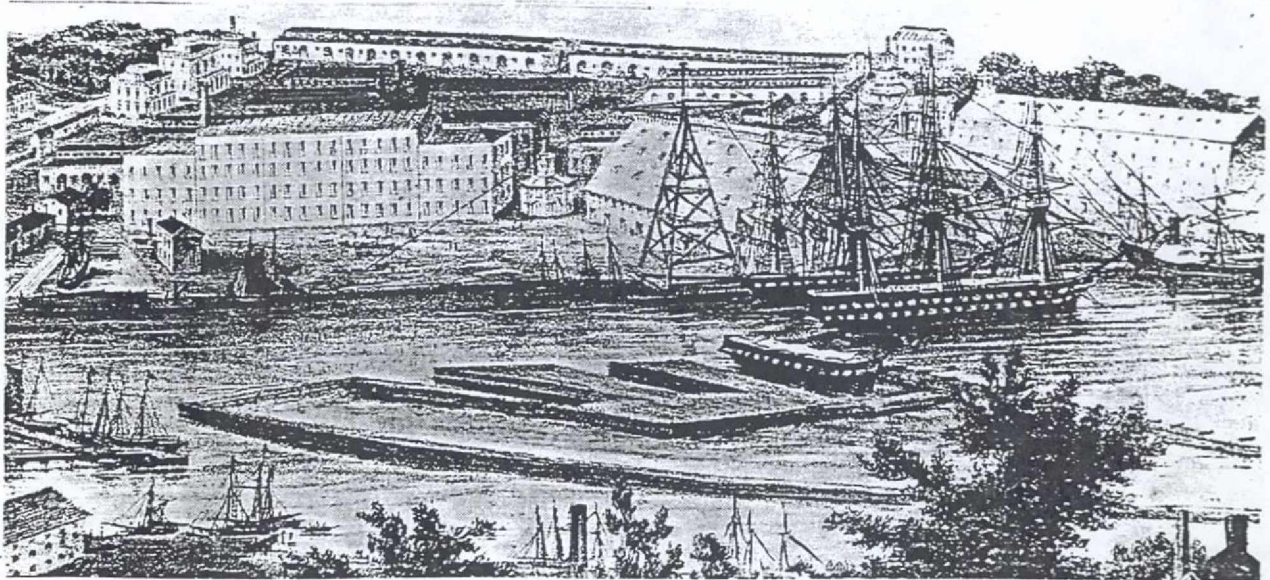


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1943 Geismar

Stage I-A Cultural Resources Survey Documentary Study and Assessment
of Potential Impact, Proposed Navy Yard Cogeneration Facility,
Borough of Brooklyn, Kings County, New York

SEORA-K



19th century view of The Brooklyn Navy Yard

DEC No. 2-6101-00185/00002-9

Prepared by Joan H. Geismar, Ph.D., and Stephen J. Oberon

Prepared for Blasland and Bouck Engineers, P.C.

April 1993

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Graphics: Amy Geller

Photo credits as indicated

Cover photo courtesy of Barbara Davis

ABSTRACT

A Stage I-A documentary study and assessment of potential impact to cultural resources was carried out for locations of planned construction in and immediately adjacent to the former Brooklyn Navy Yard associated with completion of the proposed B-41 cogeneration facility. This investigation identified four subareas where the potential for such impact is considered an issue: the western portion of the former Navy Yard, the segment of Hudson Avenue north of York Street, the so-called "Monument Lot" and Dry Dock 2. It is recommended that any construction below existing fill in these areas be preceded by archaeological field study to determine whether cultural remains are present and that ground disturbing activities in the vicinity of Dry Dock 2 be monitored to document the original structure and prevent any impact to that structure.

I - INTRODUCTORY SUMMARY

A cogeneration facility to produce both electricity and steam is proposed for the former power plant of the Brooklyn Navy Yard, situated in the northwestern portion of the Borough of Brooklyn (Kings County). This structure, known as Building 41 or the Power House, is located in the southwestern part of the Navy Yard, between Fourth and Fifth streets, some 200 feet (61 meters) north of Flushing Avenue (Figures 1 and 2).

This documentary survey was carried out to assess the potential for proposed construction activities to cause impact to historical, architectural and/or archaeological resources. It drew upon published maps and histories of the area, municipal records, archival news articles and photographs, legal documents, Navy Yard records and plans, previous cultural resource management studies, geotechnical sampling reports, interviews with knowledgeable officials and historians, and a walking reconnaissance of the entire project area.

This report was prepared for Blasland and Bouck Engineers, P.C., who have been retained as environmental consultants by the redevelopers of the property, B-41 Associates, L.P., and will be submitted by them to the New York City Landmarks Preservation Commission (LPC).

Because of its location on Wallabout Bay, where Native American occupation is likely and early Dutch settlement is known to have occurred, the former Brooklyn Navy Yard was considered to be archaeologically sensitive by the LPC. The Navy Yard, which so long played a key role in naval history and development, itself constitutes a significant cultural resource; consequently, potential impacts must be assessed where subsurface disturbance and above-ground construction will occur.

An additional dimension is added to the potential for impact to buried cultural resources by the known interment of thousands of American Revolutionary War prisoners on the shores of Wallabout Bay after their deaths on British prison ships anchored nearby. Many of the skeletons were subsequently washed out of their shallow graves and haphazardly redeposited by the tides. Since much of Wallabout Bay was filled to expand the Navy Yard during the nineteenth century, the potential for the presence of as-yet-undiscovered human remains beneath this fill must be considered high.





2 Aerial view of the Navy Yard looking southwest toward lower Manhattan and New Jersey. Major features visible on the East River waterfront are the Navy Yard and Wallabout Bay in the center of the photo, the Con Edison plant with its four smokestacks jutting into the river, and the Manhattan and Brooklyn bridges beyond it. The twin towers of the World Trade Center are to the far left. (Brooklyn Navy Yard Development Corporation)

Another focus of concern for potential project impact to cultural resources lies in the "Monument Lot," the former tomb of American Revolutionary War prisoners located in the vicinity of proposed construction. Underground electric line installation connecting Building 41 with existing Consolidated Edison lines north of John Street is planned for Hudson Avenue. The Monument Lot lies on the east side of Hudson Avenue, along the proposed underground electric line route. This is where the remains of unknown numbers of Revolutionary War prisoners recovered from nearby beaches were interred in 1808.

The low-lying, salty and marshy character of the Wallabout Bay shore would not have been very attractive for Native American settlement, though the possibility exists that indigenous groups ventured here to procure the plants and animals found in this environmental setting. The potential for the remains of small, briefly-occupied camps and shell heaps can therefore be considered moderate for those portions of the project area that formed the shoreline of Wallabout Bay prior to establishment of the Navy Yard and subsequent filling. No Native American cultural remains have been reported for this area. Comprehensive documentary research indicated that no structures dating from the period of local Dutch or British settlement were located within the limits of project impact.

The area west of Fourth Street constitutes the oldest portion of the Navy Yard and it is here that the potential for construction impact to significant cultural resources is greatest. The sites of several former Navy Yard buildings were identified in this area. Construction is planned near the site of one of these structures (Ship House E), which stood just south of present Pier C, and will pass through the former locations of three others: Building 15, which occupied the portion of the east side of Navy Street north of Sands Street; Building 23, which stood between Third and Fourth streets west of Warrington Avenue; and Building 13, an "ordnance machine shop" in 1882, which was bordered by Second and Third streets between Chauncey and Perry avenues. In addition, construction is planned near Dry Dock 2, built in 1890 and considered of historical and architectural significance.

As recently as 1939, the area around the former site of Building 4, northeast of Navy Street and northwest of Second Street in the western portion of the Navy Yard, yielded a skeleton, presumably the remains of a Revolutionary War prisoner. While the potential for encountering human remains relating to this period exists anywhere in the Navy Yard that construction extends beneath the fill, this intrusive material appears to be shallower in the western portion of the former installation. This area included the eighteenth century shoreline of Wallabout Bay, and adjacent shallows and salt marshes. This area of the project site is

therefore more likely to be where interments and later redeposition of Revolutionary War human remains will be found. It would also have been the site of any Native American occupation that might have occurred within the project impact area.

An additional locus of potential cultural resource impact was identified along the planned underground electric line route on Hudson Avenue, specifically the segment just south of Front Street. Just to the north of the Navy Yard's west wall, along the east side of Hudson Avenue, is the site of the aforementioned Monument Lot. The precise extent of the area in which these reinterments took place cannot readily be determined in relation to current property configurations. Although the remains were reportedly removed in 1873, the potential still exists for construction impact to human remains and/or other cultural resources associated with this monument which may yet be present beneath the ground surface.

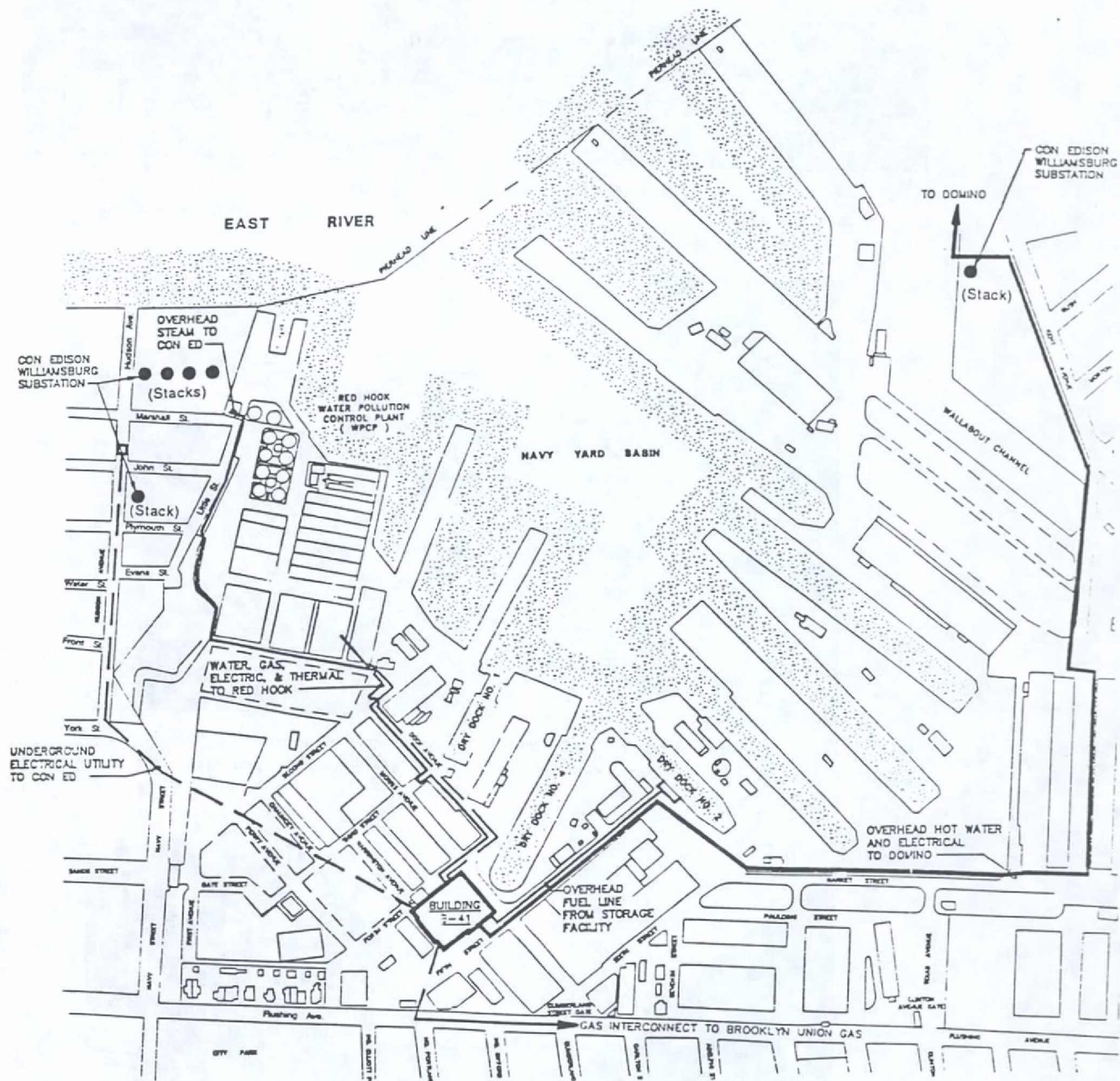
II - EXISTING CONDITIONS

Site Description

As mentioned in the previous section, Building 41, the cogeneration facility which is the focal point of this project, is situated in the southwestern portion of the former Navy Yard between Fourth and Fifth streets and southwest of Morris Avenue. From this structure, construction will radiate along four trajectories, as shown in Figure 3, some passing near or adjacent to standing structures (see Appendix).

Lines carrying steam and electricity are planned between the northeast corner of Building 41 and the Domino Sugar facility located just north of the east end of the Williamsburg Bridge. The entire length of these lines will be constructed above ground. Fuel for Building 41 will be piped from a storage depot to be built adjacent to Dry Dock 2. The fuel line will be installed along Fifth Street (Figures 3,4), parallel to the steam and electrical lines and will likewise be placed above ground, though some underground construction will occur around Dry Dock 2 (see Figure 14).

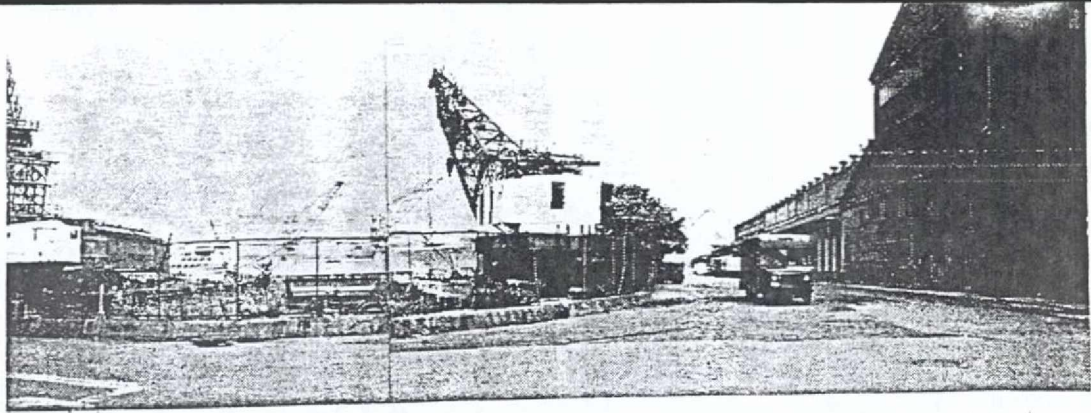
Underground steam, water, gas and electric lines will extend from the northwest corner of Building 41 (Figure 3) in a northwesterly direction along Dock Avenue (Figures 6,7,8,10) to the Red Hook Water Pollution Control Plant (Figure 9). An above-ground steam line will run parallel to these lines along Dock Street and turn west and then north on its way to the Consolidated Edison Williamsburg Substation, whose four stacks are visible in Figure 5.



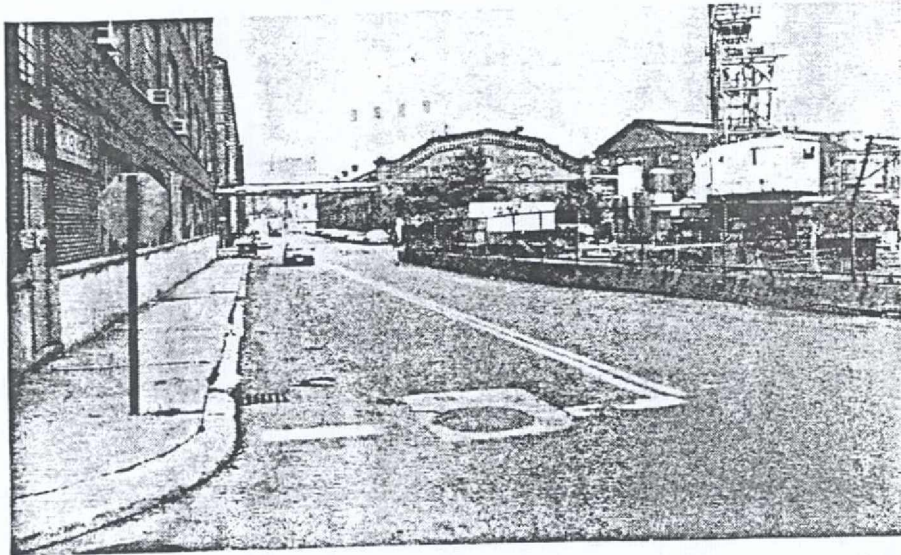
- — — proposed underground line
- — — proposed overhead line
- — — proposed underground connection (Dry Dock 2)

no scale

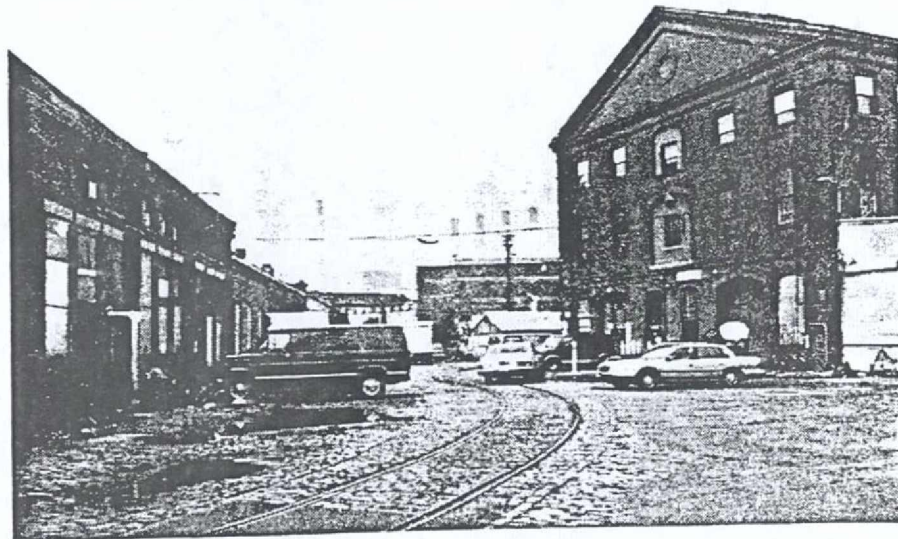




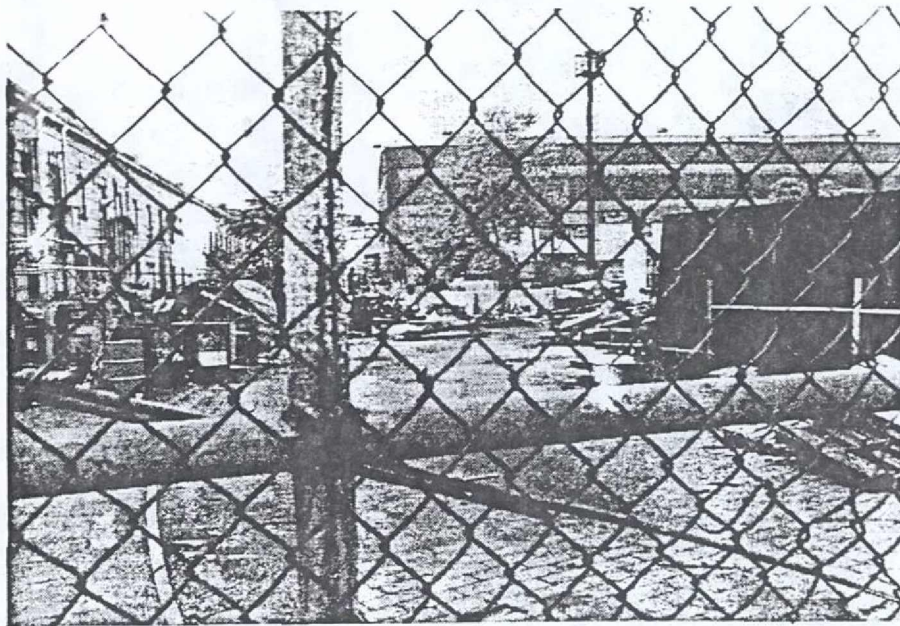
4 Composite view looking northeast up Fifth St. from Morris Ave. where an overhead line will run from building B-41 to Dry Dock 2. Dry Dock 4 can be seen to the left. (photo Geismar 9/92)



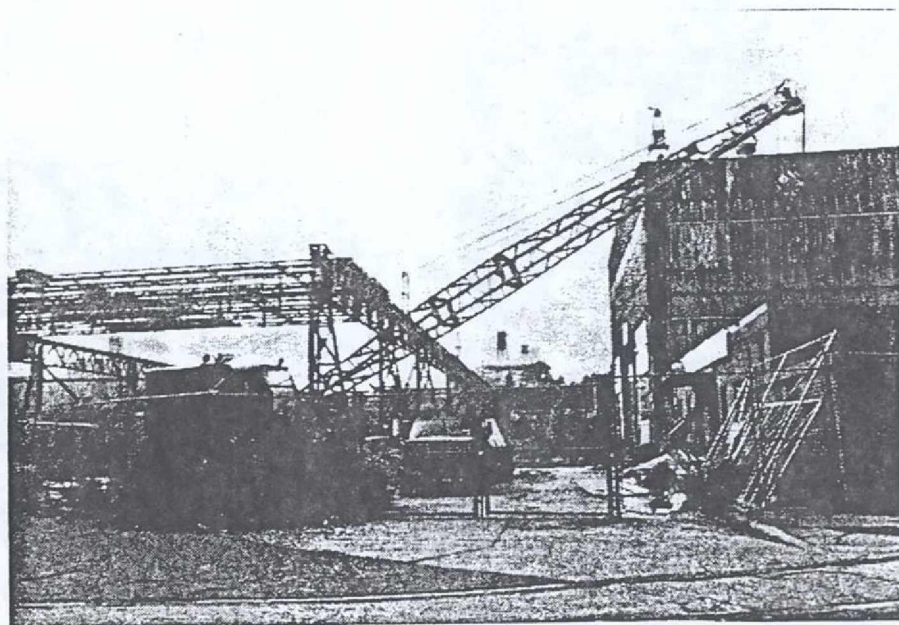
5 View west on Morris Ave. from building B-41 where an underground line is planned. Con Edison Stacks are visible (rear center of the photo), just beyond the Navy Yard. (photo Geismar 9/92)



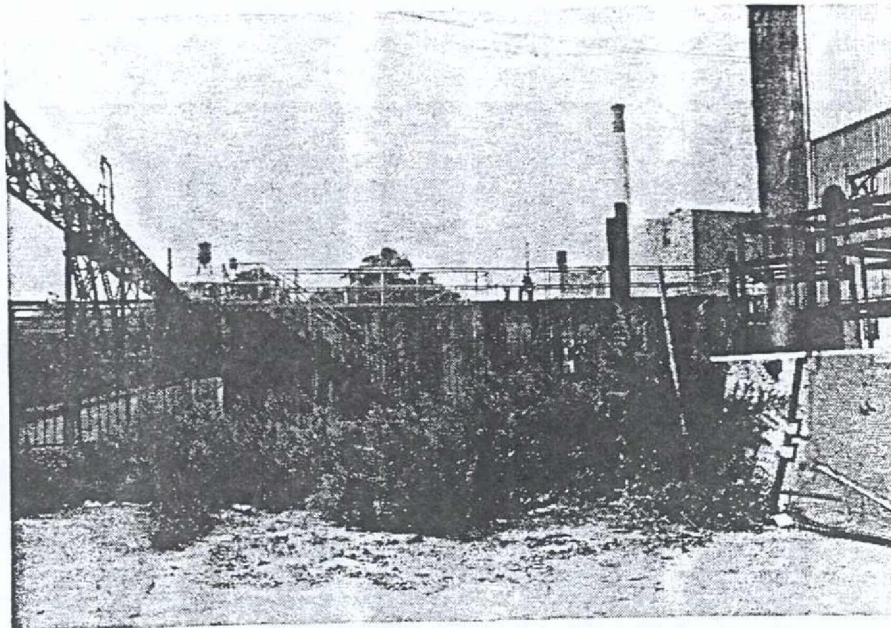
6 Path of underground line with building B-20 on left, B-13 on right. Note train tracks in center. (photo Geismar 9/92)



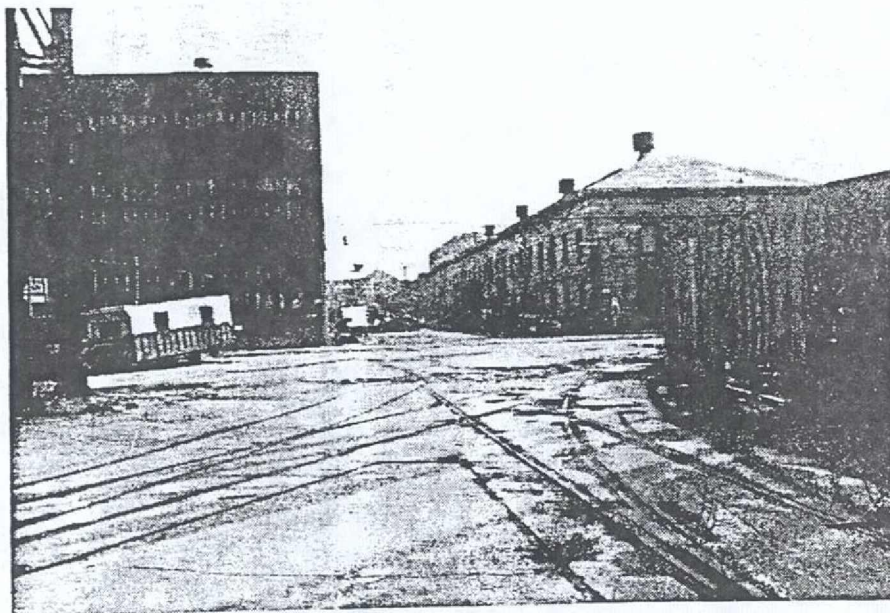
7 Building B-10 is on the left and B-269 is to the rear. Proposed underground line will follow this route. (photo 9/92)



8 Building B-314 is to the right along the underground line. (photo Geismar 9/92)



9 Building B-268 is to right and the craneway on the left; the Red Hook Water Pollution Control Plant is visible in the background to the right. (photo 9/92)



10 Looking back from the vicinity of building B-268 toward B-41. Building B-314 is to the right, B-168 to the left. A network of train tracks remains in the street. (photo Geismar 9/92)

A third construction trajectory involves an underground electric line to be built between the northwestern corner of Building 41 and a point on Hudson Avenue just north of John Street, where it will connect with an existing Consolidated Edison line near the Williamsburg Substation. Construction will extend west-northwest from Building 41 to Navy Street (Figure 11), where it will leave the former Navy Yard property and pass west of the York Street Gate (see Figures 17,18) on its way to Hudson Street, where it will turn north, pass the "Monument Lot" (see Figures 19,20) and end at a point just north of John Street.

Another underground line will be constructed to carry gas between the southwest corner of Building 41 and an existing gas line some 330 feet (100 meters) to the south, at the intersection of North Portland and Flushing avenues (Figures 12,13).

Standing Navy Yard buildings considered potentially significant by the LPC and located along or in the vicinity of proposed construction are photodocumented in the appendix to this report. No demolition of or physical impact to existing structures is planned in conjunction with the proposed installation of these overhead or underground lines or construction of the fuel storage depot. Disturbance related to these activities will occur in existing open areas. A potential for impact to buried archaeological remains of former buildings and for visual impact to significant or potentially significant structures nonetheless exists and will be assessed in the following section.

The Period of Native American Occupation

Although most documented sites of Native American occupation in Kings County lie near or along the many bays and tidal creeks in the southern portion of the county, the cultural activities of indigenous populations no doubt encompassed all of the Borough of Brooklyn (Church and Rutsch 1982:11).

Prior to the construction of the Navy Yard in the early nineteenth century, the land to be crossed by the proposed gas, electric, steam and fuel lines which was not under the waters of Wallabout Bay consisted of the salt marshes, tidal flats, and shallows.

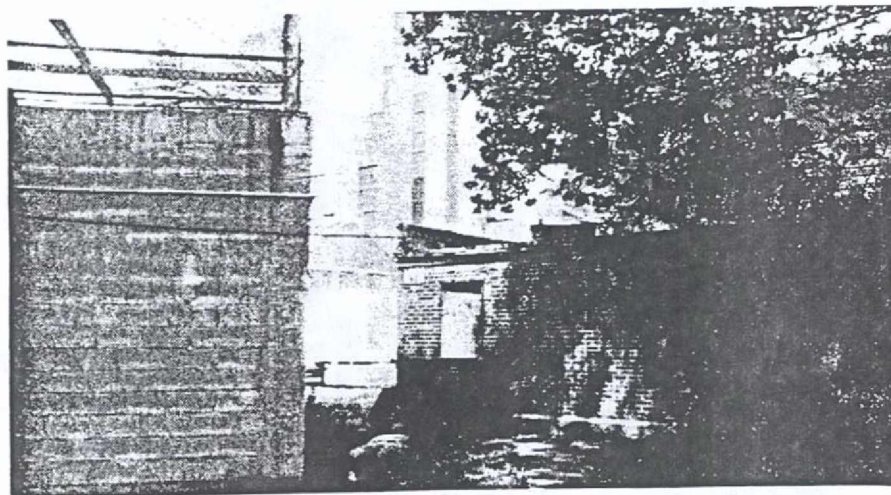
This [Navy Yard] property was originally but a waste of mud flats, swamps and creeks, excepting only the hill on the western side, upon which the Commandants' house now stands, and that on the eastern side where the hospital is located [beyond the project area]. High water then reached the point about where the lower end of the building known as that of Provisions and Clothing now stands [just east of Little Street], and



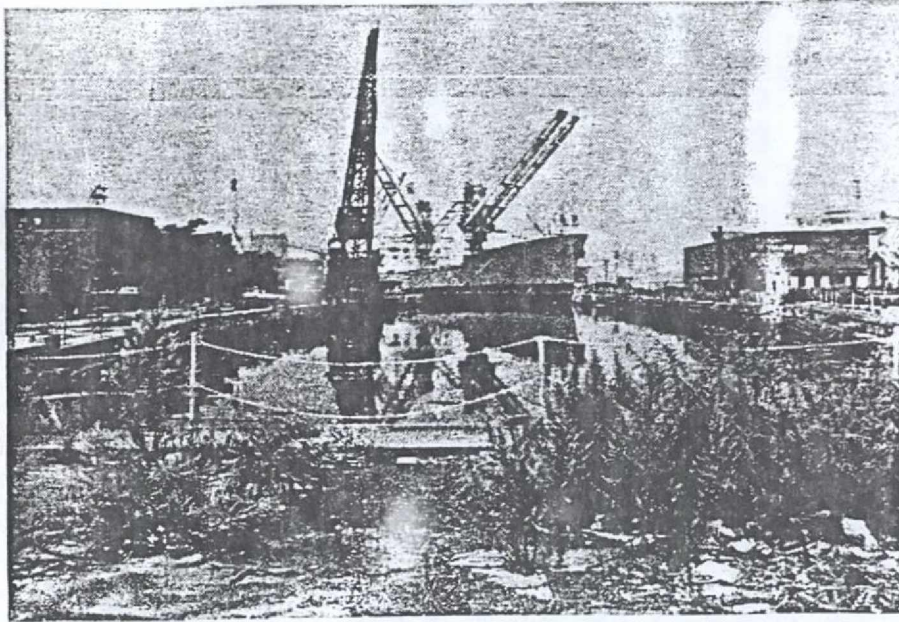
11 View is across a parking lot looking toward Navy St. from the southwest corner of building B-41 where an underground line will run. (photo Geismar 9/92)



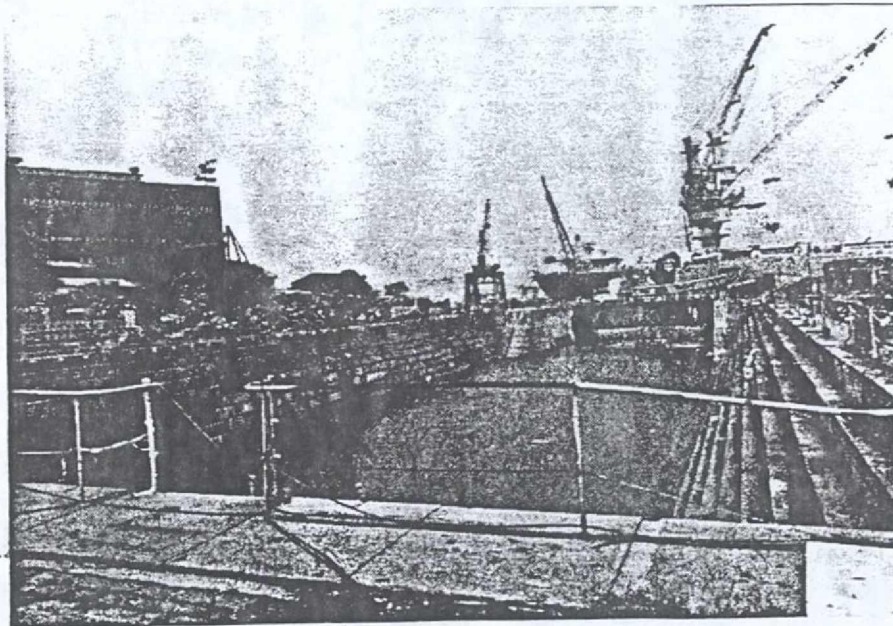
12 View is due south from building B-41 looking toward Flushing Ave. where an underground line will run. Building B-50 is on the left. (photo Geismar 9/92)



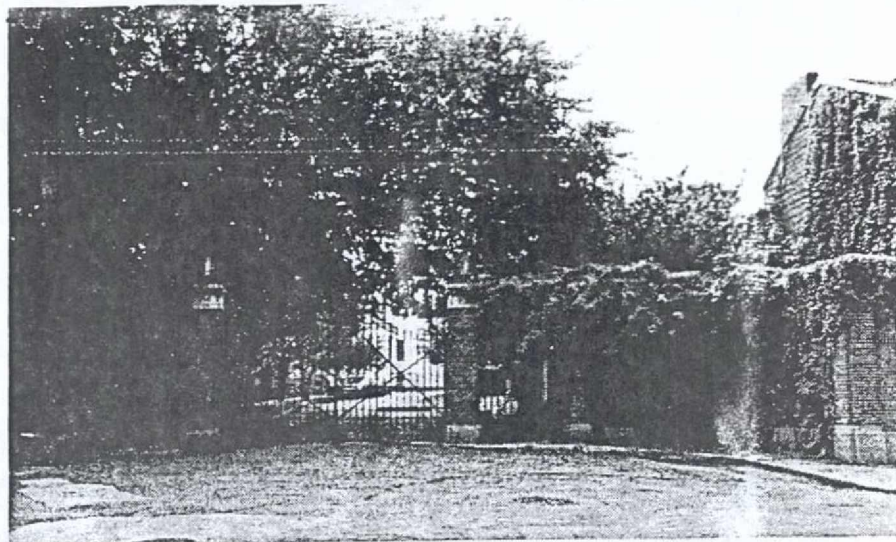
13 Looking back toward building B-41 from Flushing Ave. near N. Portland Ave. (photo Geismar 9/92)



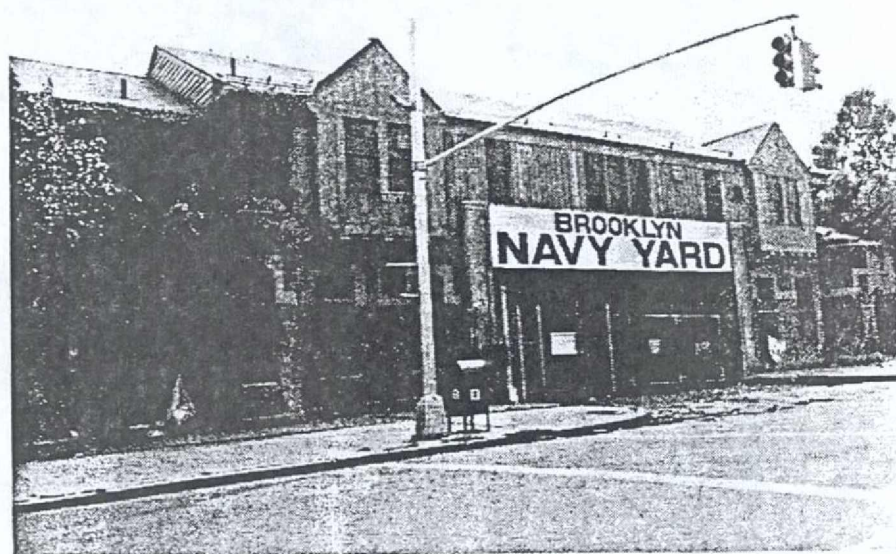
14 View is toward the East River and shows Dry Dock 2 filled with water. Underground lines may be placed on the south side of this structure. Once the world's largest wooden dry dock, it is now faced with concrete. (photo Geismar 9/92)



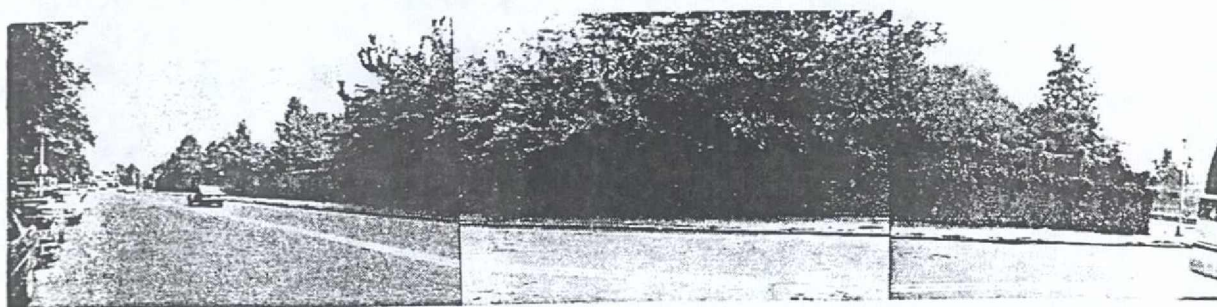
15 Dry Dock 1, the oldest dry dock in the Navy Yard and listed on the National Register of Historic Places, will not be impacted by the proposed construction. (photo Geismar 9/92)



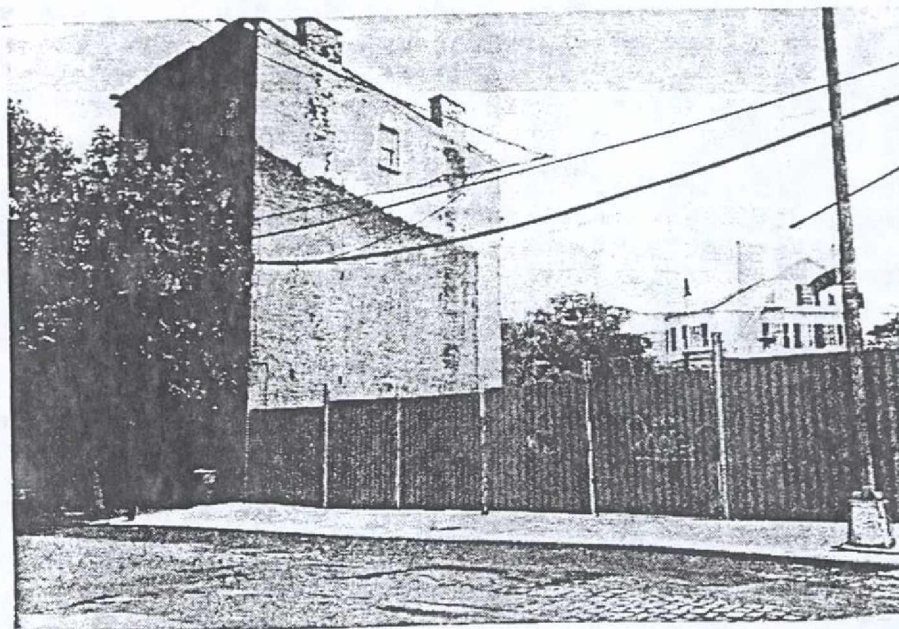
16 Little St. entrance to the Commandant's House, a New York City Landmark and listed on the National Register of Historic Places. The house is visible in the background. (photo Geismar 1992)



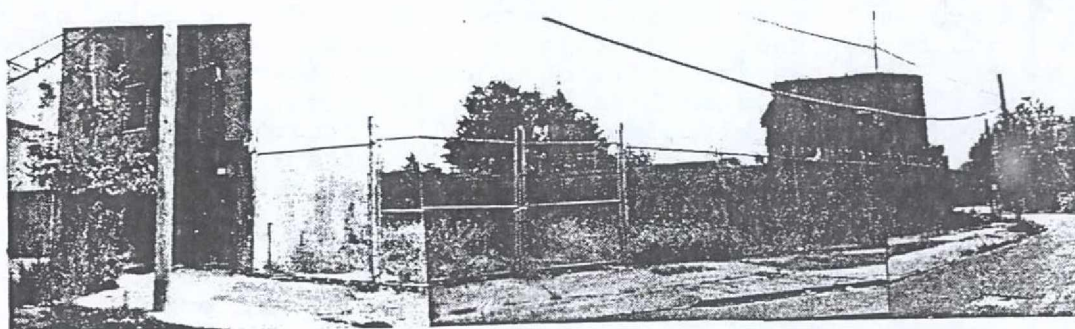
17 The Navy Yard's York St. entrance located on Navy St. (photo Geismar 9/92)



18 Composite view of the Navy Yard wall from the corner of Navy St. (left) and Nassau St. (Flushing Ave.). (photo Geismar 9/92)



19 87 Hudson Ave. (left) with neighboring vacant lot (right), part of the "Monument Lot." Note the Commandant's House to the rear on the Navy Yard grounds. (photo Geismar 9/92)



20 Composite view showing 87 Hudson St. (left), the "Monument Lot" (center), and the view south on Hudson Ave. The "Monument Lot" is the site of a tomb where the bones of thousands of American soldiers who died on British prison ships during the Revolutionary War were reburied in 1808 (see text). These infamous ships were anchored in Wal-labout Bay. The Navy Yard wall is visible to the rear. (photo Geismar 9/92)

thence, in a circular line, as far as the foot of Sands street (sic). From Sands street along the present Navy Yard as far as Flushing avenue (sic), and thence as far as Clinton avenue (sic), extending into the present City Park...there was no solid ground (Stiles 1884:870).

Though its physical character would make it an unlikely area for human settlement, the variety of plant and animal life present in this environmental setting could well have attracted indigenous food collectors. Hunting and gathering of available food resources on a periodic or seasonal basis was an economic mainstay of Native American populations for millennia, and tidal marshes such as this served as productive collection areas.

No known Native American sites are recorded within a one-mile radius of the project area by the New York State Museum or Office of Parks, Recreation and Historic Preservation archaeological site files. However, the abundance of Native American place names associated with Wallabout Bay and its surroundings (Tooker 1911: 102-103, 211-212; Kelly 1946) testify that the indigenous inhabitants of Brooklyn knew of, and undoubtedly frequented, this area. The absence of documented archaeological sites relating to this phase of human occupation is therefore more likely to reflect the incompleteness of documentation rather than the actual distribution of native populations.

The Native American presence in this area was established in 1826, when cultural remains were recovered from part of a 70-foot sand hill located just west of the Navy Yard in an area bounded by Jay, York, Front and Bridge Street (Furman 1874:98-100). Fire-cracked rocks were found on the ground surface, with coarse earthenware and the "heads of Indian arrows" yielded by a layer of cinders and ash extending from 1 to 4 feet (.3-1.2 meters) below. Clay tobacco pipes and additional unspecified cultural items were also noted in the assemblage of this site, which has been referred to as Rinnegokonck (Bolton 1934:145). These cultural materials are likely to represent the remains of a revisited camp, occupied periodically over decades, possibly centuries, in conjunction with hunting and gathering activities focused on the neighboring tidal marsh (Geismar 1988:14-16). This marsh, located to the east of Rinnegokonck, would at various times, depending on the fluctuations of sea level, have encompassed some or all of the project area.

An assessment of the potential for the presence of Native American cultural resources in the area just south of the Navy Yard, between North Elliott Place and North Portland Avenue, south of Flushing Avenue, notes that some traces of other such camps might exist beneath fill (Geismar 1988). However, the depth of this

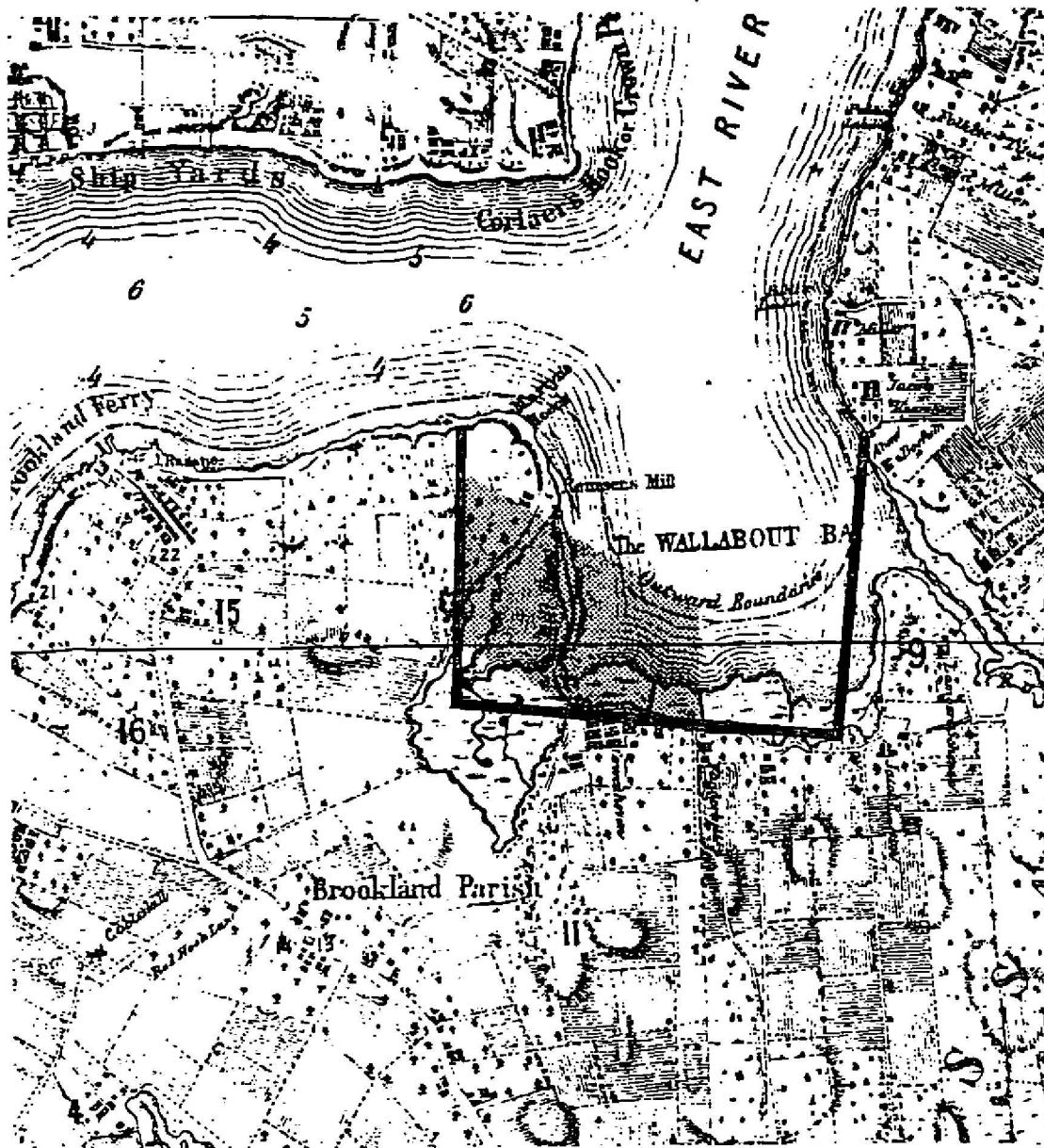
fill was found to increase as one approaches Flushing Avenue, which passes over former marshland, suggesting that archaeological sites would be more likely to occur on the higher ground farther south (Geismar 1988:17).

Since the Navy Yard lies north of Flushing Avenue, in what were formerly marshy or inundated areas (see Figures 21,22), the likelihood that Native American occupation occurred here must be considered low. Therefore, the potential for encountering traces of indigenous cultural activity beneath the fill which underlies the entire Navy Yard with the exception of West Hill must similarly be seen to be low. Whatever natural soils remain intact under the fill along Hudson Avenue, which may represent the western edge of the former lowland (see Figure 22), can be considered somewhat more likely to contain Native American cultural remains.

The Early Euro-American Period (1643-1801)

As stated above, when western Long Island was colonized during the seventeenth century, all but the westernmost portion of the project area was inundated as part of Wallabout Bay or the tidal marshes which formed its western shore. The earliest survey map of the area (Ratzer 1766-67) depicts this westernmost area as the Remsen property and the site of a grist mill and associated mill pond (Figure 21). The Remsens were the last in a series of families related by blood and marriage to own the area around Wallabout Bay after 336 acres were purchased from its native owners by Joris Jansen Rapelie in 1637 and another 400 acres were secured from the Dutch colonial government in 1647 by his son-in-law, Hans Hansen Bergen. The designation of the bay as Wallabout derives from "Waal-boght," which may be translated as "Walloon's Bay" and reflects the fact that Mr. Rapelie was a Walloon (Stiles 1867:88,94; Flint 1896:65). These were Belgian emigres seeking religious freedom, ethnic identity, and economic opportunity (Bayer 1925).

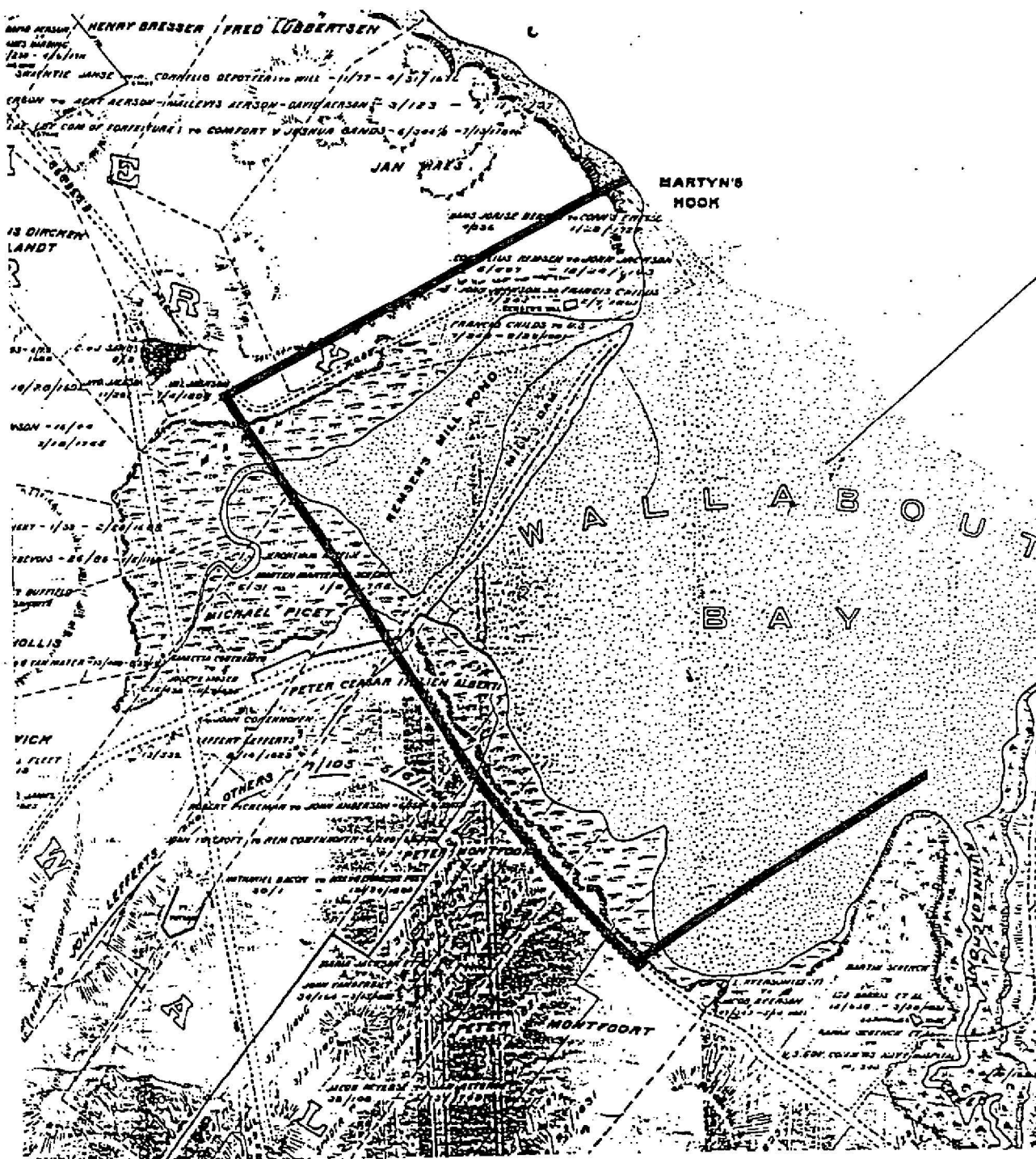
Early development of the area consisted of clearing land for cultivation where possible, cutting marsh grass in the tidal flats, and construction in 1710 of the grist mill documented by Ratzer (Figure 21) and later by Mossdrop and Beers (Figure 22) as located just south of Martyn's Hook. Built by Rem Remsen, grandson of Mr. Rapelie, the mill was designed to draw its power from the flow of the tides and a long dam was built across the western side of Wallabout Bay to create a mill pond. The stream that supplied this pond "entered what afterwards became the Navy Yard at a point near the present Sands Street gate, and flowed northeasterly near the base of the west hill to the bay" (West 1941:4). The first roadway in the area is believed to have been built along the south shore of the bay, near what is now Flushing Avenue and roughly along the course shown in Figure 22 (Stiles 1867:80,90-92; Church and Rutsch 1982:17).



——— project limit (approx.)
 ■ general area of proposed underground lines

0 1/4
mile

N



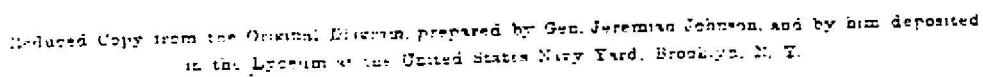
project limit (approx.)

no scale

During at least the latter part of the eighteenth century, docking facilities are shown near the site of the Remsen Mill, according to a map made from memory by General Jeremiah Johnson (Stiles 1867: opp. p.32; Figure 23) long after the 1776-83 period he attempted to reconstruct. While much of this map is undoubtedly inaccurate, particularly in its detail, the presence of docks during this general period is not inconsistent with the operation of a grist mill in an area inaccessible by land from east, south, or north.

The early Euro-American era is notable for the presence in Wallabout Bay of an infamous flotilla of British prison ships. Thousands of American soldiers lost their lives as a result of the abominable conditions that existed on these over-age, poorly-maintained vessels. As General Johnson vividly recalled the scene in his Recollections of Brooklyn and New York in 1776:

It was no uncommon thing to see five or six dead bodies brought to shore in a single morning, when a small excavation would be dug at the foot of the hill, the bodies cast in, and a man with a shovel would cover them, by shovelling sand down the hill upon them. Many were buried in a ravine of the hill; some on the Remsen farm. The whole shore, from Rennie's Point to Mr. Remsen's door-yard, was a place of graves; as were also the slope of the hill, near the house (subsequently dug away by Mr. John Jackson, and whence he obtained the bones for the 'Dry-bone Procession'); the shore from Mr. Remsen's barn along the mill-pond, to Rapalje's farm, and the sandy island between the floodgates and the mill-dam, while a few were buried on the shore on the east side of the Wallabout. Thus did Death reign here, from 1776 until the peace. The whole Wallabout was a sickly place during the war. The atmosphere seemed to be charged with foul air from the prison-ships, and with the effluvia of the dead bodies washed out of their graves by the tides. We believe that more than half of the dead buried on the outer side of the mill-pond, were washed out by the waves at high tide, during northeasterly winds. The bones of the dead lay exposed along the beach, drying and bleaching in the sun, and whitening the shore, till reached by the power of a succeeding storm; as the agitated waters receded, the bones receded with them into the deep (quoted in Stiles 1867:350).



no scale

22

Fort Putnam was built just to the south of Wallabout Bay during this period; it was rebuilt during the War of 1812 and renamed Fort Greene.

Following the American Revolution, the development of the Wallabout centered around an entrepreneur named John Jackson. Born in neighboring Queens County, Mr. Jackson moved to Brooklyn soon after the end of the war, along with his brothers Treadwell and Samuel, and bought the property known as the Remsen Estate, originally a part of the Rapelie holding. This consisted of some thirty acres of land along the western shore of the Wallabout, a thirty five-acre mill pond, the mill, and a residential structure.

Taking advantage of the existing dock and the opportunities of the period, the Jackson brothers built a small shipyard where during 1790s at least two ships were constructed; one of them, the frigate Adams, was produced for the new United States government. As one of several land and development ventures, John Jackson sold forty acres to the government in 1801 for use as a navy yard. Other Jackson undertakings affecting land within and adjacent to the area currently under consideration included construction of a toll bridge over the southwesternmost portion of the Wallabout, erection of a wind-driven saw mill on the more stable land west of the Bay, and sale of part of the adjacent meadow to the Navy Yard Commandant, Captain Isaac Chauncey, for the construction of powder magazines for the Navy (Stiles 1867:363; Church and Rutsch 1982:20). Another development in which John Jackson played a key role concerned the remains of Revolutionary War prisoners mentioned previously; this will be discussed in detail below.

The Navy Yard Era (1801-1966)

The establishment of the Navy Yard was undoubtedly a key element in the development of this portion of Brooklyn. As the resident population grew, commercial and residential structures were built to accommodate them and roads were laid out to meet the growing military and civilian transportation needs of the area.

Initial activity at the newly-acquired government facility was limited. This was due to persistent legal disputes arising both from the Jacksons' claim to and purported sale of water rights that were somewhat more extensive than those legally recognized for the Remsen property. Another deterrent was the difficulty of constructing in the unstable sediments that underlay most of the lands purchased by the government.

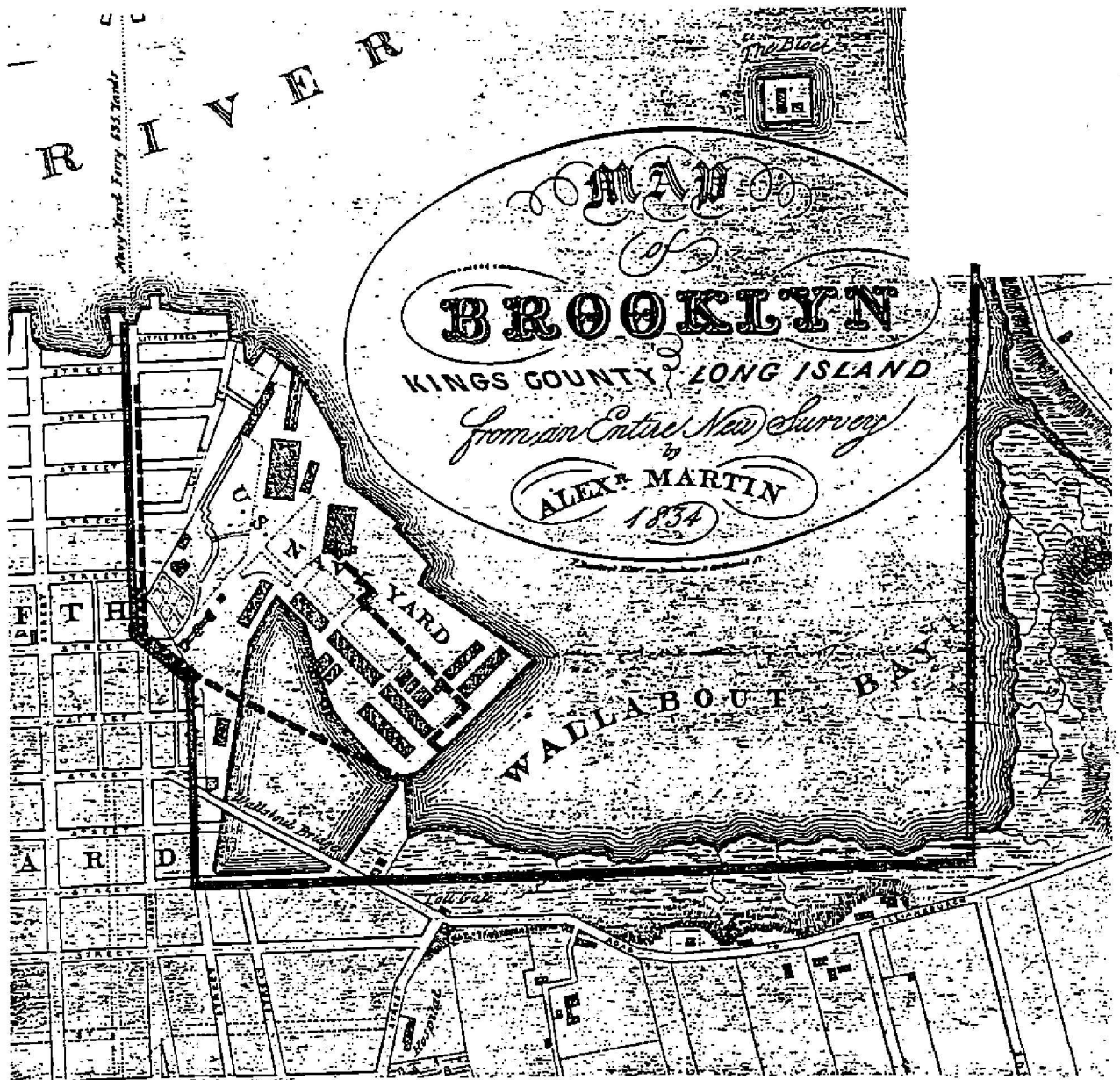
The earliest Navy Yard buildings were erected in the extreme western portion of the former Jackson property. Most impressive of these is the original portion of the Commandant's Quarters (known as Quarters 'A'); this consisted of a cellar, basement, parlor floor, and two upper floor sleeping rooms. The structure,

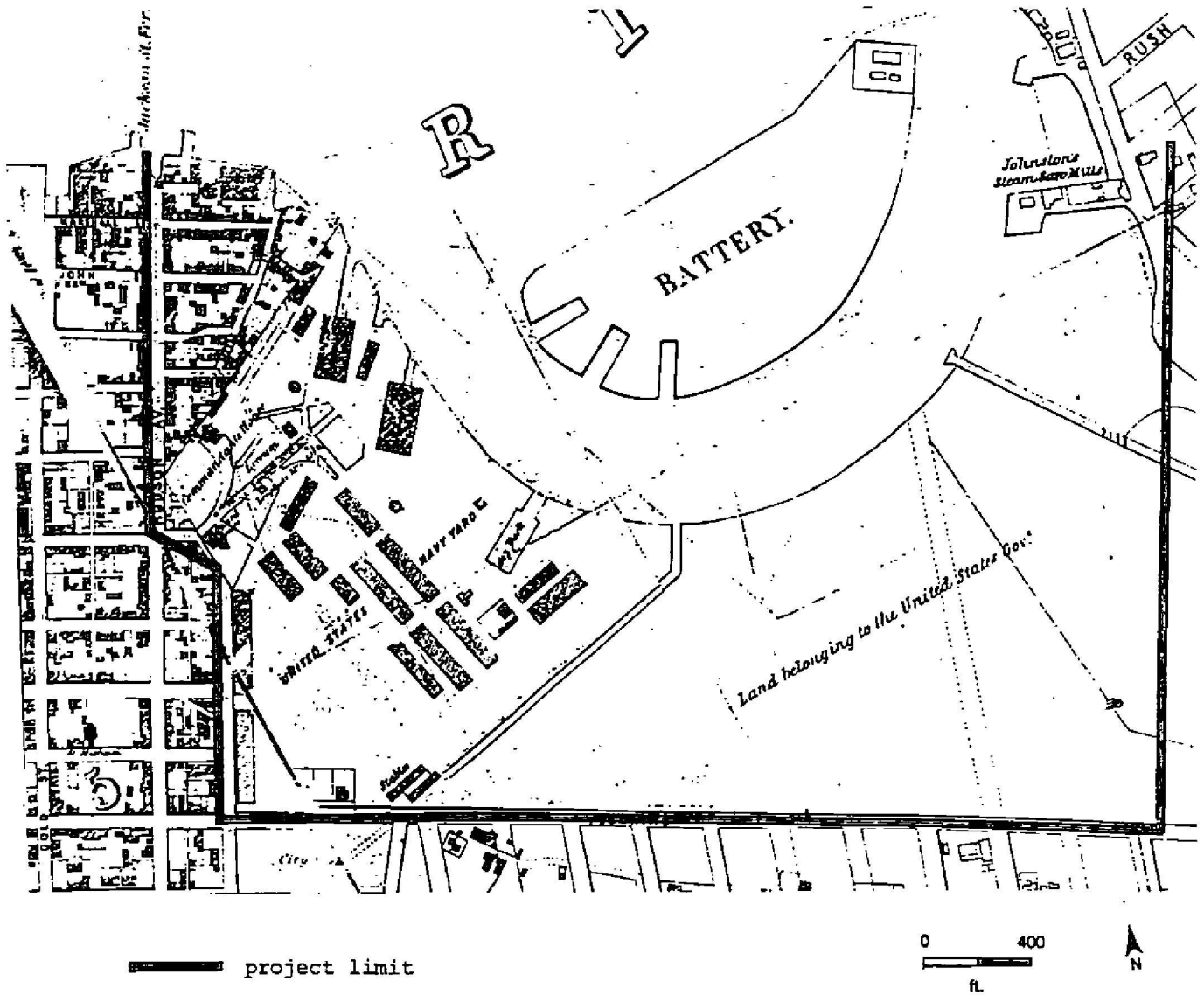
designed by the eminent architect Charles Bullfinch, was built in 1805-06 on what came to be known as West Hill, overlooking the Wallabout. Major modifications to the house were executed in 1860, 1904 and 1936, when the main hallway was enlarged, an addition was built on the north, and the conservatory was added on the south (West 1941:20).

At the same time, six brick storehouses and office buildings were constructed at the southwest end of Main Street, a road that extended northeast from what is now York Street (West 1941:24). The precise locations of these structures cannot be firmly be established from documentary sources, though they well may be represented by one free-standing and five joined structures depicted along the southeast side of Main Street in Martin's 1834 map (Figure 24). A total of eighteen larger buildings are shown by Martin to have stood within the present Navy Yard study area. None is identified on this map, but the two largest structures are shown by Dripps in 1850 to have been "Building Sheds" (Figure 25). The two structures depicted between Navy Street and the remains of the Remsen Mill Pond on the 1834 map probably represent what West (1941:25) identifies as Buildings 15 and 16, the "timber sheds" erected in 1833 and positioned north and south of the Sands Street Gate, respectively. They may have served as storage places for timbers seasoned in the waters of the mill pond prior to being used in ship construction.

Comparing the various nineteenth century maps of the Navy Yard reveals at a glance that development progressed from the western edge of the Wallabout toward the east and southeast, as ever more acres of swampy tidal flats and former millpond were drained and/or filled. The 1839 Stoddard map depicts many fewer structures than did its predecessor. Most of the omissions involve the eastern and southern portions of the Navy Yard, where no structures are shown. Since some of these buildings are quite large and appear on subsequent renderings of the Navy Yard, their omission does not appear to reflect a catastrophe such as a fire or flood. It is also unlikely that it is the result of a more limited attention to detail by Stoddard since the course of Main Street is clearly indicated and the Lyceum building at its north end is labelled. It is more plausible (a) that his map, though published in 1839, was in fact based on older data compiled before these structures were built, or (b) that Martin chose to depict structures which were planned but not yet executed in 1834 and had indeed not even been built five years later.

The Wallabout Bridge discussed earlier is also missing from Stoddard's map, which shows the marshland just south of the Bay having been filled and Flushing Avenue laid out along the new shoreline. Since the old Williamsburgh Road leading to the Wallabout Bridge is still represented, albeit vaguely, and the





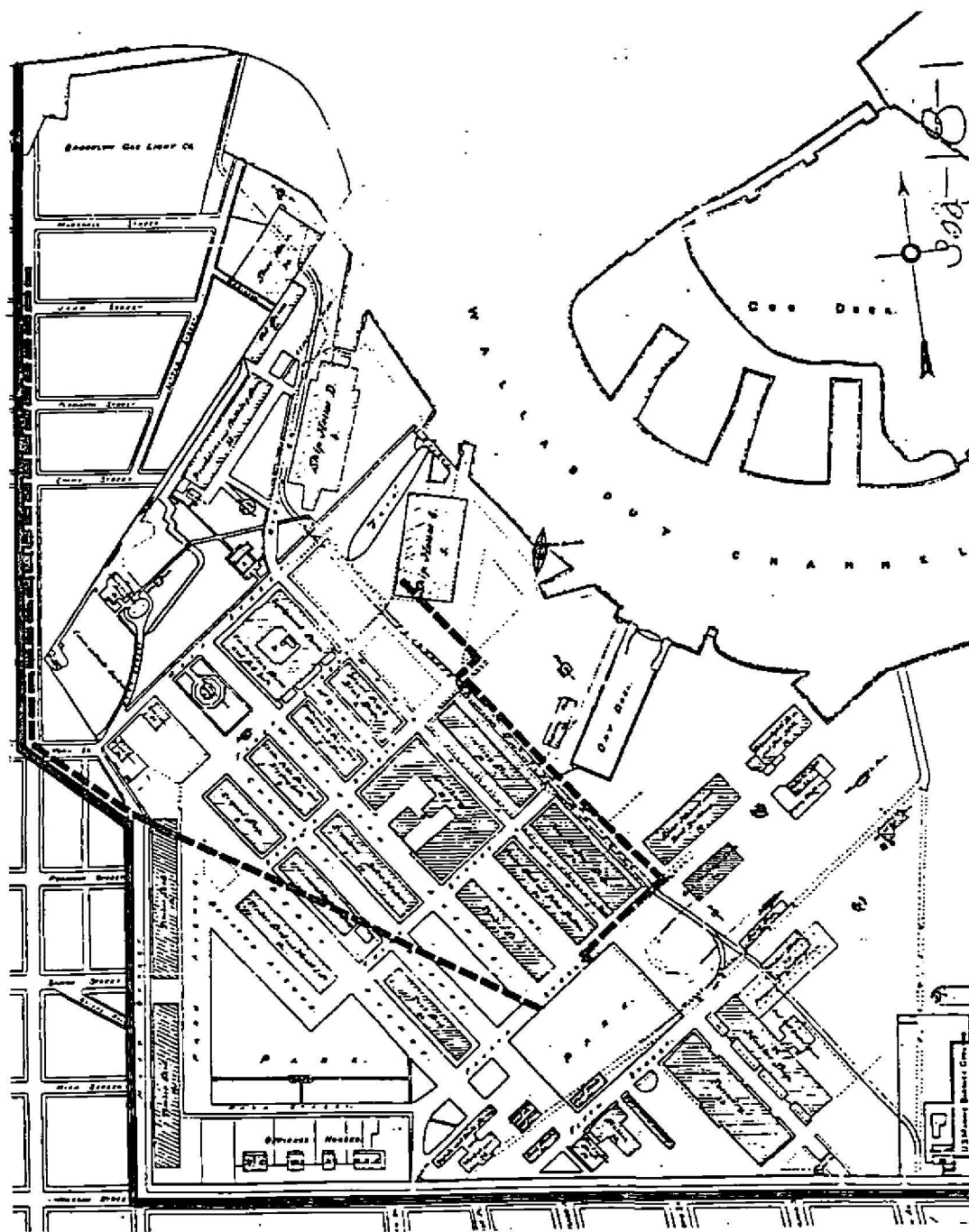
new shoreline is shown to encroach on two segments of Flushing Avenue, it seems most likely that this land reclamation still constituted an undertaking-in-progress when Stoddard drew his map.

A map of Brooklyn published in 1850 by Dripps (Figure 25) shows the development of the Navy Yard in considerable detail. The structures depicted by Martin are still represented, along with Dry Dock No.1, a granite and timber structure built between 1841 and 1851, several long, narrow buildings erected in blocks already sketched out by 1834 (see Figure 24), and two apparently circular structures. The more westerly of these represents what was in 1882 designated the "Old Reservoir" or Structure 34 (Figure 26). By 1850, the mill pond had been completely filled and the two "timber sheds" shown by Martin on the east side of Navy Street were expanded into or replaced by long, narrow structures that extend from just north of Flushing Avenue to beyond Prospect Street.

A map published in 1861 shows the major structures documented by Dripps a decade earlier, although it was not executed in sufficient detail to include smaller buildings (Brown 1861). The only obvious exception to this picture of continuity is the loss of the smallest, and probably the oldest, of the three ship building sheds located along the western part of the waterfront, between what are referred to in 1882 as Ship Houses D and E (compare Figure 24, Figure 25 and Figure 26).

Two maps of the area published in 1876 by Watson and by the Board of Health (Figure 27) do not offer the detail of the Navy Yard provided by Dripps but do attest to an increasing number of buildings, particularly in the southern half of the property. The Watson map also records the addition of a compound of marine barracks built in 1864 (West 1941:27), and a site for a foundry, both well east of the area previously occupied by Navy Yard-related facilities.

The variation in the configuration of structures and spaces within the central, densely-built portion of the Navy Yard and the recently constructed marine barracks area indicates that the two maps published in 1876 are only roughly contemporary. The greater number of structures and the more elaborate configuration of several shown on the Board of Health map imply this was in fact the more recently executed. For example, what are designated the "Smithery" (Building 11) and the "Civil Engineers Office" (Building 3) on a much more detailed map published in 1882 (Figure 26), are shown on the Board of Health map but are missing in Watson's rendering. Figure 26 also depicts Main Street as extending beyond the Lyceum and Gibson Street, its original terminus according to West (1941:24), and continuing north past Morris Avenue toward the waterfront.



project limit, western part
proposed underground lines

A horizontal scale bar with a black rectangular body. The number '0' is at the left end and '400' is at the right end. Below the bar, the unit 'ft.' is centered.



- project limit
- - - proposed underground lines
- reconstructed shoreline (west side of project site)

0 600
ft.



As shown on the twentieth century maps (Anonymous 1920, U.S. Navy 1952), most spaces in the western portion of the Navy Yard were at one time built up and the installation extended around to the east and northeast, so that it occupied almost the entire area north of Flushing Avenue.

Dry dock No. 2 was completed in 1890 and was noteworthy at the time for being the largest timber facility of its kind in the world. In 1902, it was faced with concrete (West 1941:60). Building 41, the central power plant, was built in 1898. Efforts to consolidate the three Navy Yard generating facilities at this location, begun in 1905, were completed in 1911, when Building 41 was placed in full operation. Some improvements were made in 1920, boiler stacks were added seven years later and further upgrading was undertaken between 1935 and 1940 (West 1941:33-34).

Later, the Red Hook Water Pollution Control Plant was built in the northwest portion of the Navy Yard, east of Little Street and north of the Craneway, on the location of some of the Yard's earliest structures, including Ship House D (see Figure 31).

The Legacy of the Prison Ships

Development of the Navy Yard was not limited to filling an ever-widening area of the Wallabout and constructing buildings to house the increasingly complex industries required to produce and maintain modern military ships and the personnel who staffed the installation. Often older structures were modified, renovated, or razed and replaced as the demands of shipbuilding changed over time. As noted earlier, a result of this activity, which usually required some excavation below the fill and into the former marshland, beach, or floor of the bay, was the discovery of a number of human skeletons over the years.

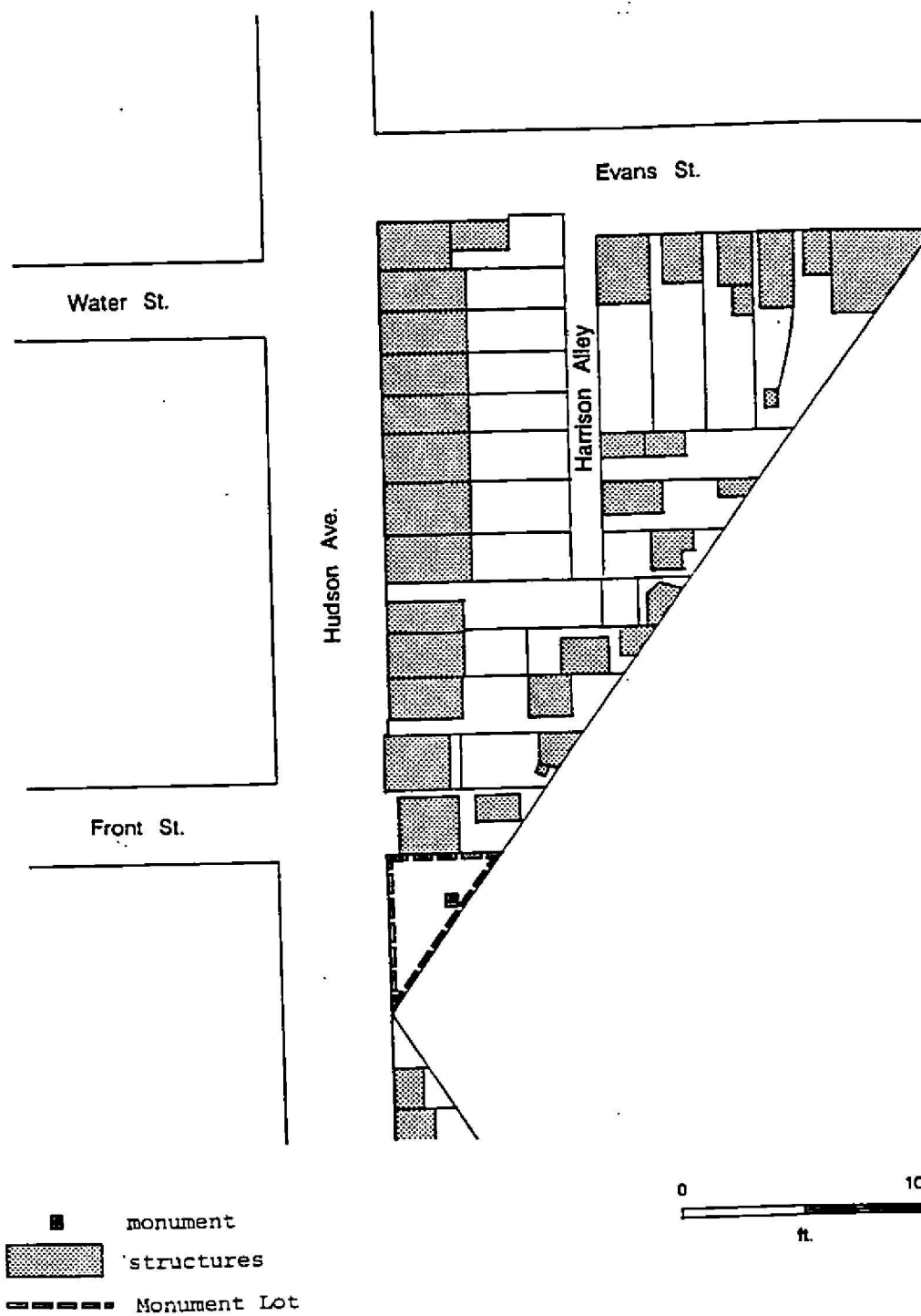
As previously discussed, large numbers of Revolutionary War prisoners who perished on the British prison ships anchored in the Wallabout were buried on what was then the shore of the bay. The shallowness of these graves and the action of the tides caused many of the corpses to be washed out of their resting places and be redeposited on the beach or swept out into the bay, where they came to rest. It has been described that bones bleaching in the sun on the shore of the Wallabout and eroding out of its sandy banks were a common sight during the decade after hostilities ceased, as bodies had been buried, according to eyewitnesses, in every reasonably dry spot on the shoreline as well as "in the ravine, near Remsen's dock" (Stiles 1884:870).

Many more skeletons were exposed during the 1790s where John Jackson cut into these banks (Stiles 1867:363), and additional human remains were encountered during the course of Navy Yard expansion and the replacement or modification of structures. Most of these bones were found in the western portion of the installation.

Parts of two skeletons were recovered in 1878 near the northeast corner of Ship House 1 (Stiles 1884:870), presumably the structure designated Ship House D or Building 4 by the 1882 map of the Navy Yard (see Figure 26). The remains of over 100 individuals were found during foundation excavations for new structures in 1900 (Anonymous 1908:np). As has been noted, bones were encountered as recently as 1939 in conjunction with renovation and enlargement of the Shipfitter's Shop (West 1941:19), a large, roughly triangular structure built in 1919 and known as Building 4 after the demolition of the Ship House mentioned above. The Shipfitter's Shop stood east of Navy and West streets and northwest of Second Street; its western corner was built over the former course of Main Street.

During the first decades after the American Revolution, the disposition of the bones, which had been buried in such profusion and were now being exposed in similar fashion, became an issue for both the local community and the national political and military establishment. Once the quantity of human remains present and not properly buried became general knowledge, various individuals, such as Connecticut Congressman Joseph P. Cook, attempted to stir the national government to act so that the recovered bones could be suitably interred. In 1792, the annual Brooklyn town meeting passed a resolution calling for the remains in possession of John Jackson be buried in the graveyard of the Dutch Reformed Church and a monument erected on the spot. Mr. Jackson refused to participate in this effort, preferring that he and the Tammany Society, of which he was a prominent member, reap the political rewards offered by this undertaking. He donated a piece of his property to the Tammany Society for the interment, and a proposal for a tomb was presented to Congress in 1803. No action was taken and the issue lay dormant until February of 1808, when the Society began a campaign to raise funds from the public. The task was accomplished in a only few months and the cornerstone for a vault into which the bones would be deposited was laid in April of that year. In the interim, the human remains that continued to erode onto the beach had been purchased and safeguarded by Benjamin Aycrigg, drawing upon his own funds (Stiles 1867:363-365).

After much pomp and oratory, thousands of bones, consolidated into thirteen caskets, were interred in a vault located on the east side of Jackson Street (now Hudson Avenue) adjoining the Navy Yard in May of 1808 (Figure 28).

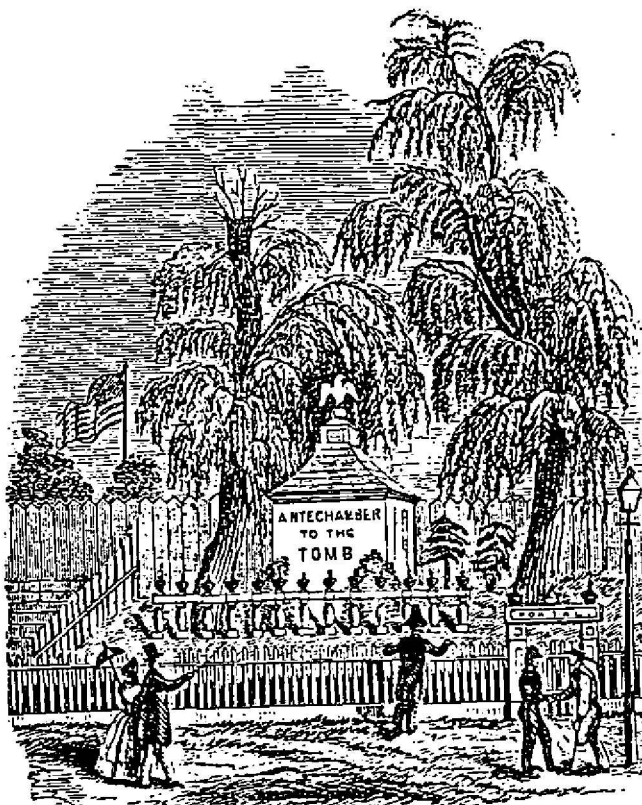


Hopes for building a more permanent monument to the martyrs remained unrealized over the next two decades, as enthusiasm waned. During this time, the growing population and commercial activity in the Wallabout section of Brooklyn encroached ever more on the small plot of land on what was now renamed Hudson Avenue (Figure 28). Grading activity along the street threatened the walls of the wooden structure covering the vault and in 1827 the lot itself was offered at auction to satisfy owed taxes. Fortunately, Benjamin Romaine, himself a prisoner of war during the American Revolution and who, as an official of the Tammany Society, had been a leader in the 1808 fund-raising effort, bought the property. He built a new ante-chamber over the vault (Figure 29), into which he placed inscriptions, busts, and artifacts evoking the early years of the American Republic and its heroes. In the hopes of protecting the site from again being neglected or put to a more profitable use by developers and politicians, he arranged for himself and his family to be buried in the Tomb.

Owing largely to his stature in the community, Mr. Romaine succeeded in blocking an 1842 attempt to have the State Legislature remove the bones to another location. However, only one year after his death in 1844, a drive to find a more suitable location for the Martyr's Tomb was again mounted and in 1855 the Martyr's Monument Association was formed to oversee these efforts. A site was chosen at nearby Fort Greene (which had been known as Fort Putnam during the American Revolution), overlooked the Wallabout (Stiles 1867:367-376).

Little action was taken over the next two decades, during which time the original tomb was again allowed to deteriorate and was threatened by development. Writing in The Brooklyn Standard in 1861, Walt Whitman characterized the Tomb on Hudson Avenue as "a disgrace" (McCoullough 1983:109) and the Monument Lot appears neglected though still visited by the public according to an 1867 rendering (Figure 29).

Finally, in 1873, the bones were removed from their coffins, were placed into twenty two new boxes and interred in a brick vault built on the lot at Fort Greene. In contrast to the well-attended ceremony marking the dedication of the Martyr's Tomb in 1808, the event at Fort Greene received very little public notice. However, when over 100 additional skeletons recovered from the Navy Yard in 1900 were placed into the tomb, a full complement of dignitaries and military honors once again marked the occasion (Anonymous 1908:np). Human remains subsequently uncovered in the Navy Yard have also been interred at the Fort Greene monument (West 1941:19), yet the disposition of the Monument Lot tomb is unknown.



THE TOMB OF THE MARTYRS.

(As restored by Mr. Romaine in 1839.)



THE PRESENT CONDITION OF THE 'MARTYRS' MONUMENT.'

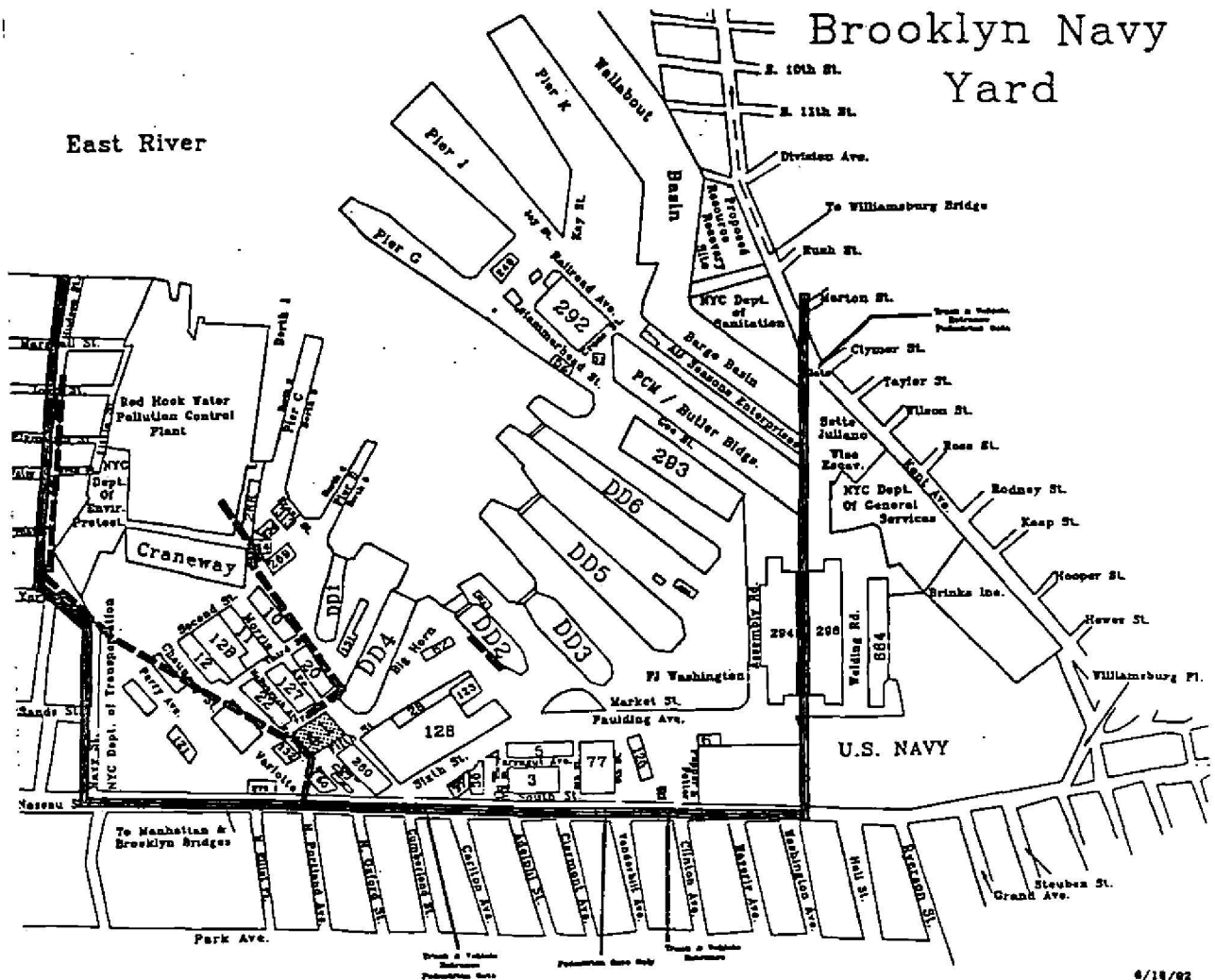
III - ASSESSMENT OF ARCHAEOLOGICAL IMPACT

Four classes of buried cultural remains were identified as potentially subject to construction impact relating to proposed utility installation: structural remains and/or cultural features pertaining to former Navy Yard buildings; as-yet-undiscovered human remains of Revolutionary War prisoners; structural and/or human remains associated with the first Martyr's Tomb; and Native American cultural remains under Hudson Avenue.




The likelihood of encountering traces of Native American or early Euro-American activity within the limits of proposed utility line construction may be considered low. The area is known to have been characterized by marshes and tidal flats prior to filling in the nineteenth century. As such, it would not have been attractive for occupation by either population, although both would have found resources present in that environment that could be harvested on a seasonal basis. It was mentioned earlier in this report that the marsh grasses were commercially cut during the eighteenth century and both plant and animal resources from such settings in other parts of Brooklyn are known to have been exploited by indigenous populations. Those colonial-era buildings that stood along the shore of the Wallabout prior to development of the Navy Yard are known to have been located to the west or south of the proposed construction impact areas.

As discussed in the preceding section, the earliest shipbuilding activities took place in the western portion of the former Navy Yard, west of Fourth Street. Four instances of possible construction impact to buried remains of former Navy Yard structures were identified. The proposed underground electric line to extend from the northwest corner of Building 41 to a point on Hudson Avenue just north of John Street, where it will connect with an existing Consolidated Edison line near the Williamsburg Substation, will pass through the sites of three former Navy Yard structures, Buildings 23, 13 and 15 (Figure 30).

Building 23 stood southwest of Building 41, between Third and Fourth Street and south of Warrington Avenue (Navy Yard maps 1920, 1944). It was originally bounded on the south by Chauncey Avenue before that throughfare was blocked between Second and Third streets by the construction of Building 63. According to West, Building 23 was erected in 1903 and housed sail, flag, and rigging shops (1941:33). Shown on a 1905 map of the Navy Yard and designated an "Equipment Storehouse" (U.S. Navy 1905), it stood through the World War II era and was razed sometime after 1952 (U.S. Navy 1952).



6/18/82

-  project limit
-  proposed underground lines
-  building B-41

no scale



Building 13, bounded by Second and Third streets and situated between Perry and Chauncey avenues, was located across Third Street and west-northwest of Building 23. It seems to date from the period 1876-1882. The structure is shown on the 1882 map of the Navy Yard where it is designated an "Ordnance Machine Shop," but is absent from a reconstructed map published by the Board of Health dated six years earlier. According to West (1941:27), Building 13 was erected in 1864, which if correct, indicates that the information used in producing both the Board of Health and Watson's 1876 maps was at least a decade out of date. During World War II and possibly earlier, the structure served as a Marine Barracks (West 1941:27); it was razed sometime after 1952 (U.S. Navy 1952).

Building 15 was situated on the site of one of the earliest structures erected after the property became an active naval station around 1811. According to West, this was a "timber shed" built in 1833. It was located north of the Sands Street Gate and a companion structure, Building 16, stood just to the south of that gate (1941:25). This building may be the structure shown on Martin's 1834 map of Brooklyn as situated between Navy Street and what remained of the Remsen Millpond. By 1850, it has either been extended and reoriented or replaced by another, much longer structure, referred to on the 1882 map as Building 15, a "timber shed". West may in fact not have been correct in correlating the two structures: that shown by Martin in 1834 may have been an unrelated predecessor to the building depicted in 1850 and identified in 1882, neither functioning as a timber shed nor known in its day as Building 15. In either case, both structures occupied the area where electric line construction is now proposed and any buried remains of either that might still be present must be considered of high potential for project impact. Some truncation of the north end of Building 15 is documented in 1928 or 1935, when Building 4, the Shipfitter's Shop, was enlarged to the south. Additional encroachment, this time on its south end, appears to have resulted from the construction of Building 200 between 1920 and 1937. The latter structure, housing the Labor Board and Safety Engineer, was not depicted on the 1920 map (Anonymous 1920) and was "remodeled" in 1937 (West 1941:37; U.S. Navy 1944).

No documentary evidence was found to indicate what types of construction materials were used in these buildings or the depth of their foundations. The spaces they occupied are now vacant and appear not to have been built upon since their demolition.

Proposed construction of underground water, gas, and electric lines between the northern corner of Building 41 and the Red Hook Water Pollution Control Facility would pass near or through the location of Ship House E, which stood just south of present Pier C. This frame shed, in which the hulls of ships were constructed, is shown on the earliest detailed map of the Navy Yard (Martin 1834) and operated at least through 1882, when it was designated Building 5. It was apparently razed by 1896; a sewer map dated January 1 of that year shows two "Launching Ways" occupying that site on the waterfront (U.S. Navy 1896). By 1905, two larger, more elaborate launchingways succeeded these structures (U.S. Navy 1905).

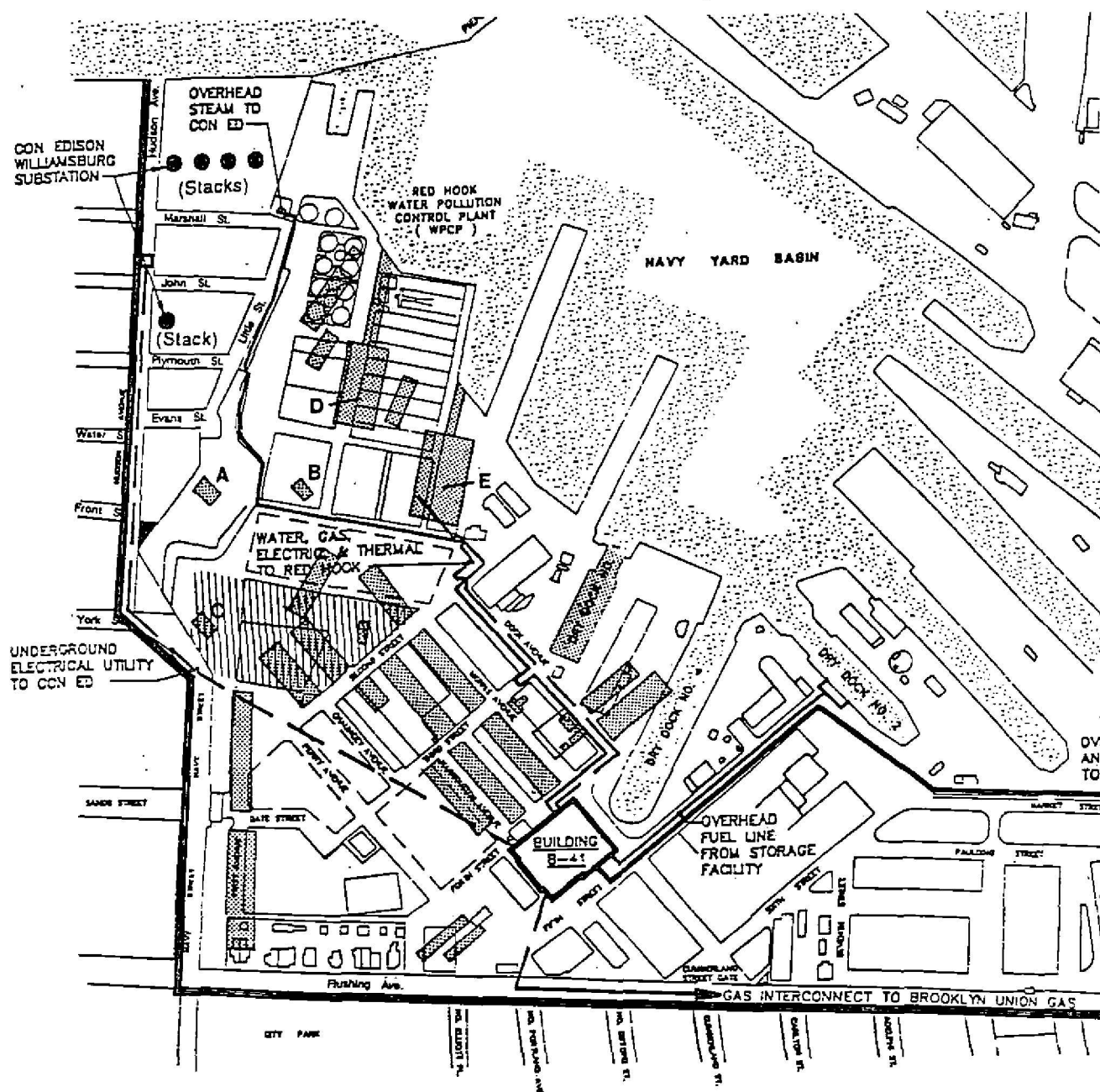
According to West, "Ways 1" was built in 1903, but "Ways 2" was not constructed until 1917-18 (1941:39-40). The more easterly structure on the 1905 map appears to be a sketch rather than a detailed rendering characteristic of other Navy Yard buildings. Its inclusion seems to indicate that the planning of this second structure had perhaps begun more than a decade before its execution. Proposed utility lines will cross through or near what was the southwest corner of Ship House E (Figure 31).

West recounts that in 1918 and 1940, when both these Launchingways (also known as Shipbuildingways) were being extended to accommodate the battleships Connecticut and Iowa respectively,

obstructions were encountered in driving the piles for their foundations. These obstructions might well have been a part of the hull of one of the former British prison ships moored in the immediate vicinity, although nothing more substantial than rumor sustains this possibility (1941:40).

This brings us to the second class of cultural material for which the potential for construction impact is considered high: human remains relating to the interment of deceased prisoners during the American Revolution. As discussed previously, thousands of prisoners kept on British ships anchored in the bay died and were buried in shallow graves along what was then the shore of the Wallabout. The remains of untold numbers of these individuals were washed out by the tides and redeposited on the beach or in the waters of the bay.

Because of the potential quantity of bones involved and the haphazard nature of their interment and redeposition, any natural soils within the eighteenth century limits of the Wallabout and along its shorelines of that period must be considered of high potential for containing human remains. The portion of the Navy Yard in which underground utility lines are to be installed has



- project limit, western part
- 1850's buildings
- proposed underground lines
- proposed overhead lines
- proposed overhead lines
- former location of Bldg No. 4

- A Commandant's house
- B Lyceum
- C guard house
- D ship house
- E ship house
- ▼ Monument lot



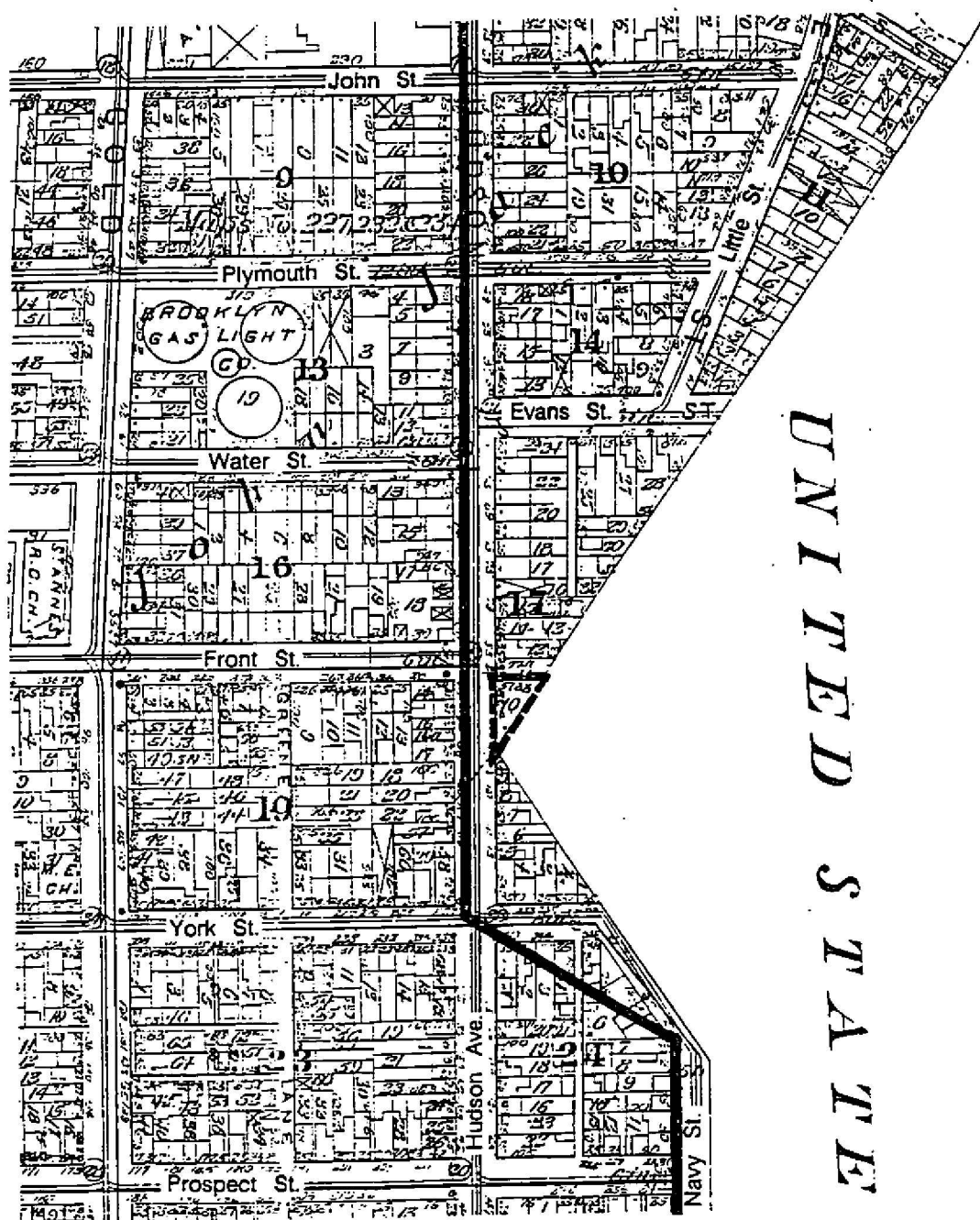
of the Monument Lot and continuing just south of its southern limits, with the actual monument depicted immediately west of the Navy Yard wall (Figure 28). This echoes two illustrations of the Martyr's Tomb from 1839 and 1867 (Stiles 1867:opp.372,376) that place it just to the west of the wall (Figure 29).

Robinson's 1886 map of the area, drawn after the bones had been removed to their Fort Greene resting place, indicates the parcel, designated Lot 10, has remained intact and shows no structures standing on it (Figure 32). Any remains of the above-ground antechamber, which stood on the Monument Lot at least through 1867 and probably through 1873, when the bones were moved, are not recorded. By 1929, the lot was subdivided into two parcels, the northern one (87 Hudson Avenue) the site of a building whose northeast corner is marked with an 'x', the meaning of which is not apparent (Figure 33).

By 1898, buildings abutted the portion of the Monument Lot identified as the "Monument," or Martyr's Tomb, on the 1855 Perris Insurance Map (Hyde 1898), but the actual tomb site remained undeveloped. By 1929, however, it was covered by a large triangular, one-story wooden structure (Hyde 1929; see Figure 33); the depth of this building's foundations, or if it had a basement, is unknown. Except for 87 Hudson Avenue, all these buildings are now gone (see Figure 20), but it is possible that remnants of the underground vault of the former Martyr's Tomb may survive in some form.

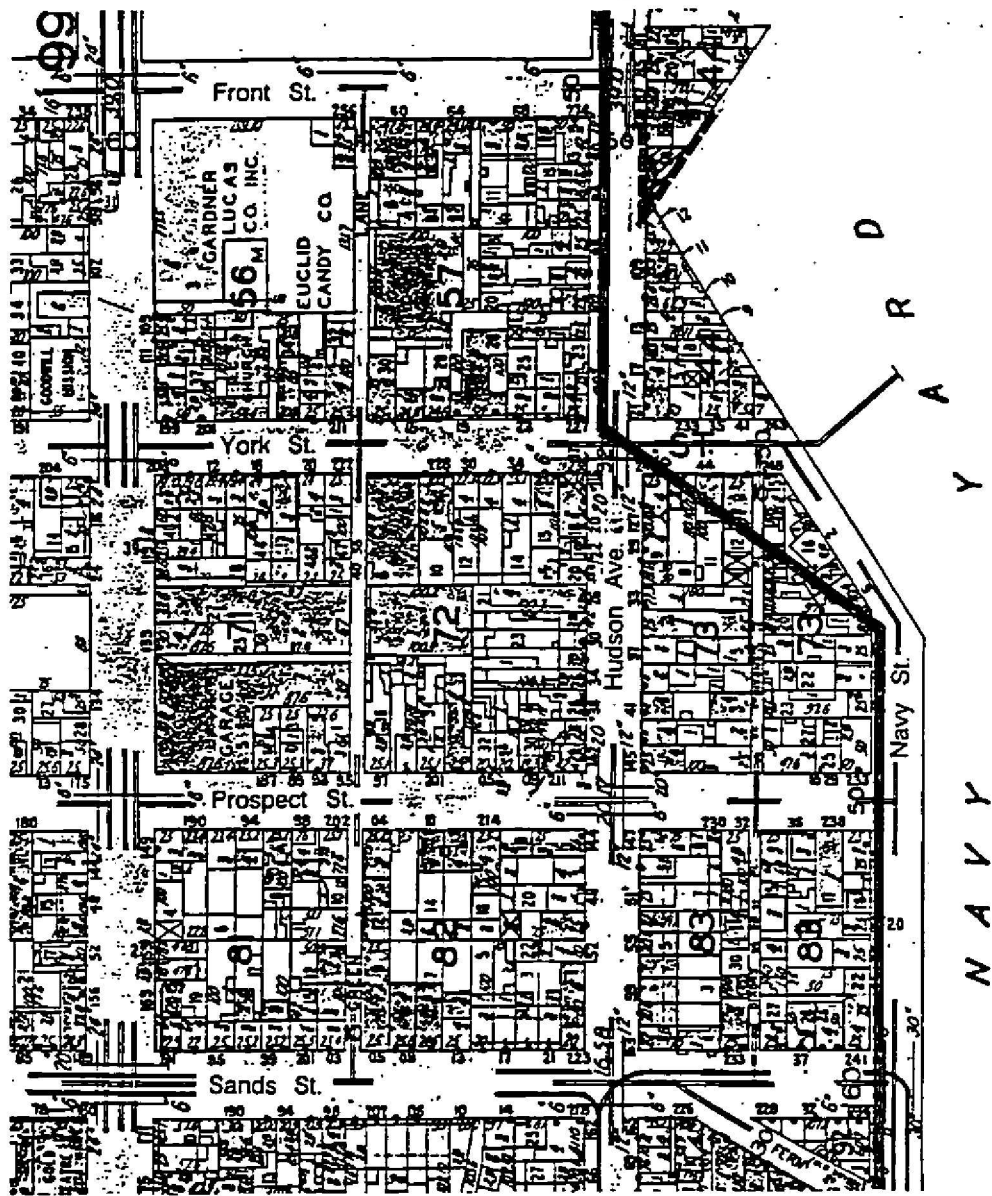
Though no evidence of major cutting along Hudson Avenue after 1840 could be documented, the disturbance that might have resulted from street widening or grading activity prior to that date can not be determined from published sources or local officials. Infringement on the Monument Lot or the underground vault by subsequent development activity, including construction of a building adjacent to Hudson Avenue in the northwest corner of the parcel, also cannot be determined from available sources. The potential must be considered high for impact to subsurface remains of the Martyr's Tomb by proposed utility installation in or east of the present course of Hudson Avenue and within approximately 100 feet (30½ meters) south of the Front Street intersection.




No other information was found to indicate or imply that any post-Revolutionary War burials took place within or adjacent to the proposed underground construction impact areas. The Naval Hospital associated with the Navy Yard and its associated cemetery were located far to the east of the planned utility placement, east of Washington Avenue and north of Flushing Avenue (Dripps 1850, Brown 1861, Watson 1876, Board of Health 1876). West mentions a letter written by Captain Isaac Chauncey to a Mr.



— project limit, western part
 --- monument lot





-  project limit, western part
-  Monument Lot
-  one-story frame structure on Monument site



produced human bones in the past and is considered particularly likely to contain as-yet-undiscovered human remains relating to this late-eighteenth century interment and dispersal.

Parts of two skeletons were recovered near the northwest corner of what was known in 1884 as Ship House 1 (Siles 1884:870), probably the structure labelled Ship House D on the 1882 map of the Navy Yard (Figure 26). This building was located along the east side of Gibson Street, now part of the Red Hook Pollution Control Plant site.

This portion of the Navy Yard was subject to considerable construction activity around the turn of the twentieth century, and was likely where at least some of the remains of over 100 individuals were found during excavations for foundations in 1900. More bones were encountered during enlargement of the Shipfitter's Shop (Building 4) in 1939. This structure stood east of Navy and West streets and northwest of Second Street, just south of what is now the Red Hook Plant and the sites of the former Ship Houses and the later Buildingways. Building 15 was located just south of the Shipfitter's Shop and was, in fact, truncated or demolished to accommodate its southward expansion. Proposed underground utility lines will pass through what was the northern portion of Building 15, within some 150 feet of the site of the Shipfitters Shop and within roughly 150 feet of where the Ship Houses and Buildingways stood. This places project impact well within the areas from which human remains have been recovered in the past and consequently increases the likelihood of additional bones being encountered below existing fill.

The depths of the fill is not clear, though it may be assumed with some certainty that at least several feet of intrusive material were introduced over the entire area of utility line impact within the Navy Yard. The low and marshy physiographic character of this area prior to the development of the Navy Yard also makes it virtually certain that most if not all of this was in fact brought from outside sources. Some dredging of the bay no doubt occurred to accommodate larger ships during the twentieth century and this material may well also have been redeposited within the Navy Yard.

Subsurface borings taken in 1970 in conjunction with the construction of the Red Hook Water Pollution Control Plant provide no conclusive information about fill depths in this western part of the Navy Yard. Borings taken in a grid pattern from the area between Building 268 and the intersection of Evans and Little streets place the water table at between 2 and 8 feet (0.6 and 2.4 meters)(Ward 1971:Borings 1-10). It could not be determined whether the water table would have risen since the late eighteenth century, but from maps of that period it seems reasonable to conclude that the area now occupied by this portion of the Navy

Yard consisted of marshes, tidal flats and the portion of the Wallabout which made up the northern half of the mill pond associated with Remsen's Mill (see Figure 21).

An above-ground fuel line planned between the northeast corner of Building 41 and the area of Dry Dock No. 2 will be installed along Fifth Street. Some related underground construction involving the installation of fuel storage tanks will take place around the dry dock facility. As noted previously, Dry Dock No. 2 was noteworthy as the largest timber dry dock in the world when it was finished in 1890. Although later faced with concrete, there is every reason to believe that the original structure remains intact beneath. There is a potential for impact to this historically significant structure from construction-related activities which may take place in the immediate vicinity, that is within 15-20 feet (4½-6 meters), of Dry Dock No. 2.

The planned underground electric line between the northwest corner of Building 41 and the existing Consolidated Edison lines on Hudson Avenue just north of John Street will pass the site of the first Martyr's Tomb. Built in 1808, this repository for bones of Revolutionary War prisoners recovered prior to that date from the shore of the Wallabout stood between the east side of Hudson Avenue (formerly Jackson Street) and the wall which marks the western limits of the Navy Yard. It comprised a subterranean crypt into which the thirteen caskets purportedly containing 11,500 bones were placed (Stiles 1867:366), and a small superstructure which was renovated around 1828 and is illustrated in Figure 29. During a period of neglect prior to this time, the tomb had been allowed to deteriorate and grading activity along the street is described as having "infringed upon" the walls of the vault (Stiles 1867:371).

The extent and degree of this impact is not clear. The elevations of this portion of Hudson Avenue, roughly between York and Front streets, apparently were apparently were established in 1840, but they seem to once have been 2-3 feet (60-90 centimeters) higher between York and Front streets (Profile Map 1840:6185; Mark 1992, personal communication). It appears that Stiles' reference to "alteration of the grade" of Jackson Street (1867:371) relates to this grading that occurred some time after 1808 prior to the purchase of the lot by Mr. Romaine.

Residential and commercial development in the Wallabout area during the first two decades of the nineteenth century is mentioned but not detailed by Stiles. Period maps show that a grid pattern of streets has been laid out but do not indicate the degree to which they have been lined with structures. Perris' 1855 map shows buildings along the east side of Hudson Avenue (as Jackson Street was renamed in 1847) up to the northern edge

Hamilton referring to a naval hospital located in an old mill near a mill pond where 12 to 15 inches (30-37½ centimeters) of water flowed over the floor at each high tide (1941:5-6).

Captain Chauncey served his first tenure as Commandant of the Naval Station between 1806 and 1812. However, if addressed to Alexander Hamilton, the letter would have had to predate 1804, before Captain Chauncey's commandancy. Even if it was meant for another Mr. Hamilton, we can safely assume the letter was written during roughly the first decade of the nineteenth century. It appears to refer to the former Remsen Mill, a standing structure in the post-Revolutionary War era that may well have been used to house naval personnel in need of medical attention during the initial phase of the Navy Yard's operation. The conditions Captain Chauncey describes most likely prompted the government to expedite the relocation of the sick and injured to a more suitable place. No mention is made of any interments associated with this early hospital.

Stiles describes a "U.S. Marine Hospital....faced in white marble" as being located "[u]pon an eminence, a little to the eastward of the Navy yard proper" and "[a]djoining it, in the rear, a small but tasteful graveyard offers a quiet resting place to those who die in the hospital" (1884:870-871). This facility dates prior to 1834, as it is shown on the Martin map published that year, and was built after 1824, when the government purchased the land upon which it stands from the heirs of Martin Schenck (Stiles 1884:870). A compendium of landmarked buildings places the construction between 1830 and 1838, albeit without attribution (Diamonstein 1988:59). With the information provided by Martin's map, the date of construction is tentatively narrowed to between 1830 and 1834.

Operations at the Navy Yard were minimal during the first two decades of the nineteenth century, due to ongoing litigation over the provisos of the title bought from John Jackson and the difficulties encountered in constructing on the swampy and sandy soils that made up most of the parcel. Because adequate living quarters had not yet been built, the Navy billeted officers and enlisted men in private accommodations during this early period of the yard's operation. Since texts discussing the history of the Navy Yard make no mention of a hospital during this period, though they recount development in minute detail, it seems probable that the military also called upon civilian medical facilities in the surrounding community to temporarily meet its needs until a proper naval hospital could be constructed. Our assessment of pertinent documents therefore did not establish any potential for encountering burials dating to the Navy Yard era within or near the routes of proposed underground construction.

As mentioned, a potential exists for Native American cultural remains to occur in any former upper soil strata that may be present under fill on Hudson Avenue between York and John streets. The roadway runs along or just above what was formerly the western shore of the Wallabout and its associated marshlands. This setting would have been a likely camping location for Native American groups exploiting the plants and animals found in this area.

Since the extent and depth of grading which apparently occurred here prior to 1840 could not be determined from documentary and oral sources, the possibility remains that intact former upper soils are present under at least some portions of Hudson Avenue. There is thus a potential for impact to Native American cultural resources by underground construction of the planned electric line in any subareas along Hudson Avenue where such soils remain.

IV - SUMMARY AND RECOMMENDATIONS

The information presented here combines data on known Native American occupation in this portion of Brooklyn, a general history of the project area from initial Dutch settlement to the present, specific discussions of development in the western portion of the Navy Yard and along the segment of Hudson Avenue between York and Front streets, and assessments of the likelihood for project impact to potentially significant cultural resources. This investigation consisted of a search of published documents and archival sources, interviews with officials and historians knowledgeable about the development of the Wallabout area, as well as reconnaissance and photodocumentation of the project area. The study focused on those locations where planned construction would extend below the present ground surface, mainly the western part of the former Brooklyn Navy Yard and adjacent Hudson Avenue.

Based on this information, four subareas were identified where the potential for impact to cultural resources is considered an issue. The possible buried cultural remains pertain to the Native American, Revolutionary War, and Navy Yard use and development of the site.

Though almost all of the land under the Navy Yard had previously been tidal marsh or part of Wallabout Bay itself, the higher ground immediately to the west would have been suitable for occupation by Native American groups exploiting the plants and animals found in the shoreline habitat. Since at least some of Hudson Avenue appears to follow this higher ground, the potential exists for project impact to Native American cultural remains in any former upper soils that may be present under the fill levels deposited since the first half of the nineteenth century.

The western shore of the Wallabout seems to have been the primary focus for interments of American Revolutionary War prisoners who perished on British prison ships anchored in the bay. Since many of the burials were subsequently washed out by the tides and the bones redeposited in the bay, what became the western part of the Navy Yard must be considered highly likely to contain as-yet-undiscovered human remains dating from this period. Numbers of bones have been recovered from this area over the past two centuries, but these constitute only a fraction of the total known to have been deposited. Almost the entire Navy Yard rests on fill, and its depth could not be established in locations where underground construction is planned. We therefore conclude that any construction related activities

in the western portion of the Navy Yard west of Fourth Street, that extend below existing levels of fill, have the potential to encounter the remains of American soldiers imprisoned during the Revolutionary War.

The triangle formed by Hudson Avenue, part of the Navy Yard's west wall and developed property just across from and south of Front Street is the so-called "Monument Lot." This was the location of the first Martyr's Tomb, where the remains unknown numbers of Revolutionary War prisoners recovered from nearby beaches were re-interred in 1808. Although the bones were moved to Fort Greene Park in 1873, the fate of the underground vault in which they were kept is not known. Since the site of the Tomb appears to have been only minimally developed over the past century, and its location in relation to the present street could not be conclusively established, the potential exists for impact to what might remain of this feature. Therefore, construction within or along the eastern side of Hudson Avenue is an archaeological concern.

At the time of its construction in 1890, Dry Dock 2 constituted the largest timber facility of its kind ever built. Its wooden interior surface has since been covered with concrete but seems to be largely intact. Planned underground construction around Dry Dock 2 has the potential to cause impact to this significant structure. While the proposed underground lines will cross the sites of other former Navy Yard buildings, any remnants of these structures remains are not likely to be considered significant cultural resources.

It is recommended that archaeological testing address these areas of concern. It is especially important that all excavation that might extend below existing fill be evaluated and conceivably preceded by archaeological field testing and documentation of each location.

It is also recommended that planned underground lines along the segment of Hudson Avenue between Front and York streets be placed along the western side of Hudson Avenue to avoid possible impact to the Monument Lot. If this is not feasible, archaeological field testing of the impact area in the vicinity of the site of the 1808 Martyr's Tomb should be carried out prior to the commencement of ground-disturbing activities.

It is further recommended that any excavation below existing grade in the immediate vicinity of Dry Dock 2 be monitored by an archaeologist so that any portions of the original wooden structure which are thereby exposed may be documented. The goal would be to record specifications and techniques of construction.

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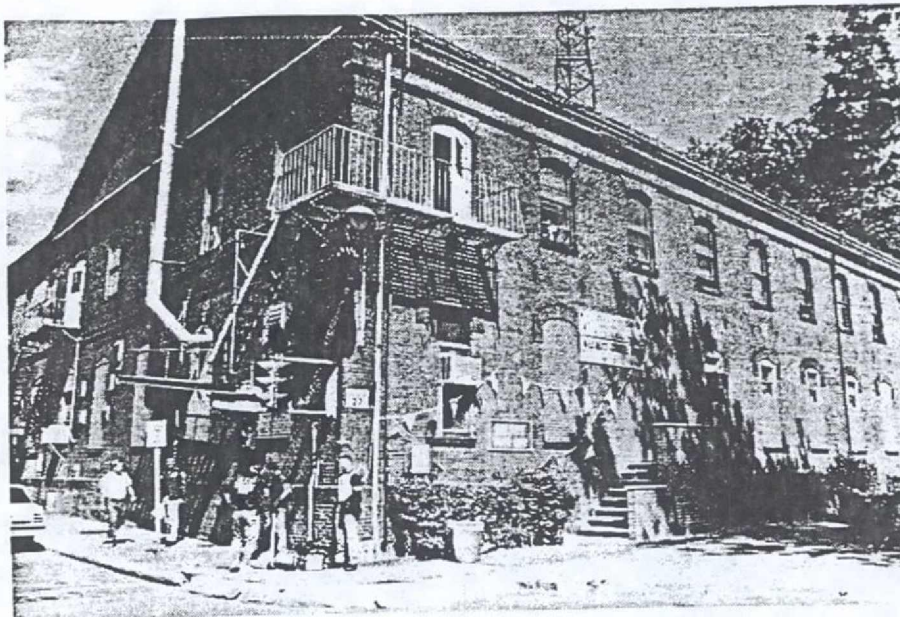
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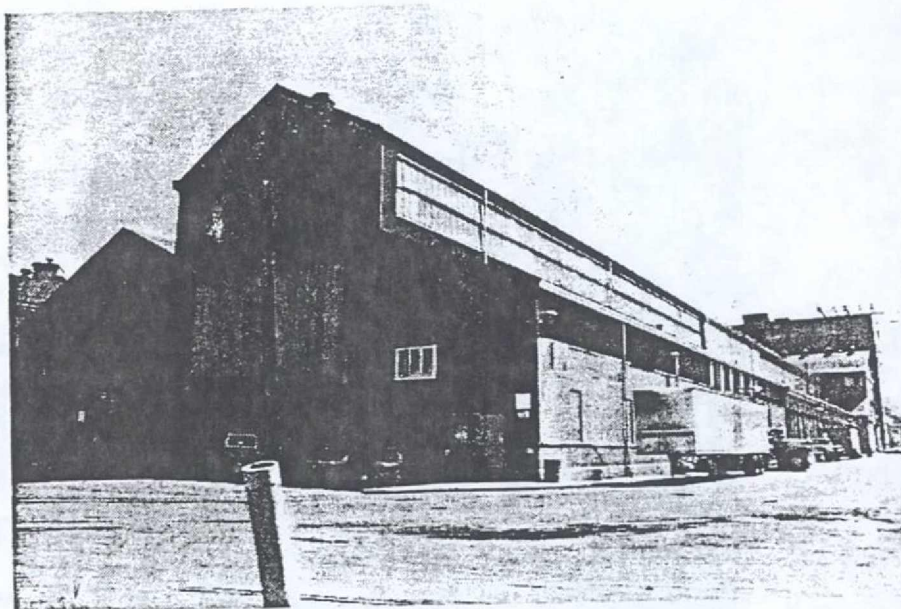
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APPENDIX

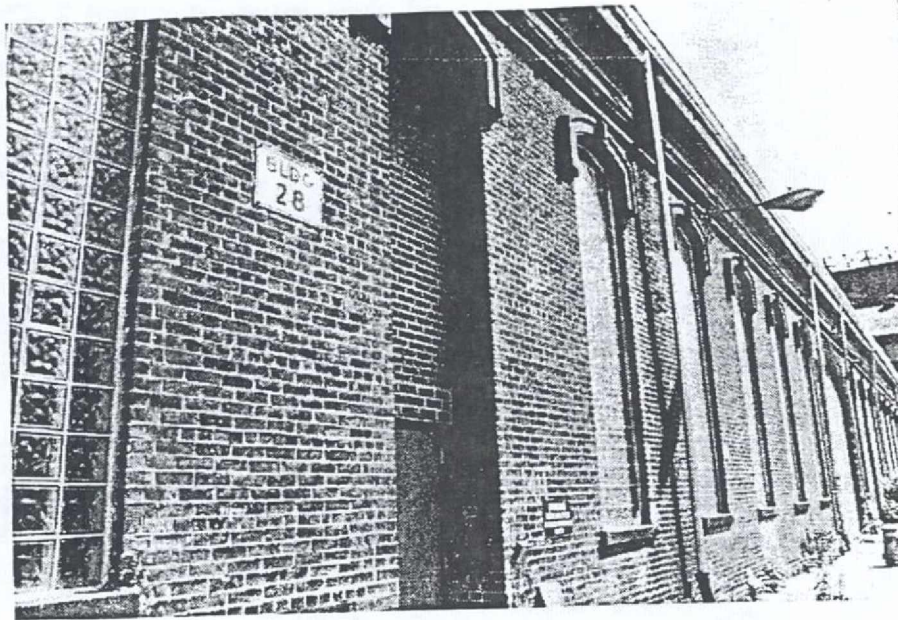
PHOTODOCUMENTATION OF SIGNIFICANT STRUCTURES



B-27 (to SE) (photo Oberon 6/92)



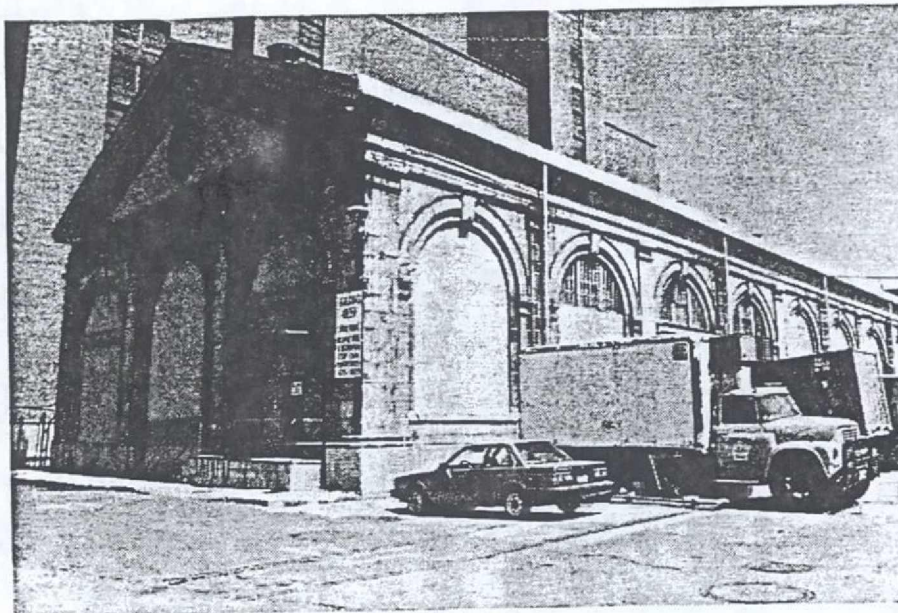
B-28 (to SW) (photo Oberon 6/92)



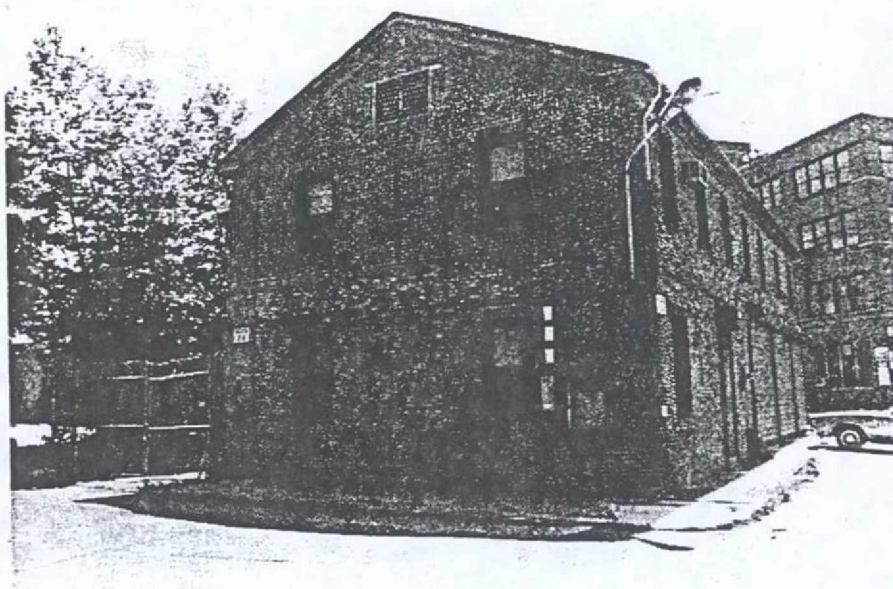
B-28 (to S) (photo Oberon 6/92)



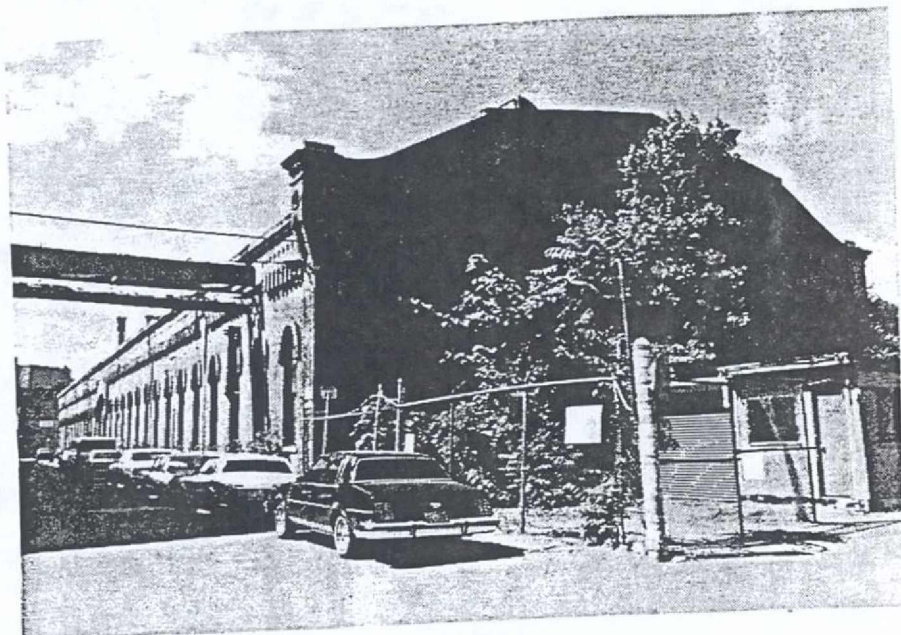
B-127 (corner of Morris Ave. and Fourth St. to NW) (photo Oberon 6/92)



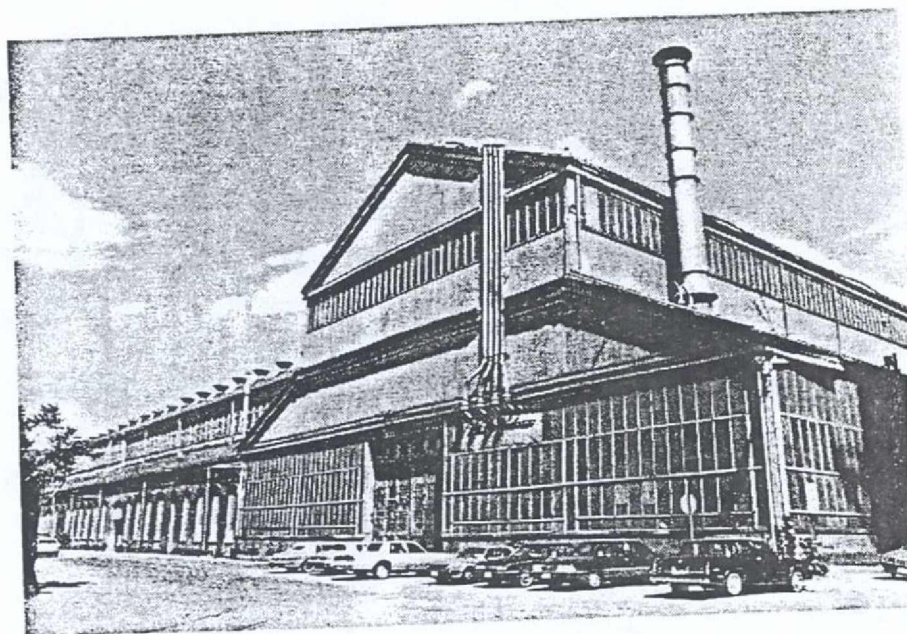
B-132 (to SSE) (photo Oberon 6/92)



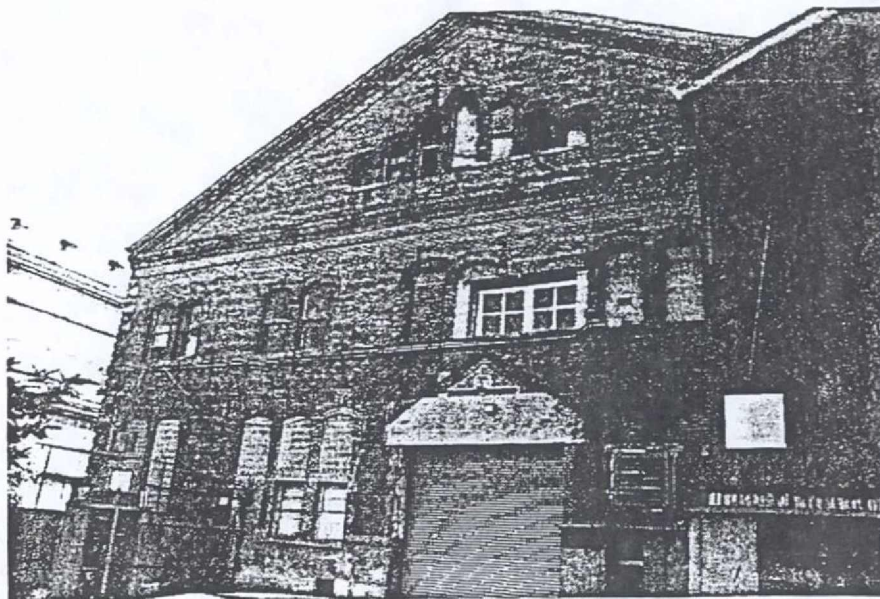
B-74 (to SW) (photo Oberon 6/92)



B-20 (to N) (photo Oberon 6/92)



B-128 (to SE) (photo Oberon 6/92)

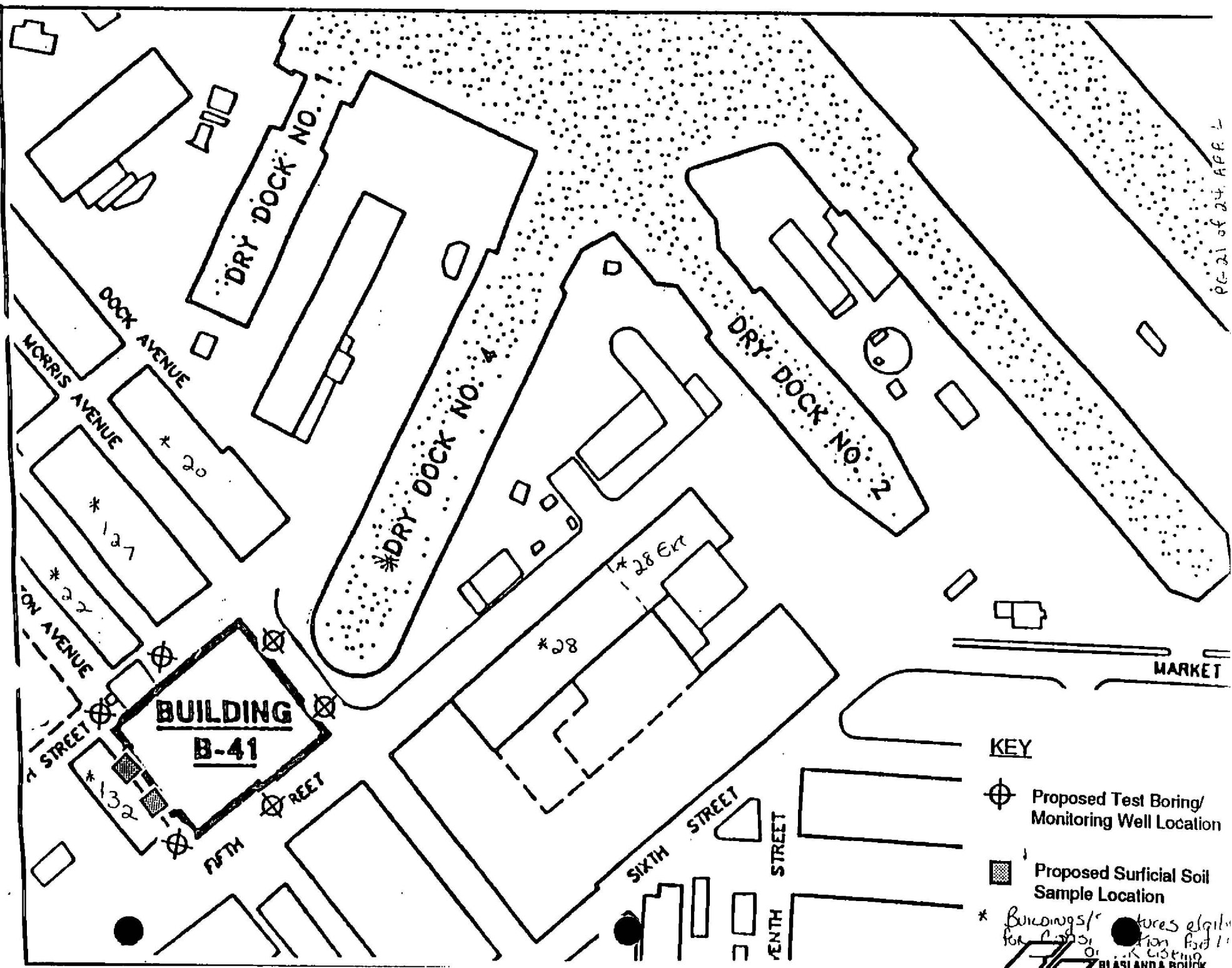


B-123 (to S) (photo Oberon 6/92)





B-22 (to SE), B-41 to right rear (photo Oberon 6/92)

ATTACHMENT B
TEST BORING/MONITORING WELL LOCATIONS



PC-21 of 24 APP. 1

KEY

-  Proposed Test Boring/Monitoring Well Location
-  Proposed Surficial Soil Sample Location
- * Buildings/structures eligible for listing

ATTACHMENT A

3 JUNE 1992

**CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
ENVIRONMENTAL REVIEW**



THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
225 BROADWAY, NEW YORK, NEW YORK 10007 PHONE (212) 553-1100

FAX COVER SHEET

FAX NUMBER: 914-695-2261

TO: Lori Calesoni

ADDRESS: B & B Engineers

TELEPHONE NUMBER: _____

DATE: 6/3/92

AL OF PAGES PLUS COVER SHEET: 1

FROM: _____

ADDRESS: _____

TELEPHONE NUMBER: _____



DANIEL N. PAGANO, M.A.
URBAN ARCHAEOLOGIST

NEW YORK CITY LANDMARKS
PRESERVATION COMMISSION

225 BROADWAY
NEW YORK, N.Y. 10007
(212) 553-1134

SPECIAL INSTRUCTIONS: _____

Bklyn Navy Yard



THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
225 Broadway, New York, NY 10007 212/553-1100

ENVIRONMENTAL REVIEW. F-4

5 EQR
PROJECT NUMBER

6/3/92
DATE RECEIVED

PROJECT

Brooklyn Navy Yard Building 41

(K)

- ☐ No architectural significance
- ☐ No archaeological significance
- ☐ Designated New York City Landmark or within a Designated Historic District
- ☐ On or eligible for National Register of historic Places
- ☐ Appears to be eligible for National Register Listing and/or New York City Landmark designation
- ☒ May be archaeologically significant; documentary study required with borings made by SDPA certified archaeologist
- ☐ May be archaeologically significant; need site plan showing building basement depths and footprints of previous and proposed buildings

COMMENTS

See 4/14/92 for archi textive and other archaeology comments

Daniel Pagano
SIGNATURE

6/3/92
DATE

William SHPO

PG 19 of 24 APP L

Memorandum

Date: June 3, 1992, revised 6-9-92

To: York Phase II File

From: Lori Calestini

Re: Summary of telephone conversation between Lori Calestini and Steve Pagano (Chief Archaeologist, New York Landmark Preservation Commission) regarding startup of drilling operations at B-41 on 6/9/92

Mr. Pagano returned call after reviewing my letter (attached) regarding the startup of the Phase II Investigation at Building 41. After explaining the necessity of initiating the test boring/monitoring well program on 6/9/92, Mr Pagano agreed to allow the work to proceed under the following conditions:

- A) Submittal of Heritage America's credentials to him prior to initiation of the project. He requested that the chosen firm be "SOPA" certified.
- B) Submittal of the documentary study of the site on 6/5/92. I indicated that, due to the short deadline given to the archaeology subcontractor, I would call him if it wouldn't be ready on the fifth. He agreed to this since he wouldn't be able to review the document prior to our project startup anyway.
- C) During installation of the borings/wells, I agreed to have an archaeologist onsite at all times during drilling to prevent any damage to artifacts which Mr Pagano believes potentially exist at the site. Upon completion of the work, the archaeology firm will submit a report detailing the observations made during the field investigation and any findings regarding the potential for artifacts at the site.
- D) Mr Pagano requested that we submit a detailed description of the proposed project including a map showing all areas which will be potentially be disturbed by the project. I indicated that the DEIS has not been finalized nor has a finalized map showing the disturbed areas been generated. I agreed to send him the most updated information available. In addition, he should speak to Gina Santucci of his office to review the documentation package I sent to her.

Dec 12 1992 24 APR L

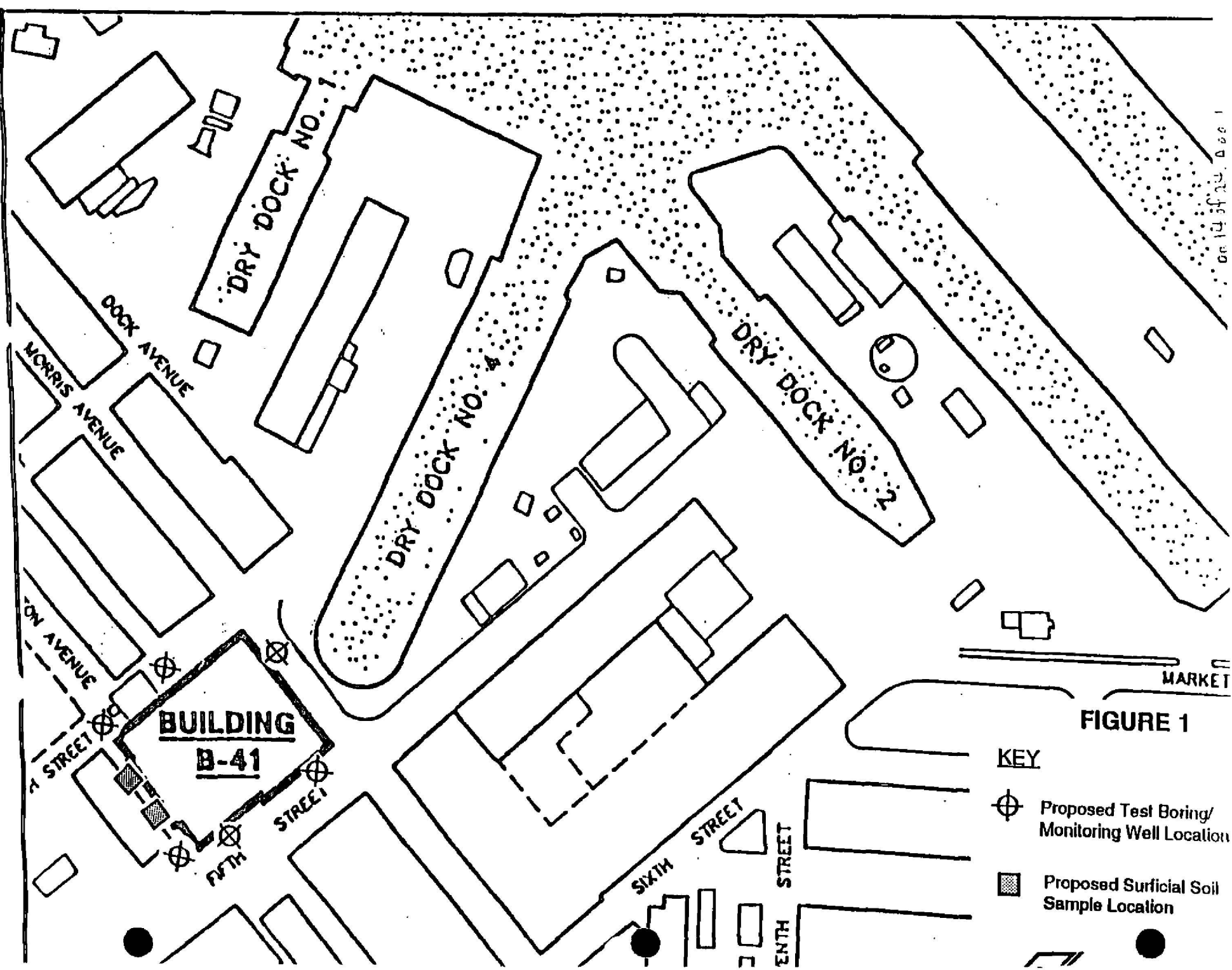


FIGURE 1

- KEY
- Proposed Test Boring/
Monitoring Well Location
 - Proposed Surficial Soil
Sample Location



BLASLAND & BOUCK ENGINEERS, P.C.
ENGINEERS & GEOSCIENTISTS

90 Crystal Run Road, Suite 104, Middletown, New York 10940-9754 (914) 695-2221
FAX: (914) 695-2261

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Thank you for your cooperation.

PANAFAX TRANSMISSION

TO: Daniel Pagano, Landmark Preservation Commission

FROM: Lori Calesini

DATE: 6/2/92

PAGES: 4 (including cover sheet)

VERIFY: _____

PROJECT NO.: _____

NOTES: Based upon a phone conversation between Ellen Metzger from my company & Gina Santucci, Ms Santucci indicated that we should contact you regarding whether or not drilling is considered in-ground construction. The attached letter provides the

☒ Original will not follow details about the project which
☐ Original will follow by: we request your input on. Thank

- ☐ Regular Mail
☐ Federal Express
☐ Courier
☐ Other

you in advance for your assistance in this matter.

LJC

PG 15 of 24, APP L



BLASLAND & BOUCK ENGINEERS, P.C.
ENGINEERS & GEOSCIENTISTS

90 Crystal Run Road, Suite 104, Middletown, New York 10940-9754 (914) 695-2221
FAX: (914) 695-2261

June 2, 1992

Mr. Daniel Pagano
City Archeologist
City of New York Landmarks Preservation Commission
225 Broadway
New York, New York 10007

Dear Mr. Pagano

The purpose of this letter is to confirm my understanding of the need for a documentary study of archeological significance in a portion of the Brooklyn Navy Yard prior to initiating a limited subsurface environmental investigation. Blasland & Bouck Engineers, P.C. (BBEPC) has been retained by B-41 Associates, L.P., as an environmental consultant for a proposed cogeneration facility to be located in the former power plant of the Navy Yard. On 6 April 1992, the City Landmarks Preservation Commission (CLPC) requested a documentary study prior to in-ground construction for the facility based upon sites of historical value and the potential for recovery of American Indian settlement and burial ground remains in the vicinity (areas not defined) of the proposed facility (Attachment A).

BBEPC has recently been requested to perform a Phase II Environmental Investigation immediately surrounding the facility which will involve the installation of six test borings/monitoring wells to a depth of 15-20 ft below grade, within the construction envelope of an existing building. BBEPC has incorporated several mitigative measures into the project work plan to preclude disturbance of archeological significant resources which include 1) installation of all wells and test borings within the construction envelope of an existing six-story building (within 5 feet of the foundation walls, Attachment B), 2) continuous split-spoon sampling to observe the composition of the fill material underlying the project site and to document the depth to native material (marine/fluvial deposits), if penetrated, and 3) provisions for an archeologist onsite (if you deem necessary) to observe the sediment samples obtained and to alert and forewarn the onsite geologist of potentially damaging drilling activities. Additionally, BBEPC has initiated a documentary study for the areas affected by the project construction. This documentary study is being performed this week and the results will be available on 5 June. Due to severe time constraints, the Phase II Investigation must be initiated by June 9 and completed by June 12. Due to this unfortunate but necessary deadline, BBEPC would like to request that you expedite review of the documentary study (focusing on the area affected by the Phase II Investigation) which can be faxed to your office on 5 June. We would be pleased to meet with you on Monday, June 8th to discuss the results. Should you have any questions or comments in the meantime, please do not hesitate to contact me at 914-695-2221.

Very truly yours,
BLASLAND & BOUCK ENGINEERS, P.C.

Lori L. Caletini

Lori L. Caletini
Senior Geologist



THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
225 Broadway, New York, NY 10007 212/553-1100

ENVIRONMENTAL REVIEW

SEGRA

PROJECT NUMBER

4/6/92

DATE RECEIVED

PROJECT

Brooklyn Navy Yard - K
Building 41

- ☐ No architectural significance
- ☐ No archaeological significance
- ☐ Designated New York City Landmark or within a Designated Historic District
- ☐ On or eligible for National Register of historic Places
- ☒ Appears to be eligible for National Register Listing and/or New York City Landmark designation
- ☒ May be archaeologically significant; documentary study required prior to in-ground construction
- ☐ May be archaeologically significant; need site plan showing building basement depths and footprints of previous and proposed buildings

COMMENTS

Building 41 is not eligible for consideration for LPC or NR listing. The following buildings within the 400' radius are: Buildings 22, 127, 20, 132, 28, 28 EX and Dry Dock #4.

Potential for recovery of American Indian settlement, and remains from 18th & 19th century barrack ground, residential and industrial use

Maria Sampecci

SIGNATURE

4/14/92

DATE

PC-1115 24 APP L



THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
225 Broadway, New York, NY 10007 212/553-1100

ENVIRONMENTAL REVIEW

SEQR
PROJECT NUMBER

6/3/92
DATE RECEIVED

PROJECT

Brooklyn Navy Yard Building 41

(K)

- ☐ No architectural significance
- ☐ No archaeological significance
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COMMENTS

See 4/14/92 for architecture and other archaeology comments

Daniel Pagano
SIGNATURE

6/3/92
DATE

cc: 2 ... Fullman SHPO

pg. 12 of 24, APP. L