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LANDMARKS PRESERVATION
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BOARD OF EDUCATION PROJECT:

BROADWAY AND ACADEMY

CEQR 88-126-M

ARCHAEOLOGICAL

ASSESSMENT

REPORT 1988

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ARCHAEOLOGICAL ASSESSMENT REPORT

for the

BOARD OF EDUCATION PROJECT: BROADWAY AND ACADEMY SITE

CEQR 88-126-M

FOR: Parsons Brinckerhoff
Quade & Douglas, Inc.
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New York City, NY

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TABLE OF CONTENTS

INTRODUCTION.....	1
METHODOLOGY.....	3
PREHISTORIC ERA.....	5
HISTORICAL ERA.....	9
SUMMARY.....	17
CONCLUSIONS AND RECOMMENDATIONS.....	19
REFERENCES.....	21
TABLE 1.....	24
ILLUSTRATIONS.....	25

LIST OF ILLUSTRATIONS

- FIGURE 1 : Portion of 1987/88 Sanborn Manhattan Land Book
Showing location of Project Site
- FIGURE 2 : Portion of Nester's New York City Maps: Manhattan
North of 181st Street
- FIGURE 3 : Geologic Map of the Northern Part of Manhattan
- FIGURE 4 : Portion of "Indian Paths in the Great Metropolis,"
Bolton, 1922
- FIGURE 5 : Portion of "Facimile of the Unpublished British Head
Quarters Coloured Manuscript Map of New York and
Environs," Stevens, 1782
- FIGURE 6 : Portion of "1783 Manhattan," MacCoun, 1909
- FIGURE 7 : Portion of "Bridges Map," W. Bridges, City Surveyor,
1811
- FIGURE 8 : Portion of "Randel Maps of Farms," 1819
- FIGURE 9 :
A : Portion of "Blackwell Map #3," 1860
B : From "Field Notes, ... for Blackwell Maps," 1860
- FIGURE 10: Portion of "King's Bridge Section, Commissioners of
Washington Heights," 1860
- FIGURE 11: Section of the "Viele Map of Manhattan," 1867
- FIGURE 12: Portion of "Map of that Part of the City of New York
North of 155th Street," 1868
- FIGURE 13: A Tracing of Section of "Insurance Maps, plate 251,"
Perris and Browne, 1877
- FIGURE 14: Portion of "Atlas of Twelfth Ward," E. Robinson, 1880
- FIGURE 15: Portion of "Atlas of the City of New York,"
E. Robinson, 1884
- FIGURE 16: Portion of "Atlas of the City of New York," Bromley,
1891
- FIGURE 17: Portion of "Atlas of the City of New York," Bromley,
1906/09
- FIGURE 18: Portion of "Atlas of the City of New York," Bromley,
1909/14

- FIGURE 19: Portion of "Land Book of the Borough of Manhattan," Bromley, 1925
- FIGURE 20: Portion of "Land Book of the Borough of Manhattan," Bromley, 1927
- FIGURE 21: Portion of "Atlas of the City of New York," Bromley, 1914/50
- FIGURE 22: Portion of "Atlas of the Borough of Manhattan," E. Belcher Hyde, 1906/69
- FIGURE 23: Project Site Photographs, Current Conditions, 1988
- FIGURE 24: Photograph of Inwood, PS 25, School Garden, 1908
- FIGURE 25: Photograph of Inwood, PS 25, School, 1908
- FIGURE 26: Photograph of Isham Street Indian Burial, 1911
- FIGURE 27: Photograph of Broadway, East Side Between Sherman and Nagle Avenues," 1936
- FIGURE 28: Street Elevations, Department of Public Works, 1926-34
- FIGURE 29:
A: Rock Data Profile, WPA
B: Rock Data Profile, WPA
- FIGURE 30: Rock Data Plan View, 1937
- FIGURE 31: Rock Data Profile, 1986
- FIGURE 32: Rock Data Plan View, 1986
- FIGURE 33: Subsurface Conditions for Block 2234, WPA, 1939
- FIGURE 34:
A: Sewer Index Maps for Block 2234
B: Sewer Index Maps, as Built, series F-27
- FIGURE 35:
A: Existing Conditions, 1953
B: Proposed Service Center, 1953
- FIGURE 36: Profile and Elevation of Electric Esso Sign, 1954
- FIGURE 37: Remedial Plot Plan for Service Center, 1966
- FIGURE 38: Profile and Elevation of Illuminated Exxon Sign, 1972

INTRODUCTION

The New York City Board of Education has proposed the construction of numerous elementary and intermediate schools in various neighborhoods throughout the city. The New York City Landmarks Preservation Commission (LPC) requested a preliminary review of certain of the parcels selected by the Board of Education for possible development. These particular parcels were "flagged" by LPC because of their topographical features and geographical location which indicates, according to known settlement pattern data, that they may possess prehistorical and/or historical archaeological potential. These preliminary reviews were primarily comparative studies - both horizontally and vertically - of past, present, and proposed building footprints.

The Board of Education's proposed Broadway and Academy School is such a "flagged" parcel. This parcel, in Block 2234 of the Inwood section of northern Manhattan, has a 225-foot frontage on the east side of Broadway and is 150 feet north of Academy Street and 125 feet south of West 204th Street. As requested, a preliminary archaeological review was conducted. The research, by Historical Perspectives, Inc., considerably narrowed the realistic archaeological testing field of the proposed school site, identifying only a 50 foot by 147-foot 11½ inch portion of the entire school site, the northern portion of Lot 7, as a possibly previously undisturbed parcel in an area of known prehistoric sensitivity. The preliminary review did not locate sufficient data to determine the subsurface integrity of the potentially sensitive area.

LPC accepted the preliminary review and requested a second stage of documentary research and a monitored soil boring test to further define the archaeological potential of this northern section of the school plot. (Daniel Pagano, LPC, personal communication, 1/29/88). As of February 13, 1988, Lot 7 was a street-level parking lot on land most recently used as a gas station at 4862 Broadway in one of the neighborhoods under the jurisdiction of Community Board 12. See Figures 1 and 2; see Figure 23 for current site photographs. The 50 foot by 147 foot 11½ inch portion of Lot 7 will be referred to as the project site hereafter. The project site's numeric designation has changed several times since the block was lotted some time between 1877 and 1880. See Table 1 for the various designations.

The following "Archaeological Assessment," prepared by Historical Perspectives, Inc., addresses three questions concerning the project site: 1.) what was the potential for

prehistoric peoples' exploitation of the surrounding land and water resources; 2.) what were the chances of historical disturbance of the potential aboriginal cultural remains; and 3.) in conjunction with the second question, if there had been sub-surface disturbances in relationship to the garage and gas station activities, exactly what they had been, where they had been, and when they had taken place. The requested soil boring test(s) will be performed and reported on in a separate submission.

Based on manuscript and published maps, atlases, and official municipal plans and profiles of surface and sub-surface development activities, Historical Perspectives' assessment finds that:

- 1.) there is a possibility of prehistoric peoples' having utilized the project site because of the coincidence nearby of an elevated area of land near a fresh water source along an Indian pathway;
- 2.) with the exception of the foundations for two gas station signposts dug in 1954 and 1972 at the northwest corner of the project site, there is a possibility that neither the rural nor the urban historical development has adversely impacted the possible material evidence for aboriginal activities; and
- 3.) there is no explicit and documented evidence that there are sub-surface gasoline tanks on the project site, but great care should be taken if soil borings are to be taken on any other portion of Lot 7 on Block 2234.

METHODOLOGY

Since archaeological resources are non-renewable, NYCLPC is concerned about any land development that might adversely affect evidence of past lifeways. The archaeological record, in conjunction with the documentary and historical records, forms a data base that researchers can use to help reconstruct both prehistoric and historical adaptations to and utilizations of the natural and man-made environments. In understanding the past through the contemporary material and written evidence, policy makers can begin to plan for a future based on data derived from the people who created for or commented on the world around them. By combining the primary sources with a scholarly secondary literature, policy planners have a fuller insight for decision making. The following assessment on the project site builds on HP's preliminary review for the Broadway and Academy project area as well as on their study of other project areas in northern Manhattan.¹ Additionally, this report uses the geological and prehistoric background that Joan Geismar provided NYCLPC for an archaeological review of the northern tip of Manhattan.² Research was conducted at the New York Historical Society, the New York Public Library, and at various offices of the City of New York: Bureau of Sewers, Department of General Services, Department of Buildings, and the Office of Borough President/Topographic Bureau.

First there will be a description of the geology and topography of upper Manhattan, followed by an explanation of the probable aboriginal activities within the general area around the project site. Then there will be a characterization of the rural nature of the project area into the late nineteenth century, after which there will be a portrayal of the urban development of the project area as Manhattan moved uptown in the early twentieth century. Next the report will show that the mixture of residential and commercial activities begun in the early twentieth century continues in the project area in the late twentieth century.

Then the archaeological assessment will return to a description of the geological and hydrological evidence for a possible explanation of the relative absence of residential or commercial development of the project site. Finally, the report will illustrate that the street elevations above sea level for the project area have risen about three feet some time between 1860 and 1926-1934. During the first quarter of the twentieth century there was a great deal of development in the neighborhood in terms of housing and subways. Compare the Blackwell map of 1860 in Figure 9A and with the 1926-1934 Department of Public Works' street elevation plan in Figure 28 for the changes in

elevation. For the several stages of the redevelopment of the buildings, compare the 1860 manuscript maps Figures 9A and 9B with published atlases in Figures 13 through 22.

Sea level for the North American continent has been fairly stable for over five hundred years, so if the comparatively uniform rise in street elevation above sea level in the project area represents land filling and grading, then the three-foot overburden could have sealed in and protected any possible aboriginal cultural remains. Other than the possible land fill and the shallow foundations for two signposts, there was little other historical disturbance of the project site. Thus, there is a potential for the project site to contain an intact, non-renewable archaeological resource, that is, material evidence for Indian activities that would have exploited a good vantage point with a potable water source near a land transportation network. See Figures 36 and 38 for the 1954 and 1972 signpost foundations.

PREHISTORIC ERA

Geology and Topography

The project site lies more than thirty feet (30 ft) above rock that was formed eons ago.³ See Figures 29A, 29B, and 30. The bedrock in the project area is a juncture of Inwood marble or dolomite and schist. At such interfaces the mineral compounds decompose at a faster rate than they do elsewhere, thus helping to create an uneven topography.⁴ The rocky terrain was also altered by the advancing and retreating glaciers that periodically descended as far south as what was to become the lower Hudson River. For millenia until about 15,000 years ago the glaciers repeatedly scraped the general area and also deposited debris when the ice sheets melted and the glaciers once again receded. Besides dumping sands, gravels, and boulders, the glaciers also "created the channels for the surrounding waterways, including the Hudson River and Spuyten Duyvil Creek...and the Harlem River."⁵

The uneven terrain of the general area derived also from the fresh-water streams that fed into the tidal creeks of the two estuaries, the Hudson River, to the west of the project area, and the Harlem River, to the east. Thus, when the first people travelled to the project area some 10,000 years ago they found an irregular terrain that combined ridges, valleys, and plains with potable water. An examination of early historic maps, described in detail in the Historical Era section, indicates that by approximately 1,000 years ago the project site was a fairly flat, perhaps seasonally inundated wetlands draining into a fresh water stream.

Local Indians

In the 1980s anthropologists and archaeologists consider that the Indians who first hunted and gathered food in what was to become New York City were probably roving bands of extended-family members.⁶ There is little evidence for their having long-term encampments or villages; rather, they probably travelled among various habitats or environments, exploiting the natural resources, both plant and animal, according to the season before moving on.

Certain environments would have been more conducive to hunting and gathering at particular times of the year. In the project area Indians would have found the ridges and rock outcrops of the nearby Fort Tryon and Inwood Parks to be a good vantage point for large game hunting in the late fall and winter. Rock overhangs would have provided shelter for the nomadic groups, particularly from the prevailing northwest winds.

In the spring the Indians would have found the resources of the salt marsh of Sherman Creek a welcome addition to their diet. They would have taken advantage of the fresh-water stream that flowed into Sherman Creek, not only for drinking water, but also for the conditions it provided for game birds and shellfish, especially the oysters that thrive in estuaries. See Figure 4.

Prehistoric settlement pattern data indicates a marked preference for prehistoric habitation and processing sites to be directly associated with a fresh water resource such as the water course known to have run through the project area before development. The LPC's 1982 study included this known bias in its assessment of potentially sensitive prehistoric areas throughout Manhattan. Block 2234 falls within the zone of "High Potential" according to the Landmarks' evaluation.

Present-day anthropologists and archaeologists rely on early twentieth century archaeologists for some of their data. R.P. Bolton's fieldwork, like his documentary work, provides modern-day researchers with descriptive information about archaeological finds. His 1922 "Indian Paths" maps coupled with documented archaeological sites on file with the State Historic Preservation Office (SHPO) and the New York State Museum show that the project site is well within a geographical area of known Indian activities. The New York City Quality Housing Rezoning analysis of the archaeological potential for Inwood revealed no less than seventeen State inventoried archaeological sites. See Figures 3 and 4.

The project site, according to Bolton's map showing Indian trails (Figure 4), would probably be just east of where the "W" in "Broadway" is. Broadway is the twentieth century name for what was earlier called the Bloomingdale Road further south and Kingsbridge Road in the project area. Kingsbridge Road/Broadway followed along a main Indian path that ran the length of the island of Manhattan.

Being near a well-travelled trail would have given the project site an advantage. The trail at that point would have gone along a low ridge at the base of higher rocky elevations to the west and lower marshy elevations to the east. The natural resources of Sherman Creek could be seen and exploited from the project site and the Indians would have had easy access to other nearby natural resources. A 1911 photograph at the New-York Historical Society (N-YHS) records Bolton and friends at an Indian burial site that overlay an aboriginal shell pit, all within the project area. See Figure 26.

Closer than the 1911 Isham Street site in Figure 26 is the Seaman Avenue site noted in both Kearns and Kirkorian's work (1986) and Geismar's (1986) report to LPC. It is within two-and-a-half blocks southwest of the project site. See Figure 1. In the key to her Figure 6 Geismar states that the Seaman Avenue site is "From Seaman Avenue to Cooper Street, off Academy Street. Extensive site: Indian and dog burials, Indian hearths and shell pockets, Revolutionary War hearth sites and huts. First known in the 1890's; exposed during street grading in 1904."⁹

Further from the project site than the Seaman Avenue site, but within the project area, there is the Inwood Station (Tubby Hook) archaeological site. According to Bolton's map (Figure 4) and an eighteenth century British map (Figure 5), either the stream that flowed into Sherman Creek thence into the Harlem River also connected with the Hudson River at Tubby Hook or else it was a nearby stream. Nevertheless, there was easy access along the stream bank between the project site and the Tubby Hook site, that Geismar notes is at "Dyckman Street and the Hudson River. [Material culture includes a] shell midden with associated arrow points, Indian pottery, Revolutionary War material."¹⁰

The artifactual evidence from these archaeological sites excavated early in this century suggests that there have been Indians in the project area for nearly one thousand years. Arrow points probably arrived in the New York region about AD 1,000 and pottery about the same time. These people would have been called Indians of the Woodland period. It seems that while there were probably temporary and seasonal encampments of earlier period Indians, that is Indians from the Archaic, and perhaps even the earliest period Paleo-Indians, there is little likelihood of the survival of their material culture.

The Paleo-Indians, those people who probably arrived about 5,000 years after the most recent glacier receded some 15,000 years ago, had a very small "tool kit" and no ceramics to leave behind. Any of their other objects most likely would have decomposed in the acidic soil of upper Manhattan. As for the Archaic Indians, there is reason to believe that many of their sites have been inundated as the sea level has risen over the millenia. Stone arrow points and pottery of the Woodland Indians have real potential for survival in the project area as well as in the project site, as seen by the early twentieth century archaeological collections.

Not only does the natural environment adversely affect some of the archaeological data, but there is also destruction caused

by subsequent development of the land. The project site has an advantage in this regard because according to a series of maps from 1811 to 1988 there has been very little disturbance on the project site, unlike the property immediately north or south. See Figures 1 and 7 through 22.

The only documented man-made changes to the project site are those in connection with the parking garage and gas station phases of Lot 7, of which the project site is the northernmost fifty feet (50 ft). See Figure 1 and Figures 35 through 38. No structures seem to have been built on the project site, nor were basements or pits for lubrication oil or gasoline storage tanks dug.

Figure 35A shows a concrete ramp in the northwest corner of the project site and indicates that it was one of the existing conditions in 1953 just before Lot 7 became a gasoline service station with a parking area. The documented historical disturbance seems to be limited to the concrete ramp which is also the location of the two illuminated signposts (Figures 36 and 38) and to the cold asphalt that was spread over the project site. Other than that, there is no other written record of historical disturbance of the project site. See Figure 35A and 35B. The cold asphalt would serve to seal in and, to some extent, protect any archaeological remains. The LPC's 1982 study identified the potential preservative qualities of a "cap" of a landfill and/or pavement overburden.¹¹

Thus, there is potential for evidence of Indian activities on the project site and for the material evidence to have survived the natural environment and been little affected by the man-made one. The Indian activities in the project area would have represented seasonal exploitation of the resources either as an occasional foray or perhaps as one of the hunting and gathering spots that was camped on or visited on a yearly basis.¹² However, the historically wet conditions of the project site argue against a Late Woodland occupation of the site. At any rate, the stream, marsh, and trail would have been attractive. The soil boring test(s) requested by LPC will certainly help determine the likelihood that the project site hosted occasional marsh processing forays or hosted more semi-permanent camps. In many respects the presence of a fresh water source and a land-transportation route through uneven terrain were also advantages to the European settlers who followed the Indians' path.

HISTORICAL ERA

Geologically and topographically, the natural environment that the Early Woodland Indians found in the project area was similar to what the first settlers found.¹³ Rocky heights, inland valleys and plains as well as estuarine marshes were all a part of the area north of Dyckman Street. Dyckman Street is less than two blocks south of the project site and is named after one of the early Dutch settlers who owned large tracts of land in northern Manhattan.

On October 11, 1667, Jan Dyckman along with Jan Nagel and twenty-one other Dutch settlers, including one woman, were granted a patent for land in what was then the town of New Harlem, now the Inwood section, the twentieth century name for the project area. Their yearly quitrent was 16 [illegible] of good Merchantable Wheat at the City of New York, which was almost 12 miles to the south.¹⁴ The patent lists the bounds, but what is pertinent to the land-use history for the project area and site is the last paragraph of the patent, in which the grantor specified some of the land forms and animals present in the mid-seventeenth century. The patent states:

Together with all the Soyles, Creeks, Quarrys, Woods, Meadows, Pastures, Marshes, Waters, Lakes, Fishing, Hawking Hunting & Fowling,...and also comonage for Range of feed of cattle & horses further west into the Woods upon the Island¹⁵ as well as without & within their bounds & Limits.

In 1744 there was a land division between Dyckman and Nagle descendents, and again the listing of the bounds provides a mental image of topographical features that no longer exist in the project area. A parchment indenture dated June 9, 1744, from Jacob Dyckman to John Nagel (varient spellings according to the manuscript) is concerned with land previously held by them as joint tenants, but was divided equally between them.

Even with the boundary map "Laid down by a schale of Ten Chains to an Inch Done in June 1744" as well as by a compass rose, it would be very difficult to place the three separate parcels on the landscape today. Nonetheless, it is illuminating to read about some of the continuing land features as well as some of the improvements. The mid-eighteenth century markers included: Salt Meadows, Road, heap of stones, White Oak, Spring, stake, Meadow, Hammock, Doke or Valley, trees, Butternut Tree, sapling, Red Oak, and River. For the improvements, the last part of the indenture reads:

To Have and To Hold all and every above mentioned Lotts pieces and parcels of Land meadows and Hammocks as above bounded and set forth, with all and singular the fences, Improvements, Timber, Ways, Easements Rights Benefits Advantages and Commodities....¹⁶

Notice that there was no mention of dwelling houses, barns, stables, and other outbuildings. This is not unusual, but it is confounding for archaeologists and other researchers doing land-use history. Yet there is an addendum on the 1744 parchment indenture that is tempting, but dangerous, to interpret as being very nearby the project site, which is no more than half-a-block southeast of the William Dyckman House, built in 1748, rebuilt in the late 1780s, and is on the National Register of Historic Places. See Figure 1 and also the photograph taken from the Dyckman House porch looking southeast toward the project site, Figure 23.

Notwithstanding that the addendum predates the William Dyckman house, it is hazardous to link the project site to the 1744 addendum because in the project area there were several Dyckman houses noted along Kingsbridge Road on the Randel map of 1819-1820, sometimes called the "Farms Map," as well as on the Blackwell map of 1860 and the "Olmstead" map of the same date.¹⁷ Nevertheless, the addendum suggests that there was some eighteenth century activity east of Kingsbridge Road and that salt meadows were attractive places for the European settlers as well as for the Indians. The addendum states:

I the above said Jacob Dyckman do for me heirs executors and administrators further covenant and grant to the Said John Nagel his heirs and assigns that they shall and may from time and at all times have ocation to Goe from the Kings road between the house where I the said Jacob Dyckman now dwells and ye house of Jacob Dyckman Junr too and from the Salt Meadows that now belong¹⁸ to the Said John Nagel this doen before Executing.

Late eighteenth century British and American maps for the project area dwell on topographical features and roadways. As far as the scale and details of the maps allow, streams, marshy land, and Kingsbridge Road characterize the project site and immediately surrounding area, not only in the eighteenth century maps, but also in the maps of the first two-thirds of the nineteenth century. Compare Figures 5 through 12. This is understandable for the British Revolutionary War map of 1782 (Figure 5). They noted obvious features in order to guide their troops. The hollow square north and west of the marsh and road

probably marked the William Dyckman house that the British¹⁹ were to burn the following year as they evacuated New York City.

The 1819-1920 "Farms map" of John J. Randel shows Jacobus Dyckman as the owner of the land that in 1988 is the project site and surrounding project area. See Figure 8. The only improvements in the land that Randel depicted were fences in the immediate area around the project site. The fencing ran along both sides of Kingsbridge Road as well as roughly parallel to the road about 300 feet to the east and slightly downhill. Perpendicular to this, forming something of a trapezoid and enclosing rock outcroppings along the north, were two stretches of fencing along streams which fed into Sherman Creek.

Into the first part of the nineteenth century the Town of Harlem continued to be made up of dispersed farmsteads. Randel drew clusters of dwelling houses, sheds, barns, and stables roughly 800 feet to the south of the project site on the east side of Kingsbridge Road on Jacobus Dyckman's land and also approximately 400 feet to the north of the project site across Kingsbridge Road, on the west side, on the heirs of Abraham Dyckman's property. About 500 feet further north on the east side of the road Randel noted an orchard. While household and agricultural pursuits were indicated all around, none appears on the project site.

Soon after mid-century there were enough people among the scattered landholders so that Isaac Dyckman gave land to the city, on the condition that a school be erected there. In 1858 Public School 52 became a reality, three miles north of the nearest public school at 156th Street.²⁰ This school is shown on the 1860 Blackwell and "Olmstead" maps, both drawn in 1860 (Figures 9A and 10). Blackwell's field notes have a scale drawing of PS 52, complete with its boys' privy at the southeast corner of the property. See Figure 9B. Other contemporary maps placed a girls' privy at the northeast boundary line.

Besides offering a glimpse into a neighborhood's desire for local schooling and ideas about cleanliness, the measured plan drawing of the school provides a scale for the larger area Blackwell map, so that the project site can be pinpointed with some assurance. Although the school house has changed its configuration several times in the last 130 years, it continues to be less than a block south of the project site.

With that in mind, a careful look at the Blackwell map (Figure 9A) suggests that the project site is about where the stream seems to go under Kingsbridge Road. The elevations, presumably feet about sea level, immediately in the vicinity

vary from 23.2 and +20.6 to the north and 20.8 to +21.2 on the south, with 18.4 at the near-confluence of three streams. Thus, the project site remained undeveloped, perhaps a fairly flat, raised area on a slope that descended gently toward Sherman Creek.

However, the "Olmstead" map of the same year provides a slightly different picture. See Figure 10. While this 1860 map places the project site generally on the 20 foot contour line, as the Blackwell map does, it also places the project site in a distinctly marshy environment that encircles the base of the 20 foot contour to the east of PS 52 which stood at an average elevation of 33.9 according to the Blackwell map. A look at the Viele map of 1867 (Figure 11) further suggests that the project site was a wet one just after the Civil War. The project site seems to have a stream running through it, a stream, just one of many, that flows into Sherman Creek. Viele used the symbol for marsh for the rest of the block on which the project site sits.

The inundated land conditions may have deterred the development of the project-site side of the Kingsbridge Road. Almost equidistant to the north as PS 52 is on the south, there is another building on the east side of Broadway. These two structures, plus the A.L. Walton house next to the school, seem to be the only ones to the east of Kingsbridge Road, which differed markedly from the west side. A comparison of the 1819-1820 Randel map (Figure 8) and the 1860 "Olmstead" map (Figure 10) shows that, within four decades, there was an increase in buildings and outbuildings on the west of the road.

Within the next ten years, though, the emphasis of the upper Manhattan maps shifted from topographical land forms to commercial real estate. The project area of Inwood began slowly to develop into neighborhoods that mixed multi-family housing with small commercial and social institutional activities. Even though the Town of Harlem had become a part of New York City as early as 1818 and the Inwood or Tubby Hook section had its first New York City public school in 1858, it took nearly twenty years more for Manhattan's gradual move uptown to make an impact on the project area immediate to the project side.²¹

The Perris & Browne insurance map of 1877 (Figure 13) shows only two structures on an official block that was to become Block 2234. These structures were located 100 feet (100 ft) south of the project site. There was a one-story frame dwelling and an outbuilding that was a one-story framed, light manufacturing building connected to a two-story one. What theretofore had been called Kingsbridge Road was labelled Broadway. The

name at least, connected this developing locale with the growing city to the south.

By 1880 the official block on which the project site sits was lotted. See Figure 14. (The earlier maps of the 1860s had been altered at least once with later additions of proposed street gridding. Some grid systems respected the topography, while others did not. See Figures 9A, 10, and 11.) Between 1880 and 1914 there were several episodes of redevelopment on the two lots that lie 100-150 south of the project site, but there was no other development on the block until sometime between 1909 and 1914. Compare Figures 14 through 18. The project site remained a blank (vacant) and was numbered as lots 116 and 117 in 1880, 1884, and 1891. In 1906/1909 and 1909/1914 the project site continued to be blank and was labelled 14 and 15.

Only the Robinson maps of 1880 and 1884 attempted to combine topographic features with the official grid system as well as with a previously proposed grid system. See Figures 14 and 15. The 1880 atlas placed a stream running through the block approximately 100 feet (100 ft) south of the project site, but there is not one going through the project site. The stream fed into Sherman Creek. The 1884 atlas eliminated that stream, but placed another stream in the northeast corner of the block, approximately 150 feet (150 ft) from the project site.

The general area was in transition from a rural area, separated from the urban center of downtown and midtown Manhattan, to a continuation of that urban center as it moved uptown. The transition to and the connecting links with the metropolis moved at an uneven pace. According to the 1879 edition of D. Appleton's Dictionary of New York and Its Vicinity, Inwood was described for visitors as:

The name of the northwestern corner of New York City. It is still a very rural spot....15 miles from the Battery along the Hudson river and can be reached by trains from the depot of the Hudson₂ river railroad at 30th st and 10th av. Fare, 25 cts.

On the other hand, for the people who lived in Inwood, the section of Manhattan that began at Dyckman Street, less than two blocks south of the project site, there was another perception:

No part of the city has suffered so much from lack of facilities for reaching centers of business as Inwood has. After the opening of the Grand Central Station, and the diversion of expresses and accommodation

trains from the banks of the Hudson at Spuyten Duyvil, Inwood was dependent for many years upon a few trains running to Ninth Avenue and Thirtieth Street, and, as a consequence, not a score of families was²³ added to its population in a period of thirty years.

Between 1909 and 1925 when there were further changes to the built environment on Block 2234, there were other accompanying changes that brought uptown and downtown closer together. See Figures 18 and 19 for the changes on the land. Nevertheless, the project site on Block 2234 remained blank on the atlases not only through 1925, but also through 1950.

In 1906 the Broadway Subway (elevated), reached Dyckman Street and St. Nicholas Avenue, several blocks east of the project site.²⁴ Beginning some time between 1914 and 1925, according to the atlases, the Independent Subway was running subways along Broadway, stopping at Dyckman Street, less than two blocks from the project site. See Figure 2.

There were other subterranean changes in the project area. Sewers were laid along Broadway in front of the project site in 1905. In 1929 there was additional work done on the 3'6" x 2'4" sewer line almost directly in front of the southern half of the project site. See Figure 34. The improved public services might have placated the author who was worried about families moving into the project area.

Between 1909 and 1914 Block 2234 began to take on the character it has today, that of five-story multiple-dwelling units, often called New Law Tenements.²⁵ See Figure 23. Yet the project site on Block 2234 remained a blank on the atlases. See Figures 17 and 18. It was not until sometime between 1914 and 1925, though, that most of the apartment-construction was done on Block 2234.

By 1927 within three blocks in any direction of the project site, all the street fronts were being developed and some had open lots, the project site among them. As the brick tenements were being built, there were fewer and fewer of the earlier two-story frame buildings around. See Figures 24 and 27.

The project site, labelled 14 and 15 on the atlases of 1925 and 1927, abutted to the south, a redevelopment of land that had previously been used for dwellings and stables. See Figures 13 through 18. In 1925 that 175 foot (175 ft) frontage on Broadway contained frame and brick dwellings surrounded by a series of one-story fire-proof garages, alternatively labelled as being made of iron (1925) and brick (1927).

What is important to the land-use history of the project site is that this 175 foot (175 ft) plot, Lots 7 through 13 on the 1925 and 1927 atlases, would become, in 1953, part of Lot 7 that incorporated the previous Lots 7 through 15. According to the atlases, through all the redevelopment of Block 2234 and the renumbering of the lots, the project site continued to be left blank until 1953. Even in 1950 when the project site's lot number was changed to 14 and was considered as one, 50-foot width on Broadway, the atlases showed it as a blank or undeveloped. See Figure 21.

By the early 1930s the open spaces on the streetfronts had been developed, that is, with the exception of the project site. What stands today in the project area is, by and large, what had been built during the first wave of residential and commercial development. See Figure 23. New York City and the United States went through the Great Depression and World War II, which brought further development to a halt.

Besides that, in 1931, the George Washington Bridge joined New York City with New Jersey, thus opening up another kind of residential life. Families who would have a chance to move into the project area had a choice between upper Manhattan urban and New Jersey suburban life. The housing stock in the project area has survived because there has been an emphasis on developing highways and suburbs since the late 1940s, thus alleviating some of the possible overcrowded living conditions.²⁶

In 1953, when Lots 7 through 15 were treated as one, 225-foot lot facing Broadway and designated as Lot 7, there were extensive changes made on the part of the lot abutting immediately to the south of the project site. See Figure 35A for the 1953 existing conditions of Lot 7. An October 28, 1953 architectural blueprint varied somewhat from the 1950 atlas.

What is particularly noteworthy about this October 1953 blueprint is the notation in the northwest corner, "Conc.[rete] Ramp Down," in addition to the project site being referred to as an open parking area. On the blueprint there is no mention of degree of slope or the surfacing material of the parking area. Perhaps, this had been the configuration of the project site since some time between 1914 and 1925, when the mid-block lots were begun to be used for automobile storage and service as well as for a gas station. See Figures 18 through 21. No buildings or subsurface features are suggested on the blueprint for the project site.

Under "Notes" on a June 12, 1953, corrected to July 9, 1953 blueprint, it reads, "Contractor must...remove all obstructions

(including all present buildings)....," and "No School, Playground, Library, Museum, Park entrances, or exits on same street. None within 200' in any direction...."²⁷ Presumably, 'removing' meant removing from the site, or else there is a possibility that the project site may underlie this c. 1953 demolition debris.

By comparing Figure 22 with Figures 35A and 35B there can be an approximate determination of where the 1953 service center footprint overlay the earlier garages and other gasoline-related features. Figure 22 shows one paste-over showing through the post-1953 paste-over. No structures on the paste-overs impacted upon the project site.

The October 28, 1953 blueprint of the mid-block service center shows that the project site is under a surface of cold asphalt. See Figure 35B. It also shows that the northernmost set of gas pumps impacts on the project site five feet (5 ft), ten feet (10 ft) east of the building line, but there is no indication that there are any subsurface tanks on the project site. Only the electric Esso sign has a foundation, six feet (6 ft) below grade, at the northwest corner of the project site, according to the June/July 1953 blueprint. See Figure 36.

In the July 7, 1966 "remedial plot showing true existing conditions...." (Figure 37), the drawings show that there was a removal of the 1953 gas pump island that impacted the project site. Besides that, there does not seem to be any other surface or subsurface impacts on the project site. The blueprint does show several sub-surface changes in the southern part of the Lot 7, though.

Further sub-surface changes in 1972 have been noted for the area immediately south of the project site, but none of the changes affected the project site. There are two blueprints in the Block and Lot files of the Buildings Department that show the location and dimensions of gasoline storage tanks and describe the materials used to line the storage pits as well as detail the location of the subsurface piping for tank-filling. The two blueprints, both approved, have different subsurface configurations. These are the most recent blueprints in the Block 2234, Lot 7 folders.

SUMMARY

Thus, although there have been many episodes of redevelopment for the project area immediately south of the project site, there has been a minimum of historical development, either above or below ground, on the project site itself. As outlined above, the Board of Education Broadway and Academy parcel, and the project site specifically, is within a zone of high prehistoric archaeological potential. And, while the absence of historical development increases the potential for intact archaeological evidence for the Indians on Manhattan, it also raises a question.

For nearly 100 years since the block was lotted, why would there have been a virtually vacant, 50-foot plot of land facing Broadway within two blocks of the main intersection of Dyckman Street? For the last 83 years the project site has had access to sewers, and for more than 63 years there has been a subway stop within 2 blocks, not to mention that more recently there has been a post office, school, library, church and synagogue, parks, and major shopping street all within easy walking distance of the project site.

Although automobile parking is an important feature of any cityscape, perhaps the choice of the placement of some street-level, open parking lots has something to do with the land on which they lie. In many cases in the last several decades such un-enclosed parking lots have been a transitional phase between redevelopment activities, but this does not seem to have been the case of Lot 7 on Block 2234.

For at least the last 63 years the primary use of Lot 7 has been for automobile gas-tank filling, servicing, and storing. In all the atlases between 1877 and 1988 the project site has been coded as being blank or undeveloped, even though Buildings Department plans since 1953 show that the project site may have been used for open-air parking. Lot 7's land use has not been a temporary condition between development projects. Could it be that such land use for the project site and the rest of Lot 7 has to do with the fact that, according to eighteenth and nineteenth century surveyors and map makers, the property's main topographic features were its streams and marshes? Perhaps the additional work done in 1929 on the 24-year old sewers approximately in front of the project site had something to do with the wet conditions noted on the series of maps mentioned.

Perhaps such land could not support a series of new law tenements. Perhaps there needed to be a lighter weight-load on that half-acre. In any case, gas stations with street-level

parking lots fill a real need in an area with mostly only on-street parking. They also are a solution for a landowner who wants to make commercial use of property. It may be simply that garages and service stations made good business sense, but the project site has been virtually vacant ever since the general area has become a place of five- and six-story apartment buildings with commercial activities at street level.

CONCLUSIONS AND RECOMMENDATIONS

Three conclusions can be drawn from the archaeological assessment outlined above:

- 1.) there is a possibility of prehistoric peoples' having utilized the project site because of the coincidence nearby of an elevated area of land near a fresh water source along an Indian pathway;
- 2.) with the exception of the foundations for two gas station signposts dug in 1954 and 1972 at the north-west corner of the project site, there is a possibility that neither the rural nor the urban historical development has adversely impacted the possible material evidence for aboriginal activities; and
- 3.) there is no explicit and documented evidence that there are sub-surface gasoline tanks on the project site, but great care should be taken if soil borings are to be taken on any other portion of Lot 7 on Block 2234.

The findings of this assessment are invaluable in planning the soil boring test(s) required by LPC. In consideration of the gasoline-related history of Block 2234 a very real concern, prior to the completion of this report, was that such testing would pose safety hazards. A properly located "continuous tube" boring test(s) should help clarify the degree of inundation on the project site during the Woodland Period and therefore assist us in estimating the likelihood that archaeological resources may, in fact, rest under the project site ground surface.

It is not the practice of responsible archaeologists to recommend the excavation of an urban site just because something might be there. There must be the reasonable and demonstrably valid expectation of obtaining data which would fill an important gap in or make a substantive contribution to the existing archaeological record. In an area like northern Manhattan, there is always the possibility of recovering a random artifact from the prehistoric era. However, excavations designed to seek out such tentative resources would be untenable.

Although archaeologists know that the Inwood area was a preferred harvesting and habitation area during the Woodland Period, this information has been gleaned in large part from late nineteenth and early twentieth century reports. Archaeological field and laboratory techniques are far more advanced today than when these early site reports were completed. There are still many unanswered questions on the seasonal cycles and habitation patterns of the Woodland Period that current, ad-

vanced archaeological methods can address. The results of the sub-surface sampling, coupled with this assessment, should alert us to the project site's potential for substantive contributions to our knowledge of the past.

REFERENCES

1. Betsy Kearns and Cece Kirkorian. "Preliminary Review, New York City Board of Education: Proposed School Sites: Broadway and Academy, Manhattan" 1987. Ms on file with NYCLPC. Betsy Kearns and Cece Kirkorian, "Archaeological Review, Quality Housing Rezoning Project," 1986. Ms on file with Allee King Rosen and Flemming, NYC.
2. Joan Geismar, "An Evaluation of the Archaeological Potential of the Community Hospital Site," 1986. Ms on file with NYCLPC.
3. Rock data profiles and plans are shown in this report as Figures 32A and B, 33, 34, and 35. The profiles and plans were compiled by the WPA and can be found in Vol. 4, Sheet 30 at the Sub-surface Section of the Department of General Services, Room 2214 of the Municipal Building.
4. Personal communication with Lawrence Ebbitt, Chief, Subsurface Exploration Section, Bureau of Building Design, New York City's Department of General Services: February 6, 1988. The rock data maps in Figures 29-32 provides further evidence that the project area contains both Inwood marble or dolomite and schist.
5. Geismar (1986), p. 15.
6. Geismar (1986), pp. 20-21; Louis A. Brennan, personal communication: 1978-1982.
7. Sherene Baugher-Perlin, et al, "Towards an Archaeological Predictive Model for Manhattan: A Pilot Study," 1982. Ms on file with LPC.
8. Kearns and Kirkorian (1986), n.p., Manhattan: Neighborhood 4.
9. Geismar (1986), p. 19"A".
10. Geismar (1986), ibid.
11. Baugher-Perlin, et al (1982), p. 74.
12. Geismar (1986), p. 22.
13. Geismar (1986), p. 13.

14. From a manuscript copy of the October 11, 1667 patent granted by Thomas Dongan, Captain General Governor and Vice Admiral of New York under George II. The copy is part of the Dyckman family papers in the manuscript collection of the New-York Historical Society (Bretton's No. 152) and can be found in folder 5 of a box labelled, "Deeds, Indentures, Releases".

A 1902 photograph of the twelfth milestone has the caption "Broadway west side [about where New #4983 should be just above Isham gateway [about midway between proj. 211 & 212 Sts.]" The photograph is in the collection of NY-HS.

15. Dyckman family papers, loc. cit. (N-YHS)
16. Dyckman family papers, loc. cit. folder 1 (N-YHS)
17. "Randel Maps of farms, etc., as affected by the Avenue & Streets as Laid Out by the Commissioners in 1807. Volume No. 4 contains that part of Manhattan, Lying all West of Volume No. 3 from Greenwich Lane to Spuyten Duyvil Creek, John J. Randel, City Engineer." The manuscript Randel map is Acc. No. 210 and can be found at the Office of the President of the Borough of Manhattan, Topographic Bureau, Map Room, Municipal Building. The Farms maps were done between 1819 and 1820.

The 1860 manuscript Blackwell map is Acc. No. 1940 and is also available in the Map Room of the Topographic Bureau. The title is "Blackwell Map #3 - 155th Street to 205th Street, East of Kingsbridge Road (on 12th Avenue). Topo, Elevations, etc." Blackwell's field notes, Acc. No. 2044 at the Topographic Bureau, give details, drawn to scale, of structures, outbuildings, privies, cisterns, and garden layouts.

The manuscript "Olmstead" map of 1860 is filed under "New York City - Parts" at the Map Division of the New York Public Library (NYPL). Its title is "King's Bridge Section. Copied from the Preliminary Map of Commissioners of Washington Heights, November 1860." According to a Map Librarian at NYPL, the donor of the map thinks it may have been executed by the Olmstead group. About 1860 Olmstead was made Commissioner of the streets north of 155th Street.

18. Dyckman family papers, loc. cit., Indenture dated June 9, 1744 (N-YHS)

19. Kearns and Kirkorian (1987), p. "2".
20. Anonymous, Fiftieth Anniversary of the Inwood School, PS 52, Manhattan, New York, 1858-1908, New York, 1908, p. 7.
21. Personal communication with Col. Geoffrey Fulton, architect and consultant: February 8, 1988.
22. Appleton's Dictionary of New York and Its Vicinity (New York: D. Appleton & Co.), p. 109.
23. Anonymous (1908), p. 6.
24. Kearns and Kirkorian (1987), p. "2".
25. Personal communication with Col. Geoffrey Fulton, architect and consultant: February 8, 1988.
26. Community Council of Greater New York, Manhattan Communities: Population Characteristics and Social and Educational Services - Inwood - Washington Heights - Hamilton Grange, 1955; Norval White and Elliott Willensky, AIA Guide to New York City, revised edition (New York: Collier Books, 1978); Molly Ivins, "A Renaissance in a Forgotten Neighborhood," New York Times, October 9, 1981, pp. B1 and B5; G.G., "Scaling the Heights," P&S (The College of Physicians and Surgeons of Columbia University), Spring 1987, pp. 21-24.
27. "Plot plan Servicecenter, New York City, Broadway w/ of 204th St. Kesbec Inc., Marketing Department, Construction & Maintenance, 15 West 51st Street, New York 19, N.Y.," dated June 12, 1953, latest correction July 9, 1953, file no. 5780, drwg. no. 1 (Block 2234, Lot 7 file at the New York City Department of Buildings, 160 West Broadway).
28. Besty Kearns, Cece Kirkorian, and Lucianne Lavin, "Phase IA Archaeological Assessment Report for the Tibbett Gardens Project, Bronx, New York," 1987. Ms. on file with LPC.

TABLE 1

Lot Number Designations for the Project Site,
the northernmost 50 feet
of 4862 Broadway
on Block 2234

Year	Lot Number
1988	7
1987	7
1978	7
1969	7
1950	14
1927	14 & 15
1925	14 & 15
1914	14 & 15
1909	14 & 15
1891	116 & 117
1884	116 & 117
1880	116 & 117
1877	block not lotted

Source: The data are derived from insurance maps and city atlases. For full citations, see the Figures 1, and 13 through 22. The shorthand citations are: Sanborn 1988 and 1987, Bromley 1978, Belcher Hyde 1969. Bromley 1950, 1927, 1925, 1914, 1909, and 1891, Robinson 1884 and 1880, and Perris & Browne 1877.

H I L L

P A R K

2255

Lot 2000.

benne East

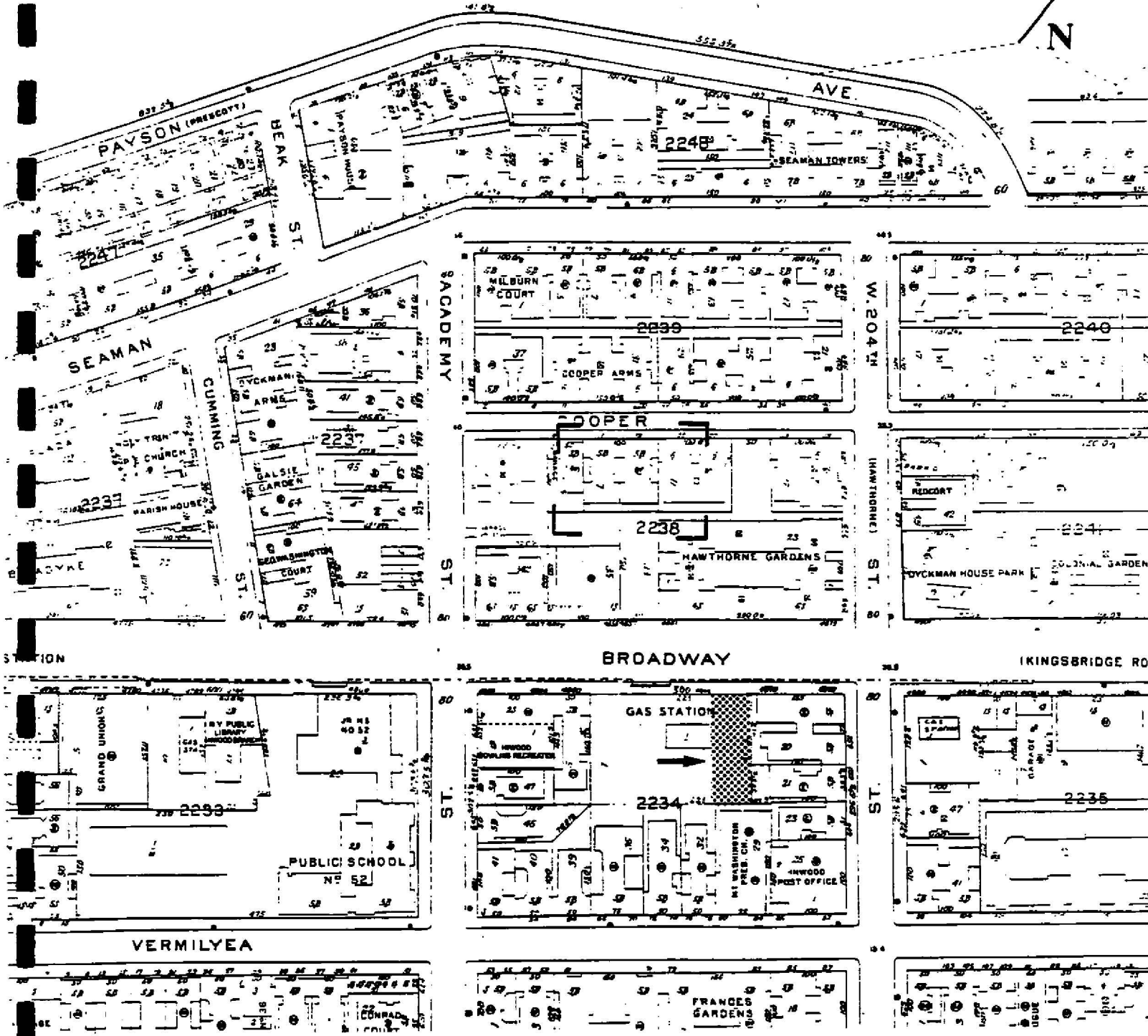
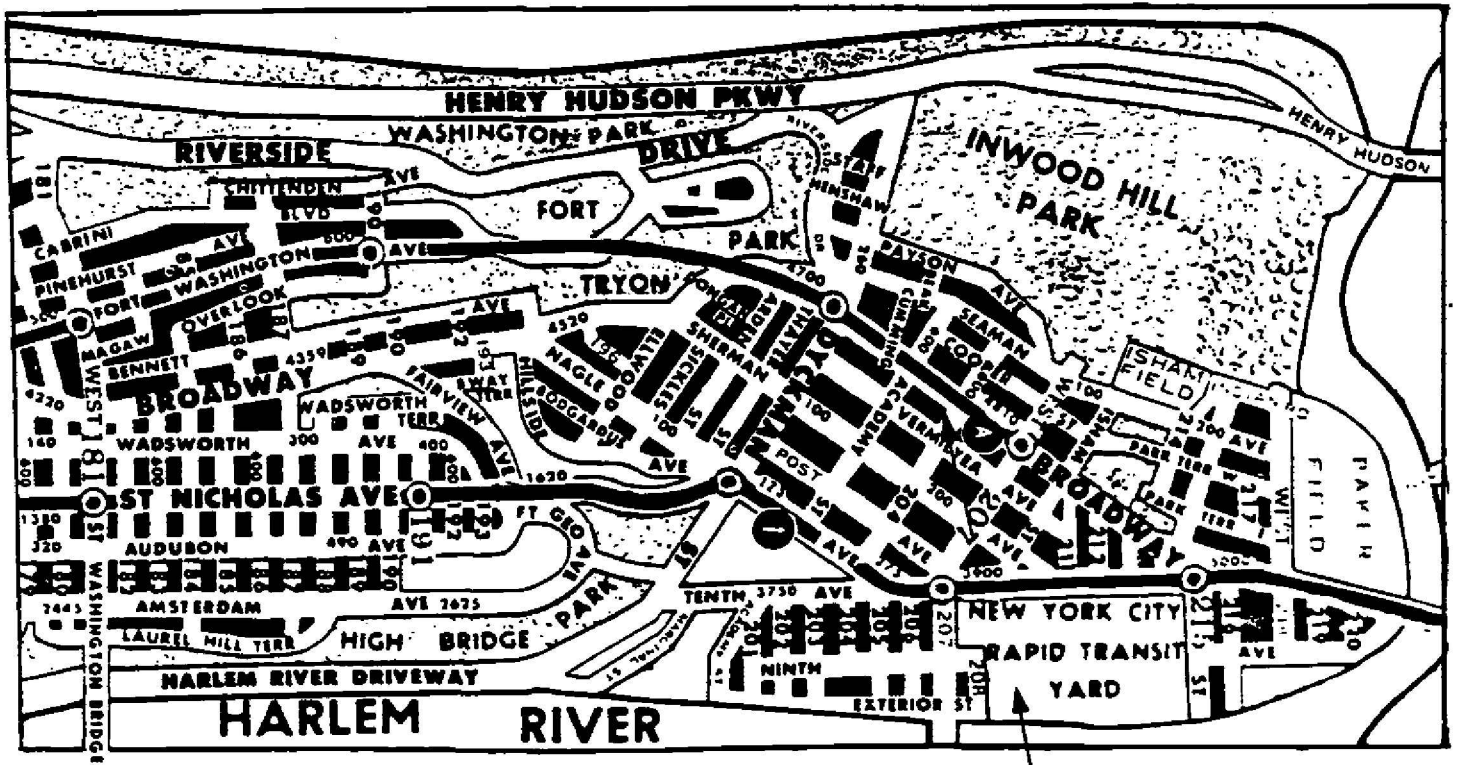


Figure 1
 The project area in 1987-1988 showing the project site (⊠), the northern-most fifty feet (50 ft) of Lot 7 on Block 2234 at 4862 Broadway, in the Inwood section of Manhattan. (From Sanborn Manhattan Land Book of the City of New York (Formerly Published by G. W. Bromley Co., Inc. and Sanborn Map Co., Inc., 1987-1988.) Reproduced from the published Plates 182 and 183, purchased from Real Estate Data, Inc.)

Figure 2
 Manhattan north of 181st Street, showing the Washington Heights and Inwood sections and including the subway lines (From Nester's New York City Maps, no date, cost 60 cents. Nester's Map and Guide Corp., 244 West 49th Street, NYC.)



BROADWAY AND ACADEMY
 PROJECT SITE

Figure 3
 Geologic Map of the Northern Part of Manhattan, West Bronx, and Eastern Bergen County, New Jersey, showing areas of known aboriginal activities. The State Historic Preservation Office, Albany, New York and the New York State Museum, Albany, New York provided the data for the locations of documented Native American archaeological sites. The bedrock map is reproduced from Joan Geismar, "An Evaluation of the Archaeological Potential of the Community Hospital Site," 1986, and is credited to Schubert 1986:75. The project site would probably be under the "y" in "Dyckman St."

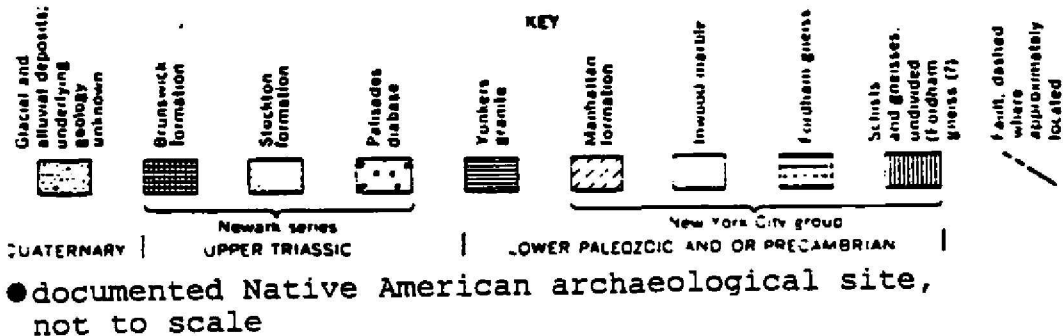
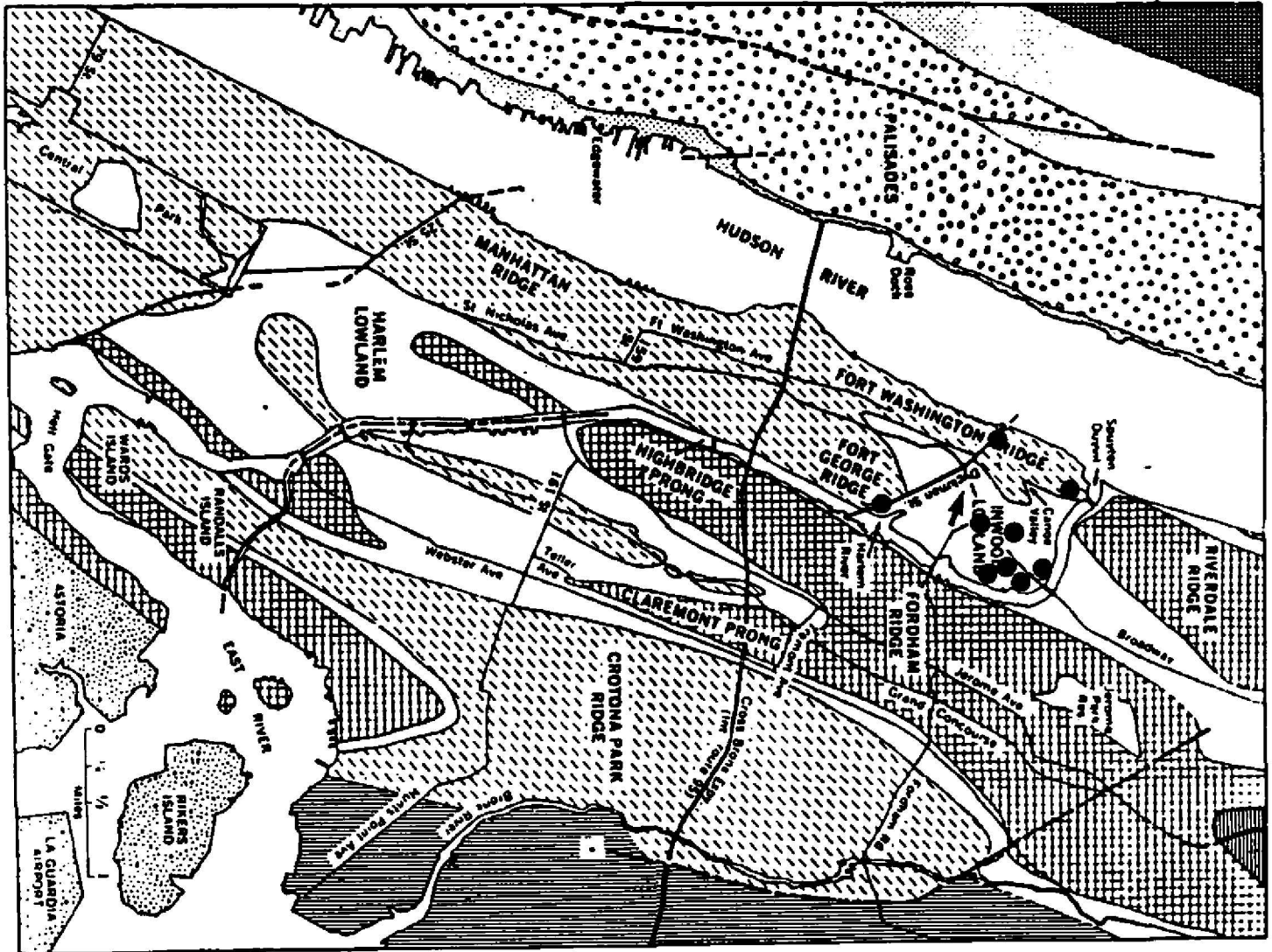
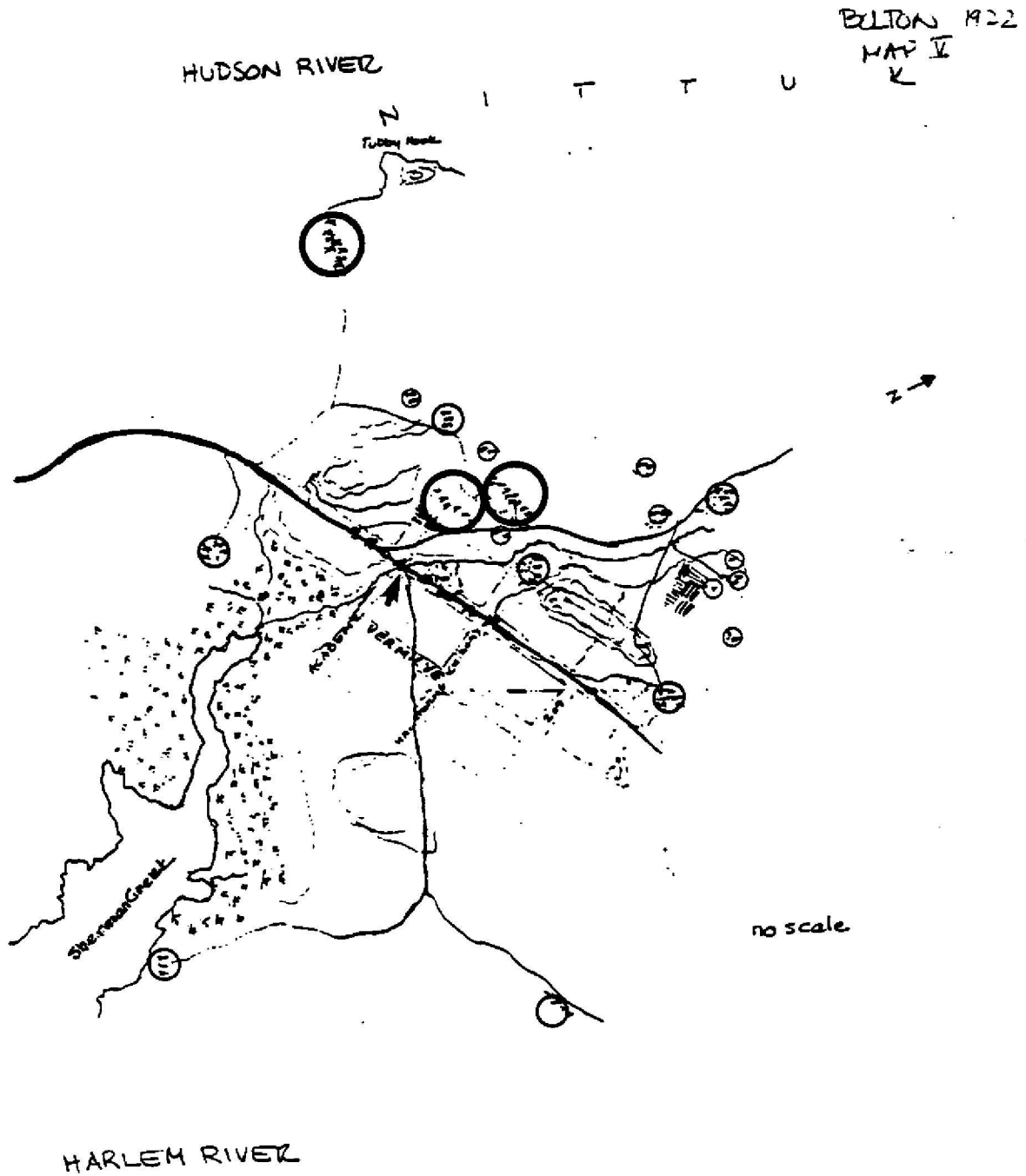


Figure 4
 A tracing of a section of the Indian Paths in the Great Metropo-
 lis, a series of maps by Reginald Pelham Bolton (New York: Museum
 of the American Indian, Heye Foundation, 1922). Map V: "Upper
 Manhattan Comprising the Inwood Valley, the Dyckman Tract, and
 Marble Hill," no scale, (New York Public Library Map Division).



○ "Indian Village" locations, as noted by Bolton

Figure 5
A tracing of a section of B. F. Stevens, "Facimile of the Un-
published British Head Quarters Coloured Manuscript Map of New
York and Environs," 1782. Reproduced from the Original Drawing
in the War Office, London, scale about 6 1/2 inches to a mile.
(NYPL)

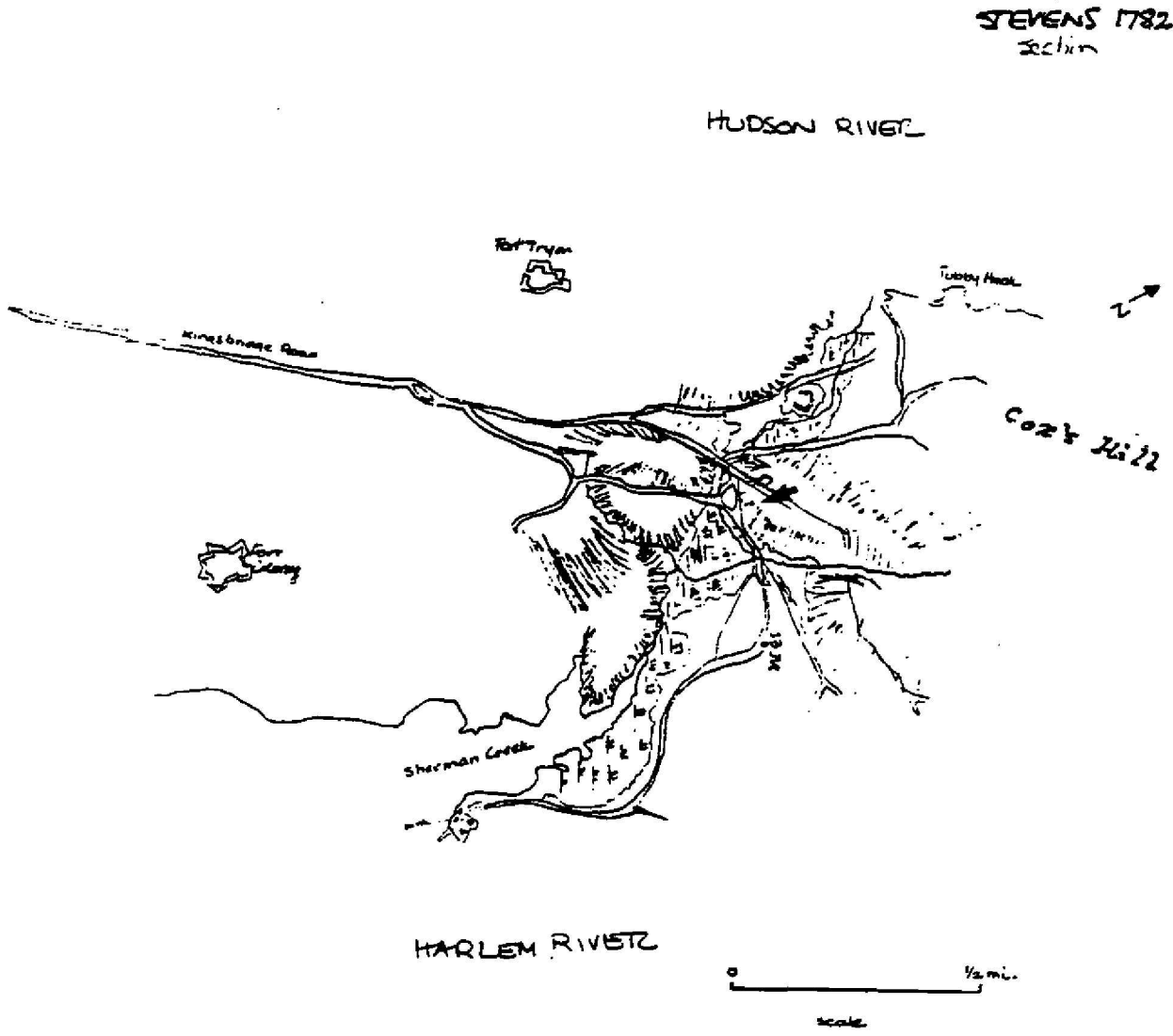


Figure 6
 A tracing of a section of "1783 Manhattan Island at the Close of the Revolution Showing the American City with Its Landmarks and the Revolutionary Fortifications on the Island by Townsend MacCoun, W.E." copyright 1909. The two dates indicate that the original map was either reprinted or updated. (NYPL)

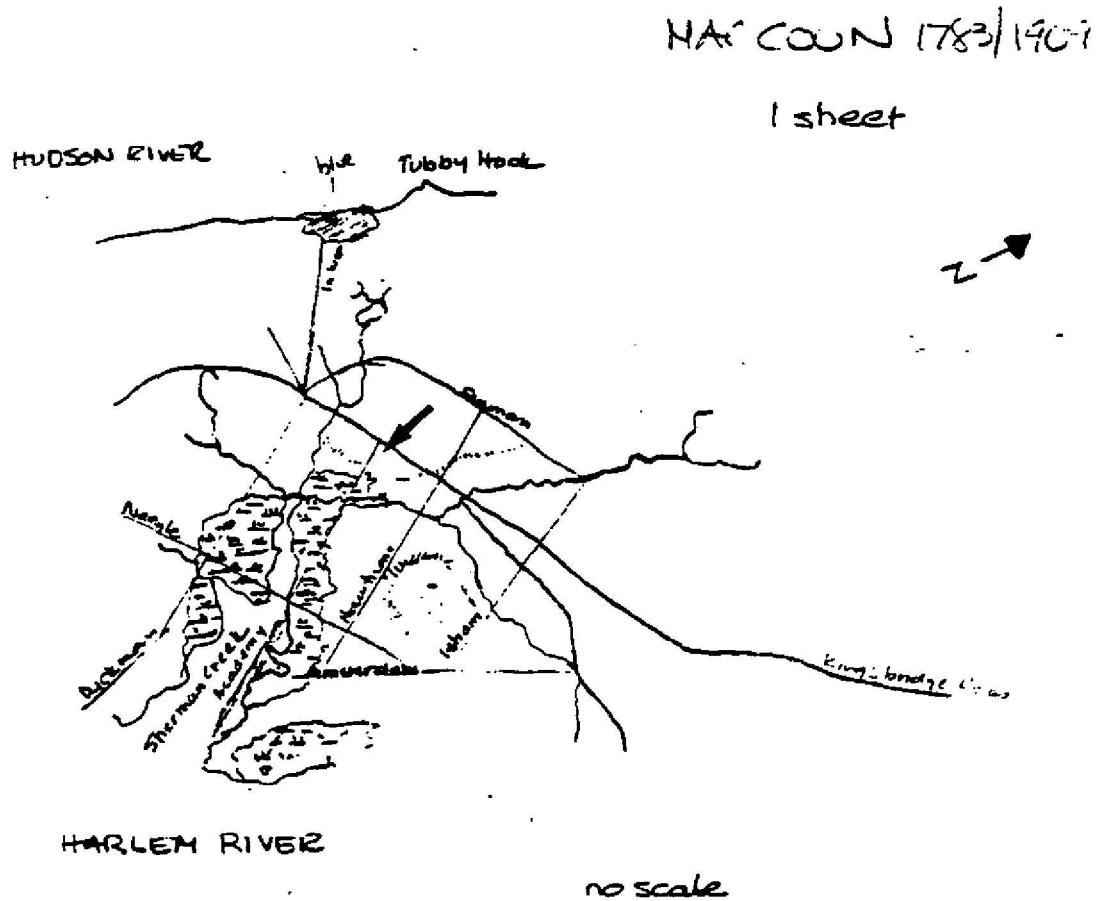


Figure 7

A tracing of a section of a sheet map of Manhattan by William Bridges, City Surveyor, 1811. What is noteworthy is that Sherman Creek is not marked as a creek, but rather as a marsh only. It could be that this map is based on the Commissioners' map of 1807 that was used to show the gridding of Manhattan. The Bridges' map shows only topographic features above 155th Street, while below 155th Street is gridded. (Office of the President of the Borough of Manhattan, Topographical Bureau, Map Room, Municipal Building)

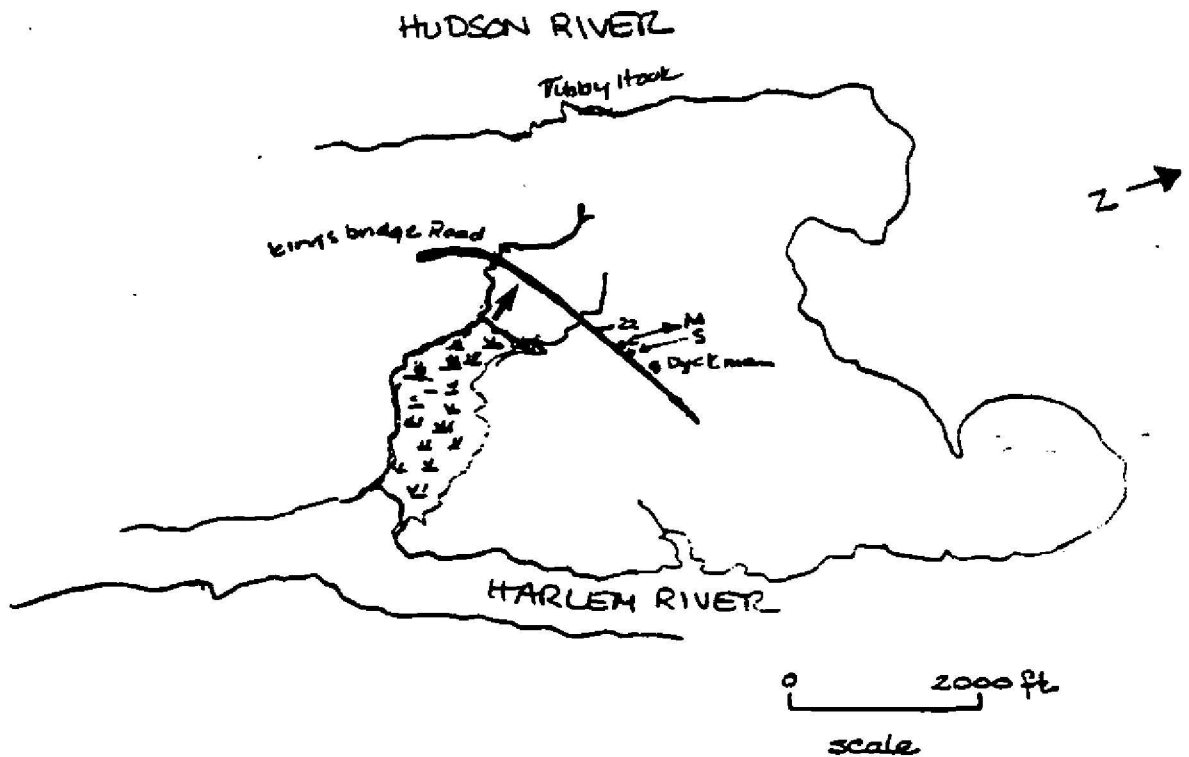


Figure 8
 A tracing of a section of "Randel Maps of Farms, etc.; as Affect-
 ed by the Avenue and Street as Laid Out by the Commissioners in
 1807. Volume #4 contains that part of Manhattan, Lying all West
 of Volume #3 from Greenwich Lane to Spuyten Duyvil Creek," John
 J. Randel, City Engineer, 1819-1820. (Office of the President of
 the Borough of Manhattan, Topographical Bureau, Map Room, Munici-
 pal Building, Acc. No. 210)

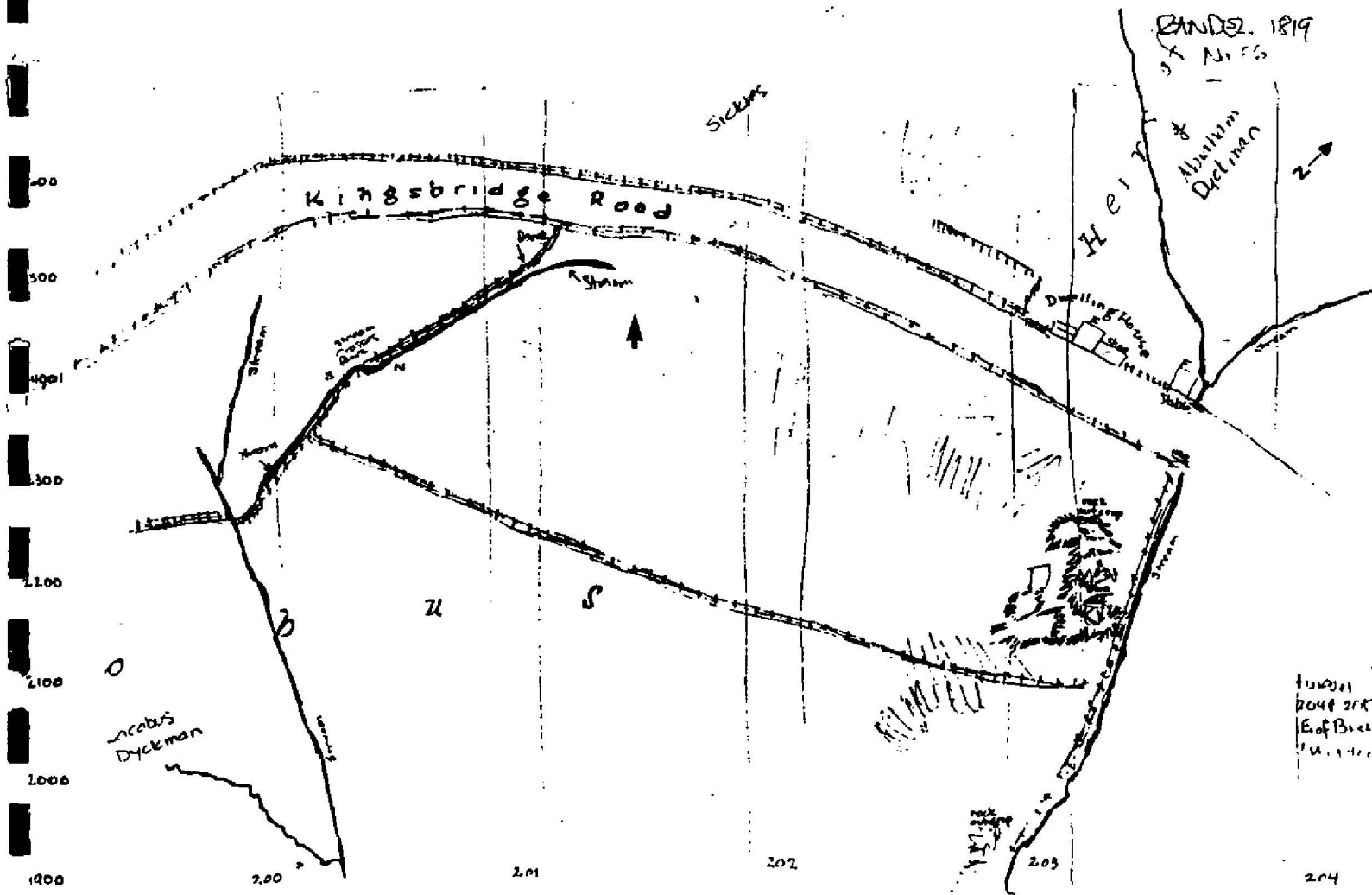


Figure 9A
A tracing of a section of "Blackwell Map #3 - 155th Street to 208th Street, East of Kingsbridge Road (on 12th Avenue). Topo, Elevations, etc," 1860. (Office of the President of the Borough of Manhattan, Topographic Bureau, Map Room, Municipal Building, Acc. No. 1940)



Figure 9B
From "Field Notes, Cross Sections and Calculations for Blackwell
Maps, North of 155th Street," reverse side of Section 10, Sheet
1, 1860. (Office of the President of the Borough of Manhattan,
Topographic Bureau, Map Room, Municipal Building, Acc. No. 2044)

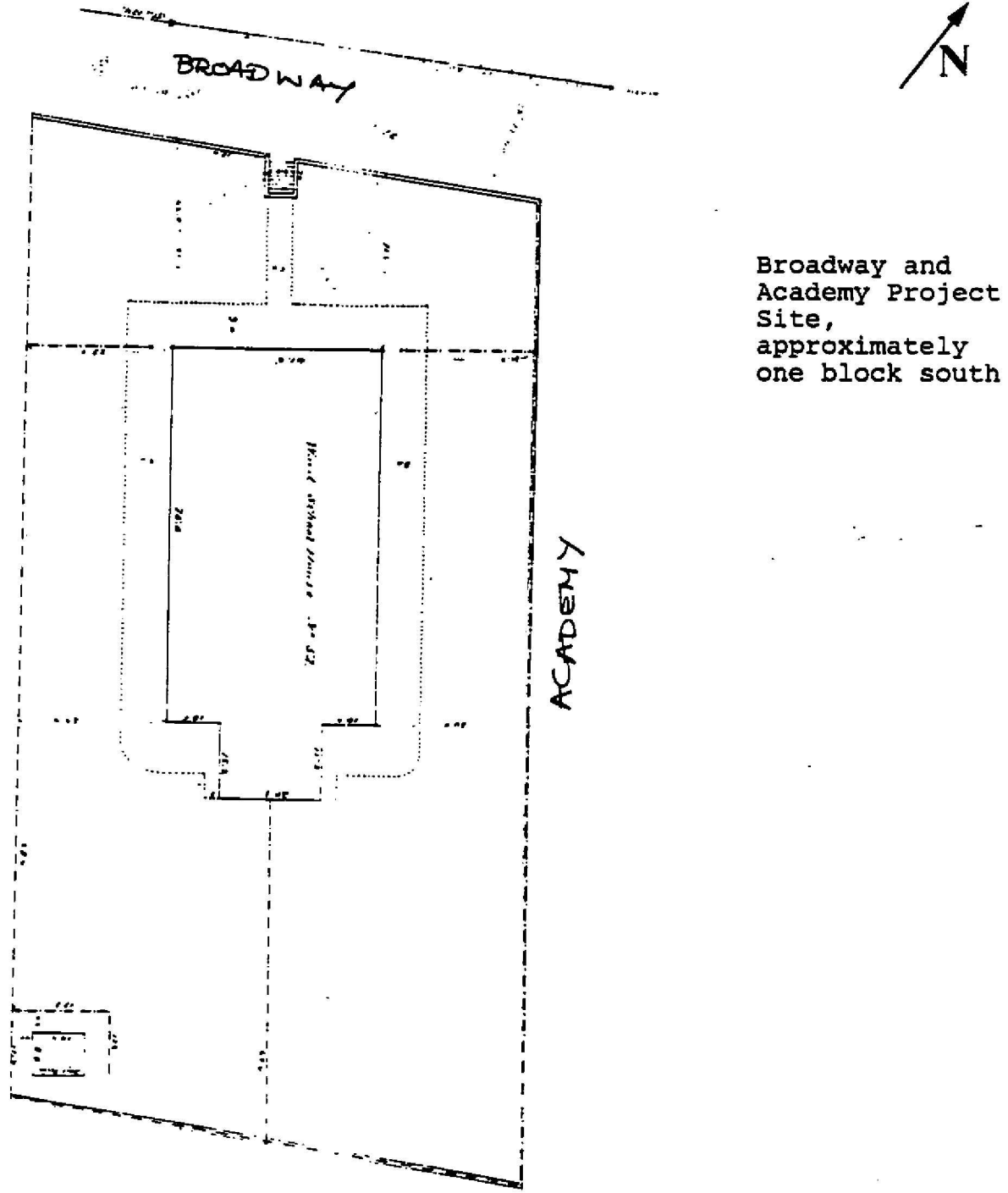


Figure 10

A tracing of a section of "King's Bridge Section. Copied from the Preliminary Map of the Commissioners of Washington Heights, November 1860." A NYPL Map Librarian said that the donor of the map considered it done by the Olmstead group and that circa 1860 Olmstead was made Commissioner of Streets north of 155th Street. The various grid overlays are confusing and show several possible solutions for laying out of streets. The faint street lines that run parallel or perpendicular to King's Bridge Road, or Broadway, most closely reflect the actual street layout in 1988. (NYPL)

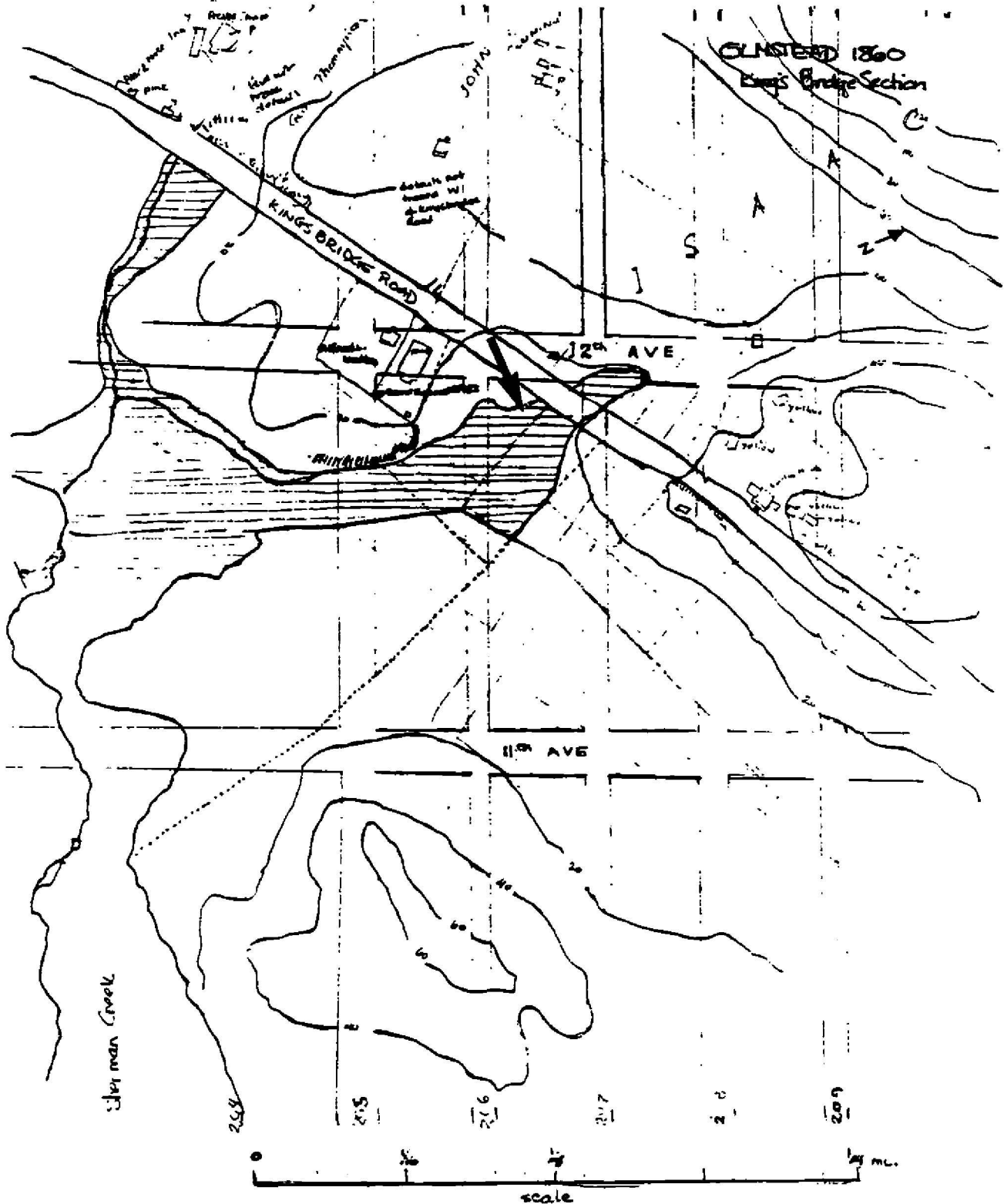


Figure 11
From a blueprint of a Viele map of Manhattan showing topographical features, especially stream beds, 1867. (Office of the President of the Borough of Manhattan, Topographic Bureau, Map Room, Municipal Building)

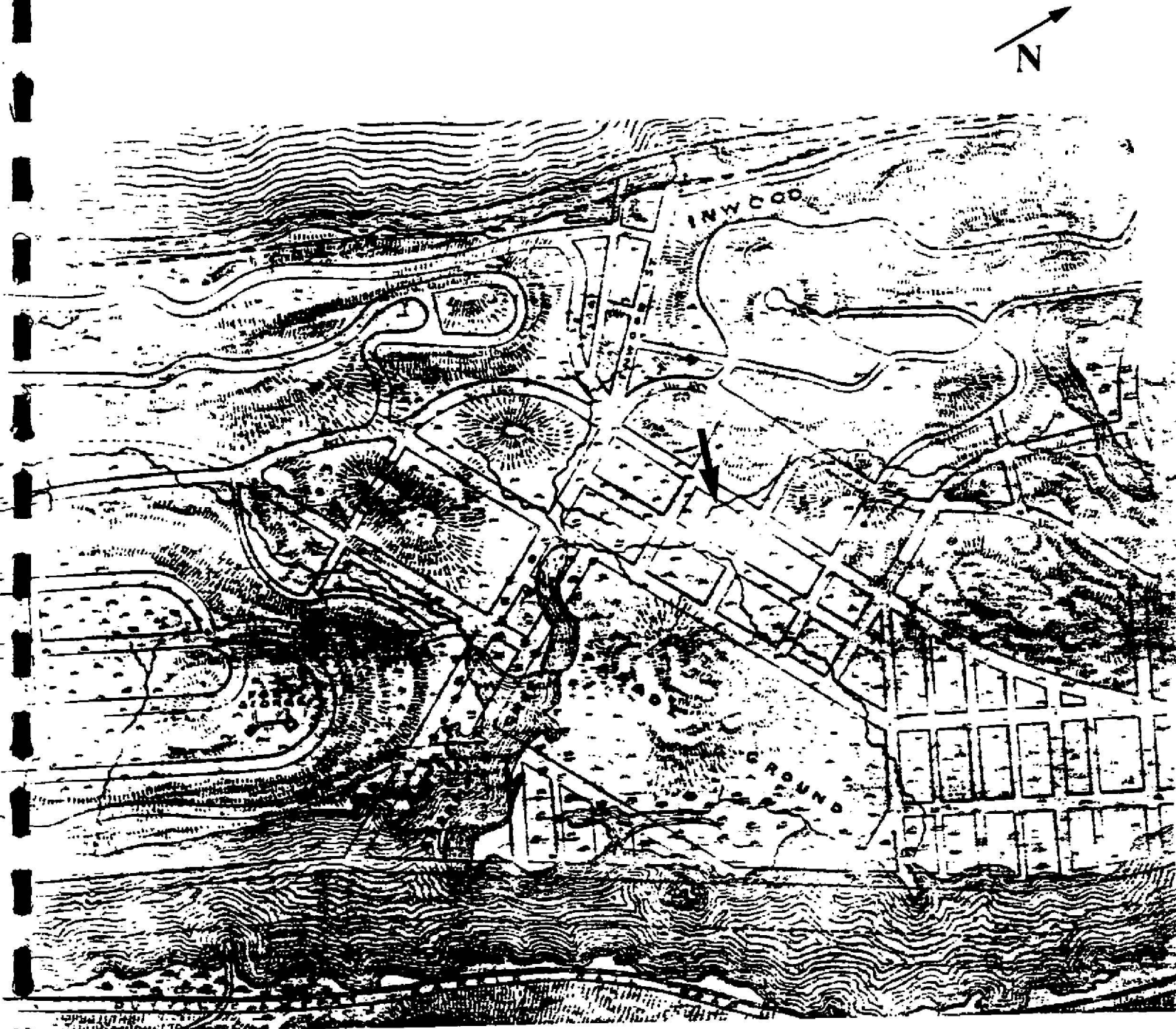


Figure 12

A tracing of a section of a "Map of that Part of the City of New York North of 155th Street Showing the progress made in laying out Streets, Roads, Public Squares and Places, by the Commissioners of the Central Park, under Chap. 565 of Laws of 1865 and of new Pier and Bulkhead lines under Chap. 697 of Laws of 1867," 1868. (Office of the President of the Borough of Manhattan, Topographic Bureau, Map Room, Municipal Building, Acc. No. 24306, sheet 2)



Figure 13
A tracing of a section of "Insurance Maps of the City of New York, plate 251," 1877. Surveyed and published by Perris & Browne, New York. (N-YHS)

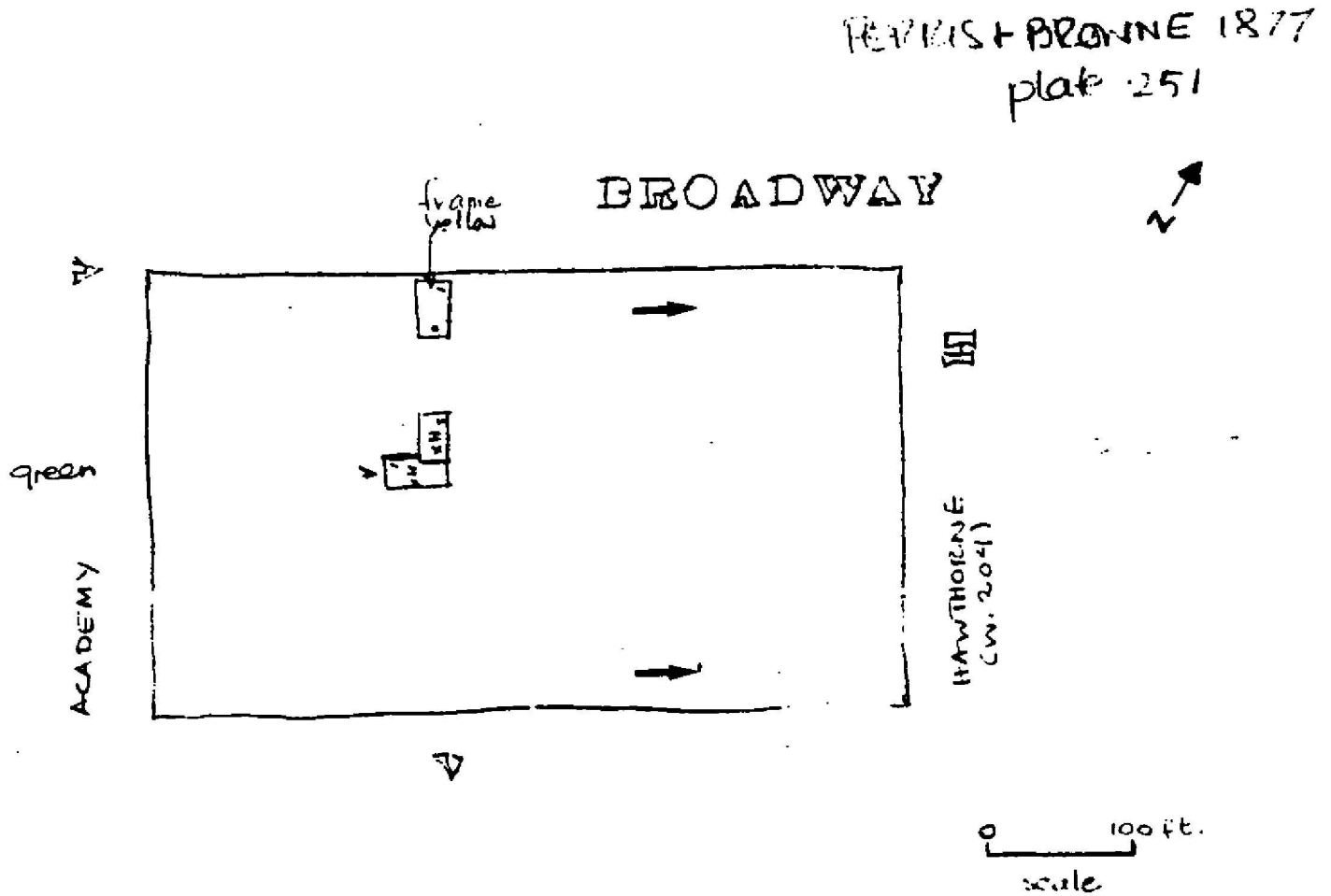


Figure 14
 A tracing of a section of the "Atlas of the Welfth Ward, City of
 New York, plate 33," 1880. Published by E. Robinson, New York.
 (N-YHS)

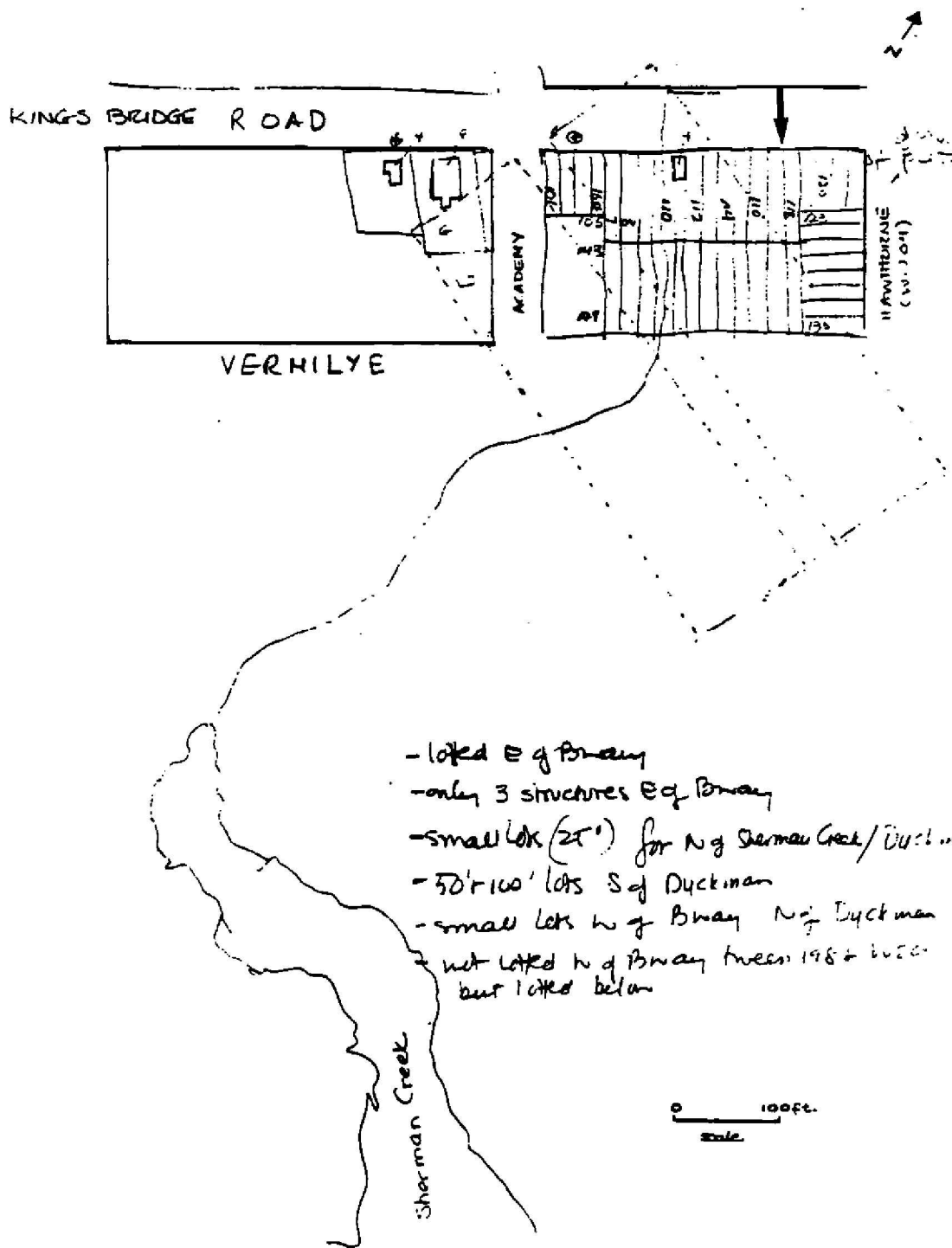


Figure 15
 A tracing of a section of the "Atlas of the City of New York,
 plate 35," 1884. Published by E. Robinson, New York. (N-YHS)

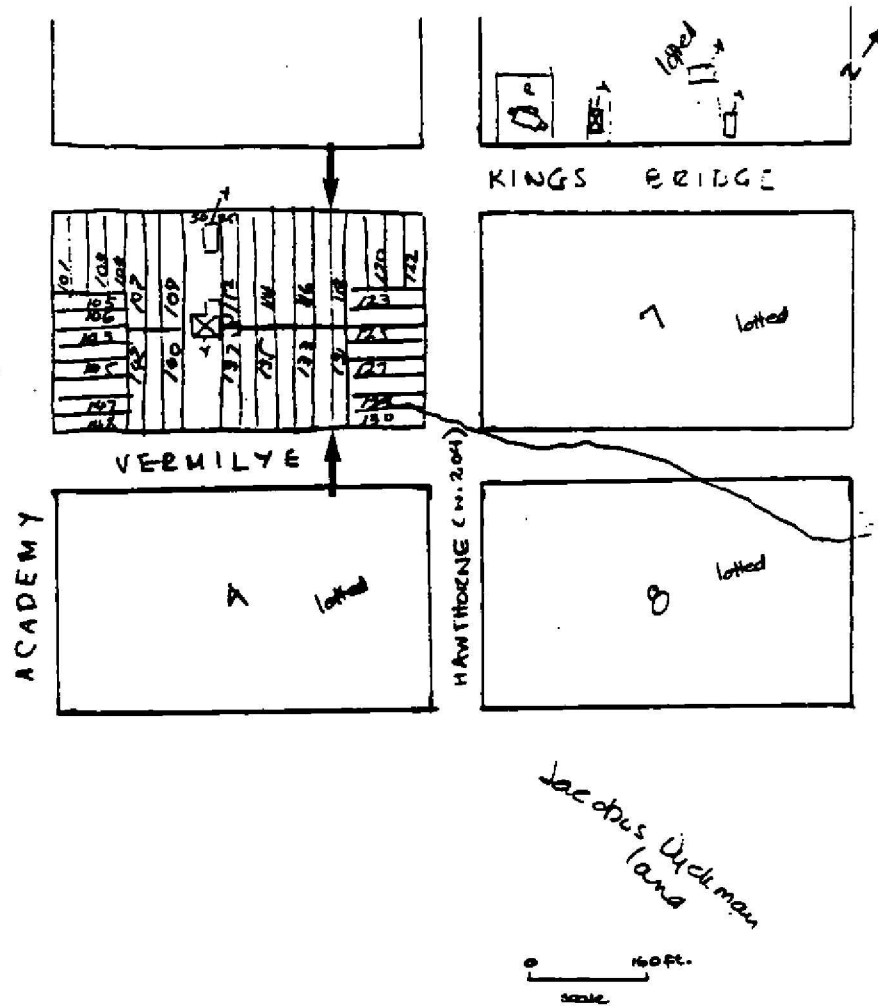


Figure 16
 A tracing of a section of the "Atlas of the City of New York,
 Manhattan Island, plate 45," 1891. Published by G. W. Bromley &
 Co., Philadelphia. (N-YHS)

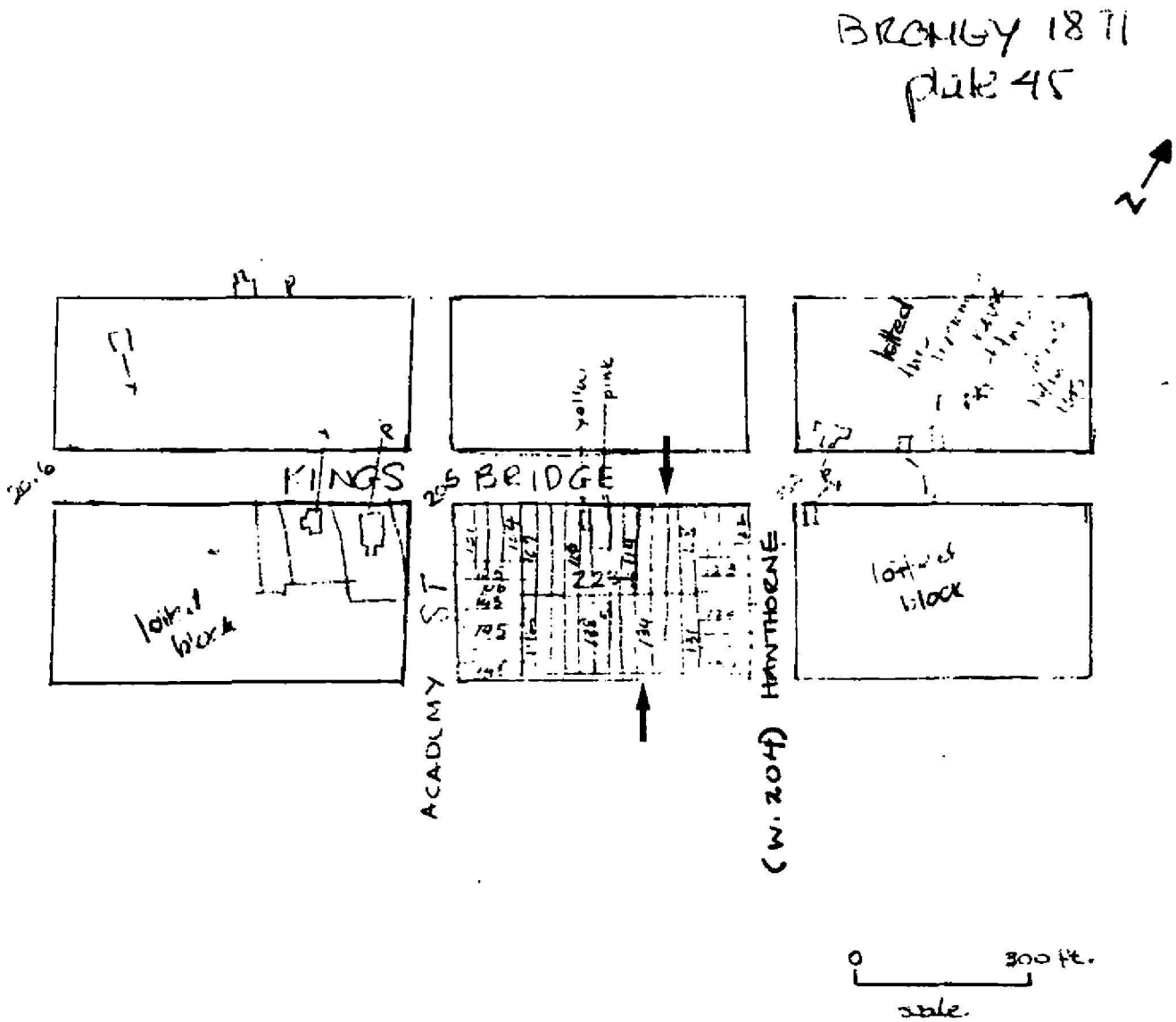


Figure 17
A tracing of a section of the "Atlas of the City of New York,
plate 26," 1906 corrected to 1909. Published by G. W. Bromley &
Co., Philadelphia. (N-YHS)

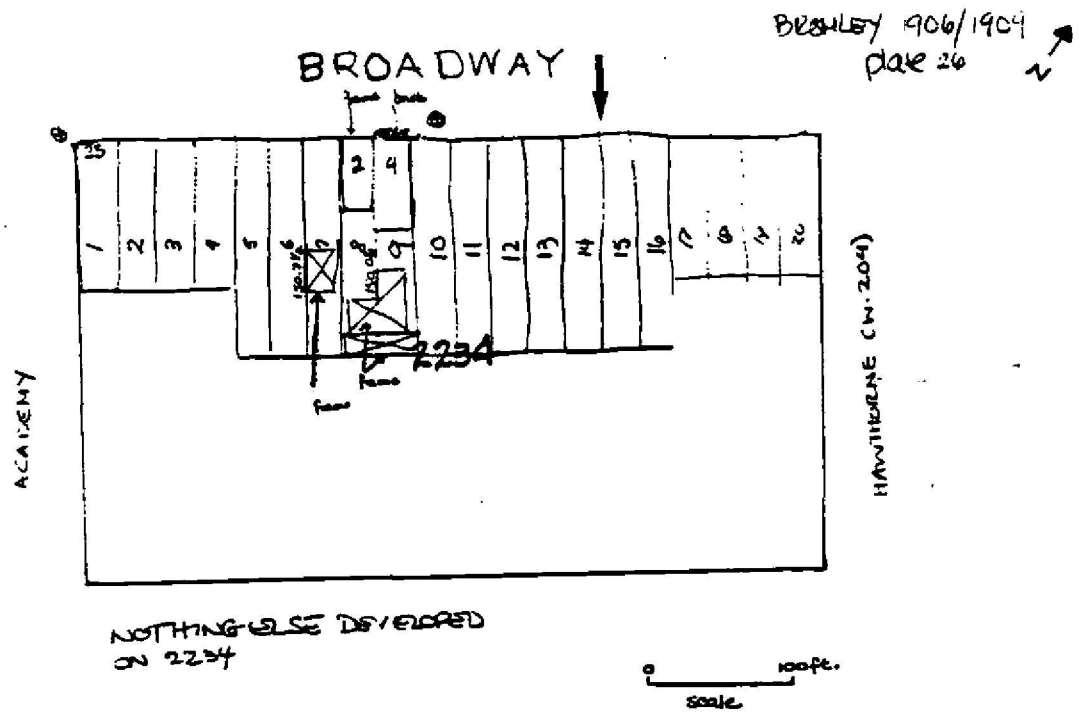


Figure 18
 A tracing of a section of the "Atlas of the City of New York,
 plate 26," 1909 corrected to 1914. Published by G. W. Bromley &
 Co., Philadelphia. (N-YHS)

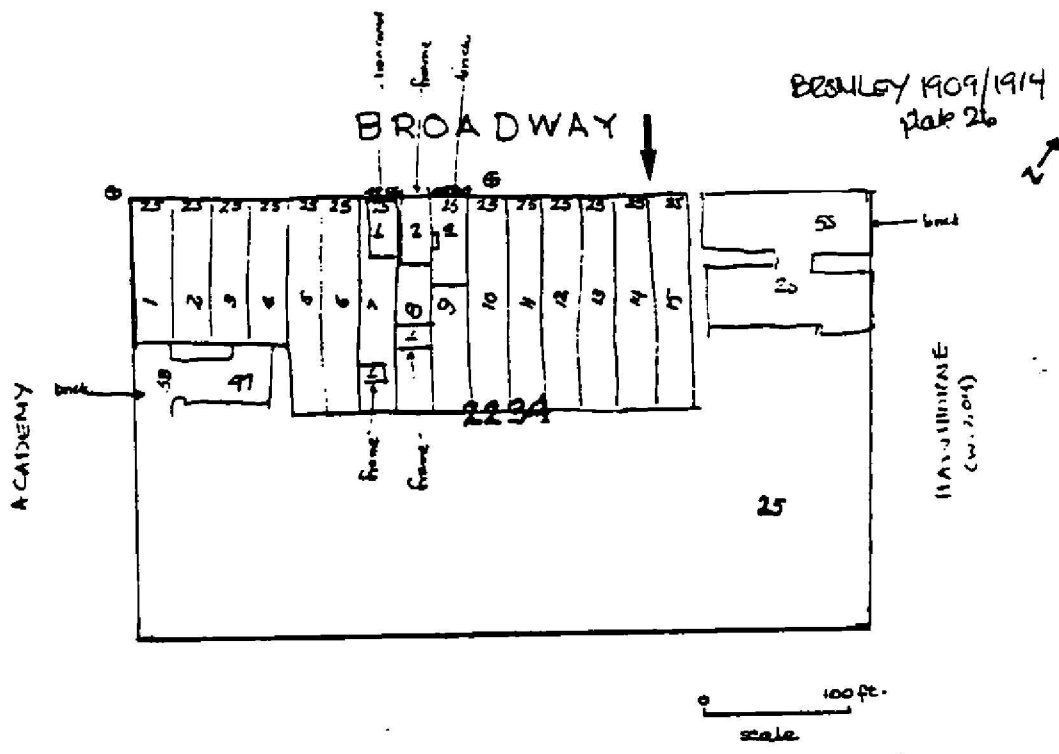


Figure 19
A tracing of a section of the "Land Book of the Borough of
Manhattan, City of New York, Desk & Library Edition, plate 184,"
1925. Published by G. W. Bromley & Co., New York. (N-YHS)

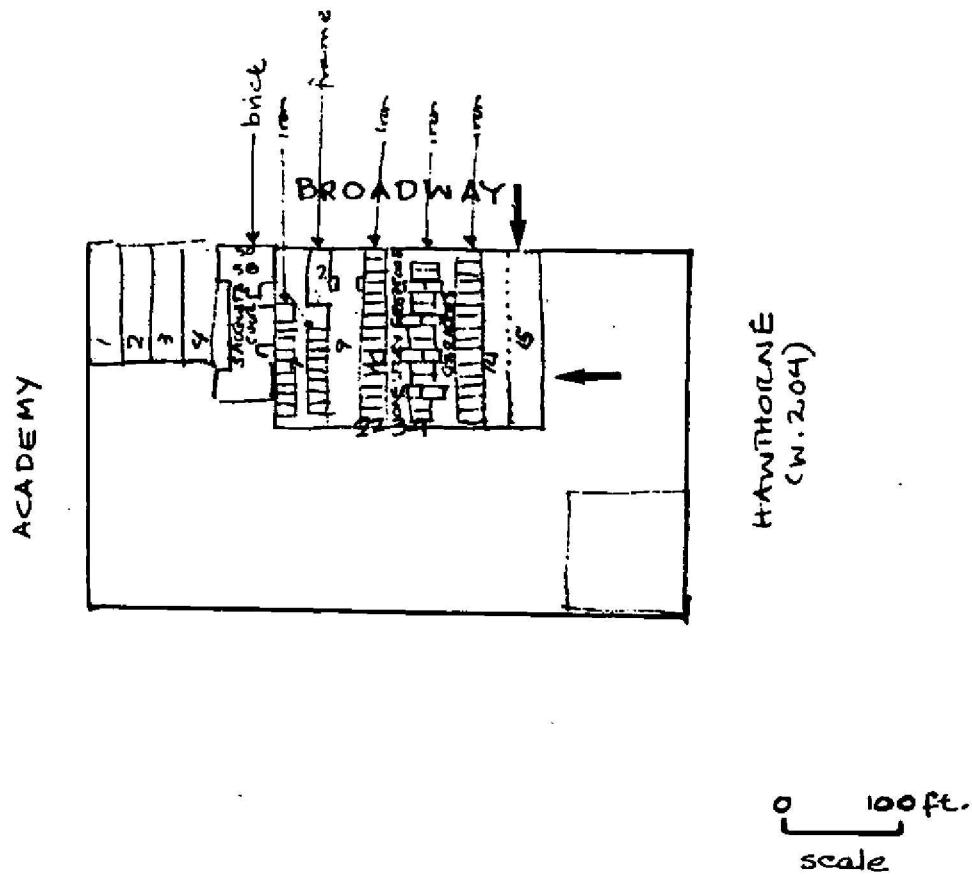


Figure 20
 A tracing of a section of the "Land Book of the Borough of Manhattan City of New York, Desk & Library Edition, plate 184," 1927. Published by G. W. Bromley, New York. (N-YHS)

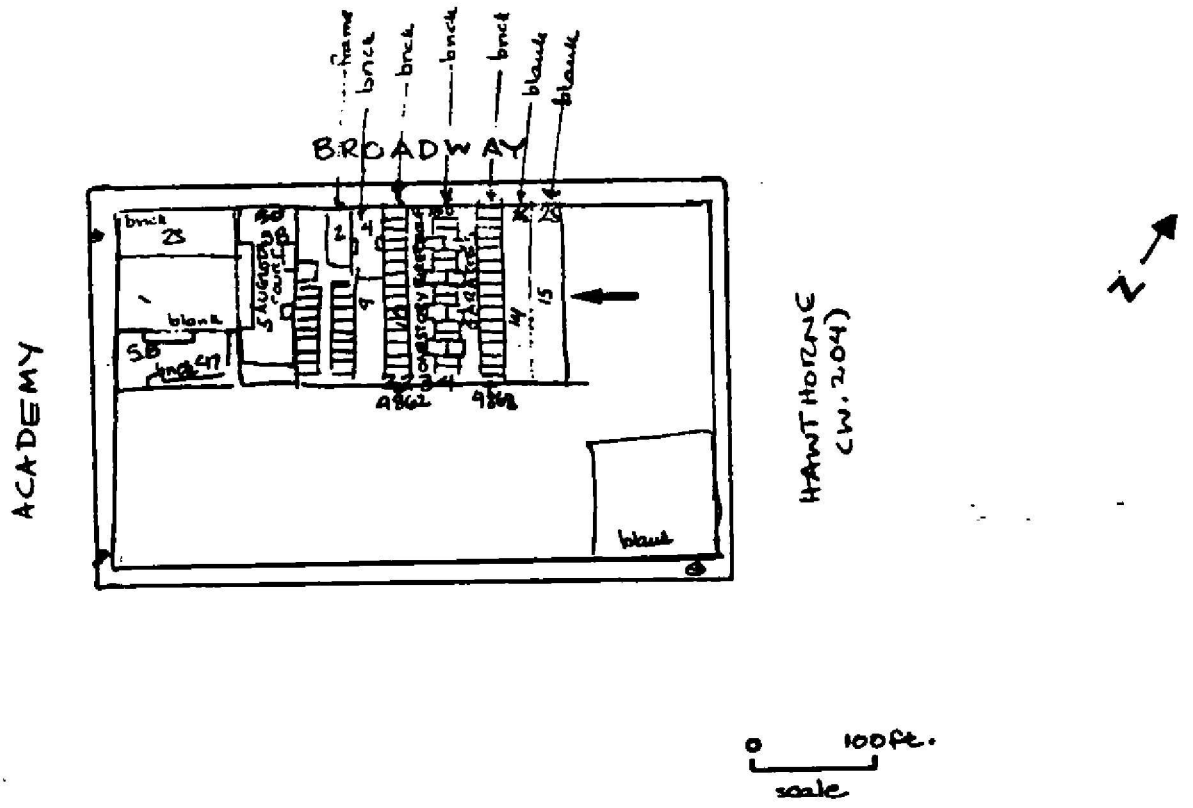


Figure 21
 A tracing of a section of the "Atlas of the City of New York, plate 26," 1914 corrected to 1950. Published by G. W. Bromley & Co., Philadelphia. (NYPL)

BROMLEY 1914/1950
 PLATE 26

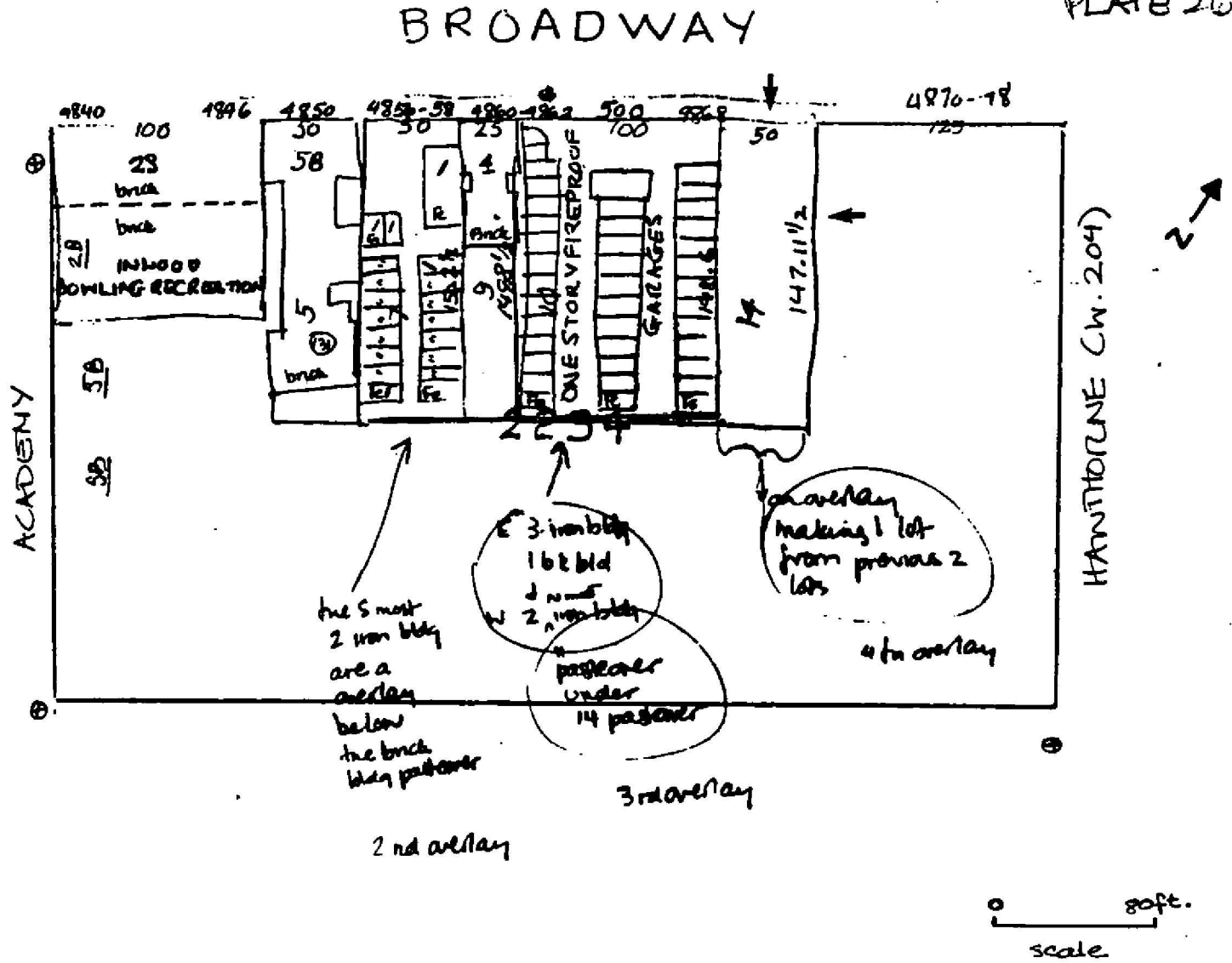
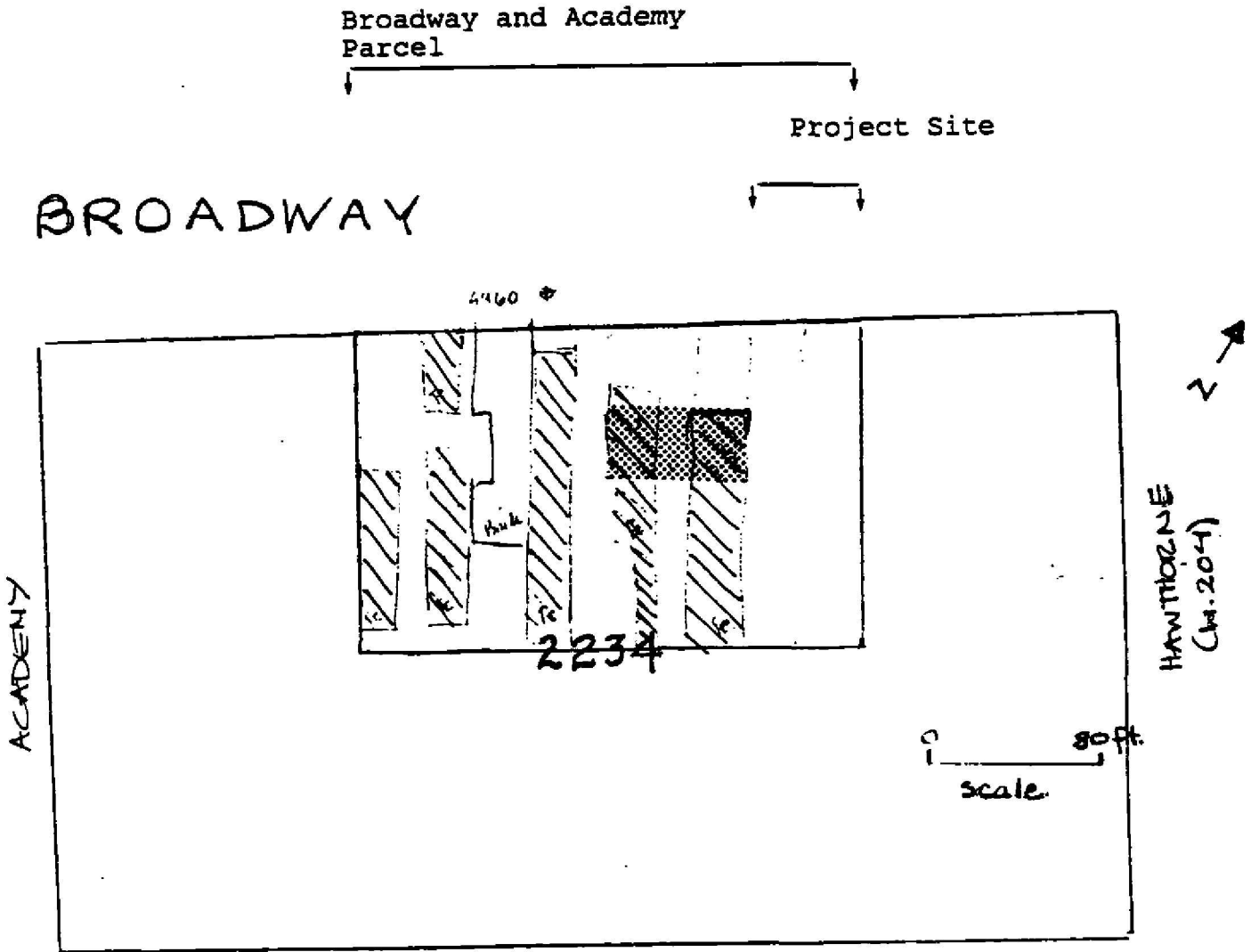


Figure 22
 A tracing of a section of the "Atlas of the Borough of Manhattan, City of New York, plate 30," 1906 corrected to 1969. Published by E. Belcher Hyde, Brooklyn. (NYPL)



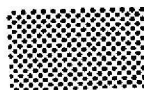
 1953 service station superimposed over 1920s garages

Figure 23
Site Photographs, 1988



48

Project Site: Northernmost section of Lot 7, Block 2234, Bronx
4862 Broadway
view: west to east from Broadway

Figure 23, continued
Site Photographs, 1988



Broadway and Academy
Project Area

Looking southeast
from porch of
Dyckman House toward
Block 2234, Lot 7
4862 Broadway



Looking northwest
from 4862 Broadway
toward Dyckman House
(in center of photo)



Looking southeast
from Broadway at
service station
structure on Lot 7,
Block 2234
Project Site on the
left

Figure 24

"The garden at PS 52 is about 150 feet square, and is probably the largest and best known garden in the City of New York." From Fiftieth Anniversary of the Inwood School, PS 52, Manhattan, New York, 1855-1908, published in 1908, opposite p. 38. Note the buildings in the background. The frame house to the south is shown on the Blackwell and "Olmstead" maps of 1860, Figures 9A and 10. The six-story brick apartment building to the east is typical of the buildings erected before 1925. For typical apartments currently in the project area, see also Figure 23. (N-YHS)

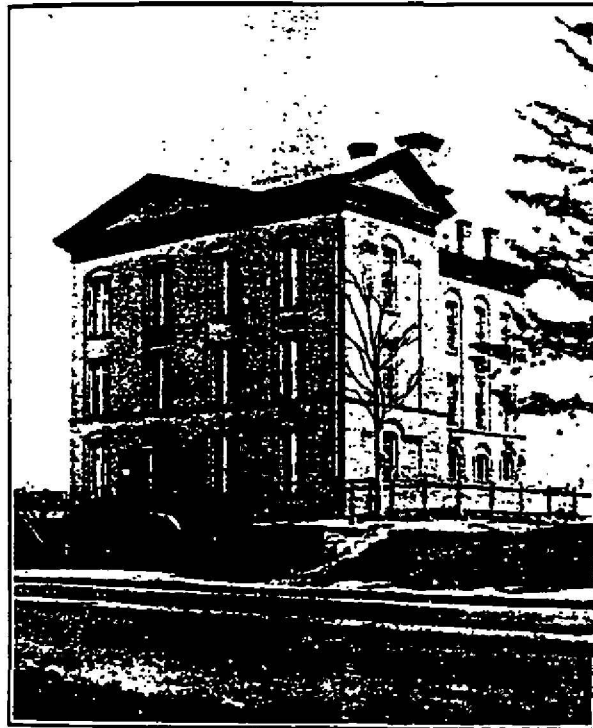


A CORNER OF THE SCHOOL GARDEN

The garden at P. S. 52 is about 150 feet square, and is probably the largest and best known garden in the City of New York.

Figure 25

"The Inwood School PS 52, Manhattan, New York, Present Appearance." From Fiftieth Anniversary of the Inwood School, PS 52, Manhattan, New York 1858-1908, published in 1908, opposite p. 6. Note that the school building is well above the street level. The stairs to street level are also noted in Blackwell's field notes for his 1860 map shown in Figure 9B. (N-YHS)



THE INWOOD SCHOOL P. S. 52, MANHATTAN,
NEW YORK

Present Appearance

Figure 26

"Group at Isham Street, October 1911. New site of Indian burial and over shell pits of Aborigines. Left to right: Watchman, R. P. Bolton, R. K. Miller and child, Mrs. Miller, Mrs. Geo Dodd (with fork), Inwood children. . ." Photograph in the collections of N-YHS.



Figure 27

Broadway "east side between Sherman and Nagle Avenues: old frame houses, Block 2172, Lots 28, 27-26, entrance with garages." This is several blocks south of the project site, but the configuration of the land use is similar to that of the project site in the 1920s and 1930s. Note the mixture of two-story frame dwellings, five-story new-law tenements, and parking garages. The sharply peaked metal roofs of the garages can be seen just above the hedge behind the picket fence at the left foreground. Note that the garages are below street grade. Photograph in the collections of the N-YHS.

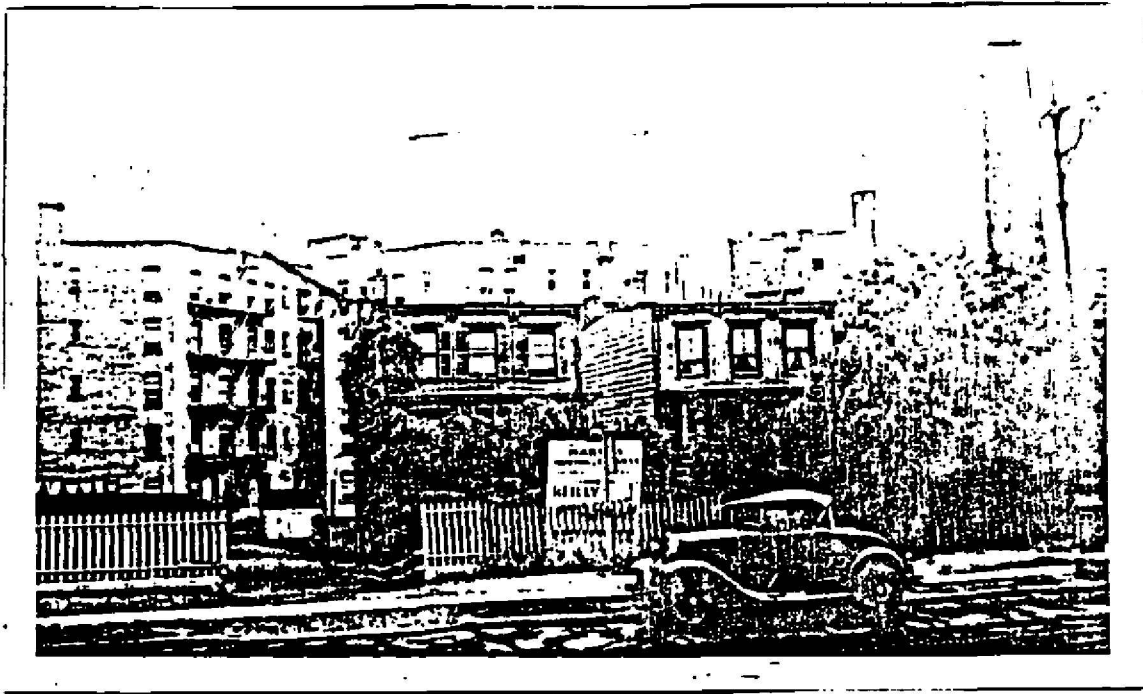
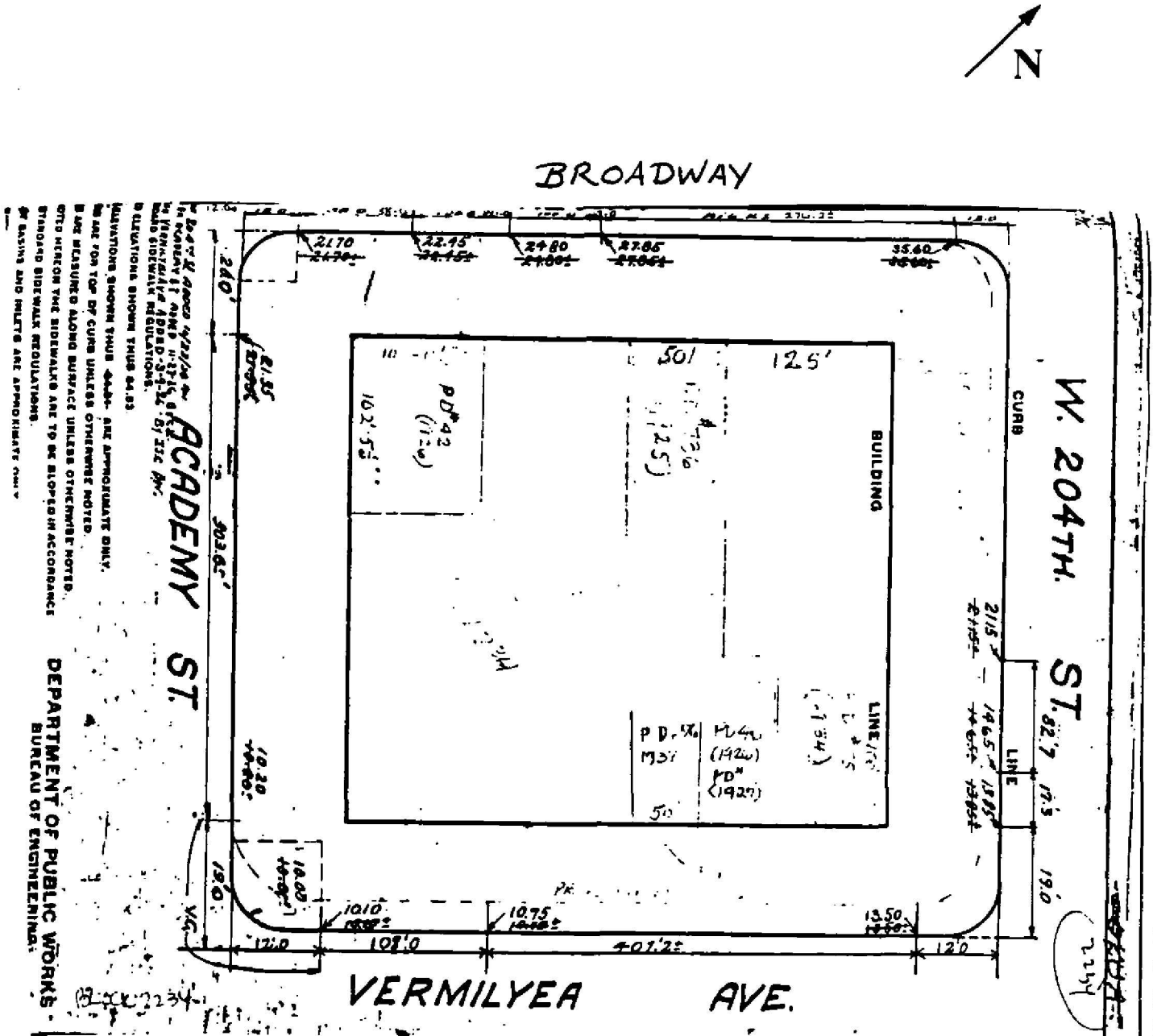


Figure 28
 Official street elevations for Block 2234, produced by the
 Department of Public Works, Bureau of Engineering, 1926-1934.
 (Office of the President of the Borough of Manhattan, Topograph-
 ical Bureau, Map Room, Municipal Building)



**DEPARTMENT OF PUBLIC WORKS
 BUREAU OF ENGINEERS**

ELEVATIONS SHOWN THIS DATE ARE APPROXIMATE ONLY.
 ARE FOR TOP OF CURB UNLESS OTHERWISE NOTED.
 ARE MEASURED ALONG SURFACE UNLESS OTHERWISE NOTED.
 ONTO WHICH THE SIDEWALKS ARE TO BE SLOPED IN ACCORDANCE
 WITH THE SIDEWALK REGULATIONS.

ELEVATIONS SHOWN THIS DATE ARE APPROXIMATE ONLY.
 ARE FOR TOP OF CURB UNLESS OTHERWISE NOTED.
 ARE MEASURED ALONG SURFACE UNLESS OTHERWISE NOTED.
 ONTO WHICH THE SIDEWALKS ARE TO BE SLOPED IN ACCORDANCE
 WITH THE SIDEWALK REGULATIONS.

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Figure 29A
 Rock data profile for Blocks 2234 and 2238. From Volume 4, Sheet 30.
 (Department of General Services, Subsurface Exploration
 Section, Municipal Building)

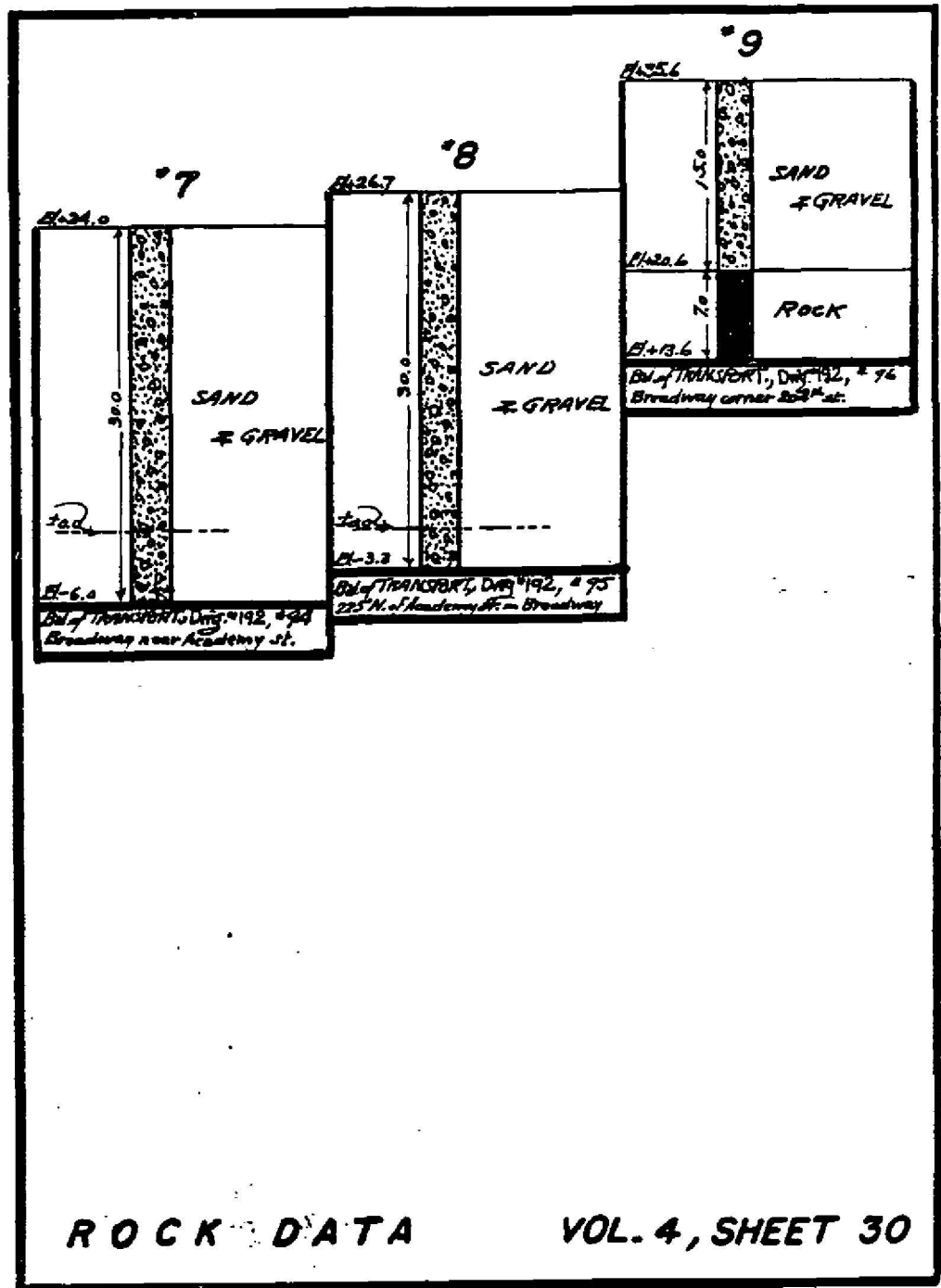


Figure 29B
 Rock data profile that includes Block 2238. From Volume 4, Sheet
 30, WPA. (Department of General Services, Subsurface Exploration
 Section, Municipal Building)

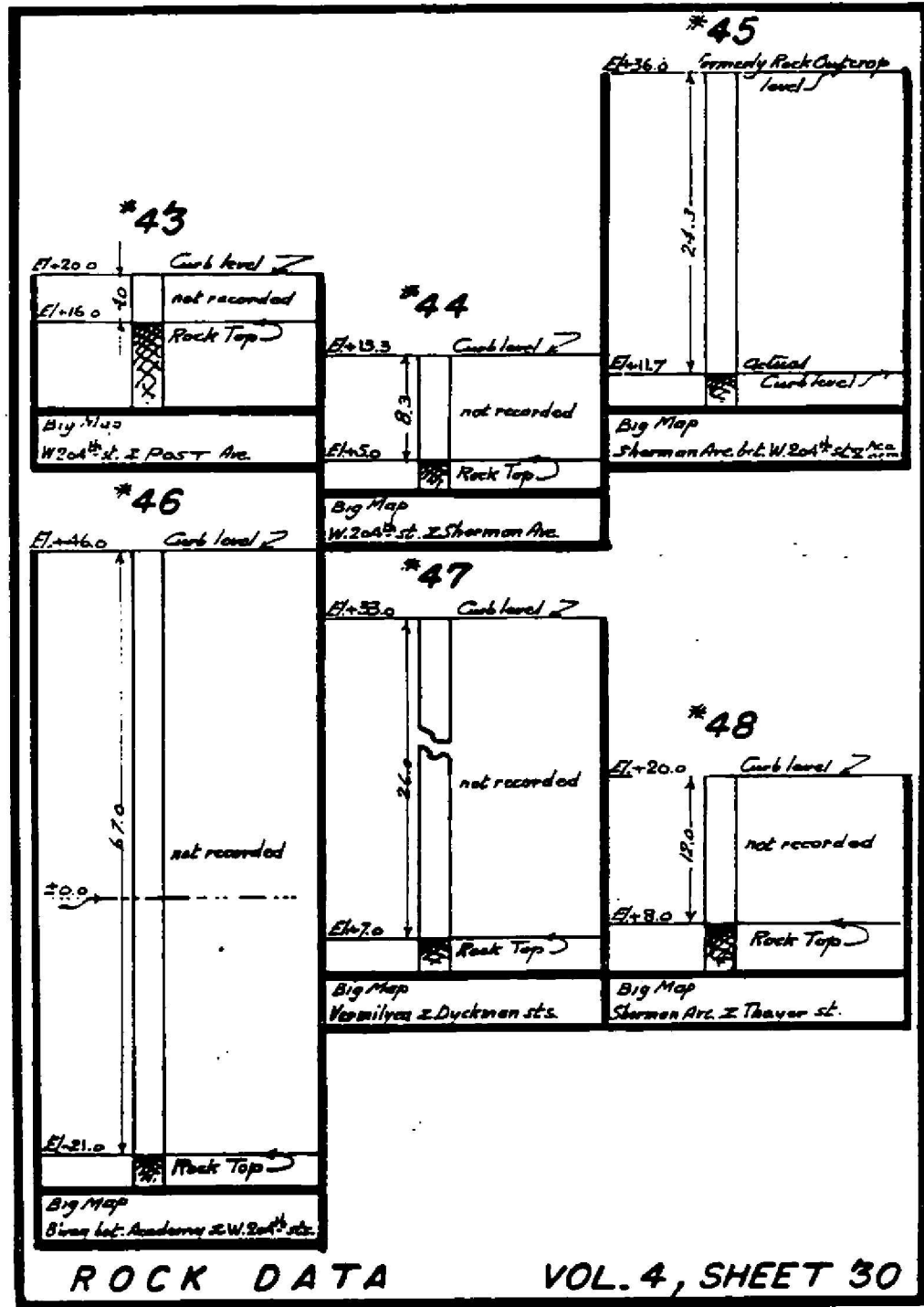


Figure 30
 Rock data plan view of Block 2234 and 2238. From Volume 4, Sheet
 30. (From Department of General Services, Subsurface Exploration
 Section, Municipal Building)

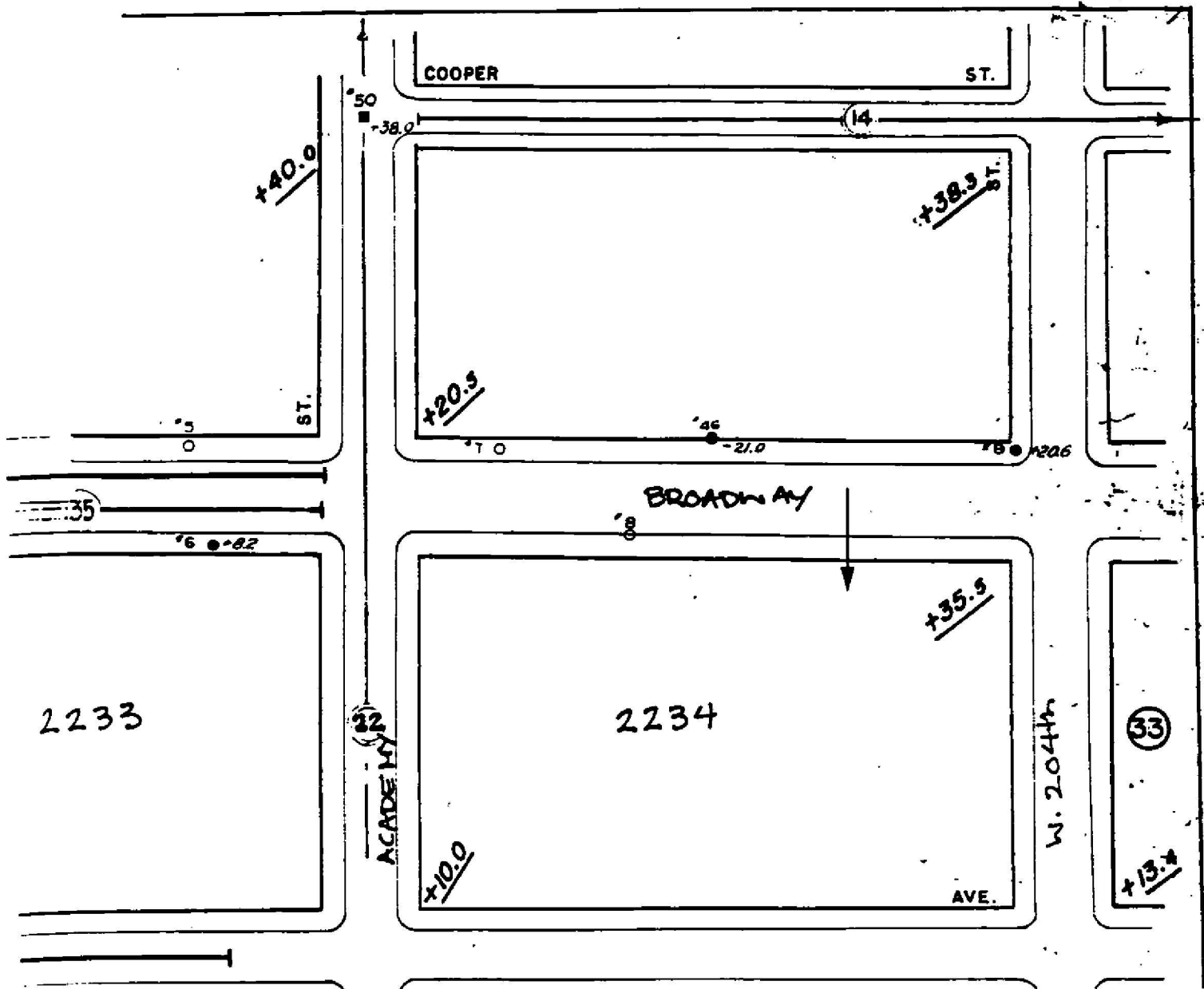


Figure 31
 Rock data profile for Block 2233, one block south of Project Site
 Block 2234. From Record of Borings, B-1, 1986. (Department of
 General Services, Division of Public Structures, Municipal Build-
 ing)

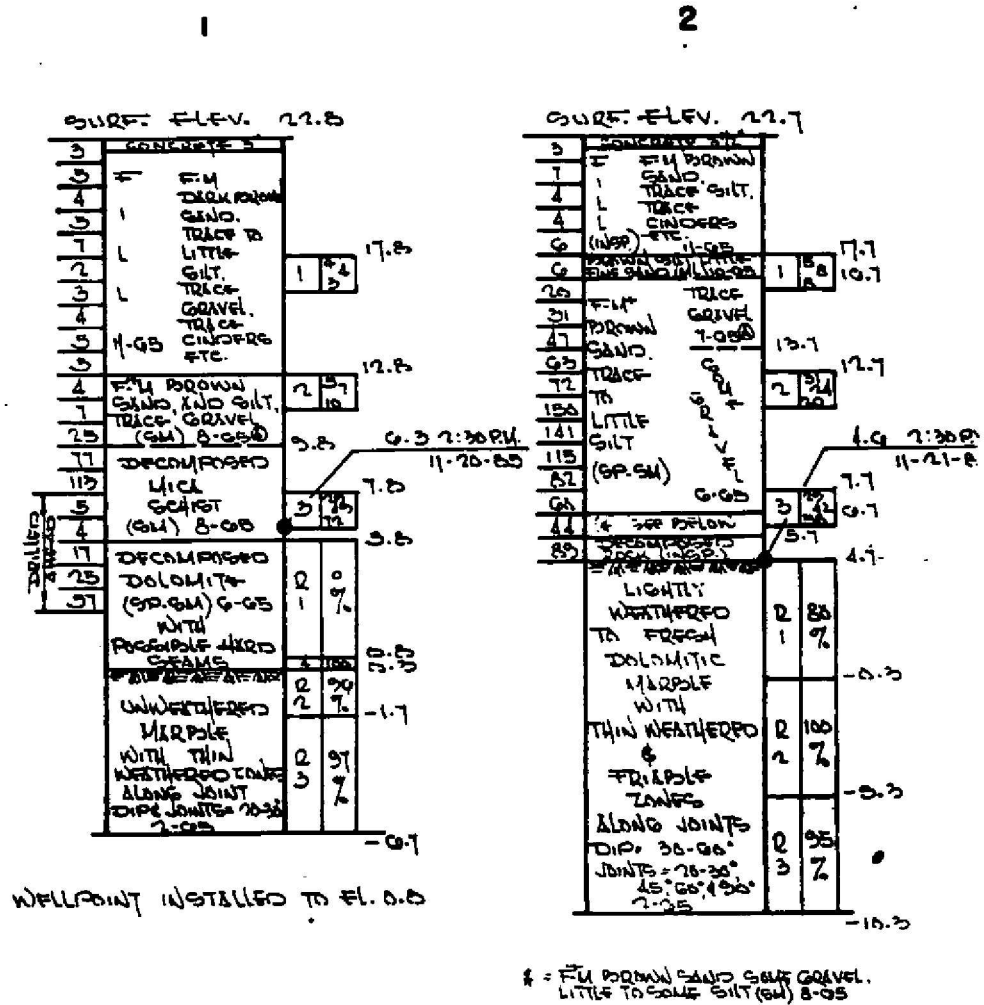
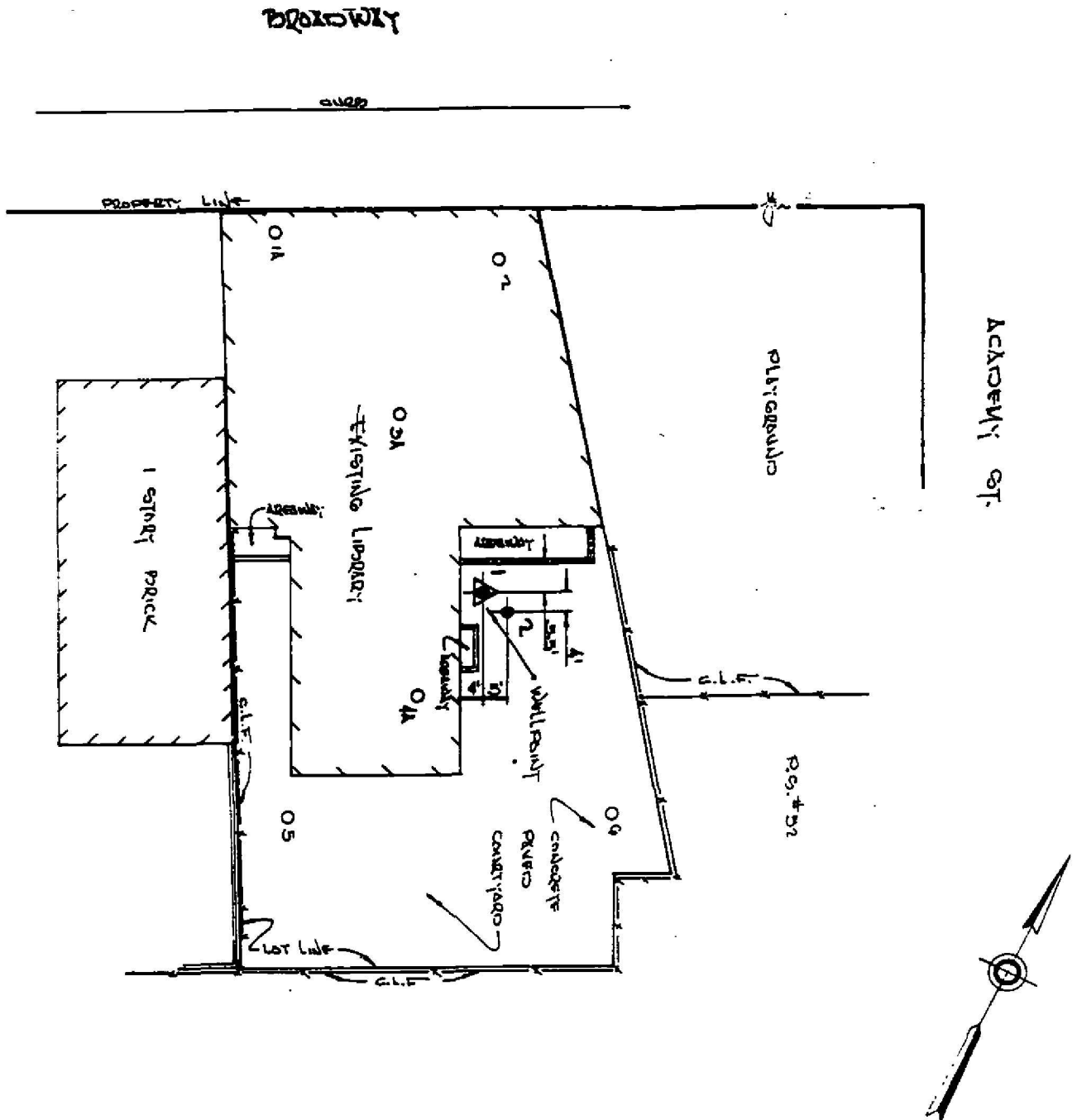


Figure 32
 Rock data plan view for Block 2233, one block south of Project
 Site Block 2234. From Record of Borings, B-1, 1986. (Depart-
 ment of General Services, Division of Public Structures, Municipi-
 pal Building)



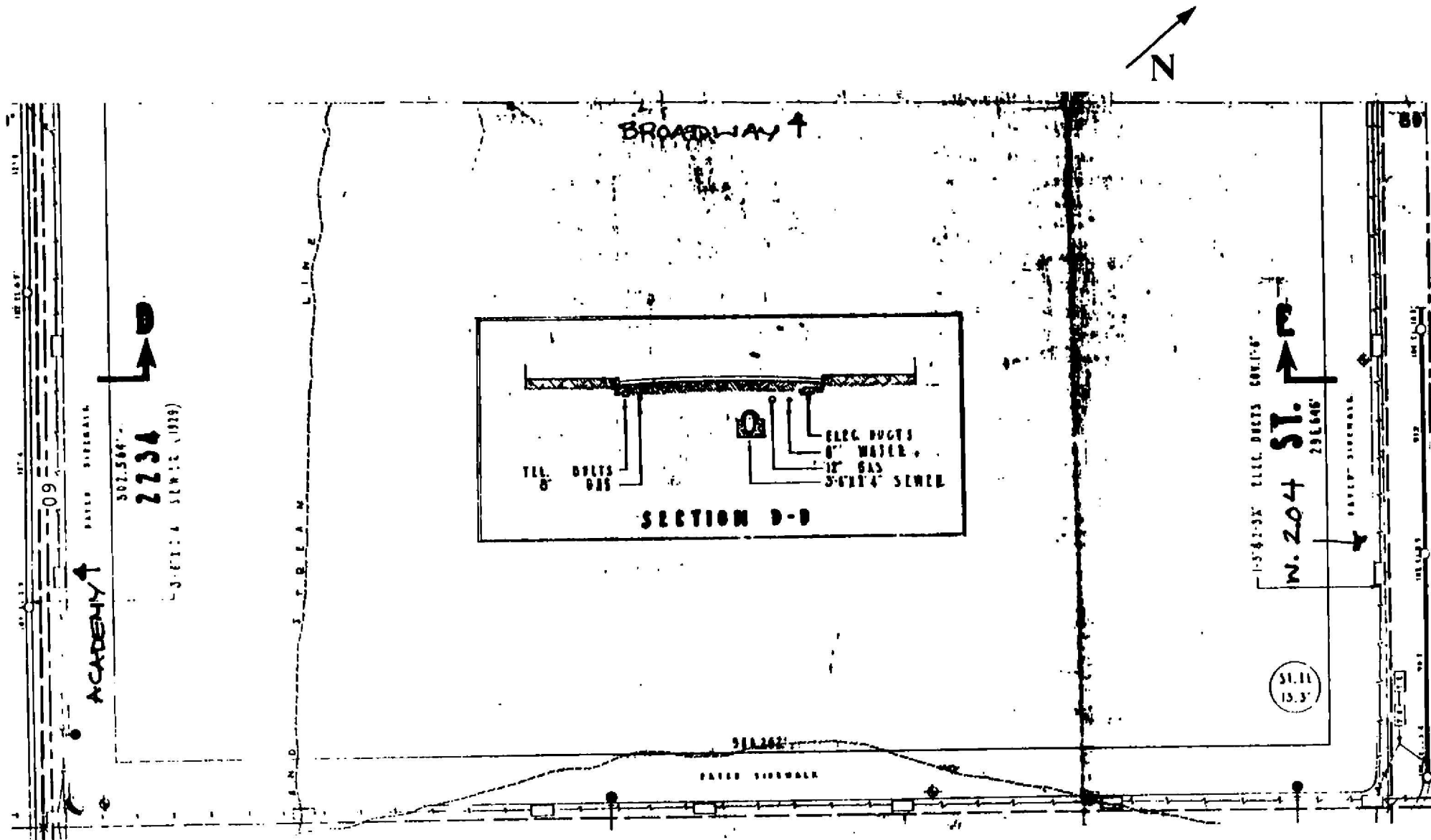


Figure 33
 Subsurface conditions for Block 2234, Inwood, Manhattan, (17),
 WPA Project 465-97-3-4, For the Department of Water Supply, Gas,
 and Electricity, 1939. (Department of General Services, Subsur-
 face Exploration Section, Municipal Building)

Figure 34A
 Sewer index maps for Block 2234. (Bureau of Sewers, 40 Worth Street)

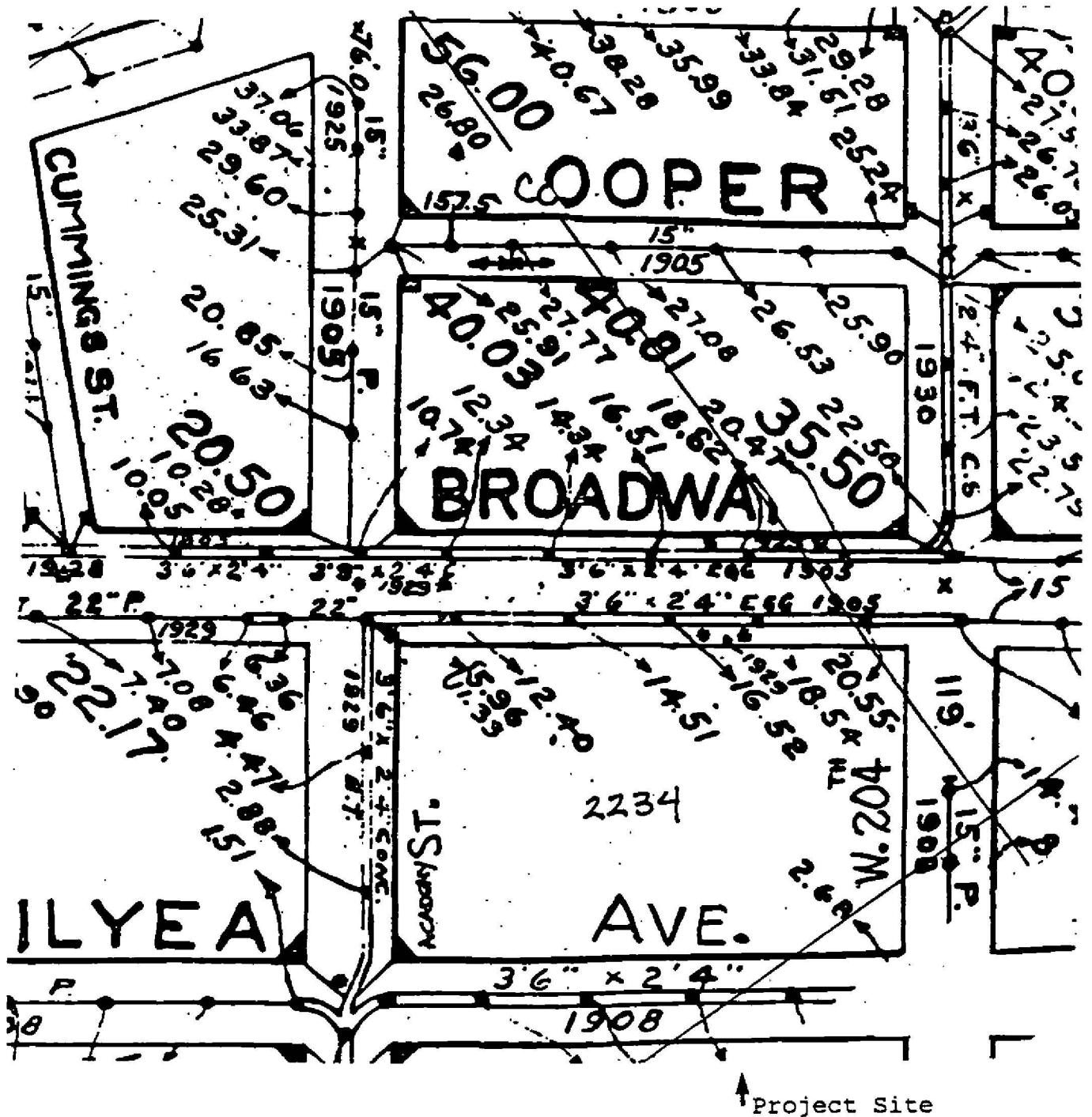
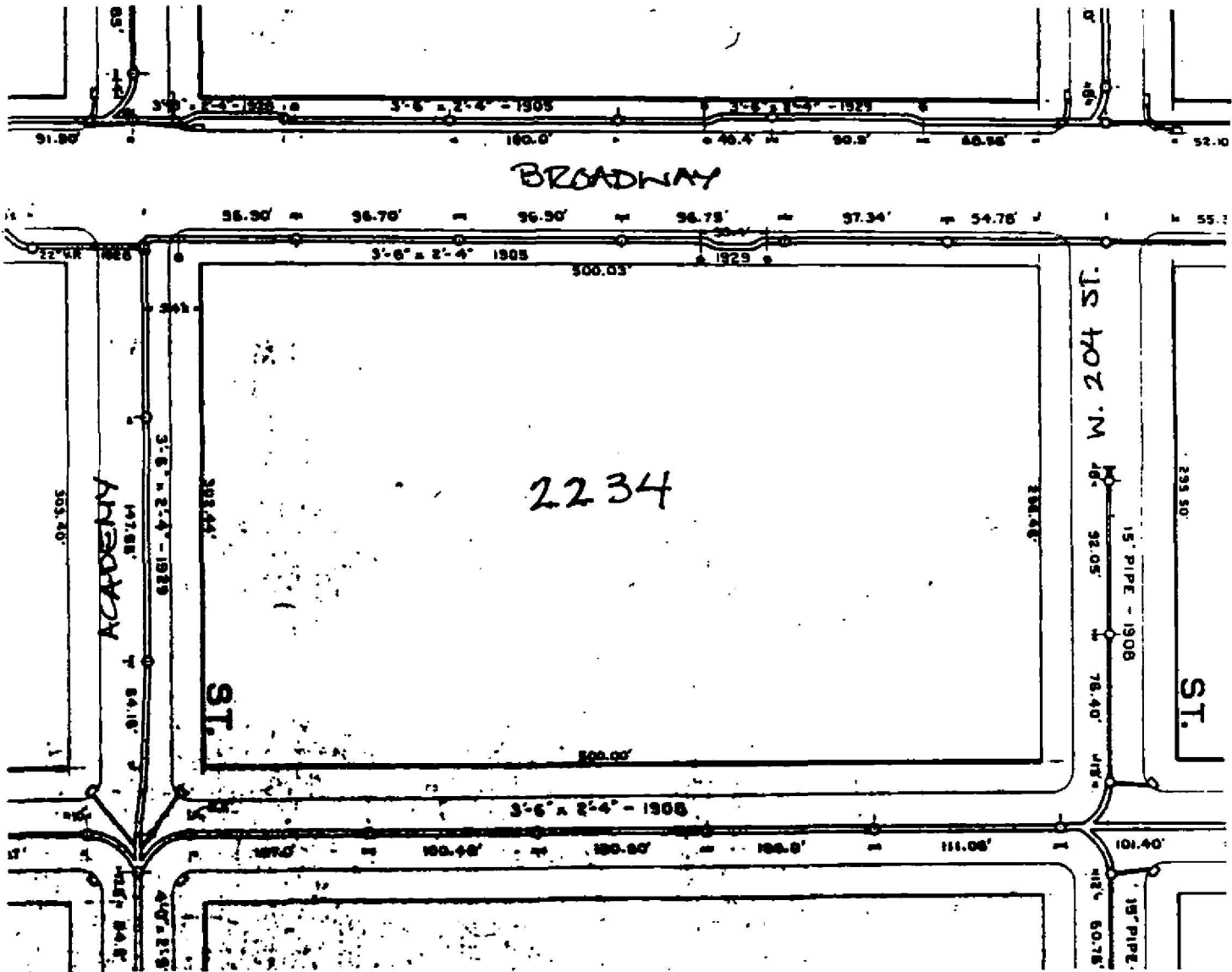
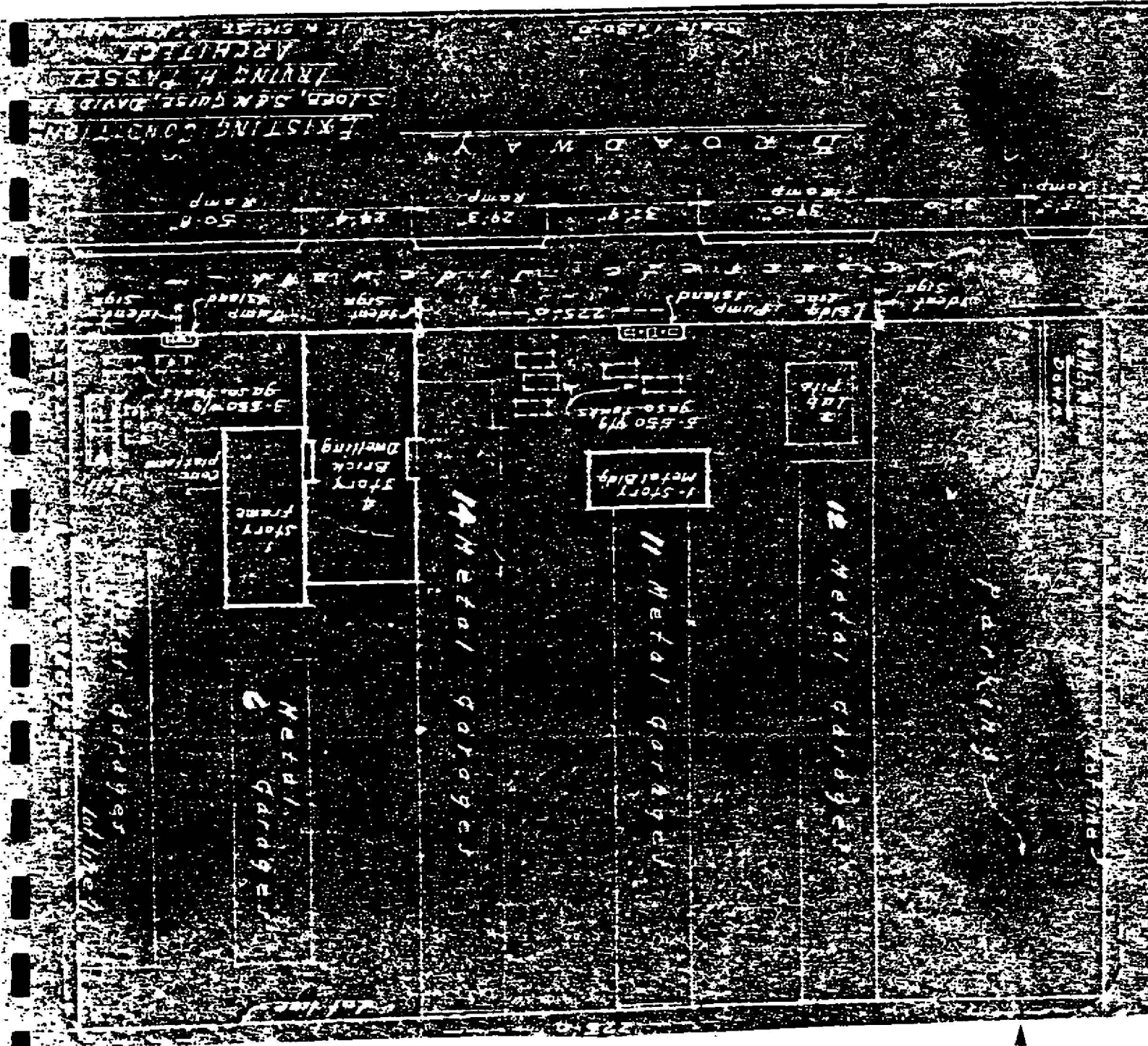


Figure 34B
 Sewer index maps, as built, series F-27, for Block 2234.
 (Bureau of Sewers, 40 Worth Street)



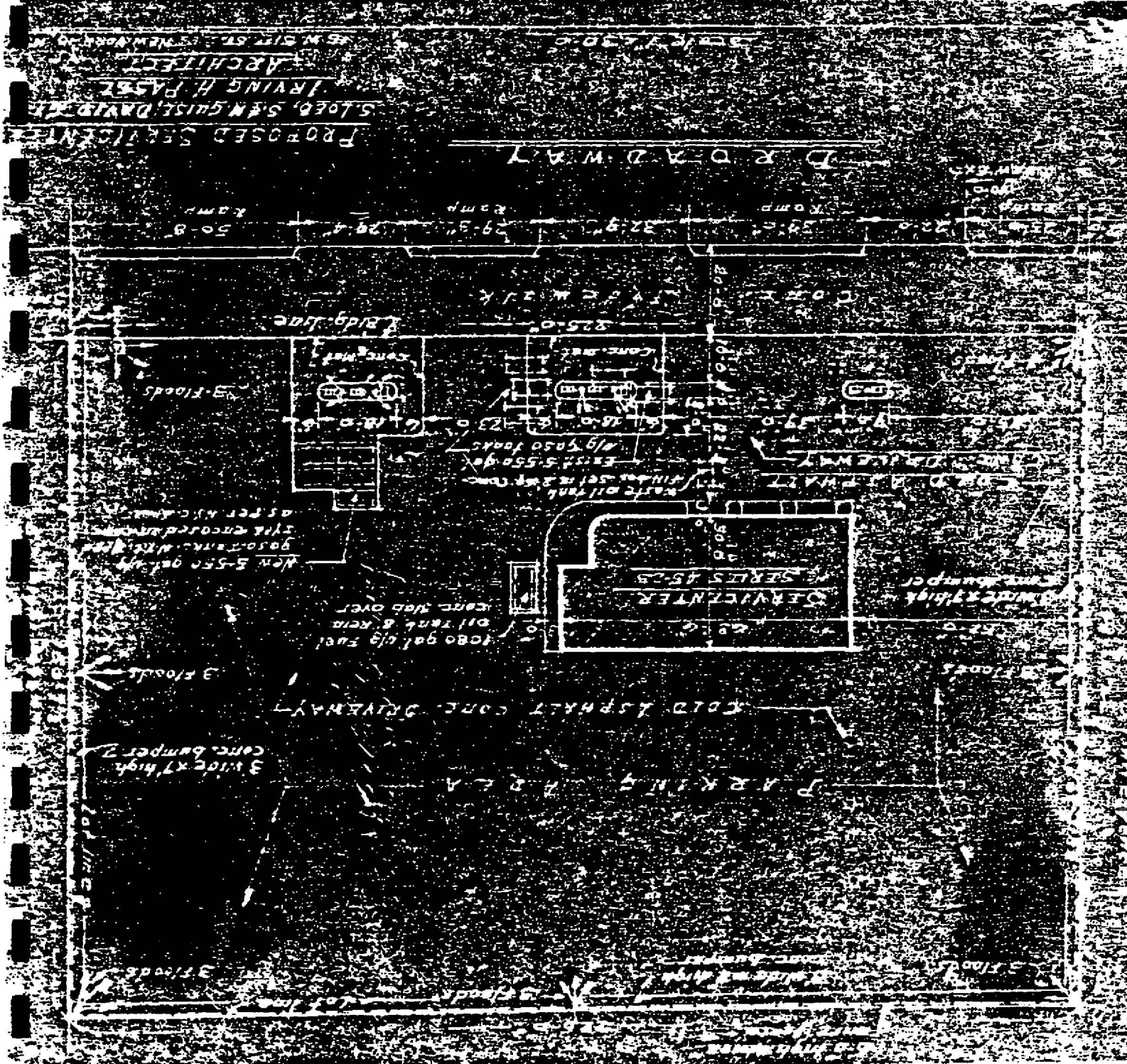
↑ Project Site

Figure 35A
 Existing conditions on Block 2234, Lot 7, October 28, 1953.
 (New York City Department of Buildings/Manhattan, 160 West
 Broadway)



Project Site ↑

Figure 35B
Proposed "Servicenter" on Block 2234, Lot 7, October 28, 1953.
(New York City Department of Buildings/Manhattan, 160 West
Broadway)



Project Site →

Figure 36
 Profile and elevation of electric Esso sign, October 14, 1954,
 on Block 2234, Lot 7. (New York city Department of Buildings/
 Manhattan, 160 West Broadway)

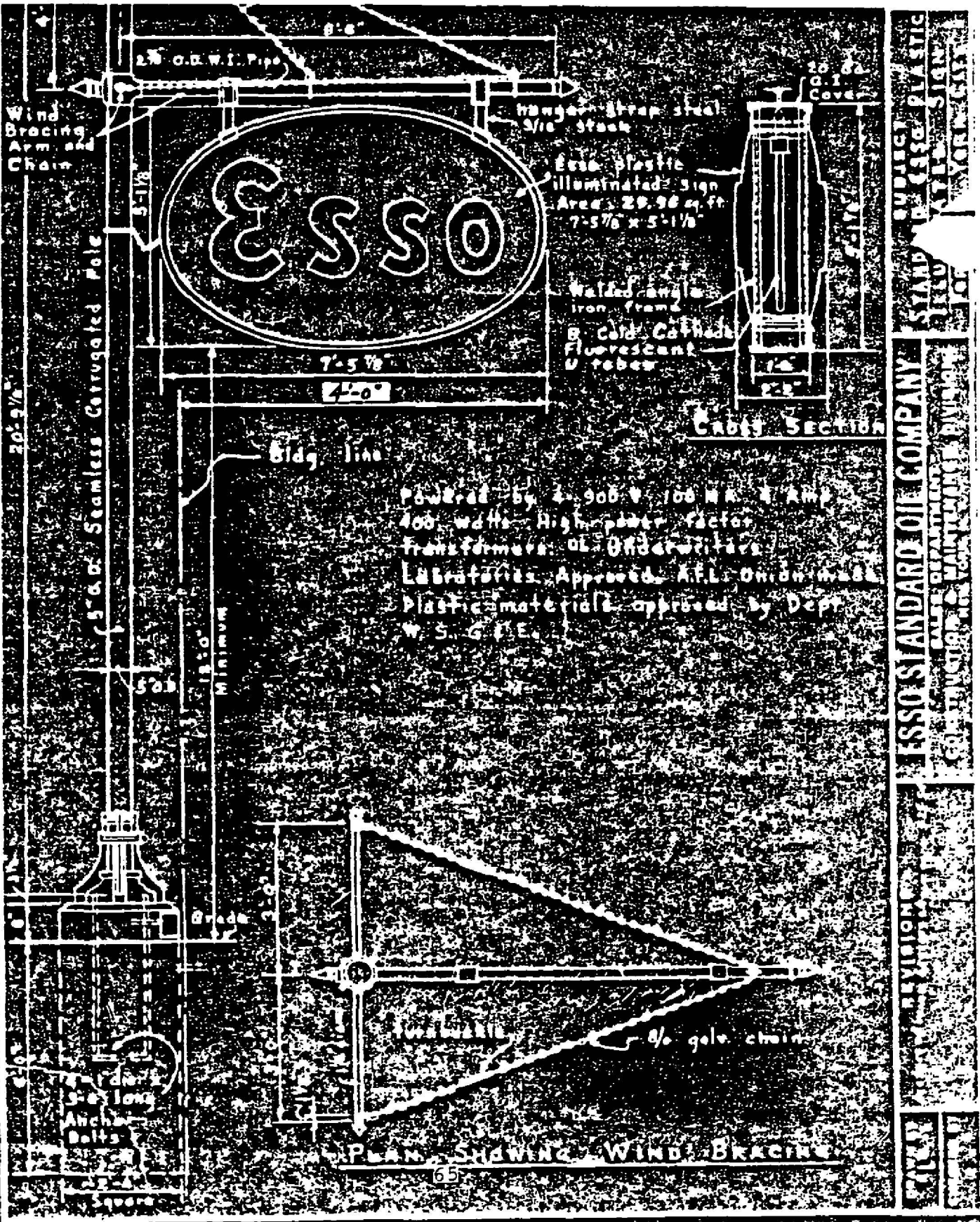
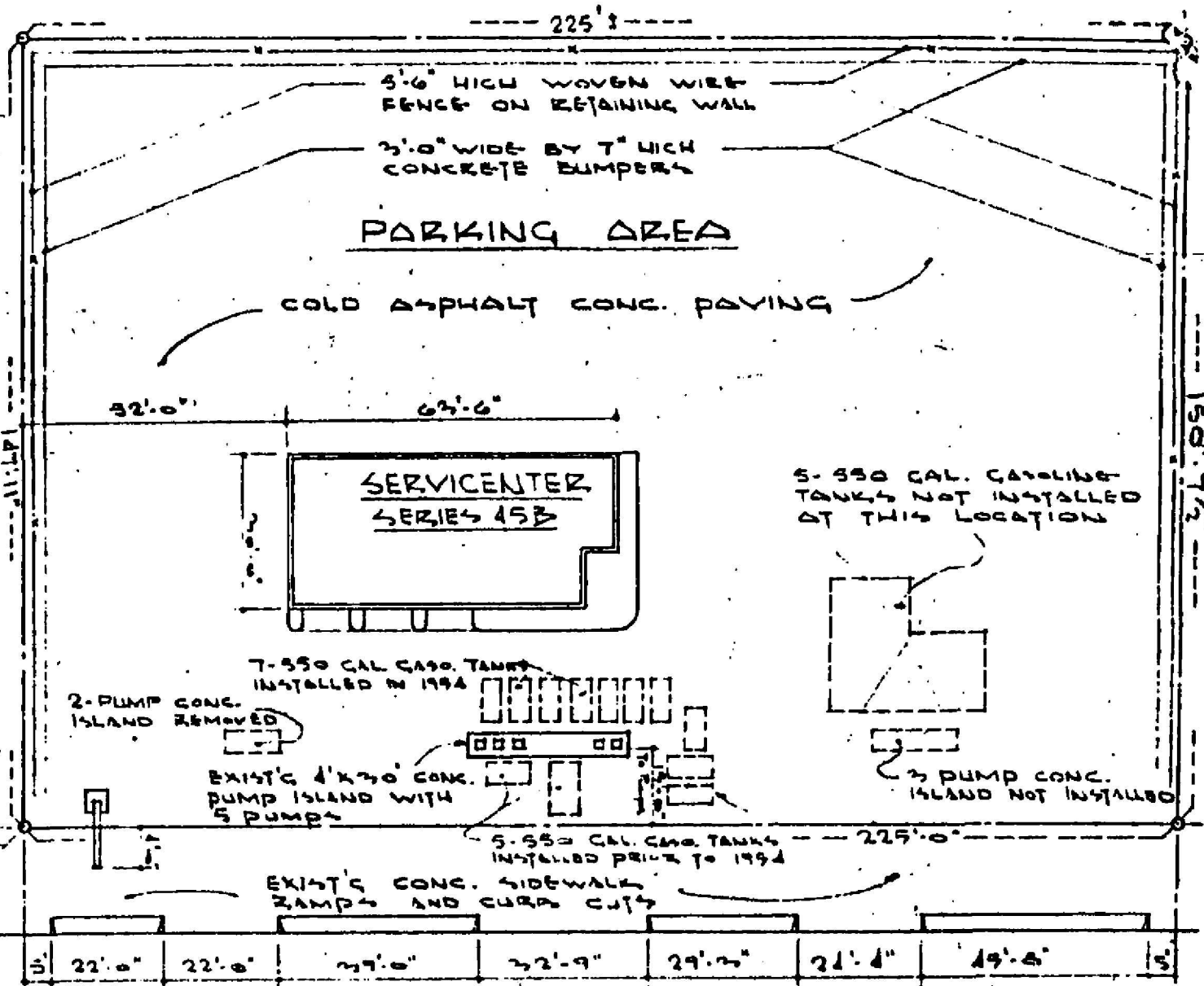


Figure 37
 Remedial plot plan for "Servicenter" on Block 2234, Lot 7,
 June 21, 1966. (New York City Department of Buildings/Manhattan,
 160 West Broadway)

NOTE

5-NYC APP'D TYPE
 M.F. PUMP & SET
 BACK 15' FROM LOT
 LINE ON ONE CONC.
 PUMP ISLAND



Block 2234
 204⁶⁶ ST.

PLOT PLAN

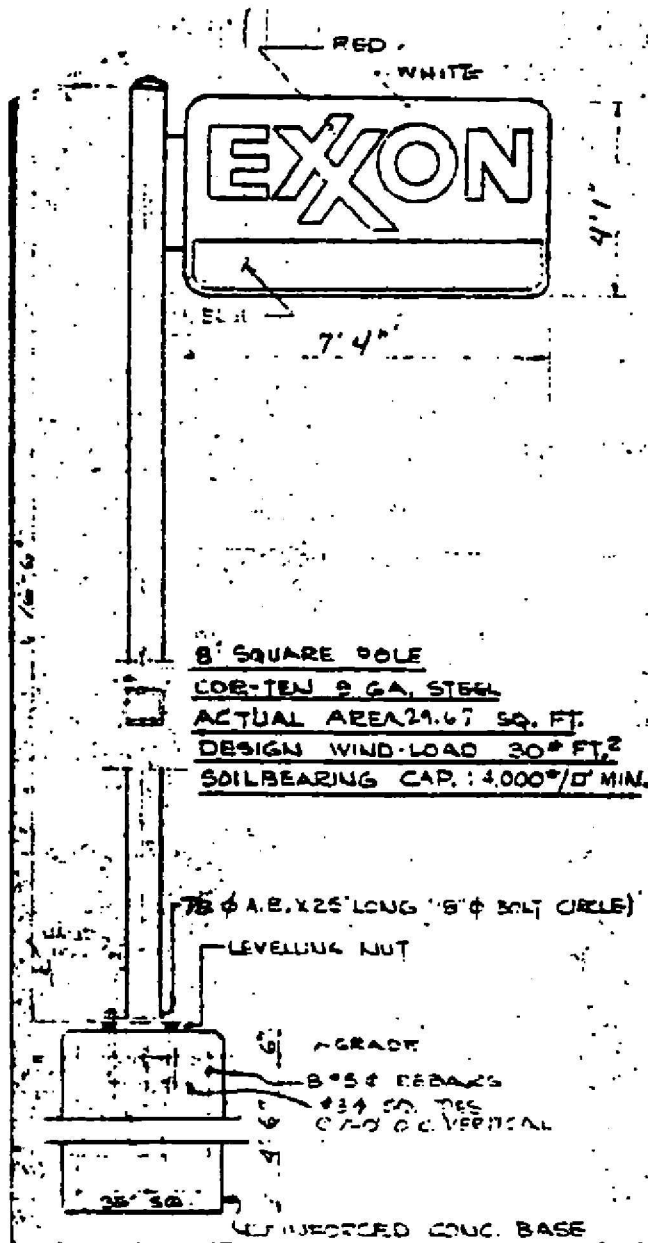
BROADWAY

HUMBLE OIL AND REFININ	
DATE 7-21-66	EXISTING SERVICENTER
DRAWN BY CZF.	4800-66 BRO MANHATTAN
SCALE 1"=70'	02170

REMEDIAL PLOT PLAN SHOWING TRUE EXISTING CONDITIONS INCLUDING
 12-550 GAL. GAS. TANKS AND ONE CONC. PUMP ISLAND WITH 5 - 10X
 APPROVED TYPE GASOLINE DISPENSERS INSTEAD OF 10-550 GAL. TANKS
 TOGETHER WITH TWO 3 PUMP AND ONE 2 PUMP CONC. ISLAND.

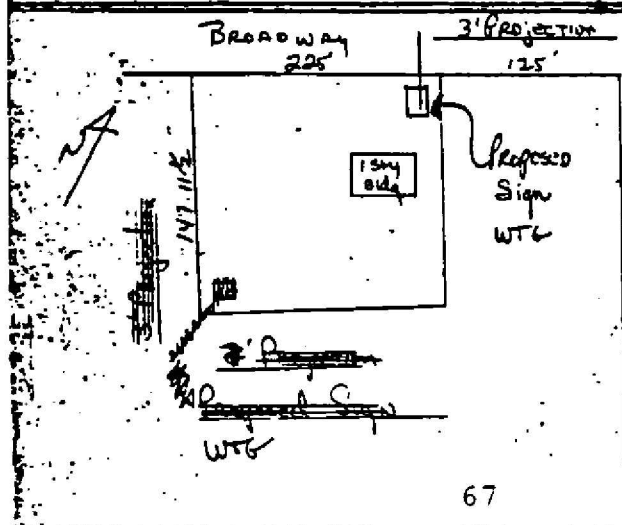
ORIGINAL DWG DATED
 11-12-65

Figure 38
 Profile and elevation of illuminated Exxon sign, October 10, 1972, on Block 2234, Lot 7. (New York City Department of Buildings/Manhattan, 160 West Broadway)



- 1) No colors, Red, Blue, Yellow interference w/traffic lights
- 2) Non-Flammable, Non-toxic, Non-hazardous
- 3) Sign structure to comply with Code of Dept. of Bldg's Sec. 24-207 Art. 2 & 24-208 Laws in all respects.
- 4) Details of Sign, make of Plexiglass.
- 5) Design for Wind Load of 30[#]/FT².
- 6) Structural Base & Hardware if required to be verified by Bldg. Dept.
- 7) Soil Bearing 4,000[#]/Sq. Ft. If new base subject to Bldg. Dept. Inspectors.
- 8) Max. Pole Stress 17,000 PSI
- 9) Existing Base to be re-used.
- 10) #307 Bolts
- 11) A36 Steel Base ASME 333
- 12) Provide Test Cylinder if required.
- 13) New Pole Shafts Steel Exceeds
 A) 50,000 PSI Yield Strength
 B) 70,000 PSI Tensile Strength

HUMBLE OIL REFINING CO.
 29.67 SQUARE FT. SIDE-MOUNTED SIGN
 INTERNALLY ILLUMINATED
 30S Sign 51BS Pole



BLOCK _____
 LOT _____
 ZONE _____

LOCATION PLAN OF SIGN ON SERVICE STATION AT
 4860/62 Broadway
 SS 125' West of W 204 St
 Manh.
 Job 15 SS 0471 T-53L
 DATE DRAWING ES/
 10/10/72 #1 OF 1