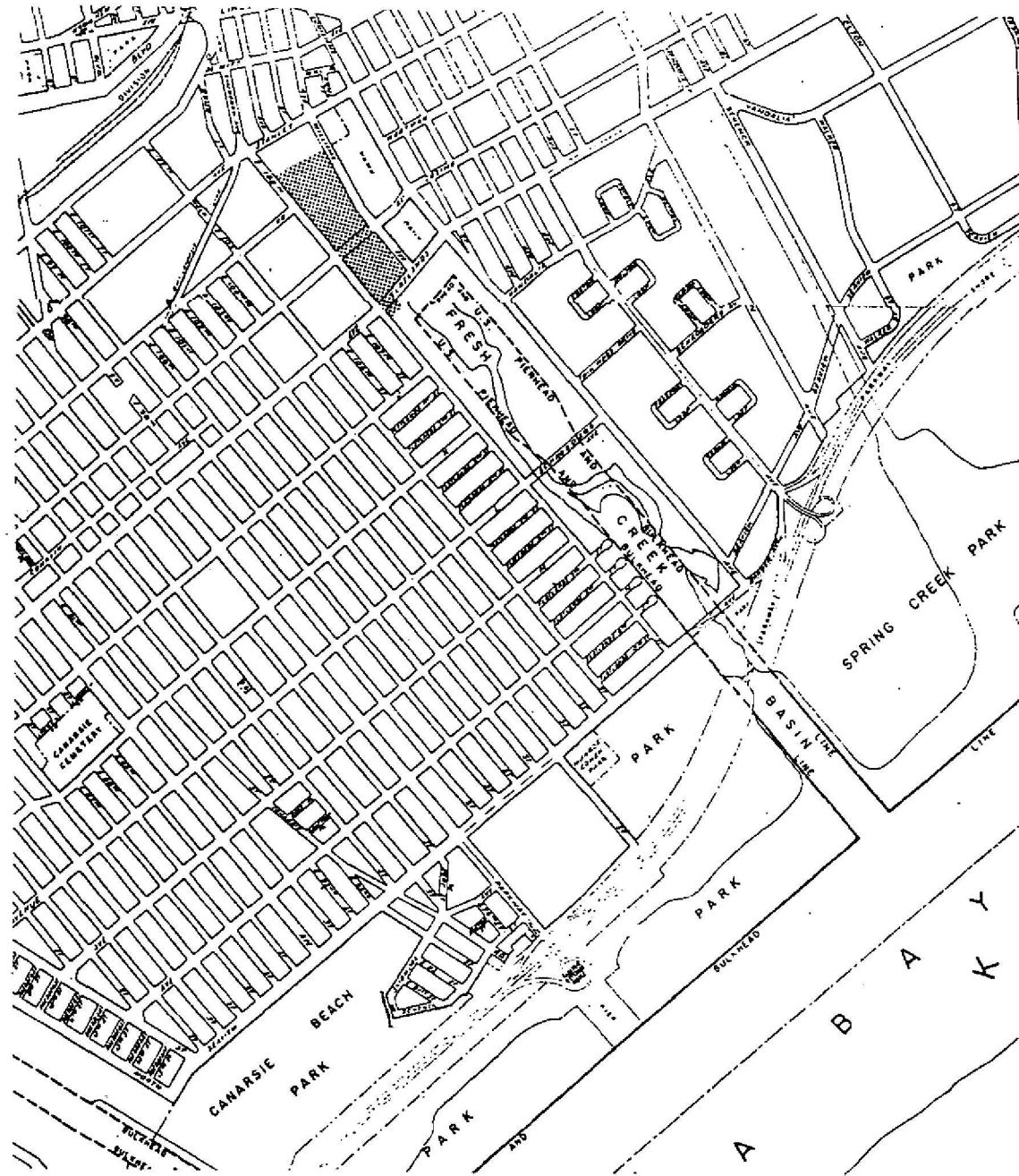
Local land patents date to the 1670s when English rule was becoming established. Until about forty-five years ago, the project site was covered by vestiges of the



approximate project-site location

no scale





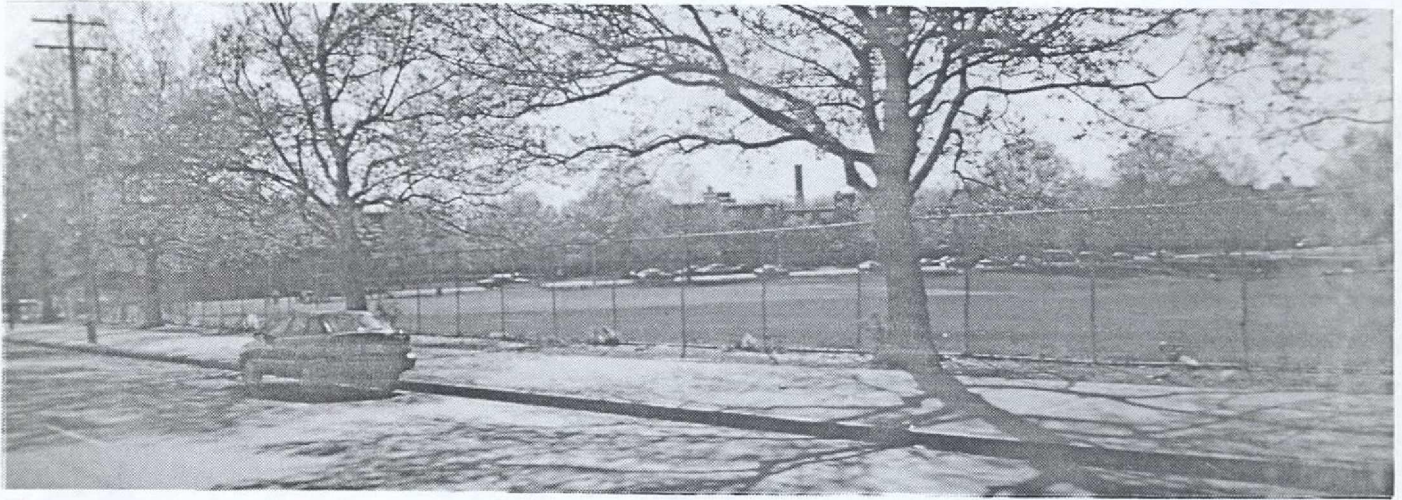
Dept. of City Planning 1982

 project site

0 1000  
ft.







3 View northwest across site from Flatlands Ave. near Louisiana Ave. The Breukelen Houses situated on Williams Ave. are in the background. Note baseball diamond in the park to the left and the generally flat terrain of the filled site. (photo: 5/2/94)



4 View northeast from intersection of Glenwood and Williams Aves. To the rear are some of the low commercial buildings that border the site to the east on Louisiana Ave. (photo: 5/2/94)



5 View south on Williams Ave. from P.S. 260 (the Breukelen School). Three-story components of the Breukelen Houses are to the right beyond the project site on the west side of the street. (photo: 5/2/94)



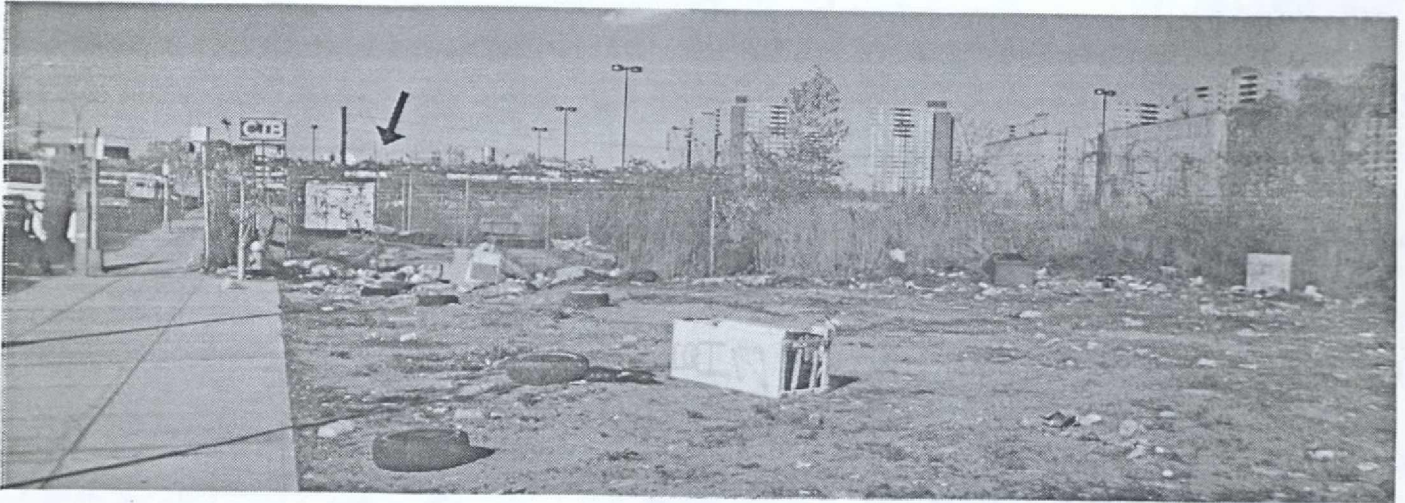
creek, adjacent marshland, and the mill pond. Fresh Creek, a tidal waterway cited as a land boundary in deeds dating into the twentieth century, still exists as the Fresh Creek Basin located south of Flatlands Avenue (Figure 7). With the exception of the mill pond, which was not completely filled until the early 1950s, the project site has remained undeveloped throughout its recorded history.

West of the center line of Fresh Creek, the site property had been in possession of the Vanderveer Family for over two centuries; to the east it had belonged to the Rapeljes for about half that time. Yet the only early structures that are documented are the Vanderveer family's homestead farm complex and grist mill erected just southwest of the project site. The mill, the mill pond, and a house date from the late seventeenth century (this original dwelling was replaced or augmented by another structure in 1829). When the property was sold in 1905, it comprised just over 210 acres, and had purportedly been the largest individual farm in Brooklyn during the nineteenth century. At the time of the sale, the Vanderveer mill still stood west of the project site, and the mill pond and dam are documented in photos and drawings as late as 1895. A development scheme proposed in 1906 was never realized.

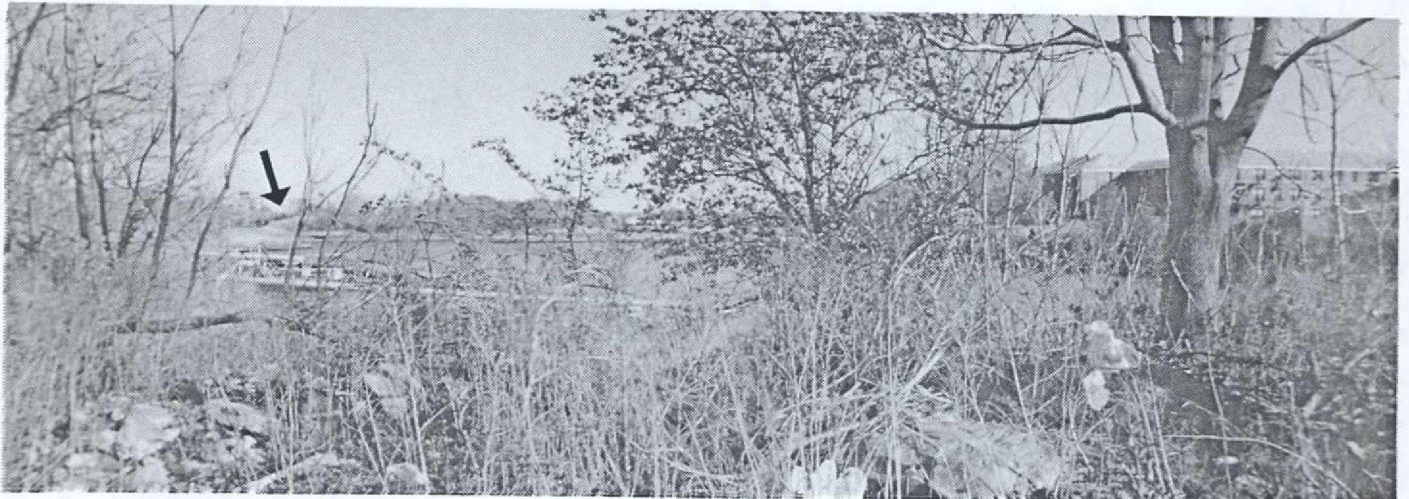
The site evaluation is based on research into deeds, tax assessments, historical maps, wills, published histories, unpublished reports, and a site visit made on May 2, 1994. The documentary sources indicate the site has no historical archaeological significance either north or immediately south of Flatlands Avenue (the mill dam was apparently south of the project site). Although the New York State Museum notes two prehistoric sites in the vicinity of Fresh Creek, it does not appear that they were located where this tidal creek and marshland once traversed and covered the site. The fill that eliminated the creek, the marshes, and the mill pond is documented in soil borings drilled by the City in 1969 and 1984. These were located adjacent to, but not on, the project site. It appears that the site was partly filled between 1929 and 1950, and entirely filled before or just after 1952 when the adjacent Breukelen Houses were completed. At present, it is a public park (see Figures 3-5).

Based on this information, it is not anticipated that the planned construction will impact any significant cultural resources. Site-specific soil borings should be reviewed when they become available, and it is possible that borings geared to an archaeological assessment may be necessary.





6 Looking east toward the possible site of a ventilator structure (arrow) on the south side of Flatlands Ave. The Starrett Houses are visible in the distance. (photo: 5/2/94)



7 View south from vacant lot on south side of Flatlands Ave. looking toward the Fresh Creek Basin. Note sewer pipes (arrow) on the left. (photo: 5/2/94).



The summary presented here is extracted from the detailed information found in the following sections.

## **PREHISTORIC CONSIDERATIONS**

A Native American presence is possible in the New York-metropolitan area beginning with the retreat of local glaciation 10,000-12,000 years ago. It has been documented by Early Man (Paleo-Indian) sites on Staten Island that may date from 11,000 years ago (e.g., Kraft 1977). More commonly found in this geographic area, however, are the late-prehistoric and early-historic era sites and shell middens that have been located in several of the boroughs and on the islands in New York Harbor. Among them are the large shell mounds, or middens, still to be seen in Inwood Park in upper Manhattan and the extensive shell middens exposed on Liberty and Ellis Islands during reconstruction in the 1980s.

It appears that shell middens--formed by the discards of meals consumed seasonally over time--were mainly a phenomenon of "recent" geological times. This was after modern conditions were established on land and sea approximately 5,000 years ago. The earliest shell fish remains reported for a coastal New York site according to Ceci [1977:82] are those found at Shoreham on Long Island that date to approximately 2595 B.C., or almost 5,000 years ago. By then the project site's terrain comprised a creek set in low-lying marshland devoid of ridges or rises. This landscape, which was known historically, was unsuitable to the camping or food processing associated with the formation of shell middens. It does not seem likely, therefore, that shell-midden resources would be present under the fill introduced to eliminate this marshland setting, but this would have to be verified through soil borings.

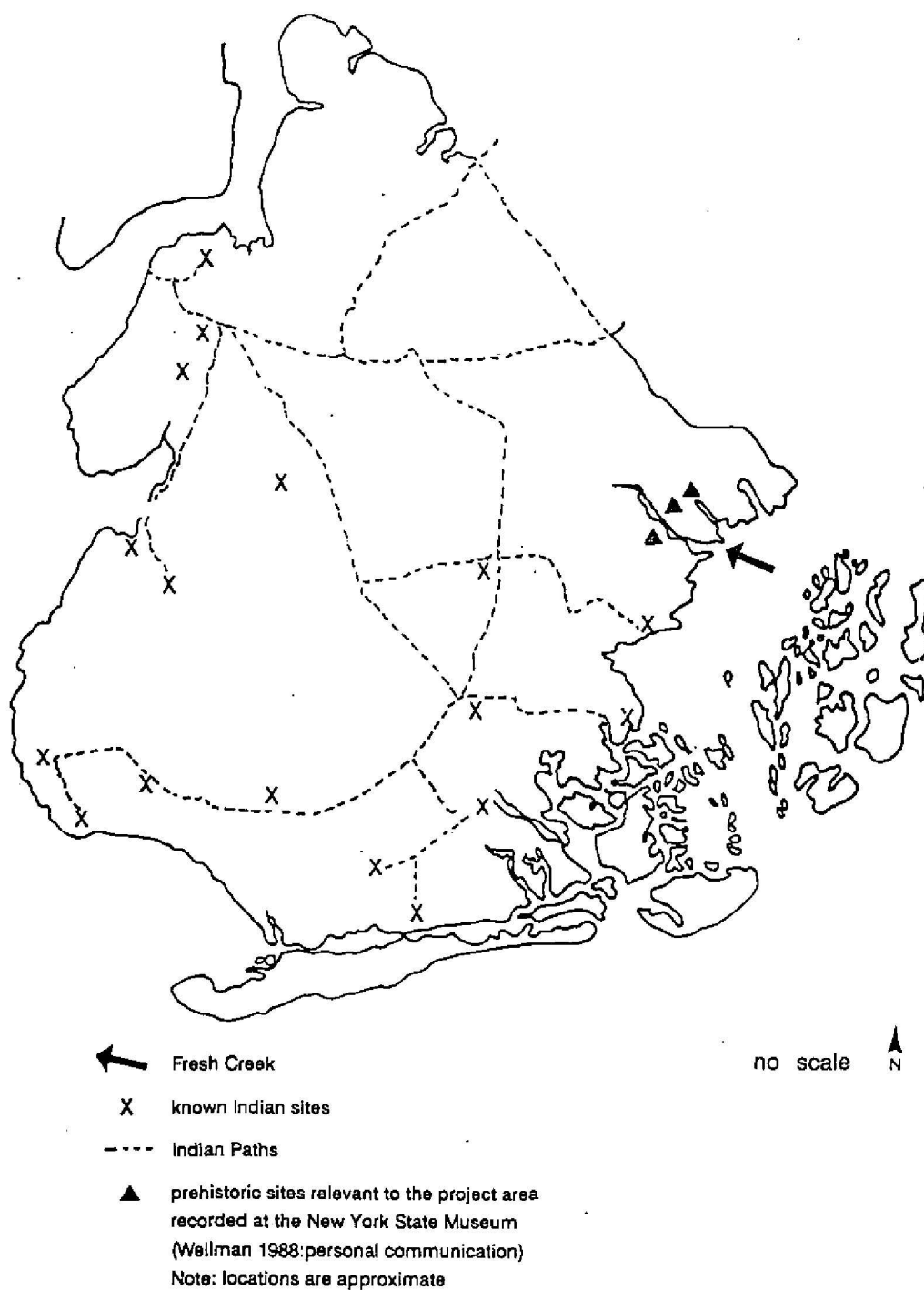
The New York State Museum has identified the general project area as potentially sensitive based on its location near Jamaica Bay, a source of shell and fin fish, and the presence of its several creeks (e.g., Geismar 1988:8). It is possible the terrain in the project area may have been drier and the creek fresh water when sea level was lower prior to the creation of the "modern" landscape. If so, it may have been suitable for prehistoric use or habitation. However, sites associated with this earlier time are more ephemeral than shell middens and would be virtually impossible to systematically locate under fill. Yet, based on a questionnaire circulated in the 1920s, two vaguely located sites on Fresh Creek (also known historically as Fresh Kill or First Creek) are on file at the New York State Museum. These comprise

a camp site on the west side of the creek near Jamaica Bay (NYSM Site No. 3610) and a "village" site on the east side (NYSM Site No. 3609); shell heaps in the vicinity of what was Second Creek, another tidal waterway to the east, are also documented (NYSM Site No. 3607). It should be noted that the locations of these sites on both creeks are speculative at best (Wellman 1988; personal communication; see Figure 8).

Given the site's pre-fill terrain, a permanent Native American settlement, as opposed to an ephemeral camp site, does not appear to be an issue. The late Carlyle Smith in his archaeological study of coastal New York noted that "Nearly all of the permanent settlement sites are situated on tidal streams and bays on the second rise of ground above the water" (Smith 1950:101), not in the marshes or shore areas. Moreover, it is believed by some modern scholars that permanent local Native American settlement was mainly, if not entirely, a phenomenon caused by the economics of European contact (e.g., Ceci 1977); as such, these settlements were usually recorded or noted historically. Although the project site remained undeveloped until the 1950s, no evidence of Native American use has been noted in the contemporary archaeological literature. To add to this, Bolton's reconstruction of Indian paths in Brooklyn--based mainly on historical information--does not place any on or very near the project site (Bolton 1934; see Figure 8).

Black's history of Jamaica Bay, prepared for the National Park Service, notes the lack of natural uplands near the bay in the project area; it also notes that wide expanses of marshland prevented an "intimate association" with the water (Black 1981:52). This would have been a terrain that provided food resources to hunters and gatherers, but not the location of habitation sites. In addition, fresh water, a prerequisite to settlement, was apparently lacking in the immediate project area (Fresh Creek was tidal, and therefore at least in part salt water, since the modern landscape was established). The most likely nearby site location may be an "island" in the tidal creek noted on some maps (e.g., U.S.G.S. 1908; Figure 9; see also Figure 14) and mentioned in deeds (e.g., Liber of Deeds [hereafter LD] 1906 Section 14 8:84), but this high ground within the creek and marsh was located south of the project site (see Figures 9 and 14).

While the project area has potential for archaeological sensitivity because of its shoreline setting, it can be seen that certain prerequisites for use as an ideal Native American habitation site or even a camp site were not present in late-





○ project site area  
 ↑ island

0 1  
 miles  
 N

prehistoric times. It is possible that an isolated tool or hunting equipment may remain on the site under fill. However, the chances of finding these objects are negligible (a similar assessment was made regarding the Praedergat Basin lying west of the project site [Historical Perspectives in Allee King Rosen & Fleming et al 1993:II D-6]).

Fresh Creek has now been bulkheaded and channeled (Black 1981:54) and, directly on the site, filled (at this writing, 5 to 27 ft. of fill have been documented in soil borings located around, but not directly on, the site [see Soil Borings below and Appendices A and B]). South of Flatlands Avenue the creek basin still empties into Jamaica Bay and is now part of a sewer overflow system (see Figure 7).

This assessment requires on-site soil boring data to verify subsurface conditions.

> NB

## **HISTORICAL CONSIDERATIONS<sup>1</sup>**

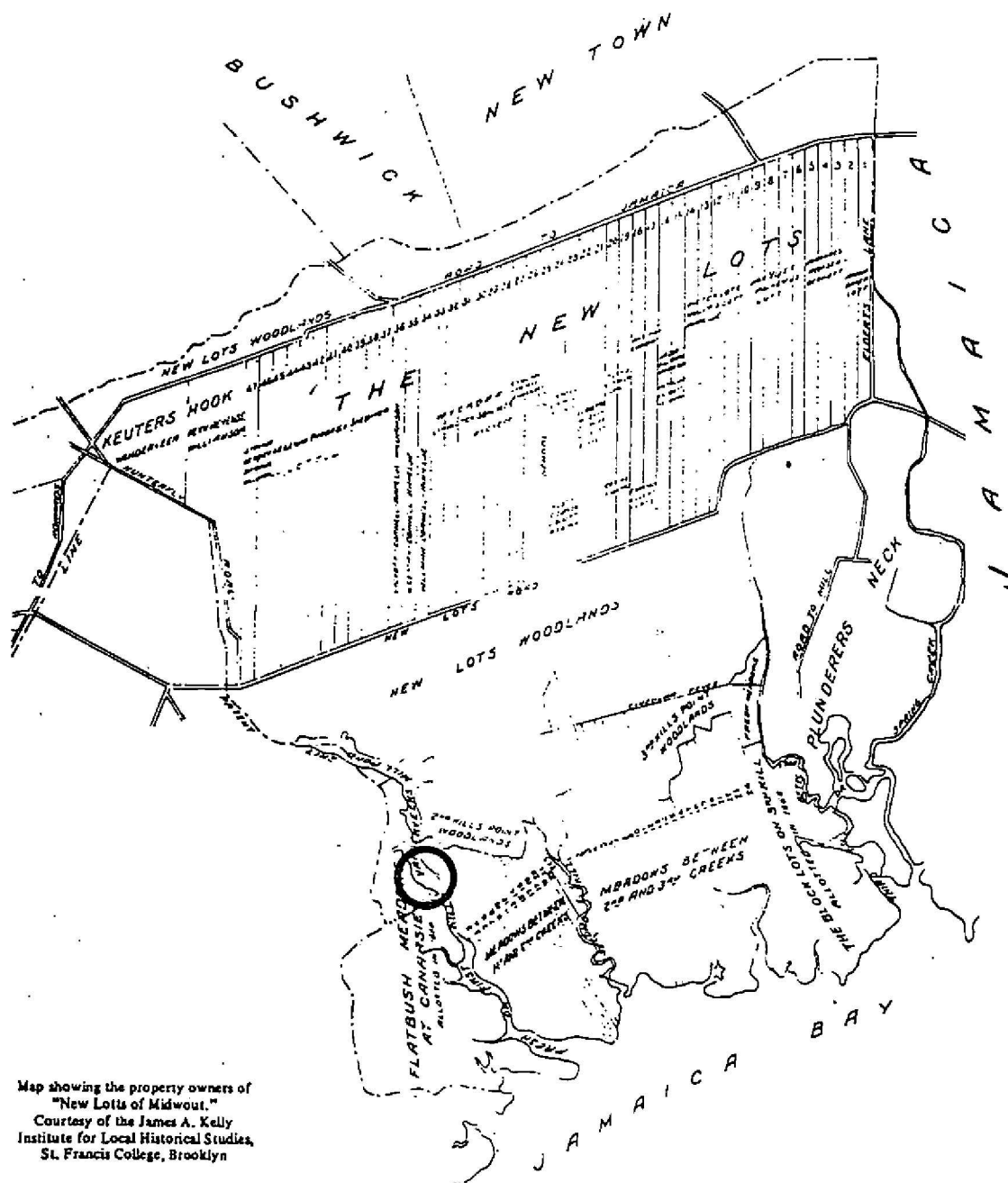
In 1677, Sir Edmund Andros, then the English governor of the reclaimed Dutch territory of the New Netherlands,<sup>2</sup> granted a separate patent for land situated in the eastern part of the town of Flatbush (Figure 10). One of the five original Dutch towns (the others being Breuckelen [Brooklyn], Nieuw Utrecht [New Utrecht], Boswiyck [Bushwick], and Flatlands [Nieuw Amersfoort], t'Vlack Bos or Mitwout; (e.g., Stiles 1884:214; Flint 1896:66), Flatbush may have been settled as many as twenty years before a formal grant was made in 1651 (Stiles 1884:213-214). An expanded version of this grant was confirmed by Lieutenant-Governor Thomas Dongan in 1685 (Ross & Pelletreau 1903:319-320). In 1677, the Flatbush settlers or their descendants had also been granted the parcel of land to the east called the "New Lots" of Flatbush; this tract comprised over 1,426 acres and included the project site (see land ownership history below).

Most eighteenth-century development of New Lots concentrated north of New Lots Avenue, and therefore well north of the project site. The exception was the

---

<sup>1</sup>The general history presented here is adapted from Geismar 1988 and expanded.

<sup>2</sup> New Netherlands, including New Amsterdam and the Dutch towns on Long Island, first fell to the British in 1664; the Dutch briefly recovered this territory in 1673 only to lose it again about a year later (e.g., Stiles 1884:90).





Vanderveer mill and homestead complex built before 1704 on the west side of the Fresh Creek, just beyond the project site. This early grist mill (Figure 11), at least to successively-built dwellings (the last erected in 1829), and outbuildings stood on or just south of Flatlands Avenue in the vicinity of what is now 106 to 109th Streets for over 200 years (Commissioner's Map c. 1871; Hyde 1909; Robinson 1886; see Figures 10 [Landesman 1977:25]) and 15 [Robinson 1886]). The location of the mill dam was a research question, but according to deeds and maps, it appears that it was situated south of the project site (e.g., LD 1906 Section 14 8:88; Higginson 1861; Sanborn 1928). These same sources indicate the mill pond it created was mainly on the project site.

The project site has a minor claim on history by virtue of its proximity to the route followed by the British in the capture of Brooklyn during the Revolutionary War (Figure 12). However, there is no evidence for any actual war activity or encampments on or near the site (undoubtedly the same tidal creek and marsh terrain that deterred prehistoric use also determined its involvement, or non-involvement, in the Revolutionary War). For decades after the war, the high ground beyond the project area remained farmland.

During the 1830s John R. Pitkin, a wealthy Connecticut merchant, initiated an ambitious scheme to create a city in New Lots to rival New York. Based on its location and intent, he named his ill-fated venture "East New York." However, it never became more than an unincorporated village in New Lots and still identifies the section of Brooklyn where the project site is partly located.

Apparently the panic of 1837 helped defeat Pitkin's plans (Stiles 1884: 307). Had they succeeded, the project site might have become part of this new metropolis. Instead, it remained undeveloped (see below). Nearby, the Brooklyn-Rockaway Beach Rail Road, a branch of the Long Island Rail Road, was run north and west of the project site in 1864 (Seyfried 1966 Part 5:3); these tracks are documented on maps from the late nineteenth century (see Figures 14 and 15).

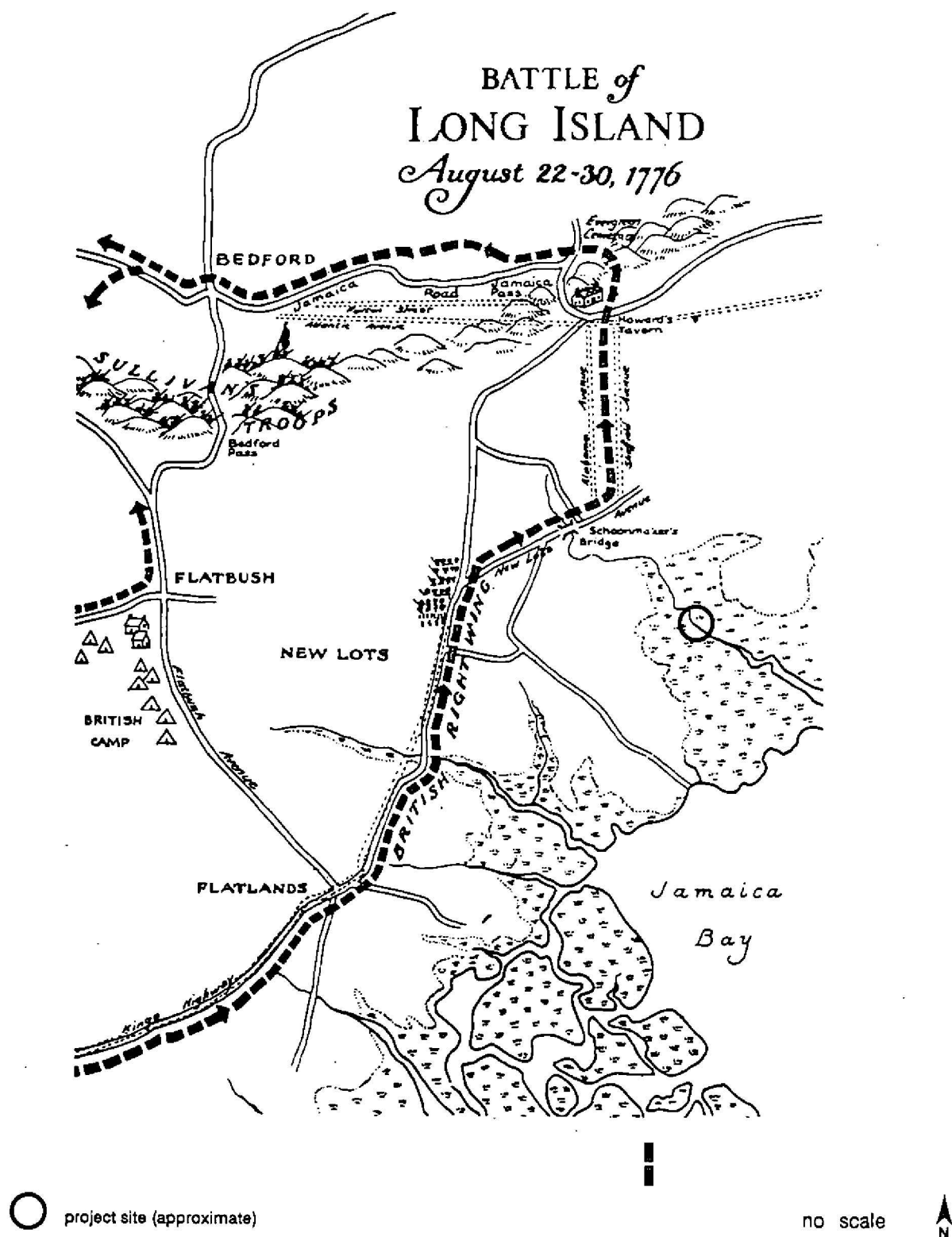
### **Land Ownership History to 1906**

Fresh Creek historically served as a boundary between properties. Two years after the final English takeover of the New Netherlands, land patents that may have included the meadows of the project site (these were not mentioned in the Eng-



### Vanderveer's Mill

**A**



lish grant) were issued to numerous patentees then living in the western part of Flatbush. Based on mainly Alter Landesman's *History of New Lots*<sup>3</sup> combined with deed and will information, an attempt has been made to reconstruct original and subsequent early ownership of the site property. For most of its recorded history, the site belonged to two prominent Brooklyn families, the Rapeljes and the Vanderveers.

The project site falls within what has been defined as the Flatbush Meadows at Canarsie and the twenty-four lots laid out between First and Second Creek (Landesman 1977:15, 27; see Figure 10). While early records are unclear, it can be established that the Rapeljes, who Landesman describes as "prolific and influential," settled in New Lots early in the eighteenth century (Landesman 1977:23). The common ancestor of the Brooklyn Rapeljes was Joris, a French Huguenot who emigrated to this country in 1623, going first to Albany, then New Amsterdam, and finally, in 1637, to Brooklyn. His great grandson, Johannes, settled in New Lots, and Johannes' son, Daniel, a British sympathizer, was among those from New Lots in exile during the Revolutionary War (he had opened his home on New Lots Road [now Avenue] to the British during the above-mentioned capture of Brooklyn). Daniel's son, Simon, was the father of Williamson Rapelje (Stiles 1884:319; Landesman 1977:23). Simon acquired a large piece of property in 1806 that included the project site (LD 1806 39:293 in the Brooklyn Historical Society Conveyance Box Block 4430; also LD 1816 39:288); no will is recorded for Simon, but the western part of this property presumably was inherited by Williamson since it was part of his estate when he died in 1885 (Liber of Wills [hereafter LW] 113:357-365).

At his death, Williamson Rapelje left property to five of his six surviving children (a son who lived in China [Stiles 1884:320] received only money). Two of his daughters inherited houses on New Lots Road, and his sons Simon, Henry L., and Williamson [Jr.], were left large land parcels north and south of New Lots Road. It was Williamson [Jr.] who inherited Parcel No. 6 that abutted Vanderveer's mill pond, and included part of the project site.

The Vanderveers were descended from Cornelis Janse Van der Veer who emigrated from North Holland in 1659 and purchased property in Flatbush in 1677-1678

---

<sup>3</sup> To commemorate the 300th anniversary of the granting of the forty-seven lots of New Lots to Dutch settlers in Flatbush, Alter F. Landesman compiled a detailed history of New Lots that is recommended to anyone seeking more detailed information.

(Landesman 1977:25). Based on deeds, he and his son-in-law, David Polhemus, had built a dwelling house and "corn mill" on the west side of Fresh Creek prior to 1704. Both Vanderveer (also Vandevere and Van Derveer) and Polhemus are cited in Lieutenant-Governor Thomas Dongan's Flatbush patent of 1685. Cornelis apparently died in 1704; no will has been found, but it is cited in one of the family deeds (Vanderveer 1704), and in this year all his children and sons-in-law signed a written agreement that obliged them to care for Trijntie de Mandeville "Vandevere," their mother (and mother-in-law) and Cornelis's widow (Agreement 1704). Several deeds representing the division of Vanderveer's estate among his children and sons-in-law (e.g., Vanderveer 1704), note that the property included "all that Lott of meadow in the twelve Lotts soe (sic) called" designated Lot Number Seven. Landesman indicates that Vanderveer ownership of this property dated to the late seventeenth century; he also notes that they became "one of the wealthiest and most influential families in the region" (1977:25).

Milling seems to have been a family trade: a John C. Vanderveer built what is said to be Brooklyn's only windmill, a structure that was begun in 1801 and stood near New Lots Avenue until it burned in 1879 (e.g., Younger 1978:92). In 1759,<sup>4</sup> the Vanderveer Mill on Fresh Creek had also burned, but, unlike the windmill, this tide water mill was rebuilt. Nineteenth-century maps indicate its position in various locations, all of them just southwest of the project site (e.g., Walling 1860; Beers et al 1873; Robinson 1886; see Figures 13-15; also the Commissioner's Map c. 1871, which is not illustrated).

Landesman described the "Red Mill on Fresh Kill [Creek], also known as Vanderveer's Mill," as a popular gathering place and "a landmark of the section" (1977:77). He goes on to say "the mill occupied a site on the western bank of Fresh Kill...about a half mile south of New Lots Road, at Flatlands Avenue and about East 109th Street." An even more detailed description is found in an 1895 newspaper article. It notes that when the first mill burned a few years prior to 1761, it was rebuilt by the widow of Dominicus Vanderveer. It was described as follows:

Over beyond Canarsie, about a mile from the shore of Jamaica Bay, lies the Vanderveer homestead [and] gristmill...The wheel still

---

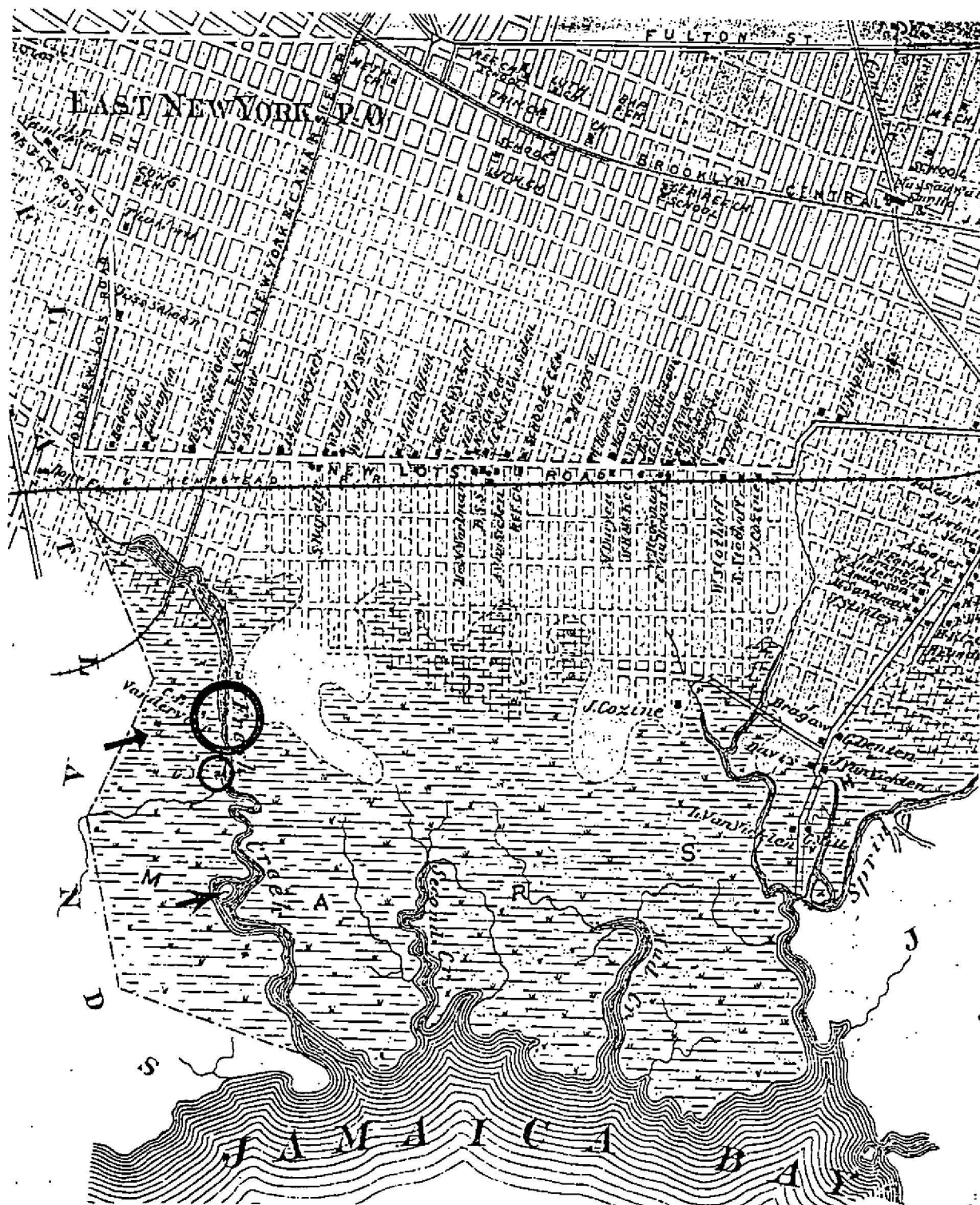
<sup>4</sup>Some historical articles confuse these two mills. The tidal mill is definitely documented as late as 1905 (see text).

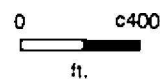
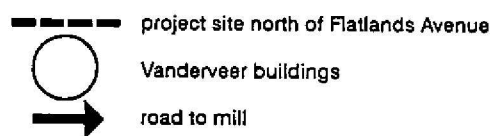


Vanderveer's grist mill (right arrow) and mill road

**AN**







turns...but it is fast falling to ruin and the old dam is overgrown with sedge and the floodgate is incrustated with barnacles...[the mill] is practically inaccessible since its secluded site is no small distance from the high road [New Lots Avenue?].

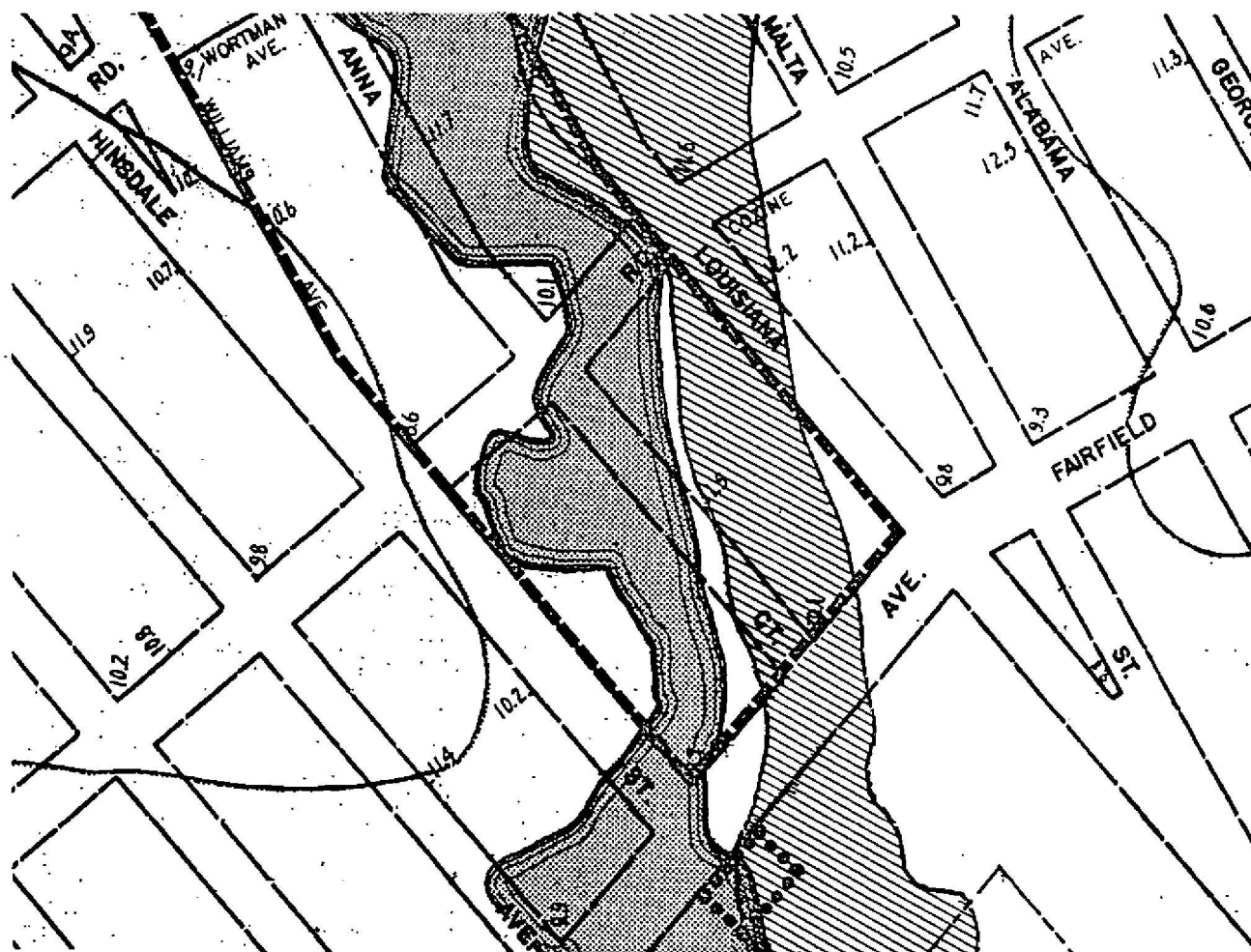
The writer prophetically goes on to say

Before long, however, the peace of this quiet farm will be broken by the invasion of the growing city. A projected street [Fairfield then Flatlands Avenue] passes one corner of the house and runs within a few hundred yards of the mill. The near future will see Fresh Kill pond filled up and the present expanse of meadow land cut into building lots (*Brooklyn Daily Eagle* November 10, 1895 in the Brooklyn Scrapbook Vol. 63:3).

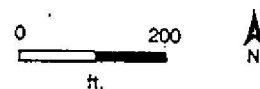
The situation of the house and mill in marshland is a puzzle, but the cartographic evidence undeniably documents this location. The two structures were still standing in 1905 when the property was sold by John Vanderveer, a seventh generation member of the family. At the time, Vanderveer resided at Babylon, Long Island, and the buyers were New York City developers (LD 1905 3077:29). The sale is also documented in an unidentified newspaper clipping dated March 13, 1905, located in the Brooklyn Historical Society. The headline reads "John Vanderveer Farm Sold to A Syndicate for \$555,000," and captions under illegible photos showing the mill and house read:

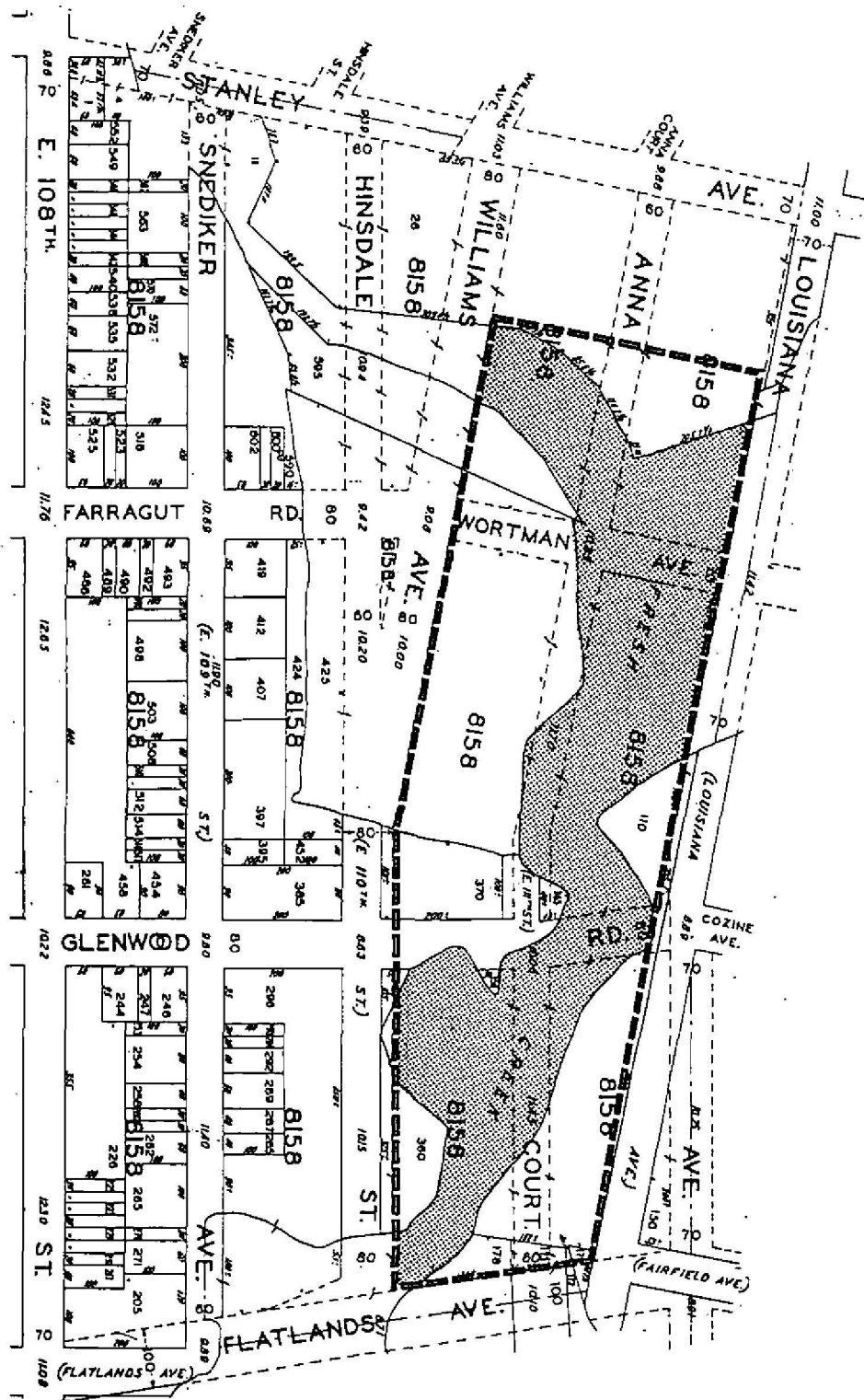
The John Vanderveer farm containing 221 acres [the deed says 210+] in the heart of the Twenty-six and Thirty-second Wards and which was the largest individual farm in Kings County, was sold Saturday...[to] a syndicate of Manhattan Capitalists...a gigantic improvement scheme will be carried out immediately. This big tract is south of and adjoining Brownsville and it is the ultimate intension of the syndicate to make the entire tract an extension to Brownsville through which Fresh Creek will run (Brooklyn Scrapbook Vol. 3:133).

The structures were apparently demolished soon after this date, but the anticipated development, known as "Vanderveer Crossings" (LD 1906 Section 14 8:84; Williams 1906) never happened. A topographical survey done sometime between 1905 and 1910 (Ebbitt 1994:personal communication) shows details that suggest a meandering stream and perhaps a mill pond on the site (Figure 16), but it does not document any structures where the Vanderveer buildings once stood. Hyde's 1929 atlas does not indicate any changes made to the creek or property (Figure 17), nor, for that matter does a 1950 Sanborn Insurance map (not illustrated). This and other Sanborns (e.g., 1928) suggest that the mill dam was located south of Flatlands Avenue, near Avenue J--well south of the project site.



- project site (Flatlands to Wortman Avenues)
- Fresh Kill
- ▨ earlier course of Fresh Creek (date unknown)
- proposed air exhaust location





project site north of Flatlands Avenue  
Fresh Creek

0 200  
ft.





## TWENTIETH CENTURY DEVELOPMENT OF THE PROJECT SITE

Since the turn of the century, the project area has been altered from a marshland traversed by a tidal creek and the site of a seventeenth-century mill pond to a mixed commercial-residential neighborhood developed on fill that obliterated the natural terrain. The Breukelen Houses, completed in 1952 (Haliner 1994:personal communication), are found to the west, and commercial properties, including a chicken supplier, a milk distributor, and the aforementioned Pathmark shopping center, are located to the east and south (see Figures 3 to 6). As late as 1950, part of the project site remained land under water (Bartlett et al 1950). The current site terrain was established in 1952 or thereabouts, and a combined sanitary and storm sewer was approved for the west side of Williams Avenue in 1937 that empties into Fresh Creek Basin (Bureau of Sewers 1937). This basin is found on Sanborn Insurance maps after 1981. As designed in 1937, the sewer traverses the proposed air exhaust site.

## SOIL BORINGS

Ten soil borings located in the Subsurface Exploration Division of the Department of General Services provide some information about subsurface conditions (DGS 1969, 1984) adjacent to, but not directly on, the project site. For example, they indicate the presence of 5 to 27 ft. of fill (comprising sand, silt, gravel, brick, concrete, and misc. material). The underlying soil is fine and fine to medium brown sand with some gravel. Areas of peat and layers of silt, the former representing a former creek bed, mill pond, or marsh, are also documented (see Appendices A and B). It should be noted that the drillers were unaware of the information needed to make an archaeological evaluation (for example, shell fragments on the pre-fill surface of the subsoil might indicate Native American shell heaps or "middens," although, as noted earlier, the likelihood of finding this kind of evidence is minimal at best).

Although the sampling spoon was undoubtedly small (usually a 2-in. diameter spoon is employed that yields a 1 3/4-in. diameter core sample) and, therefore, not ideal for recovering samples for an archaeological assessment, no evidence of shell or other materials that might indicate prehistoric use were recorded. Not surprisingly, a filled marsh or former water courses are indicated.

There is no evidence of archaeological sensitivity based on the data provided through this limited subsurface testing. However, site-specific borings are needed to verify this assessment.



## CONCLUSIONS AND RECOMMENDATIONS

Throughout most of its history, the project site has been covered by a meandering tidal creek, marsh, and a mill pond. Moreover, despite its location within an area flagged for its prehistoric site potential, neither the archaeological literature nor existing soil boring data suggest it has any archaeological significance. However, analysis of site-specific soil boring data is recommended.

OK

## BIBLIOGRAPHY

### Agreement

- 1704      Agreement to care for Trijntie Vanderveer, Widow of Cornelius Vanderveer, deceased. Ms. Box 47, Vanderveer Manuscripts. Brooklyn Historical Society.

### Allee King Rosen & Fleming, Hazen and Sawyer, Hydroqual, Inc., and Historical Perspectives

- 1993      Draft Environmental Impact Statement for the Paerdegat Basin Water Facility Plan. Prepared for the City of New York, Department of Environmental Protection, Bureau of Environmental Engineering. October 1993.

### Bartlett, Ludlam & Dill

- 1950      Topographical and Property Line Map, New York City Housing Authority, Breukelen Houses. Sheets 6 and 7 of 7. Brooklyn, New York. May 6, 1950. Through O'Brien & Gere, Engineers, Inc.

### Beers, Comstock, and Cline

- 1873      *Atlas of Long Island*. Beers, Comstock, and Cline, New York.

### Black, Frederick R.

- 1981      *Jamaica Bay, a History*. Cultural Resources Management Study No. 3. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, U.S. Department of the Interior, Washington.

### Bolton, Reginald P.

- 1934      *Indian life of long ago in the City of New York*. 1972 reprint. Crown Publishers, Inc., New York.

### Brooklyn Scrapbook

- n.d.      Brooklyn Historical Society Archives. Brooklyn, New York.

## BIBLIOGRAPHY (continued)

### Bureau of Sewers

1937 Bureau of Sewers, Borough of Brooklyn, City of New York, Plans, Profiles and Details of Combined Sewer in William Avenue, West Side, and the Terminus of the Existing Sewer, etc...Also Dredging a Channel in Fresh Creek Basin from its Head Southerly About 1000 Feet. Standard Specifications and Addenda. Sheets 1-3 of 20. May 11, 1937. Through O'Brien & Gere Engineers, Inc.

### Ceci, Lynn

1977 The effect of European contact and trade on the settlement pattern of Indians in coastal New York, 1524-1665: the archaeological and documentary evidence. Ph.D. dissertation. Xerox Microfilms, Ann Arbor.

### Commissioners' Map

c. 1871 Commission of Kings County Town survey, New Lots. Topographical Bureau, Brooklyn Borough President's Office.

### DGS

1984 Reconstruction of DeWitt Avenue, Van Sinderen Avenue, Malta Avenue, Etc., Borough of Brooklyn. Prepared by Engineering Services, Subsurface Exploration Section, Department of General Services, Division of Public Structures, Bureau of Building Design, City of New York. Record of Borings B-1, B-2. July 30, 1984.

---

1969 City of New York, Department of Public Works, Division of Engineering Services, Subsurface Exploration Section. Record of Borings for 26th Ward W.P.C.P. Extension and Interceptor Flatlands Avenue Between Williams and Van Sicken Avenues, Borough of Brooklyn, Sheet 5 of 5. September 8, 1969.

### Department of City Planning

1982 *Sectional maps of New York City.* Plates 17 and 23.

### Ebbitt, Lawrence

1994 Personal Communication. Chief, Subsurface Exploration, New York City Department of General Services, Municipal Building.

## BIBLIOGRAPHY (continued)

Flint, Martha Bockee

1896      *Early Long Island, a Colonial Study*. P. Putnam's Sons, New York.

Geismar, Joan H.

1988      Documentation of Block 4322 Lot 24 in the East New York Section of Brooklyn (formerly a village in New Lots). CEQR No. 87-238K. Prepared for the Mobil Oil Corporation. Prepared by Joan H. Geismar, Ph.D. August 30, 1988.

Haliner, Sarah

1994      Personal Communication. New York City Housing Authority, New York.

Higginson, J. H.

1860      *Higginson's Map of Kings and a Large Part of Queens Counties [LI] from Actual Surveys*. J. H. Higginson, New York.

Hyde, E. Belcher

1929      *Desk Atlas of the Borough of Brooklyn, City of New York*. E. Belcher Hyde, New York.

---

1909      *Atlas of Brooklyn, City of New York*. Vol. 8, Sec. 23-25. Plate 21. E. Belcher Hyde, Brooklyn.

Kraft, Herbert C., 1977

1977      The Paleo-Indian Sites at Port Mobil, Staten Island. *Current Perspectives in Northeastern Archaeology. Essays in Honor of William A. Ritchie*. Edited by Robert E. Funk and Charles F. Hayes III. Researches and Transactions of the NYSAA:17(1).

Landesman, Alter F.

1977      *A History of New Lots, Brooklyn, to 1887*. Kennikat Press Corp., Port Washington, New York.

## BIBLIOGRAPHY (continued)

### Liber of Deeds (LD)

Misc. Register's Office, Municipal Building, Brooklyn.

### Liber of Wills (LW)

Misc. Record Room, Surrogate's Court, Brooklyn.

### New York State Museum

n.d. Sites on file. Division of Research and Collections. The State Education Department, the University of the State of New York, Albany.

### Rock Line Map

1905-1910 Rock Line Map, Borough of Brooklyn, Sheet 59. City of New York, Project No. 165-97-6999 (6036-1024). December 1935. U.S.W.P.A. Department of General Services, Subsurface Exploration, Municipal Building, New York.

### Robinson, E.

1886 *Atlas of the City of Brooklyn*. E. Robinson, New York.

### Ross & Pelletreau

1903 *A History of Long Island*. Vol. I. Section by Peter Ross. The Lewis Publishing Co., New York.

### Sanborn Insurance Maps

Misc. Sanborn Map Co., White Plains, New York.

### Seyfried, Vincent F.

1966 *The Long Island Rail Road: A comprehensive History*. Privately published, Garden City.

### Smith, Carlyle S.

1950 *The Archaeology of Coastal New York. Anthropological Papers of the American Museum of Natural History* 43 (2).

## BIBLIOGRAPHY (continued)

Stiles, Henry R.

- 1884      *The Civil, Political, Professional and Ecclesiastical History and Commercial and Industrial Record of the County of Kings and the City of Brooklyn, New York from 1683-1884.* W. W. Munsell & Co., New York.

U.S.G.S Survey

- 1908      *Brooklyn Quadrangle.* Edition of 1908, reprinted 1928. Department of the Interior, U. S. Geological Survey, Washington, D.C.

Vanderveer

- 1704      Partion Deed of Land of Cornelis (Cornelius) Vanderveer. Ms. Box 47, Vanderveer Manuscripts. Brooklyn Historical Society.

Walling, H. F.

- 1860      *Map of the City of New York and Its Environs.* S. D. Tilden, New York.

Wellman, Beth

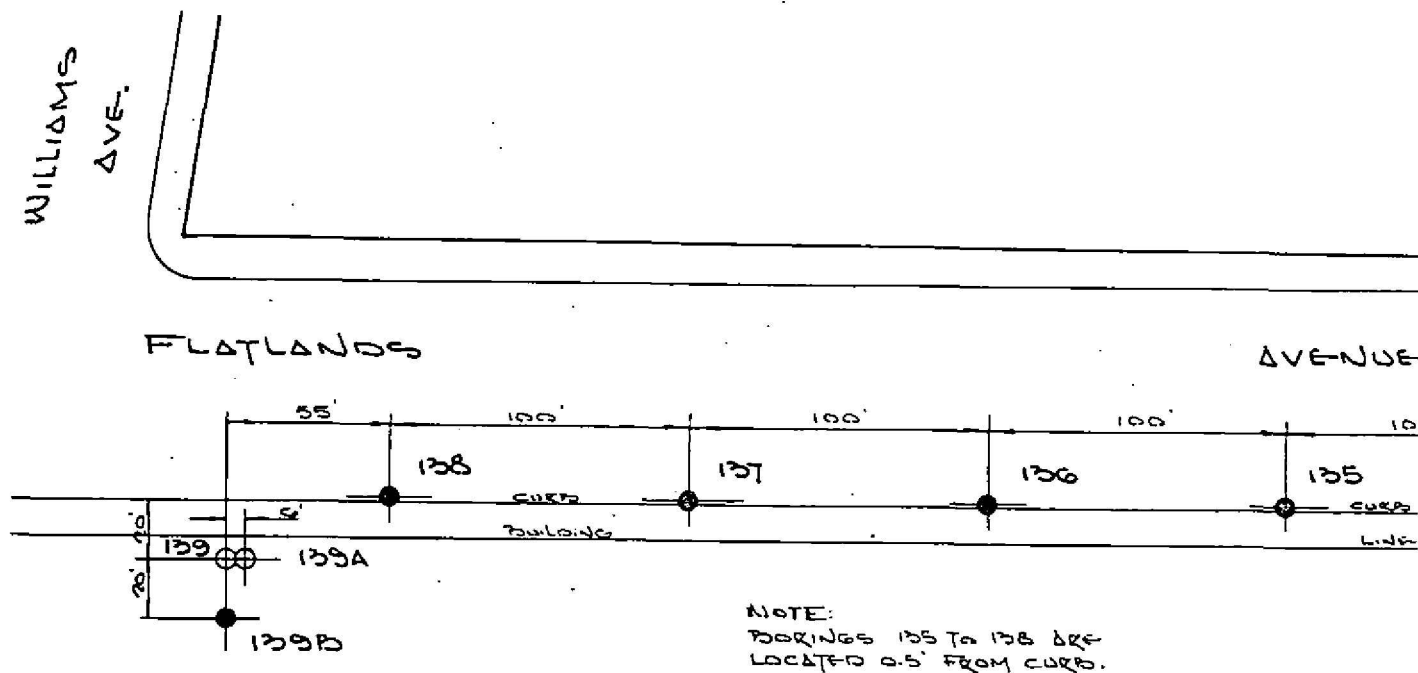
- 1988      Personal communication. Staff archaeologist, Division of Research and Collections, New York State Museum, Albany.

Williams, R. L.

- 1906      Vanderveer Crossings, Inc. Subdivision Map. Wm. Reynolds, President. R. Turnbull, General Manager. R. L. Williams Surveyor. February 1906. Brooklyn Borough President's Office, Topographical Bureau. File Map No. 1361.

Younger, William Lee

- 1978      *Old Brooklyn in Early Photographs 1865-1929.* Dover Publications, Inc., New York.

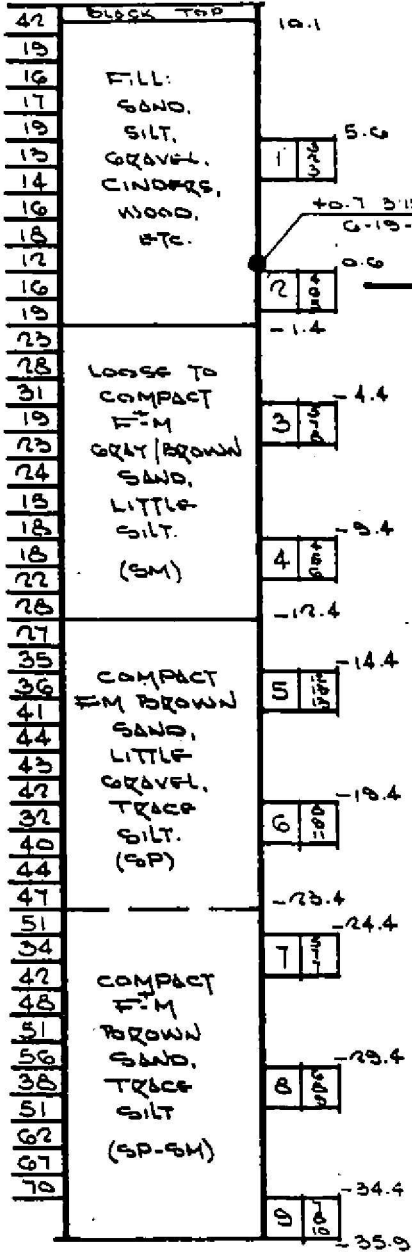


• boring location; see boring logs that follow



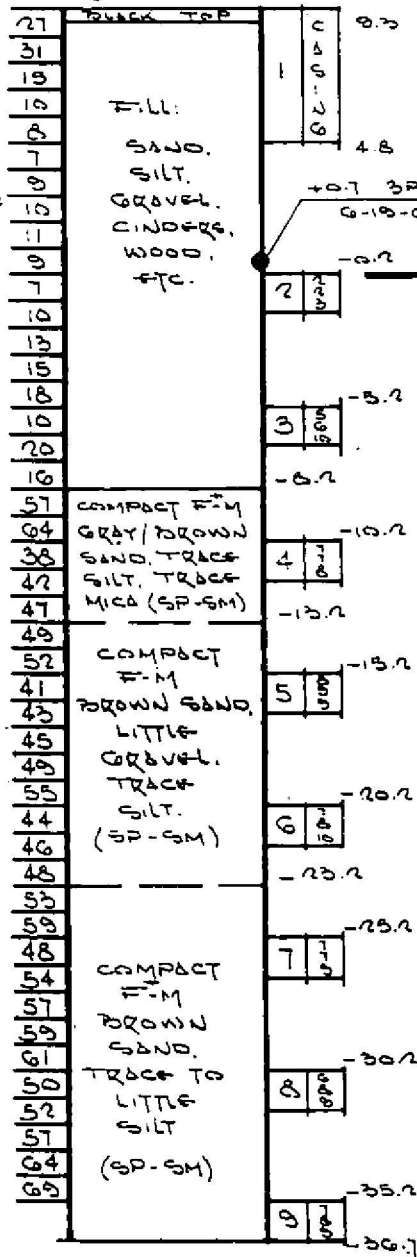
135

SURF. ELEV. 10.0



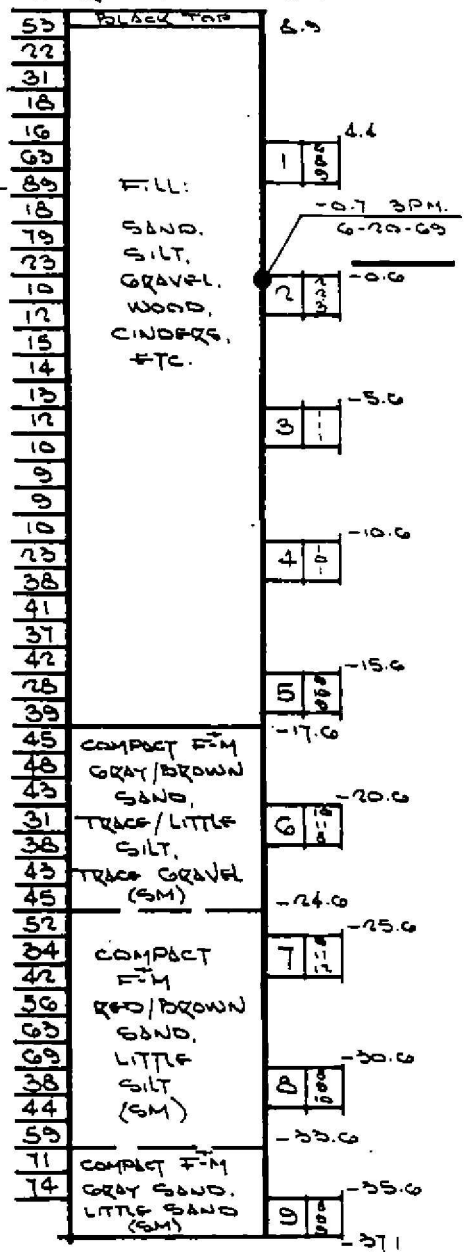
136

SURF. ELEV. 9.8



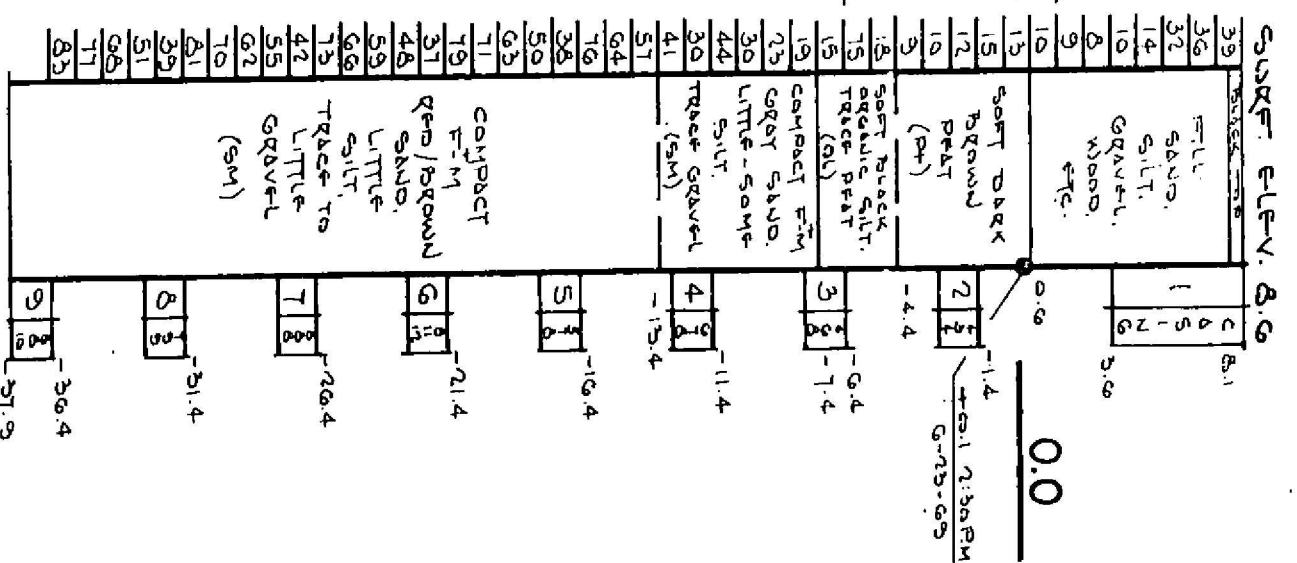
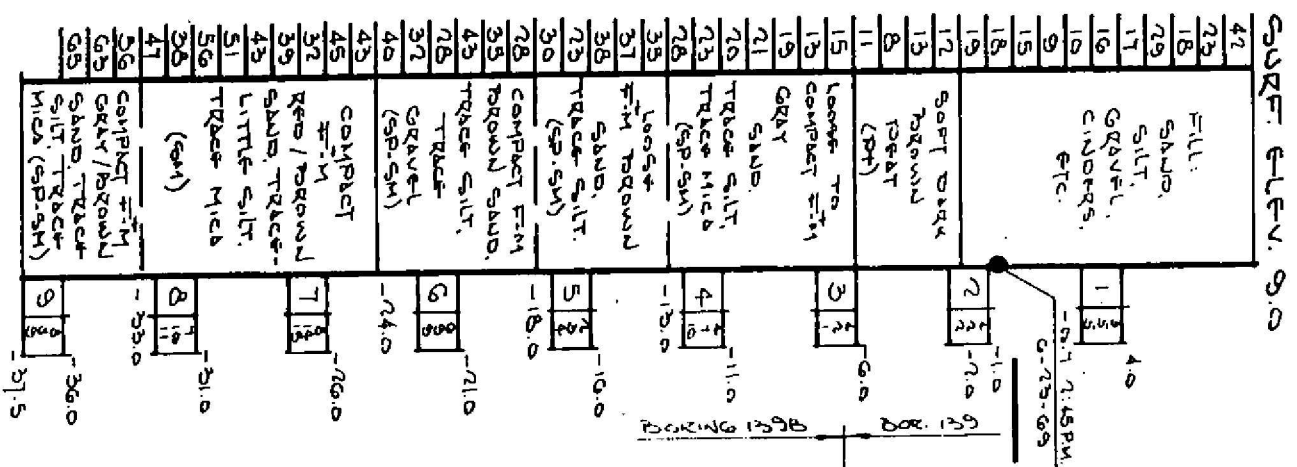
137

SURF. ELEV. 9.4



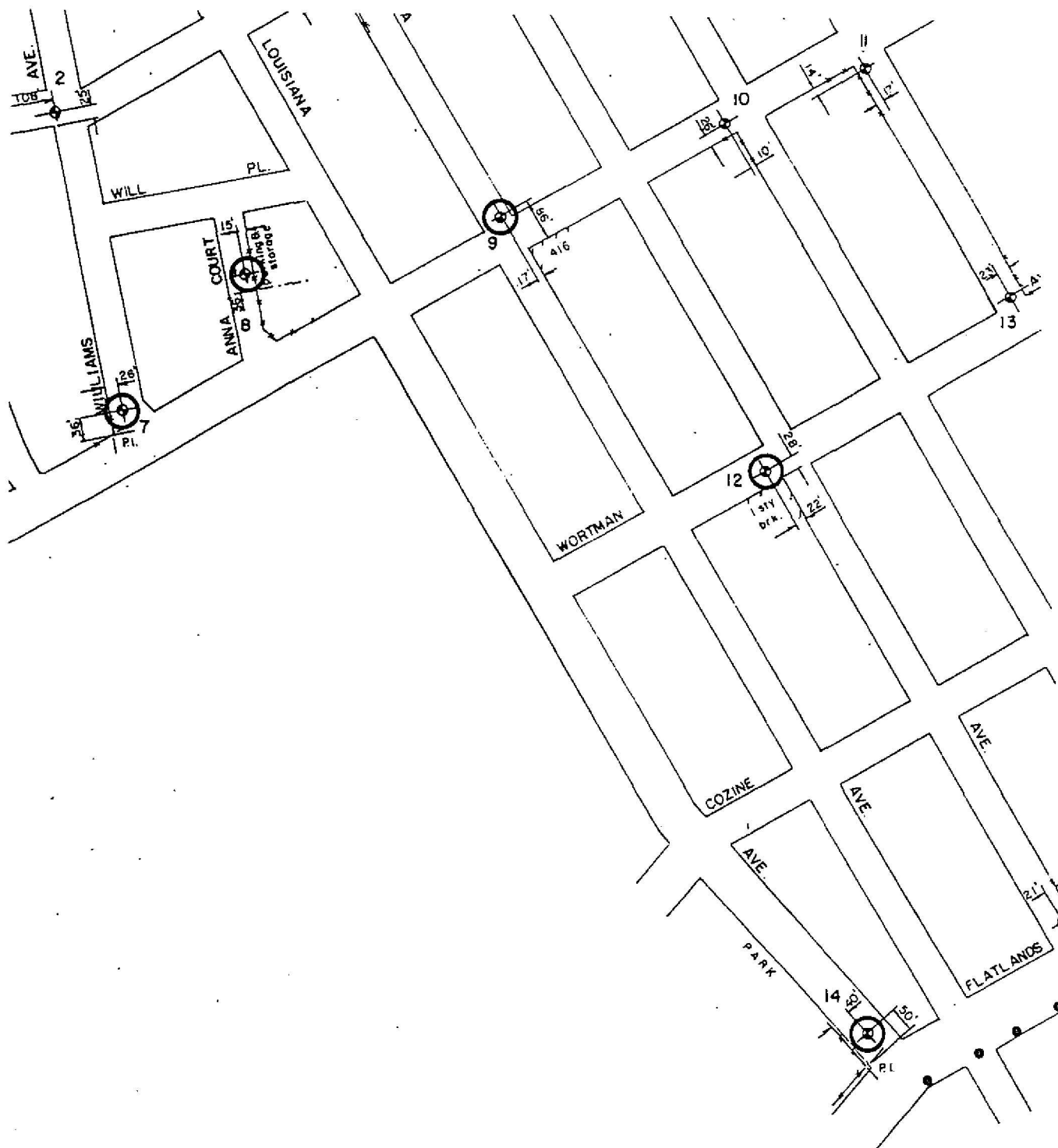
138

139B



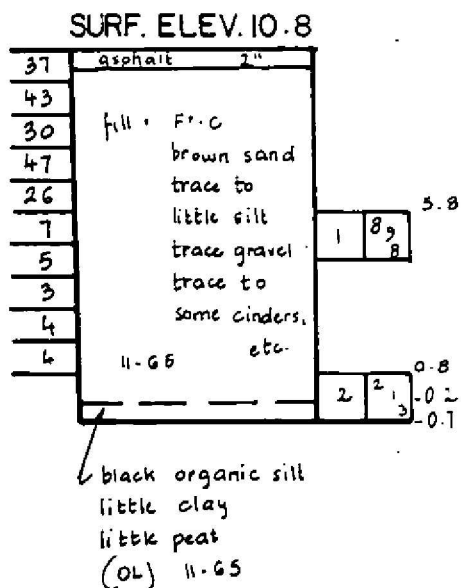
BOREHOLE ATTEMPT 129, 139A  
WIT OBSERVATION AT 13FT.

**B**

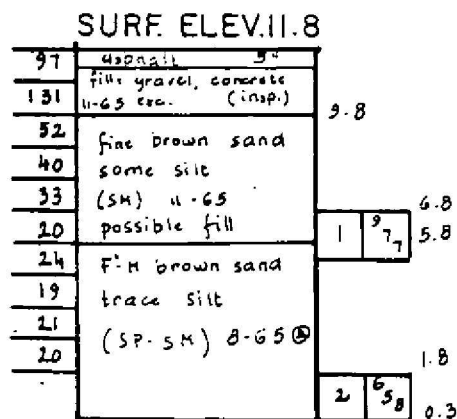


○ location of borings cited in text; see logs that follow

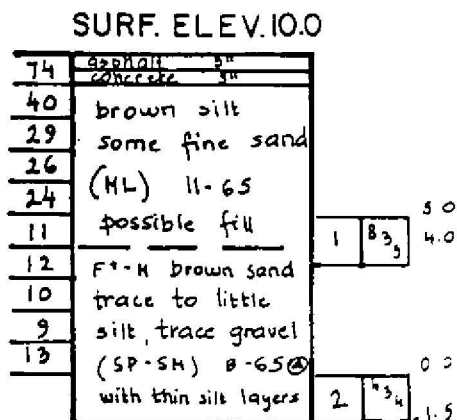
7



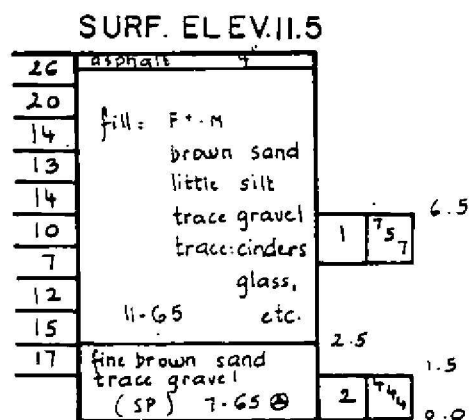
8



9



12



14

SURF ELEV. 9.6

