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Pickman & Yamin

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[" Convention Center Parking]

CULTURAL RESOURCES SURVEY, PHASE IA, BLOCK 679

MANHATTAN, NEW YORK "

33rd & 34th St
between 11th & 12th Aves.

Arnold Pickman and Rebecca Yamin

October 2, 1985

ENVIRONMENTAL MANAGEMENT

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DEPARTMENT OF CITY PLANNING

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I. INTRODUCTION

This report presents the results of a Phase Ia cultural resources survey of block #679 in the Borough of Manhattan, New York City. The block is bounded by West 34th and 33rd Streets on the north and south, respectively, and by 11th and 12th Avenues on the east and west. It measures 800 feet east/west and 197.5 feet north/south. As specified in the State Environmental Quality Review Act the objective of a Phase Ia survey is to review the project area with regard to possible cultural resources and under the State Historic Preservation Act of 1980 to assess the liklihood that significant archaeological sites, as defined under the criteria established for the inclusion of sites in the National Register of Historic Places and the State Register of Historic Places are present in the study area.

The survey consisted of a site visit (conducted on September 18, 1985) and the analysis of various primary documents and secondary sources. Documentary research was conducted in the research branch of the New York Public Library, Map and Local History divisions; New York University's Elmer Holmes Bobst Library; the New York City Municipal Archives; the New York County Records Office; and the Office of the Manhattan Borough President, Bureau of Topography. The research, analysis, and site visit were conducted by the Principal Investigators for this survey, Arnold Pickman and Rebecca Yamin.

Description of the Project Area

At present block 679 is a largely vacant lot. Several one-story, temporary prefabricated-type structures, which apparently serve as construction offices for the New York Convention Center, are located along the western edge of the block and a single structure of similar construction is located within the northern portion of the block. An elevated structure carrying railroad tracks crosses the extreme western portion of the block curving across its northwest corner and continuing east more or less parallel to and approximately 25 feet south of 34th Street. The structure slopes downward from the northwest corner of the block and the tracks continue eastward, first on fill supported by a retaining wall, and then at grade.

Impacts

It is our understanding that the construction methods to be used for the proposed parking facility on block 679 will be slab at grade footings extending down to rock. In our recommendations, we have assumed that construction would negatively impact any possible significant archaeological resources which may be present on the block.

Lot Numbers

The numbering of the lots on block 679 has changed several times since the lots were first numbered in the 1840s. For the purposes of this report the lots will be referred to by the numbering system used in the late nineteenth and early twentieth centuries. By the late nineteenth century

eight lots fronted on 11th Avenue, extending westward 100 feet. They were numbered 29-36 beginning at the corner of 33rd Street. Eight lots also fronted on 12th Avenue, extending 100 feet eastward. The four lots beginning at the corner of 33rd Street were numbered 1-4 and the four lots beginning on the corner of 34th Street were numbered 61-64. On the southern half of the block there were 24 lots numbered 5-28 fronting on 33rd Street. Lot 5 began 100 feet east of 12th Avenue and Lot 28 ended 100 feet west of 11th Avenue. On the north side of the block, there were also 24 lots, numbered 37-60. Lot 37 began 100 feet west of 11th Avenue and Lot 60 ended 100 feet east of 12th Avenue.

Summary of Conclusions and Recommendations

The documentary research indicates that it is likely that archaeological deposits are present on block 679 which may prove eligible for inclusion on the National Register of Historic Places and the State Register of Historic Places (the criteria for both are identical). As listed in Section 800.10 of 36CFR 'National Register criteria' means "The following criteria established by the Secretary of the Interior for use in evaluating and determining the eligibility of properties for listing in the National Register: The quality or significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures and objects of State and local importance that possess integrity of location, design, setting, materials, workmanship, feeling and association and

1. that are associated with events that have made significant contribution to the broad patterns of our history; or

2. that are associated with the lives of persons significant in our past; or
3. that embody the distinctive characteristics of a type, period, or method of construction, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
4. that have yielded, or may be likely to yield, information important in prehistory or history."

It is criterion #4 that may apply to any or all of the following resources identified as possibly present within block 679, criteria #3 regarding methods of construction applies specifically to #2 below.

1. land deposits from five separate landfilling episodes dating from the late 1820s or 1830s through the 1870s
2. bulkheads associated with four of these filling episodes
3. archaeological deposits and structural remains associated with an iron foundry which operated in the southeastern portion of the block from the late 1830s through the late 1850s and a grist mill which operated at the same location from the late 1850s through the 1860s and perhaps through the 1870s
4. deposits associated with a domestic occupation on the northeastern portion of the site from the early-mid 1830s through the late 1840s and a

second occupation of the same site between the early-mid 1860s through the 1870s.

The landfill deposits may include domestic refuse from adjacent properties to the water lot grants or refuse from commercial activities in the area. These materials could contribute to the unwritten history of early nineteenth century lifeways and industrial practices in this section of Manhattan as well as document the sources of landfill used in this period. The bulkheads associated with the landfilling episodes may provide information on the history of landfilling technology which has been recently recorded at archaeological sites in lower Manhattan for the late seventeenth through the early nineteenth centuries but is apparently unknown for the later portions of the nineteenth century. The archaeological deposits associated with the remains of an iron foundry dating to the late 1830s and a grist mill at the same site dating to the 1850s may contain information on these industries and work patterns associated with them which have also not been well recorded historically. Archaeological deposits from a domestic occupation within the site could provide information on a socio-economic group or groups whose activities were not recorded in historical documents thus contributing to an accumulating body of comparative material on other than upperclass and politically powerful Manhattan residents during the nineteenth century.

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initially

have the
documentary
records
been
checked?

The fact that the documentary research conducted for this study suggests that no deep cutting down of the original nineteenth century ground surface has taken place in portions of block 679 presents the possibility that some or all of the above discussed deposits may have the integrity required for National Register eligibility. In archaeology integrity means wholeness,

completeness, and the presence of artifacts in their original associations. It is, of course, impossible to assess the integrity and actual presence or significance of these deposits and structures without subsurface excavation. We therefore recommend that test excavations be conducted. More detailed recommendations for the conduct of these excavations are included in Chapter IV of this report.

II. THE DOCUMENTARY RECORD

Prehistoric Period - Known Sites

By the early part of the twentieth century, when a widespread interest in America's prehistoric past was first expressed, development had destroyed or obscured prehistoric archaeological sites in most of Manhattan. Only in the extreme upper part of the island, in the Inwood Hill area, were sites recorded and excavated (Skinner 1920). Bolton (1920), however, reconstructed the location of Indian occupation sites as they existed at the time of the initial European settlement from "indian deeds, colonial charters, and other historic references." Extrapolating from these sources and topographical considerations Bolton (1922) also reconstructed the course of Indian paths in New York City. A portion of Bolton's map (1922, map VIIIA) showing Indian sites and pathways in Manhattan is reproduced here as Figure 1. It shows the nearest site (encircled #4) to the study area located on the shore below 14th Street. This site, Sapohanikan, is described by Bolton as a "kind of landing and trading place" where the Indians of Manhattan traded with those from the mainland (Bolton 1920: 240). Bolton's map shows a trail leading southeast from Sapohanikan to connect with the main north/south trail which ran along the present course of Third Avenue. There are no trails shown in the vicinity of the study area.

Prehistoric Period - Possible Unreported Sites

Since prehistoric sites in this portion of Manhattan are known only from historical documents and only from the period of the initial European

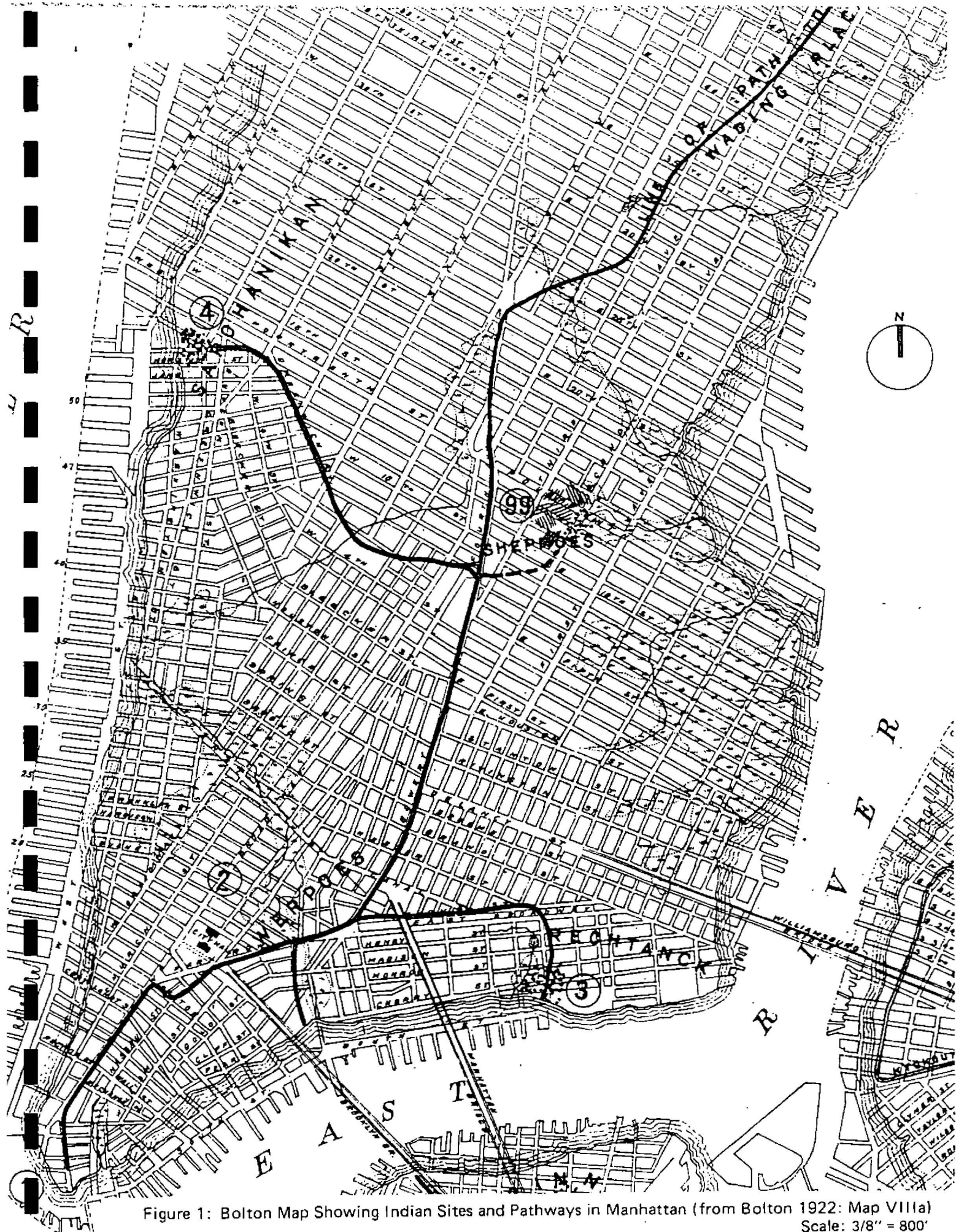


Figure 1: Bolton Map Showing Indian Sites and Pathways in Manhattan (from Bolton 1922: Map VIIIa)
Scale: 3/8" = 800'

settlement, there is a possibility that other prehistoric archaeological sites may have been present. The likelihood that such sites would have been present in a particular area can be assessed by reconstructing the physiography prior to historic period land modifications.

During the late prehistoric period only the extreme northeastern corner of block 679 would have been dry land (shown on various maps discussed below). However, based on locations of known prehistoric sites, shoreline areas where freshwater streams entered the Hudson may be considered likely places to find prehistoric sites. A number of nineteenth century maps show a small stream entering the Hudson at 29th Street (see Figures 3 and 4). This stream, located approximately 1,100-1,200 feet south of the block 679 shoreline, is the nearest stream to the project area. It should be noted that the widely consulted Vielle map, which is an 1864 reconstruction of the shoreline in colonial times, shows this stream entering at 32nd Street. This is almost certainly incorrect unless the course of the stream had been shifted since colonial times, since all the nineteenth century surveys (e.g. Randel 1814 and 1819, Colton 1836, Dripps 1852) show the stream in the vicinity of 29th Street.

In assessing the sensitivity of the shoreline area for the presence of possible prehistoric archaeological sites the rise in sea level since the final stage of the Wisconsin glaciation must be considered. It is currently accepted that the initial prehistoric occupation of the eastern United States did not occur until after this time (c. 11,000 B.P.). Since the Hudson River at the location of New York City is estuarine, portions of the river adjacent

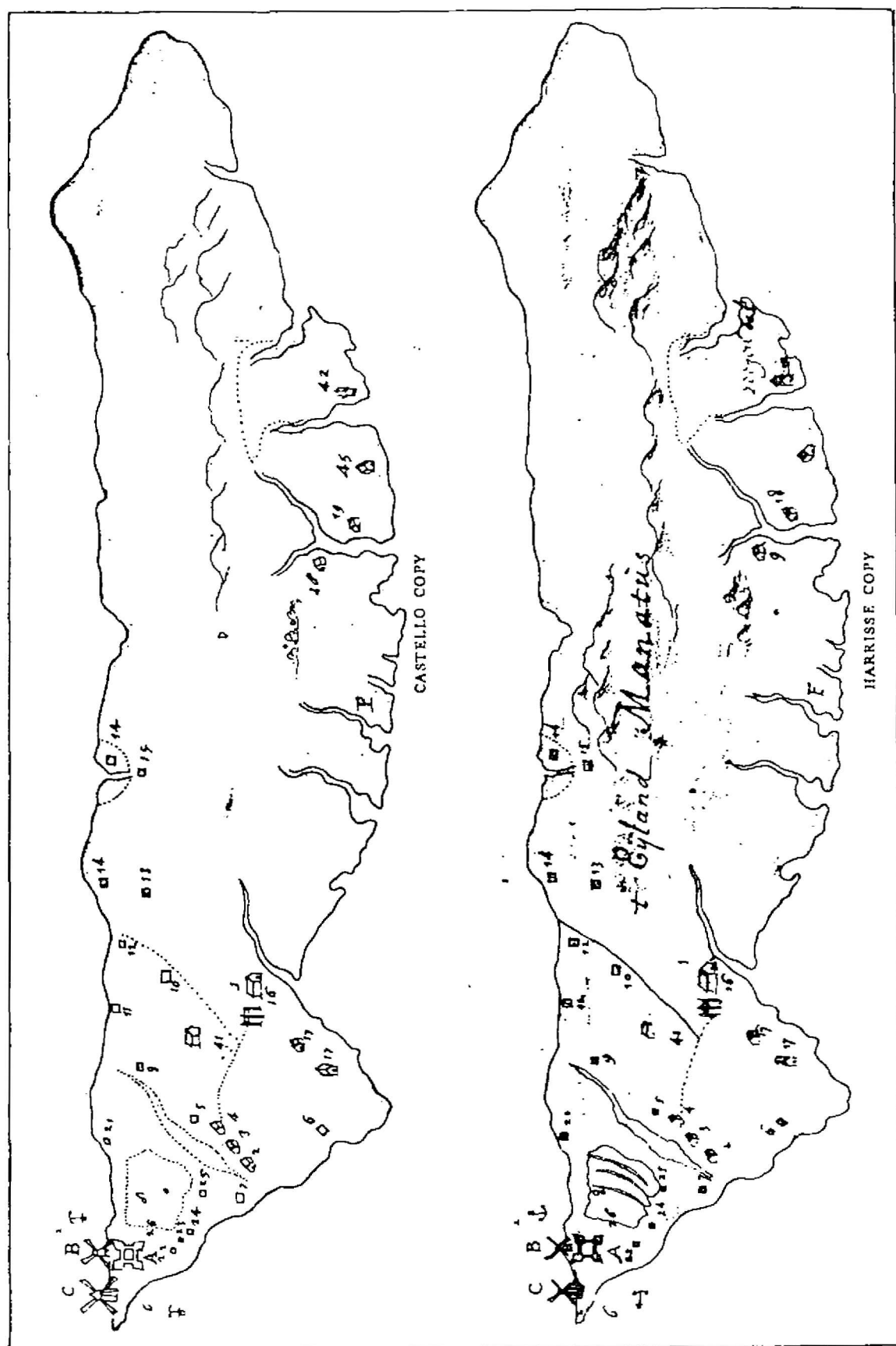


Figure 2: The Manatus Map of Early Seventeenth Century Farms on Manhattan Island (from Stokes V. II 1916: Pl. 42a). No scale given.

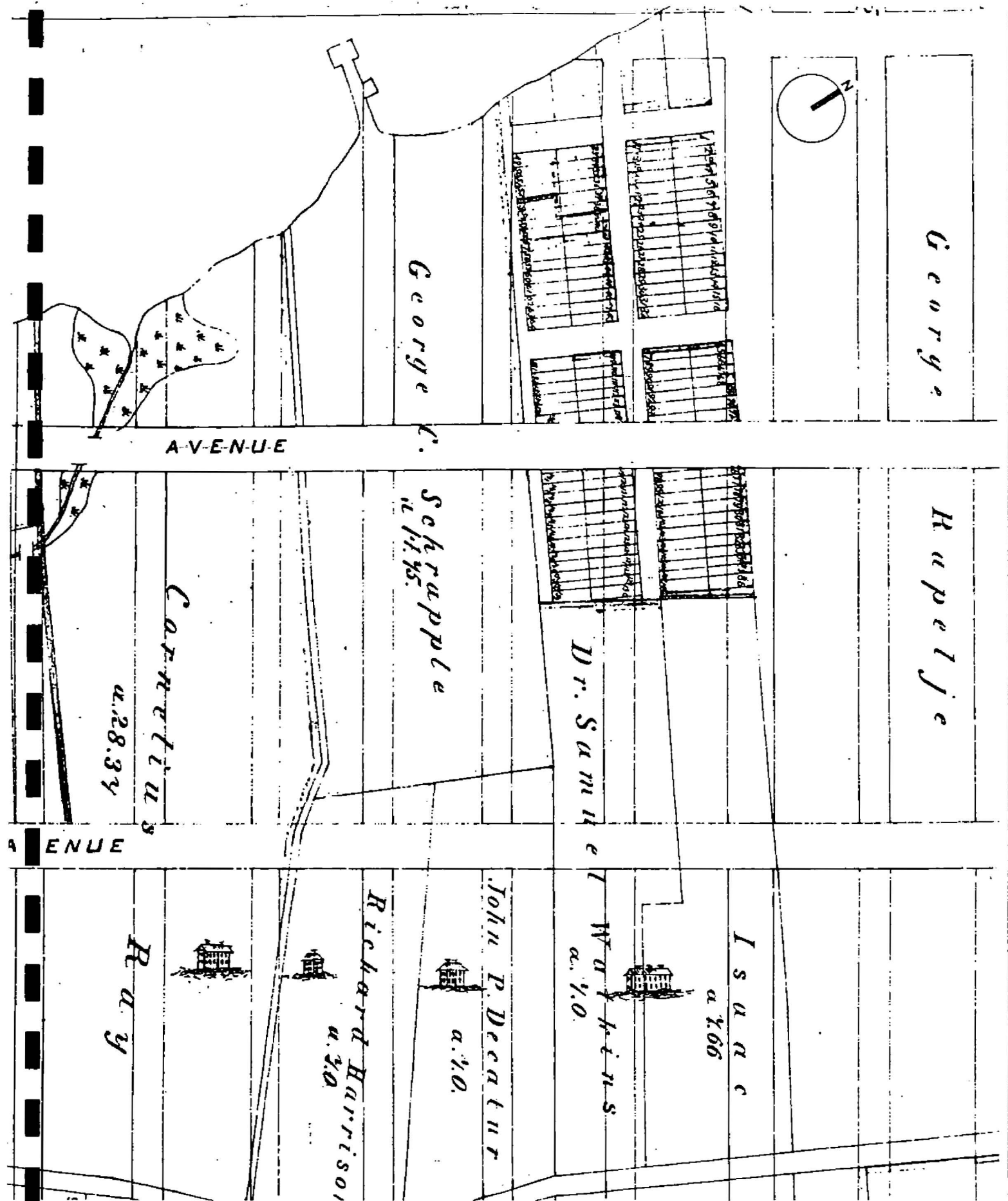


Figure 3: The Blue Book Map of Farms, 1815. Scale: 1" = 300'.

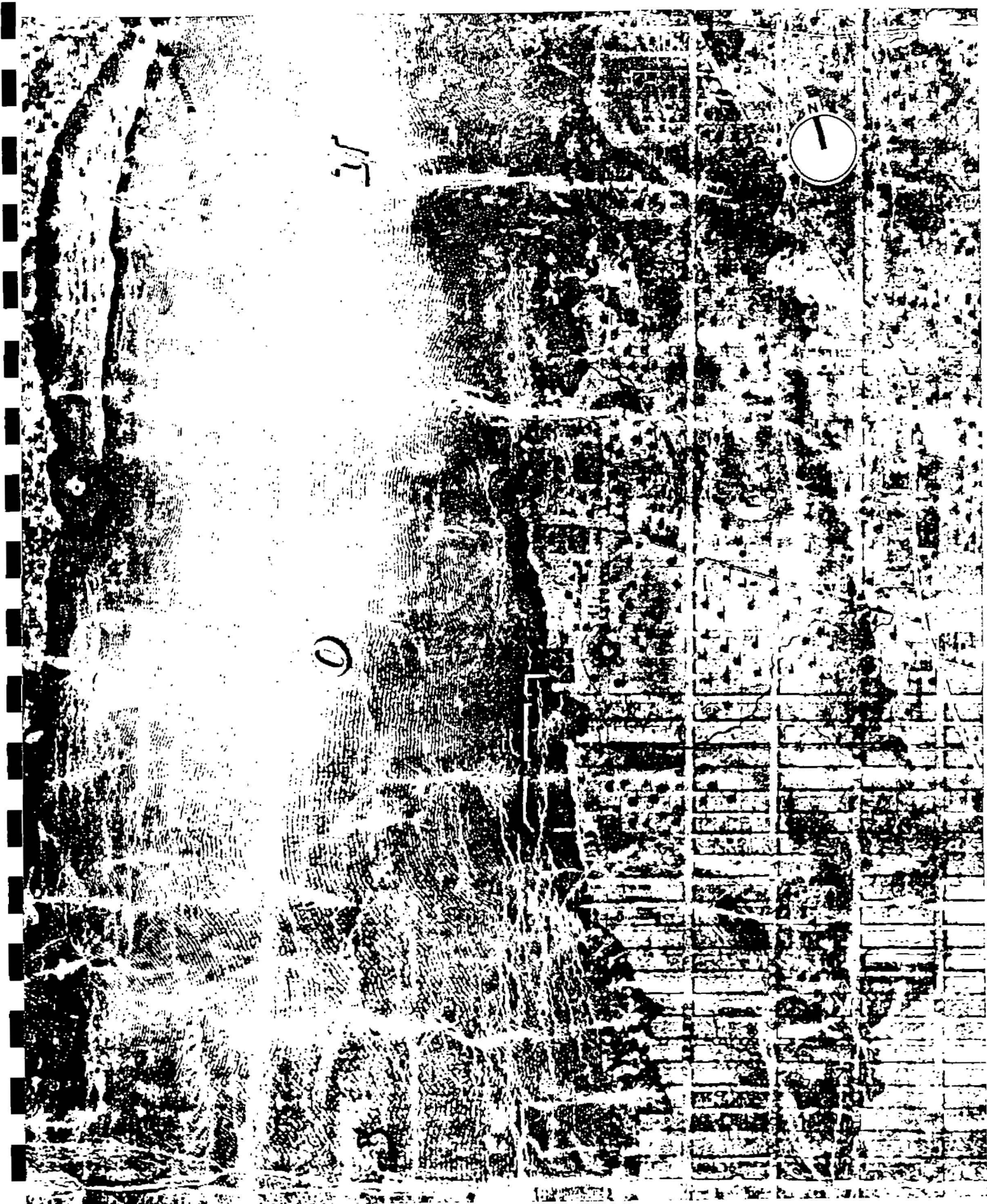


Figure 4: Colton Map, 1836. Scale: 1" = 1250'.

to the present shoreline would have been dry land during the prehistoric period.

A reconstruction of the Hudson River shoreline as it existed at different times during the prehistoric period was carried out by one of the authors of this report (Pickman) and Sydne Marshall for the Westway project cultural resources study (Historic Conservation and Interpretation, Inc. 1983). The surface contours of the glacially deposited sands which underlie the Hudson River silt deposits had been reconstructed by engineers based on the results of soil borings. The surface of this sand was assumed to be the land surface on which prehistoric occupation would have taken place prior to the incursion of the river and deposition of the overlying silts. The contour elevations were combined with the sea level elevations at various times in the post-glacial period (as determined by radiocarbon dating of immediately post-glacial organic deposits) to reconstruct the shoreline for a number of dates during the prehistoric period. The reconstructed shorelines were then compared with a model based on the characteristics of known prehistoric coastal sites.

The sea level elevation at the time of the initial prehistoric occupation of the northeast, c. 11,000 B.P., was approximately 80 feet below present sea level. Westway project borings indicate that the depth of the glacial sands at the location of 12th Avenue west of block 679 is in excess of 90 feet, and thus would have been inundated before the advent of prehistoric occupation. The Westway project study notes that in the area of block 679 "The slope falls continuously toward the west from the present shoreline" (Historic Conservation and Interpretation, Inc. 1983: A18). The difference between the

pre-filling shoreline elevation of 0 feet and the 90-foot contour, combined with the length of block 679 (800 feet) gives an estimated slope of approximately 11% for the immediate post-glacial surface in the study area. The Westway project concludes that "north of Canal Street, there are significantly fewer topographic features in the project area that demonstrate the settlement criteria previously discussed in relation to prehistoric human settlement" (Historic Conservation and Interpretation, Inc. 1983: 53).

We were informed by Mel Eznic of Woodward-Clyde that block 679 was not covered by the borings done for construction of the New York Convention Center. Thus we were not able to more exactly reconstruct the particular pre-inundation landform on the block itself.

Historic Period - Seventeenth and Eighteenth Centuries

The locations of early seventeenth century farms on Manhattan Island are shown on the 1639 Manatus Map, reproduced here as Figure 2. The nearest farmhouses to the project area are those numbered 14 on the map. Both belonged to Jan Cornelissen van Rotterdam. The northernmost of the two houses was located at 42nd Street and the southernmost between 14th and 24th streets (Stokes, V. II 1916).

The part of Manhattan in which the project area is located remained farmland throughout the eighteenth century. According to Stokes (V. VI 1927) the shoreline at block 679 was originally part of a grant of land to Cornelys van Ruyven, Allard Anthony, and Paulus Leenderts and was subsequently acquired by Wessel Pietersen van Orden before 1737. By 1760 it was in the possession

of his son, Jacobus. The present location of 34th Street was the boundary line between the Jacobus van Orden farm and the "Glass House" farm of Rem Rapelje. Stokes does not discuss the location of farm houses, but the 1815 Blue Book Map of Farms (Figure 3) shows a row of farm houses east of Ninth Avenue. As noted above only the extreme northeast corner of block 679 was dry land at this time.

Historic Period - Nineteenth and Twentieth Centuries

In the early nineteenth century the land in the general area of block 679 was still farmed. The 1815 Blue Book (Figure 3), however, shows the area along the shoreline as having been gridded into lots. The grid was apparently at a slight angle to the New York City street grid eventually adapted.

The Blue Book also shows that only a small portion of block 679 was above the high tideline. The shoreline crossed the southern edge of 34th Street approximately 55 to 60 feet west of the western edge of 11th Avenue. It crossed the western edge of 11th Avenue approximately 75 feet north of the northern edge of 33rd Street. The shoreline then cut diagonally across what eventually became the intersection of 33rd Street and 11th Avenue.

Thus, only the northwesternmost of the lots shown on the Blue Book of Farms map contains a portion of what became block 679. Although the Blue Book of Farms only shows farmhouses in this area east of 9th Avenue the 1814 and 1819 Randel maps show a structure on this lot but east of the location of 11th Avenue and therefore not on block 679. A deed on file in the New York County Records Office (Liber Deeds 193: 493) indicates that this lot was

sold in 1825 by George Rapelje to John Elwise. At some point the Rapelje family, which owned the Glass House farm to the north, must have acquired a portion of the adjoining Jacobus van Orden farm. It appears that George Rapelje gridded the area into lots for sale, laying out the street grid shown on the Blue Book of Farms. The copy of the 1814 Randel map in the collection of the New York Public Library is photostatically reduced making the names associated with the structures difficult to read, but it appears that the name associated with the structure on the lot in question is Elys, an alternate spelling of Elwise which also appears in some of the tax records. Thus, it is likely that the Elwise family occupied a house on this lot, probably as tenants of George Rapelje, as early as (1814), prior to purchasing the land in 1825.

In 1827, John Elwise obtained a water lot grant from the City of New York. This deed (Liber Deeds 219: 494) granted to Elwise "that certain water lot, vacant ground and soil under water to be made land and gained out of the North or Hudson River." The extent of the water lot grant is described in the deed and shown its accompanying map. The grant extended into the river a distance of 200 feet at the point where the shoreline intersected the west side of 11th Avenue. The terms of the water lot grant required Elwise at his expense to "build erect make and finish or cause to be built erected or made and finished...a good sufficient and substantial bulkhead at the northwesterly end of the said hereby granted premises from the southerly to the northerly side thereof." The requirement for the grantee to fill the lots and construct bulkheads was also part of the terms of the subsequent water lot grants.

Since the land which Elwise bought from Rapelje was oriented to a grid on a diagonal to the rectangular grid subsequently adopted (see Figure 3) there was a thin strip adjacent to 34th Street not included in the sale or in the subsequent water lot grant. We did not find a record of this discrepancy being corrected. However, when Elwise sold his land and water rights in 1848 and 1850 the deeds included all of the land south of 34th Street.

In the early 1830s all of New York above 14th Street was included in the 12th Ward. This area was "a largely rural space of market gardens, estates, waste land, much of it owned by the municipal government, and villages such as Manhattanville and Harlem at the end of the island" (Spann 1981: 103). At this time, the tax assessments did not list separately land west of 10th Avenue. However, in the tax assessors book for 1832 under the heading "10th Avenue" there is a listing for John Elway with "one house and eight acres." This house was probably the one noted on the 1814 map.

By 1836 the 16th Ward had been created to include the land between 14th and 40th Streets (Spann 1981: 103). The 16th Ward tax assessments for this year list "John Ely, two houses and eight lots, 33rd and 34th streets." Thus the previous assessment must have mistakenly recorded acres instead of lots. The 1836 Colton map (Figure 4) appears to show the location of this second house. It was at the southwest corner of 34th Street and 11th Avenue, and was thus the first structure to be erected on block 679.

On July 26th, 1838 William Browning and Henry R. Dunham received a water lot grant which extended from the shoreline, where it intersected 11th Avenue, for 900 feet (the planned west side of 12th Avenue) and extending

approximately to the middle of the block between 33rd and 34th Streets (Liber Deeds 387: 460). The grantees were supposed to build wharves 30 feet wide to support the landfill and create 12th Avenue and the extension of 33rd Street. The amount of land actually filled here, as elsewhere, however, was not necessarily that specified in the grant. Browning and Dunham had previously acquired property on what became the east side of 11th Avenue. Ownership of such property was a condition set forth for the water lot grant. The 1836 tax assessments indicate that Dunham and Browning owned six lots, two houses, and a factory on this property. Listings in Longworths City Directory indicate that William Browning had operated a foundry at 96 North Moore Street as early as 1829. Henry R. Dunham was listed as a machinist as early as 1836, and Henry R. Dunham and Company was listed at 100 North Moore Street at least by 1839.

The 1840 tax assessors book confirms the data from the 1836 tax records and the Colton map for that year (Figure 4) that John Elwise had erected a house on block 679 by this time. John Elwise is listed in 1840 as owning four lots on the west side of 11th Avenue between 34th and 33rd Streets with a house on the corner lot, than numbered 10760 (later numbered 36). The 1840 tax records also indicate that William Browning and H.R. Dunham had a "large square and factory building on new made ground" on the west side of 11th Avenue between 34th and 33rd Streets. The 16th Ward map, dated 1845 (Figure 5), shows the Dunham and Browning foundry on the northwest corner of 33rd Street and 11th Avenue. The building extended 74½ feet north of 33rd Street and 50 feet west of 11th Avenue. The map also shows the extent of land filling as of this date. Apparently Elwise had filled in part of his water lot, but not to 200 feet west of 11th Avenue as called for in the grant.

A small wharf extended outward in about the center of the block. This wharf is also visible on the 1836 Colton map (Figure 4). A rectangular piece of land, presumably the "large square" referred to in the 1840 tax records, had been filled in by Browning and Dunham. This land extended $74\frac{1}{2}$ feet north of 33rd Street -- the length of the foundry building -- and extended 303 feet west of 11th Avenue.

In 1848, John Elwise sold his property on the east side of 11th Avenue to Browning and Dunham (Liber Deeds 501: 359); in 1850 Elwise also sold his block 679 property including the water rights to them (Liber Deeds 541:400).

In 1850 Browning and Dunham divided the property which they had formerly held in common with Browning receiving the southern half of block 679 and Dunham receiving the northern half. The division also included the water rights associated with each half of the block (Liber Deeds 557: 455; 458).

There were four water lot grants for block 679 dated December, 1852. Two of these, to Browning and Dunham in common, repeat the terms of the earlier water lot grants except for a narrow strip in the middle of the block (Liber Deeds 623; 174; 176). The other two grant to Dunham and Browning separately the rights to the half of the block that each actually owned at this time under the terms of the 1850 deeds dividing the common property. The later grants extend the terms of the earlier grants further westward anticipating the creation of a 13th Avenue in this area (Liber Deeds 621; 521; 528).

The 1852 tax assessors book reflects the division of property between Browning and Dunham. The Elwise house had apparently been torn down after

Dunham and Browning purchased the property because the four lots on the block which had been Elwise's were listed as undeveloped. William Browning was listed as owner of a boiler, shop, foundry, and four lots. The 1852 Dripps map (Figure 6) confirms that the Elwise house at the corner of 34th Street and 11th Avenue was no longer standing. This map shows the foundry property in detail. The Browning foundry is shown on this map as the "Archimedes Iron Works," the only reference to the foundry by this name in the records. The map shows a total of seven buildings on the foundry property in addition to the main foundry building at the corner of 33rd Street and 11th Avenue. Four of these structures are completely within the bounds of block 679 and an additional structure straddles the north line of 33rd Street and was thus only partially on the block itself.

It should be noted that both Browning and Dunham apparently continued in business in lower Manhattan during the period of their venture on block 679, as both are listed at the 96 and 100 North Moore Street addresses in the 1852 edition of Wilson's Business Directory.

The 1854 Perris Atlas (Figure 7) shows the foundry property in more detail. The foundry building itself is shown in pink on the original signifying a brick or stone building. The heavy line at the north end of the building indicates the presence of a steam engine boiler. Three of the five buildings shown on block 679 on the earlier Dripps map are still standing, one of frame construction and one with an attached outbuilding. This complex of buildings is described as a stone cutting works in the Perris Atlas. This is either an error or Browning had leased the buildings for this purpose.

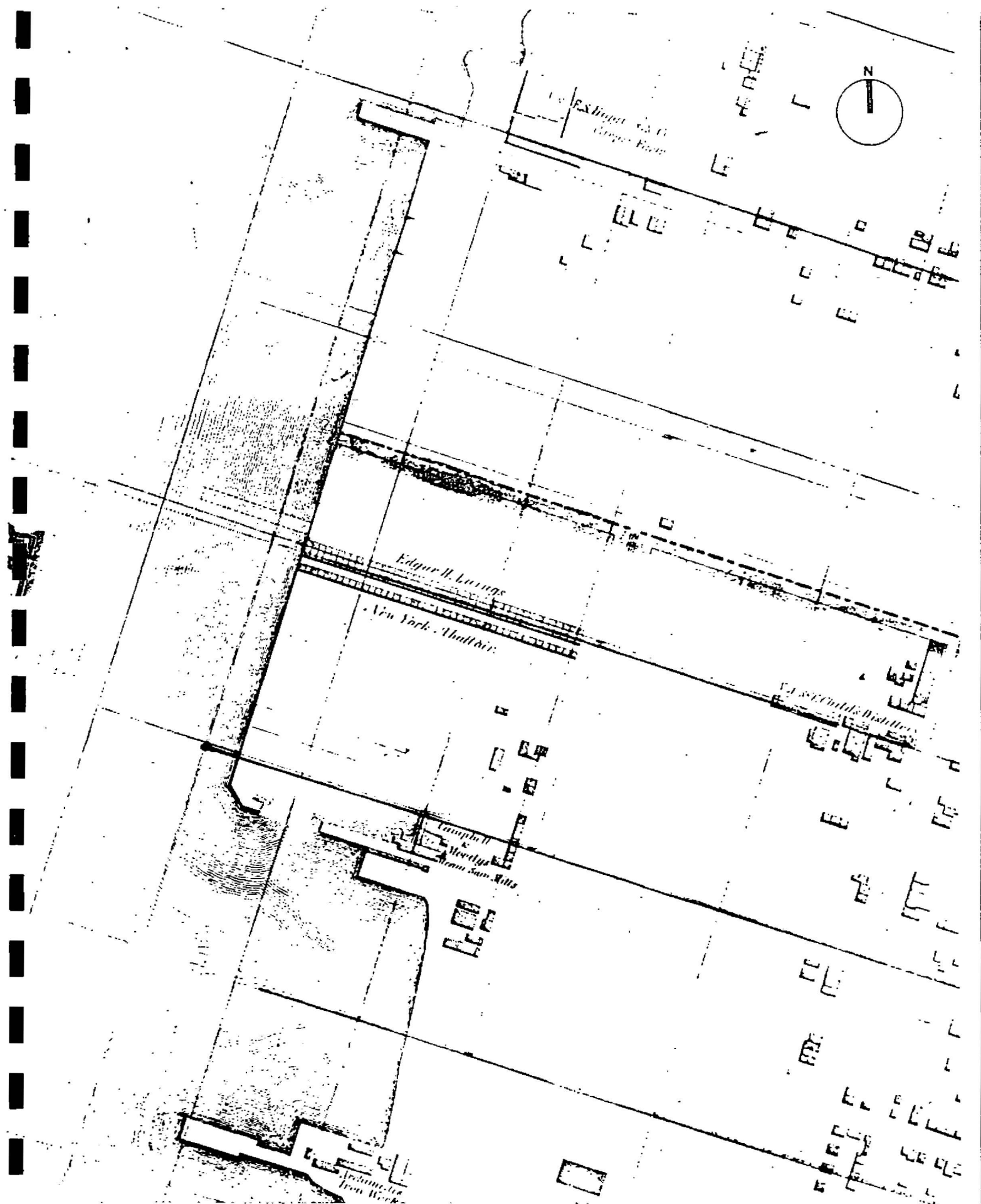


Figure 6: Dripps Map of the City of New York, 1852 with Detail of Archimedes Iron Works. Scale 1" = 300'.

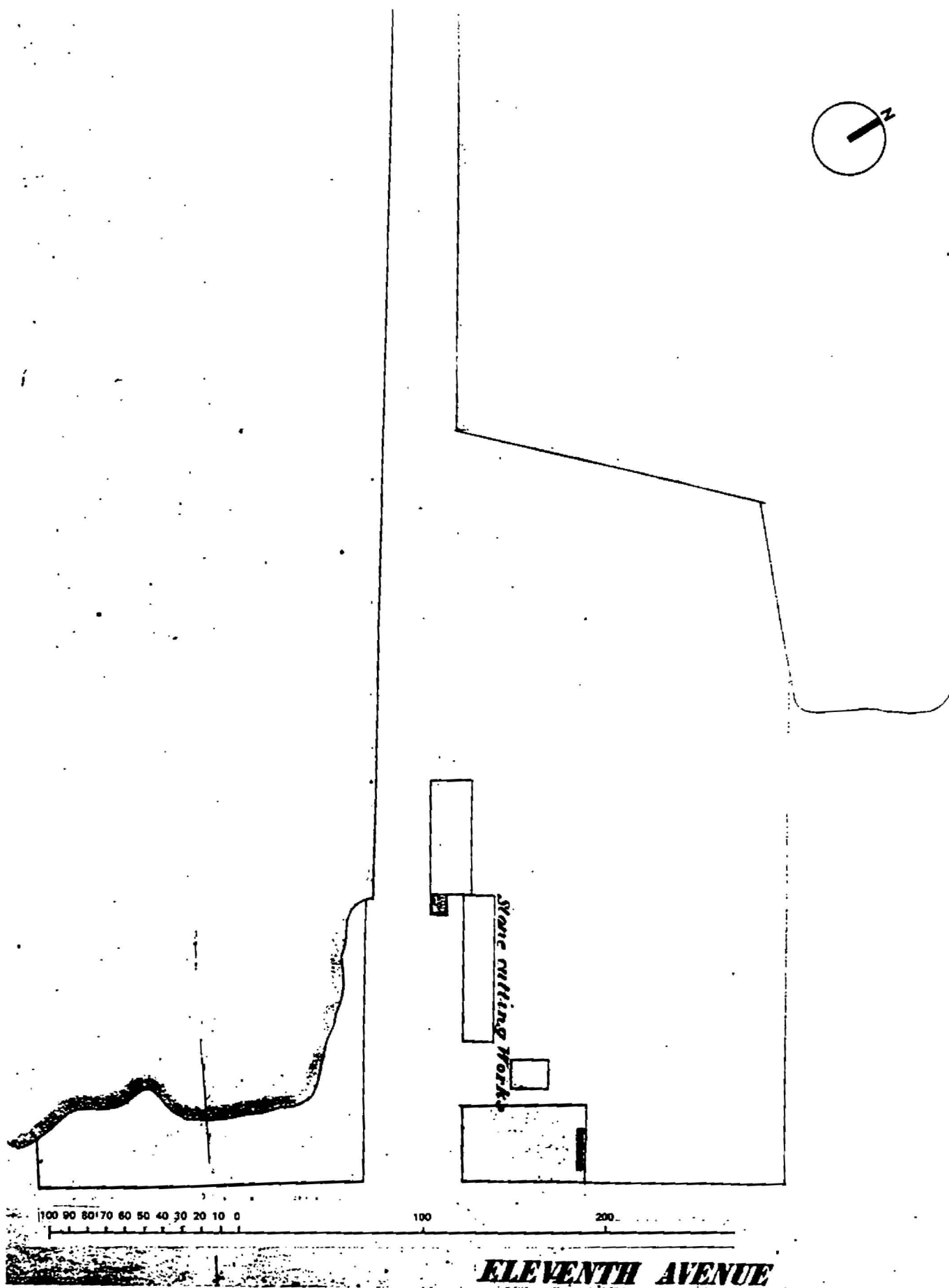


Figure 7: Perris Atlas Map, 1954 with Detail of Foundry Site.

The 1855 tax assessors book continues to describe the foundry property as containing a "boiler shop and lots." The Perris Atlas shows that additional landfilling had taken place on the block between 1852 and 1855. The filled land along 33rd Street extended approximately 450 feet west of 11th Avenue. Bunham had apparently also filled the northern half of the block almost to the same point at this time. The 1855 tax records confirm this filling. William Browning was assessed for 13 lots on the north side of 33rd Street indicated as a "new assessment" and Henry R. Dunham was assessed for 13 lots of undeveloped land on the south side of 34th Street.

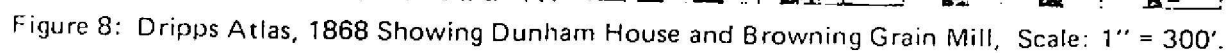
In 1854 Henry R. Dunham transferred title to much of his property, including the northern half of block 679, and the associated water rights, to John Dunham (Liber Deeds 669:544). It is likely that John Dunham was Henry's son. It is possible that the property was subsequently retransferred back to Henry R. Dunham, although this transaction could not be traced, since the New York County deeds are only indexed through 1859. In any event, the tax records show that Henry R. Dunham continued to be assessed for the property.

The 1860 tax assessor's book shows Dunham's lots on the north side of the block as being undeveloped. However, it indicates that he had filled in additional land on this part of the block, as the assessment for the lots fronting 34th Street indicates "22 lots on this block above water." Since each of these lots had a 25 foot frontage, beginning 100 feet south of 11th Avenue, the filling must have reached a point 650 feet west of 11th Avenue by this time. On the southern side of the block, Browning, although still owning the land, apparently abandoned the foundry operation between 1855 and 1859. The 1860 assessments indicate Browning as having four

lots including a two story grist mill, measuring 98 feet 9 inches by fifty feet. It is possible that the foundry building was razed and replaced by a new structure, but it is more likely that the original foundry building was expanded from its original 74½ foot length to extend the full width of Browning's property and was converted into a gristmill. The other dimension of the grist mill was the same as the original foundry building in the same location. The assessments also indicate that 22 of the lots fronting 33rd Street had been filled, with only the two westernmost of these lots indicated as being "under water."

According to the 1865 tax assessors book no new filling had taken place between 1860 and 1865, and Browning still operated the grist mill. However, the assessment of Dunham's four lots fronting on 11th Avenue indicates the presence of a two story house.

1868 Dripps Atlas (Figure 8) shows what is apparently the Dunham house at the corner of 11th Avenue and 34th Street. This atlas also shows Browning's "grain mill." An L-shaped extension had been added to this building on lot 32 between 1865 and 1869, extending westward the full 100 foot depth of the lot. The atlas shows three additional small buildings on the block. On the southern half, the property between 100 and 300 feet west of 11th Avenue (lots 28-35), is labelled "stoneyard." One small structure is shown on this property fronting on 33rd Street approximately 250 feet west of 11th Avenue. Railroad tracks curve onto the block from 11th Avenue and run behind this building for the length of the block. However, the depiction of the western part of the block must be in error since other data, discussed below, indicate that the westernmost 150 feet of the block had not been filled at this time.



On the northern half of the block, the property extending from 300 to 600 feet west of 11th Avenue (lots 45-56) is shown as being occupied by the Scranton Coal Company, apparently functioning as a coal yard. A small structure is shown fronting on 34th Street approximately 300 feet west of 11th Avenue. Another smaller structure is shown fronting on 34th Street approximately 150 feet west of 11th Avenue. This may have been an outbuilding associated with the Dunham house.

The 1870 tax assessments do not indicate the presence of structures on the block. However, this may be because the assessments for this year were less detailed than for other years. For example, there is no indication that any of the lots are water lots. Their lower assessed valuation, however, makes it apparent that the lots on the western portion of the block remained water lots. One change from the description of the filled land in the previous tax records is that the assessments indicate that three of the lots fronting on 33rd Street (lots 37-39) remained as water lots rather than the two indicated on the previous tax records. The ward map dated 1871 indicates that portions of lots 37-39 had been filled at this time. Since these had not been completely filled they continued to be assessed as water lots in 1870. The ward map indicates that the lots on the northern portion of the block had been completely filled in by this date. However, two Department of Docks maps dated 1873 show the westernmost lots (lots 59, 60, 61-64) as being still under water, except for a narrow strip of land bordering 34th Street.

Although the 1870 tax records are ambiguous about the presence of structure, the 1875 tax assessments specify the lots as being vacant although this may be an error as discussed below. The lots fronting on 12th Avenue

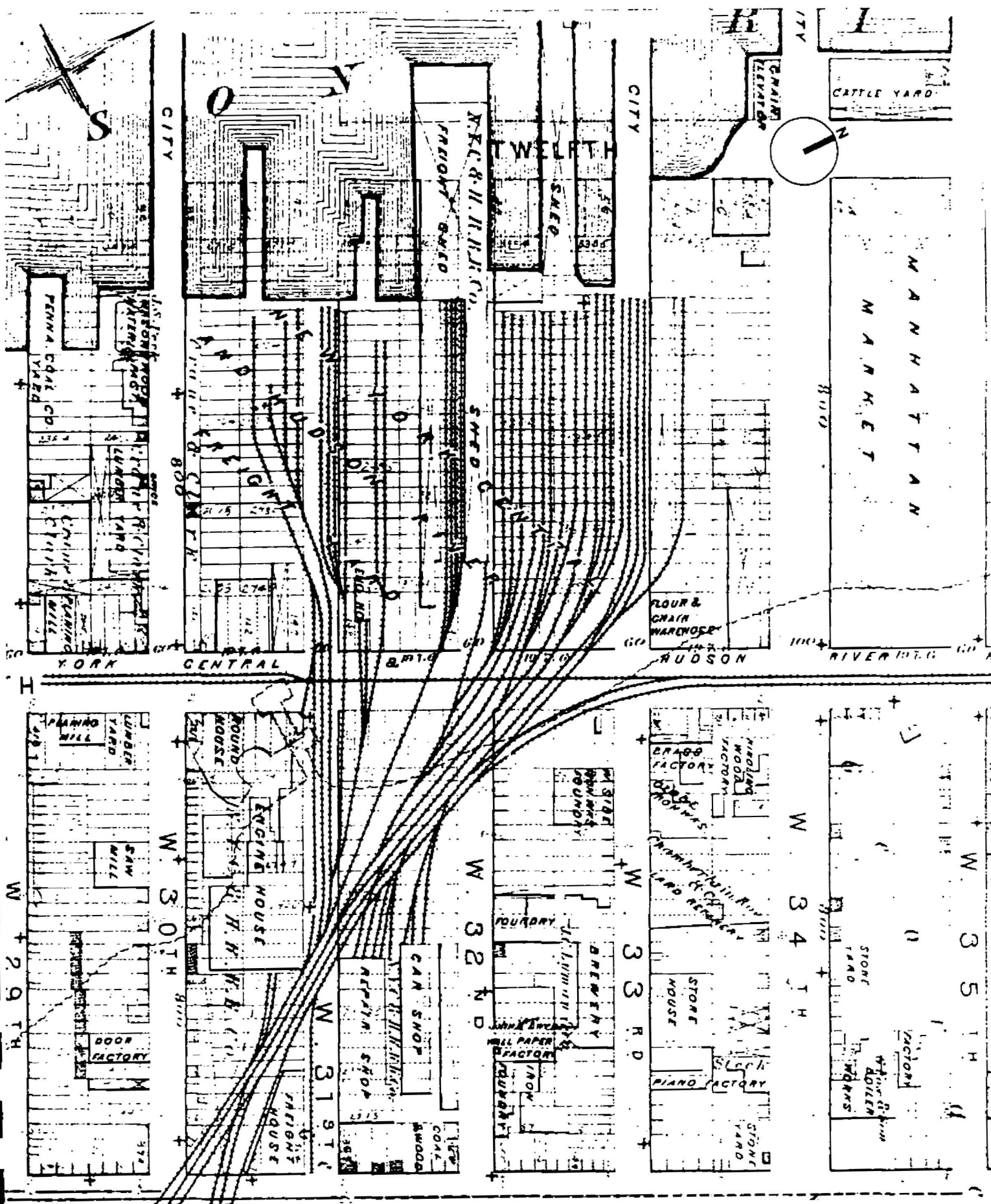
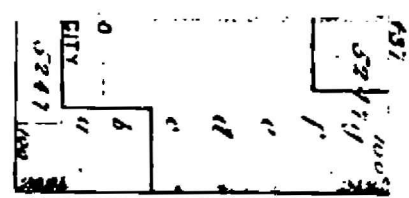
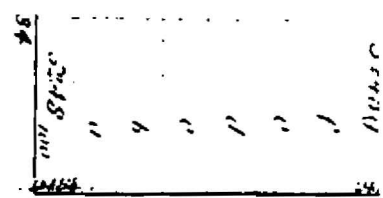


Figure 9: Bromley Atlas, 1879. Scale: 1" = 200'.



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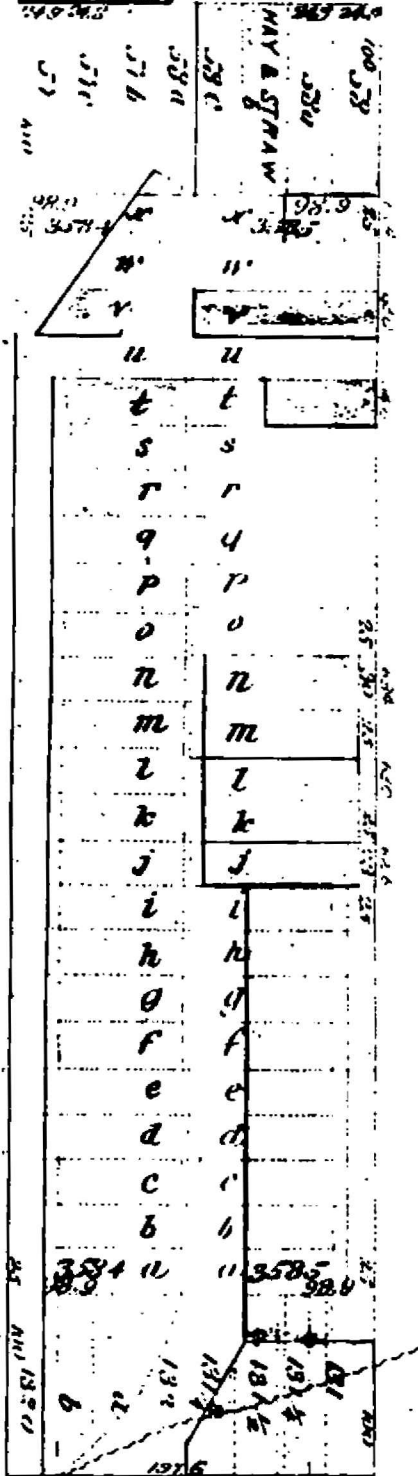
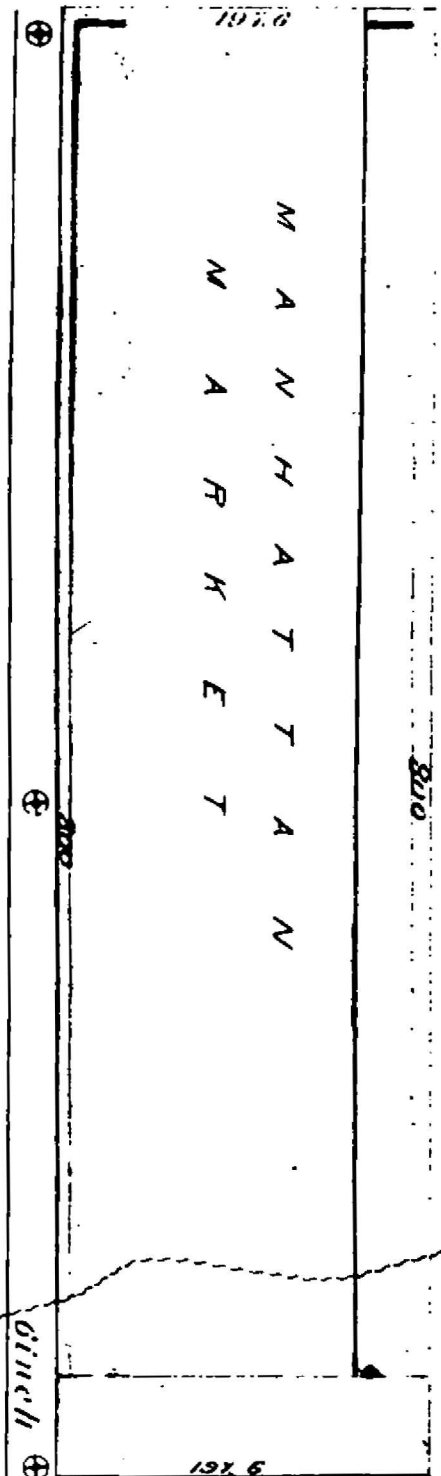
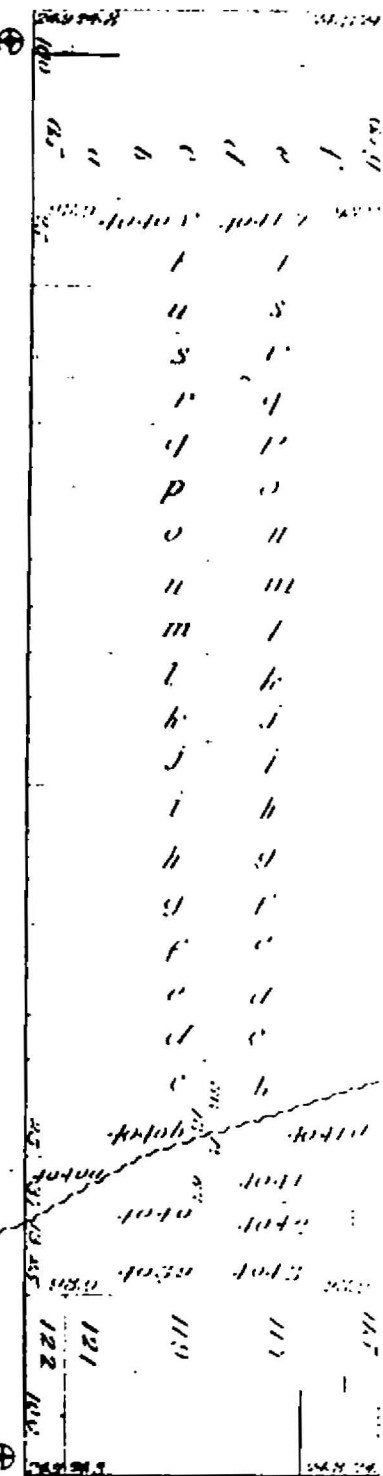


Figure 10: Robinson and Pidgeon Atlas, 1883. Scale: 1" = 100'.

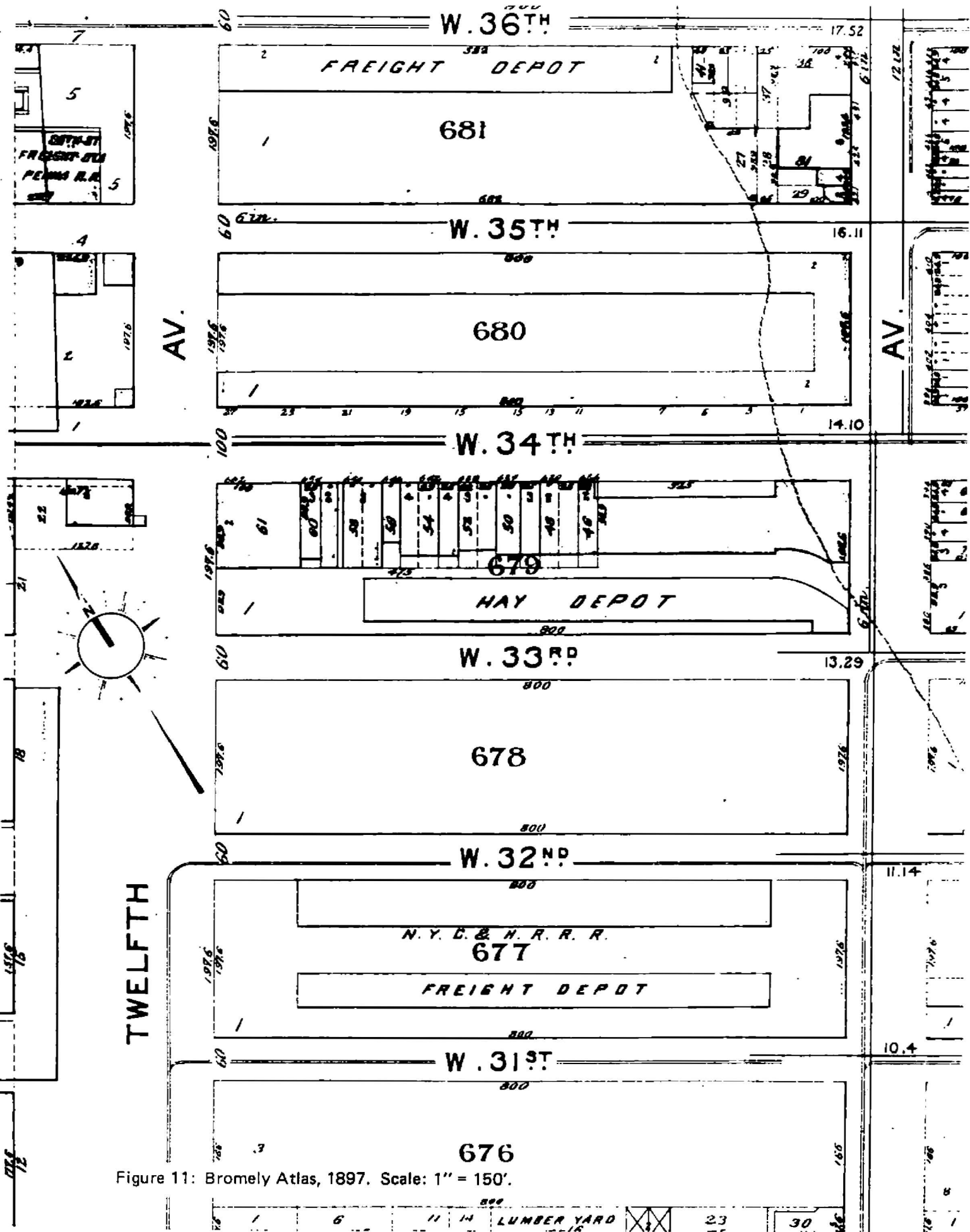
continue to be assessed as water lots as are the two westernmost lots fronting 34th Street and the three westernmost lots on 33rd Street. The property on the southern half of the block continues to be assessed to William Browning, while that on the northern half of the block is assessed to the estate of H.R. Dunham who had apparently died between 1870 and 1875.

The events on the block at the end of the 1870s and in the early 1880s can best be reconstructed by considering the 1879 Bromley Atlas (Figure 9), the 1883 Robinson and Pidgeon Atlas (Figure 10) and the 1880 tax records. The 1879 atlas shows a brick building, 100 feet deep, occupying the entire area of lots 29-32 at the corner of 11th Avenue and 33rd Street. This building is marked "flour and grain warehouse." Behind it (to the west) is a long frame structure indicated as being a stable and shown extending from approximately 160 feet to 600 feet west of 11th Avenue fronting on 33rd Street. A railroad track ran behind this building. The 1880 tax assessments describe the two story building at the corner of 33rd Street and 11th Avenue differently than it is shown in the 1879 atlas. The depth of this building on lot 29 (the corner lot) is indicated as 75 feet, its depth on lots 30 and 31 as fifty feet, and its depth on lot 32 as 100 feet. There are several possible explanations for this discrepancy. First it is possible, though not likely, that the 1879 building had been torn down and replaced. It is more likely that the square shape of the building on the 1879 atlas is a simplification of its actual shape. It is also quite possible that the 1870 and 1875 tax records erred in describing the land as vacant and that this building was the same building which housed the Browning grist mill and before that the foundry. The shape would have been the same as that of the grist mill with the addition of a 25 foot extension to the southernmost portion of the

building. The 1880 tax records show the lots fronting on 11th Avenue as well as those on the south side of the block fronting on 33rd Street as being owned by the Hudson River Railroad Company.

On the 1883 atlas the frame stable had been replaced by a long brick building which also extended 600 feet to the west of 11th Avenue. This building was set back approximately 25 feet from 33rd Street and was attached to a roughly triangular building, with a curving north wall, situated on the lots fronting 11th Avenue. The curving rear wall of the building enabled railroad tracks to enter the block from 11th Avenue. This entire structure is indicated on the later atlases as a hay depot or hay exchange. Its morphology remains the same except that the 1883 atlas indicated that the triangular-shaped structure did not extend to 33rd Street. Lot 32 was vacant. The later atlases show a portion of the structure on this lot extending 50 feet west of 11th Avenue (see Figures 11-12). This was either a later addition or represents an error in the 1883 atlas. The difference in morphology indicates that the stable shown on the 1879 atlas and the structure fronting on 11th Avenue described in the 1880 tax records had been razed and replaced by the hay depot by 1883. The 1880 tax records indicate that all of the above properties had apparently been sold by Browning to the Hudson River Railroad Company.

The 1880 tax records continue to show the lots on the extreme western portion of the block as water lots with the water lots fronting on 33rd Street owned by the Hudson River Railroad Company and those fronting on 12th Avenue still under the ownership of William Browning. However, the 1879 and 1883 atlases indicate that all of the water lots had been filled in. The land



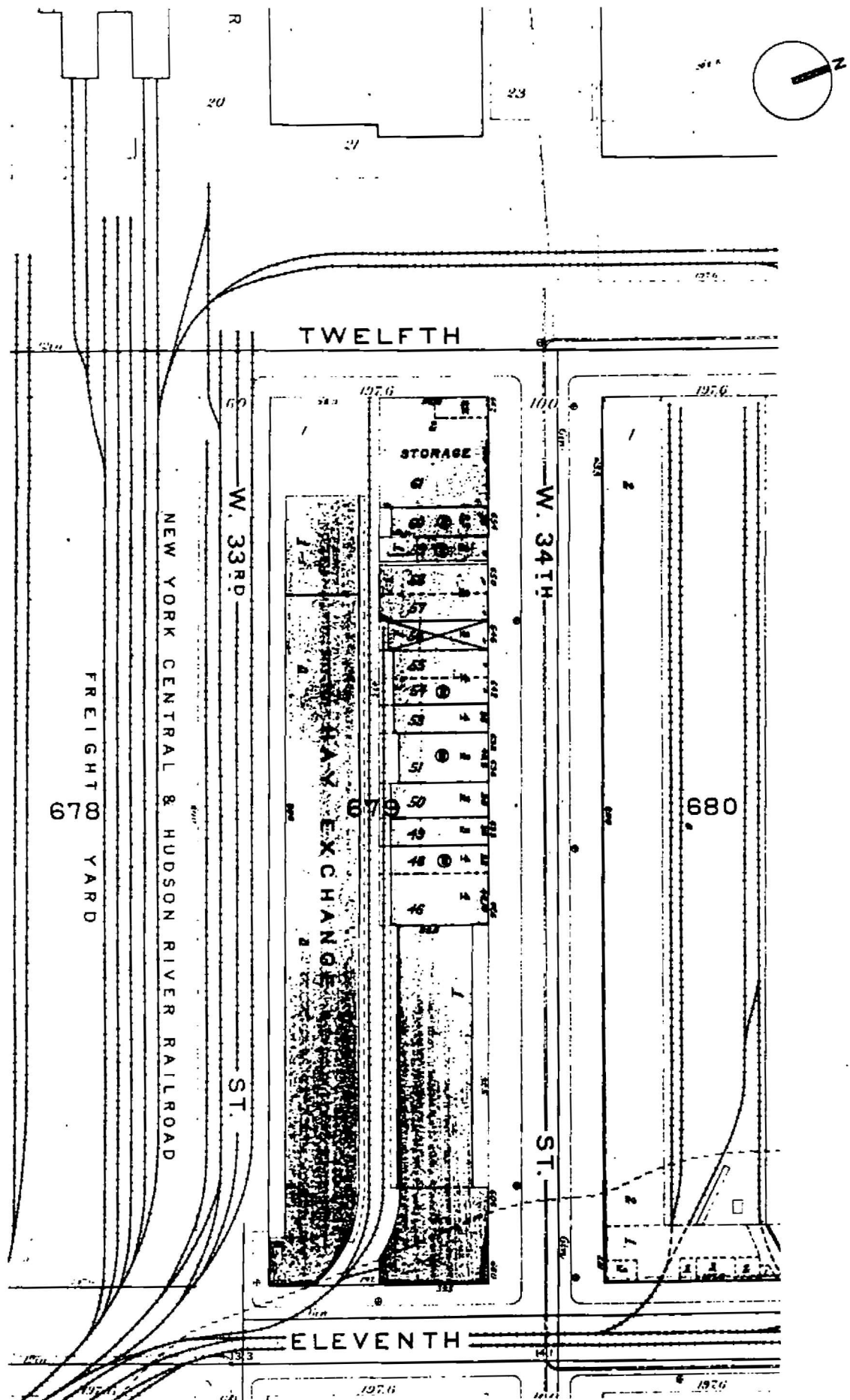


Figure 12: Bromley Atlas, 1920. Scale: $1\frac{1}{2}'' = 200'$.

must have been filled by 1883 since a frame building is shown in this area, west of the Hay Depot, on the Bromley Atlas of that year.

The 1879 atlas shows a small structure in the extreme northeast corner of the block (lot 36). The 1880 tax records describe this structure as measuring 25 by 30 feet and having two stories. As with the structure on lots 29-32 it is quite possible that the description of this land as vacant in the 1870 and 1875 tax records was in error and that this is the same structure owned by Henry Dunham in 1865 and shown on the 1869 atlas. In addition, it is also possible that the 1852, 1855, and 1860 tax records also erred in not listing structures on this lot, and that this is the same structure, perhaps rebuilt, erected by Elwise in the 1830s. It is likely, however, that at least the superstructure of the Elwise house had been razed since it is not shown on the 1852 or 1854 maps (Figures 6-7).

The 1879 atlas shows a frame stable extending westward from 11th Avenue attached to a rectangular building. Both are set back approximately 10 to 15 feet from 34th Street. The shading on the atlas indicates that this building was a framed structure covered with iron. The 1883 atlas shows the eastern portion of the frame stable replaced by a brick building on the four lots facing 11th Avenue. The south wall of this structure is angled to permit railroad tracks to enter the block from 11th Avenue. This structure is shown on the later atlases as a four story building with a basement. The portion of the building on lot 36, closest to 34th Street, is shown as a stable on the atlases.

By 1883 the stable is still shown attached to the larger building but it is constructed of brick. According to the 1880 tax records the lots containing the stable and those fronting on 11th Avenue (lots 37-45 and 33-36) belonged to the Hudson River Railroad Company. Lots 36-50 on which the rectangular building stood and the remaining lots (52-60) fronting on 34th Street continued to be owned by Henry R. Dunham. However, the descriptions of the structures on these lots in the tax records do not match that shown in the atlases. The tax records indicate that lots 46-48 contained two story structures, 60 feet deep, while lots 49-51 contained structures 90 feet deep, the one on lot 50 three stories high and those on lots 51 and 52 one story.

The 1879 atlas shows that a brick building had been constructed on the four lots on the north side of the block which fronted on 12th Avenue (lots 51-54). This property is also shown in the 1880 tax records as belonging to Henry Dunham. The tax records indicate these as water lots, but the valuation of the property makes it certain that this was an error. The structure on this property is labelled "hay and straw" on the 1883 atlas and the structure is shown on the later atlases. The only other structure shown on the north side of the block in 1879 was a small frame building on lot 59 which extended approximately 50 feet south of 34th Street. By 1883 this building was no longer standing, but a similar structure was shown on lot 60. (It is possible that this is the same structure, mislocated on either the 1879 or 1883 atlas.) In 1883 a second frame building was shown on lot 58 and a brick structure, extending 60 feet from 34th Street is shown on lot 56.

The plan of the railroad yards, including block 679, published by Mordecai in 1885 does not agree with any of the sources noted above. Although

the date of Mordecai's publication is 1885, the plans themselves are not dated and must be earlier. On the southern portion of the block Mordecai shows a structure corresponding to the location of the stable shown on the 1879 atlas, but set back from the street as was the later hay depot. The stable shown on the 1879 atlas fronted on the street. The Mordecai plans do not show a structure fronting on 11th Avenue on lots 29-32. This would be consistent if the plans were made after demolition of the earlier foundry/grist mill structure, but before the construction of the hay depot.

The Mordecai plan shows a building at the corner of 34th Street and 11th Avenue and the rectangular stable-like structure west of but not attached to it as it is shown on the 1883 atlas. The rectangular structure shown on the 1883 atlas, to the west of the stable, is not shown. The building at the corner of 12th Avenue and 34th Street is shown in dashed lines, either indicating planned construction or perhaps that the structures were not owned by the railroad.

Mordecai labels the building on the north side of the block referred to above as a "stable," as "Hay Shed #2" and that on the south side as "hay shed #1." He describes the function of hay shed #1 as "strong such hay as is not directly delivered to consignees." He describes hay shed #2 as the "regular hay market." Thus the block is apparently shown after it was purchased by the railroad but before the new brick hay market was built on the southern part of the block. At this time the hay market was located in the frame structure shown on the 1879 atlas within the northern half of the block. The Mordecai plan apparently shows the block during its reconstruction by the railroad in the early 1880s.

The new hay depot was a three story brick structure, as shown on the atlases. A frame outbuilding, shown immediately west of the hay depot in 1883, was removed by 1891 as it is not shown on the Bromley atlas of that year. A one story brick addition extended the hay depot approximately 80 feet further to the west after 1897.

The function of the hay depot was presumably the same as that described for the old frame depot on the north side of the block. It was "Leased in sections to the hay dealers who unload their own cars. The only work required of the railroad company is to arrange the cars in the train according to the consignees' location in the shed. About 400 bales, or 40 cars are handled every day, on an average, throughout the year (Mordecai 1885: 18).

The construction of the new hay depot made block 679 a major center of New York's hay dealers. Buildings directories show that many of the commercial firms occupying the new brick buildings on the 34th Street side of the block were also hay dealers. The 1878 edition of Wilson's Business Directory lists only 4 hay brokers. One of these, William Affleck and Company, is located at 387 11th Avenue. This would have been the address of the long frame building in the northeastern portion of the block shown as a stable on the 1879 atlas and called the old hay market by Mordecai. By 1886 the address of Affleck and Company had changed to 604 West 34th Street, the location of the larger brick building at the corner of 11th Avenue and 34th Street. At this date, the business directories indicate a total of 92 hay dealers in the city. Seventeen of these were located on block 69. The address of two of these was 601 West 33rd Street, reflecting their location in the apparently recently completed brick hay depot. By 1887 the addresses of

six hay dealers were given as either 601 West 33rd Street or at West 33rd Street, Corner 11th Avenue. By 1893, 27 of the 80 hay dealers listed in the New York City Business Directory were located on block 679, 23 of these at 601 West 33rd Street, the address of the hay depot. The hay depot apparently operated at least through the early 1920s as a pamphlet published in 1921 notes that "There is also the Hay exchange located at the foot of 33rd Street and Hudson River "(Manufacturers Trust Company 192:16-17).

Construction on block 679 subsequent to the 1880s was investigated by examining atlases dated 1891, 1897 (Figure 11), 1913, 1920 (Figure 12) 1934, 1950, 1974, and 1984. Through the 1920s the hay depot continued to stand on the southern side of the block. On the north side the four story structure on the northeast corner of the block and the attached one story structure shown on the 1883 atlas also continued to stand through the 1920s. The 1913 atlas labels the one story structure "hay and feed".

The two story brick building occupying the four lots fronting on 12th Avenue at the corner of 34th Street also remained through the 1920s. This building was labelled as "storage" or "warehouse" from 1906 through 1920. The extreme northwestern corner of the building also housed a saloon during this period.

By 1891 each of the other lots fronting on 34th Street (lots 46-60) also contained brick structures. With some minor modifications, these structures continued to stand until the 1920s. The buildings on lots 59 and 60 had rear extensions. The frame buildings shown on the 1879 atlas were replaced with brick structures. The building on lot 60 extended back 85 feet from

34th Street with a one story frame extension, while the lot 59 building extended back 50 feet with a one story frame extension which had a brick or stone foundation. There was a narrow alley on lot 59 between the building on that lot and the one to the east. The latter building occupied both lots 57 and 58 and was labelled "hay and feed" on the 1913 atlas. The brick building on lot 56, shown on the 1883 atlas, continued to stand. A one story addition was added to the original structure between 1906 and 1913. The building is indicated as a stable on the 1920 atlas (Figure 12). The adjacent building to the east is shown as occupying lots 54 and 55 through 1897. It was joined together with the structure on lot 53 by 1906 and by 1920 the two are again shown separated. The 1913 atlas labels the structure "hay and feed". The structure on lots 51 and 52 and the one on lot 50 are shown as having stores on the first floor. Lot 49 is shown as having a stable in 1913. In 1891 and in 1897 lots 47 and 48 are shown as containing a two story structure with another two story structure on lot 46. Between 1906 and 1913 these structures were either replaced or modified and by the later date the three lots contained a four story brick building labelled "factory" on the 1913 atlas. Throughout the period railroad tracks ran through the center of the block between the hay depot and the structures fronting on 34th Street. A frame loading shed is shown behind the latter structures on the eastern portion of the block.

The tax records in the Office of the Register of the City of New York indicate that by 1896 the New York Central Railroad owned all of the land on block 679. Drawings dated 1927 in the Bureau of Topography, Office of the Manhattan Borough President, show the railroad's plan for the incorporation of block 679 into the railroad's west side yard. These plans indicate that a

warehouse was to be built above the existing grade of the street, with railroad tracks on a lower level below the warehouse as well as a platform from which railway cars could be loaded from the warehouse. However, examination of various atlases subsequent to this date suggest that these plans were never implemented. The 1934 Bromley atlas indicates that the hay depot building was still standing on the south side of the block. The nineteenth century buildings on the north side of the block, however, had been razed, and replaced by railroad tracks. The hay depot building is identified as the "eastbound freight house" on the 1934 atlas. The 1950 update of the E. Belch Hyde Atlas still shows the hay depot building on the south side of the block with railroad tracks on the north side. The 1955 Bromley atlas indicates that between 1950 and 1955 the hay depot building had been demolished. A total of 16 rail lines are shown entering the block. The only structure on the block at this time was a building on its southwestern corner. The structure was owned by Annheuser Busch Incorporated and probably functioned as a warehouse. The central part of the structure had two stories with the eastern and western ends being only one story high. The building extended from approximately 30 feet to 190 feet east of 12th Avenue. It should be noted that a tax map dated 1939 in the New York County Recorder's Office shows the one story structure in the southwestern corner of the block as the only one on block 679. It is possible that the 1950 atlas is in error and the hay depot was demolished between 1934 and 1939.

The 1974 Bromley atlas (1970 updated) indicates that as of this date the configuration of the block remained the same as in 1955. The railroad tracks and the Annheuser Busch building were still present. The building and tracks were removed after this date.

III. POSSIBLE ARCHAEOLOGICAL RESOURCES ON BLOCK 679

It is first necessary to consider the types of archaeological deposits which may have been deposited on block 679 and then to assess the likelihood that these deposits may have remained undisturbed by events since their deposition.

As discussed in the previous chapter, the absence of known prehistoric sites and the general topography and physiography of the area do not indicate that block 679 is a likely location of prehistoric archaeological deposits. In the early historic period, the portion of the block which was not under water would have represented the shoreline of the farmland which constituted this portion of Manhattan Island.

As far as the archaeology of the area is concerned, the period of interest begins in the second quarter of the nineteenth century.

Landfilling and Bulkheads

The first type of archaeological resource which might be found on block 679 is landfill and associated bulkheads. In recent years there have been a number of landfill blocks excavated in lower Manhattan. Samples of landfill have yielded archaeological deposits which have provided data on daily life and clues to the sources of the fill material. As previously noted, under the terms of the water lot grants it was the responsibility of the grantee to provide the landfill material. Specifications for the fill material were generally covered by phrases such as the grantee "will

fill...with good and sufficient earth" (e.g., Liber Deeds 621:521-525). The excavations in lower Manhattan indicate that in some cases dredge fill was used containing cultural materials from the river bottom. In others the fill consisted of artifact-rich trash and in still others it was earth containing little cultural material. Since the grantees were persons who owned land on the shore opposite the water lots, they sometimes used soil taken from their own property. Although this practice has not been historically documented artifacts recovered from a landfill excavation in lower Manhattan were found to be associated with the occupational activities of the grantee (Pickman 1983). The documentary records for block 679 indicate that the water lot grantees Browning and Dunham had a foundry operation and John Elwise owned a house east of the shoreline before they obtained the block 679 grants. Cultural materials from these sites as well as other types of artifacts may have been incorporated into the early landfiling episodes. Succeeding episodes of landfiling on the block would probably have resulted in different types of fill being deposited.

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It is also possible that the shoreline had been used for the dumping of trash prior to the landfiling. These deposits would underlie the landfill.

The bulkheading associated with each landfill episode is another potential archaeological resource. Such bulkheads were required under the terms of the water lot grants. Even without such specifications, fill retaining structures would have to be constructed to keep the deposited fill from being washed away by the river. The excavations in lower Manhattan (7 Hanover Square, Telco, 175 Water Street, Shearson-American Express) have revealed several types of landfill retaining structures including stone walls

which also served as house foundations, plank bulkheads, massive wharf constructions, and even a sunken ship. The landfill and landfill retaining structures at these sites dated from the late seventeenth through the early nineteenth centuries. There have been no excavations of landfill sites in Manhattan from the period represented on block 679. It would be of particular interest to investigate the impact of the steam-driven pile driver on landfilling technology as the pile driver postdates any of the sites where landfill retaining structures have already been investigated (Diana Wall, personal communication 1985).

obtained from inventory

In addition, the landfill episodes on block 679 span the period from the 1830s to the 1870s which presents the opportunity to investigate changes in landfill technology which took place during the nineteenth century.

Figure 13 summarizes the landfilling episodes on block 679. The location of each landfill retaining structure, as reconstructed from the data discussed in Chapter II, is indicated on the figure. The first landfilling episode occurred between 1827, the date of the Elwise grant, and 1836, the date of the Colton map. The latter source seems to show that the landfilling extended west of the boundary of the Elwise grant (outlined by dotted circles). The second landfilling episode would have occurred between 1838, the date of the Dunham and Browning grant, and 1840, when the foundry was known to have been present. Both of these landfilling episodes are reflected on the 1845 16th Ward map. Since the 1852 Dripps map does not show the protruding wharf on the former Elwise property, it is possible that some additional filling occurred between 1845 and 1852.

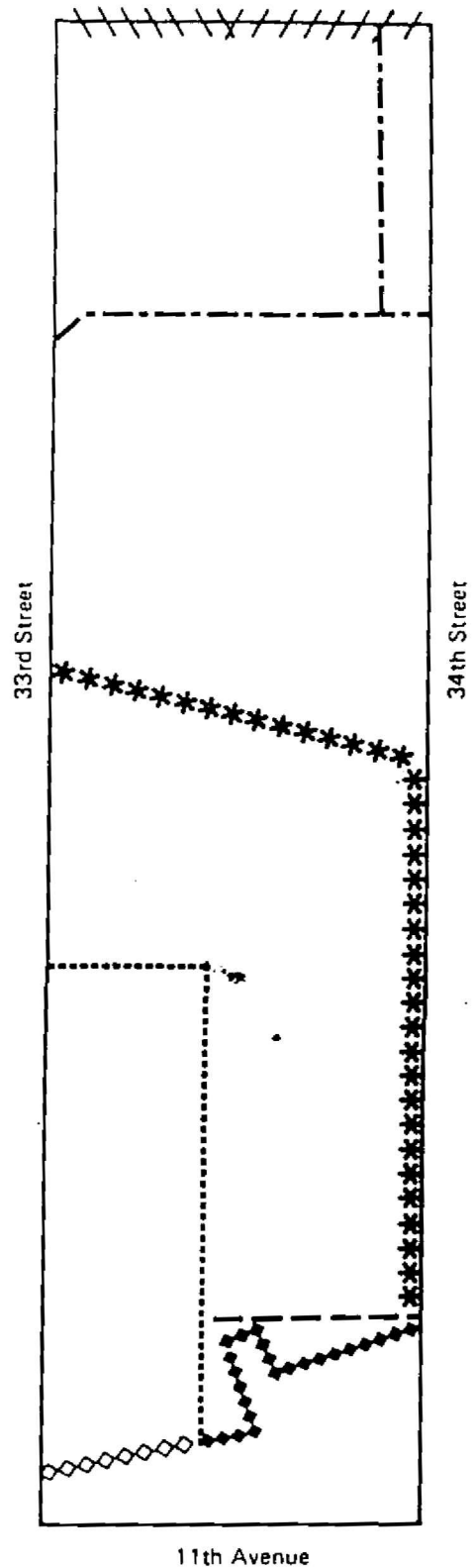
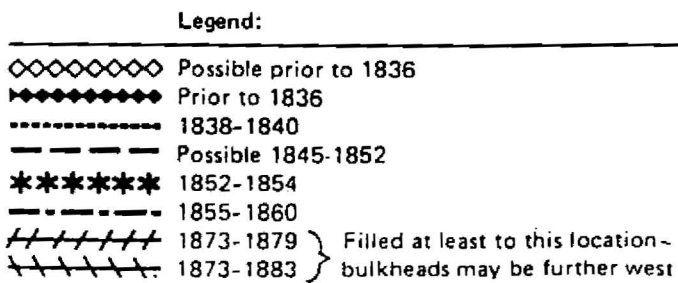


Figure 13
Landfill Episodes and Bulkhead Locations
 Convention Center Parking Strategies EIS
 Scale: 1" = 100'

The third filling and bulkhead construction episode would have occurred between 1852 and 1854, the dates of the Dripps and Perris maps. The penultimate episode of landfilling probably occurred between 1855 and 1860, as noted in the tax records, and shown on the 1873 Department of Docks maps. The remainder of the block to 12th Avenue was filled between 1873, the date of the Department of Docks map, and 1883, the date when structures are shown on the Robinson and Pidgeon atlas of this date. The bulkhead for this landfilling episode would probably lie beyond the bounds of block 679. It is possible that the northern portion of this western part of the block was filled prior to the southern portion of this area.

Occupational/Industrial Deposits

Archaeological deposits associated with the occupation of block 679 can be found within and outside of the boundaries of the buildings constructed on the lot. Within structural sites archaeological deposits may be found in basements of both residential and commercial buildings. Basement deposits can take the form of trash or commercial stores remaining in basements when buildings were demolished. Basement deposits have been found on lower Manhattan sites within structures which were burned prior to demolition and also on unburned basement floors (see Pickman, Rockman, and Rothchild 1981).

There may also be remains of mid-nineteenth century foundry and grist mill operations on block 679. One aim of industrial archaeology is to reconstruct production techniques and work patterns. Besides the tools or machinery remaining in the basement when the buildings were torn down, such

information may also be reconstructable from "markings on the floor or work surface that indicate work patterns; machinery mounts to which...machines were attached; indications of the power train that operated the factory; etc." (Historic Conservation and Interpretation, Inc. 1983:455).

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foundry
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useful is this*

There are two categories of deposits which may be found beyond the boundaries of structures. Surficial middens result from the deposits of trash from nearby structures in particular locations. Less dense deposits of surficial material can result from accumulations of artifacts from everyday activity even where systematic dumping of refuse has not occurred.

Archaeological deposits are also found in "features" which were excavated into the ground surface which existed while the surrounding structures were occupied. On historic period sites these features most often take the form of cisterns, privies, and wells. Deposits in privies and wells sometimes consist of material which accumulated during the period of use of these features (cisterns were usually covered during their use). Other archaeological deposits found in such features consist of trash which was deposited in the features after their period of use. Both types of deposits can provide information on daily life of the period.

Such features would have been in use prior to the availability of piped-in water for domestic use. Except in lower Manhattan, where privately supplied piped-in water was available in the late eighteenth and early nineteenth centuries (Green 1832), this was not available until after the completion of the Croton Aqueduct in 1842. The distribution reservoir for the Croton water was on the present site of the New York Public Library at

42nd Street, and specific areas of the city obtained water as pipes were laid in different areas after 1842 (Board of Water Supply 1917). The 1850 edition of Valentine's manual has a list of all the streets where pipe had been laid until that date. Pipe had been laid in 10th Avenue from 12th to 39th Streets, but there is no indication that pipe had been laid either on 11th Avenue or on 33rd or 34th Streets. Therefore, the Elwise and Browning and Dunham properties would have had to have such features for use by the domestic occupants in the one case, and the factory workers in the other. Since the Dunham and Browning foundry and the later Browning grist mill used a steam engine, a substantial supply of water must have been needed to produce the steam. Either a very large cistern or a well would have been required (unless river water was used).

Valentine's manual for 1854 and 1857 details the amount of pipe laid in those years. There is mention of pipe laid in 33rd Street east of 10th Avenue, 34th Street between 8th and 9th Avenues, and in 11th Avenue between 43rd and 48th and between 51st and 52nd Streets. Thus it is possible that municipal water was not provided to block 679 until at least the late 1850s and possibly later. The 1883 atlas shows waterlines in 11th Avenue and 34th Streets and a sewer in the latter street.

Basement deposits dating to the period prior to 1860 could be found on lot 36 (the Elwise house) and on lots 29-32 (the foundry and grist mill). Features and outbuildings associated with the Elwise house would have been located on lot 36 or lots 33-35 and those associated with the industrial property would have been located on the lots noted above and on lots 28-35, the limits of the Browning and Dunham property. Surficial deposits and

outbuildings, and possibly features associated with the Dunham house (1860s-1870s) could be found on lots 33-36 as well as on the land west of the house (lots 37-45).

The only deposits dating prior to the 1870s which could be present on the block west of the areas noted above would be surficial industrial debris associated with the use of portions of the block as a stone yard and coal yard.

The development of block 679 for commercial use by the railroad began in the 1870s was essentially completed by 1891. The block was a center for commercial dealers in hay, straw, and feed; stables, perhaps associated with these activities, were also present. Since water and indoor plumbing was available, it is unlikely that there would be any privies, cisterns, or wells dating to this period. Archaeological deposits would most likely be present in the form of possible accumulations of material remaining in building basements when the buildings were razed. The area to the rear of most of the buildings was occupied by railroad tracks. The most likely areas where such surficial deposits could have accumulated would have been on lot 59, fronting on 34th Street. This was the earliest of the commercial buildings to have been constructed, being shown on the 1879 atlas. Trash could have accumulated in the alley east of this structure and in the area to the rear of the structure, where a later one story extension was constructed. Deposits may also have accumulated to the rear of the building on lot 56, where there was an open area in the 1890s until a later extension was constructed. Such deposits may also have accumulated in the open area south of the large brick

building on the corner of 34th Street and 12th Avenue (lot 61) which housed a saloon for at least a portion of its life.

In the course of the research for this report, we examined a number of secondary historical sources including Stokes, Spann, Scoville, Wilson, Haswell, Booth, Lamb, Beach Lockwood, and Clark. None of these sources provided any information on the activities which took place on block 679 or on the persons associated with them. These sources emphasize the more widely known historical events and personages, the history of landmark structures, and the lives of wealthy and prominent New Yorkers. Small industrial operations, such as the foundry and grist mill on block 679, and the lives of the less prominent settlers of what was then "uptown" New York such as John Elwise, have gone unrecorded. However, the activities on this block were examples of the industrial and commercial growth of New York City during the nineteenth century. The historical archaeology of this block and the associated documentary research would provide information on an aspect and an area of New York usually ignored by historical sources.

Analysis of Disturbance and Protection of Possible Archaeological Deposits

The preservation of archaeological deposits on block 679 associated with a particular period depends on the succeeding events resulting in the upbuilding and down cutting of the land surface. Deposits within basement areas can be disturbed by subsequent construction on the same site, but this is not necessarily so. In some cases debris from structural demolition can protect the earlier floor with a later floor built over the debris. Construction of large twentieth century buildings often involves deep

excavation and basement construction. However, experience with sites elsewhere in Manhattan indicates that in many cases nineteenth century structures did not have basements.

Construction in areas outside that were occupied by a previous structure would disturb any surficial deposits associated with the previous construction phase unless there had been a large amount of landfilling between the two construction phases. However, where later structures occupy an area which previously contained subsurface features (e.g., cisterns, privies, or wells) from a previous construction phase, the lower portion of such features and the deposits within them can remain intact beneath the floor of the later structure.

While we cannot determine the history of grade modifications within the block itself, this information is available for the intersections of 11th and 12th Avenues with 33rd and 34th Streets (summarized in Table 1). For purposes of analysis, we will assume that the surface of the land within the block followed the elevations of the adjacent streets. Inferences as to the disturbance taking place on the block can be made by comparing these data with the construction sequence on the various lots.

The earliest indication of the grade of 11th Avenue comes from a drawing of the profiles of the various avenues included in the 1850 Valentine's manual. Although no reference elevation is given, we assume that all elevations are referred to the high water mark. This drawing shows the elevation at 33rd Street to be 4.9 feet and that at 34th Street 7.3 feet. We assume that these are the approximate surface elevations of the landfilling

Table 1
ELEVATIONS AT CORNERS OF BLOCK 679

<u>Year</u>	<u>Source</u>	<u>11th Ave. 33rd St.</u>	<u>11th Ave. 34th St.</u>	<u>12th Ave. 33rd St.</u>	<u>12th Ave. 34th St.</u>
1850	Valentines Manual	4.9	7.3	-	-
1883	Robinson & Pidgeon Atlas	7.5	11	-	5.1
1897	Bromley Atlas	13.29	14.1	-	-
1913	E. Belcher Hyde Atlas	13.23	14.86	6.01	6.00
1927	NYCRR Yards Plans	13.24	14.86	5.5	5.0
1934	Bromley Atlas	13.3	14.1	-	-
1984	Sanborn Atlas	13.3	-	-	6.0 (Between 34th & 35th Sts.)

which had taken place prior to that time and therefore the surface elevations surrounding the foundry building and the Elwise house respectively. The 1883 Robinson and Pidgeon atlas (Figure 10) gives the elevation at 11th Avenue and 33rd Street as 7.5 feet and that at 34th Street as 11 feet. The grades shown on the 1897 atlas are 13.29 feet at 11th Avenue and 33rd Street and 14.1 feet at 11th Avenue and 34th Street. The elevations at these corners shown on subsequent atlases are almost exactly the same as these elevations.

Considering first the location of the foundry and grist mill building it appears likely that the construction which occurred between c. 1855 and c. 1875-1880 represented additions to the original building. The only subsequent structure built on the site was the hay depot constructed in the early 1880s. If we assume that the grade at which the construction of the hay depot buildings occurred are those shown on the 1883 atlas, there would have been a raising of the ground surface by 2.3 feet at 11th Avenue and 33rd Street and 3.7 feet at 11th Avenue and 34th Street between the construction of the foundry/grist mill and the construction of the hay depot. Therefore, the basement of the later building would, on the average, have to have been some three feet deeper than that of the earlier structure to destroy any basement deposits. Furthermore, it is possible that the grade at which the hay depot was constructed was that shown on the subsequent atlases. If that were the case the basement of the later building would have had to be approximately 7.6 feet deeper than that of the earlier building to affect the earlier basement floor. Moreover, as shown on Figure 14, a portion of the western part of the earlier foundry/grist mill building would not have been directly affected by the construction of the hay depot building.

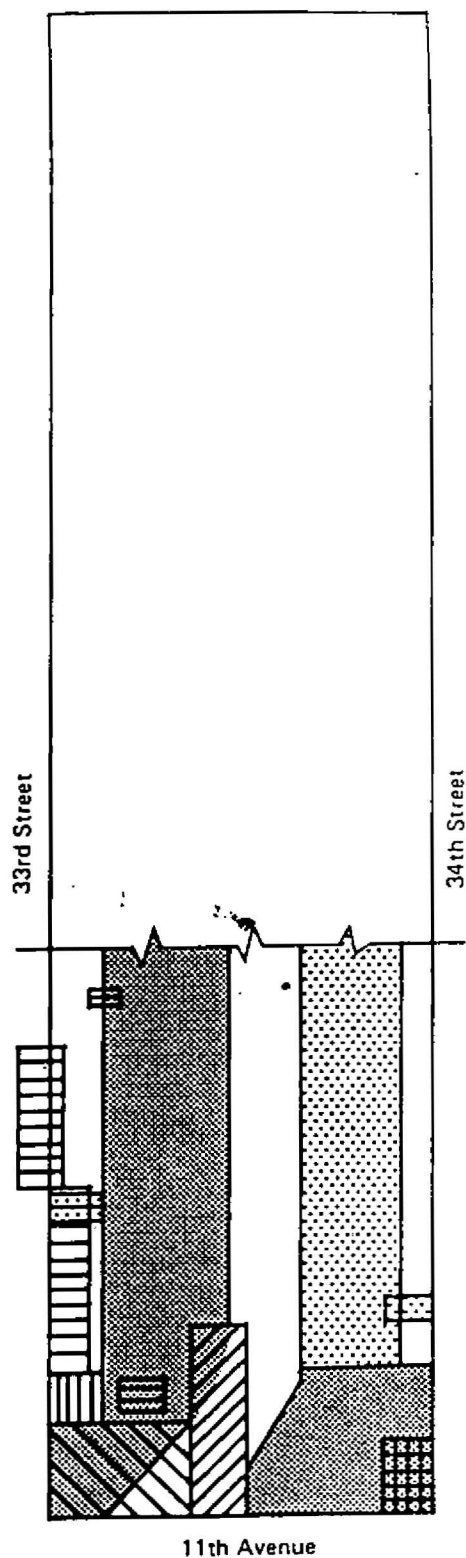
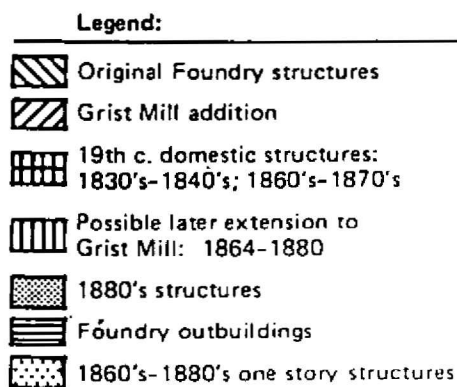


Figure 14
Construction Sequence on
Truck Marshalling Yards Site
 Convention Center Parking Strategies EIS
 Scale: 1" = 100'

On the remainder of the foundry/grist mill property (outside of the location of the building itself) there was only minor later construction including a small structure shown on the stone yard on the 1868 atlas and the hay shed or "stable" shown on the 1879 map. The construction of the hay depot would probably have destroyed any surficial deposits at the location of the building itself, but because of the raising of the surface noted above, it would be expected that substantial portions of any features at this location would be preserved beneath its basement floor. There is an approximately 25 foot wide strip in front of the hay depot which, except for the two apparently insubstantial structures noted above, was never built upon after the foundry/grist mill period. A smaller such strip is at the rear of the hay depot location. The raising of the grade may have protected any features and outbuilding foundations in these areas and possibly any surficial deposits dating to the period of foundry/grist mill operation.

A similar analysis applies to the Elwise house on the northeast corner of the block. In this case, there may have been a second house on the Elwise site, c. 1860s, perhaps utilizing the older structure's foundation. The commercial structure built in the 1880s would have been constructed from a surface feet higher than the earlier one. The basement floor of the earlier structure(s) could be preserved beneath the later floor, and truncated features could also exist beneath the floor. There is also a small area consisting of approximately the western half of lot 33 which was never built upon. In addition, the only construction on lots 37-45, with the exception of a small outbuilding shown on the 1868 map, to the west of the Elwise house site is a one story structure built in the 1870s-1880s. The area to the front and rear of this one story structure was never built upon. Thus any surficial

deposits or features associated with the Elwise house or the 1860s Dunham house could have remained unaffected by these structures.

The grade at the corner of 12th Avenue and 34th Street is indicated on the 1883 atlas as 5.1 feet while the 1913 atlas indicates this elevation as 6 feet and that at 12th Avenue and 33rd Street as 6.01 feet. It is likely that the construction of the extensions at the rear of the buildings on lots 56, 59, and 60 noted previously would have disturbed any previous surficial deposits in these areas. Deposits in the alley on lot 59 may have remained intact if they were protected against later disturbance by demolition debris. Construction of the twentieth century Anheuser Busch structure in the 1950s would have disturbed much of the surface area south of lot 61 which had formerly not been built upon. Construction of this building would probably have disturbed deposits beneath any demolition debris.

The last phase of disturbance on the site is associated with construction of the New York Central Rail Yards in the late 1920s/early 1930s. As noted in the previous chapter, plans for the railroad yards called for the construction of a viaduct to carry 11th Avenue over the rail yards and also to carry 33rd and 34th Streets (as well as other cross streets) over the yards at 11th Avenue. This viaduct was built and exists at present. However, the plans also indicate that the ground beneath the viaduct was to be graded so that the top of the rail line would be at an elevation of 4.0 feet. On block 679, 400 feet west of 11th Avenue, the top of the rail elevation was to have been 4.75 and a raised warehouse was to have been built over the tracks, with its floor at an elevation of approximately 30 feet. There are two indications that these plans were never put into effect. First, as noted in

the previous chapter, subsequent atlases show the hay depot building as still standing and used by the rail road as a freight depot with rail yards north of the building. Secondly, the 1984 edition of the Sanborn atlas shows the elevation at 11th Avenue and 33rd Street (below the viaduct) as 13.3 feet, approximately the same elevation shown on all atlases from 1897 onward, and almost exactly the grade shown as existing on the 1927 rail yard plans. Since engineering analysis of block 679 has not yet been undertaken, we could not confirm that the present elevations are as shown on the 1984 atlas.

Construction of the rail yards would have resulted in some disturbance. However, the difference in grade between the 13.3 foot elevation at that time, and the 1850 grade of 4.9 feet indicates that there were approximately 8.5 feet of later deposits protecting the possible mid-nineteenth century deposits near the corner of 11th Avenue and 33rd Street. It is possible that the driving of piles to support the viaduct may have disturbed some of the underlying deposits immediately bordering 11th Avenue.

Since the top of rail grade indicated on the 1927 railroad yard plans and the original 4.9 foot elevation at 11th Avenue and 33rd Street were nearly the same, even if the original plans had been carried out it is likely that basements and features in at least a portion of the site, in addition to the landfill deposits and bulkheads, would have remained largely intact.

The 1984 atlas does not indicate the grade at 12th Avenue and 33rd or 34th Streets. However, the grade shown on 12th Avenue between 34th and 35th Streets is 6 feet. Thus the grade has remained relatively the same since the initial landfilling in the 1870s-1880s.

On the western portion of the block, deposition of surficial deposits would have occurred at the approximate grade which existed at the time of railyard construction. The latter construction would probably have destroyed these deposits but the underlying landfill deposits and bulkheads, as well as basements, would have remained intact.

Analysis of Indirect Impacts

We examined the area surrounding block 679 to determine whether construction on this block could have possible indirect negative impacts on any surrounding structures which may be eligible to the National Register of Historic Places. Examples of such impacts could occur in the form of intrusions into the architectural values of a historic structure or district including obstruction of sight lines relating to such a building or district.

The east side of 11th Avenue, west of block 679, contains the blank side walls of two, two story commercial buildings which appear to date to the twentieth century. West of the site is 12th Avenue and the Hudson River. Immediately north of block 679 the New York Convention Center is under construction. To the south, the blocks between 33rd Street and 28th Street are occupied by railroad yards. The nearest structures are a row of what appear to be nineteenth-early twentieth century commercial buildings on the west side of 28th Street. Construction on block 679 would not have indirect impacts on any historic or architectural values which may be associated with these buildings, and it was not considered necessary to evaluate them further.

IV. CONCLUSIONS AND RECOMMENDATIONS

The examination of documentary sources suggests that it is possible that significant archaeological deposits are present on block 679. The documents indicate that there were several episodes of landfill deposition and bulkhead construction spanning the period from the late 1820s or 1830s through the 1870s. The information on landfill content and bulkhead construction could provide significant historical information and data enabling comparison with landfill content and technology from earlier periods which have been obtained from the archaeological excavation of blocks in lower Manhattan. It is also possible that there are intact deposits on the eastern portion of the block which result from one and perhaps two phases of domestic occupation in the northern part and from industrial operations in the southern part. The initial domestic occupation dates from the early-mid 1830s through the late 1840s and the second dates from the early-mid 1860s through the 1870s. The industrial operation consisted of an iron foundry operated from the late 1830s through the late 1850s. The same structure was then operated as a grist mill from this time until at least the 1860s and perhaps as late as 1880.

The western portion of the block contained commercial structures, largely involved with the hay, straw, and feed business, whose construction dated for the most part to the 1880s. Deposits from this period would have been surficial and would probably have been disturbed by subsequent construction of the rail yards. Since running water and sewage disposal was present at the time these buildings were constructed, archaeological features (e.g., privies, cisterns, wells) would not have been present. Because of the nature of the bulk of the late nineteenth century commercial operations (i.e., hay, straw,

feed) we do not consider it likely that substantial intact significant archaeological deposits would be present in the basements of these structures beneath the demolition rubble.

We recommend that subsurface testing be carried out on block 679 to assess the actual presence and assess the significance of archaeological deposits. Test borings could be placed within each of the five areas indicated on Figure 13 which represent separate landfilling episodes to determine the nature of the fill and its stratigraphic relationships to any subsequent cultural deposits. Back hoe trenching might be used to confirm the location of bulkhead structures suggested by the documentary research.

monitoring instead

On the eastern portion of the block, the debris within the basements of the most recent structures should be removed using power equipment (Figure 14, shaded area). The basement floors of these structures should then be removed in order to examine the area for earlier structural remains and features.

There is one portion of the foundry/grist mill structure which apparently was not affected by later construction (unshaded with diagonal lines). Overlying rubble should be cleared from this area using power equipment until the walls and basement floor of the structure are uncovered. Subsequently the floor of the grist mill extension should be removed to check for features associated with the earlier foundry structure. Areas beneath the later floors but outside the area of the original buildings (shaded and unhatched) should be cleared and examined for the presence of truncated features. Test borings should be placed in the areas where there were no later structures or structures without basements (unshaded and dotted) to determine the presence

of midden deposits. If such deposits are not indicated, the area should be completely cleared of overlying rubble with power equipment, and examined for the presence of features.

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