CULTURAL RESOURCES SURVEY
TESTING AND MITIGATION PHASES
60 WALL STREET SITE
NEW YORK CITY

by

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with

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The following report is of a stage IB/III (testing and mitigation phase) cultural resources survey of the property at 60 Wall Street in New York City, performed by Historic Conservation and Interpretation, Inc. (hereafter also "HCI") of Newton, New Jersey. HCI undertook this research project as part of a team planning effort for the proposed construction of a new building on the 60 Wall Street site (an open lot at the time of the survey) by Park Tower Realty Corp., Inc. of New York City. The work reported herein was undertaken after HCI's completion of the stage IA cultural resources survey of the same site performed in 1983 (HCI 1984).

At the time of the survey in 1984, the 60 Wall Street site (also referred to herein as the study, or project, area) was an approximately 1.3-acre empty lot occupying the central portion of present-day Block 40 in the first ward of the Borough of Manhattan, New York City. Block 40 is bounded on the north by Pine Street, on the east by Pearl Street, on the south by Wall Street, and on the west by William Street (see Figures 1 and 33). At present, the lot is listed as Lot No. 3 (the lowest-numbered parcel of the 12 lots consolidated by the present owners). Lot 3 is bounded by Pine and Wall streets on the north and south, respectively, and by standing multi-storied structures to the east and west.

Demolition of the most recent structures on the lot in the mid- to late 1970's apparently leveled the site to conform with the existing curb levels of Pine and Wall streets. Portions of the project area served as parking lots for an unknown period of time after the demolition of its last standing structures. Given the property's high value, the extended length of time in which the parcel remained vacant was remarkable.

As plans for the new building progressed, a significant tradeoff was made between the developer, the Park Tower
FIGURE 1. On this 1982 sheet from the Sectional Maps of New York City (Dept. of City Planning, Map No. 12), the 60 Wall Street study area is indicated by parallel lines within the Wall-William-Pine-Pearl Street block.
Realty Corporation, and the City of New York, under the guidance of the New York City Landmarks Preservation Commission (LPC). The exchange involved the purchase of air rights. By buying the air rights over the Merchants Exchange Building located at 55 Wall Street (which will protect the historic structure from the threat of being razed, enlarged, or built upon), the developer could transfer this newly acquired open space to the proposed new building.

By law, a new city skyscraper can occupy only a prescribed amount of air space, depending on the proposed building's height and the zoning regulations for the site. The higher the building, the more "set back" it must be from the street. By acquiring air rights from neighboring extant buildings (usually historic structures threatened by new construction or potentially destructive renovation), developers can transfer that actual space to their new buildings as part of their set back requirements.

Among other commitments made by Park Tower to the City Planning Commission in order to comply with the CEQR requirement was an archeological survey. When the survey of written documents and records showed that there were places in the study area which had the potential to contain significant archeological remains (HCI 1984), a testing phase began. Test excavations revealed that in two of the five lots originally laid out in the late seventeenth century, intact cultural remains of earlier periods were found. Deposits were located in those parcels having relatively shallow cellars (i.e., 10 feet deep or less). Because of these finds, the site developers then agreed to and financed a phased rescue or salvage excavation to mitigate the negative impact that their construction would have on the site's potentially significant cultural resources. The site's remains were subsequently excavated and recorded by HCI. The resultant collection has become part of New York University's Department of Anthropology research collections.

The cultural resources work included both documentary and archeological research into humankind's use of this site in both the prehistoric and the historic cultural eras; the analysis of all pertinent data resulting from this research; and the presentation of this analysis in a final report. Documentary research included a search of appropriate state site files, archives, and repositories of historical data. Also consulted were the personnel and files of municipal agencies, libraries, and museums in order to gain pertinent information on the site and its historical evolution (see Section III). In addition to these data, researchers collected information as to the nature of the physical charac-
teristics of the site--e.g., through the study of soil borings and information from previous excavations.

Historic Conservation and Interpretations's proposal for the initial testing program (stage IB) on the 60 Wall Street site outlined various research topics and questions that, based on the results of the stage IA documentary survey, were to be addressed in the stage IB work (see HCI 1984; see also HCI's May 4, 1984 proposal for the IB work to the New York City Landmarks Preservation Commission, both of which are on file at the LPC). Additional revisions of the research design were made in light of the information produced as a result of the stage IB excavations (see HCI's June 29, 1984 progress report of the cultural resources survey at 60 Wall Street, also on file at the LPC).

Upon completion of the entire stage IB/III excavation, the entire artifact collection was processed. Laboratory procedures included inventorying and identifying all objects. At the same time, additional documentary research was undertaken for those lots on which archeological resources had been recovered, and analysis of the artifactual and archeological data began.

In light of the information obtained from the research conducted on this site, it is both necessary and appropriate to review and further refine the project's original research design. In HCI's May 4 and June 29 proposals, the site's cultural resource potential was divided into two categories for the purposes of investigation: (1) remains of the city's earliest landside defenses--i.e., the wall or landside fortifications of New Amsterdam/New York; and (2) remains of domestic or commercial culture.

For the first category of potentially identifiable cultural resources--i.e., the wall--the stage IB test excavations revealed that the entire stratum which may have contained remnants or evidence of this cultural activity had been removed and destroyed by subsequent development of the study area. Therefore, the proposed research questions concerning the landside fortifications could not be addressed by the present project. The legacy of the fortifications and their impact on the subsequent development of this portion of the city's cultural landscape, however, will be discussed in Section III, C, 1 and 2.

For the second category of cultural resources--i.e., the remains of domestic or commercial culture--three general research topics were proposed: (1) the comparison of the material culture found in the two lots fronting Wall Street (56 and 58 Wall Street) with that found in the two lots
fronting Pine Street (59 and 69 Pine Street)*; (2) the
analysis of extant architectural elements; and (3) the
analysis of an alleyway which extended through two lots as
an archeological feature.

This first research question--how does material culture
found in the lots fronting Wall street compare with that
found in the lots fronting pine street?--reflected the known
difference that existed between the types of buildings and
their occupants along each of these two streets. Specific
research questions were to be asked of any data recovered
from the features found in the lots fronting each
thoroughfare (see 5/4/84 proposal, page 3), basically to
determine whether the cultural remains were diagnostic of
the type of activity hosted by the given lot.

The second research problem--the analysis of extant
architectural elements--treated architecture as a complex
set of artificial features. It was planned to add to the
documentary data concerning the buildings erected on the 60
Wall Street site by studying their construction methods and
the changes evidenced in their on-site remains. The
foundations from many of these buildings and building
expansion episodes were still on the site. They reflected
the late eighteenth- through the early twentieth-century
uses of the site, a period when rapid changes and growth
occasioned the deepening of cellars under buildings, the
filling in of backyards with building additions, and the
successive construction of ever-larger edifices. This data
base allowed the posing of the following research questions
of the architectural remains that date before the most
recent structure on each of the lots (i.e., the pre-twentieth-
century building fabric):

1. In what ways does the physical fabric reflect
escalating property values as Wall street became
New York City's, and the world's, financial cen-
ter? How is the rise in property values related
to changes in the function of buildings?

2. How did expansion of structures take place?
Was the existing fabric consistently removed and
replaced, or did a succession of renovations oc-
cur? For example, is the expansion of buildings
both below grade and in the number of stories re-

*These street numbers were in effect from 1845 (Wall
Street lots) and 1816 (Pine Street lots) until the 1970's
demolition. For changes in these streets' numbering system
before those dates, see Appendix A.
lated to the function of the building or due to constraints in building technology?

3. Did these operations reflect city regulations or other constraints, such as the placement of water and waste management systems?

4. Was there a physical pattern of growth attributable particularly to commercial and financial institutions? If so, how is it manifested in the material culture?

The third research problem—the analysis of the alley as an archeological feature—planned to address questions of cultural use patterns, maintenance and repair, access, and functions other than as a thoroughfare (e.g., as a drain). Comparison of the resultant data with those from similar urban sites was also intended.

The researchers abilities to address these research questions as posed were, in hindsight, somewhat limited for the following reasons. First of all, additional documentary research undertaken after completion of the fieldwork has shown that the original premises of the research questions, as well as the archeologists' understanding of the study area's history, were inadequate. The questions presupposed that two

... very different neighborhoods evolved on the two sides of the present-day 60 Wall Street site. On the lots fronting Wall Street, the site's southern side, a row of some of the largest and most elegant residences in the city were built ... in the [1780's].... During this same period, the northern side of the site -- the lots fronting on Pine Street -- developed into a mixed use area, including smaller and less elegant dwellings than those on Wall Street, retail establishments and warehouses. (HCI 5/4/84 Proposal, pages 2-3)

Subsequent research has revealed that throughout the period during which Wall Street was primarily residential (1680-1830), commercial establishments were located on both sides of the block within the study area. Not until the early nineteenth century, as the area became increasingly commercial, was the dichotomy between Pine and Wall streets pronounced. For instance, as early as 1711 and until at least 1725, a bolting house was located on the 56 Wall Street lot (see Appendix A). The shop of Dr. John Dupuy, an early eighteenth-century resident of the block, may have been located at his residence on Pine Street (see 59 Pine
In the latter half of the eighteenth century, a goldsmith was located in the house formerly occupied by Dupuy. Members of numerous other occupations, including shoemakers and printers, operated businesses on both sides of the study area during this period.

As the area became exclusively commercial in the second and third decades of the nineteenth century, according to one contemporary account, all the former residential structures along Pine Street between Pearl Street and Broadway were replaced by commercial buildings, primarily warehouses. At the same time the elegant mansions along Wall Street, which dated to the period of Wall Street's preeminence as a residential community (1780-1800), were being converted to offices for financial and insurance companies. The type of work space required by these institutions did not result in the wholesale destruction and replacement of existing structures.

Second, the current project has not yielded the comparable sets of data necessary to make the intra- and inter-site comparisons posed by the research questions. No architectural remains of the original residential structures (built between the 1680's and the 1740's) were found in any of the lots investigated. The earliest support structures that survived subsequent development consist of two brick wells that evidently date to the 1730-50 period. The few undisturbed primary deposits of cultural material that were recovered are from different time periods and different sites. Comparison with other sites excavated in New York City or within the region is beyond the scope of this project.

Regarding the analysis of the alleyway, although alleyways were used within the study area, and the shared rights of access to the rear portions of lots are noted in land transfer records, what was interpreted as an alleyway between the structures at 59-61 Pine Street was actually a hallway or thoroughfare within a building. A cellar was located beneath it. The feature that was found within the "alleyway" (and upon which the research questions were based) actually dates to an earlier period when the 59 Pine Street lot was wider. None of the records examined for this lot indicates that an alleyway was located along the east boundary of the parcel (see Appendix A, 59 Pine Street). Therefore, the research questions posed on May 4, 1984 are not relevant.

Finally, by way of a general problem, perhaps the most frustrating aspect of the project has been the lack of correspondence between the archeological collection and the
available documentary evidence. The various primary deposits date either from periods when the lots in question were commercial or from residential periods for which the owners, and, more importantly, the occupants, are not known. In instances where the occupant of a given lot at a particular time is known, few or no deposits were found. Unfortunately, the mid- to late eighteenth-century period was the most difficult to research in terms of primary records—e.g., deeds, wills, and tax records. This is not to imply that research was exhaustive. Much additional research, especially into genealogical sources, will contribute to future interpretations of the material recovered during this project.

In light of the foregoing statements, we have attempted in the following text to answer the research questions originally posed in the May 4, 1984 proposal, but in more general terms than originally anticipated. Section VII contains a detailed description of the entire artifact collection. General comparisons of the architectural remains, including an analysis of the support structures found in the study area (i.e., wells, privies, and cisterns), are made in Section VIII, Conclusions.
II. PHYSIOGRAPHICAL SETTING

As part of one of the most valuable real estate districts in the world, the 60 Wall Street site has been intensively changed by the construction of commercial structures as Wall Street evolved into an international financial center. However, some understanding of the site's previous, albeit now obscure, natural conditions and of the sequence of developments influencing these conditions is useful in attempting to reconstruct past activities on the site.

Situated on Manhattan Island, the site is part of the Manhattan Prong of the New England Upland Physiographic Province. Originally Manhattan was an undulating upland area lying atop ancient crystalline rocks, and having a topography similar to that found in Westchester County and in much of western New England. Such topography formed through periods of uplift and active erosion of the landscape, most notably on the Schooley peneplane, beginning some 70 million years ago. At that time, this entire region was a broad, smooth plain (i.e., peneplane). Its subsequent uplift rejuvenated stream erosion, which then carved most of the underlying features of today's undulating topography from bedrock of varying hardness (Schuberth 1968: 179).

The more familiar natural features of the landscape are the result of glaciation that began some 1.5 million years ago and ended about 15,000 years ago. The constantly moving continental glacier not only scoured extensive amounts of bedrock and sediments, but also transported and deposited them. Accumulated sediment at the glacier's southern front resulted in the sandy hills of Long Island and Staten Island, whereas the region north of this front was covered by a thinner mantle of poorly sorted glacial "drift."

On the 60 Wall Street site, the underlying bedrock consists entirely of the Manhattan schist, a coarse quartz mica schist that covers much of the island. Soil borings on the site indicate that the schist generally slopes to the
east and west away from the central portion of the site. Directly above bedrock at the 60 Wall Street site are found varying amounts of silt, clayey silt, and clean sand and gravel, all of which are glacial deposits. Thus, the gently undulating topography of the southern tip of Manhattan was further modified by a cover of several feet of sandy sediment.

Glaciation also significantly affected the regional drainage and sea levels. At maximum glaciation, vast amounts of water were tied up as glacial ice, which significantly lowered sea levels. With glacial retreat, however, this water was released as meltwater, which raised sea levels and formed extensive lakes in valleys by then partially dammed by ice or accumulated sediment. Lake Flushing, formed when the outlet of western Long Island Sound was blocked by sediment, temporarily flooded over most of Manhattan Island, making the terrain unavailable to North America's earliest human inhabitants. Clay and silt deposits found throughout the region over the less sorted glacial drift mark the presence of these former lakes. Lake deposits do not appear to be significant in test borings made on the 60 Wall Street site.

In subsequent post-glacial times, meltwater, including that dammed within the glacial lakes, recharged and raised sea levels. For coastal New York this sea level rise has been estimated at between 3 and 4 feet per century until 6,000 years ago, when the rate slowed to 1 foot per century. About 2,600 years ago, this rate slowed to 0.45 foot per century (Salwen 1965: 32). For southern Manhattan Island, the effect of this rise has been the drowning of the terrain that was open land after the draining of Lake Flushing. Such terrain could have supported or provided resources for prehistoric inhabitants of Manhattan.

The 60 Wall Street site, located as it is at the southern end of Manhattan Island, would have been covered by Lake Flushing but has not been influenced by subsequent sea level changes. The site would have evolved steadily through a succession of post-glacial vegetative changes characteristic for this region as the climate evolved to that of the most recent millennium. The most recent Native Americans, as well as the subsequent Colonial populations, would have encountered a mixed oak forest containing various other deciduous species.

Of course, intensive urban development has completely destroyed any surface evidence of these past environments. During the Colonial era and into the Federal period, the village of Manhattan expanded northward to and beyond Wall
Street. Any aboriginal occupation, as well as the first scattered estates and homes of the Europeans in the vicinity of the study area, caused, no doubt, only minor disruptions to the environment when viewed against the later urbanization of the site.

Deforestation of the study area for farmland, and its subsequent excavation for free-standing structures, were followed in the late eighteenth and early nineteenth centuries by pronounced subsurface disturbance as 2- to 5-story commercial and residential buildings with basements and cellars were built along both sides of the block. However, throughout most of the nineteenth century, backyards survived within the study area, and construction related excavations undoubtedly did not reach the 30- to 40-foot depths of bedrock. Only with the twentieth-century construction of larger, multi-storied, commercial structures were the former backyard areas utilized, earlier foundations and support structures obliterated, and new foundation piers placed near, or on, bedrock. As is discussed elsewhere in this report, the extent of this latest excavation/construction episode is crucial to understanding the nature of preserved pre-twentieth-century features, either cultural or natural, below the surface at 60 Wall Street.
III. Documentary Research

A. Introduction

The discussion in this section is arranged chronologically into two general periods, the prehistoric and historic eras. The historic period is further subdivided into the following: (1) the Dutch colonial period (1625-64); (2) the English colonial period (1664-1783), which is further subdivided into the late seventeenth century, the early to mid-eighteenth century, and the Revolutionary War era; (3) the Federal period (c. 1783-1812); (4) the mid-nineteenth-century period (c. 1815-65); (5) the late nineteenth-century period (c. 1865-1900); and (6) the twentieth-century period. For each era, a general historical introduction is followed by a more specific treatment of the project area. Subjects covered include the architectural development of the study area and the types of utilities (including water supply and waste management) generally in use in the city and in each particular lot. Also, for those lots which were found to contain archeological resources, the history of property ownership and occupancy is outlined (see Appendix A for an abstract of relevant municipal records).

Archeological evidence that contributes to an understanding of the infrastructural development of the individual lots is integrated into this discussion. For instance, where remains of water and waste systems were found, approximate dates of construction and abandonment help to determine the chronological sequence of development at the site.

The following historical narrative combines research in secondary sources with that in primary county and municipal records, pertinent, of course, to the 60 Wall Street site. Although it is thorough and site-oriented, it is not, however, a definitive or exhaustive treatment. Additional documentary sources and areas of research which contribute to an understanding of the archeological resources recovered during this project are noted in later sections of this report (e.g., in Section V, where the field work is described and analyzed).
Archival research focused on New York City records located at the Office of the County Clerk, at the Municipal Archives, at Queens County Community College, and at the Department of Buildings. Record groups consulted included deeds, wills, tax rolls, city directories, obituaries, and construction applications and plans for new buildings as well as applications to alter existing buildings.

Cartographic sources, including fire insurance maps, pictorial directories, and bird's-eye views, provide some of the most detailed information about the development of the 60 Wall Street site. General histories of New York City and lower Manhattan, particularly those dealing with the study area and Wall Street, were also consulted. This research was conducted at the Local History Room and Map Divisions of the New York Public Library (at both the Main Research Library and the Annex), The New-York Historical Society (Research Library and Prints and Photographic Collections), and The Museum of the City of New York (Maps and Prints).

B. Prehistoric Era

Knowledge concerning the use of Manhattan Island by aboriginal populations is scanty compared with what is known of the prehistoric culture history of the city's other boroughs and the adjoining coastal areas. A survey of the records of local museums--i.e., the Heye Foundation Museum of the American Indian and the American Museum of Natural History--reveals that only a few aboriginal sites were ever investigated in Manhattan, and those were located in the northern portion of the island and examined around the beginning of the twentieth century (Rutsch 1970; Parker 1922; Skinner 1909A, 1909B; Finch 1909; Bolton 1909). In the region of the study area--i.e., generally the southern tip of Manhattan--one site, a shell midden located near the former Collect Pond (in the vicinity of present day City Hall, see Figure 2), has been plotted entirely through secondary accounts left by the region's first settlers (Skinner 1961: 51).

Within the past five years, some aboriginal cultural material has been recovered in the deepest strata of the excavations of the Staadt House and Lower Bridge Street sites (Rothschild 1984: personal communication; Grossman 1984: personal communication). These findings tend to confirm the speculations made in other recent studies of Lower Manhattan (Baugher et al. 1982: 5; HCI 1983: 41)---i.e., that there still exists real potential for finding significant prehistoric cultural remains in future excavations within Manhattan's urban setting.
FIGURE 2. Portion of Viele's 1859 Original Topography of Manhattan Island, showing original shorelines, topography, and watercourses. The study area is indicated by diagonal lines within the Wall-William-Pine-Pearl Street block.
The present study area contains some of the physical attributes for settlement sites favored by aborigines. It is near the shore of one of the most protected parts of the harbor. It also lies south of a rise of land, which could have provided some protection from rougher elements of weather as well as a southern exposure (see Figure 3). On the negative side, there is no record of a large supply of fresh water in the immediate vicinity of the study area, certainly a primary human requirement for survival on the shore of a tidal estuary. However, abundant sources of potable water were available within a reasonable distance, and undocumented smaller but adequate sources may well have once existed even closer. (Figure 2 shows locations of watercourses near the study area.)

Based on current knowledge, then, the recovery of aboriginal cultural material was considered possible, although no real evidence pointed to the study area's having a high potential for containing such material. During the course of excavation in the project area, a total of eight possible prehistoric artifacts were recovered from disturbed contexts, including three bifacially flaked objects and five waste flakes. Three of these items, including two of the bifaces, may not be of aboriginal manufacture, but rather may be fragments of European or domestically manufactured gunflints. An inventory of these objects and their provenience is given in Appendix G.

One definitely prehistoric artifact was the midsection of a bifacially flaked, dark gray chert tool (possibly a knife; see Figure 120). The object, and a waste flake of similar material, were found in the backfilled construction trench for a brick-lined well shaft, designated Feature 17. The feature was located in Lot 24, 69 Pine Street, and may have accompanied the first development of the lot between 1730 and 1750.
FIGURE 3. The 60 Wall Street site superimposed on topographical map of Manhattan Island, based on information from Viele 1859 (Herb Githens, cartographer).
C. Historic Era

1. The Dutch Colonial Period (1625-64)
   a. Introduction

By 1523, the harbor and waters around Manhattan Island had been visited by European explorers. Although Giovanni da Verrazano is known to have entered the harbor under the French flag in 1524, the first substantive contact occurred when Henry Hudson explored the waters around Manhattan Island and the river which bears his name for the Dutch East India Company in 1609. Between Hudson's explorations and the mid-1620's, a variety of Dutch expeditions surveyed the area.

While other European countries were colonizing portions of the New World to the north and south, the Netherlands claimed the region between the Delaware and the Connecticut rivers. The Hudson River, located between these two boundaries, became the center of Dutch settlement. The first shipload of permanent settlers arrived from the Netherlands in 1625 and built a fortification and town on the southwest corner of the tip of what is today Manhattan Island. The fortification, named Fort Amsterdam, was built mostly of earthworks. The town's first street, Broad Way, extended one-quarter mile to the north, terminating at what would become Wall Street. Pearl Street marked the easternmost boundary of the settlement, which was called New Amsterdam (Lyman 1964: 17).

Unlike some of its contemporary colonies established on religious bases, New Amsterdam was set up as a private concern for the sole purpose of trade. Even before permanent settlement began, Dutch merchants had realized fortunes through fur trading with the area's aborigines.

By the mid-seventeenth century, Dutch settlement had spread outward from Manhattan into the then outlying areas that were to become Staten Island, New Jersey, Brooklyn, Queens, and Harlem. Most of this later settlement took the form of Dutch bouwieries, or farmsteads. Dutch colonization also extended northward upriver on the Hudson to the head of navigation at Fort Orange (today's Albany). The city of New Amsterdam, however, remained concentrated on Manhattan's southern tip, a triangular plot bounded on the east by Pearl Street (also known as the "Strand," then the East River waterfront), on the west by Broad Way, and on the north by Single (today's Wall) Street (Lyman 1964: 26).
b. The Landside Fortifications of New Amsterdam

From 1653 to the end of the century, during which time the city passed from Dutch to English rule, a stockaded wall extended along its northern "frontier" from the East River to Broad Way. The wall was built to protect the city against attack from Indians and from other Europeans. Some sources indicate that c. 1644, preceding the wall's construction, a cross-island pile of brush, branches, and small trees, designed to prevent cattle from roaming, was built by order of the third Dutch Director General, Governor William Kieft (Hill 1908: 5-6; Goodwin, Royce, and Putnam, 1899: 82; Lamb 1883: 9). The eastern range of the fence became the northern boundary of a 15-acre common grazing land or sheep pasture, consisting of rolling upland and swampy meadow. In the course of time, the southwestern portions of the meadowland in the valley, along the line of present-day Broad Street, were occupied by tanneries. Prior to the construction of the fortifications in 1653, the remainder of the pasture land had been granted by the West India Company to people of influence, apparently on speculation (Lamb 1883: 10).

For some years before the establishment of the stockade, the land north of the primitive wall or brush line was probably either in pasture or in the process of being cleared for farmland. As early as 1638, a large tract of land, stretching across the island and extending as far north as present-day Fulton Street and Maiden Lane, was under lease from the West India Company to Jan Jansen Damen. On April 25, 1644, Governor Kieft granted the tract to Damen (Liber GG of Grants at Albany, as cited in Hall 1918B: 592; Stokes 1927: VI, 86; see Figure 4).

In response to the declaration of war between England and Holland in 1652 and to rumors of an invasion of New Amsterdam by the united colonies of New England, Governor Stuyvesant and his council met with the burgomasters and schepans in a general session in March of 1653. The meeting resolved to prepare for the defense of the city. Among other measures, it was decided "to surround the greater part of the City with a high stockade and a small breastwork ..." (Records of New Amsterdam I: 65-66). By this time, the city of New Amsterdam had expanded to the point where Fort Amsterdam could neither protect nor provide refuge for the city's inhabitants. On March 15, 1653, a joint committee
FIGURE 4. Map showing original land grants in lower Manhattan (Goodwin, Royce, and Putnam 1899). The study area lies within the Jan Jansen Damen Tract.
representing the city and the provincial council advertised its readiness to "receive proposals for a certain piece of work to set off the city with palisades, 12 to 13 feet long, by the rod," and announced that prospective bidders could "hear the conditions and look on the work" on the afternoon of Tuesday the 18th at City Hall (Records of New Amsterdam I: 69). As recorded in the court minutes, the stockade was to have the following specifications:

The palisade must be 12 feet long, 18 inches in circumference, sharpened at the upper end and be set in line. At each rod a post 21 inches in circumference is to be set, to which rails, split for this use shall be nailed one foot below the top. The breastwork against it shall be 4 feet high, 4 feet at the bottom and 3 feet at the top, covered with sods, with a ditch 3 feet wide and 2 feet deep, 2-1/2 feet within the breastwork. The length of the grounds to be lined with palisades is 180 rods, the end of the rods being the last of the money. Payment will be made weekly in good wampum. (Records of New Amsterdam I:72)

When no acceptable bids were received, the committee altered its design of the fortifications by substituting planks for the palisades, which they estimated "would cost only three to four thousand florins" (Records of New Amsterdam I: 73-74).

Historical accounts differ regarding the manner by which the wall's construction was financed. Historian Oswald Garrison Villard states that the funds were raised by the New Amsterdam town government through property taxes (Goodwin, Royce, and Putnam 1899: 81). Valentine's History of the City of New York (1853), states that about forty of the city's "principal" inhabitants offered a loan for the project (Valentine 1853: 57-58).

Although a general date for the wall's construction can be determined, the final form and configuration of the stockade cannot be stated definitively. Construction of the fortification was apparently initiated in late May of 1653. Compulsory work on its erection was required of every citizen of New Amsterdam, according to a law passed May 12, 1653 (Laws & Ordinances of New Netherlands, 144-45, as cited in Stokes 1922: IV, 138-39).

That there are no references in the previously described specifications to what appears to be a moat may result from the fact that the description of the stockade is accurate only as it pertains to the material necessary for the construction of the defenses. This material would have to have been purchased, whereas skilled and unskilled labor for the actual construction was to have been drawn from the
community. Also, no record was made of either the posts' butts being set in a trench or the ditch's being located outside the wall. Such exterior ditches, or primitive moats, often functioned as defenses as well, especially when outfitted with any of several kinds of structures made of sharpened wooden stakes (Muller 1794).

Prior to the enactment of the law of May 12, 1653, it was resolved at a meeting of the council held April 20, 1653 that "the citizens without exception" shall "begin immediately digging a ditch from the East River to the North River, 4 to 5 feet deep and 11 to 12 feet wide at the top sloping in a little towards the bottom"; that the carpenters shall "be urged to prepare jointly the stakes and rails"; that "the soldiers and other servants of the Company with the free negroes, no one excepted, shall complete the work in the Fort by making a parapet" and the farmers "... be summoned to haul pieces of turf"; that the sawyers shall "immediately begin to saw planks of four inches thickness for gun carriages and platforms" (New York Colonial Documents, XIV, 201, as cited in Stokes 1922: IV, 139). The above-referenced compulsory work order evidently details both the rehabilitation of the fort as well as the work associated with the landside fortifications. The proposed large ditch to be excavated across the island indicates that a moat was probably associated with the landside wall.

By early July of 1653, the fortifications had been completed. In a letter to the city authorities dated July 28, 1653, Stuyvesant states that for "already three weeks" the city has "been surrounded with palisades on the land side [at present Wall Street] and along the strand on the East River [present Pearl Street]" (Stokes 1922: IV, 139). He also called upon the burgomasters and schepans to fulfill the rest of their agreement of March 15 to put the fort in a proper state of defense as a safe place of retreat.

The wall is mentioned in the town records from time to time. Citizens were told to shut up hogs that were rooting in the fresh earthworks, and mention is also made of raising the wall to discourage Indians from jumping over it as they pleased (Goodwin, Royce, and Putnam 1899: 83-91). One of the more informative references to the wall is a complaint made by the owner of the land on which the fortifications were built. On October 5, 1654, Jean Vinge (alternately spelled, Van Gee or Vigne), an heir of Jan Jansen Damen, appeared at the court of the burgomasters and schepans and complained "of the damage he sustained by the erection of the city walls." During the construction of the fortifications, "his land lay open" and cattle destroyed his crops. In addition to demanding payment for the lost crops, he requested a survey and payment for the "land taken away," i.e., the land on which the fortifications were built (Records of New Amsterdam I: 250). The following month a
new fence was built for Vinge at public expense (Colonial Historical Manuscripts, Dutch, 143, as cited in Stokes 1922: IV, 153).

The fortifications constructed in 1653 required continual restoration and reinforcement. Repairs were made in 1654, and again in late September of 1655 in response to attacks by Indians. The wall was repaired with "plank 5 or 6 feet high nailed to the sides of the Palisades ..." (Stokes 1922: IV, 159). In reaction to the Indian raids of the previous year, work was proceeding on palisades along the North River by September of 1656 (Stokes 1922: IV, 165).

In October of 1657 and January of the following year, the city authorities passed a number of ordinances which, while mentioning the city's fortifications, amounted to some of the strongest social legislation yet enacted by the city. As of October 1, 1657 the city forbade anyone from building "within cannonshot from the City's wall" (Records of New Amsterdam I: 32, as cited in Stokes 1922: IV, 165). On January 15, 1658 the building of dwelling houses under the city walls or near the city gates was prohibited, until the vacant lots in the city had been properly improved and built upon (Records of New Amsterdam I: 37, as cited in Stokes 1922: IV, 165). The significance of this legislation has been outlined by James Ford in Slums and Housing (1936). In addition to prohibiting the construction of dwelling houses where it was socially disadvantageous, such as near the city walls, the law recognized the "vital importance of the land in its relation to public benefit." The law provided a system for the condemnation and forced purchase of property, and a means to promote the orderly growth of the city, by restricting building practices and the number of speculative, undeveloped lots (Ford 1936: 32).

Between May of 1658 and February of 1664, plans were again advanced by the burgomasters of New Amsterdam and the provincial council to improve the defenses of the city. Proposed by the provincial council was the enclosing of the city within palisades, having two or three gates. The burgomasters resolved to submit proposals for the construction of a stone wall with bastions (Stokes 1922: IV, 188). Evidently, neither of the proposals was acted upon, inasmuch as a witness to the surrender of New Amsterdam in 1664 noted that "the city of New Amsterdam being open all around, and only enclosed on the land side in all haste and speed, on the arrival of the enemy, by old and rotten palisades against which a little breastwork was thrown up about 3- [to] 3-1/2 feet high and scarcely one foot wide, and consequently [was] unfit to withstand the smallest force ..." (New York Colonial Documents II: 475, as cited in Stokes 1922: IV, 243).
Historical accounts differ regarding the wall's financing, construction, actual location, and, perhaps most fundamentally, purpose. Underlying the construction and maintenance of the city's landside fortifications was a political struggle between Governor Stuyvesant and his council, representing the provincial authority, and the city authorities representing the burgomasters and schepans of New Amsterdam. At issue was how funds for public works would be raised, how taxes would be levied, and what the rights of individuals were in what was essentially a company town. The complexities of these issues have been treated only tangentially, and, obviously, are beyond the scope of this project.

Figure 5 is a scaled interpretive drawing of how the landside fortifications of New Amsterdam may have appeared based on the original specifications of 1653. The detail inset shows how the defenses were repaired in 1655 in response to attack by Indians. The drawing also illustrates the hypothesized relationship of the landside fortifications to the future development of the study area block.

c. The Project Area

1) Ownership

Prior to the construction of the city fortifications in 1653 the study area was part of the Jan Jansen Damen's estate. As noted previously, Damen leased the land, possibly as early as 1638, and acquired title to the property April 25, 1644. Jan Jansen Damen died c. 1651, leaving a single heir, Adriana Cuvilje. Within a few years the estate was devised to Jean Vinge, Adriana Cuvilje's son by a previous marriage (Hall 1918: 594). The 1653 fortifications were constructed on land (partially or wholly) owned and under cultivation by Vinge, as is evidenced by the damage claim filed shortly after the fortifications were completed.

In Prominent Families of New York (1897), Weeks states that Jean Vinge was the son of Guleyn Vigne [sic], one of the first settlers of New Amsterdam. According to Lamb's Wall Street in History (1883), Vinge lived in a farmhouse near what is today the present corner of William and Pine streets (Lamb 1883: 14). Jean inherited his father's farm near what later became Wall Street. According to Alfred V. Wittmeyer (1886), Jean Vinge, whose parents were from Valenciennes, France, may have been the first European born on Manhattan Island (1614), during one of his parents' trading voyages to the Hudson River before New Amsterdam was settled (Wittmeyer 1886: x; see also Andrews 1893: 84-85). Besides being a brewer and farmer, Jean Vinge was one of the more prominent burghers of the city and several times held the position of a schepan (Weeks 1897: 339).
FIGURE 5. Interpretive drawing of the hypothesized location of the landside fortifications of New Amsterdam, based on documentary evidence, in the context of the study area.
At this time the exact relationships of the early owners and a complete record of title to the property along the fortifications have not been determined. This type of research would be important to any future study of the fortification. Present efforts concentrated on tracing complete title chains only for those properties that were partitioned out of the Damen estate and on which archeological remains were found (see Appendix A).

2) Landside Fortifications

A variety of maps have been drawn showing the location of the wall alternatively on the north, on the south, and in the center of Wall Street. Based on the history of land ownership for the lots within the project area, a small portion of the landside fortifications as they were configured in the late 1680's extended across the study area in an east/west direction. What relation the 1680's fortifications had to the earlier systems is not known. There is little doubt that the fortifications were some distance north of the northern edge of present-day Wall Street and south of the south edge of Pine Street. The wall's exact location within this corridor remains a mystery. Other than a section of the wall and possibly an associated ditch (or moat), apparently no other defensive structures, such as a bastion or a gate, were built within the project area.

Over the years the exact location of the "wall" has been the concern of numerous historians of New York City. One of the most exhaustive efforts was published by Edward Hagaman Hall in the Twenty Second Annual Report of the American Scenic and Historic Preservation Society (Hall 1918B). In researching the early real estate history of the Wall Street lots on which the First Presbyterian Church of New York was built, Hall also investigated the early ownership of the north side of Wall Street from Broadway to Pearl Street and the construction of the colonial fortifications. The late 1680's development of the parcels in the study area and final fate of the landside fortifications will be discussed in the next section (Section 2), but an examination of Hall's statements concerning the wall is in order here.

Essential to Hall's reconstruction is his contention that the wall was located approximately 2.5 feet north of the 2-foot deep ditch mentioned in the original specifications for the wall, as advertised March 15, 1653. The ditch, according to land surveys of 1685, was located 44 feet north of the present north edge of Wall Street (Hall 1918B: 593-95). This scheme would locate the line of fortifications within the present study area and within the southern one-third of the lots that fronted on Wall Street (e.g., Lots 3, 4, 5, 7, 10, 11, 12, and 13; see Figure 5). On Figure 5, the line of fortifications has been located...
approximately 80 feet north of where Hall states the defenses were positioned. This hypothesis is based on the research that was undertaken for the current project, the details of which will be covered in later sections. (It should be noted that the sketch of the fortifications in Figure 5 is a hypothesized interpretation of documentary data.)

The main weakness of Hall's work concerning the location of the wall is in its complete reliance on the description of the wall as originally promulgated March 15, 1653. Essential to Hall's argument is the location of the small ditch south of the palisades as a point of reference. It should be remembered that according to the pronouncements, the ditch was only 2 feet deep and 3 feet wide at the top. The backfill soil from this feature, which may have served to drain low or wet areas, functioned primarily as a firing platform. The ditch easily could have filled up and become indistinguishable over the 30-year period between the construction of the fortifications and the property surveys of the north side of Wall Street in 1685. Also, what was originally specified may not have been built (as may have been the case in the wall's construction, where planks were substituted for posts in the revised specifications of the palisade). Hall also makes no mention of the larger ditch ordered by the City Council in April of 1653. This feature of the defensive works, which was proposed as 4 to 5 feet deep and 11 feet across (see "moat" in Figure 5), would surely be recognizable as a landmark over a longer period of time, assuming that maintenance of the wall did not involve the filling of the ditch. References to the exact location of the larger ditch or moat, which presumably was outside or north of the wall, have not been examined. Finally, Hall's research makes no references to the fact that the fortifications were in a constant state of repair and alteration—i.e., what was demolished in 1699 may have been very different from what was proposed, constructed, and maintained for more than a half-century.

3) Archeological Inferences

No archeological remains attributable to the landside fortifications of New Amsterdam and colonial New York were found during this project. The current project has determined that the location of the "wall" and the way in which the land was expropriated and subdivided has had a profound, but somewhat less tangible (in terms of physical remains), impact on the subsequent pattern of settlement of the 60 Wall Street study area (see Section 2 for the early development of the area). The basements and cellars of buildings constructed between the late seventeenth and early twentieth centuries have extended to a depth greater than -26- the wooden posts, foundations, and ditches associated with the various fortifications that ranged along the northern
edge of the early city. By the early twentieth century, the entire project area had been covered by at least a single story of superstructure. Prior to the early twentieth century construction of multistoried skyscrapers, which spanned the full width of the city block, the fortifications' effect on the cultural landscape was still discernible in the size, configuration, and orientation of the parcels of land located between Pine and Wall streets.
2. The English Colonial Period (1664-1783)
   a. The Late Seventeenth Century
      1) Introduction

The apparent peaceful surrender of New Amsterdam to the English in 1664, although unaccompanied by a destructive siege or the displacement of large numbers of people, no doubt set in motion fundamental changes in the social and economic fabric of the city. In terms of numbers, the English population equaled the Dutch by the close of the seventeenth century and rapidly surpassed it in the early years of the eighteenth. The Dutch, however, naturally continued to exercise influence in the city, as did other ethnic and religious elements, especially the French Huguenots.

As was the case prior to the surrender, New York City's population, under English rule, contained a wide array of nationalities, a circumstance which became more pronounced during the latter seventeenth and early eighteenth centuries. As Bonomi has observed in *A Factious People: Politics and Society in Colonial New York* (1971),

> Almost from the start, New York City had evolved along lines that were to set it off from the rest of the colony. Encompassing within a small area an ethnic and religious diversity which never failed to elicit surprised comment from visitors, the city rapidly developed the tone and style of a cosmopolitan center. (Bonomi 1971: 25)

In addition to the Dutch and English, many French and Germans lived in the city, as did smaller contingents of Scots, Irishmen, Swedes, Portugese Jews, and black slaves. The immigration of French Huguenots occurred after 1685. Although "the most opulent" Huguenots settled in New York City (and, as discussed later, comprised some of the earliest occupants of the study area), others founded New Rochelle in Westchester County (Bonomi 1971: 24).

Throughout the last third of the seventeenth century, New York, as an English colony, continued to be a walled city. As shown on the Castello Plan of 1664, the wall
defined the northernmost limits of the urban settlement (see Figure 6). Also quite apparent on the plan is the orientation of the city to the East River, with the majority of the houses located on the slope east of Broadway. In 1678 the city consisted of 343 houses, with all but 6 of the structures and a windmill located south of the landside defenses (Stokes 1922: IV, 314). As early as 1674, fifteen dwellings stood on the south side of Wall Street (The Bank of America 1926: 17; see Figures 7 and 8).

2) The Landside Fortifications

The landside fortifications that ranged from the East River to Broadway continued to be maintained under the English, even though the English conquest of the city had underscored their uselessness. In response to rumors of a French invasion, the fortifications along the north side of Wall Street were given renewed importance. Two bastions were built along the line of defense after 1674 (Lamb 1883: 22). According to the November 15, 1688 report of a commission investigation undertaken on the order of Governor Andros, the fortifications were again in disrepair. The following excerpt from the report evidently refers to the landside fortifications within and adjacent to the study area of the present project:

The half moon by ye water gate and ye [artillery] mount [are] all fallen down and washed away. There is two seekers and no carriages, ye water gate [at present Pearl and Wall Streets] all down. The Curtain [wall or palisade] from ye water gate [near present Pearl and Wall streets] to the Artillery mount [near the present corner of Wall and William streets] was formerly double stockadoed and a ditch with breastworks within of salt sod and now all down. The ground is laid out in lots, some built, some a building, and layed out to build upon. (New York Colonial Documents III: 590, as cited in Stokes 1922: IV, 347-48)

What, if any, impact the report had on the restoration of the fortifications is unknown.

In 1692 a number of stone bastions were built along the defense line, one of which was near the northeast corner of Broadway and Wall streets (Hill 1908: 27; Hall 1918B: 597; see Figure 9). A 1698 description of New York notes that "... to the Land it is encompassed with a Wall of good thickness ..." (Stokes 1922: IV, 404). The stone from the fortifications (evidently from the stone bastions) was salvaged in 1699 for reuse in the construction of a new city hall on Wall Street (Hill 1908: 37). A petition to then
FIGURE 6. Map entitled Redraft of the Castello Plan of New Amsterdam, 1660 (Stokes 1939: 6), showing a bird's-eye view of the City of New Amsterdam in that year. The island is fortified by Fort Amsterdam at its southern tip and by the wall across its northern boundary. According to Stokes (1939: 7), the Castello Plan is the only contemporary plan of Dutch New Amsterdam that remains. An arrow indicates the relative position of the project area (within dashed lines), at the eastern end of the wall.
FIGURE 7. Copy of the Schenk view of New York, c. 1673 (Sixty Wall Tower n.d.: 14). The box marked "inset" is enlarged as Figure 8, and shows the palisaded "wall" extending from the top of the riverbank over the horizon.
FIGURE 8. Section of Schenk view shown in "inset," Figure 7. Note palisade.
FIGURE 9. Map of the city in 1695, as redrawn for Janvier's 1894 In Old New York. The study area block is identified by an arrow.
Lieutenant-Governor Nanfan regarding the appropriation of stone from the fortifications states

"That the former line of fortifications that did Range Along the Wall Street from the East to the North River together with the Bastions that were theron Erected are fallen to decay and the Incroachment of Buildings will render ye Same Useless for ye time to Come." (Stokes 1922: IV, 82).

3) The Development of the Block Prior to the Removal of the Landside Fortifications

Less than 35 years after the construction of the original fortifications, the speculative value of the land and the pace of development in the Wall Street area had increased tremendously. Even before the removal of the fortifications, the lands on which they stood were being surveyed for future development, and Wall and Pine streets were being laid out. As part of the Damen estate, the property had been devised to the heirs of Adriana Cuvilje--John Vinge and his sisters. Along the fortifications, 80-foot-deep lots were laid out (Hall 1918B: 594).

On December 14, 1685, Captain John Knight, acting as agent for Colonel Thomas Dongan, then Governor of New York, purchased several lots from the Damen heirs, including all the land along the north side of Wall Street (see Hall 1918B: 600-602; New York County Deeds, Liber 13: 124-54). The deed, which refers most directly to the study area, reads as follows:

... the said John Vangee Son and heir of Adriana Cuvillie Sole Heiress of John Johnson Damen as aforesaid and Niesie his wife ... for ten shillings given by John Knight ... [convey] a certain lot or parcel of land of the before recited premises [the Damen estate] situate on the North East Side of the City of New York on the Eastside of the Town gate joyning to the said City Fortifications Contayning in depth from the ditch 80 feet and in front by the ditch and rear 173 feet 11 inches bounded to the Westward with the land of [Gullme] Van Plank to the Northward ... land of John Vangee to the Eastward with the land of George Heathcott and Jan Jansen's lott and to the southward with the Street Commonly called the Wall Street.... (New York County Deeds, Liber 13: 134)

Dongan promptly resurveyed the north side of Wall Street on December 15, 1685). By narrowing the street to 36 feet, he
made available an additional 44 feet of land, which could be appended to the original 80-foot lots along its north side. Thus, after a series of transactions (through which the lands were acquired exclusively by Dongan), these lots came to have depths of approximately 124 feet (for details, see Lamb 1883: 23; Hall 1918B: 602-13; and Stokes 1922: IV, 335). Pine Street (then known as Tienhoven and later as King Street) was surveyed December 17 and laid out the following year (Stokes 1922: IV, 336), thereby establishing the north side of the study area block. (See Figure 5 for the scaled hypothetical interpretation of the study area and the fortifications at the time the lots were surveyed.)

Over the next few years, Dongan subdivided his possessions. A large area on the north side of Wall Street between Broadway and William Street was conveyed to Abraham DePeyster and Nicholas Bayard on May 25, 1689 (Hall 1918B: 614). Apparently the area east of William Street was conveyed in smaller lots to a number of individuals. Lot 11, 54 Wall Street (see Figure 10), was conveyed by Dongan to his predecessor as Governor, Anthony Brockholst, on May 20, 1689 (New York County Deeds, Liber 18: 103). According to the conveyance, the lot measured 50 feet wide and 115 feet deep. For the Wall Street lot adjacent to the east (No. 56), on which archeological remains were found, another pertinent Dongan conveyance (from 1688) is cited in Section 4. The area on the south side of Pine Street (backing the Wall Street lots) was also being surveyed and divided into smaller parcels by the executors of the estate of John Vinge (see property ownership for 59 Pine Street in Section 4, which follows).

4) The Project Area
   a. Property Ownership*

   (1) Lot 10: 56 and 58 Wall Street; 59 Pine Street

   56 Wall Street. In May of 1688, the 56 Wall Street parcel of land was surveyed out of Col. Thomas Dongan's holdings and granted to George Brown, a "Malster," or a dealer in malt and possibly a brewer (New York County Deeds, Liber 25: 181). Although the actual records of conveyance have not been examined, it appears that Brown quickly sold the lot to William Cox, a merchant in New York City. Upon the death of Cox, the property was devised to his wife Sarah, according to his will dated July 15, 1689 and proved in August of the same year (New York County Deeds, Liber 25: 35).

*For lots in which archeological resources were found.
FIGURE 10. Map of study area block showing lot and street numbers in 1916 (Gill 1916). Diagonal lines indicate the location of the present project area; lot numbers are those which were used in the course of the survey work.
A short time thereafter, Sarah married Captain William Kidd, her second of four husbands.

Between 1688 and January of 1694, the first "dwelling house" was constructed at 56 Wall Street, no doubt one of the structures which, according to the petition previously cited, was "encroaching" on the landside fortifications. On January 27, 1694, Captain William Kidd and his wife Sarah conveyed the lot for £130 to John Wattson (also spelled Watson), a butcher in the City of New York. Besides mentioning the structure, the deed states that the property measured 25 feet wide and 112 feet deep (New York County Deeds, Liber 21: 75).

The lot, according to tax and probate records, was part of Watson's estate until 1702/1703. A "John Watson" was living in the house as late as 1704. During this period the house was also rented, or boarded, to a number of persons on a yearly basis (see Appendix A, 56 Wall Street). The property was eventually sold March 20, 1703 by Thomas Sutton, a "Yeoman of Staten Island," and by Thomas Sturges, a "Mariner," to David Provoost, Junior, a "Merchant," for £140 (New York County Deeds, Liber 25: 181). Sutton was the stepson of John Wattson, whereas Sturges was the widower of Elizabeth Farbush, Thomas Sutton's sister.

58 Wall Street. According to tax records, the lot at 58 Wall Street, which contained a dwelling as early as 1695, was owned by John Mambru (also spelled Monbrew, Membrut, Mambruy, Maunbruits, and Mambraits) (The New-York Historical Society 1911: 3). At this time it is not known when or from whom John Mambru acquired the parcel, but it is entirely possible the lot was purchased from Thomas Dongan. John Mambru, a French Huguenot, owned the lot throughout the remainder of this period. Based on later deeds, it appears that the original lot, like 56 Wall Street to the west, also measured 25 feet wide and 115 feet deep.

59 Pine Street. During the late seventeenth century, the property at 59 Pine Street was part of the Jean Vinge estate, which bordered the city fortifications. On August 7, 1691, "the Executors of John Van Gee [sic]" conveyed the lot to Samuel Burt (New York County Deeds, Liber 18: 186). Burt owned the property throughout the remainder of this period, but he may not have lived in the house (which stood there from at least 1696) inasmuch as he owned another lot in the North Ward (New York City Municipal Archives, early tax records; see Appendix A). Burt was the tax assessor for the East Ward from 1695 through 1699.
In the late seventeenth century, the property at 69 Pine Street was part of the Jean Vinge estate, and, like 59 Pine Street, it was located to the west, bordering and extending northward from the city fortifications. At this time it is not known when the property was partitioned out of the Vinge holdings.

b) Architectural Development

The appearance of the structures built in the project area in this period is not known, nor is their exact situation on the lots discernible. It can be assumed that they were not replicas of the older Dutch structures built downtown in either style or fabric, but that they represented a more English or perhaps a more cosmopolitan style, given the ethnic heterogeneity of the population.

c) Water and Waste Management

Due to the lack of any physical evidence, it is not known what type of features (or their location) were sited within particular lots for the on-site acquisition of water or the disposal of waste. Any shallow support structures appear to have been destroyed by subsequent development of the lot. According to documentary sources, a public water well was located at the corner of Wall and William streets as early as 1686 (see Appendix B).

b. The Early to Mid-Eighteenth Century

1) Introduction

The eighteenth-century portion of the Colonial period was marked by the continued northward expansion of the town. By 1700, at least three new roads had been laid out north of the former wall (Lyman 1964: 54). The 1729 Lyne survey of the City of New York, published by William Bradford (and consequently also known as the Bradford map), graphically shows that the majority of the early eighteenth-century development continued on the east side of the island along the East River (see Figure 11). At this time, the 60 Wall Street block (as shown in detail in Figure 12) was fairly developed (the solid areas represent houses), but still contained a number of empty, unimproved lots.

Specific developments in the Wall Street area in this era helped to make it one of the most important districts in the city. At the western end of the street, Trinity Church had been built in the closing years of the seventeenth
FIGURE 12. Enlarged portion of 1729 Lyne Survey Map, on which the project block has been labeled.
FIGURE 11. Map called the Bradford Map, or the 1729 Lyne Survey Map of New York City at that time.
FIGURE 12. Enlarged portion of 1729 Lyne Survey Map, on which the project block has been labeled.
century. On Pine Street just east of Nassau Street, the Eglise du Saint Esprit was built in 1704, symbolizing the development and importance of New York's Huguenot community.

Moving eastward, New York's City Hall was completed in 1700 at the head of Broad Street, north of Wall Street. It was built on land evidently belonging to Abraham DePeyster, which had been formerly devoted to the fortifications (Lamb 1883: 24; Stokes 1915: I, 238-39). According to Lamb's Wall Street in History, the construction of City Hall "was the great event which established Wall Street as the central point of interest for leading business and professional men" (1883: 25).

The period also saw an increase in the volume of trade passing through the Port of New York. Harbor activity favored the East River, chiefly because of its more protected anchorage, which was less plagued by ice, and by its comparatively gentle, sloping shoreline. As commerce developed, wharves were built out into the river, and commercial structures began to appear among the residences located at the east end of Wall Street [for an example, see the record of ownership during this period for 56 Wall Street in Section (1) below].

By 1720, the Meal Market had become the public market-place for the exclusive sale of corn, grain, and meal within the city. Before this time, the market had been a butcher shop, but it was moved onto Wall Street when it became the center for the grain trade. The export of flour to the Caribbean and the provisioning of ships with biscuit became ever-growing sources of the port's business. This market also had the dubious distinction of being the place where slaves were hired out by their owners on a daily basis. The Meal Market began to decline at mid-century and was removed by government order in 1762 (Goodwin, Royce, and Putnam 1899: 96-98). It provides an example of the many commercial enterprises that flourished at the eastern (harbor) end of Wall Street. Deed records mention a cattle pen (New York County Deeds, Liber 25: 96), a likely accompaniment to the butcher shop located at the early market. Shipping and shipping-related enterprises abounded here, inasmuch as New York's economy was based in large part on the commercial exchange between the West Indies, Europe, and the American colonies.

By the middle of the eighteenth century, Wall Street had became the most desired place of residence in the city. As Lamb has stated in Wall Street in History,
Long before the Revolutionary War [Wall Street] had been notably the fashionable quarter of the city. The three-story double brick dwelling of the Marstons - afterward occupied by the Holland minister, Van Brackle - the McEvers mansion on the north eastern corner of Wall and William streets, the residence of Gen. John Lamb, Collector of the Port, adjoining, the handsome home of the Van Hornes, and the imposing dwellings of the Buchanans, Whites, Dennings, Smiths, Startins, Culyers, and other prominent families.... (Lamb 1883: 31)

Accompanying the development of commerce in this period was the initial establishment of the insurance industry in the city. The office of a marine insurance company, secured by subscriptions of underwriters, was located at the Tontine Coffee House, a block to the east of 60 Wall Street (King 1893: 639). The following advertisement appeared in The New York Mercury, October 29, 1759:

The Old Insurance-office Is kept at the Coffee-House, as usual; where all Risques whatsoever, are under wrote, at very moderate Premium, and due Attendance given from Twelve to One, and from six to eight, by Keteltas & Sharp, Clerks of the Office. (Gottesman 1938: 305)

2) The Project Area

a) Property Ownership*

(1) Lot 10: 56 and 58 Wall Street; 59 Pine Street

56 Wall Street. David Provoost, Jr. acquired the 56 Wall Street property in 1703 and owned it until 1711. He appears to have rented out the house. Provoost also owned the adjacent lot to the west (54 Wall Street). In 1711 he sold the eastern lot to Abraham Van Horne, also a merchant of New York City, for £300. According to the conveyance, the property contained a "Bolting House or Warehouse" (New York County Deeds, Liber 26: 490). Abraham Van Horne was the husband of Mary Provoost, sister of David (Record of Wills, Liber 9: 139). The tax records indicate that a Hendricke Meyers was paying taxes at this address and at the adjacent address to the east (58 Wall Street) from 1726/27 to 1732/33. The 56 Wall Street property was legally owned, however, by Abraham Van Horne, who willed it to his son:

*For lots in which archeological resources were found.
I leave to my son Samuel my dwelling house and ground, now in tenure of Abraham Lynsen, also my bolting [at 56 Wall] and baking house and ground, both situate on the north side of Wall Street. (Record of Wills, Liber 14: 108)

The baking house and dwelling were located at 68 Wall Street, Lot 5 on Figure 10. The "bolting house" is not mentioned in the tax records after 1724/25. Samuel Van Horne (and later his estate) appears to have owned the lot until the 1780's.

58 Wall Street. Sometime between 1709 and 1721, this property passed from Jean Mambru to his sons, Jean, Jr. and Elias. As was noted for 56 Wall Street, tax records list a Hendricke Meyers paying property taxes at this address from 1726/27 to 1732/33. No records have been found which indicate why Meyers was levied for these lots. His relationship to the Van Hornes and the Mambruts has not been determined. A Henry de Meyer, possibly the same person, was named godfather to the son of Elias Mambrut in 1735 (Wittmeyer 1968: 202). According to the will of Dr. John Dupuy (cited in the following discussion of 59 Pine Street), in 1741 Elias Mambrute was living in a house located on the corner of King [Pine] and William streets and owned by Dupuy. Ownership and occupancy from the mid-1730's to the 1760's cannot be traced.

59 Pine Street. At the start of this period, the 59 Pine Street lot, which contained a building, was owned by Samuel Burt. On November 10, 1712, the surviving executor of Burt, James E. Mott, conveyed the lot and what is described as a "brick mansion house" to John Tatham, gentleman, for £350 (New York County Deeds, Liber 26: 568). According to the conveyance, in 1712 the house was occupied by or was in the possession of Mrs. Mary Wendham, widow. In some way the house was next acquired by John and Hester David, who conveyed the lot to John Dupuy February 4, 1714 (New York County Deeds, Liber 37: 325).

Dr. John Dupuy was a well-known and evidently wealthy New York physician. The first visiting physician associated with the French church (John Pintard, cited in Wittmeyer 1968: lxxxvii), he acquired a number of houses and lots in the Pine Street area and may have had a shop in his dwelling at 59 Pine Street. His 1745 obituary read as follows:

Last night died, in the Prime of Life, to the almost universal Regret and Sorrow of this City, Mr. John Dupuy, M.D. and Man Midwife;... (The Weekly New-York Post-Boy 1745).
John Dupuy's will, dated May 27, 1741, is interesting in that it shows the range of his real and personal holdings:

I leave to my wife Ann, my negro wench and negro man, and my clock and furniture for one room; Also all that my dwelling house where I now live, during her life, and then to my sons, John, Daniel and Francis, and my daughters, Hester, and Jane wife of Peter David, goldsmith. I leave to my daughter Hester, my dwelling house and lot next to the corner of King Street, in William street, now or late in the tenure of Sheffield Howard; Also a negro girl and furniture for a room. I leave to my son John my Great Garden in William street, and all the drugs and medicine belonging to my shop. I leave to my son Daniel £60, and to my son Francis a negro boy and £100. To my neice Susannah Chardavoyne £5. My executors are to sell my house and farm in Orange County, and also the lot on the corner of King Street and William street, now in the tenure of Elias Mamberute; Also the house and lot I have opposite to my Great Garden left to my son John; Also my little garden near the French Church, I leave all the rest of my estate to my wife and children. (Liber 15 of Wills, p. 265, as abstracted in The New-York Historical Society 1895: 15)

In a codicil to the will, dated September 7, 1743, Dr. Dupuy left his shop, excepting "2 great mortars" to his son Francis (The New-York Historical Society 1895: 16)

As cited, after the doctor's death, his widow, and subsequently their children Daniel and Hester Dupuy, owned the house and lot of ground at 59 Pine Street. At least by August of 1754, the dwelling house was rented by Myer Myers, a goldsmith, who ran the following newspaper advertisement:

Myer Myers is removed from his shop at the Meal Market to the house in King-street, belonging to the widow of Doctor Dupuy, ... where he continues to follow the Goldsmith's business in all its branches. (The New York Mercury, Aug. 12, 1754, as cited in Gottesman 1938: 53)

The property remained in the Dupuy family until 1764, when it was conveyed to Myer Myers, the former tenant.

(2) Lot 24: 69 Pine Street

The mid-eighteenth-century history of Lot 24 is unknown. Based on the Bradford map, the lot at 69 Pine Street was undeveloped as late as 1729 (see Figure 12). In addition, the lack of records for the early eighteenth
b) Architectural Development

It is likely that the structures which had been built in the project area (at 59 Pine and 56, 58 Wall Street) in the late seventeenth century stood throughout this period. Although some information about the value and function of the buildings can be obtained from documentary sources through the 1730's, no concrete evidence exists about the architectural style of specific structures. Again, it is probable that the structures in the project area reflected a certain cultural heterogeneity.

Some mixing of residential and commercial functions occurred early in the century. As noted previously, the building at 59 Pine Street, which was described as a "brick mansion house" in the early eighteenth century and which may have contained the shop of Dr. Dupuy, was later owned by and was the workplace of a goldsmith. Tax records reveal that commercial structures also stood on other parcels on the block, including a bolting- or warehouse and a bakehouse. It is not known whether the bolting house at 56 Wall Street was a second structure on the lot, a replacement for an earlier house, or the result of converting the residential structure to commercial use.

On Lot 24, 69 Pine Street does not appear to have been developed until between 1730 and 1750. This date range is based on both map and archeological evidence.

c) Water and Waste Management

Public wells continued to be built throughout this period. This source of drinking water was augmented by exploitation of the Tea Water Well or Pump, at a natural spring located near the Collect Pond. In addition, private cisterns and wells appear to have been constructed, perhaps reflecting the unsatisfactory quality of city water. For a fuller discussion of the municipal regulations and attempts to provide an adequate water supply, see Appendix B. Municipal efforts at waste management were also limited, and private, on-site waste disposal predominated throughout the period.

-45-
Archeological remains of cisterns, wells, and privies provide direct evidence about private responses to problems of water and waste management. The archeological data also provide indirect evidence for building function, date of construction, and the siting of structures on lots.

The results of archeological tests in Lot 24 appear to confirm what is graphically represented on the Bradford (Lyne) map: that the property had not been improved possibly as late as the fourth decade of the eighteenth century. The lower portion of a circular, brick well (Feature 17) was found beneath the concrete cellar floor of the most recent structure on the lot. Based on the dates of manufacture for the artifactual material in the backfilled soil of its builder's trench, the well appears to have been constructed after 1730 and before approximately 1750. The cultural material is a collection of domestic refuse and construction debris, with some of the earliest European material possibly dating to the late seventeenth century. As noted earlier in this section a few prehistoric objects, including the mid-section of a bifacially flaked chert tool, were also recovered.

Presumably, the sinking of the well accompanied the building of a structure of comparable age. The location of the well, near the center of the lot (discussed in Section V), may indicate that the structure was not set back from Pine Street. Combined with the information from the Bradford map it is reasonable to assume that construction of the well, and the earliest building on the lot, occurred between 1731 and 1750. However, it cannot be assumed that the material recovered from the builder's trench is associated with the occupant of the lot, especially if these actions represent the first development of the lot. Some of the artifactual material that was backfilled into the builder's trench may have come from adjacent lots that were occupied by this time. A full description of the excavations in Lot 24 (and the rest of the site) and of the material recovered is given in Section V.

In Lot 10, another well (Feature 18), was found and completely excavated. This well was located on a property line between 56 and 58 Wall Street, in the middle part of the lots. Although it is possible that it was a shared well that accompanied the initial late seventeenth-century development of these lots, it may have been built later, at a time when both parcels were owned by the same individual. As noted previously, Hendricke Meyers was taxed for both
lots from 1726 through at least 1733 (see also Appendix A). Although the artifactual material in the builder's trench does not provide a firm date for its construction, the well is comparable in material and method of construction, and perhaps in age, to the 1730's-1750 well on Lot 24. In this case, the archeological evidence supports the documentary indication that the two lots were combined in this period. In addition, if the well was built at the later time, it may indicate a change in function of the structures on the lot from commercial (the bolting house) to residential. As noted previously, the bolting- or storehouse was no longer mentioned in tax records after 1726/27.

Archeological evidence for the on-site disposal of sewage was also found in Lot 10. At 58 Wall Street and 59 Pine Street, the lower courses of two stone-lined privies (Features 8 and 9, respectively) were uncovered beneath the modern demolition fill. On the Wall Street lot the feature was located in the northeast corner of the lot, whereas the Pine Street feature was situated in the southeast corner. Both support structures were situated in the back, left corner of the respective lots along their rear property lines. No artifacts were recovered from the builder's trench to provide a date of construction for either feature, but they were in use throughout this period. The existence of these features may lend additional support to the assignment of a residential character to these lots during this period.

c. The Revolutionary War Era (1763-83)

1) Introduction

The steady growth and prosperity of New York City during the second and third quarters of the eighteenth century are evident on Bernard Ratzer's Plan of the City of New York (Figure 13), which depicts lower Manhattan c. 1766-67 (although the document was published in London in 1776). The map indicates the degree of the city's development by this time, both north of Wall Street and east along the waterfront.

During this period, Wall Street continued to be a prestigious residential and business address. Small businesses oriented toward providing services to well-to-do residents were also common along the street, as is evidenced by the following two newspaper advertisements:
FIGURE 13. Bernard Ratzer's Plan of the City of New York, depicting Lower Manhattan c. 1766-67 (the document was published in London in 1776). The project area block is indicated by an arrow.
Washing of all kinds for Gentleman and Ladies, Done in the best Manner, and on the most reasonable Terms, by Mary Campbell, (In King-Street, next Door to Mr. M'Readi; Shoemaker). Particularly silk Stockins, chintze &c. [The New York Journal of the General Advertiser, June 17, 1773 (Supplement), as cited in Gottesman 1938: 285]

(According to documentary sources, a "Mr. McCready" was the owner and resident of the 61 Pine Street property, within the 60 Wall study area.)

James Byers - Broken China and Glass Riveted in the very neatest and best Manner, and warranted to hold, ... living in Wall-street opposite to Mr. Abraham Lynsen's. (The New York Gazette and the Weekly Mercury, Jan. 14, 1771, as cited in Gottesman 1938: 86)

Ceramics recovered from a late eighteenth-century deposit at 56 Wall Street (discussed in Section V under Feature 7, and also in Section VII) included a Chinese Export porcelain plate fragment with repair holes, possibly the handiwork of Mr. Byers, whose shop was located across from No. 56, on the south side of Wall Street.

Even in the years prior to the British Army's occupation, the city's normal cycle of social and economic activity was disrupted by the breakdown of colonial authority and administration and the mobilization of the Revolutionary forces. The British occupation in the summer of 1776 reduced the population of the city by half as thousands of American patriots fled their homes (Duffy 1968: 73). Adding to the chaotic times were two destructive fires (in 1776 and 1778) that destroyed numerous structures. The property abandoned by patriots was confiscated by the British Army. As New York became the Tory's capitol during the lengthy conflict, thousands of refugees from areas under rebel control entered the city.

With the occupation of New York by the British, many Wall Street residences were vacated by their owners. During the war, the McEvers mansion, located on the northeast corner of Wall and William streets (see Figure 14), was taken over by General Knyphausen, the commander in charge of New York (Lamb 1883: 45).
FIGURE 14. Copy of print from the New-York Historical Society's collections entitled, "North side of Wall Street, east of William Street." The view is attributed to 1797. The McEvers Mansion, on the northeast corner of Wall and William streets, later (1792) became the Bank of New York.
2) The Project Area

Records are sparse for a period lasting from the mid-1730's through the late 1780's. As a result, it is difficult to reconstruct ownership and occupancy of the Wall and Pine street lots during the Revolutionary era. The information available has been analyzed. Many changes in ownership occurred in the late 1780's, which may reflect the confiscation and resale of Loyalist property after the war. Thereafter, the chain of ownership and occupancy can be traced more fully (see Section 3, the Federal Period).

a) Property Ownership*

(1) Lot 10: 56 and 58 Wall Street; 59 Pine Street

Documentary evidence indicates that throughout this period the parcel may still have been owned by Samuel Van Horne and his estate. Van Horne's executors sold the property to John Jones, a ship chandler, for £1,975 in June of 1786 (New York County Deeds, Liber 47: 470). The chain of ownership is far from clear, however, for another conveyance notes that the property was owned by the London-based heirs and attorneys of an important and wealthy pre-Revolutionary merchant, William Kelly, who sold it June 28, 1785 to William Denning for £2,255 (New York County Deeds, Liber 44:186). Subsequent records indicate that Denning (who also owned 54 Wall Street) did own the property through 1816. Thus the Van Horne conveyance is problematical, possibly reflecting conflicts over property ownership during the Revolutionary War.

According to a deed for an adjoining lot (54 Wall Street), the house was occupied by Charles Cromelin in 1773 (New York County Deeds, Liber 40: 132). The Cromelins seem to have been related through marriage to the Kellys (see will of John Kelly, Record of Wills, Liber 25: 497).

One further complication is raised by the following advertisement:

*For lots in which archeological resources were found.
To be sold at public Vendue, on Tuesday the 7th July next, .... All the elegant and valuable household furniture of Richard Vassal, Esq; (who has lately embarked with his family for Jamaica), at his late dwelling house in Wall-street, belonging to and formerly occupied by Mr. William Kelly, .... (The New York Gazette and the Weekly Mercury, June 29, 1772, as cited in Gottesman 1938: 125)

If the house referred to is 56 Wall Street, Richard Vassal was the occupant prior to Cromelin. Vassal was married to the daughter of Thomas Clark, who owned the adjacent property to the north (61 Pine Street) (Record of Wills, Liber 31: 191).

58 Wall Street. No deeds or other records dating between 1733 and 1787 have been found for this property. Efforts to trace ownership during this period from references found in later deeds and deeds to adjoining properties have been unsuccessful.

59 Pine Street. On July 5, 1764, this property was conveyed by Daniel and Eleanor Dupuy and Hester Marchal (the widow of John David) to Myer Myers, goldsmith and former tenant. Daniel and Hester were the children of Dr. John Dupuy (New York County Deeds, Liber 37: 325).

Only one record pertaining to this property has been found for the Revolutionary War period—the following advertisement, which appeared in the August 26, 1776, issue of Rivington’s New-York Gazetteer:

To be Sold, a House and lot of ground in King Street, thirty four feet front and rear, and seventy eight feet deep, containing every convenience necessary to a family, for condition of sale apply to Myer Myers.
(Gottesman 1938: 54-55)

It is not known when the property was actually sold. It was owned by John Byvanck in 1789.

(2) Lot 24: 69 Pine Street

According to the boundary description for a deed to the parcel adjoining 69 Pine Street to the south (Lot 5), the property was "now or late of John Troup" in late 1785 (New York County Deeds, Liber 43: 116). An 1809 conveyance of Lot 5 also states that Lot 24 was "late of John Troup now of Hugh Walsh" (New York County Deeds, Liber 181: 420). The lot was sold to John Jones by Hugh Walsh in 1789. Efforts to obtain information about Walsh or Troup have been un-
successful. Unfortunately, to a certain extent, the lack of documentary information affects the interpretive value of a majority of the archeological material recovered from the lot, especially the material recovered from the builder's trench of Feature 17.

b) Architectural Development

It can only be assumed that the structures which stood within the project area during this period were the original buildings, as we have no evidence of construction or of war-related destruction of properties. During the occupation of the city by the British, fires did sweep through lower Manhattan, destroying numerous buildings, including Trinity Church (Lamb 1883: 44), but they did not affect the study area. No archeological evidence of construction or rebuilding during this period has been found in any of the lots.

c) Water and Waste Management

Just prior to the Revolutionary War, efforts were underway to provide the city with a drinkable and reliable water supply, but these efforts evidently fell short of bringing public water to either Wall or Pine Street (see Appendix B). The primary source of potable water continued to be freshwater springs. "Tea-water pump" water, which was exploited commercially, could still be purchased, and brackish water was available from public wells. Private wells and cisterns were no doubt an important alternative source of water. It appears from archeological evidence that wells uncovered during this project, previously described, were still in use during this period.

Although public measures were taken to provide for the channeling of surface and roof runoff through the city streets, efforts which helped to keep streets minimally clean (Stokes 1926: V, 1209), sewers for the disposal of human waste were not available. Backyard privies were in use in the project area during this time.
3. The Federal Period (c. 1783-1812)

a. Introduction

After the evacuation of the city by the British in 1783, New York, and the Wall Street area in particular, played a significant role in the history of the new nation. Although the war left the city devastated and the financial difficulties that plagued the nation were many, the immediate post-war period was a time of relative prosperity and rapid population growth.

With the end of hostilities, the population of New York City dropped to approximately 12,000 as the British Army and thousands of Loyalists departed for England and other British colonies. By 1786 the population had jumped to 23,614. In four years the population had increased to over 33,000, making New York the largest city in the country (Duffy 1968: 77).

New York City became the first capitol of the new nation, and all there was of a national government met at City Hall and other public buildings in the area. When George Washington took his oath of office in Wall Street's Federal Hall (the reconstructed City Hall, just west of the study area) April 30, 1789, much of the downtown area was still covered by ruins, the result of years of attrition and two major fires.

Cultural adjustments made at the end of the war are reflected in the land transfer documents. Transfers from wealthy residents in England to new owners in America indicate the disposition of property that could no longer be used by the heirs of the Loyalists who had been evicted from New York. Confiscated Loyalist property was sold to raise revenue, and American soldiers were paid in land grants west of the Appalachians (Trager 1979: 334).

As the seat of the new government, "life in Wall Street at once assumed a phase of elegance a notch or two higher than ever before" (Lamb 1883: 58). What had already been one of the most fashionable New York City residential areas now attracted only the most prosperous merchants and professionals as well as influential people in national and local government seeking homes there. Residence in the street and vicinity was essential to the congressional and overseas dignitaries. As commerce quickened after the Revolution, property and rent values soared in the Wall Street area. The small individual house lots that were
worth the equivalent of about $600 in 1706 had by 1793 increased in value to the $12,000 range (Goodwin, Royce, and Putnam 1899: 99-100).

The 67 Pine Street address is a good example of the important local and national figures resident in the study area following the war. Based on municipal tax records for 1789, the structure was the home of Comfort Sands, a merchant and Revolutionary War patriot. He had been a member of the Committee of One Hundred, which administered the affairs of the Province when royal authority had broken down, and he also sat in the various Provincial Congresses. After the peace of Versailles, he was President of the Chamber of Commerce in New York City (Weeks 1897: 489). In 1795, the house was being leased by Alexander Hamilton.

The first city directory, published in 1786, illustrates the variety of occupations represented along Wall Street serving what was essentially a residential neighborhood. Included, among others, were an apothecary, a grocer, six merchants, a clockmaker, one printer and bookseller, a schoolteacher, one owner of an intelligence office, and an upholsterer (Wilson 1877).

With the transfer of the nation's capitol to the city of Philadelphia in 1790, and ultimately to Washington, the political and social importance of the Wall Street area began to decline. New York City continued as a state capitol until 1798, when the honor was transferred to Albany. However, from that time to the present, Wall Street has maintained its importance as the home of the nation's financial and commercial institutions. Wall Street became known as the Merchant's Promenade, and auction houses, the forerunners of stock brokerage firms, were found on both sides of the street (Collins 1946: 174). Insurance companies, also based on Wall Street, had begun to multiply as well. By the late 1780's, the insurance industry had expanded beyond providing marine insurance on cargoes to include fire insurance on houses and goods as well as life insurance.

The first New York fire insurance company was organized in 1787, and later was renewed and incorporated under the name of "The Mutual Assurance Company," with John Pintard as its secretary. Pintard's residence was evidently located at 59 Pine Street between the years 1787 and 1791. In 1809 the company was reorganized with a capital stock; in the same year, it purchased the lot at 52 Wall Street (present-day 64 Wall Street--Lot 5, also within the study area; New York County Deeds, Liber 181: 420). Tax assessment records for 1809 list 52 Wall Street as the office of the National Insurance Company and the home of John Pintard (see Appendix A). Like many of the city's insurance firms, the National Insurance Company was rendered insolvent by the fire of
1835, but managed to regain its title to the Wall Street property. In 1846, the company's name was changed to the Knickerbocker Fire-Insurance Company. The company was dissolved in 1890 and the lot at 52 Wall Street was sold in 1892 (King 1893: 639; New York County Deeds, Liber 354: 592).

In the 1790's, the still predominantly residential character of Wall Street began to change with an increase in the number and variety of financial institutions. The traditional beginning of the New York Stock Exchange dates to May 16, 1792, when 24 brokers signed an agreement regarding rates of commission. Although the initial meeting place of the organization was supposedly under a buttonwood tree near 60 Wall Street, subsequent meetings were held at the Tontine Coffee-House, at Wall and Water streets. The Stock Exchange was formally organized in 1817, and met until 1853 at the Merchant's Exchange building located on the south side of Wall Street between Hanover and William streets (King 1892: 738; Collins 1946: 156).

Another important development was the establishment of the Bank of New York. The bank was located in the McEvers mansion at 48 Wall Street on the northeast corner of Wall and William streets (Lamb 1883: 59; see Figure 14). This institution, which was chartered in 1791 for 20 years with a capital stock of $900,000, held a banking monopoly in the nation until 1799.

In the early decades of the nineteenth century, landfilling operations on the East River harborside were accelerated. This extension of dry land to the east of the former shoreline at Pearl Street resulted in the creation of a total of three new blocks of filled land (Lyman 1964: 55). At the same time, port facilities began to develop along the Hudson River as well, to accommodate the ever-increasing harbor traffic. The developing Wall Street financial district thus became a corridor between two commercial riverfront areas.

b. The Project Area

Throughout this period, the Wall and Pine street lots retained a residential character, as dwellings and boardinghouses continued to be interspersed with financial and commercial establishments. The south side of the project area, facing Wall Street between William and Pearl streets, maintained its fashionable residential character somewhat longer than the northern portion, facing Pine Street. The structures on the Pine Street side of the block functioned as mixed residential and commercial establishments and included a number of printing-shops and lawyers' offices. According to tax records for the year 1795, Alexander Hamilton appears to have had an office at 63
(present-day 67) Pine Street. Additional occupants on the block were evidently associated with the expansion of the port's commercial activity. It is during this period that boardinghouses make their first appearances on the Pine Street side of the block.

1) Property Ownership*
   
a) Lot 10: 56 and 58 Wall Street; 59 Pine Street

*For the lots in which cultural resources were found.

56 Wall Street. In 1785, William Denning owned both 56 Wall Street and the adjacent lot to the west (54 Wall), which served as his place of residence (Franks 1787). Between 1787 and 1794, Denning leased the house at 56 Wall Street to Charles Startin (see Appendix A). Startin, a merchant in the city, moved to Broadway in or about 1795.

William Denning continued to own the lot at 56 Wall Street until 1816, during which time the character of the area changed dramatically. Beginning in 1799, the length of tenancy of this property is comparatively short term, and there are indications that although a portion of the structure was devoted to commercial use, its upper floors or basement may have been subleased by boarders. In 1799 the lot was leased to William Denning's son-in-law, William Henderson, also a merchant. From 1800 to 1802 the property was leased to William Leffingwell and Hezekiah Pierpont, merchants. Leffingwell's residence was located on the south side of Wall Street (Lamb 1883: 60-61). In 1808 the house was subleased by Walter Morton, who in 1811 is described as the secretary of the Phoenix Insurance Company. Between 1812 and 1814, directories and tax records list Walter Morton, John Aird, and the Phoenix Insurance Company at this address.

58 Wall Street. The immediate post-Revolutionary War owners and occupants of 58 Wall Street have not been determined. Based on references in deeds for 56 Wall Street, 58 Wall street was either owned or occupied by Cornelius Trebout and John Ellison at some time prior to 1785, and by Peter Keteltas in 1785 (see New York County Deeds, Liber 47: 470; 44: 188). In 1789 and 1790, the lot was owned (and possibly occupied) by John Marsden Pintard. Unfortunately, it is not known when or from whom Pintard acquired the lot.

According to The New York Directory of 1787, the structure was then occupied by Henry Brockholst Livingston (Franks 1797). It seems likely that Livingston resided here immediately following the British evacuation. On December 2, 1784, he married Catherine Keteltas, daughter of Peter...
Keteltas (evidently the owner of the property). Brockholst Livingston was the son of William Livingston, first governor of New Jersey. He graduated from Princeton in 1774 at the age of 17. During the Revolutionary War he served as an aide to Generals Schuyler and Arnold and was the private secretary to John Jay on his diplomatic mission to Spain. After the war he practiced law in New York City and served as a judge in both the State and later the Federal Supreme Courts (Livingston 1910: 227-29, 553). Henry Brockholst Livingston may have lived at 58 Wall Street between the years 1784 and 1790.

In 1791 the structure at 58 Wall Street was leased to John R. Livingston, a merchant and cousin of Henry Brockholst Livingston. In the years 1793 and 1794, it was a boardinghouse run by William Davis. After 1795 and before April of 1799, the lot was apparently conveyed by John Marsden Pintard to his brother Samuel and his wife Abigail Pintard of Long Island.

The property at 58 Wall Street was leased to Thomas Knox, a merchant, between the years 1797 and 1799. On April 13, 1799, the lot and dwelling house were conveyed by Samuel and Abigail Pintard to the former tenant, Thomas Knox, for £3,800 (New York County Deeds, Liber 62: 37). The lot was Thomas Knox's place of business and residence until 1815.

59 Pine Street. The structure and lot at 59 Pine Street were owned by John Byvanck at the start of this period. He had acquired the 34-foot wide, 78-foot deep lot from Myer Myers sometime prior to 1789, possibly as early as 1776. Between 1787 and 1791, the house was leased to a John Pintard, the cousin of John Marsden Pintard.

For the remainder of this period and until 1816, the property was owned by the heirs of John Byvanck, devised according to his will of July 18, 1792 (Record of Wills, Liber 41: 41). Importantly, it appears that none of the heirs of John Byvanck ever lived on the Pine Street property. In November of 1795, Jane and Garrett Noel Bleecker conveyed the house and lot of ground to Josephine Youle, the daughter of Jane (Youle) Bleecker by a previous marriage. The deed states that "the rents from the house are to go toward Josephine's education and maintenance." Jane (Youle) Bleecker was a daughter of John Byvanck and had acquired the property from her sister Mary and Mary's husband George Codwise (see New York County Deeds, Libers, 56: 527, 531; 57: 205). No records have been found which identify the residents of the house at 59 Pine Street between 1792 and 1798.

From 1799 to 1807, the house and property were leased by Louis Jones, a printer, and served as both his place of business and home. Jones, and later his widow Mary, were
assessed for this real estate for the remainder of this period (see Appendix A). As is apparent in the following advertisement published in the August 3, 1803 issue of the New York Gazette and General Advertiser, Jones' business complemented the commercial activity in the area:

Hand-Bills, Cards, Posting Bill and Blanks of all sorts, Printed at the shortest notice, and on the lowest terms in the city, either in the French or English Language, by Louis Jones, No. 55 Pine Street. Blank Tobacco Manifests, for shipping Tobacco, ....
(Gottesman 1965: 307)

After the death of Louis Jones, in or about 1808, the house continued to be the residence of his widow Mary until 1814 or 1815. In 1812 and 1813, Robert Forrest, a shipmaster, was a tenant at 59 Pine Street.

b) Lot 24: 69 Pine Street

According to tax assessment records, the lot at 69 Pine Street, and the adjacent lot to the west (67 Pine Street), were owned by Hugh Walsh in 1789. It is not known when the 50-foot wide, 93-foot deep lot was acquired by Walsh. In 1789 the lot contained two structures, the easternmost of which (at 69 Pine Street) was being rented by Alen Duncan, a chandler (ship provisioner or candle-maker). On October 19, 1790, Hugh Walsh and his wife, Catharine, who were living in New Windsor, Ulster County, New York, sold the lot at 67-69 Pine Street to John Jones, a merchant, for $2,000 (New York County Deeds, Liber 57: 452).

During the last decade of the eighteenth century and into the early years of the nineteenth, the building was rented by John Jones to a number of individuals. It functioned both as residential and commercial space. In 1794 and 1795, the structure was rented by John C. Shaw, a merchant. In 1799 the house is listed in Longworth's Directory as a boardinghouse run by John McDonald. Between 1808 and 1809, just before the War of 1812, a printing office owned by Zachariah Lewis was located in the building.

2) Architectural Development

Throughout this period, two- and three-story Georgian- and Federal-style townhouses presented an almost unbroken facade from one end of the block to the other (see Figure 14). For the most part, each structure apparently occupied the full width of its lot. The relatively deep Wall Street lots provided ample room for outbuildings, gardens, courtyards, etc., behind the buildings. Although it is probable that some of the buildings along Wall Street and within the study area underwent extensive modification or
replacement in this era, documented examples of these changes have not been found.

Little is known about the appearance of the buildings fronting Pine Street. Evidently, the lower floors became commercial in function, if not in form, whereas the upper floors remained residential space.

3) Municipal Utilities

In A History of Public Health in New York City, 1625-1866, John Duffy noted that the dramatic postwar population growth and the reconstruction of the city,

... presented almost insurmountable difficulties to the newly reorganized city government. Even under ordinary circumstances it would have been difficult for an administration accustomed to dealing with the problems of a relatively small town to be suddenly confronted with the sanitary and health needs of an urban area. (Duffy 1968: 77)

One of the main problems confronting the expanding city was the lack of a reliable water source or of a distribution system. Underscoring the need for an adequate supply of water during this period was the pollution of the Collect Pond and the Tea Water Pump, directly related to the expansion of the city; a series of destructive fires; and the occasional outbreak of diseases.

The first positive action to correct this situation did not occur until April 1799, when a bill empowering a private company to supply the city with water passed the State Assembly and Senate. The private Manhattan Company was granted the right not only to construct and to operate a waterworks but also to conduct a banking business (see Appendix B for more details on the Manhattan Company).

The Manhattan Company's waterworks consisted of a number of wells that fed a large rectangular reservoir located on the north side of Chambers Street between Broadway and Center Street. The distribution system of bored wooden logs extended southward down the elevated axis of Broadway with lateral lines extending east and west down side streets. The details of the distribution system, such as the total area covered and the manner and number of structures served, are not known. Undoubtedly, wealthier residential neighborhoods, including the Wall and Pine street study area, were tied into the system as early as 1800.

According to the following advertisement, which appeared in The Daily Advertiser, January 20, 1800, owners of houses could contract with individuals to tap into the
wooden water mains. Water was then conveyed into structures by lead pipes:

The subscriber informs his friends and the public, that in addition to the variety of ship and House Plumbing, he manufactures the Lead Pipes to convey the water from the logs in the street, into the houses, likewise to any other part that may be required—all of which he will execute at as low a rate, and on shorter notice than any in the city. Also warrants the pipes to be fixed in such a manner as not to freeze on the coldest days, by the help of a spring cock which he has invented for that purpose to work in the wall ... George Youle, 298 Water Street (Gottesman 1965: 220)

The advertisement also shows that technical improvements to the service were already being made. (At this time, George Youle's relationship to Jane Youle and her daughter Josephine, owners of the lot at 59 Pine Street during the late eighteenth and early nineteenth centuries, has not been determined.)

The availability of Manhattan Company water does not appear to have resulted in the abandonment of the two early eighteenth-century wells (Features 17 and 18) uncovered during this project. Importantly, the wells were not used as trash or sewage receptacles, which, given the fact that both lots were residential at the time, would indicate that they were maintained as an alternate source of water. In fact, both wells were not filled until there was a major phase of construction on each lot (on Lot 24 this occurred in the 1820's, whereas on Lot 10 the final abandonment of the well did not take place until 1901).

4) Archeological Evidence for Development of the Lots

Archeological data obtained during this project provide indirect evidence for new construction activity during this period. Although little of these buildings survived later construction episodes, the lower portions of support structures (i.e., a privy and cisterns) dating to the late eighteenth century were found at 56 and 58 Wall Street. Artifactual material from the builder's trench of Feature 7, a large privy, points to a date of construction after 1795 and prior to 1812. The construction of the privy and the cisterns may have been associated with a major phase of alteration or new construction. Cisterns built around this time may have alleviated problems caused by increased development by capturing surface and roof runoff for drinking or other household uses.

The size of the Feature 7 privy at 56 Wall Street—approximately 4 by 23 feet—suggests that it was designed
for a large number of users. The adjacent property to the west (54 Wall) was owned by the same individual, William Denning, during the Federal Period, and it is possible he built the privy to serve both lots. Agreements in land transfer records which specify shared rights to wells and pumps located between subdivided lots have been noted on other lots of the block as well (e.g., New York County Deeds, Book 43: 116; the same transaction reserved the right to use a bakehouse behind the Wall Street residences).
4. The Mid-Nineteenth-Century Period  
(c.1815-65)  
a. Introduction

The period in United States history from 1815 to the Civil War was a time of turbulence, change, and growth. The Industrial Revolution changed forever the style and quality of American life. Industrialization fostered transportation, and transportation—first canals and then railroads—made raw materials easily accessible to the East Coast markets and opened the western hinterlands for settlement. New York City grew accordingly throughout this period of rapid expansion, assuming the position of the nation's foremost port.

During this era, urban improvements included, among other things, horse-drawn railroads, an expanded public water system, and gas-lit streets. Shipbuilding became a major industry in New York City, as might be expected in so large a port. Steamboats, first successfully employed by Robert Fulton early in the century, came into common use, both as ferries and as river steamers on the New York-Albany route. By 1825, twelve banks and sixteen marine insurance companies accommodated the city's growing business interests, a large but still inadequate number (Lyman 1964:120).

The city's rapid commercial growth at this time was reflected in the continued development of Wall Street as a financial district. By 1825, Wall Street had become the center for financial and stock transactions, and its name was applied to the entire district, which included Broadway, Broad, New, Nassau, and Pine streets, and Exchange Place. As the area became more commercial, the prominent families in residence there moved further uptown to newer residential neighborhoods, such as Washington Square. In his novel entitled Washington Square (first published in 1880), Henry James' description of the financial district in the 1830's skillfully sums up the changes that were occurring throughout the downtown area:

Some three or four years before this, Doctor Sloper had moved his household gods up town, as they say in New York. He had been living ever since his marriage in an edifice of red brick, with granite copings and an enormous fan-light over the door, standing in a street within five minutes walk of the City Hall, which saw
its best days (from the social point of view) about 1820. After this, the tide of fashion began to set steadily northward, as, indeed, in New York, thanks to the narrow channel in which it flows, it is obliged to do, and the great hum of traffic rolled farther to the right and left of Broadway. By the time the Doctor changed his residence, the murmur of trade had become a mighty uproar, which was music in the ears of all good citizens interested in the commercial development, as they delighted to call it, of their fortunate isle. Doctor Sloper's interest in this phenomenon was only indirect—though, seeing that, as the years went on, half his patients came to be overworked men of business, it might have been more immediate—and when most of his neighbor's dwellings (also ornamented with granite copings and large fan-lights) had been converted into offices, warehouses, and shipping agencies, and otherwise applied to the base uses of commerce, he determined to look out for a quieter home. The idea of quiet and genteel retirement, in 1835, was found in Washington Square, where the Doctor built himself a handsome, modern, wide-fronted house, with a big balcony before the drawing-room windows, and a flight of white marble steps ascending to a portal which was also faced with white marble. (James 1982)

With the rise in commercial activity, Wall Street properties increasingly came under the control of companies, which either razed the former dwellings or converted them into commercial properties. Chief among these firms were insurance companies chartered to support business ventures. As early as 1818, the New York Fireman's Insurance Company purchased property on Wall Street in the study area block (New York County Deeds, Liber 126: 80). In concert with the developments on Wall Street, the study area lots fronting Pine Street also changed from mixed commercial/residential use to exclusively commercial and financial occupancy.

In mid-December of 1835, a fire swept through the lower part of Manhattan. Although it did not advance north of Wall Street, leaving the study area untouched, south of Wall Street the fire devastated seventeen blocks containing over 500 houses (among them the last examples of the city's seventeenth-century architecture) and a good part of the city's business district (Lyman 1964: 130). One loss in the block across from the study area was the Merchants Exchange, which had been built between 1823 and 1827 to provide a trading floor and facilities for bid and call activities. The exchange was rebuilt in 1842 and was used as before until its purchase in 1863 by the U.S. Government. At that time it became the U.S. Customs House. City Bank purchased the building in 1899 and enlarged it to its present size in 1908. The building became a New York City Landmark in 1965 (City Bank 1980: 1-21).
The 1835 fire, in addition to destroying a large part of lower New York's built environment, also affected its fledging insurance industry. Twenty-three of the city's twenty-six fire insurance companies were thrown into bankruptcy by the fire of December 16, 1835 (King 1893: 639). Legislation passed in February of 1836 allowed certain of the insurance companies to sell their holdings at auction through agents. In some cases, they repurchased their firms through receivers the following day (New York County Deeds, Libers 350: 409; 354: 592). Another outcome of the fire was the panic and depression 1837, which closed the Stock Exchange for three years (Hill 1908: 154).

The rapid change in the architecture of Wall Street and the entire financial district during the first four decades of the nineteenth century did not go unnoticed by contemporary writers. A description of the district written in 1840 noted its change in architecture, business, and general character since 1800:

On the lot where the United States Bank now stands [the third structure east of northeast corner of Wall and William streets on Figure 14, just west of the project area] was the elegant mansion of General John Lamb, first Collector of the Port, and father of Alderman Lamb.... On the opposite side, where is now going up the new Merchant's Exchange stood the residences of Thomas Buchanan, Mr. White, and William C. Leffingwell.... Pine Street has undergone still greater changes; from Water Street to Broadway [including the entire Pine Street portion of the project area], every house has been demolished. (Lamb 1883: 60-61)

From the late 1830's until the Civil War, banks, insurance companies, brokers, and agents located their establishments along the length of Wall Street (see Figures 15-18). In 1850 alone, 25 insurance companies occupied numbers 58 through 76 Wall Street (New-York Pictorial Directory of Wall Street 1850; see Figure 19). By the mid-nineteenth century, Wall Street not only was the financial center of the nation but was also the middleman between the developing lands to the west and Europe.

b. The Project Area

1) Property Ownership

Both lots 10 and 24 are excellent examples of the transformations that were taking place along the full length of Wall Street and throughout the financial district during this period. Before 1815, the dimensions of the four parcels which comprise the lots had not changed since the late seventeenth century, when the lots were subdivided. The increased commercial utilization of the lots, which had
FIGURE 15. View of Wall Street looking eastward from Broadway in 1834, as depicted in Peter Maverick's lithograph entitled "Wintertime on Wall Street" (Sixty Wall Tower n.d.: 22). The original work is in the collections of the Museum of the City of New York.
FIGURE 17. View of Wall Street in 1850, looking westward from approximately William Street (Sixty Wall Tower n.d.: 26). The original work is in the collections of the Museum of the City of New York.
FIGURE 18. Copy of photograph of Wall Street, looking eastward, c. 1865, from the corner of Broad Street (Lightfoot 1981).
FIGURE 19. Drawing of the Wall Street streetscape, c. 1850 (New-York Pictorial Directory of Wall Street 1850; original in New York Public Library collections). The study area is shown in the top (north) side of the street, 52 through 70, inclusive.
begun early in the period, required the alteration or destruction of the former residential structures.

a) Lot 10: 56 and 58 Wall Street; 59 Pine Street

56 Wall Street. On April 2, 1816 William Denning conveyed the 56 Wall Street lot and house to William H. Robinson for $20,000 (New York County Deeds, Liber 117: 480). For a few years prior to this date the building possibly served as both a residence and a place of business. Between 1808 and 1814, one of the occupants was Walter Morton, who is listed as the secretary of the Phoenix Insurance Company in an 1811 directory. The insurance company continued at this address from 1812 to 1815. After acquiring the property in 1816, William H. Robinson may have also lived in the house. Companies listed at the address include the Neptune Insurance Company and the Contributionship Insurance Company.

By the early 1830's, the building at 56 Wall Street was leased exclusively by insurance firms. In November of 1828, Robinson, who is listed as a broker, conveyed the lot to the Trader's Insurance Company (New York County Deeds, Liber 245: 87). At this time it is not known what position, if any, Robinson held with Trader's Insurance Company. For two years after the conveyance he is listed at this address.

Evidently the Trader's Insurance Company was one of the companies bankrupted by the fire of 1835. In May of 1836 the receivers of the estate for the company transferred the lot to the Commercial Insurance Company of New York (New York County Deeds, Liber 352: 573). The Commercial Insurance Company had also been located at 56 Wall Street since 1835.

On May 7, 1939 the lot was purchased from the Commercial Insurance Company for $100,000 by George F. Talman, a lawyer (New York County Deeds, Liber 397: 101). Between 1839 and 1841, the main tenant at 56 Wall Street was the Equitable Insurance Company. From 1842 to 1852, its main occupant was the American Life Insurance and Trust Company of Baltimore. In May of 1847, during the tenure of the American Life Insurance and Trust Company, Talman sold the lot to William Shepard Wetmore of New York City for $80,000 (New York County Deeds, Liber 529: 535).

Wetmore owned the property throughout the 1850's and into the 1860's, eventually willing the lot to his children. Throughout the period, the building was leased primarily by insurance and financial companies. In 1851, for instance (see Figure 19 for a graphic representation of the structure), the companies listed at the address by Doggett's New York City Street directory for 1851 included the American Insurance Company of New York.
Life Insurance and Trust Company (with G.F. Talman, the previous owner of the lot, noted as assignee), the Niagara Fire Insurance Company, and the Aetna Fire Insurance Company of New York. Other companies and individuals listed at this address include the Apalachicola Land Company, the New York and Liverpool U.S.M. Steamship Company, and Camman & Whitehouse, bankers.

In June of 1862, Wetmore willed the lot at 56 Wall Street, among other real estate, in equal shares to his son, George P. Wetmore, and his daughter Annie D. Wetmore (Record of Wills, Liber 141: 222). Included in the bequest were 59 and 61 Pine Street. (The ownership history of these parcels, the northern portion of Lot 10, prior to being purchased by William S. Wetmore, will be discussed later in this section.)

The lots at 56 Wall Street and 59 and 61 Pine Street, as shown on the 1857 Perris map, each contained a structure at that time (see Figure 20). The 56 Wall Street lot measured approximately 23 feet wide and 112 feet deep and contained a 3-story brick building. The main building, which fronted on Wall Street, was approximately 23 feet wide and 54 feet deep. A 13-foot wide and 50-foot deep extension was appended on the north along the west boundary line. Adjacent to the east of the extension was a 9-foot wide and 50-foot deep open yard or alley.

William Shepard Wetmore, born in 1801, was a merchant in business first in New York for an unknown period of time, and later in Middletown, Connecticut, and Providence, Rhode Island. As head of the firm of Wetmore and Company, he went to China. He was married twice, first to Esther Phillip Wetmore, daughter of Samuel Wetmore of New York, and second to Austine Noyes, of Salem, Massachusetts (Weeks 1897: 617). At the writing of his will, William Wetmore was residing in Newport, Rhode Island. The will notes that besides the lot on Wall Street his holdings in New York City included a house and lot at 15 Waverly Place, probably a former residence. The mortgage income from the property was to go toward his widow's annuity. Additional New York City real estate included a warehouse at 33 Chambers Street and a plot in Brooklyn's Greenwood Cemetery. Outside of New York, William Wetmore owned a house in Cayahoga Falls, Ohio, which he left to his brother Charles. One of the more interesting parcels of land itemized in the will was the "Delano Land Company" in Pennsylvania, which consisted of 5,400 acres of coal lands, which he left to his children (Record of Wills, Liber 141: 222).

56 Wall Street. In a similar situation to that which occurred at 56 Wall Street, the structure at 58 Wall Street served a mixed residential and commercial use during the second decade of the nineteenth century. Within a few
FIGURE 20. The project area block as shown on the 1857 Perris Insurance Company Map of New York City. The labels "Wall Street," "courtyard area" (in what was the project's Lot 10), and "hallway" or "thoroughfare" (also in Lot 10, Pine Street side) have been added to clarify the many text references to these locales. (Compare the map with Figures 10, 33, and 34.)
years, the lot was leased exclusively by commercial and financial companies. On January 16, 1816, Thomas Knox, a merchant in New York City, sold the property to John G. Warren, a broker, for $20,000 (New York County Deeds, Liber 117: 365). Evidently, for the remainder of the year the house was the home of John S. Larned, a merchant, whose place of business was located at 68 South Street. In 1817 and 1818, both John G. Warren and Samuel Jarvis, a tailor, had their businesses at 58 Wall Street. Warren's home address is given as 64 William Street.

Between 1819 and 1834, the lot continued to be the business location of John G. Warren, and, later, of John G. Warren and Son. In the meantime, the Warren family's place of residence had moved uptown to 339 Broadway. In 1834 the Fireman's Insurance Company was located at the Wall Street address. In that same year, John G. Warren died, leaving all his property to his executor and son, John, in trust for his other children (Record of Wills, Liber 71: 484).

According to tax assessment records, the lot at 58 Wall Street was listed as "vacant" for 1835. Longworth's Directory for the same year lists John Warren, the owner of the parcel, at 49 Wall Street, across the street to the south. Evidently, the structure on the lot, which may have been built in the late seventeenth century, was demolished for a new one. (What bearing this information has on the archeological remains that were found on this portion of Lot 10 will be discussed in Section V.) It can be speculated that the greater number of businesses occupying the building after 1835 is indirect proof that a larger structure was erected on the lot.

In any event, starting in 1836 and lasting throughout the remainder of this period, the lot—which was legally owned by John Warren, the sole executor of John G. Warren's estate—housed a variety of insurance and financial companies. At this address in 1851, Doggett's New York City Street Directory lists two insurance companies (New York Equitable and Union Mutual), one banking firm (Dennistown, Wood and Co.), one brokerage firm (Weeks and Co.), one banker, six lawyers, and the New York, Providence and Boston Railroad Company. Also listed are a number of unidentified individuals, probably working for these firms (see Appendix A).

59 Pine Street. Prior to 1816, the lot at 59 Pine Street measured 34 feet wide by 78 feet deep and evidently contained the "brick Mansion house" (cited thus in deed; New York County Deeds, Liber 26: 568) originally built by Samuel Burt in the late seventeenth century and subsequently occupied by Dr. John Dupuy and John Byvanck. The lot, which was owned by Josephine Youle as early as 1795, was rented by Louis Jones, a printer, between 1799 and 1807. Jones and
his wife Mary also lived in the house, and at times had a boarder (Longworth 1799-1807). After the death of Louis Jones, on or about the year 1808, Mary continued to live in the house and take in boarders.

On April 13, 1816, Josephine Youle conveyed the lot to David R. Lambert for $8,000 (New York County Deeds, Liber 120: 255). In the next few months, David Lambert, in association with James King and John Graham, purchased the two adjacent lots east of 59 Pine Street (numbers 61-63 Pine Street), putting together a parcel which measured approximately 87 feet wide by 78 feet deep. Within a year of the purchase date, the existing structures on the lots had been demolished and three stores or warehouses had been constructed. On April 3, 1817, the property and structures were equally partitioned among the owners, with each receiving a lot that measured 28.8 feet wide by approximately 76 to 79 feet deep. John and Ann Graham received the warehouse at 59 Pine Street, James G. King the building at 61 Pine, and David R. Lambert the structure at 63 Pine (New York County Deeds, Liber 120: 259).

The partition deed notes that the three warehouses were four stories high and were built of brick. The deed also maintains that the buildings were fireproof. No mention is made of the roof type or of the extent of the structures on the lots. Before additional construction details of the warehouse are presented, as determined by documentary and archeological research, a brief outline of the ownership and tenants of the structure for the remainder of this period follows.

John and Ann Graham mortgaged the property to Richard and Mary Black for $14,000 shortly after gaining title to the lot at 59 Pine Street (New York County Deeds, Liber 167: 261). Between 1817 and 1822, John Graham's business was located at the Pine Street lot. In 1822, according to Longworth's Directory for that year, the warehouse also housed the firm of Buchanan & Clader and Company, merchants. On June 27, 1823, John and Ann Graham and William Calder conveyed the lot to William M. Black and Robert Dyson for $14,000. Black and Dyson assumed the mortgage of Mary Black, widow and executrix of Richard Black (New York County Deeds, Liber 167: 261). Buchanan & Calder and Company continued to be located at 59 Pine Street until 1827.

Prior to May of 1827, the lot had been acquired by Hugh Spooner, a partner in Sands, Spooner and Company, who leased the property at 59 Pine between the years 1828 and 1833. Throughout this period, the property continued to be mortgaged to Mary Black. With payment on the mortgage in default after the death of Hugh Spooner, Mary Black appointed Thomas Sands of Liverpool, England as her attorney. On November 23, 1833, the lot and warehouse were sold at public
auction to Joseph Sands of Brooklyn for $35,000 (New York County Deeds, Liber 308: 607).

Between 1834 and 1838, the warehouse was partially leased to William A. Lawrence and Henry H. Munsell, merchants. During this period 59 Pine Street was also the place of business for the firm of Sands, Turner and Company, importers of dry goods. After 1838 and until 1848, Joseph Sands was the owner and sole occupant of the structure. The variety of partnerships, headed by Joseph Sands and located at the address, include: Sands, Turner, Fox and Co. in 1838; Sands, Fox and Co. in 1842; and Sands, Fuller and Co. in 1844 (see Appendix A).

Complete title to the lot was acquired by David Hadden, a New York merchant, between June of 1848 and January of 1849 for the sum of $18,100 (New York County Deeds, Liber 509: 539, 541). Hadden also owned the adjacent lot to the east (61 Pine Street), securing title in April of 1824 from Rufus King, the son (or grandson) of James King (New York County Deeds, Liber 166: 33). During the next seven years, the prime tenant in the building at 59 Pine Street was the firm of Graydon, Swanwick and Company, importers of dry goods and clothing. On May 1, 1857 the executors of the estate of David Hadden, William A. and John A. Hadden, his sons, conveyed both 59 and 61 Pine Street to William S. Wetmore, a Merchant of Newport, Rhode Island, for $44,000 (New York County Deeds, Liber 730: 675). The two Pine Street lots and the lot at 56 Wall Street, which have a common rear property line, were owned by William Wetmore for the remainder of this period.

b) Lot 24: 69 Pine Street

Throughout the period the lot and structure at 69 Pine Street was owned by members of the Jones family and rented to a variety of businesses. Among the family's extensive Manhattan real estate holdings were two other lots in the study area, including all of Lot 11 (54 Wall Street) and part of Lot 7 (60-62 Wall Street and 63-65 Pine Street). Sometime prior to September of 1823, the western half of the 50-foot wide lot originally purchased by John Jones in 1790 was identified in documents separately from the adjacent parcel to the east (Lot 25), which remained in the family.

For a number of years before 1818, the structure may have served as both a residence and a place of business, most notably as a printing office. Longworth's Directory and the municipal tax records list Zachariah Lewis, editor of the Commercial Advertiser, as the occupant for 1809. From 1812 to 1816, Samuel Williams, an accountant, appears to have also resided at 69 Pine Street. Between 1818 and 1824 the lot was leased by Alden Spooner, editor of the Columbian. Spooner lived in Brooklyn and subleased the
structure at Pine Street to John Cotter, a tailor, and, in 1823, to Carter and Prentiss, editors of the Statesman.

With the death of John Jones, title to the lot was transferred to his son Isaac C. Jones on September 23, 1823 by the Commissioners of his estate (New York County Deeds, Liber 172: 15). After the expiration of Alden Spooner's lease in 1824 and throughout the remainder of this period, it appears that the structure was used primarily as a warehouse by commission merchants and importers. Between 1825 and 1835, the property was leased by J.W. Schmidt, a merchant. Schmidt, whose home address was 106 Greenwich Street, is identified in Longworth's Directory as the Prussian Consul and Vice-Consul for Hamburg between 1825 and 1835.

2) Architectural Development

With some important exceptions and as recorded in Figure 19 and hypothesized in Figure 21, by 1850 many of the earlier residential buildings present in the study area during the Federal Period had been altered or replaced by 3- to 5-story brick commercial structures. Decoration on these utilitarian buildings consisted of classical revival elements, mostly around doorways and, in some instances, on the facades of upper stories. The structure at 60-62 Wall Street in 1850 (see Figures 19 and 21) may have been modified from an earlier substantial Federal-style building. Federal-style architectural elements (dormers) are evident in the buildings at 56 and 64-66 Wall Street, but the neoclassical elements on the facade at 64-66 were probably later additions. Basement stories, such as those at 68 and 70 Wall Street, were often utilized as retail shops (Githens 1984: personal communication).

a) Lot 10: 56 and 58 Wall Street; 59 Pine Street

56 Wall Street. The first depiction of the late eighteenth-/early nineteenth-century structure at 56 Wall Street is the pictorial directory published in 1850 (see Figure 19). The Federal-style 3½-story (plus basement) brick building is three bays wide with a gabled roof and dormers. This structure does not appear to have been altered during the antebellum period.

According to the 1852 and 1857 Perris maps (see Figure 20), 56 Wall was a 25-foot wide by 115-foot deep lot. The main structure fronted on Wall Street and measured 25 feet wide, extending northward 52 feet. The building contained a narrow rear extension (possibly originally a kitchen) situated along the west property line, measuring 13 feet wide by 49 feet deep. The height of this extension is not known.
FIGURE 21. Interpretive isometric drawing of the Wall Street side of the study area as it appeared c. 1850, based on data from an 1850 streetscape (New-York Pictorial Directory of Wall Street 1850; see Figure 19) and the 1857 Perris Insurance Company map of the block (see Figure 20).
58 Wall Street. As noted previously, the 58 Wall Street lot was listed as vacant on tax records for 1835. The building constructed in that year appears on the 1851 pictorial directory as a 4-story, 3-bay wide brick structure with a flat or shallow gable roof, typical of the Greek Revival style of architecture. The 1835 building does not appear to have undergone any alterations during the remainder of this period.

The 1852 and 1857 Perris maps show 58 Wall Street as a 25-foot wide by 112-foot deep lot, containing a configuration of structures that is almost a mirror image of those at 56 Wall Street. The main structure fronted on Wall Street and measured 25 feet wide, extending northward 52 feet. A rear addition extended further northward along the east boundary of the lot to the north property line, measuring 18 feet wide by 52 feet deep. Adjacent to the west of the extension was an 8-foot wide by 50-foot deep courtyard (see Figure 20).

59 Pine Street. As noted previously, the 4-story brick warehouse at 59 (and also 61-63) Pine Street was constructed in 1816. Figure 22 is a mid-nineteenth-century photograph of a warehouse located on the east side of Front Street between Wall and Pine streets, which is probably similar to the structures built at 59-63 Pine. According to the 1852 Perris map, the structure at 59 Pine street measured 57 feet wide by 68 feet deep and occupied almost the entire lot. Along the southern property line was a 9-foot deep by 57-foot wide rear yard (see Figure 20).

At this time it is not known how the structures were serviced by utilities since no features dating to the early nineteenth century were found along the narrow rear yard or within the confines of the structures. Either subsequent construction (primarily the excavation of a cellar beneath both warehouses) wiped out any evidence of the waste and water systems, or the structures were tied into municipal systems at the time of construction. Indeed, the only archeological feature uncovered in the lot was an eighteenth-century privy associated with the structure on the lot prior to 1816. The stone feature was located in the former southwest corner of the 34-foot wide lot, and was partially destroyed by the construction of the stone foundation for the warehouse (see Section V, Feature 9).

Interestingly, what was originally thought to be an alleyway between two buildings on the 1857 Perris map was actually a interior hallway extending from Wall Street to Pine Street (see Figure 20). At this time the three buildings were owned by George P. Wetmore (see Appendix A; New York County Deeds, Book 730: 675, Hadden to Wetmore).
FIGURE 22. The Reed & Sturges Warehouse, c. 1855, stood just west of the East River on the east side of Front Street between Wall and Pine streets (Black 1973: Plate 10). Close to the study area, it probably resembled the warehouse built at 59-63 Pine Street in 1816.
b) Lot 24: 69 Pine Street

The most informative graphic evidence regarding the structure on the lot comes from the 1852 and 1857 Perris maps. As depicted on these maps, the building's dimensions were 25 feet wide by 63 feet deep, and the structure was situated in the front (northern) portion of the lot. A skylight-covered addition measuring 19 by 22 feet was situated along the western side of the lot. The remainder of the lot appears to have been undeveloped. The height of the building at this time is not known.

3) Municipal Utilities

At the start of this period the structures in the study area were probably supplied with water by the Manhattan Company. After 1842, when the Croton system was opened, owners would have had access to the new source of piped water. It is likely that some of the buildings on Wall Street were hooked up to the Croton system shortly thereafter. By that time the shallow wells were probably polluted or had dried up due to extensive development and a drop in the level of groundwater. It is possible that the Pine Street warehouses did not require running water and were therefore not hooked up immediately, in which case alterations to install piped water would have had to have been made later, when the buildings housed offices.

In the early part of this period, privies continued in use. Based on the dating of the artifacts recovered from the privies at 56 and 58 Wall Street (Features 7 and 8), they were abandoned after the 1830's. It is possible that they were open (and in use) at least until 1845, when the city's sanitary code was revised to allow emptying of waste into the sewers. Because the buildings were commercial rather than residential, there may not have been an initial impetus to install water closets to replace the privies. But as the number of people working in the buildings increased, water closets may have been deemed necessary, and the hookup to city sewers would have followed. The privy at 56 Wall Street was definitely no longer in use by 1857, as a hallway connecting the structures on Wall and Pine streets had been built over it (sometime between 1852 and 1857, see Figure 20).

Drainage problems in the study area were dealt with by converting cisterns and wells to drywells, as was the case in the 56 and 58 Wall Street lots. At 58 Wall Street, a portion of the base of a double-chambered brick cistern (Features 19 and 20) was removed in order to convert the structure to a drywell. A more elaborate system was constructed at 56 Wall Street, where a 35-foot long, 6-inch diameter lead pipe was installed below ground. The conduit connected a cistern (Feature 10) with an eighteenth-century
well (Feature 18) to create a drain and drywell for surface and structural runoff. These features and their locations are described in more detail in Section V.

4) Archeological Evidence for Development of the Lots

Although the eyewitness account cited previously states that all Pine Street structures between Water Street and Broadway were demolished between 1800 and 1840, the documentary evidence examined for Lot 24 does not indicate the exact year of demolition. Archeological fieldwork undertaken during this project has produced indirect evidence for construction activity during the period in question (c. 1815-65). Excavation beneath the concrete floor of the cellar in Lot 24 exposed the remains of the south foundation wall of the building depicted on the 1852 and 1857 Perris maps (see Figure 20). Only a single course of stone had survived subsequent alterations to the structure. North of the foundation (i.e., within the interior of the structure) was the lower portion of a brick well. Based on the diagnostic cultural material found within a thick debris layer inside the well's shaft, which included fragments of ceramics manufactured no earlier than the second decade of the nineteenth century and a single printer's type (evidently attributable to the printing shops located on the lot between 1809 and 1823), it is reasonable to conclude that the well was filled when the original structure on the lot was demolished. Therefore, the structure represented on the Perris maps would appear to have been built in the third or fourth decade of the century, replacing the early eighteenth-century building associated with the well.

Taking into account the archeological evidence, it is interesting to note that there was a change in the types of firms leasing the structure after 1824, which suggests a new building was built or an existing structure was altered at about this time. The former printing office was then functioning as a warehouse. Additional support for this hypothesis may be found in the tax assessment rolls. Between 1815 and 1824, the property lost almost half of its assessed value, dropping from $3500 to $2000, a fact which may reflect the age and physical condition of the structure. In 1825, the next year, the value of the property had increased to $8000, evidently reflecting the presence of a new or improved structure on the lot.
5. The Late Nineteenth-Century Period (c 1865-1900)

a. Introduction

The last third of the nineteenth century became known as the era of the financial barons—men such as Cornelius Vanderbilt, Jay Gould, and John P. Morgan, whose fortunes were made in the proliferation of America's industries and transportation systems. It was also a period which witnessed a growing social dichotomy between the wealthy and the vast numbers of immigrant poor. This disparity is perhaps best illustrated in the types of New York City housing that accommodated each group. "Uptown" along Fifth Avenue (today's Midtown) were located the prestigious mansions of monied families; whereas many immigrant groups took up residence in overcrowded tenements on the Lower East Side, making do without adequate water, heat, light, or sewerage facilities.

Urban infrastructural improvements undertaken during this period of continuing accelerated growth included the design and construction of Central Park, the building of the Brooklyn Bridge, and the expansion of trolley, ferry, and commuter rail networks to newly created outlying residential districts. The latter enabled workers to commute from distant neighborhoods to their places of employment in such areas as Wall Street.

Industry—including brickhouses, slaughterhouses, distilleries, and ironworks—concentrated on the west side of Manhattan and along other parts of the great harbor. Landfilling had extended shorelines into the rivers to create new land for commercial development. Throughout the era, Wall Street continued as the focal point of the financial district and controlled the nation's commerce (see Figures 23 and 24).

The enormous surge of industrial growth that followed the Civil War required large amounts of capital, much of which was financed through Wall Street institutions. During the later part of the nineteenth century insurance companies and "home" offices of large corporations continued to be joined by banks and trust companies. The Panic of 1873 slowed business, but by 1877-78, banks with capital in the millions were again active along the street (Trow's 1877-78, 1899).
FIGURE 23. Portion of Galt and Hoy's 1879 *The City of New York*, a bird's-eye view, on which the study area block has been highlighted. See Figure 24 for an enlargement.
FIGURE 24. Portion of *The City of New York*, an 1879 bird's-eye view, showing the study area block (just above the "WALL" in "Wall St.") at that time.
As is evident in the enlargement of the project area portion of Galt and Hoy's 1879 bird's-eye view of Manhattan (see Figure 24), the size of structures in the study area was typical for lower Manhattan at that time, in the range from four to five stories high. Figure 25 is a photograph of the study area dating to c.1880, evidently taken on a non-workday. The noticeable lack of people on the street (which even today is characteristic of the financial district on weekends) provides an indication of the level of commercial (as opposed to residential) development in the area. The narrowness of the street contrasts sharply with the somewhat romanticized views of Wall Street from the earlier nineteenth-century views (see Figures 15, 16, and 17).

In addition to depicting the street's stark, gritty qualities, the photograph also contains much valuable information about the variety and types of utilities then serving the financial district. At this time the street, and probably many of the commercial establishments in the area, were lit by gas, as is apparent from the streetlamps. Also of note is the line of "manhole" covers along both sides of the street. These are probably coal chutes leading to vaults located beneath the sidewalk, opening into the basements and cellars of the structures. Finally, the wooden poles along the north side of Wall Street probably carried telephone and telegraph communications (not electricity). When electricity became available later in the century, the financial district was the first area in the city to receive the service (see Levinson 1961).

By the 1860's, the structures along the south side of Pine Street between Pearl and William streets were being converted from warehouses to offices and retail stores. Mid-century land transfer records note the warehouses lining the street (e.g., New York County Deeds, Liber 1058: 286). Not until later in the century did banks and insurance companies begin to purchase these properties. One of the first was the New York Life Insurance & Trust Company (New York County Deeds, Liber 1000: 59; 2017: 357), which owned Lots 12, 13, 19, and 19-1/2 in 1866, an example of the consolidation process which would eventually allow for the construction of larger buildings (see Figure 26, the 1891 Bromley map).
FIGURE 25. View westward c. 1880 along Wall Street, with the north (study area) side of Wall Street on the right (Black 1973: 29). Note retail establishments in basements. A man is leaning against the telephone pole in front of 66 Wall Street.
FIGURE 26. Portion of the 1891 Bromley atlas map of New York, showing the project area block.
b. The Project Area

1. Property Ownership*

a) Lot 10: 56 Wall Street and 59-61 Pine Street

Throughout the late nineteenth century, the structure and lot at 56 Wall Street (along with 59-61 Pine Street) was owned by William S. Wetmore and his children, George Peabody Wetmore and Anne D. Wetmore. On July 18, 1871, Anne Wetmore, of Newport, Rhode Island, conveyed her one-half interest in the three lots to her brother George for $140,000 (New York County Deeds, Liber 1184: 333). By the final quarter of the nineteenth century, George P. Wetmore's real estate holdings in the study area also included 58 Wall Street.

Although not as wealthy as the Vanderbilts or the Goulds, George Wetmore was extremely successful in business and state and national politics. Born in London, he graduated from Yale College in the class of 1867. In addition to serving as the Governor of the State of Rhode Island, he was a member of the United States Senate in 1897. Wetmore married a Keteltas, and was the father of Edith and Maud Wetmore. Even though the Wetmores' family home was in Newport, in business and social affairs he was closely identified with the New York area. In New York City he was a member of the Metropolitan, Tuxedo, Knickerbocker, Union League, Union, Riding, and other clubs (Weeks 1897: 617). In the late 1870's, Wetmore, in partnership with August Belmont, David D. Withers, and Pierre and George Lorillard, was the owner of Monmouth Park, a thoroughbred race track in Oceanport, Monmouth County, New Jersey. The track was located near Long Branch, then the most fashionable seaside resort in America (Klein, Bianchi, and Williams 1984).

b) Lot 10: 58 Wall Street

At the start of this period, the structure and lot at 58 Wall Street were owned by the estate of John G. Warren. Office space in the structure was leased to a number of insurance and banking companies. Between April 21 and May 1 of 1886, the rights to the lot were acquired from John G. Warren's children and grandchildren by Richard W. Robinson of Brooklyn. Robinson then purchased the real estate on May 1, 1886 from James Kearny Warren, the executor of the last will and testament of John Warren, for $175,000 (New York County Deeds, Liber 1959: 227). A week later Robinson sold the western 14-foot wide by 113-foot deep portion of the lot to George P. Wetmore for $103,856.85 (New York County Deeds, Liber 1959: 227). *For lots in which archeological resources were found.
Liber 1958: 342). On the same day, the eastern portion of the lot was conveyed by Robinson to Edith C. Iselin for $71,143.15 (New York County Deeds, Liber 1958: 339).

c) Lot 24: 69 Pine Street

Ownership of Lot 24 (69 Pine Street), during the majority of this period, remained in the Jones family. According to tax records, the lot was transferred to Rebecca Jones, apparently by Isaac Jones, in or about the year 1875. On December 16, 1880, the executors for Rebecca Jones conveyed her estate in equal parts to the children of her late son, Lewis C. Jones: Sydney Colford Jones, Edith Colford Iselin, and Helen Adele Jones. Lot 24 was devised to Sydney Colford Jones (New York County Deeds, Liber 1578: 74). In April of 1893 the real estate, owned for more than 100 years by the Jones family, was sold by Sydney Jones Colford (formerly Sydney Colford Jones) to Max S. Korn (New York County Deeds, Liber 18: 141).

2) Architectural Development

a) Introduction

Throughout this period there were few major construction projects in the study area. Perhaps of greater impact on the built environment, as already noted, was the consolidation of contiguous lots by individuals and corporations and the conversion of the warehouses along Pine Street to office space. Even as late as 1894, the majority of the buildings on the block did not exceed five stories in height. According to the 1894 Sanborn and Perris Map Company's Insurance Map of the City of New York, of the thirty structures on the block only seven were taller than five stories, and only one was taller than seven stories. A nine-story building was constructed at 54 Wall street in 1886 by the Central Trust Company (HCI 1984: 58-60). Also, perhaps due to the area's stability, between the 1850's and the 1890's (as is shown in Figures 20 and 26) the amount of space on the block devoted to court- and rear yards was roughly comparable.

As stated, the structures at 56-58 Wall Street and 59 and 69 Pine Streets underwent few major changes during this period, and continued to function as office space leased primarily to insurance and banking companies. None of the documentary or archeological evidence examined during this project points to any new structures being built during this period. The increasing value of the properties and the greater number of people employed, plus the change in function of the Pine Street lots, no doubt required some alterations of existing fabric to provide adequate workspace, light, and sanitary conditions. Stylistic changes in
facades probably accompanied some of the more extensive alterations.

b) 56 Wall Street

As shown on the Bromley Map of 1891 (Figure 26), the building at 56 Wall Street is virtually identical, in terms of its extent on the lot, to the structure depicted on the 1857 Perris map (see Figure 20). Photographic evidence, however, indicates that the structure had undergone extensive alteration (see Figure 27). Attributed to c. 1870, the photograph definitely predates 1886, based on the date of the construction for the Central Trust Company's Building at 54 Wall Street and the date of tenancy for the companies listed on the exterior of the structure.

As shown in Figure 27, the former 3½-story, gable-roofed structure with dormers was enlarged to 4½ stories with a dornered Mansard roof. Like the former building on the lot (see Figures 19 and 21), the three-bay structure extended the full width of the lot and retained the basement level.

An approximate date for these alterations can be assigned through a closer examination of tax assessment data. Between 1839 and 1861, the property at 56 Wall Street was assessed in the range of from $70,000 to $75,000. Although the figure dropped to below $70,000 during the Civil War, in 1866 the value was listed as $80,000. The largest jump in assessment occurs in 1867, increasing from $80,000 to $120,000 (see Appendix A). Based on this information, the structure appears to have been "modernized" in 1866-67, a date that agrees with the relatively short period of popularity enjoyed by the Mansard style of architecture.

Another minor alteration of the building occurred between 1891 and 1894. The 1894 Sanborn-Perris map indicates that the main building was extended approximately 15 feet to the north. The number of stories of the extension and the material used in this construction are not known.

Throughout the period, the building at 56 Wall Street continued to be connected with the structure(s) at 59-61 Pine Street by a hallway. The hall appears on both the Perris map of 1857 (Figure 20) and the Sanborn-Perris map of 1894.
FIGURE 27. View northward at the north side of Wall Street, c. 1870, but definitely before 1886. (The photographer is perched over Hanover Street.) The building with dormers and Mansard roof is 56 Wall Street, shown between No. 54 on the left and No. 58 on the right. (Courtesy New-York Historical Society, Neg. No. 33487.)
c) 59 Pine Street

As noted in the previous section, the warehouse structure at 59-61 Pine Street appears to have been converted to office space by William Wetmore after he purchased the lot in 1857. Details of one improvement made by George P. Wetmore, William's son, were obtained by examining municipal building records. On March 17, 1881, as sole owner, he filed for an application to install an elevator at 59-61 Pine Street. On the application the building is described as a single, 5-story, brick office building with a flat tin roof. The structure measured 56 feet wide and 68 feet deep, identical in size to the structure or structures depicted on the Perris map. The depth of the brick wall foundation was listed as 10 feet below the curb line (Department of Buildings, Alteration Application 274, 1881).

d) 58 Wall Street

Throughout this period the main portion of the 4-story structure at 58 Wall Street, evidently built in 1835, did not undergo any alterations (see Figure 27). Improvements, however, were made to the rear extension between 1857 and 1891. On the 1891 Bromley map, a 10-foot wide by 14-foot deep addition was added to the northwest corner of the rear extension (see Figures 20 and 26). On the 1894 Sanborn map, the addition is covered by a skylight (Sanborn-Perris Map Company 1894). At this time it is not known if the alterations were made by John Warren, the owner of the lot prior to 1886, or by George P. Wetmore, the succeeding owner, between 1886 and 1891.

The western edge of the addition evidently did not extend beyond the western property line of 58 Wall Street. Two reasons for this are possible: the adjoining lot was owned by someone else (which would mean the addition was built prior to 1886); and/or construction in this area would have demolished the large cistern (Feature 10, located southwest of the privy), which was still in use at this time. In any event, the addition did extend over the area in which a rectangular stone privy was found (Feature 8, see Section V). Construction of the addition may have resulted in the destruction of the upper portion of the feature. As noted earlier, the feature appears to have been abandoned decades earlier in the late 1830's.

As part owner of the lot at 58 Wall Street, George P. Wetmore altered the storefront of the main structure at 58 Wall Street in April of 1899. On the Department of Building's application, the office building is listed as 4 stories high with a 10-foot foundation (Department of Buildings, Alteration Application 853, 1899).
e) 69 Pine Street

At the start of this period, the early nineteenth-century warehouse at 69 Pine Street continued to be leased to merchants. Later in the century, the building was converted to office space with a restaurant located on the ground floor.

Based on cartographic sources, there do not appear to have been any major additions made to the structure during the period. As represented on the 1891 Bromley atlas map (Figure 26), the dimensions and configuration of the main structure and the rear addition are identical to what was depicted on the 1857 Perris map (see Figure 20). On the 1894 Sanborn-Perris map, the early nineteenth-century structure is again represented with the same dimensions, and is 5 stories high. Tax records for the entire period show little change in the property's assessed value (see Appendix A).

The building is mentioned in an application for the alteration of an adjacent building filed with the Bureau of Inspection of Buildings in the Fire Department on March 24, 1882. In the application, William C. Schermerhorn, the owner of the 67 Pine Street lot, proposes to raise the side walls of the structure to the height of the peak roof and to install a flat roof. The applicant states that the roof of the building at 69 Pine Street had already been altered from a peak to a flat roof (Fire Department, City of New York, Bureau of Inspection of Buildings, Statement of Specifications No. 403, 1882).

3) Municipal Utilities

Throughout the last third of the nineteenth century, the four structures at 56-58 Wall Street and 59-61 and 69 Pine Street were connected to municipal water and sewer systems. The location, size, and length of water mains and sewers are depicted on the 1891 Bromley map (see Figure 26). Although the on-site disposal of human waste apparently ended before 1860, rainwater runoff from structures and courtyards was being directed to cisterns and overflow drywells by a system of leaders, gutters, and below-grade lead pipes. The archeological remains of the system were uncovered within the open courtyard of the 56 and 58 Wall Street lots. The analogous systems in the Pine Street lots, if they existed at all, appear to have been totally demolished by subsequent construction activities.
6. The Twentieth Century
   a. Introduction

Throughout the early twentieth century and up to the present, Wall Street has remained the seat of the nation's finances and a symbol of the extremes of urban development. The financial district, which dominates lower Manhattan, continues to be a center for both national and multinational corporations, banks, and financial institutions.

The physical concentration of these services in the area would not have been possible without two developments: (1) the consolidation of small lots into larger parcels of land; and (2) the construction of multistoried skyscrapers. The second would not have been possible, of course, without the advent of steel-framed modern architecture, served by elevators, and the first continues to this day, as is evidenced by this project. A quick examination of the 1905 Sanborn map readily shows the joined parcels and the remaining narrow original 25-foot wide lots at that time (see Figure 28).

Throughout this period, both Wall and Pine streets were lined by office buildings, the bottom stories of which were devoted to retail commercial and food services. The two tallest buildings ever built within the study area contained 33 and 26 stories. At the same time, however, other lots within the 60 Wall Street study area never contained buildings taller than 5 stories. The City Services Building, also known as the 60 Wall Tower and located at 70 Pine Street, dominated the eastern end of Pine Street. A pedestrian walkway above street level connected the City Services Building with the 60 Wall Street building on the south side of the street.

Within the study area, the 33-story building at 52 Wall Street (Lots 12, 13, 19, and 19½) was designed by the architectural firm of McKim, Mead and White and was owned by the National City Bank Corporation (now the Citibank Corporation) located at 55 Wall Street. The foundation for the steel frame and concrete structure, which spanned the full width of the block, was placed on concrete footings set on bedrock. Construction of the 403-foot high fireproof office building was started in 1927 (Department of Buildings, Application for New Building 128, 1927; Sanborn 1930).
FIGURE 28. The study area block as it appeared on the 1905 Sanborn Insurance Company Map (1905: Vol. 1, Plate 6).
Construction of the office building at 60 Wall Street (Lot 7) started in 1903. Designed by architects Clinton and Russell, the building was composed of two sections: the Pine Street portion of the structure was 26 stories high, whereas the building fronting on Wall Street was only 14 stories (Department of Buildings, Application for New Building 650, 1903; see Figure 29).

By the end of the 1920's, the project area had undergone yet another phase of construction activity similar to that which had occurred in the early nineteenth century, as the structures deteriorated or were judged to be obsolete. With the exception of the structures at 56-58 Wall and 59-61 Pine Street, the oldest building on the block dated only to the late 1880's.

Throughout the boom-and-bust economic cycles of the mid-twentieth century, there was apparently no major construction in the study area. As is apparent in Figure 30, an aerial view of lower Manhattan, by the early 1960's the buildings in the project area had been visually obscured and dwarfed by adjacent structures.

The start of the most recent construction phase at 60 Wall Street began in the early 1970's, with the demolition of the structures on the lot and the unveiling of plans for a new skyscraper to occupy the entire parcel (see Figure 31). Not surprisingly, the first structures demolished were the conglomeration of late eighteenth- and early nineteenth-century buildings on Lot 10 and the nine-story building on Lot 11, erected in 1886.

b. The Project Area

1) Property Ownership*

a) Lot 10: 56-58 Wall Street and 59-61 Pine Street

As noted in the previous section, during the final quarter of the nineteenth-century, the Wetmore family consolidated ownership of the lots and structures at 59 and 61 Pine Street and 56 Wall Street. George Wetmore and Edith C. Iselin were part owners of the property at 58 Wall Street between the years 1886 and 1901.

On April 27, 1899, Wetmore and Iselin filed an application with the Department of Buildings to improve the existing building at 58 Wall Street, described as being four stories high with a flat roof and housing a store and offices (Department of Buildings, Plan No. 853, 1899). When the proposed work was disapproved by the Department of

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*For lots in which archeological resources were found.
FIGURE 29. Portion of the 1916 Bromley map showing the study area block (Bromley 1916: Plate 1).
FIGURE 30. Portion of a 1963 aerial photograph which includes the project area within the intensely developed financial district (Fried and Watson 1980: Plate 8). The 60 Wall Tower building (see arrow) was located on the uptown side of Pine Street directly across from the study area.
FIGURE 31. Photograph of model for new building to be erected on the 60 Wall Street site (Goldberger 1984).
Buildings, Wetmore and Iselin decided to raze the structure rather than to undertake the improvements required, which evidently were not economically justifiable. Demolition occurred sometime prior to September 1901.

Subsequent to the demolition of the building at 58 Wall Street, the eastern 12 feet of the lot (and the adjacent parcel to the east at 60 Wall Street) were conveyed to Thomas H. Hubbard by Edith C. Iselin, and afterward by Hubbard to the 60 Wall Street Corporation (New York County Deeds, Liber 74: 497; 78: 109). The Hubbard conveyance included all of Lot 7, which at that time consisted of 60-62 Wall Street and 63-67 Pine Street. Acquisition of the strip of land from Lot 10 created a straight western boundary for the owners of Lot 7, and its value for the developers is self-evident. The Sixty Wall Street Corporation constructed a 26-story building on the north side of the lot and a 14-story building on the Wall Street side of the lot in 1903. A boundary line agreement between Wetmore and 60 Wall Street Corporation was recorded in 1904 confirming the eastern property line (New York County Deeds, Book 84: 386; Sanborn 1905; see Figure 28).

In September of 1901, George P. Wetmore filed an application at the New York City Department of Buildings to alter the existing building at 56 Wall Street and to develop the strip of ground formerly occupied by the structure at 58 Wall Street. As will become apparent in the remainder of this report, this most recent construction phase amounted to the single most pervasive and destructive impact on archeological resources located on the Wall Street side of Lot 10. Alteration of the main building included the construction of an "annex" 15 feet wide and 52 feet deep to the east side of the existing 5-story building. Plans for the work note that both the main structure and the annex contained a basement, but not a cellar. The depth of the foundation wall was 8 feet below the curb on the east side of the lot and 12 feet on the west side. A cross-sectional drawing indicates that although the foundation extended from 8 to 12 feet below the curbline, the floor of the basement was less than 5 feet below the curbline. These figures apply to both the annex and the main structure.

Alterations to the rear extension to the main structure at 56 Wall Street consisted of removing the upper stories (the number of which is unknown) and adding a 10-foot wide by 51-foot deep addition to the east. According to a site plan, the rear extension was to be 2 stories high, with a basement but no cellar. The remainder of the lot, an approximately 14-foot wide bay situated along the east side of the property, was to contain a 1-story addition, and was to be "floored over and roofed ... making a continuous office from Wall Street to Pine Street" (Department of Buildings, Alteration Application and Plans 2165, 1901). As a result
of this construction, the entire surface area of the parcel was, for the first time, covered by at least a single story of superstructure.

According to the application, the two 5-story warehouse buildings built at 59-61 Pine Street in 1816 were not affected by the construction work. The site plan further states that the building(s) did have a cellar and basement, a fact which is not indicated on the 1916 Bromley map.

Interestingly, the plan indicates that a "new corridor" was to be built linking the rear extension of the building on Wall Street to the structure on Pine Street. Apparently the corridor extended through the Pine Street building. The "thoroughfare hall" on the Pine Street side of the lot is in the same location and is of the same width as the apparent hallway shown on the 1857 Perris map (see Figure 20; Department of Buildings, Alteration Application and Plans 2165, 1901).

The 1916 Bromley map graphically represents the details noted on the site plan of the construction application (see Figure 29). The map, which lists the lot as containing offices, also indicates that the 1-story addition built east of the rear extension on 56 Wall Street contained a basement. By 1916, part of the 2-story rear extension on 56 Wall Street had been raised by 1 story. No depiction of the hallway appears on the map for the building fronting on Pine Street, but the elevator installed in 1881 is located in what would be the hall's right-of-way.

The redesigned structure(s) continued to be leased to retail stores (in the basement level), insurance firms, and law offices during the first quarter of the twentieth century. Between 1914 and 1928, Lot 10 was sold by George P. Wetmore to the 60 Wall Street Corporation, and was leased by the Commercial National Bank and Trust Company of New York (Bromley 1930). As noted on a Department of Buildings application filed in September of 1928, the store(s) located in the basement of the structure at 56-58 Wall Street were removed and the space converted for unspecified banking purposes. Interestingly, the application also notes that upward of 250 people worked in the building. Additional improvements included a new elevator, new plumbing throughout the structure, the rearrangement of partition walls, and the installation of a legal size enclosed fireproof staircase (Department of Buildings, Alteration Application No. 2092, 1928).

The general plan and extent of the 1901 alterations in the rear northern portion of 56-58 Wall Street and 59 Pine Street can be seen in Figures 37, the archeological site plan for Lot 10. The rear portion of Lot 10 (the former location of the rear extensions and courtyards to the
buildings at 56-58 Wall Street) consists of three long narrow bays. Along the west boundary of the lot was a 13.5-foot wide bay corresponding in width to the size of the pre-1857 rear extension. The interior "thoroughfare hall" noted on the alteration plans of 1901 was situated a few feet above ground level. Located along the plastered and painted walls of the hallway were electrical outlets. The central and eastern bays, which measured 10 and 13 feet wide, respectively, encompassed the former courtyard area between the rear additions as depicted on the 1857 Perris map (see Figure 20). Interestingly, no evidence was found of the rear extension to the structure formerly located at 58 Wall Street. Apparently, the 1901 construction phase obliterated all remains of the building. (Additional details and the impact of this construction on particular archaeological deposits will be discussed in Section V.)

The removal of the demolition fill from the north side of Lot 10 (formerly 59-61 Pine Street) confirms a number of statements made in the 1901 application. The construction resulted in few impacts to the former warehouse structures. Excavation also confirmed the existence of approximately 12-foot deep cellars beneath both of the structures. In order to extend the hallway through the building, the builder leveled the rear south foundation wall and an area adjacent to it to the south to the depth of the Wall Street side of the lot. Finally, the excavation of the recent fill uncovered a large storage bank vault which occupied the majority of the cellar and first floor of the former structure at 61 Pine Street. At this time it is not known when the vault was constructed. The vault was constructed of steel-reinforced concrete, with its foundation extending to the base of the cellar (see Figure 37).

b) Lot 24: 69 Pine Street

At the turn of the century Lot 24 was owned by Isidore S. Korn, a widower, and Max S. Korn. On July 11, 1905 the lot was conveyed to the City Real Estate Company for the stated price of $100.00 (New York County Deeds, Liber 91: 421). A few months later, in September of 1905, the City Real Estate Company sold the lot to the Sixty Wall Street Corporation for the same price (New York County Deeds, Liber 96: 237).

Throughout this period, the structure on the lot continued to be leased to commercial establishments serving the financial district. In the early part of this century, a restaurant or coffee shop was located on the premises. On the 1916 Bromley map, the lot is listed as an "ex buffet" (see Figure 29). During the excavation of the basement, fragments of hotel and institutional china were noted in the demolition fill.
The full range of occupants and types of businesses residing in the structure during this period will not be detailed in this report. Rather, an attempt was made to determine whether any alterations or major construction occurred during this time period which may have impacted any extant archeological remains.

Between 1894 and 1905, the 5-story warehouse building, evidently constructed in the third decade of the nineteenth century by members of the Jones family, was either demolished and a new structure erected on the lot, or had its three upper floors removed. The 1905 Sanborn map depicts the structure as covering all but a 5-foot wide strip of land along the south boundary of the lot (see Figure 28). The "ex buffet" represented on the 1916 Bromley map was a 2-story building, evidently without a basement (see Figure 29).

As will be described in Section V of this report, when cleared of approximately 6 to 8 feet of demolition fill, an open cellar with a concrete floor was uncovered in Lot 24. The cellar extended the full length and width of the lot, including the 5-foot deep strip of ground along the southern boundary. Three brick piers set on concrete footings were located along the line of the southern facade of the former rear addition to the main structure. Based solely on their absence on the 1916 Bromley map, it would appear that both the cellar and concrete floor were installed after this date. However, the construction phase may have occurred earlier (prior to 1905) in conjunction with the removal of the upper stories of the building. At about this time, ownership of the lot did pass to the Sixty Wall Corporation, the owners of the lot adjacent to the west (Lot 7). The demolition of the upper stories was probably part of a major alteration and/or was associated with the construction of the new building on Lot 7.

2) Municipal Services

Throughout this period, all structures in the project area were served by modern utilities and connected to municipal water and sewerage systems. As the entire surface area of each lot was covered by superstructure, any new construction, such as that which occurred on Lot 10 in 1901, was done within city regulations. Until the major alteration of the structures at 56-58 Wall Street was carried out in 1901, rainwater runoff continued to be drained on-site. The water was directed to cisterns, drywells, and an adapted well, originally constructed in the late eighteenth century.
D. Summary and Conclusions

1. Introduction

The main documentary research effort of the stage IB/III cultural resources work has attempted to establish complete title chains and lists of occupants for those study area lots in which in-situ cultural material was found. To substantiate the documentary record where pertinent, the writer has integrated archeological evidence of architectural developments and infrastructural improvements into the preceding narrative.

Examination of primary documentary sources has concentrated on deeds, tax records, directories, selected wills, newspaper articles, and photographic and cartographic sources. The evidence derived from the archeological investigation of the study area has also provided very detailed and specific information about the development of this particular part of the city. Data were recovered on a wide range of topics, including the introduction and expansion of municipal utilities (i.e., water supply and the disposal of waste) on particular lots and the manner and degree to which each parcel was developed over its 300-year history.

The preceding narrative is not, of course, definitive, but it is a sizable first step in the interpretation of the cultural history of the site. The documentary material examined and presented is, by design, selective, focusing on those lots in which archeological resources were recovered. No attempt was made to detail the range of individual or family holdings in the general area; nor was it considered pertinent to conduct intensive research on the numerous individuals resident in the study area at various times.

2. Summary

Within a few decades of original settlement, the northern frontier of New Amsterdam was under cultivation and in pasture. From 1653 until the end of the century, during which time the city passed from Dutch to English rule, the city proper was located south of the palisaded fortifications that extended from the Hudson to the East River. Due to pre-construction changes in the wall's design specifications, as well as the need for its continual maintenance and reinforcement, the precise site location of the wall is difficult to locate. The city defenses were usually hastily improved during emergencies, and then left
to decay. Consequently, the actual appearance of the fortifications within the Wall Street study area at any particular time in history is at present unknown.

By the mid-1680's the city was in the early stage of expanding beyond the confines of the former Dutch trading post. The undeveloped land immediately adjacent to the defenses, to the south (the maneuver grounds) and to the north, was in the process of being subdivided and improved as the colony's population and the value of land outside the wall increased.

The dimensions and boundaries of the newly created blocks along the north side of Wall Street were, for the most part, established by the late 1680's. By this time, the north and south lines of Wall and Pine streets, respectively, had been surveyed. The area achieved official recognition by act of the Common Council December 8, 1683, by the establishment of the East Ward. The original description of the boundaries of the East Ward, which incorporated a large expanse of land both south and outside of the fortifications (including all the present study area), reflects the scattered development of the area:

To Begin att ye house of Thomas Lewis and ffrom thence Northward to ye house of Laurence Sluys then along ye Wall to ye Corner house of Miriam Levy and so to Thomas Lewis againe, with all ye houses in ye Smith ffloye and without ye Gate on ye South side of ye ffresh Watter.
(The New-York Historical Society 1911: 1)

With the officially sanctioned removal of the landside fortifications in 1699, a "new" part of the city was created. Factors contributing to the early growth and enhancement of the locale's value as a residential neighborhood included both natural advantages and religious and political factors. In contrast to the older part of the city, the area contained much open space. Also, the area was on a significantly higher elevation and was well drained. Throughout the first half of the eighteenth century, the undeveloped western end of the 60 Wall Street block was known as "De Peyster's Garden." Colonel Abraham de Peyster, along with Nicolas Bayard, owned much of the land along the north side of Wall Street. The land in the area sloped upward to the west, and, as shown on the 1729 Lyne Plan of the City of New York (see Figure 11), it was here that many religious groups chose to locate their churches. Within a few blocks north and south of Wall Street were Trinity Church, the First Presbyterian Church, the New Dutch Church, and (of most significance to the study area) the French Huguenot Church.

Also contributing to the importance of the area was the construction in 1699 of the new City Hall in Wall Street at
the head of Broad Street. This choice of location insured Wall Street's position as the focal point for municipal politics throughout the remainder of the eighteenth century. A portion of the land on which the building was constructed was granted to the city by de Peyster.

Throughout the first half of the eighteenth century, the city expanded northward and eastward along the East River. By 1750 all the lots within the study area appear to have been developed. Based on a variety of documentary sources, the Wall and Pine street area apparently became a wealthy French Protestant neighborhood. A survey of tax records from the years 1695 to 1733 reveals numerous French surnames. Baptismal records of the French Huguenot church also list many of the study area's occupants, including members of the DuPuy, Mambrew, and Pintard families (Wittmeyer 1968: 74, 97, 202, 254).

No doubt the Wall street area attracted a greater number of French Huguenots after the establishment of the Eglise du St. Esprit, the French Church, on the north side of Pine Street east of Nassau in 1704 (Stokes 1922: VI, 344). The origins of French influence in the area, however, can be traced to before the construction of the church and even prior to the post-1685 influx of French Huguenots as a result of the revocation of the Edict of Nantes. The land on which the fortifications were constructed in 1653 (and the Pine Street portion of the study area) was owned by French Huguenot Jean Vinge and remained in his estate until the early eighteenth century (Wittmeyer 1886: x).

Throughout the remainder of the eighteenth century and into the early decades of the nineteenth century, the Wall Street area was the preeminent residential address of the city. Spared from the effects of several destructive fires and despite occupation by the British, the Wall Street area emerged from the War of Revolution as the cultural center and political capitol of the new nation. Joining the governmental officials residing in this area of the city were lawyers, merchants, bankers, and insurance brokers.

With the establishment of the Bank of New York in 1792, the character of commercial activity in the Wall Street area began to change. Supplementing the upper-class service establishments were financial institutions that operated on a national scale. In addition to banks and insurance companies, other financial institutions found it essential to be located on Wall Street. The change to an entirely commercial area was accompanied by the consolidation of lots and the structures thereon. In cases where the former residential structures were not adapted to different uses (i.e., offices), such as along Pine Street, the residential structures were replaced with 4-and 5-story brick warehouses. This process, which started in the study area
as early as 1816, accelerated in the late nineteenth and early twentieth century and continues to this day.

3. The Landside Fortifications of New Amsterdam/New York

As already stated, no archeological remains of the landside fortifications of New Amsterdam/New York were found during this project. Prior to the late nineteenth- and early twentieth-century construction phase, however, the impact of the landside fortification on the cultural landscape of the area could be seen in the size, shape, and orientation of the parcels of land located between Wall and Pine streets (the best graphic representation of the area at this time is the 1857 Perris insurance map, see Figure 20).

Perhaps of most significance regarding the early development of the block was the fact that the landside fortifications were still standing in the initial stages of the block's residential development. Also of special importance is the contrasting way in which the "public" land devoted to the remnant fortifications was subdivided and returned to "private" ownership (i.e., the Wall Street lots) versus the Pine Street lots, which were privately owned. As part of a speculative venture by then Governor Thomas Dongan the parcels along the north side of Wall Street were laid out with a degree of uniformity. A 25-five foot wide lot that ranged from 110 to 120 feet deep was the norm for the parcels facing Wall Street. In contrast, the land within the study area along Pine Street was in the control of Jean Vinge or his heirs during the late seventeenth and early eighteenth centuries. The original lots within the study area along Pine Street vary in size from as narrow as 19 feet wide to a maximum of 34 feet wide.
IV. FIELD DOCUMENTATION AND METHODS OF EXCAVATION

A. Introduction

In general, the fieldwork for the 60 Wall Street cultural resources project was accomplished in two phases: a testing phase and a mitigation phase. The test phase excavations were accomplished in two overlapping stages. Working with large excavation machinery, the archeologists' first goal was to systematically remove the fill resulting from the demolition of the most recent structures on the lots and to verify the location, extent, and depth of disturbance for each area within the project area that the Stage IA cultural resource survey had determined to be most sensitive for the presence of cultural remains (HCI 1984: 43). After these relatively small, confined areas were examined, the process of clearing modern demolition fill from the much larger areas of secondary sensitivity was begun.

Excavation invariably started near the rear of each lot (i.e., the center of the block) and proceeded either north or south toward Pine or Wall streets, respectively. The removal of the fill was monitored by the field director and crew chief. During this phase of the fieldwork, a small team of excavators shovel-scraped clear the areas uncovered by the backhoe, taking care not to disturb intact architectural elements. Following up the backhoe usually required the removal of from 3 to 6 inches of fill by hand. At one point, one bulldozer and two 190-horsepower backhoes, with a maximum 12-foot reach, and were employed to remove and stockpile the demolition fill. No backdirt was removed from the site inasmuch as the owners of the property did not have excavation permits. Accumulations of backdirt were placed on lots for which no tests were planned or undertaken.

The second stage of the testing phase was started as the areas of secondary sensitivity were cleared in individual lots. Once in-situ archeological features were uncovered, controlled archeological tests were initiated in three lots: Lot 10, 24, and 25. Indeed, the process of clearing the modern demolition fill continued throughout the entire testing phase. Removal of the large volume of demolition fill from the selected portions of the study area which were determined to contain potentially identifiable archeological resources required a tractor-tread backhoe with a 3-cubic yard bucket and a maximum reach of 20 feet.
The goal of the mitigation phase was to excavate and record completely the cultural resources identified in the previous phase. Controlled excavations were undertaken in only two parcels; Lots 10 and 24. During the mitigation phase, those portions of the study area that were found not to contain in-situ archeological resources were backfilled. With the exception of a single backhoe, all large excavation machinery was moved off the area. The only unconventional piece of equipment employed during the mitigation phase was an air-powered jack-hammer, needed to remove structural remains that partially blocked or hindered access to archeological remains.

### B. Provenience Controls

Owing in part to the extensive architectural remains uncovered after the removal of the recent demolition debris, a single horizontal grid system was not imposed over the site. Rather, all archeological tests units were laid out in relation to extant walls and located on a surveyed plan of the lot (refer ahead to Figures 37, 38, and 45). Individual lot plans were also located on the overall site plan (refer ahead to Figure 34). As such, individual excavation units were not of a standard size, but varied in dimension in order to yield profiles and cross sections of architectural and archeological features and associated strata.

Prior to the initiation of fieldwork, absolute vertical and horizontal control markers were established at the site. A site datum for both horizontal and vertical controls was located on the southwest corner of a 1-story addition to a structure that fronts on Pearl Street and located along the east central portion of the lot. A single secondary transit station, tied into the site datum point, was also established in the south central portion of the lot to provide uniform elevations during the excavation and to cross-check measurements. All measurements to survey individual lots and to produce a contour map of the study area were taken from this transit station. Measurement was taken at intervals of 10 feet from the transit at every 10 degrees. All vertical measurements were taken in relation to a datum plane of 21.4 feet above mean sea level.

To control vertical measurements, the archeologists arbitrarily established a temporary datum point near each excavation unit. All measurements for plan views, profiles, and vertical stratification were taken from a handheld, leveled line attached to the temporary datum point. All temporary datum points were then surveyed in relation to the transit station and site datum.

The present surface elevations of the lot are generally reflective of the area's geologic structure (see Section II)
and range from a high of 23.5 feet above mean sea level in the northwest corner of the project area to a low of approximately 15.5 feet in its southeast corner, a drop of roughly 8 feet in elevation.

C. Excavation Procedures

All excavation, with the exception of the removal of the modern demolition fill, was accomplished by hand. All hand-excavated soil was screened through 1/4-inch steel mesh. For strata that obviously represented disturbed or secondary deposits, only samples of construction and waste materials (i.e., brick, slate, mortar, building stone, and coal) were retained. Other materials recovered in these and all primary deposits were fully collected. All cultural material retained in the field was placed in labeled bags and transported to the project laboratory on a regular basis. Bag labels included provenience information as recorded in the field catalog.

Excavation was conducted by following observable stratification and by changes in the soil's color, texture, and compactness, and by concentrations of associated cultural debris. Most often these distinctions involved a simple change in the color or type of soil. As will be discussed in later sections of this report, no site-wide stratification was observed, and all archeological deposits recovered were associated with features that intruded into naturally deposited, culturally sterile subsoil. The fill within the interior of each feature was usually excavated completely in half-section, and most associated builders' trenches were either sampled or fully excavated.

D. Field Recording

The documentation of the fieldwork phase of the 60 Wall Street archeological project produced five basic types of records: (1) a narrative description; (2) a field catalog; (3) provenience sheets; (4) a photographic record; and (5) scaled drawings, consisting of plan views, profiles, and cross sections of excavation units and portions of lots.

A narrative-style description of each day's activities was maintained by the field director and by the crew chief. In addition to a general description and preliminary interpretation of ongoing test units, these field notes also commented on daily weather conditions, the activities of particular personnel, and any visitors to the site. These journals were not rigorously maintained during particularly busy periods, especially during the mitigation phase, when the field crew was directly supervised by the field director. At that time, a considerable portion of the supervisor's attention was devoted to assisting with the excavation, screening, and field recording.
Throughout the fieldwork phase of the project, a field catalog was maintained. All entries made to the field catalog regarding a particular excavation unit were the responsibility of the crew member conducting the excavation, regardless of his or her level of experience. For each archeological context, the following set of information was entered in the catalog:

CATALOG NUMBER. A consecutive number starting at number 1.

LOT NUMBER. As designated by property ownership in 1916.

EXCAVATION UNIT. Alphabetically designated within each lot in order of excavation, e.g., 24-A ... 24-E, 10-A ... 10-MM.

FEATURE NUMBER. All features--i.e., wells, cisterns, privies, and soil discolorations--were numbered sequentially across the entire site as they were uncovered. The architectural remains of the most recent structures within each lot were not designated as features.

STRATUM. Stratigraphic designations consisted of a Roman numeral given to each visible layer uncovered during excavation and were recorded consecutively within each excavation unit--i.e., I, II, III, ....

LEVEL. Arbitrary levels within a stratum were numbered consecutively--i.e., I-1, I-2, I-3, ....

DEPTHS. A series of opening and closing depths were taken from the excavation unit's temporary datum point for each stratum or arbitrary level within a stratum. All measurements were made in feet and tenths and hundredths of feet and noted on the provenience sheets or on the associated drawing. Only the minimum and maximum opening and closing depths were recorded in the field catalog.

SOIL DESCRIPTION.

MUNSELL COLOR CODE.

DATE.

COMMENTS.

Bulk soil samples (for soil, chemical, and flotation analysis) were given the same catalog number as the stratum or level from which they were taken. For those catalog numbers which refer to field drawings rather than to archeological contexts, some or all of the preceding
information was recorded in addition to the type of drawing—i.e., plan view, profile, or cross section.

The information contained within the field catalog was entered into a computerized data base and updated daily. The field catalog records have been incorporated into a project catalog which is reproduced in full in Appendix F. A more detailed description of the project catalog, which serves a particular purpose, is given in Section VI.

All information pertaining to a particular stratum or level was recorded on a three-part, three-color, carbonless provenience sheet, each of which was given a unique catalog number. As the forms were completed in the field, the third copy of the record was sent to the laboratory with any retained cultural material. The second copy of the record was placed in a file folder for use by the project supervisors and the excavators of a particular unit. The first part of the record was inserted into a loose-leaf notebook in the possession of the field director. Figure 32 is an example of this provenience sheet.

Every field drawing, whether it was a plan view, a profile, or a cross section of an excavation unit, was given a unique number and listed in the field catalog. Plans and cross sections of lots were also given unique catalog numbers. All measurements for field drawings were taken in relation to the excavation unit's temporary datum point using an engineering scale of feet and tenths and hundredths of feet. In general, plan views and stratigraphic drawings of excavation units were made at a scale of 1 inch to 1 foot. Archeological north was arbitrarily decided to be in the direction of Pine Street, the most northerly boundary of the study area.

Photographic documentation of the fieldwork included 35-mm. black and white prints and color slides. All formal photographic records of archeological deposits and features included scales, range poles, and a north arrow. Provenience information was provided on a menu board for each photograph.

E. Scientific Samples

The analysis of soil from historic sites has proven to be a valuable indicator of past human activity and has also been recognized as an important aid in the conservation of archeological specimens (see Grossman 1982: Vol I, II-86; Vol. II, A-1). Data on lot usage and general site interrelationships are suggested by plotting pH values and the distribution and relative concentrations of various forms of trace elements—such as, calcium, magnesium, phosphate, and potassium—which correlate with particular activities. For instance, high levels of phosphate are derived from the
FIGURE 32.

PROVENIENCE SHEET

Site: ___________________________ Catalogue #: __________

Excavation Unit: Block: ___________________________ No.: __________

Feature No.: ___________________________ Date: __________ By: __________

Location of test: ________________________________________________________

Stratification: NE: NW: SE: SW:

Depth from surface: Top: __________________________________________________

Bottom: _______________________________________________________________

Description of soil & Associated features:

Extent of stratum (refer to plan view):

Types of Material Remains:

Associated recording: Profile #: Plan #: Photograph #:

CATALOGUE SHEET -- HISTORIC CONSERVATION AND INTERPRETATION INC.
P.O. BOX 111, RD 3
NEWTON, NEW JERSEY 07860 (201-383-6355)
deposition of organic wastes, and may thus indicate an area where animals were penned or housed, or the location of a kitchen midden.

Unfortunately, these types of analyses have not produced unequivocal results, even when the tests have been applied to areas of known activity—e.g., the site of a barn, or of a blacksmith shop. The chemical analyses of soils have been used primarily as corroborative evidence substantiating patterns of activity derived from the analysis of artifact distribution.

With the exception of the demolition fill, the stage 1B test phase excavations at 60 Wall Street did not uncover any site-wide strata or broad scatters of cultural material associated with earlier occupants. As a default sampling design, soil samples were taken from most strata for soil chemistry and flotation analysis during the testing phase of the project. In light of the nature of deposits encountered at 60 Wall Street—i.e., generally secondary fill or primary deposits associated with features—it was felt that the chemical analysis of soils would be of limited usefulness, and the requisite expenditure of time and money for the analysis of the samples was not warranted. Therefore, a modification of the sampling strategy was made during the mitigation phase. Samples, primarily for the recovery of small bone and botanical specimens, were taken only from those strata thought to represent primary deposits. (Attendant problems with the sample will be covered in Section VI.)

F. Infield Conditions and Constraints

There were few infield constraints during the excavation. Since the owners did not have construction permits, backdirt could not be removed from the site, and the placement of backdirt did become a logistical problem during the test phase excavations.

Inasmuch as the 60 Wall street site was on existing land (as opposed to filled, or made, land), the problems associated with water infiltration into excavated areas were nonexistent. The site was extremely dry, in contrast to other archeological projects in progress in the city on filled or made land at that time. Due to the time in which the project was scheduled, as well as to a relatively dry summer, very little fieldwork time was lost to rain or to the construction of temporary shelters. Makeshift shelters composed of pvc tubing and large plastic sheeting were employed.

Throughout the archeological fieldwork period, the 60 Wall Street property was surrounded by an 8-foot high plywood and chain link fence erected by the owners of the
property prior to the start of fieldwork. A contract with a 24-hour on-site uniformed guard service provided additional security. This service was maintained during the entire fieldwork phase of the project, including an approximately 3-week period between the end of the testing phase and the start of the mitigation phase.

In contrast to many of the recent archeological projects conducted in New York City, the 60 Wall Street site project was fortunate in that it was not looted of archeological resources or field equipment during the fieldwork session. A particular effort was made to downplay or minimize the importance of any in-situ archeological remains and not to advertise the findings, especially to persons with access to the site or with knowledge of the day-to-day activities on the site. Thefts of the crew's personal property did occur, despite precautions.
V. RESULTS OF ARCHEOLOGICAL TESTING

A. Introduction

The following section of the report is a description of the archeological fieldwork conducted at 60 Wall Street between April 30 and August 11 of 1984. As stated previously, fieldwork was accomplished in two phases: (1) a testing phase, which extended over a 9-week period that began April 30 and ended June 28; and (2) a mitigation phase, which extended from July 16 to August 11.

Archeological investigations of the project area were designed with two objectives. The first goal (testing phase) was to examine systematically those portions of the project area which, based on the preliminary documentary research effort (HCI 1984), were evaluated as possibly containing undisturbed archeological deposits dating before the most recent construction episodes. Once in-situ cultural resources were identified, the next stage was to determine the depth, extent, and character of the archeological and architectural deposits. The second goal (mitigation phase) was to excavate and record completely the cultural resources identified in the previous testing phase. The following text gives a brief overview of the testing phase and a detailed description of all cultural resources identified and examined during the mitigation phase of the fieldwork.

B. Testing Phase

1. Introduction

Test excavations were proposed and undertaken in eight of the twelve parcels within the study area based on their potential for containing undisturbed cultural resources. Although the results of the test excavations will be presented in numerical order by lot starting with Lot 3, in actuality those portions of the project area determined to be the most sensitive (i.e., all "A" areas in Figure 33) were examined first and provided important insights for subsequent excavations in less sensitive portions of the study area.
Based on a variety of documentary sources examined prior to the start of the testing phase, the total area of each parcel (and portions thereof) in the project area was ranked into three categories according to its potential for yielding undisturbed archeological resources. For this purpose, the records of the New York City Buildings Department were of primary importance in determining the impact of the latest construction within individual parcels. Additional corroborative evidence was obtained from a series of soil borings undertaken by an independent contractor before the start of documentary investigations. This research predicted the potential for a wide variety of cultural resources within selected portions of the project area, including, in particular, possible elements of the late seventeenth-century landside fortifications of New Amsterdam and New York. Despite an unparalleled level of architectural development, in a few of the lots within the study area the latest construction activity did not appear to have obliterated all evidence of previous cultural activity. Rather, it had either incorporated elements of an earlier structure or utilized different portions of the lot. A graphic representation of the archeological potential of the project area can be found on Figure 33, reproduced (with some additional information from the testing phase) from the documentary study (HCI 1984: 43).

An "A" area was defined as containing the greatest potential for undisturbed cultural resources dating prior to the most recent construction episode on the lot. These areas have served as either backyards, alleyways, or air and light shafts, and had undergone relatively little subsequent construction. (The configuration of lot lines on the map is based on the real property ownership as of 1916. A total of four parcels containing potential "A" areas were located within the study area: lots 5, 10, 11, and 25. As shown on Figure 33, the total area characterized as "A" areas amounted to approximately 450 square feet, or less than 1.0% of the project's total area (56,663 square feet). Each "A" area also represents a relatively small percentage of the total area of individual lots and was generally located in the rear, mid-block portion of the study area.

"B" areas were defined as those portion(s) of the lots that have been disturbed to the depth of a single basement or cellar, approximately 6 to 10 feet below the surface, but which retained a potential for deep, areally limited, intrusions into subsoil. Examples of such deposits are trash pits, post holes, and the undisturbed lower courses of deeper lying earlier foundations and associated construction trenches. Another type of feature would be the remains of water management and waste disposal systems. Examples of these types of features include the lower reaches of wells, privies, and cisterns. This designation was based on apparently reliable documentary evidence including information
from a series of soil borings. A total of six parcels contained "B" areas: lots 3, 4, 10, 11, 24, and 25 (see Figure 33). The most recent structures on these six lots were all less than 12 stories high. The total area classified as "B" areas amounted to approximately 59.2% (33,537 square feet) of the study area (see Figure 33).

A number of "B" areas were difficult to categorize owing to either conflicting or a lack of documentary evidence regarding the extent and depth of the below-grade disturbance associated with the most recent structure. Based on the dimensions of the last building on the lot, including the height of the structure, these areas were designated as "B-1" areas on Figure 33 and consisted of the rear portion of Lot 3, the majority of Lot 5, the Wall Street side of Lot 7, and the southern portion of Lot 11.

A "C" area was defined as an area unlikely to contain any potentially identifiable cultural resources dating prior to the most recent structure on the lot. In all probability, in "C" areas the construction of cellars and subcellars extended deeper than any previous archeological deposits and architectural remains. A total of 40.0% (22,676 square feet) of the site was characterized as "C" area, including the northern portion of Lot 7 and all of Lots 12, 13, 19 and 19½ (see Figure 33).

In contrast to what is shown on Figure 33 (and stated in the documentary study), the "A" area within Lot 11 is not located entirely within the parcel. Part of the narrow strip of ground that was originally thought to be in Lot 11 was actually situated in Lot 10. This error was based on a misinterpretation of the cartographic representations of the parcels in the late nineteenth and early twentieth century (see Figures 20, 26, and 28), which depict the area as undeveloped.

For a variety of reasons, not every square foot of ground defined as having a potential for containing cultural deposits was cleared of the demolition fill and examined physically. Once the depth of the most recent disturbance was determined in a particular parcel, the potential of the remaining untested area was reassessed, based on the documentary record and on the results of test excavations in other lots. As will become evident, the ongoing analysis of the site's potential was aided by the examination of the "A" areas, which quickly established that there were no "undeveloped" areas on the site. These areas, which had undergone just a subsurface development and functioned as either air or light shafts, were not readily identifiable on cartographic sources. In addition to providing examples of sterile subsoil, examination of the "A" areas also determined that, aside from the fill associated with the demolition of the last structures on the site, there were no
broad deposits of unrecorded fill on the block. Early in the testing phase, it was realized that the types of resources preserved on the site would be limited to features that were excavated deeply into subsoil. Finally, based on these findings, the archeologists determined to examine as much of the "B" areas as possible.

2. Test Descriptions and Results

a. Lot 3 (70 Wall Street)

As presented in the stage IA documentary report (HCl 1984), evidence for the presence of a deep cellar and subcellar precluded testing in the southernmost 92 feet of Lot 3. The rear, northern 9 feet of the lot, however, was evaluated as being potentially disturbed only to the depth of a single basement, estimated to be between 6 and 10 feet below the surface. With the exception of the northeast corner of the lot, the narrow area was designated as a "B" area (see Figure 33).

A backhoe test was excavated in the northwest corner of the lot to a depth of approximately 13 feet below the present surface (see Figure 34, overall site plan). Importantly, the demolition fill continued to extend downward without uncovering any indications of a cellar floor or the base of the fill. The test was halted when the machine's maximum reach was attained.

A subsequent excavation was made in the northeast corner of Lot 3 by Raamot Associates, the foundation engineers contracted by the site's owners, to examine the foundation of the latest structure on the lot. Using a crane and clam bucket, a test was excavated to a depth of approximately 25 feet below the surface. Water collected in the excavation at a depth of approximately 20 feet below the surface. The water was neither ground- nor tidal water, but rather water being held in the subcellar of the former structure. This deep test also failed to reach the structure's deepest floor.

In summary, the last structure on the lot evidently contained a cellar and subcellar that extended beneath the full depth and width of the last structure on the parcel. Based on these findings, no additional archeological tests were made in the lot.

b. Lot 4 (68 Wall Street)

According to the documentary evidence examined for Lot 4, the entire area of the parcel contained potentially undisturbed archeological and architectural remains (a "B" area--see Figure 33). The most recent building on the lot was constructed in 1917 on a brick foundation set on a
concrete footing that extended to a depth of 12 feet below the curb line. The structure occupied the full width of the southern 79 feet of the lot. An apparent open area that measured approximately 25 feet wide and 21 feet deep was left undeveloped in the northern portion of the lot. The 1917 structure replaced a pre-1905, 5-story structure that fronted on Wall Street, and which, according to cartographic sources, occupied a greater proportion of the lot than the later building. Significantly, the cellar of the most recent structure did not appear to have extended much deeper than the basement of the previous structure. Therefore, in view of the documentary evidence, a basement depth of from 6 to 10 feet below the curb line was expected in Lot 4.

Archaeological testing in Lot 4 began along the rear north wall and proceeded in a southward direction toward Wall Street (see Figure 34). Testing uncovered an open cellar with no interior bearing or partition walls. At a depth of 11 feet below the present surface, a concrete slab floor was exposed. Removal of the 8- to 10-inch thick concrete floor uncovered a culturally sterile, reddish-brown, sandy, silt subsoil, similar to what was found in other lots. The demolition debris and concrete floor was removed by a tractor-track dozer from the northern 37 feet of Lot 4.

Evidently, although the most recent structure on the lot occupied only the southern 75 feet of the lot, the cellar continued under the rear, northern, 21-foot portion of the lot. A single steel I-beam, extending east-west across the width of the cellar, was uncovered at a depth of less than 1 foot below the surface along the rear (north) end of the lot, indicating that the rear section of the lot also contained a superstructure. Based on these findings, no controlled archeological excavations were made in the parcel.

c. Lot 5 (64-66 Wall Street)

As presented in the documentary study of the project area, Lot 5 contained a narrow 25-foot wide by 4-foot deep strip of "undeveloped" ground, or "A" area, located in the northeast corner of the parcel (see Figure 33). In contrast to this potential "A" area, the extent and depth of the disturbance associated with the most recent construction activity in the remaining southern portion of the lot were known. Therefore, the majority of the lot was classified as a "B" area. A soil boring in the south-central part of lot recorded a total of 21 feet of fill before it encountered what appeared to be a concrete slab floor. Two additional borings in the extreme northern and southern ends of the lot detected thinner deposits of modern demolition fill, in the 13-foot thick range (Raamot 1983). According to these tests, the majority of the parcel evidently contained a
cellar, whereas a small portion of the lot, the dimensions of which are unknown, also contained a subcellar.

A single backhoe excavation was made in the "A" area, the northeast corner of Lot 5 (see Figure 34). The test excavation was halted at a depth of approximately 10 feet below surface when structural elements (steel I-beams) limited the reach of the backhoe's boom. The total depth of the demolition fill and the character of the floor of the structure were not determined. An irregularly shaped area, wider than the "A" area, was excavated owing to the slumping of the loose demolition debris in the cellar. The area examined also included part of the cellar area adjacent to the south—the "A" area. Based on in-situ building elements, including items such as a wall-mounted light switch and intact marble wall panels, it was estimated that an additional 2 to 4 feet of fill still remained in the cellar. No additional attempts were made to remove the structural obstructions with a larger machine. To do so would have demolished the foundation walls to the north immediately adjacent to areas in lots 24 and 25 already prepared for controlled excavations.

Subsequent to archeological excavations, additional tests were made in the "B" area of Lot 5 by Raamot Associates, Inc. Adjacent to the southwestern, interior corner of the lot, the concrete floor of the former building was uncovered at a depth of approximately 12 feet below the present surface. Based on information from these test excavations, and also from indications of greater depths of disturbance in areas near the center of the lot, the archeologists undertook no further work in Lot 5.

d. Lot 7 (60-62 Wall Street; 63-67 Pine Street)

As presented in the documentary report, the southern part of Lot 7 was designated as a "B" area based on evidence for limited development. Although the archeologists were unable to determine what portion of the lot contained the relatively shallow basement (in the 13-foot range), an analysis of historic maps of the early twentieth century pointed to the west mid-block portion of the lot (see Figure 33). The area, which measured approximately 35 feet wide and 50 feet deep, had hosted a 3-story structure and was flanked by multistoried structures that formerly fronted on Wall and Pine streets. The area is described on the 1916 Bromley map as a "courtyard" (see Figure 29). The northern part of the lot was designated as a "C" area, based on documentary evidence and soil borings. A soil boring in the northern part of the lot cut through 30 to 35 feet of demolition fill and confirmed Building Department records, which stated that the floor of the subcellar and the foundation of the structure were placed just above bedrock.
A single backhoe excavation was made in Lot 7 in the west-central portion of the lot, the "B" area. The test was excavated to a depth of approximately 13 feet below the present ground surface without uncovering any in-situ structural remains (see Figure 34). The area beneath the courtyard, like the majority of the lot, evidently contained a cellar and subcellar. Any attempt to determine what portion of the parcel contained the shallow depths of disturbance would have required the excavation of a large quantity of fill. Based on the result of the test, no further archeological work was undertaken in the lot. (see Figure 35 for a photograph of the project area during the testing phase.)

e. Lot 10 (56-58 Wall Street; 59-61 Pine Street)

1) Introduction

As stated previously, an "A" area in Lot 10 was erroneously characterized as being located entirely within Lot 11 in the preliminary documentary study. It is shown as the northernmost portion of Lot 11 in Figure 33, measuring approximately 50 feet wide and 5 feet deep. Actually, a portion of this "A" area is situated in Lot 10 (see Figures 28 and 33). On historic maps of the late nineteenth and early twentieth centuries, this area appears never to have been developed (see Figures 26, 28, and 29). The remaining portion of Lot 10 was judged to be a "B" area, because the documentation, which included excellent records from New York City's Department of Buildings, indicated a very shallow depth (less than 5 feet) below curb level for the basement of the last structure on the lot.

2) "A" Area Tests

Test excavations in Lot 10 started in the extreme southwest corner of the central portion of the parcel and continued in an eastward direction (see Figures 33, 34, and 35). At a depth of 3.5 feet below the surface, a 19.5-foot long and 2.0-foot wide basalt ashlar foundation wall capped by a row of bluestone slabs was uncovered along the diagonal property line between lots 10 and 11 in the mid-block area (see Figures 34-37). This wall may be part of an addition to the c. 1816 warehouse built at 59 Pine Street. The full northward extent of the west wall of this possible addition was not found, as it was probably destroyed during the demolition of the structure. The east end of the foundation made a 90° turn and extended 4.5 feet to the north (not shown in Figure 34). The ashlar wall abutted a red sandstone foundation that extended in an east-west direction (see Figures 34 and 37). Including the thickness of the masonry, the ashlar addition to the warehouse measured approximately 6.5 feet deep and 19.5 feet wide.
FIGURE 35. Photograph of 60 Wall Street site during the testing phase. View is to the west, taken from an adjacent building. In the background are the mid-block excavations in lots 10 and 11. Note the irregular angles of the building foundations marking the rear property lines of lots 10, 11, 19, and 19½. Compare with Figure 34. (Photographer: Tony Masso, 1984.)
FIGURE 36. View eastward of the rear, southern part of the Pine Street side of Lot 10 (59-61 Pine Street) after the removal of the demolition debris. The rear (south) foundation wall of the c. 1816 warehouse is projecting toward the photographer (to the right of center) at a right angle to the arched brick interior warehouse wall. This foundation of the former warehouse building was cut when a narrow stone addition was added to the south. Floor joist pockets are visible above the arches in the brick interior wall. (Photographer: Tony Masso, 1984.)
Excavation to the north of this foundation extended to a depth of approximately 11.5 feet below the surface. With the removal of the demolition fill from this area, bluestone slabs, which were determined to be only 3 to 4 inches thick, were found to overlay a single course of red brick. Along the eastern portion of the basalt wall, between the layer of brick and bluestone, were the remains of an iron frame bolted into the lower stone wall, which appears to have supported a metal and glass grate. Fragments of the grate—composed of parallel rows of 3-inch wide, clear, circular, glass disks—were found in the demolition debris during the excavation of the area north of the foundation.

Along the northern base of the basalt foundation was another row of bluestone slabs, each of which measured approximately 4.5 feet long and varied in width. Although no cultural resources were uncovered beneath the lower row of bluestone paving, a line of granite footing stones were found adjacent to and north of the paving stones. Beneath the layer of stone was a culturally sterile, fine brown silt subsoil containing mica.

The "A" area situated in the west-central part of Lot 10 corresponds in size and location to a rear yard area of a structure that fronted 59 Pine Street (see Figure 20). As noted in the historic background section of this report, the warehouse addition just described was constructed after 1905 (see Figure 28). (The main structure on the lot, originally a 5-story brick warehouse, was built in 1816.)

The excavation of the demolition fill also revealed structural details of the 1816 warehouse (see Figures 34, 36, and 37). Evidently, in the course of constructing the addition or extension, the builders partially removed the rear (south) foundation wall of the warehouse. In Figure 36, the end of the 2.3-foot wide red sandstone foundation wall of the warehouse is shown in profile. Present but not immediately apparent in the photograph is a large rectangular granite footing beneath the foundation. Additional footing stones extending westward from the in-situ portion of the foundation were noted during the clearing of the demolition fill, indicating that this wall once extended across the rear width of the warehouse, as shown on the 1857 Perris map (Figure 20).

In summary, the "A" area in Lot 10, originally identified as being part of Lot 11, was disturbed to a depth of approximately 13 feet below the present ground surface. In the first decade of the twentieth century, the cellar space of the main structure (originally constructed in 1816) was expanded to the southern boundary line of the lot. There does not appear to have been a superstructure over the addition. Rather, the narrow extension increased the dimensions of the main structure's cellar and served as an air or light
shaft. In the process of constructing the addition, the stone foundation of the main building was partially removed. Remains of the warehouse foundation's granite block footing stones were uncovered. No in-situ cultural resources dating prior to the last structure on the lot were uncovered in the area.

3) "B" Area Tests

After examining the lone "A" area, the archeologists removed the modern demolition fill from approximately two-thirds of the remaining area of Lot 10, all of which was ranked as a "B" area (see Figures 33 and 34). In the course of clearing the fill, the general plan of the last structure(s) on the lot became apparent. As related in the historic background section, the in-situ structural remains, described in detail in the following section, are a mixture of late eighteenth-, early nineteenth- through early twentieth-century elements.

a) Rear Yard Area of 59-61 Pine Street

To the east of the narrow stone extension to the warehouse on 59 Pine Street (the "A" area), excavation of the demolition fill uncovered a 9-foot long by 10-foot wide area, which was bounded by brick walls on the south, east, and southwest and by stone walls on the north and northwest (see Figures 34 and 37, E.U. 10-C and E.U. 10-R). Excavation by backhoe was halted at a depth of 8.2 feet below the surface when a concrete slab floor was reached. The northern stone wall was a continuation of the red sandstone foundation of the 1816 warehouse, previously noted. The northwest stone wall, which was overlaid by a brick wall, was the ashlar foundation of the addition (see Figures 34 and 37). The relationship of these two wall segments is more clearly depicted in Figure 38, which omits much of the twentieth-century structural elements.

Most recently, this basement area was located beneath part of the "thoroughfare" or "hall" that stretched from Wall Street to Pine Street (Figures 34 and 37). Prior to the 1901 alterations of the structure, the area was covered by an extension of the main structure on the 59 Pine Street lot (see Figure 26). On the 1857 Perris map, the rear extension is connected with the addition to the structure at 56 Wall Street (see Figure 20). Numerous iron and lead pipes extending from the east and south were found in the area during the removal of the modern debris. Also, floor joist pockets were found on both the east and west walls, indicating that a crawlspace was located above the concrete (see Figure 36).
After removing the concrete slab from the area, archeologists excavated a single controlled test unit (E.U. 10-C; see Figures 34, 37, and 38) and uncovered the remains of a stone feature, designated Feature 9 (Figure 38). The northern arc of the feature was demolished by the warehouse's stone foundation and by later construction. Beside the stone feature, additional archeological deposits found in the area included the builders' trenches for the stone and brick walls bounding the area (see Figure 38). The builder's trench associated with the foundation for the warehouse has been designated Feature 27. Results of the controlled tests during both the test and mitigation phases, including a detailed description of the stratification and cultural material recovered from the feature, are given in Sections V, B and VII of this report.

To the east of the hallway, the excavation of demolition fill uncovered an area measuring approximately 23.5 feet wide and 10.0 feet deep that roughly corresponded to the pre-1901 "backyard" area of 61 Pine Street depicted on historic maps (see Figures 20, 26, and 28). (See site plan, Figure 34.) On the 1916 Bromley map (see Figure 29), a 1-story addition covered the entire area. A linoleum-tiled concrete-slab floor was uncovered beneath 6.0 feet of fill. The area was bounded on the west and south by brick walls that still retained a plaster and paint surface finish and by a hollow brick wall on the east (see Figure 37). North of the backyard area was a series of brick pillars and a concrete storage vault (see Figure 37). This space probably functioned as a vestibule to the storage vault. In addition to the lower portion of the steel door frames, in-situ features included a rubberized access ramp and the door stop (see Figure 37). The concrete floor of the vault was at a slightly higher elevation than that of the vestibule to the south.

In the course of excavating the site west of the vestibule, a crawlspace area beneath the vestibule was noted. Utility pipelines extended from the vestibule into the previously described "thoroughfare." Beneath the concrete floor of the vestibule, the crawlspace measured approximately 4 feet wide, 22 feet long, and from 4 to 5 feet high. The floor of the crawlspace, found at a depth of 8.8 feet below the surface of the lot, was covered by bluestone slabs. These slabs were similar to those encountered in the western "bay" of 59-61 Pine Street (see Figure 34). The western and southern boundaries of the crawlspace were marked by a 2.0-foot wide basalt ashlar wall that extended upward to within a few inches of the underside of the concrete floor (see Figure 38). On the north of the crawlspace were the continuous concrete and brick foundation walls of the vault. The ashlar basalt foundation wall on the southern side of the crawlspace did not extend to the eastern boundary line of Lot 10 and appears to have been
demolished during the construction of the vault or the adjacent building to the east. The surface of the easternmost portion of the crawlspace (adjacent to Lot 7) dropped sharply downward to the east.

The entire crawlspace beneath the floor of the vestibule was designated Excavation Unit 10-Q (see Figures 34, 37, and 38). Prior to the start of excavation in the crawlspace, the bluestone slabs were removed and the uncovered surface was troweled. Directly beneath the paving stones and covering the majority of the area was a culturally sterile, reddish-brown, fine silt. Near the center of the unit were two parallel rows of red bricks approximately 6.0 feet long. One foot west of the line of bricks was a roughly square-shaped brick feature (see Figure 38). The unidentified masonry, thought to be a drainage system, was designated Feature 14. Covering the interior of both portions of the feature was a black silty soot. No evidence of a construction trench was apparent adjacent to the exterior of the brickwork. (A full discussion of the feature and the associated cultural material is given in Section V, C.)

b) Rear Yard Area of 56-58 Wall Street

After removing the modern fill from the "rear yard" area of the Pine Street portion of Lot 10, the archeologists focused on the corresponding rear northern portions of the Wall Street side of the lot. The structural remains of the most recent building consisted of three narrow bays (labeled "western," "central," and "eastern" in Figure 37) that extended in a north-south direction (see also Figure 39). With the exception of the northern portion of the eastern bay, where the fill extended more than 11 feet below the present surface of the lot, the majority of the area examined contained between approximately 6 and 7 feet of modern demolition debris. The foundation walls of the most recent structure on the southern Wall Street portion of Lot 10, with few exceptions, were constructed of red brick, set on poured concrete footings (see Figure 37). Inasmuch as the most recent building probably had a wooden floor, no longer extant, careful monitoring of the backhoe was necessary to establish the depth of the demolition fill. The demolition debris in the lot was cleared to within 37 feet of the Wall Street sidewalk (see Figure 34).

As noted in the historical background section, prior to the 1901 alterations of the structure at 56 Wall Street, the structure at 58 Wall Street was demolished and the parcel was subdivided. The eastern portion became part of what was Lot 7 in 1916 (see Figure 10). The western portion, which remained in what later became Lot 10, consisted of an open courtyard and a 7-foot strip formerly occupied by the rear
FIGURE 39. View to the north of the 56-58 Wall Street (southern) side of Lot 10. Note three bays of unequal width running from north to south. In the central foreground are archeological features (Features 16, 18-21) straddling the architectural remains of the most recent structure on the lot. (Photographer: Tony Masso, 1984.)
extension of the demolished building that fronted on 58 Wall Street. (This 'courtyard' is labeled in Figure 33.)

The western bay of Lot 10 measured 12.5 feet wide and was flanked by continuous red brick walls on both the east and the west. The west wall extended the full length of the area cleared, whereas the east wall was only 58.5 feet long (see Figures 37 and 39). Floor joists for the basement extended from east to west across the bay and were set less than 1 foot above the ground on a narrow ledge built into the brick walls. Besides the architectural remains, the western bay also contained remains of the most recent utilities that serviced the structure (see Figure 37). In addition to the plaster and paint wall finish, electrical outlets were found along the walls of the bay. Cast-iron and steel pipes of various diameters were found at the interface of the demolition fill and the subsoil. Additional utility lines, uncovered during the excavation of controlled test units in the bay, will be described in Section IV, C.

The most prominent feature in the western bay was a 35.5-foot long concrete form (see Figure 37). Located along the western side of the bay, the form was 3 feet wide and had a 1.2-foot wide and 1.1-deep central channel. Extending across the channel at intervals of 10 feet were short sections of 2-inch diameter iron pipe. Identified as a "gray beam" (for a bearing wall) by the backhoe operator, the exact function of the form is unknown.

The central bay measured 8.5 feet wide (see Figure 37). In contrast to its continuous western wall, its eastern wall consisted of a series of brick piers set on concrete footings that were connected by short sections of brick wall. The piers, which measured approximately 3 feet square, were set at intervals of 10 feet. The east wall of the bay extended to within 37 feet of the Wall Street sidewalk. In comparison to the western bay, few utility lines were uncovered in the area during the removal of the demolition fill. Two branches of a 6-inch diameter cast-iron sewer line were found in the northwest section of the bay (see Figure 37). The two lines joined and extended southward 23 feet from the north brick wall of the bay, where they turned 45° to the southwest.

The third and final bay, located along the east side of the lot, measured approximately 12 feet wide (see Figure 37). Its east wall, located on the property line, extended the full length of the area cleared. In the northern part of the bay were three short sections of brick wall that extended from east to west between the brick columns and the east foundation wall (see Figure 37). No service lines were found in the area. In the extreme southern part of the bay, a 9.5-foot wide and 10.0-foot long concrete feature was un-
covered. The exact function of the structure, possibly the remains of an elevator shaft, is not known.

A total of 16 archeological features were uncovered beneath the demolition fill in the southern part of Lot 10 (see Figures 33 and 38). In most cases, the archeological remains were constructed of brick or stone. They included a one well (Feature 18), two stone privies (Features 7 and 8), two cisterns (Feature 10 and Features 19 and 20, the last two actually a single double-chambered cistern), and three features tentatively identified as drywells or overflow chambers associated with the cisterns (Features 13, 15, and 16). Additional features included four small sections of stone foundation walls (Features 21, 23, 24, and 25), two soil discolorations (Features 6 and 12), and a 39-foot long lead drainage pipe (Feature 26) and its associated builder's trench (see Figure 38).

During the testing phase, a total of 12 test units were excavated to sample the deposits associated with the features. The locations of the test units and the features are shown in Figures 34, 37 and 38. Figure 38 depicts the cultural remains with the twentieth-century structural remains removed. The location of the features within the parcel are shown schematically on Figure 33. The outline of the pre-1901 structures have been overlaid in Figure 33, graphically demonstrating that most of the features were located with the courtyard or along the rear yard of the parcel. A full description of these tests and the additional excavation units employed to completely excavate each deposit will be found in Section C.

In summary, then, the features found on the southern or Wall Street side of Lot 10 were associated with either the on-site acquisition of water, the disposal of human waste, or the containment and management of structural rainwater runoff. They ranged in date of construction from the early eighteenth through the late nineteenth century. All the features were abandoned and filled in conjunction with the construction activity of the most recent structure in 1901, the surviving elements of which have been described.

c) Pine Street Side

The northern side of Lot 10 was cleared of demolition fill concurrent with the controlled test excavations in the southern portion of the lot. Similar to what was found in the southern section of the lot, the below-grade architectural remains of the most recent structure also consisted of three bays of unequal width that extended in a north-south direction (see Figures 34, 37, and 40). In contrast to the shallow depths found in the southern part of the lot, however, the demolition fill extended to a maximum depth of
FIGURE 40. Photograph of the rear, southern part of the Pine Street side of Lot 10 (59-61 Pine Street) after the removal of the demolition fill. The view is to the south toward Wall Street. The southern ends of two of the three "bays" shown on Figure 34 are visible, defined by walls and a wall remnant, in the central and right foreground of the photograph. The ground level of the central bay was part of a "thoroughfare hall" between Wall and Pine streets. Note the joist pockets and the finished wall above the cellar level (arches in wall at left marks the cellar level). The interior foundation wall between the western (right) and central bays was demolished during excavation. A steel-reinforced concrete storage vault occupies the majority of the eastern bay (to the left, out of the picture). Arched cellar openings identical to those along the east side of the central bay were found in the demolished bearing wall. (Photographer: Tony Masso, 1984.)
approximately 13 feet below the present ground surface, uncovering a cellar level.

The eastern bay measured 23.5 feet wide (not including the masonry walls), with the majority of the area occupied by the steel-reinforced concrete storage vault (see Figures 34 and 37). The approximate size and extent of the storage vault were determined by removing the demolition fill from the central bay to the west and by an examination of a crawlspace area beneath the vault. The west wall of the eastern bay was constructed of red brick and contained arches providing access at the cellar level (see Figures 36 and 40). Including its 1.5-foot thick concrete walls, the vault measured 18 feet wide and was at least 58 feet deep. The northern end of the crawlspace beneath the vault was filled with demolition debris, which obscured its full length. Interestingly, the vault was not situated adjacent to the east foundation wall that marks the property line of the lot, but was separated from it by a space of approximately 4.5 feet. The wooden forms used during the construction of the vault's foundation were apparent in each of the brick arches (see Figure 36). No attempt was made to remove the floor of the vault, nor were any controlled tests made in the crawlspace area beneath the vault.

The central and western bays measured 10.5 feet and 17.5 feet wide, respectively, and were cleared to within approximately 1 to 2 feet of the Pine Street sidewalk. No evidence of a brick or concrete floor was found in either bay. With the exception of the southern 10 feet of the central bay, in which Feature 9 was located (see Figure 38), the entire area contained a cellar. In the process of emptying the fill from the cellar, excavators demolished the bearing wall between the west and central bays.

Although little of the brick superstructure survived the demolition of the building, some additional structural feature were evident. The floor joists for the first story extended across the full width of the central and western bays. Joist pockets were apparent in both the western and the central bay walls. Finally, two interior chimney bases were located on the west foundation wall of the western bay (see Figure 41). The later construction of the vault made it impossible to determine whether additional chimneys had been located in the eastern bay of the structure.

In summary, the excavation of a cellar beneath the c. 1816 warehouses on 59-61 Pine Street extended beyond the depth of any previous construction activity and destroyed any potentially identifiable archeological deposits. At present, there is no evidence to suggest that the cellar was installed after the construction of the building. The
FIGURE 41. View westward at the chimney foundation on the interior of the west side of the former structure at 59 Pine Street (northern side of Lot 10). Note joist pockets below finished walls. The base of the stadia rod is not at the base of the cellar. (Photographer: Leonard Bianchi, 1984.)
structure(s) (which originally included a third building on the 63 Pine Street lot) covered the majority of the 29-foot wide and approximately 80-foot long lots, leaving undeveloped a narrow strip of ground along the rear southern boundary of each lot. It was in this area that a shallow depth of disturbance and in-situ archeological resources were found.

f. Lot 11 (54 Wall Street)

1) Introduction

The most recent structure on Lot 11 was a 9-story building erected in 1886 that occupied the full 50-foot width and the southern 70 feet 6 inches of the 117-foot 6-inch deep lot. On the west side of the lot was a 16-foot wide 11-foot deep corridor that connected the main structure with a 6-story addition. The addition, situated along the northwest portion of the lot, was also constructed in 1886. The dimensions for this structure were 35 feet wide by 32 feet deep. Prior to 1916 the addition was raised to a height of 9 stories (Department of Buildings, Application for Erection of Building 660, 1886; Bromley 1916). The 1886 construction left the northeast portion of the lot undeveloped, but by 1894 this area was also covered by superstructure, which, in turn, underwent alteration in 1913 (Sanborn and Perris Map Company, 1894; Department of Buildings, Alteration Application 443, 1913, see Figures 26 and 29).

A single "A" area was identified for Lot 11, based on the documentary evidence. On Figure 33, the area is depicted as a narrow strip of ground, measuring approximately 5 feet deep by 50 feet wide, and located along the rear (north) boundary of the lot. In actuality, and as noted previously, the configuration of the rear portion of Lot 11 varied considerably from what appears on the figure (see Figure 28 and "CORRECTION" label on Figure 33 for the actual lot lines). The lot was actually irregular in shape, without the parallel boundaries that intersect at ninety-degree angles depicted on some maps. (The impact of these findings on adjacent properties, especially Lot 10, has already been noted.)

Put in simplest terms, the "A" area identified in the documentary report was incorrectly interpreted and did not lie entirely in Lot 11 (see Figures 28 and 33). The rear (northern) property line of Lot 11 actually cut diagonally across this area from northwest to southeast (see lot identified as 54 Wall Street in Figure 28, the 1905 Sanborn Insurance Company map). The western 32 feet of the northern lot boundary abuts Lots 19 and 19½, and the eastern 18 feet of its northern boundary is adjacent to the southern portion
of Lot 10. Evidently, construction of the 6-story addition to the building on Lot 11 in 1886 left a thin triangular strip of ground undeveloped (see Figure 33). Subsequent development of the northeastern portion of the lot extended from the rear of the main structure (indicated by dashed line in Figure 33) to the northern boundary of the lot. The remainder of the lot was categorized as a "B" area owing to the fact that only a 10-foot deep basement had been constructed beneath the rear structure and additions. The area encompassed by the main structure on the lot was also designated a "B" area. The exact location of the 17-foot deep subcellar beneath the main structure is not known.

2) "A" Area Tests

The excavation of the modern fill from Lot 11 started in the northwest corner of the lot and proceeded in an easterly direction. A 4-foot wide, 5-foot long red brick chimney shaft was uncovered beneath approximately 1.5 feet of demolition debris in the northwest corner of the lot (see Figure 34). The interior of the feature was lined with modern yellow fire brick. The chimney may have vented a boiler or furnace located to the south in the cellar of the structure.

East of the brick feature was a 3-foot wide by 5-foot long concrete patch. Excavation to the south and below the concrete revealed an empty chamber which extended off the cellar. East of the concrete was located a long narrow triangular area filled with construction debris that measured 4 feet deep and 25 feet along its base (see Figure 34). This area was bounded on the north by the reinforced concrete foundation of the former structure on Lots 19 and 19½ (the building also occupied Lots 12 and 13). To the south of the "A" area was the brick foundation of the 6-story addition to the 9-story main building on the lot. Needless to say, the size and shape of the triangular parcel precluded any controlled testing. In all probability, the construction of the most recent building had destroyed any in-situ archeological resources.

3) "B" Area Tests

The "B" area of Lot 11 was tested in three phases. The first area to be investigated was the rear, northwestern portion of the lot. An area that ranged from approximately 15 to 32 feet deep and 29 feet wide was cleared of demolition debris. At a depth of 12 feet below the surface a concrete floor was uncovered that extended beneath the entire area. No attempt was made to remove the concrete in this portion of the lot.

The second "B" area tested within Lot 11 was located in the northeastern corner of the parcel and measured 15 feet
wide by 21 feet deep. In 1916, this site had hosted a 2-
story superstructure with a basement. Archeological
excavations using a backhoe uncovered the lower portion of a
steel-lined vault in what must have been the basement (see
Figure 42). Below approximately 10 feet of building debris,
a layer of steel floor panels was uncovered in the vault.
Beneath the steel panels was a wood floor, consisting of oak
strips on 2-inch thick floor joists. After removing the
wood floor, archeologists uncovered another layer of steel.
Assuming the second layer of steel plates were set on con-
crete, they decided to forego any attempt to remove the
steel plating, inasmuch as the depth below surface would be
in the 12- to 14-foot range and would have required a
considerable expenditure of time.

The third, and final, "B" area investigated in Lot 11
was a 15-foot wide by 20-foot deep locale situated south of
the vault room. The most recent structure in this area also
appears to have been erected by 1894, and was subsequently
altered in 1913 in concert with the developments in the
northeastern corner of the lot. In 1916, a 1-story addition
with a basement covered the area. Removal of the demolition
fill uncovered a concrete slab floor at a depth of 9 feet
below the surface. The concrete floor proved to be only 3
inches thick and was removed by the backhoe. Beneath the
layer of concrete was an additional 3 feet of building
debris in a light tan sand matrix. Excavation in the area
was halted when a second concrete slab was uncovered at a
depth of 12 feet below the surface. This concrete floor may
have extended northward beneath the vault area. No further
testing was conducted in Lot 11, based on this series of
excavations and on the documentary evidence for even deeper
disturbances in the southern portion of the lot. In
summary, no in-situ cultural resources dating prior to the
most recent building activity were found in Lot 11.
FIGURE 42. View southwestward at the removal of the demolition fill in the rear, northeastern part of Lot 11 (54-56 Wall Street) with a tractor-tread backhoe, the largest excavation machine used during the project. (Photographer: Tony Masso, 1984.)
g. Lot 24 (69 Pine Street)

1) Introduction

As presented in the documentary study, the original assessment of the archeological potential of Lot 24 was conjectural due to the limited amount of background documentary evidence. Based solely on the cartographic evidence, the parcel's entire area was designated a "B" area, since the tallest structure ever built on the lot was a pre-1857 5-story building. Significantly for the preservation of archeological resources, this structure was not replaced by a taller building. Between 1891 and 1905, either the 5-story building was demolished and a new 2-story structure erected on its site, or the three uppermost floors of the pre-1857 building were removed. The superstructure of the most recent building on the parcel covered the majority of the lot.

The removal of the modern demolition debris from Lot 24 started at the rear (south) property line and proceeded northward toward Pine Street (see Figures 34 and 43). Few in-situ structural elements were found in what appears to have been an open basement (see Figure 44). At a depth of approximately 8.5 feet below the surface of the lot, a concrete floor was uncovered that extended across the full width and length of the area cleared. At a distance of 3.6 feet north of the south brick foundation wall were two 1.5-foot long by 2.5-foot wide red brick pillars (see Figure 43). Besides the brick support columns, only one other structural element was noted during the removal of the fill; at a distance of approximately 15 feet north of the southeast corner of the lot were found the remains of the basement stairs. Only the eastern steel stringer of the staircase, anchored to the east brick wall, was left in place by the removal of the demolition fill.

The pillars mark the northern edge of a narrow 5-foot deep by 23-foot wide "backyard" area along the south end of the lot (see Figures 20, 26, 28). Between the eastern pillar and a narrow structural projection of the east foundation wall were the remains of a door frame (see Figure 45). As depicted on the maps, the pillars are on line and in the same orientation as the rear southern wall of an extension to the main building. Prior to 1905, an open area also extended along the southeast side of the extension. The rear extension was evidently constructed at the same time as the main building on the lot and dates to the third or fourth decade of the nineteenth century (see Section III).

Between 1891 and 1905, the "rear yard" areas in Lot 24 were evidently either built over and converted to interior
FIGURE 43. Photograph of rear of Lots 24 (foreground) and 25 (background) after being cleared of demolition debris. The concrete floor has also been removed in the southern end of Lot 24. View is to the east. (Photographer: Tony Masso, 1984.)
FIGURE 45. View eastward at rear, southern portion of Lot 24, after the completion of E.U. 24-A, which is visible in the extreme foreground. A steel I-beam is visible on the far right of the view, at the foot of the brick wall. (Photographer: Tony Masso, 1984.)
space or, as in the case of the narrow strip of ground along the southern edge of the parcel, were excavated to the depth of a single basement and possibly served as an air or light shaft.

2) Excavation Unit 24-A

Upon clearing the southern 15 to 20 feet of the lot, which included the removal of the concrete floor and the western brick column, a single controlled excavation unit (E.U. 24-A) was located adjacent to the south foundation wall (see Figures 44 and 45). Excavation unit 24-A measured 3 feet wide by 10 feet long and was located 5.7 feet east of the southwest corner of Lot 24. The long axis of the test intersected the main building's south foundation wall at a right angle and abutted a steel I-beam (see Figure 45). The function of the I-beam, which extended the full width of the lot and was partly embedded in the concrete slab floor, is unknown. A temporary datum point (D.P. 4) was placed on the south brick wall at a depth of approximately 9.20 feet below the present surface of the lot (13.07 feet below site datum, or elevation 8.35 feet, see Figure 44).

3) Stratification

Immediately beneath the concrete floor and the base of the column was a light brown, sandy, silt overburden (designated stratum I) that covered the entire test unit. Stratum I was excavated to a depth of 0.3 feet below the datum. In plan view at this depth, the southern 4.5 feet of the unit consisted of a dark brown sand containing building debris (Stratum II). In contrast, the northern 5.5 feet of the unit was a continuation of Stratum I, the light brown sandy silt (Stratum I, level 2). The cultural material recovered from Stratum I consisted of a mixed deposit of construction material and a few domestic items. Stratum II appeared to be a builder's trench for the south brick foundation wall.

The horizontal extent of Stratum II decreased in size with depth and the deposit ended at a point along the foundation 2.9 feet below datum. The cultural material recovered from Stratum II consisted primarily of waste construction debris, including fragments of wire lath and concrete. Non-construction debris included fragments of machine-made, amber beer bottle glass and incandescent lightbulbs. Also recovered were a number of clear glass milk bottle fragments with a red printed distributor's label.

The second level of Stratum I did not contain any cultural material. In order to determine if level 2 of Stratum I was subsoil and not a sterile fill layer, an auger test was excavated in the north portion of the test unit (see
Figure 45). The test was taken down to a depth of 5.5 feet below datum (18.5 feet below site datum, 14.5 feet below the surface) with no visible change in the character of the soil and no deposits of cultural material.

In summary, no undisturbed cultural resources dating prior to the late nineteenth century at the earliest were found in E.U. 24-A. In fact, some of the material recovered from the test unit may date in manufacture and deposition to the second or third decade of the twentieth century, indicating that the concrete floor of the basement was installed some time after the superstructure was changed from five to two stories in height.

Based on the information derived from E.U. 24-A, which indicated that there were no broad resource-bearing strata beneath the concrete floor, the next action was to clear as much of the parcel as possible within time and budget constraints. Although the excavation for the basement had extended deep into sterile subsoil, the depth of the basement floor was relatively shallow in comparison with other lots in the study area (see Figure 46).

Approximately two-thirds of the basement in Lot 24 was emptied of demolition fill. Examination of the area required the removal of the concrete floor and the shovel scraping of the entire area down to sterile subsoil. The lot was cleared to within 38 feet of the Pine Street sidewalk, ending at a basement partition wall composed of twentieth-century hollow brick.

Test excavation uncovered two truncated features in Lot 24. The first, designated Feature 17, was the lower section of a well constructed of modified red, compass brick (see Figures 44 and 47). The backfilled well was located near the center of the lot, approximately 52 feet south of the Pine Street sidewalk. The outer diameter of the well measured 4.4 feet. Surrounding the brick lining of the shaft was a distinct, roughly circular builder's trench of mottled clays, sands, and silts that measured approximately 9.5 feet in diameter (see Figure 47).

The second feature, designated Feature 22, was the bottom course of a 3.0-foot wide (at its maximum point) fieldstone foundation wall that extended in an east-west direction across the lot (see Figures 34, 44, and 47). Both the east and west ends of the foundation were demolished by the installation of utility lines. The foundation was located 5 feet south of Feature 17 and 55 feet south of the Pine Street sidewalk and 63.5 feet south of the Pine Street curb. The architectural remains are definitely associated with the warehouse constructed in the early nineteenth century. On the Perris maps of 1852 and 1857, the south wall
FIGURE 46. Photograph of Lots 24 (left) and 25 (right) (69 and 71 Pine Street, respectively) during the removal of the concrete floor from the rear, southern portion of Lot 25. Note the higher elevation of the basement floor in Lot 24 to the west. Also, note the common or party foundation wall separating the northern parts of the lots, versus the separate foundations for later (southern) additions. View is to the north. (Photographer: Tony Masso, 1984).
FIGURE 47. View southeastward at the preparation of Features 17 (well) and 22 (stone wall) in Lot 24 (69 Pine Street) after the removal of the basement concrete floor. (Photographer: Tony Masso, 1984.)
of the structure was located 64.5 feet south of Pine Street (see Figure 20).

During the testing phase the northeast quadrant of the builder's trench of the well was excavated to culturally sterile subsoil. A detailed description of this excavation unit (designated E.U. 24-B) and the additional units needed to completely excavate all of the deposits associated with the feature (E.U. 24-C, D, and E) are discussed in Section V, C, which follows. Also discussed will be our the examination of Feature 22.

h. Lot 25 (71 Pine Street)
   1) Introduction

According to cartographic sources, the most recent structure on Lot 25 fronted on Pine Street and occupied the full width of the northern 53.0 feet of the parcel. Extending southward from the main structure was an addition that measured 14 feet wide and 29 feet deep. Both the main building and the addition pre-date 1852 (an identical configuration of structures is shown on the 1857 Perris map, see Figure 20).

Of importance for the preservation of cultural resources, the most recent structure on the lot was only 5 stories high. Some of the minor alterations to the structure have been discussed previously in Section III. A single potential "A" area (see Figure 33) was identified for Lot 25, based primarily on an analysis of cartographic sources. This "A" area measured 4 feet deep and 14 feet wide and extended across the rear (southern) boundary of the lot. The remainder (the majority) of the lot was designated as a "B" area (see Figure 33).

2) "A" Area Test: Excavation Unit 25-B

Archeological excavation confirmed the existence of Lot 25's "rear yard" area, but with an important difference from what was hypothesized in the documentary report (see HCI 1984: 63-64). Indeed, the area does not appear to have been covered by superstructure, but, unexpectedly, it had been excavated. At a depth of 6.60 feet below the present surface of the lot, a layer of concrete was encountered. This narrow area had apparently been left undeveloped to serve as an air or light shaft. Separating the "rear yard" area from the building's cellar to the north was a rubble 1.0-foot wide stone wall (with brick and concrete patchwork; see Figures 34 and 44). Extending through the wall were a number of aluminum exhaust/air ducts connected to the back of a walk-in refrigeration unit located in the southwest corner of the cellar.
When the demolition fill was removed, there were indications that a possible feature, such as a cistern or a privy, was located beneath the concrete slab in the "A" area. In the northwest corner of the "rear yard" area was a 6-inch diameter cast-iron drainage pipe that extended vertically through the concrete (see Figure 48). Approximately 4 feet east of the pipe was a square iron drain cover. It was not known where or into what the drain emptied.

The entire "A" area of Lot 25 was encompassed by a single excavation unit, designated E.U. 25-B, that measured approximately 2.5 feet wide and 12.2 feet long, and was surrounded by masonry walls. A temporary datum point (D.P. 3) was located on the south brick wall adjacent to the test unit at a depth of 6.53 feet below the present surface of the lot (10.67 feet below site datum, elevation 10.73 feet above sea level, see Figures 44 and 48).

With the removal of the 0.3-foot thick layer of concrete, a number of distinct areas became apparent in plan view. Directly beneath the concrete slab and extending across the entire unit was a layer of construction debris in a reddish-brown silty sand, labeled Stratum I. Surrounding the cast-iron pipe in the northwest corner of the unit was a mortared stone and brick support structure. East of Feature 4 was an 1-foot square red brick feature located directly beneath the iron drain. Both constituted Feature 5. The interior of the feature was filled with a dark brown/black silt, Stratum II (see Figure 48).

Stratum I consisted of a 3.0- to 4.2-foot thick lens layer of disturbed soil, which sloped steeply to the east. The stratum was excavated in two arbitrary levels. In the process of excavating Stratum I in the vicinity of Features 4 and 5, no indications of a cistern-like feature or of a builder's trench associated with the features became apparent. At a depth of 0.8 foot below the top of the concrete floor, the upright cast-iron pipe piercing the floor joined another cast-iron pipe leading to the drain located to the east. Thus joined, they extended northward through the cellar wall. Evidently the drain and the upright cast-iron pipe served to carry runoff rainwater into the cellar of the structure and eventually into the sewer system. A gutter and downspout were probably located on the southwest corner of the former structure, whereas the drain gathered surface runoff.
FIGURE 48. View westward at rear (southern) portion of the Lot 25 "A" area, post-excavation view of Feature 5 in Excavation Unit 25-B, part of the exterior drainage system of the former structure on the lot. Note the stone foundation wall underpinned by brick at far right of photo. Also note former level of concrete slab in "rear yard," midway down stuccoed walls at left and left top of photograph. (The cast-iron drainpipe in northwest corner of the space at left is embedded in the concrete floor.) (Photographer: Tony Masso, 1984.)
Inside the square brick drain was a 0.2-foot thick layer of dark brown/black silt. Cultural material within the deposit was of recent manufacture and included numerous fragments of machine-made bottle glass and plastic. Beneath the layer of silt was one end of a 4-inch diameter cast-iron pipe set in concrete, which was also filled with a black silt.

3) "B" Area Test: Excavation Unit 25-A

Proceeding from south to north, the archeologists removed the modern demolition fill by backhoe from an additional 35-foot area of the lot. Excavation in the rear portion of the lot (but north of the "A" area), in the area of the addition, revealed a 1.5-foot wide and 4.0-foot high American bond brick foundation topped by a red sandstone foundation wall on the addition's southern and western sides (see Figures 34 and 49). At a depth of 13.0 feet below the surface, a concrete floor was found covering the entire area that had been cleared.

In the course of removing the demolition fill, a number of in-situ features were found above the concrete that clearly illustrate how the space was most recently utilized. Located in the southwest corner of the addition was a wood-lined fiberglass-insulated, walk-in freezer, approximately 7 feet wide. In the southeast corner of the addition, and separated from the freezer by a partition wall (composed of wood studs and iron wire lath), was a thin layer of coal and coal ash. A wood stringer for a stairway was nailed to the east wall and extended downward into the cellar from the southeast corner of the rear addition.

Excavation Unit 25-A measured 5-foot square and was located parallel and approximately 2 feet north of the south foundation wall of the addition (see Figure 44). A portion of the 6-inch thick concrete floor was removed with the aid of the backhoe. Also, a temporary datum point (D.P. 2) was placed on the south foundation wall at a depth of 12.07 feet below the present surface of the lot (16.07 feet below site datum, at an elevation of 5.33 feet above sea level; see Figures 44 and 49).

Under the loose overburden, a reddish-brown silt containing mica (Stratum I) was found over the majority of the excavation unit. Within Stratum I were three well-defined concentrations of construction debris, which were labeled Features 1, 2, and 3. No detailed description of these three disturbances will be given, inasmuch as none extended more than 0.5 foot into the surrounding soil matrix. The features contained varying amounts of
FIGURE 49. View southward at the rear (southern) portion of Lot 25 in preparation for archeological tests. Note partially removed concrete floor. Also note western foundation (to right), the lower courses of which are composed of red brick and the upper courses of red sandstone. (Photographer: Tony Masso, 1984.)
construction debris with few diagnostic artifacts. Although one of the features definitely resulted from the backhoe's removal of the concrete floor, the other two disturbances appear to have been associated with the original installation of the concrete slab.

Similar to the three disturbances noted, a small amount of mixed construction debris and a single ceramic sherd, a saucer fragment, were found in the uppermost 0.3 to 0.4 foot of Stratum I. The maker's mark on the sherd has been attributed to the Greenwood China Company of Trenton, New Jersey. According to W. A. Barber, the company and the particular manufacture mark was established after 1886 (Barber 1904: 46). Level 2 of Stratum I, also a reddish-brown silt with mica, was culturally sterile.

At a depth of 1.7 feet below datum, the soil within the unit changed to a sterile reddish clay. On the possibility that Stratum I was a thick fill layer, a post hole test was placed in the northwest corner of the unit and dug to 5.3 feet below datum. The post hole test, later expanded to include the entire northern 1 foot of the unit, uncovered numerous stratified layers of naturally deposited silts, clays, and sands that varied in color from reddish-brown to yellow. For example, in a 1-inch section of soil, the clay, sand, or silt lenses numbered in the ten's. Inasmuch as the strata were culturally sterile, the excavation unit was closed.

When no broad horizontal resource-bearing strata were found, an attempt was made to uncover a greater proportion of the lot's area. Toward this end, the concrete floor of the southern 29 feet of the lot, which encompassed part of the lot occupied by the main structure, was removed by hand and the surface was cleaned by shovels (see Figure 46). No undisturbed cultural deposits were uncovered in this section of the lot.

4) Summary

Excavation units 25-A, 25-B, and the examination of the southern one-third of the parcel did not uncover any in-situ cultural resources dating earlier than the last quarter of the nineteenth century. Based on pertinent documentation and a small quantity of artifactual material (the marked saucer fragment) recovered during tests, it is possible to provide additional details about the history of the most recent structure on the lot. Evidently, sometime between 1886 and 1890, the basement of the structure was lowered approximately 4.0 feet and the stone foundation walls were underpinned with brick. The increase in the depth of the cellar probably destroyed any remains of earlier structures or archeological deposits. As presented in the documentary research report (HCI 1984: 63-64), an application was filed
with the Building Department in 1890 for the construction of a skylight over the 2-story rear addition to the building. On the form, it was noted that the building had a 10-foot deep brick and stone foundation (Department of Buildings, Application for Alteration 777, 1890). The application was evidently referring to the foundation of the addition, inasmuch as the foundation for the main structure was constructed entirely of stone.

The 2.0-foot wide foundation for the main structure on the lot was composed of red sandstone. Since the structure shared a common foundation with the adjacent building to the west (on Lot 24) it would appear that this structure, like the building on Lot 24 (69 Pine Street), was also originally built in the third or fourth decade of the nineteenth century.

Although the controlled excavation tests made in Lot 25 did not uncover any in-situ cultural remains, they did contribute to an understanding of the project area. Of most importance, the excavations clearly established the character of the undisturbed subsoil. Also, the lack of any cultural resources at the depth of approximately 13.0 feet below the surface became a de facto guideline in those portions of the study area which, at the time, remained to be examined.

3. Summary and Conclusions

In conclusion, the most significant result of the test phase excavations was the confirmation that no physical remains of the late seventeenth-century landside fortifications of New Amsterdam/New York remained within the 60 Wall Street study area. The construction of the most recent buildings in the study area extended deeper than any potentially identifiable elements of the defensive system. The majority of the cultural remains that were uncovered are attributable to the twentieth century and consisted of either steel-reinforced concrete and I-beams or brick set on concrete footings. In contrast, the earliest architectural remains, dating to the late eighteenth and early nineteenth centuries, generally consisted of sand- or bluestone foundations.

Test excavations were conducted in eight of the twelve lots within the study area and identified a total of 25 architectural and archeological features. Not surprisingly, these remains were found in the three parcels with the shallowest depths of disturbance: Lot 10 (56-58 Wall Street and 59-61 Pine Street); Lot 24 (69 Pine Street); and Lot 25 (71 Pine Street). The majority of the features (20) were found in Lot 10. Of these, 12 are the remains of systems for on-site water acquisition or the disposal of runoff rainwater and human wastes and 5 are the remains of
foundations. They all dated before the early twentieth-century renovations on lot 10 (see Section III). The remaining three features were intrusions into subsoil marked by a soil discoloration (see Table 1).

Only two in-situ features were uncovered in Lot 24 (69 Pine Street): a well and the bottom course of a stone foundation. Inasmuch as the four features designated in Lot 25 (1-3, and 5) were the result of recent disturbances, these remains will not be discussed beyond what has already been presented (see Table 1).

Figure 33 is a schematic representation of the features uncovered at the 60 Wall Street site during the testing phase. In addition to the total area excavated, it also depicts outlines of the pre-1901 structures on Lot 10. This information has been taken from the 1857 Perris insurance map (see Figure 20).

Inasmuch as the 60 Wall Street study area is located entirely on existing land, excluding the recent demolition fill, the test phase excavations did not uncover any site-wide strata or broad scatters of cultural material dating before the twentieth century. Nor were there any unrecorded fill strata either associated with early improvements to the block or resulting from episodes of wholesale destruction. An example of the former type of fill—to landscape lowlying areas or former streambeds—was recorded at the Sullivan Street excavations conducted in 1984 (Salwen 1987: personal communication). The latter type of fill appears to be quite extensive in the lower Manhattan portions of New York City affected by the Great Fire of 1835. The immense quantity of debris produced by this catastrophic event was left in place and served to elevate the landscape.

Finally, throughout the test phase excavations, previous interpretations of the documentary evidence regarding the 60 Wall Street site gathered and examined to that point required constant re-evaluation. Some early assertions regarding the archeological potential of certain areas was off-target. In general, if the documentary evidence were evaluated in light of what was uncovered in the field, the most reliable data for archaeology came from the New York City Building Department's records and files, located at the Municipal Archives and the Department of Buildings. Almost
## TABLE 1. LIST OF FEATURES, 60 WALL STREET SITE

<table>
<thead>
<tr>
<th>Feature No:</th>
<th>Construction Material:</th>
<th>Function:</th>
<th>Lot:</th>
<th>Address:</th>
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<tbody>
<tr>
<td>1</td>
<td>Soil discoloration</td>
<td>?</td>
<td>25</td>
<td>71 Pine</td>
</tr>
<tr>
<td>2</td>
<td>Soil discoloration</td>
<td>?</td>
<td>25</td>
<td>&quot;</td>
</tr>
<tr>
<td>3</td>
<td>Soil discoloration</td>
<td>?</td>
<td>25</td>
<td>&quot;</td>
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<tr>
<td>4</td>
<td>Soil discoloration</td>
<td>Builder's</td>
<td>24</td>
<td>69 Pine</td>
</tr>
<tr>
<td>5</td>
<td>Brick</td>
<td>Drain</td>
<td>25</td>
<td>71 Pine</td>
</tr>
<tr>
<td>6</td>
<td>--</td>
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<td>10</td>
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</tr>
<tr>
<td>7</td>
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<td>Privy</td>
<td>10</td>
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</tr>
<tr>
<td>8</td>
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<td>Privy</td>
<td>10</td>
<td>58 Wall</td>
</tr>
<tr>
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<td>Stone</td>
<td>Privy (?)</td>
<td>10</td>
<td>59 Pine</td>
</tr>
<tr>
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<td>Brick</td>
<td>Cistern</td>
<td>10</td>
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<td>--</td>
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</tr>
<tr>
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<td>Drywell (?)</td>
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<td>16</td>
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</table>
to the exclusion of traditional sources used by archeologists--such as records of conveyance, historic maps, and other primary records--building records provided the most accurate information concerning the most recent architectural developments (and, consequently, the archeological potential) of each lot. A more intensive examination of these records before excavation would undoubtedly have resulted in a better understanding of the site's archeological potential.