SITE 5B WASHINGTON STREET URBAN RENEWAL AREA

NEW YORK, NEW YORK

1990

ARCHAEOLOGICAL DOCUMENTARY RESEARCH

HISTORICAL PERSPECTIVES INC.

P.O. Box 331 Riverside, Connecticut 06878

SITE 5B

WASHINGTON STREET URBAN RENEWAL AREA

NEW YORK, NEW YORK

Archaeological Documentary Research

Prepared

For: The Public Development Corporation

By: Historical Perspectives, Inc.

Date: July, 1990

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

INTRODUCTION

Historical Perspectives, Inc. (HPI), in response to a request from the New York City Public Development Corporation (PDC), provides the following report in order to assess the potential for locating a buried ship on Site 5B in the Washington Street Urban Renewal Area on lower Manhattan's west side. Site 5B, that is, Block 131, is bounded on the north by Warren Street; on the east by Greenwich Street; on the south by Murray Street; and on the west by West Street (Map 1 and Photos 1-6). The College of Insurance, built in the early 1980s as part of the urban renewal project, stands on Site 5A, immediately south of Site 5B. In July 1990, the project site functions as a street-level parking lot (Photos 1-6).

The PDC request was based on a Phase 1 archaeological impact report findings that the Minutes of the Common Council (MCC), in 1829, reported a sunken ship at Warren Street and that pieces of teak were recovered during the opening of a utility trench near the intersection of West and Warren Streets, which forms the northwestern boundary of Site B (Kirkorian and Tidlow 1984:22-23). On the basis of these facts, the speculation was that some form of ship lay buried below the street.

After reading the existing archaeological documentary research and site reports, conducting further documentary research, and analyzing existing soil boring data, as well as interviewing the 1984 informant who had picked up some of the teak, HPI concludes that the teak, recovered near the intersection of West and Warren Streets, was not part of a buried ship. Instead, the teak was possibly part of a bulkhead, wharf, or pier.

HPI's working hypothesis was that the possible buried ship was either an accidentally submerged vessel lying in a slip along side a pier or wharf or else that it was purposefully sunk and used as part of a pier, wharf, or bulkhead to retain the soil, rock, and debris that made up the land fill. For the project block, during the time period when it was navigable water or being land filled, neither a ship as such nor a vessel as cribbing turned up in other archaeological reports or the MCC.

According to survey and insurance maps, the total area of the project site, Block 131, has been solid land since circa 1810-1828. With the exception of a loss of about 18 feet along the Greenwich Street side, at about mid-nineteenth century, Block 131 has remained the same size. Building construction data compared with soil boring logs revealed that early filling episodes remain below the deepest foundations, but there seems to be no pattern that would indicate piers, wharves, or bulkheads with which a shipping vessel might be associated. Thus, there is a lack of evidence for a buried ship in the contemporary

records and no discernible pattern for an undocumented buried ship in the 1989 soil borings.

No petitions or memorials concerning shipping vessels, or hulks as the MCC called them, turned up for Site 5B in the MCC during the time period when that project block was either land submerged beneath the Hudson River between piers or was in the process of becoming made land, after 1810 and before 1829. In the MCC, at least, there is no record of a sunken vessel not raised or of a sailing vessel used as cribbing for bulkheading or pier-making purposes for Site 5B.

While absence of information in the municipal record does not confirm absence of a buried ship, further credence is given to the idea that the teak was not part of a ship or bulkhead on Site 5B when 1989 soil boring data are compared with the nineteenth- and twentieth- century construction and demolition history of the buildings on Block 131.

In only one area, in the middle of the north face of the block, was there one building foundation that was nearly as deep as the made land. Therefore, by and large, the lower level of the land fill, presumably below the cellar foundations, has the potential for remaining relatively undisturbed. If there were a ship or piers, wharves, docks, and bulkheads on the project block, there would be a possibility of noticing a pattern of certain building materials in the soil boring samples.

However, there seemed to be no pattern that would indicate wood and rock cob piers or wharves projecting into the river like those found seven blocks to the north at Site 1 of the Washington Street Urban Renewal Area (Geismar 1987 and Map 1), nor was there an evident pattern that might be construed as being a ship used for bulkheading, running parallel with the river as had been noted on the east side of lower Manhattan at 175 Water Street (Geismar 1983).

Again, absence of a pattern in the core samples for either cob wharves or cribbing does not confirm the nonexistence of either piers or bulkheads, much less a buried ship. Yet, when that evidence is taken together with the 1984 informant's recollections in 1990 about the teak, it is clear that the unmilled teak was neither a structural part of a ship nor actually on the project block.

Minutes of the Common Council, water lot and land conveyance records, Buildings Department Block and Lot information, city directories, and contemporary maps could provide evidence about the possibility of a buried ship on Site 5B. There are only a few other written records readily available that might shed light on the question of a sunken ship. Various court records and the Trinity Church archives provide a wealth of information, but the

inability to place the details described in the documents on the landscape with any exactness hinders the work of archaeologists looking for a buried boat within a particular block.

Four tasks are described here. First, there is an evaluation of the existing archaeological documentary research, followed by an account of additional documentary research. Thirdly, there is an analysis of existing 1989 soil boring log information as compared with Block 131 construction and demolition history from 1855 to 1971. Finally, there are the recollections of the 1984 informant who picked up some teak that had been removed from below street level by utility workers.

EVALUATION OF EXISTING ARCHAEOLOGICAL DOCUMENTARY RESEARCH

Within the last nine years, urban redevelopment projects on lower Manhattan's west side have required seven assessments of the archaeological and historical sensitivity along the Hudson River. The Washington Street Urban Renewal Area projects have generated four archaeological documentary research or site reports as well as a scholarly paper and publication, including the 1984 Kirkorian and Tidlow report referred to above (Geismar 1986, 1987a, 1987b; Grossman 1985; Hershkowitz 1981; Kirkorian and Tidlow 1984). The Battery Park City Authority redevelopment projects have included two Phase 1A archaeological assessment reports in their planning process (Kearns, Kirkorian, and Schneiderman-Fox 1990, Kearns, Kirkorian, and Tidlow 1989). The New York State Department of Transportation Westside Highway project has provided one cultural resource survey, with another one in progress (Rutsch 1983).

The general historical background in the environment impact studies (EIS) of the west side of lower Manhattan gives a broad-brush overview of the area and sets the stage for beginning to understand Block 131's land-use history. The site-specific documentary inquiry in these EISs leads a researcher to certain archives and sources of information.

Geismar's 1987 fieldwork report for Site 1 of the Washington Street Urban Renewal Area was of particular help for both the historical overview and the nature of the variations and changes in wharves, piers, and land fill technology.

Research in progress for the New York State Department of Transportation provided a valuable sequence of maps and atlases against which to read the MCC. Early nineteenth century petitioners to the Common Council (CC) knew exactly where "the foot of" or the "bottom of" any street was at any time, and a comparison of contemporary maps and land conveyance records with the MCC enables us in the late twentieth century to visualize where particular slips, piers, and bulkheads might have been as the land filling process pushed west into the Hudson.

Kearns, Kirkorian, and Schneiderman-Fox's Pedestrian Bridge at Chambers Street report of March 1990 carefully documented the sinking (1827) and subsequent raising (1828) of a vessel at the foot of Chambers Street, one block north of Site 5B, thus eliminating that boat from the possibility of being considered the buried ship in question on Site 5B.

The 1984 HPI report, like Grossman's 1985 report on Site 5C and Herskowitz's 1981 report on Site 5A, concerns property surrounding Site 5B. Nonetheless, because of the locus- and topic-specific nature of the archaeological documentary research, these EISs are of little direct help for the period when Site 5B was filled to the eastern edge of West Street. Also, the Kearns, Kirkorian, and Tidlow 1989 Phase 1A report for Site A of Battery Park City assesses cultural resources of a later time period much to the south of Block 131 and, therefore, has little bearing on this research question.

ADDITIONAL DOCUMENTARY RESEARCH

Maps and records in the Municipal Archives, the Municipal Reference Library, the City Registry, the Buildings Department, The Office of the Borough President, the Department of General Services, the New York Public Library, and the New-York Historical Society were studied. Both published and manuscript sources for possible references to a buried ship as well as to water lot, wharf, pier, slip, and street construction and regulation were checked. For the soil boring data, HPI consulted a 1989 draft report of a geotechnical and environmental investigation for Site 5B (Woodward-Clyde Consultants. Inc. [WCCI] 1989).

Since it was presumed that the possible buried ship functioned either as a sailing vessel and/or as cribbing for a bulkhead or wharf, it was necessary to understand when the block was filled as well as what was the land making sequence on Site 5B in order to try to locate a possible buried ship on the PDC project site. A ship could have sunk while alongside a dock or wharf when Site 5B was under water, or else it might have been adaptively reused to retain the soil, rocks, and debris that were used to fill the land being extended into the Hudson River.

The Possible Buried Ship

The MCC recounted the memorials, petitions, committee reports, and audited accounts of payment for work completed for many hulks or wrecks, but only two were in the project area. Neither one can be construed as having been within Site 5B as either a sailing vessel or cribbing because of the timing of the sinking and the location of the hulks. This is deduced after chronologically following the MCC's references to water lot,

wharf, pier, slip, and street construction and regulations on the Hudson River below Canal Street.

One of the vessels was the one that sunk in 1827 and subsequently was raised in 1828, located one block north of Site 5B at the foot of Chambers Street (MCC 1917, XVI:607, 627; XVII:120, 335, 401, 413) and described in HPI's March 1990 report (Kearns, Kirkorian, and Schneiderman-Fox 1990).

The other vessel was a sloop that sunk in 1829 immediately outboard of Site 5B "at the foot of Warren Street by coming in contact with a Log from the Corporation Pier at said place...." (9 March 1829, MCC 1917, XVII:688). By the end of 1828 the foot of Warren Street was on the west side of West Street, across West Street from the project block (17 Nov 1828, MCC 1917, XVII:468).

Sixteen months later, in 1830, the MCC recorded further developments in the case of the sloop at the foot of Warren Street. According to the MCC:

> The Counsel presented the following Report relative to a suit against the Corporation for damage done to a Vessel by a log projecting under water.
> The Counsel to the Board Respectfully Reports, that in the suit lately commenced against the Corporation by Stephen Miller to recover damages for injury done to his Sloop by a Log projecting under water from the Pier at the foot of Warren street, and which was referred to Jonathan J Coddington Isaac Frost & James W Gerard, the plaintiff has recovered for his damages and Costs the sum of $1307.50 and that payment thereof has been demanded....(12 July 1830, MCC 1917, XIX:162)

Further discussion that day included the adoption of a resolution to pay Stephen Miller the $1307.50 "[324]" as well as a motion "[326]" to inquire

> ...how far the Inspector of Wharves, or the Contractor for building the Wharf was liable to the Corporation in consequence of the injury sustained by the Vessel of Stephen Miller, for which said Miller has recovered from the Corporation damages to the amount of $1307 50/100. (ibid., 163)

There are no further references to Stephen Miller between 1831 and 1835 in the proceedings of Board of Alderman (PBA), that is, the 1831-onward agency equivalent to the 1675-1831 Common Council; and he is not listed in the city directories (Longworth 1829-1835). Besides which, neither Coddington, Frost, nor Gerard turned up in the PBA (Longworth 1829; PBA 1831, 1832, 1833). Thus, we do not know if the sloop was raised. In any

case, the submerged one-masted sailing vessel was lying in the Hudson River, at least 70 feet west of the project block, Site 5B.

With the absence of any other information in the MCC and PBA about sunken ships in and of themselves, the possibility of finding references to sunken ships used as cribbing by checking through the MCC index for street development and regulation as well as for water lot, wharf, pier, and slip construction was investigated. HPI also checked a water lot grant and several deeds.

Water Lot, Wharf, Pier, Slip, and Street Development

Upon comparing contemporary maps with references to wharf, pier, slip, and street construction in the MCC, HPI was able to find the location and sequence of the land making projects on the water lots of the Hudson River below Chambers Street. The results of the comparisons demonstrate that Site 5B was filled some time after 1810 but by the end of 1828.

Only very general instructions of where, but not how, to build the wharves, etc. turned up. As for where, an 1811 grant for land under water specifies that "wharves or streets" were to be constructed along present-day Warren and West Streets as well as along old Murray Street, which must lie under the northern section of Site 5A, the College of Insurance (compare Maps 1 and 3). The southern boundary of Site 5B, prior to 1967, would have been the northern boundary of old Murray Street. Thus, these wharves or streets were contiguous, but external to, the northern, western, and southern boundaries of Site 5B. (See Appendix A for the development of West, Warren, Washington, and Murray Streets as documented in Stokes and MCC and Maps 4 through 10 for a chronological sequence of contemporary maps from 1775 through 1830.)

Two block-specific documents provide general evidence about the wharf and street placement and development on Site 5B. One is an 1809 map (Map 7), a block survey by William Bridges, that accompanied land conveyance records for 1821 and 1829. The other is an 1811 grant for land under water that specified where wharves and streets were to be constructed.

In November 1773, after three petitions in thirteen years, Trinity Church, otherwise known as The Rector and Inhabitants of the City of New York in Communion with the Church of England, was granted the water lots fronting their land on the Hudson River (MCC 1905, VI:206, VII:159, 457).

The Index of Grants of Land under Water lists a November 18, 1773 grant to Trinity Church for land bounded on the north by Chambers, south by Murray Street, east by high water, and west by

an imaginary line 200 feet beyond low water (Book D, page 423). The low water line was just west of the mid-section of Block 131; the high water line ran diagonally northwest/south east through Greenwich Street between Warren and Murray Streets (Windwart 1877, Part Two). Site 5B lies on the south and to the west of this grant on submerged land under the jurisdiction of both the Trinity Church water lot grant and the Dongan Charter of 1692 (see the West Street development in Appendix A; Map 1).

The WPA-produced index to land conveyances notes that Block 131 "is wholly within the Trinity Church farm" and that there are no instruments of record between 1654 and 1808, except for an 1800 transaction about a street. Yet, by reading some early nineteenth century indentures and grants under water, we can, to some degree, link the land with particular owners who were required to develop the project area in specific ways.

An 1821 indenture reiterated a 1796 Trinity Church deed of land west of Greenwich Street between Murray and Warren Streets to William Denning, merchant (City Register Liber 151, pages 222-225, 5 May 1821; Map 7). An 1829 indenture restated a 1799 land transaction between William Denning and his wife, Amy, and George Clinton, Esq. (City Register Liber 246, pp. 243-244, 11 February 1829). Clinton was granted "all that one full and equal undivided third part" of land west of Greenwich Street between Murray and Warren Streets (ibid., p.243). By not mentioning it, the 1796 and 1799 indentures suggest that Washington Street was not in place between Murray and Warren Streets.

In 1804 Washington Street was a point of reference for West Street in the project area (8 Oct 1804, MCC, 1917 III:612) and according to a 1809 map, Washington Street ran through the project site (Map 7). The 1809 block-specific William Bridges survey shows the respective shares of "34 Lots of Ground...belonging to Geo. Clinton, Wm Denning, and John McKefson, Esq." (City Register Liber 152, page 183). These 34 lots become 45 lots by 1855 (Perris 1855, Vol. 1a, plate 4) and match up with the 45 lots on the 1859 tax assessment maps and the 1902 Bromley insurance map for the project site.

While lot lines changed somewhat for Site 5B, the overall dimensions of the western end of the block remained the same from at least 1809 until some time between 1967 and 1971 when the buildings on the project site were razed (Windwart 1877, Part Two; Hyde 1913; Buildings Department Block 131, Lots 22 through 45 folders).

The "34 Lots of Ground" mentioned on the 1809 block survey are presumed to have been submerged land because, two years later, for the same property, there was a grant to George Clinton for land under water that was bounded

> northwardly by Warren Street, southwardly by Murray Street, Easterly by ground belonging to the said party of the second part [George Clinton].... (25 March 1811, Grants of Land under Water F:78).

The real estate was described as "All that certain vacant ground water Lots or soil under water to be made land and gained out of the North or Hudson River" (ibid., 78).

The 1811 document recorded the transfer from the Mayor Alderment etc. to George Clinton of the water lots between Warren and Murray Streets, beginning 200 feet west of Washington Street and running to the west side of an intended 70-foot wide West Street (ibid., 78-81). In exchange for the water lot grant, Clinton, in three months at his own expense, was to construct

> or cause to be built erected made and finished one good sufficient and firm wharf or street of thirty two feet six inches in breadth along the Northerly side of the premises hereby granted the whole extent there of being the moiety or exact half part of the breadth of the Street known and distinguished by the name of Warren Street and will make such street in such manner as shall be directed by the [Mayor Aldermen etc.]...along the Southerly side of the premises hereby granted the whole extent there being the moiety or exact half part in breadth of the Street known and distinguished as Murray Street...in such manner as shall be directed by the [Mayor Aldermen etc.]....(ibid., 79)

These would have been two public-access wharves or streets, each 160 feet by 32.5 feet extending west from ground to which Clinton already had title (ibid., 78). In addition to the wharves or streets on Warren and Murray Streets, George Clinton, in three months, was also to

> build erect make and finish or cause to be built or etc made one other good and sufficient firm Wharf or Street of seventy feet in breadth through the westerly end of the premises the whole breadth thereof.... (ibid., 79).

The 250.6 foot by 70 foot wharf or street, the "intended West Street" on Map 7, was also to have been built at Clinton's own expense. The water lot grant does not describe how the wharves or streets were to be built. Rather, the directions were "...in such manner as shall be directed by the [Mayor Aldermen etc.]...." (ibid., 79). At any rate, they were constructed just outside the project site's northern, southern, and western boundaries.

The closest we can get to a documentary explanation of how to build the wharves is one that describes cob construction, but does not allude to buried ships used as cribbing. In 1798 there was a directive as to how piers and wharves were to be made along both the East and Hudson Rivers, which was

> ...to extend piers at right Angles from the said permanent Street into the Rivers, at proper distances from each other to be determined by the corporation with suitable Bridges for the accommodation and so constructed as to admit the Currents at both Ebb and Flood in both Rivers to wash away all Dirt and Filth from the Wha[r]ves and thereby render the health of the Inhabitants of the City more safe and secure.... (12 Feb 1798, MCC 1917, II:421)

As for the probable bulkhead between Clinton's eastern "ground" that abutted the 1811 water lot grant, we have no documentary evidence. Perhaps such a bulkhead would have been noted or described in one of the land conveyance records for which there are "no instruments of record" (Block Index Deeds, Vol. 15, Block 131). That bulkhead would probably have run on a northwest/southeast line approximately 90 feet east of the eastern edge of West Street, roughly in line with the B-2 and B-31 soil borings taken in 1989 (Map 3). See Plate 1 for an 1810 view of the foot of Dey Street for the kind of bulkhead and sailing vessels that probably lined the west side of lower Manhattan at the time.

There is no discernible pattern of wood, rock, and cobble in the fill layer in the 1989 WCCI soil borings to suggest a bulkhead or buried ship that would have underlain the approximate rear lot lines of the buildings facing West Street (Map 3). According to contemporary documents there is a possibility that there was a bulkhead on the project site, but the core samples of the 1.5 to 10 feet of fill below cellars along the possible bulkhead line does not argue for finding such evidence through archaeological testing.

Although the three month construction program, stipulated in 1811 for the wharf or street construction, seems, at least to someone in 1990, to be a tight schedule, there is nothing in the MCC to suggest that Clinton did not comply with conditions of the grant.

Bulkhead, wharf, street, and presumably land making activities were all part of the development of Site 5B in the second decade of the nineteenth century. Even though the project site was lotted from the time that Trinity Church had jurisdiction of the water lots in the eighteenth century, just exactly when Site 5B became made land is not known because the

earliest extant tax assessment map for the project site is 1858 (Municipal Archives).

While William Bridges' 1807 city map (Map 6) indicates made land extending to what was to become West Street, his block-specific map of two years later (Map 7), as well as the 1811 water lot grant, suggests that Site 5B continued to be ground or soil under water. In all probability, Site 5B was still under water in 1812 (Elliot 1812). Before 1817 there is no solid indication that the project site was made land.

A June 6, 1816 indenture was recorded in 1829 at the request of heirs to George Clinton (11 Feb 1829, City Register Liber 246, pages 258-260). The property in 1816, on modern Block 131, lot numbers 1-45 inclusive (Bromley 1902; Hyde 1913), included

> ...all that undivided common estate & interest in & to those lots dock & premises which belongs to them as heirs of George Clinton deceased...between Murray & Warren Streets west of Greenwich Street fronting upon Hudson's River & upon Washington & West Streets the same being a common or undivided one fourth part thereof be the same more or less.... (City Register Liber 246, page 258)

While the 1816 indenture lists a dock as well as premises for Site 5B, it does not locate them on the landscape. It is very possible that the reference to premises is simply a legal convention. The 1819 petition to the CC by George Clinton's heirs does not really situate the 1816 dock, but it gives further evidence for possible land filling activities. Clinton's heirs were

> ...praying that no forfeiture...be incurred by non-compliance with an Ordinance of the Corporation passed 17th May last directing the building of a bulkhead along the west of West Street by the said heirs as owners of certain lots fronting on West Street and praying an extension of the time for complying with said Ordinance.... (18 Oct 1819, MCC 1917, X:573)

Thus, the wharf or street of 1811 along West Street had not been bulkheaded along its outboard side as of October 1819 (see entries for 1817-1820 on West, Warren, and Murray Streets in Appendix A). It even appears as though West Street may not have been completed as far as Murray street as of March 1819 (MCC 1917, X:266; see Appendix A for transcription from MCC).

Presumably, the heirs of George Clinton, together with others who held the project block in both individual and common ownership, complied with the ordinances to build the bulkhead

along West Street some time between 1818 and 1820 (Block Index Deeds, Vol. 15, Block 131; Appendix A) because there are no further petitions or memorials on that subject (MCC 1917, 1820-1831).

Thus, the 1821 petition for a public slip, basin, or pier between Murray and Warren Streets would have been for an area west of the project site. It is a moot point because of a resolution, adopted in 1822, that stated it would be "inexpedient at present to grant the prayer of the Petitioners...." even though the CC conceded that "it would much improve that neighborhood by building piers and forming public basins" (18 Feb 1822, MCC 1917, XII:237). Budgetary restraints due to heavy storm damage in the fall of 1819, and therefore great expense for repairs to the city's wharves and piers, were the reasons for denial of the petition brought by "a number of Masters and Owners of Vessels navigating the North river...." (ibid., 237).

Some time between 1817 and 1821 the project site went from being considered a remote location for transporation and commerce to one that was suited for shipping and trade (see particularly the Murray Street development in Appendix A). In 1817 and 1818 there were requests made to the CC for shifting the horse-powered Hoboken Ferry from the foot of Murray Street to Vesey Street and then Barclay Street (2 June 1817, MCC IX:183, 646, 686-687; see Appendix A for more details).

In 1817 the foot of Murray Street would have been outboard of the 1811 wharf or street along West Street. In defense of "a petition of sundry Inhabitants of this City and of New Jersey...." (18 May 1818, MCC 1917, MCC IX:646) to move the ferry from Murray Street, the petitioners stated that

> [333] The present landing place of the Ferry on this side of the River is at the foot of Murray Street, a situation too remote from the Market to afford proper accommodation to the country people who bring their produce for sale, and is moreover destitute of every convenience for landing, having neither Piers, Floats nor Bridge.... (8 June 1818, MC 1917, XIX:686-687)

Although there may have been some vested interest in painting such a bleak picture of the facilities at the foot of Murray Street, the 1817 petition suggests that the presumed 1811 wharves or streets along the northern, western, and southern perimeter of Site 5B needed improvement in order to accommodate the northward growth of Manhattan along the Hudson River. Together with the 1818 through 1820 requests for extended deadlines for bulkheading the west side of West Street discussed above, the 1817 petition suggests that the project site was beginning to undergo further development.

For Site 5B, the 1817-1828 period saw a lot of activity in terms of sidewalks, bulkheads, slips, horse-powered ferries, steam boats, and even a salt water floating bath proposed by a druggist who had a shop at 315 Broadway and lived at 403 Broadway (Jacob Rabineau in Longworths 1818; see the Murray Street development in Appendix A for more details). Again, this evidence is for wharf, bulkhead etc. development along the perimeter of Site 5B, but not for the project site itself.

On one hand, the 1817 Longworth and 1824 Hooker maps (Maps 8 and 9) show the project site as made land, but perhaps not developed land. Another 1817 map indicates piers west of West Street at the foot of both Warren and Murray Streets, but is ambiguous about made land on the project site (Poppleton 1817). On the other hand, the 1827-1830 Ewen map (Map 10) shows piers outboard of West Street at both Warren and Murray Streets, with no development and, perhaps, even no made land on the project site. Nevertheless, the 1827-1830 map shows development on made land as well as piers outboard of that made land only three blocks south, between Vesey and Fulton Streets (Map 10).

Before the end of 1828, though, it stands to reason that the project site was made land because of its potential for having been land filled from at least 1811 on and for having been bulkheaded west of West Street about 1820. In November 1828 there was a report to the CC about West Street:

> That West street being a great leading Street along the Margin of the North River, and a principal Channel of communication for the very extensive trade of the West part of the City....
>
> The said street now extends from the Albany Basin to the State Prison, in one unbroken line, except at Spring Street Basin (across which it has been ordered to be continued) and at Washington Market Basin.... (17 Nov 1828, MCC 1917, XVII:468)

Thus, the sloop that sunk in 1829 at the foot of Warren Street went down outboard, or to the west, of the west side of West Street, at least 70 feet west of Site 5B (MCC 1917, XVII:688; XIX:162, 163). Therefore, there is virtually no documentary evidence for either an accidentally or purposefully buried ship on Site 5B during the time when Block 131 was under water through the time when the street along the project site's western boundary was definitely in place.

We turn now from the documentary search for the early water lot and land filling history of Site 5B to the history of the construction, renovation, and demolition of the built environment on Site 5B in order to estimate the possibility of an undocumented buried ship being found relatively intact on the project site. It can be argued that buried ships turn up

archaeologically more often than they do in the written record, witness the Tyger and the Ronson.

ANALYSIS OF 1989 SOIL BORING LOGS FOR SITE 5B

A comparison of WCCI's 1989 soil boring logs with the Building Department's Block and Lot information and insurance atlases suggests that there is little evidence for the possibility of a buried ship on Site 5B.

By mid-nineteenth century the project block had a strictly commercial character (see Plate 2 and compare it with Photos 2 and 5). The 1851 street and city directories list fruit, flour, and fish provisioners, grocers, and men who dealt in coals, hardware, woodware, liquor, pickles, butter, and even someone who sold hats. There were coopers, sail makers, ship chandlers besides a tobacconist and several hotels, lodging houses, and porter houses (Doggett 1851).

The earliest fire insurance maps in 1855 show Site 5B fully developed with brick or stone stores (Perris 1855, Vol. 1a, plate 4). Within two years there were already differences in back yards, skylights, and classes of hazards (Perris 1857, Vol. 1, plate 8). Continual changes in many of the first floor extensions at the rear of buildings created even smaller open spaces behind buildings (Perris 1855, 1857; Sanborn-Perris 1894, Vol. 1, plate 7). It is presumed that the extensions were above ground only and so would indicate the areas absent of cellars for those lots for which there are no other Buildings Department Block and Lot data.

See Plate 3 for an early twentieth-century view looking east from West Street somewhat to the south of the project site, but quite similar to the 1845 brick building shown in the 1940s photograph in Plate 1. The brick buildings on the project site tended to replace their peaked roofs for flat ones so that there was more head room and, therefore, storage space on the top floor. The hotel on the corner in the painting shows such a possible conversion.

Ongoing renovations to most of the buildings on Site 5B, documented from 1880 on into the 1960s in the Building Department's Block and Lot folders, included adding elevators. See the 1859 tax assessment map with cellar plus elevator shaft depths obtained from the Blocks and Lots folder information as well as the depth of the fill as gleaned from WCCI's 1989 report (Map 2).

With few exceptions, there is the possibility for relatively undisturbed water lot and land fill cultural material to lie below the cellars and behind some of the buildings on the

project block. Yet when the cellar/elevator shaft and fill depths are compared with the contents of the soil boring logs (Maps 2 and 3), there is no discernible pattern that would imply evidence for either cob wharf or bulkhead construction, much less a buried ship. There are relatively few soil borings abandoned within the fill layer, which might indicate the lack of heavy obstructions.

This is particularly true for the possible bulkhead that retained George Clinton's "ground" east of his 1811 water lot grant (Grants for Land under Water F:78). That possible bulkhead would approximately correspond with a line running between borings B-2 and B-31, along the rear lot lines of those buildings facing West Street (compare Maps 2 and 7 with the quotations from the 1811 water lot grant). Three of the four soil borings along that line were completed at 61.5 feet; the other, at 109.0 feet (WCCI 1989, Soil Boring Logs for B-2, B-12, B-31, and B-13). Neither cultural nor environmental obstructions hindered the coring device.

Wood and rocks or cobbles do not appear together with any certainty to suggest the cob piers noted in Geismar's 1987 report. The relative absence of wood, in particular, and rock or cobble, in general, in the lower level of the fill layer provides evidence for a lack of cob piers as well as a possible buried ship below the cellar depths.

Any wood in the upper level can be attributed to the wood support beams that were routinely added to the long, narrow brick buildings that tended to be provisions and hardware warehouses in the last decades of the nineteenth century (see the many building alteration permits in the Blocks and Lots folders for references to spruce and yellow pine piers to have been added along the center length of the brick buildings because of the concern about the floors' bearing capacity).

The presence of no discernible pattern for a buried ship or bulkhead in the soil boring records hinders any suggestion that there might be an undocumented buried ship on the project site. By the same token, the ability for the soil boring device to proceed through both the upper or cellar foundation/elevator shaft and the lower or submerged land/made land layers of fill, because of very few obstructions, argues for the lack of cultural material in the fill layer that might be construed as being either a buried ship or bulkhead.

INTERVIEW WITH NEIGHBORHOOD INFORMANT

Because of the extreme difficulty in locating the 1984 informant, Mardig Kachian, all other research for this project had been completed before an interview with him could be

arranged. He was pleasantly surprised to be called about the teak and had several specific memories.

Mardig Kachian remembers the teak as being unmilled, about 8- to 12-inches in diameter. The teak came from a depth of about 12 to 15 feet below West Street, between Warren and Chambers Streets, but closer to Chambers Street. The excavated teak came from a hole that the telephone company was digging in preparation for installing a waterproof junction box, which Kachian thought was in anticipation of the need for fiber optics' special care. The hole needed to be large enough to hold an approximately 10x6x8 foot concrete junction box, which was placed about 20 to 30 feet from the curb. Kachian does not remember the year, but he recalls that the teak was piled along the curb.

Kachian recalls that it was a private contracting firm doing the work for the telephone company. At the time of the excavation, the workmen told Kachian that the "entire area was on a teak grid". Kachian did not know the original length of the teak in the grid because the unmilled logs had been cut up to make room for the utility box.

Kachian took the teak to Queens College where he was teaching, and it was sculpted. The sculpture has since been discarded.

In sum, the teak mentioned in the 1984 Phase 1 report was not a structural member of a buried ship, but rather an unmilled log that was possibly part of a cob wharf or bulkhead along West Street.

CONCLUSION AND RECOMMENDATION

Three lines of inquiry argue for HPI's conclusion that there does not appear to be any possibility for a buried ship to be on Site 5B. First of all, there is the lack of information in contemporary records, particularly the MCC, which creates doubt about the possibility of an accidentally sunken ship being on Site 5B. This is because of the New York City regulations requiring that there be no obstructions to navigation at wharves, slips, and piers. If sunken vessels were not raised, heavy daily fines were imposed. Besides which, in the age of sail, sloops and schooners had great value for their owners as a means of transportion.

Secondly, there is no discernible pattern present in 1989 soil boring data for the possibility of an undocumented submerged and/or scuttled sailing vessel. When wood was noted below the presumed cellar foundation depth, it was listed as wood fragments or fibers, probably not a strong enough indication for the possibility of a buried ship.

Thirdly, in 1990, the informant described the unmilled teak he had picked up from an excavation in West Street, between Warren and Chambers Streets. The pieces, 8- to 12-inches in diameter, are not considered to be structural members of a buried ship, and they were not found on the project site.

Based on a telephone interview, a reading of eighteenth-, nineteenth-, and twentieth-century manuscript and published documents and maps, as well as late twentieth-century soil boring logs, HPI recommends that no further documentary research or any archaeological testing needs to be done on Site 5B of the Washington Street Urban Renewal Area in order to assess the potential of locating a buried ship.

REFERENCES CITED

Buildings Department
1880-1971 Blocks and Lots Folders, Block 131, Lots 22-45. Folders available at the Municipal Archives, New York City.

City Register, Manhattan
Manhattan Block Index Deeds. Volume 15, Blocks 127-137. Typescript available at the City Register, Manhattan.

1821 Liber 151, pages 222-225, 5 May. Microfilm of manuscript available at the City Register, New York City.

1829 Liber 246, pages 243-244, 11 February; Liber 246, pages 257-260, 11 February. Microfilm of manuscript available at the City Register, New York City.

Doggett, John, Jr.
1851 Doggett's New York City Street Directory for 1851. John Doggett, Jr., New York

Elliot, William
1812 Elliot's Improved New York Double Directory. William Elliot, New York.

Geismar, Joan H.
1983 The Archaeological Investigation of the 175 Water Street Block, New York City, Volumes 1-3. Soil Systems, Inc. Copy available at New York City Landmarks Preservation Commission, New York City.

1986 A paper on health, hygiene, and landfill in terms of Site 1 of the Washington Street Urban Renewal Area, New York City. Paper presented at the Society for Historical Archaeology Annual Meeting, Sacramento, California.

1987a Archaeological Investigation of Site 1 of the Washington Street Urban Renewal Area, New York City. The Cultural Resource Group, Louis Berger & Associates, Inc. Submitted to Shearson Lehman/American Express through the New York City Public Development Corporation. Copy available at the Municipal Resource and Reference Library, New York City.

1987b Landfill and Health, a Municipal Concern or, Telling It like It Was. Northeast Historical Archaeology 16:49-57.

Grants of Land under Water
1773 Book D, page 423ff, 18 November. Manuscript copy available at the Topographic Bureau, Office of the Manhattan Bureau President, New York City.

1811 Book F, page 78-81, 15 March. Manuscript copy available at the Topographic Bureau, Office of the Manhattan Bureau President, New York City.

Gray, Christopher
1990 Streetscapes: 179 West Street, A Lonely Reminder of the Days of Waterfront Glory. The New York Times, 27 May 1990, R5, columns 1-5.

Grossman, Joel W.
1985 Washington Street Urban Renewal Project Site 5C Archaeological/Historical Sensitivity Analysis. Greenhouse Consultants Incorporated. Submitted to the Public Development Corporation. Copy available at the Municipal Resource and Reference Library, New York City.

Haskell, Daniel, editor
1931 Manhattan Maps: A Cooperative List. New York Public Library, New York City. Xerox copy available at The New-York Historical Society, New York City.

Hershkowitz, Leo
1981 Documentary Research Study for Site 5A, Washington Street Urban Renewal Area. Submitted to New York City Landmarks Preservation Commission. Copy available at the New York City Landmarks Preservation Commission, New York City.

[Hyde de Neuville, Baroness]
1984 Baroness Hyde de Neuville: Sketches of America, 1807-1822. Jane Voorhees Zimmerli Art Museum, Rutgers, State University of New Jersey, New Brunswick and The New-York Historical Society, New York City.

Kearns, Betsy, Cece Kirkorian, and Faline Schneiderman-Fox
1990 Phase 1A Archaeological Report for the Pedestrian Bridge at Chambers Street, New York, New York. Historical Perspectives, Inc. Submitted to the Battery Park City Authority. Copy available at the Municipal Resource and Reference Library, New York City.

Kearns, Betsy, Cece Kirkorian, and Evelyn Tidlow
1989 Phase 1A Archaeological Report for Site A: Marginal Street Adjacent to the South Residential Neighborhood, Battery Park City, New York, New York. Historical Perspectives, Inc. Copy available at the Municipal Resource and Reference Library, New York City.

Kirkorian, Cece, and Evelyn Tidlow
1984 Phase One Archaeological Impact Report for Sites 1A, 1B, 5B, and 5C, Washington Street Urban Renewal Area, New York City, New York. Historical Pespectives, Inc. Submitted to the Public Development Corporation. Copy available at the Municipal Resource and Reference Library, New York City.

Longworth
1813-1835 New York City Directory. David Longworth, New York.

Minutes of the Common Council of the City of New York, 1675-1776
(MCC 1905)
1905 Dodd, Mead and Company, New York.

Minutes of the Common Council of the City of New York, 1784-1831
(MCC 1917)
1917 City of New York.

Proceedings of the Board of Aldermen of New York
(PBA)
1831-1835 City of New York.

Stokes, Isaac Newton Phelps
1915-1926 The Iconography of Manhattan Island. Volumes I-VI. Robert H. Dodd, New York.

Woodward-Clyde Consultants, Inc.
1989 Geotechnical and Environmental Investigation, Drexel Burnham Lambert, Inc. Office Building, New York, New York, Draft Report. Submitted to Kohn Pederson Fox Associates, PC. Copy available at Woodward-Clyde Consultants, Inc., New York City.

MAP BIBLIOGRAPHY

Bridges, William

1807 Plan of the City of New York.... Isaac Riley, New York. Cited as Haskell 644 (Haskell 1931) on xerox copy available in book of Manhattan maps at The New-York Historical Society.

1809 Map of 34 Lots of Ground in the Fifth Ward of the City of New York belonging to Geo Clinton Wm Denning & John McKesson Esqrs shewing their respective Shares agreeably to a partition or subdivision thereof in March 1809. City Register Liber 152, page 183; Liber 246, page 257, 11 February 1829.

Bromley, George W.

1902 Atlas of the City of New York. Volume 2, update of 1899. G.W. Bromley and Co., Philadelphia.

Ewen, Daniel

1827-1830 Maps and Surveys of the City of New York. Daniel Ewen, New York. Manuscript copy available at the Topographic Bureau, Office of the Manhattan Bureau President, New York City.

Hooker, W.

1824 Plan of the City of New York. W. Hooker, New York. Xerox copy available from the New York Public Library Map Division, New York City.

Hyde, E. Belcher

1913 Atlas of the Borough of Manhattan. Volume 2, update of 1906. E. Belcher Hyde, Brooklyn, New York.

Longworth, David

1817 Actual Map and Comparative Plan of New York. David Longworth, New York. Xerox copy available from the New York Public Library Map Division, New York City.

Maps of the Third Ward of the City of New York

1858 Tax Assessment Map, plate 7. Microfilm available at the Municipal Archives.

1859 Tax Assessment Map, plate 10. Microfilm available at the Municipal Archives.

Montressor, John

1775 A Plan of the City of New York and Its Environs. A. Drury, England. Xerox copy available in book of Manhattan maps at The New-York Historical Society, New York City.

Perris, William
1855 Maps of the City of the City of New York. Vol. 1a, plate 4. New York. Microfiche No. 87 available at the New York Public Library Map Division.

1857 Maps of the City of New York. Third edition. Vol. 1, plate 8. New York. Copy available at the New York Public Library Map Division.

Poppleton, T.
1817 North River Shore, Battery and 75th Street: A Map of Property on the North Side of Marketfield Street between Broadway and Fifty-Third to Fifty-Ninth. R. Graves, New York. As seen in Kearns, Kirkorian, and Schneiderman-Fox 1990, Figure 9.

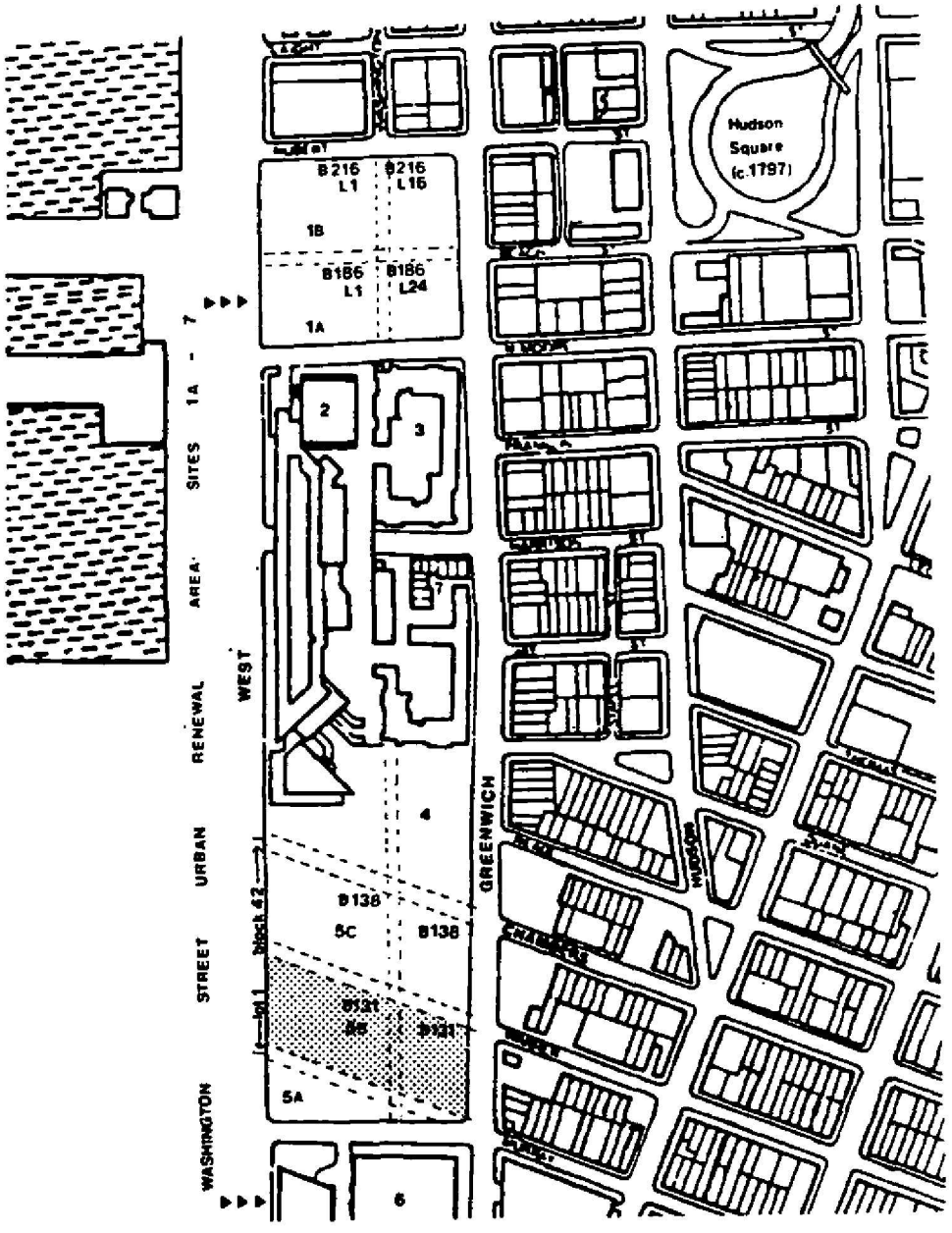
Sanborn-Perris
1894 Insurance Maps of the City of New York. Volume 1, plate 7. Sanborn-Perris Map Co., Limited, New York. Microfilm copy available at the New York Public Library Map Division, New York City.

Taylor, B. and J. Roberts
1797 A New and Accurate Plan of the City of New York in the State of New York in North America. S. Haywood, New York. Xerox copy available in book of Manhattan maps at The New-York Historical Society, New York City.

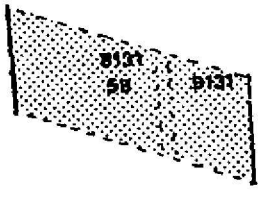
Windwart, Dr. Heinrich
1877 Map of Trinity Church Property between Fulton and Christopher Strs Broadway and Hudson River, and Adjoining Estates, etc., in three parts. Part Two. Copy available at the New-York Historical Society.

MAP 1

Washington Street Urban Renewal Area Sites 1A-7



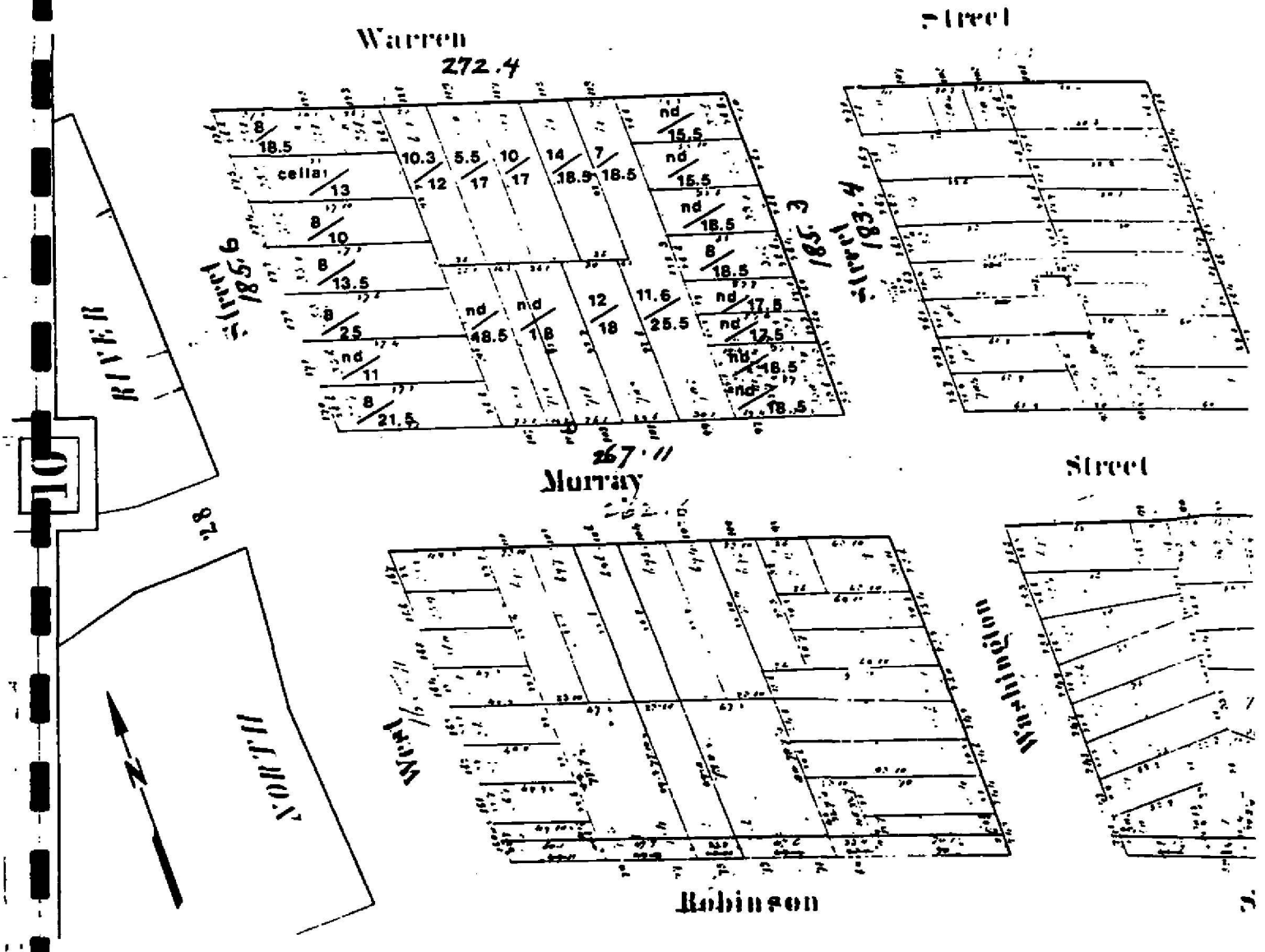
Key



Project Site 5B

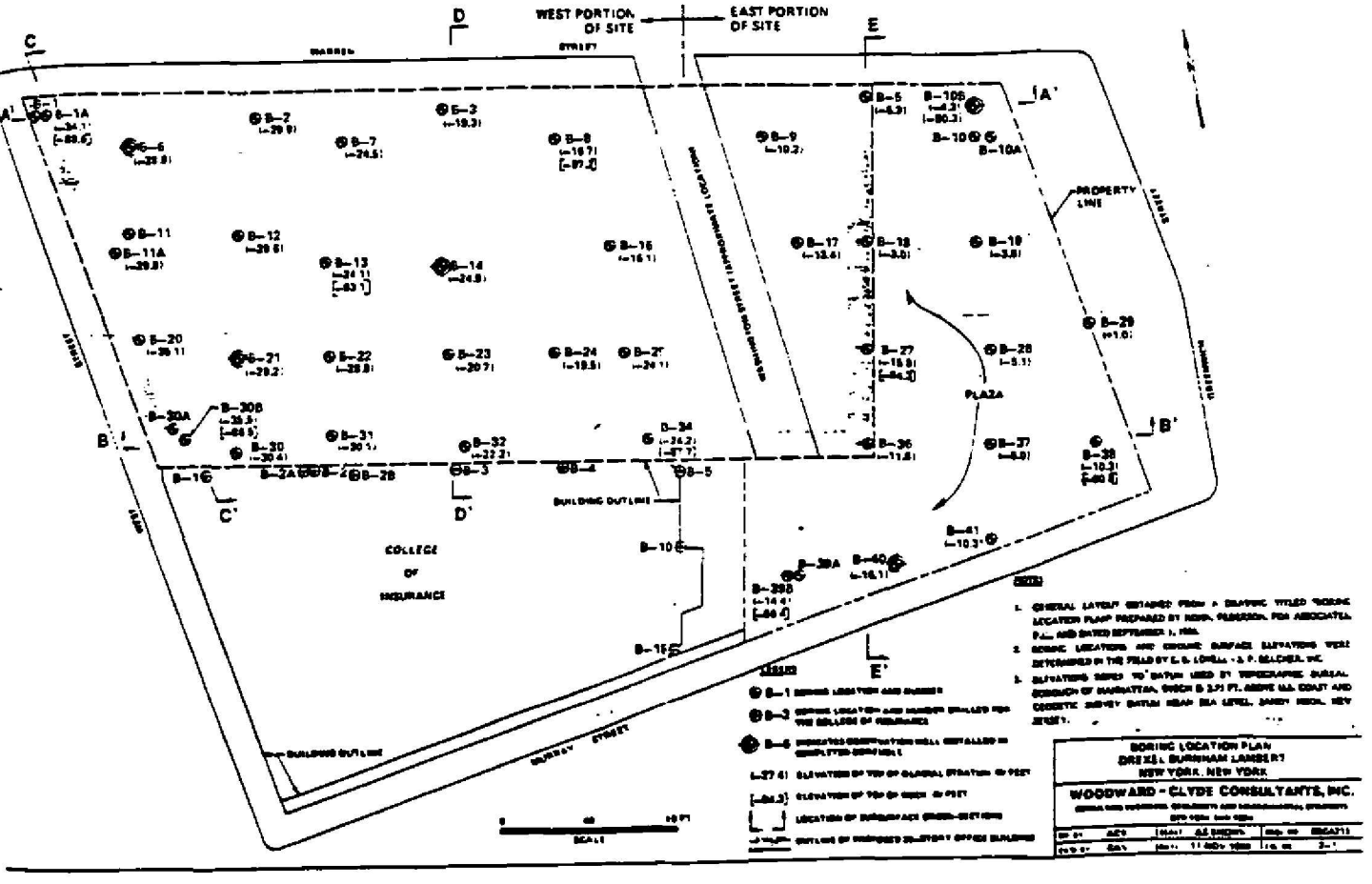
Adapted from Kirkorian and Tidlow 1984: Figure 3.

MAP 2
1859 Tax Assessment Map
with Cellar and Fill Layer Depths Noted



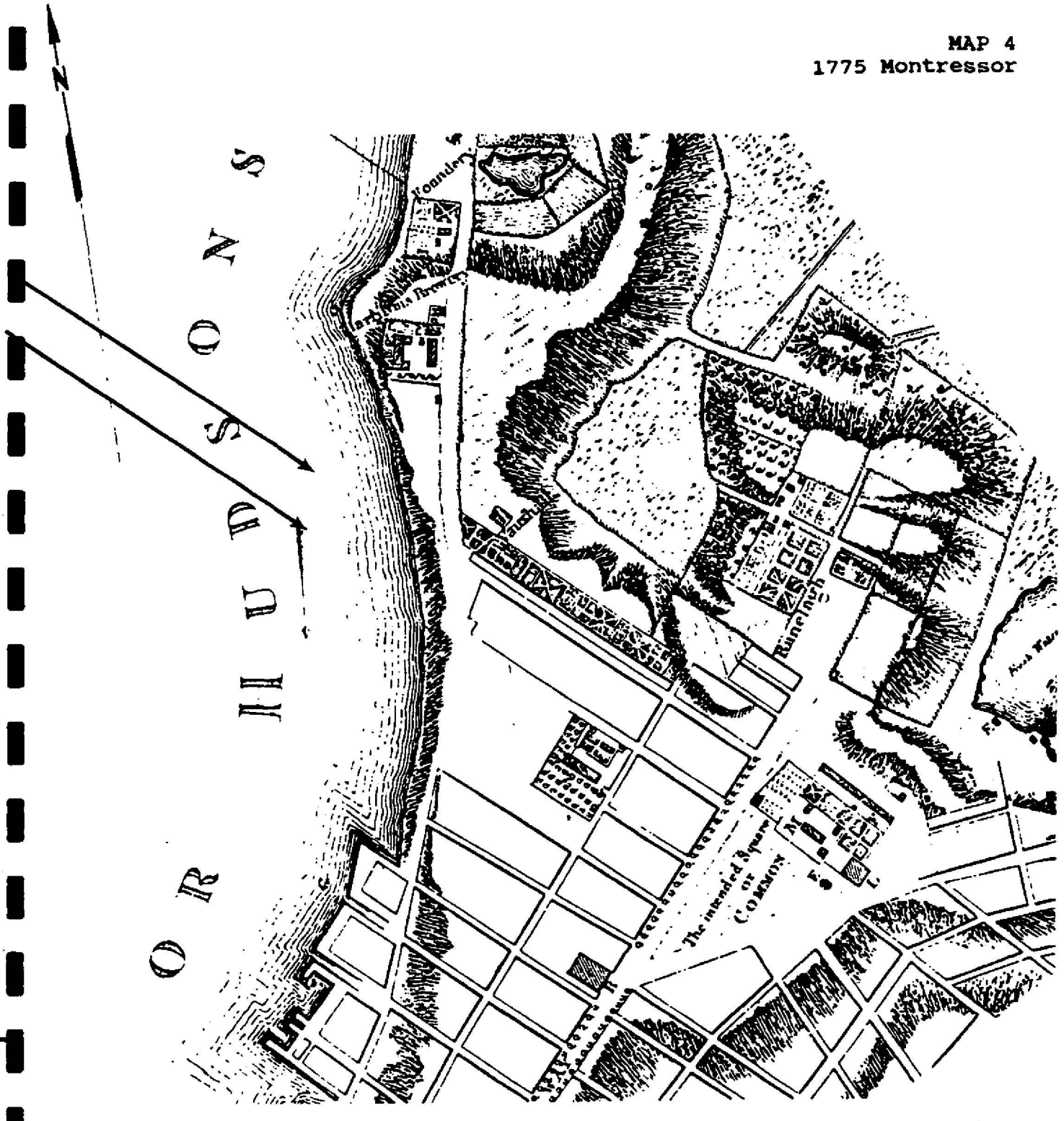
From microfilm of Maps of the Third Ward of the City of New York, 1859, plate 10. Data for cellar and fill depths from Buildings Department Block 131, Lots 22-45 folders and WCCI 1989. The fractions represent the depth of cellar over depth of fill (both in feet). Although the cellar depths consider the entire lot as the combined cellar and elevator shaft depth, only a small portion of the lot actually contains an elevator shaft. The relative location of the elevator shafts, usually a 6 foot square, no more than 4 feet below the cellar level, can be seen by comparing the Block and Lot data with the 1894 Sanborn-Perris insurance map (Volume 1, plate 7). The fill depth used is from the soil boring closest to the lot being considered. The "nd" indicates no data.

MAP 3
1989 Woodward-Clyde Consultants, Inc. (WCCI)
Boring Location Plan



From Woodward-Clyde Consultants, Inc. (WCCI) 1989: Figure 2-1

MAP 4
1775 Montressor



From a xerox copy of John Montressor, A Plan of the City of New York and Its Environs. A. Drury, England, 1775. Xerox copy available in a book of Manhattan maps at The New-York Historical Society. The two arrows point to the northern and southern boundaries along the western boundary of what was to become Site 5B.

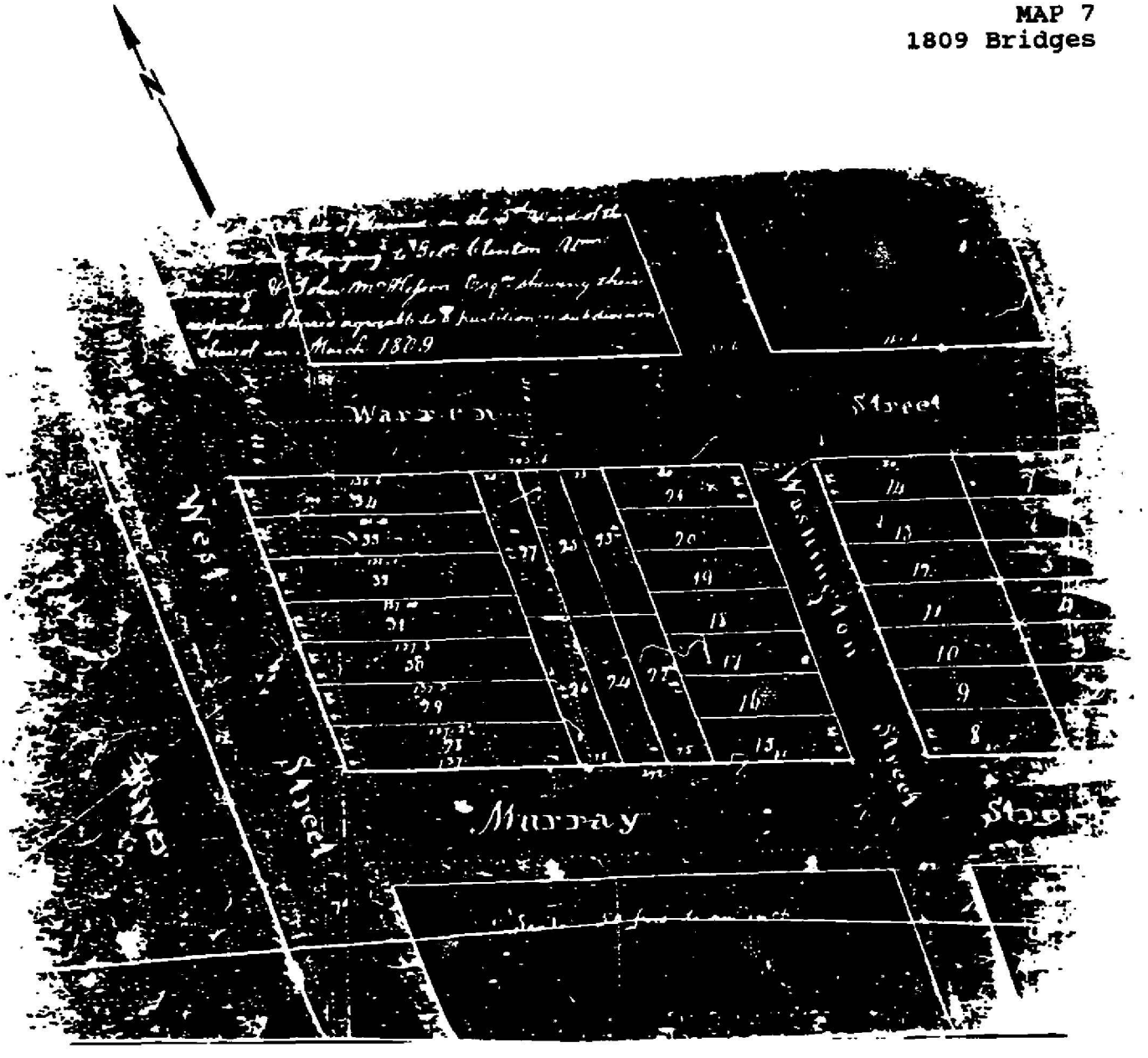
MAP 5
1797 Taylor Roberts

From a xerox copy of B. Taylor and J. Roberts, A New and Accurate Plan of the City of New York in the State of New York in North America. S. Haywood, New York, 1797. Xerox copy available in a book of Manhattan maps at The New-York Historical Society. The two arrows point to the northern and southern boundaries along the western boundary of what was to become Site 5B.

MAP 6
1807 Bridges

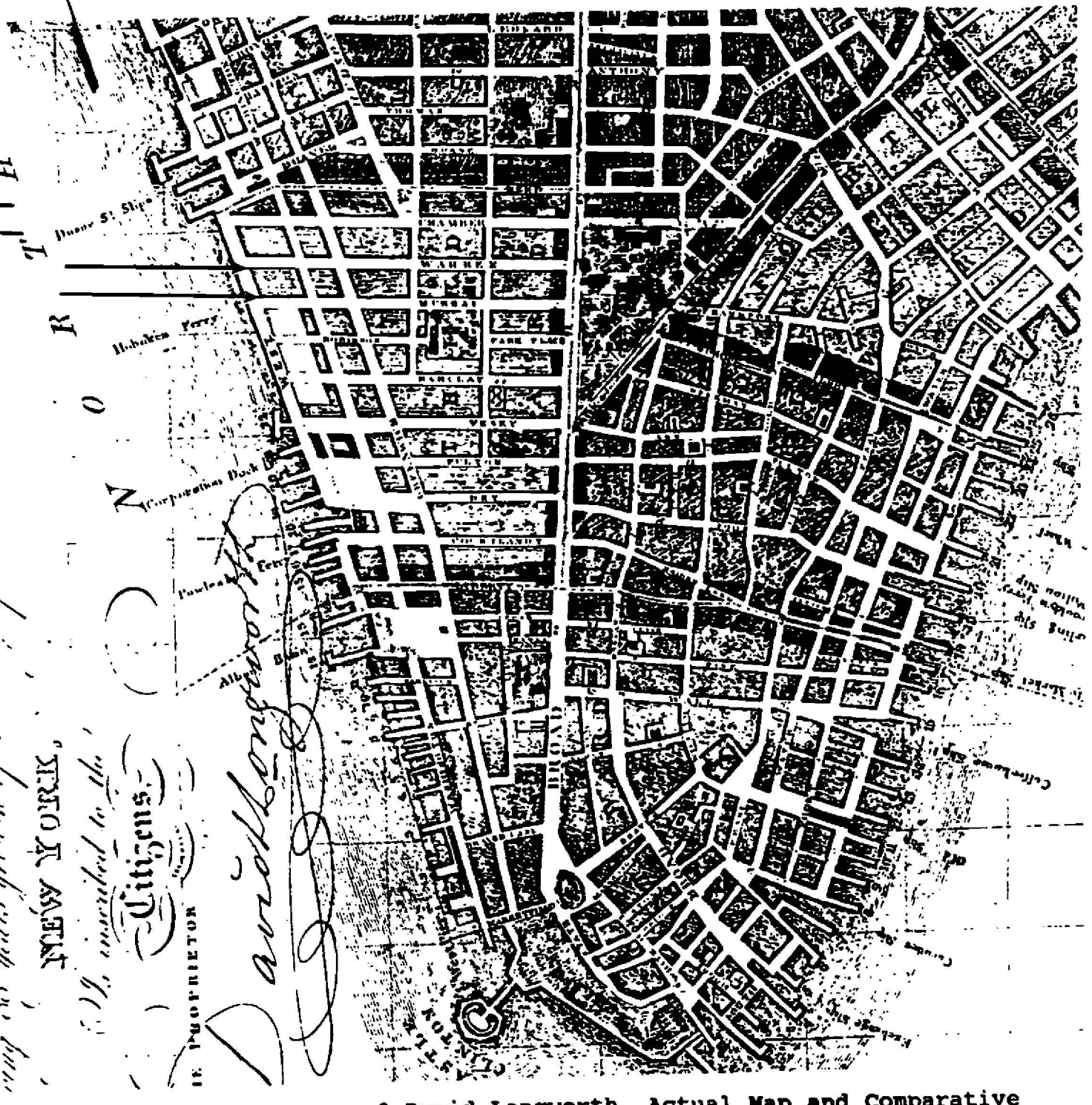
From a xerox copy of William Bridges, Plan of the City of New York.... Isaac Riley, New York, 1807. Cited as Haskell 644 (Haskell 1931) on a xerox copy available in a book of Manhattan maps at The New-York Historical Society. The two arrows point to the northern and southern boundaries along the western boundary of what was to become Site 5B.

MAP 7
1809 Bridges



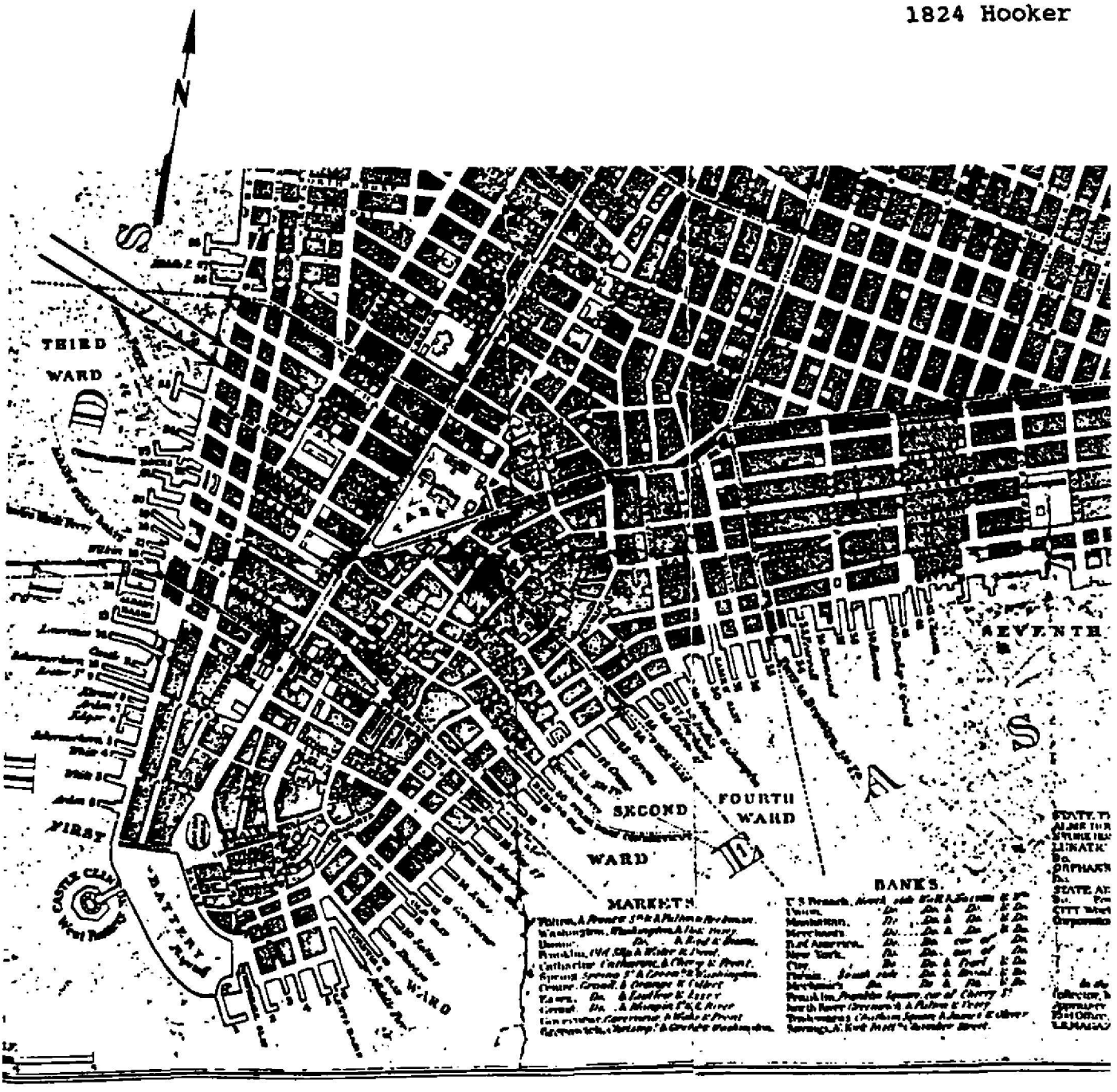
From a microfilm copy of a Map of 34 Lots of Ground in the Fifth Ward of the City of New York belonging to Geo Clinton Wm Denning & John McKesson Esqrs shewing their respective Shares agreeably to a partition or subdivision thereof in March 1809. City Register Deeds Liber 152, page 183, post May 5, 1821; also recopied in City Register Deeds Liber 246, page 257, February 11, 1829. This is a block-specific survey of what was to become Site 5B. The east/west length along Warren Street was 290.6 feet; along Murray Street, 292 feet. Compare these dimensions with those on Map 2. The wording along the western boundary of Site 5B is "Intended West Street".

MAP 8
1817 Longworth



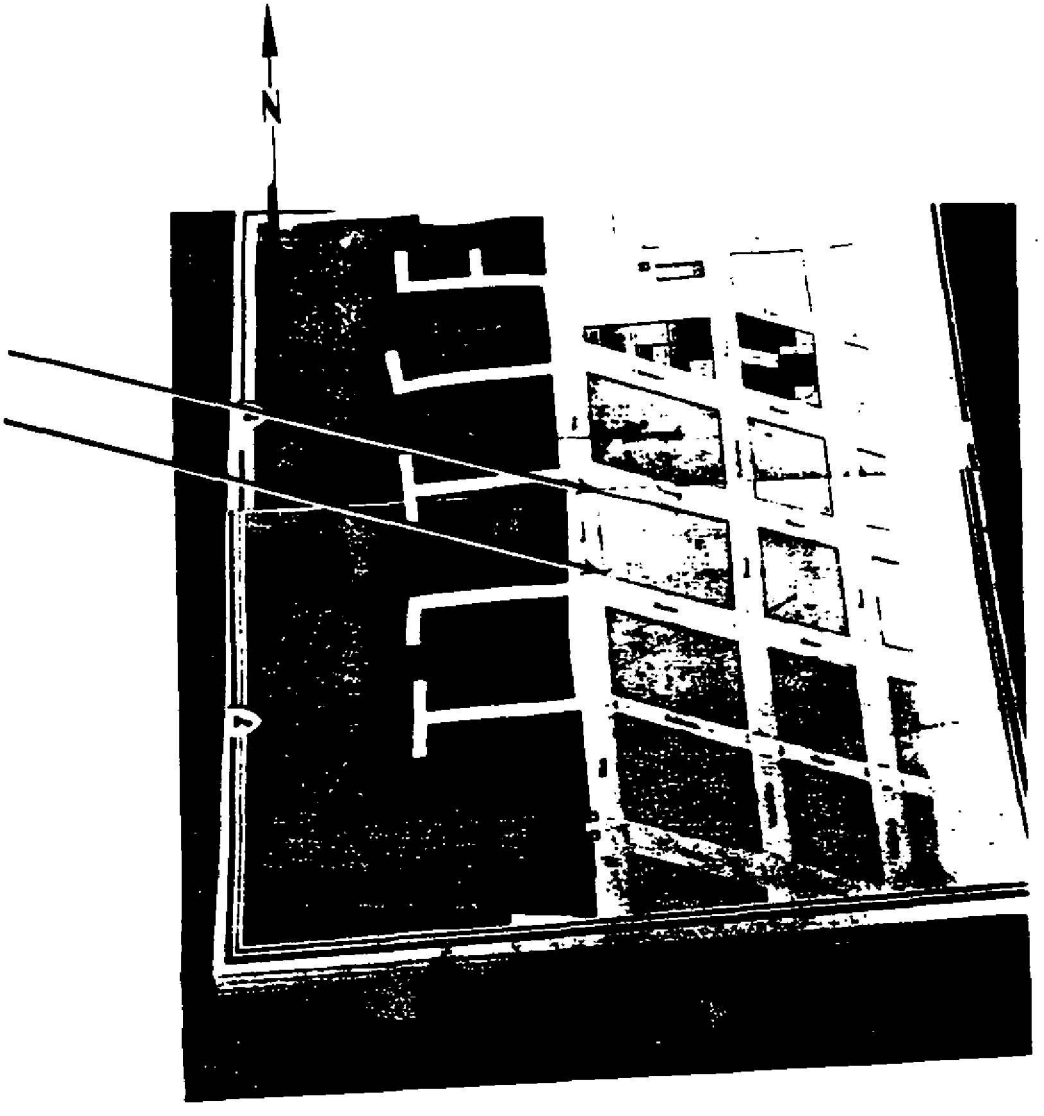
From a xerox copy of David Longworth, Actual Map and Comparative Plan of New York. David Longworth, New York, 1817. Xerox copy available at the New York Public Library Map Division. The two arrows point to the northern and southern boundaries along the western boundary of what was to become Site 5B.

MAP 9
1824 Hooker



From a xerox copy of W. Hooker, Plan of the City of New York. W. Hooker, New York, 1824. Xerox copy available at the New York Public Library Map Division. The two arrows point to the northern and southern boundaries along the western boundary of what was to become Site 5B.

MAP 10
1827-1839 Ewen

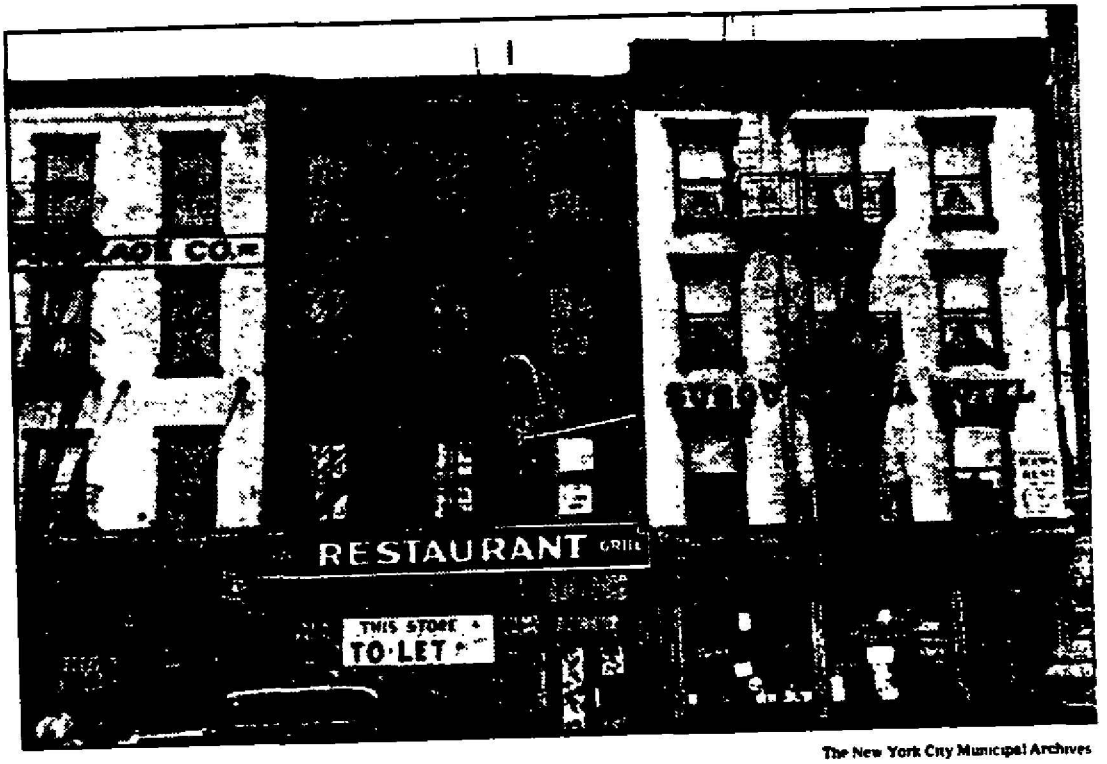


Composite photograph of Daniel Ewen, Maps and Surveys of the City of New York. Daniel Ewen, New York, 1827-1830, plates 7 and 8. Courtesy of the Manhattan Borough President's Office. Manuscript copy available at the Topographic Bureau, Office of the Manhattan Borough President. The two arrows point to the northern and southern boundaries along the western boundary of what was to become Site 5B.

PLATE 1
1810 Scene at the Foot of Dey Street

A notecard that shows a detail from Hudson's River, Dey Street, (New York) by Baroness Hyde de Neuville, 1810. From the collections of The New-York Historical Society. This 1810 view of the foot of Dey Street is probably at Greenwich Street (Map 6), two blocks east of and five blocks south of Murray Street. The northern side of old Murray Street is the southern boundary of Site 5B.

PLATE 2
1845 Brick Building on West Street
in a 1940s Photograph



The New York City Municipal Archives

Building at 179 West Street with 'To Let' sign in the window, circa 1940.

Photograph from Christopher Gray, Streetscapes: 179 West Street, A Lonely Reminder of the Days of Waterfront Glory. The New York Times, 27 May 1990, R5, columns 1-5. Photograph courtesy of The New York City Municipal Archives. The 1845 4-story, brick building at 179 West Street is similar to many on the project block, Site 5B. Both 179 West Street and the buildings on Site 5B had marquees or shed roofs suspended over the street (Gray 1990, Buildings Department Blocks and Lots folders) toward the end of the nineteenth century. See Photographs 2 and 5 for the spatial relationship between 179 West Street and Site 5B.

PLATE 3
post 1913 View of West Street

A notecard that reproduces Manhattan Contrasts by Everett L. Warner (1877-1963). From the collections of The New-York Historical Society, a gift of the artist, 1941. The painting presents a view looking northeast from West Street toward the Woolworth Building, built in 1913. The 4-story brick building with a peaked roof is similar to buildings on Site 5B before alterations in the last decades of the nineteenth century (Buildings Department Block and Lot folders). The alterations on Site 5B raised the brick upper walls and replaced the peaked roofs with flat ones so as to provide more head- or storage-room on the top floor. The seemingly stone hotel on the corner in the painting shows what probably was a conversion from a peaked to a flat roof. The scene in the painting is several blocks south of the project block. Compare this view of the Woolworth Building with Photographs 1 and 2.

SITE PHOTOGRAPH 1

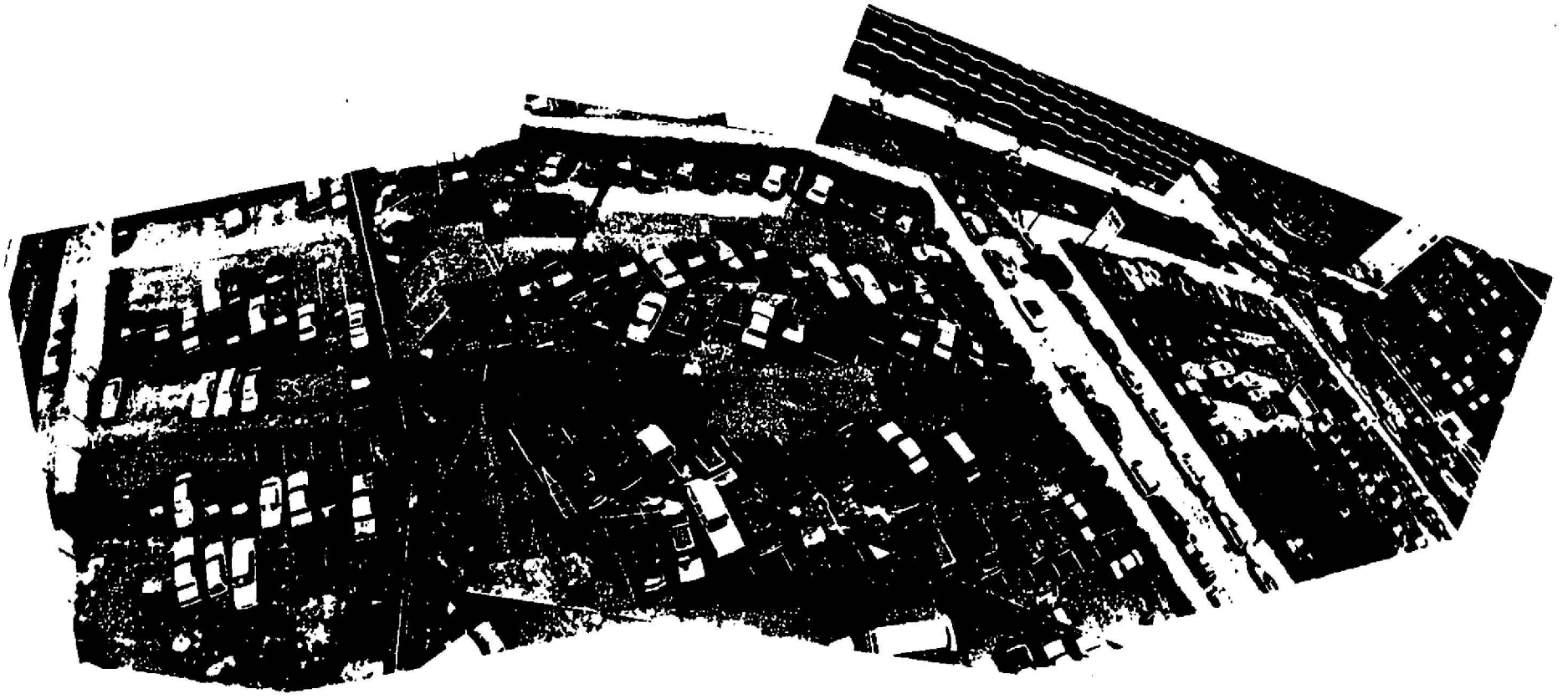
View: Looking east from West Street toward the project site, Site 5B of the Washington Street Urban Renewal Area. In July 1990, Site 5B is a street-level parking lot on Block 131. Block 131 is bounded on the north by Warren Street, east by Greenwich Street, south by (old) Murray Street, and west by West Street (Map 1). The 1913 Woolworth Building is in the background, and the early 1980s College of Insurances is immediately south of Site 5B, on Site 5A (Map 3). Photograph taken June 27, 1990.

View: Looking east from West Street toward the intersection of Warren and West Streets. Site 5B is the street-level parking lot on the south side of Warren Street, in the middle ground and toward the right of the photograph. The 1845, 4-story brick building on the left, 175 West Street (Plate 2), is the only standing structure facing West Street on that block (see also Photograph 5). The unmilled teak timber was picked up along the curb near 175 West Street. The 1913 Woolworth Building is in the center rear, and the early 1980s College of Insurance is in the middle ground right, on Site 5A. Composite photograph taken June 27, 1990.

SITE PHOTOGRAPH 2

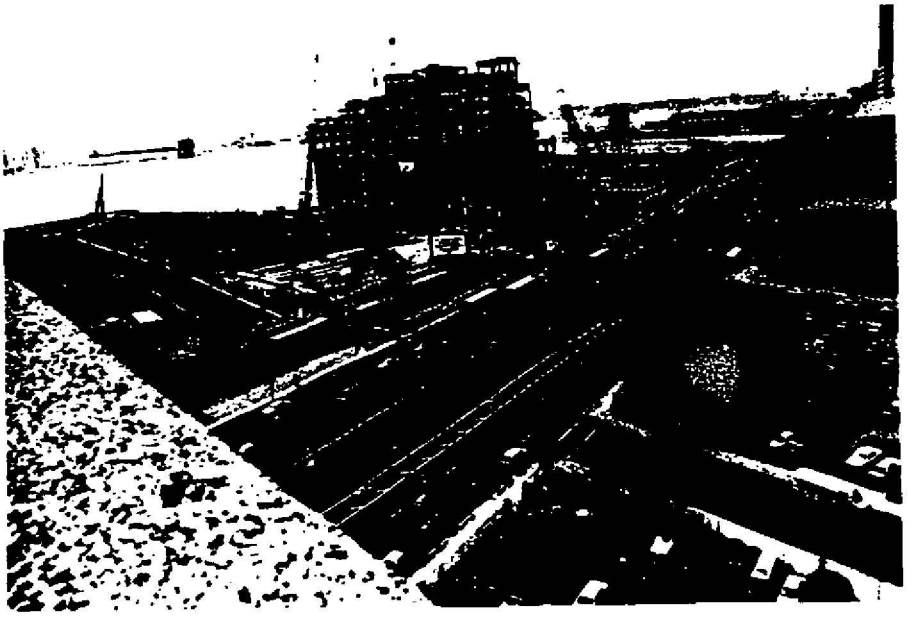
SITE PHOTOGRAPH 3

View: Looking southwest from the northeast corner of the Warren Street and Greenwich Street intersection. Site 5B is the street-level parking lot in the middle ground. Site 5A, the College of Insurance, with its windowless north side, is immediately south of Site 5B (Map 3). Composite photograph taken June 27, 1990.



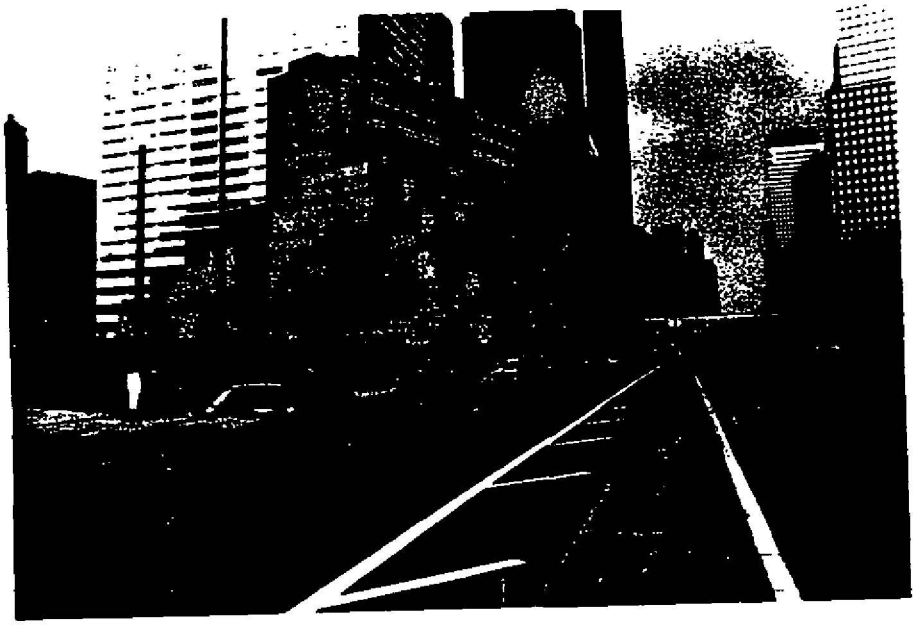
View: Looking down from the roof of the College of Insurance, Site 5A, toward the north and Site 5B. Site 5B is the street-level parking lot. In the upper right corner is the Warren Street side of P.S. 234 at the northwest corner of Warren and Greenwich Streets. On the east side of Greenwich Street, at the same intersection, are 11-story condominiums whose architecture is reminiscent of the 4-story stores that stood in the area from min-nineteenth century until they were razed, between 1967 and 1971, as part of the Washington Street Urban Renewal Area projects. Composite photograph taken June 27, 1990.

SITE PHOTOGRAPH 4



View: Looking northwest from the roof of the College of Insurance, Site 5A. West Street runs diagonally through the photograph. The northwest corner of Site 5B, at the intersection of Warren and West Streets, is in the lower right corner of the photograph. Site 5B is the street-level parking lot. The 1845 brick building at 175 West Street (Plate 2), between Warren and Chambers Streets, stands near the location where the 1984 informant picked up the excavated teak timber, said by utility workers to be part of a "grid of teak". The teak was unearthed when utility workers dug below West Street. Photograph taken June 27, 1990.

SITE PHOTOGRAPH 6



View: Looking south on West Street from just north of the intersection of Warren and West Streets. Site 5B is the parking lot behind the cyclone fence at left mid-ground. Site 5A, the College of Insurance, is immediately to the south of Site 5B. The World Trade Center and the World Financial Center are in the background. Photograph taken June 27, 1990.