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**Phase IA Archaeological Assessment**

**Proposed Gateway Center at Bronx Terminal Market**  
**Block 2356, Lot 20; Block 2357, Lots 1 and 86; and Block 2539,**  
**Lots 2 (part), 32, and 60 (part)**  
**Bounded by the Metro North Railroad, River Avenue, 149<sup>th</sup>**  
**Street, and the Harlem River**  
**Bronx, New York**

**NYSOPRHP Project Review Number 04PR02034**

Not reviewed by NYC LPC - for  
ref. only.

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River  
Bronx, New York**

**NYSOPRHP Project Review Number 04PR02034**

Prepared For:

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## EXECUTIVE SUMMARY

The Gateway Center at Bronx Terminal Market is a proposed redevelopment of a portion of the current Bronx Terminal Market site, along with the Bronx House of Detention, with a series of retail establishments, a multi-level parking garage and at-grade parking, a hotel, and a public park and waterfront esplanade (the Proposed Project). The Proposed Project would be located in the West Haven neighborhood of the Bronx on Block 2356, Lot 20; Block 2357, Lots 1 and 86; and Block 2539, Lots 2 (part), 32, and 60 (part)—an approximately 26-acre parcel that is bordered by the Metro North Railroad tracks to the north, River Avenue to the east, 149<sup>th</sup> Street to the south, and the Harlem River to the west. The Major Deegan Expressway and Exterior Street a/k/a Major Deegan Boulevard (the street under the Expressway) bisect the project site. The parcels east of the Expressway would be merged with portions of 150<sup>th</sup> and 151<sup>st</sup> Streets and Cromwell Avenue to form the eastern section of the project site. The Proposed Project would involve the closing of the Bronx Terminal Market and the Bronx House of Detention.

The Lead Agency for this project is the New York City Office of the Deputy Mayor for Economic Development and Rebuilding, while the project applicant is BTM Development Partners, LLC. The Lead Agency is conducting a coordinated environmental review pursuant to the National Environmental Policy Act (NEPA), the New York State Environmental Quality Review Act (SEQRA), and the New York City Environmental Quality Review (CEQR). This archaeological study was prepared as part of the environmental review process and to satisfy the requirements of Section 106 of the National Historic Preservation Act, and complies with the standards of the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) (New York Archaeological Council 1994) and the guidelines of the New York City Landmarks Preservation Commission (LPC) (CEQR 2001; LPC 2002).

The project site is currently occupied by eight buildings and a portion of a ninth, referred to as Buildings A-D, F-H, and J and the Bronx House of Detention. Both the Bronx Terminal Market complex (Buildings B, D, F, G, H, and J) and the Bronx House of Detention have been determined eligible for listing in the National Register of Historic Places (NRHP) by the NYSOPRHP (Howe 2004a, 2004b). Building A, which suffers from structural and integrity issues, and Building C are not considered to be contributing elements to the complex. Because of Building A's condition, the New York City Economic Development Corporation, acting on behalf of the Office of the Deputy Mayor for Economic Development and Rebuilding through prior arrangement with the applicant, required demolition of this building, which is occurring as of this writing. The Area of Potential Effect (APE) will be referred to throughout this report, and constitutes the footprint of planned construction and disturbance on the site.

The Phase IA study revealed that portions of the project APE located within the northern end of the property contain the potential for recovery of precontact archaeological resources located beneath a layer of peat found under fill deposits and river mud. However, according to project specifications, full excavation for new buildings associated with the Gateway Center will only extend ca. 3-4 feet below grade, for

construction of pile caps within proposed building footprints. This depth will not penetrate the bottom of the fill and river mud layers found across the site (which is ca. 20 feet below grade in the vicinity of Building A, to ca. 70 feet below grade at the pier and bulkhead line) and therefore will not reach the peat layer or below the peat layer. Although the pilings themselves will be sunk to bedrock, only shafts the diameter of the pilings will be driven, making archaeological testing in advance of this construction unfeasible. Future utilities planned for the site will not be located any deeper than existing utilities on the property. The only area of the APE that will require additional excavation as part of the proposed project is near the intersection of East 151<sup>st</sup> Street, River, and Cromwell Avenues, within the parking lot north of the Bronx House of Detention, where ca. 20 feet of soil will be removed. However, this area does not contain a layer of peat, being just at the edge of the original shoreline and not within a former marshy area, and the area has been previously disturbed from earlier construction. Therefore, any potential later precontact period archaeological resources in this location would already have been destroyed (Fiorelli 2004).

Due to the depth of the potential precontact resources on the property and the difficulty in accessing these potential strata, which are well below the water table, no archaeological field investigations are recommended for precontact resources at this time. However, not all portions of the project APE are being immediately developed as part of the current Gateway Center project. Specifically, a future hotel site north of Building A falls within the area of high precontact archaeological sensitivity, but construction specifications for the proposed hotel have not yet been determined. If future plans for this hotel indicate it will contain a basement requiring deep excavation (i.e., excavation that would penetrate/impact the peat layer or below the peat layer), then archaeological field investigations or monitoring for the recovery of precontact resources would be a consideration.

Historic period archaeological sensitivity for the project APE is low. The property was completely undeveloped prior to ca. 1880, and any remains from the majority of the structures on the property built between ca. 1880 and the 1920s, when the first structures of the Bronx Terminal Market were constructed, would have been destroyed by construction of the Bronx Terminal Market. The piers and bulkheads on the property are of a common type, and do not possess any particular archaeological value. There appears to be little historical archaeological research value associated with the buildings formerly located on the piers within the APE, as in most cases the activity that occurred within these buildings would not have left a significant archaeological record. Finally, the buildings associated with the Bronx Terminal Market (Buildings B, D, F-H, and J) and the Bronx House of Detention, although recently determined eligible for the NRHP, do not possess any historical archaeological research potential. These buildings are mostly extant on the property, their construction is well documented, and no archaeological features would be expected outside of the footprint of the buildings themselves. No archaeological field investigations are recommended for historic period resources.



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## I. INTRODUCTION

The Gateway Center at Bronx Terminal Market is a proposed redevelopment of a portion of the current Bronx Terminal Market site, along with the Bronx House of Detention, with a series of retail establishments, a multi-level parking garage and at-grade parking, a hotel, and a public park and waterfront esplanade (the Proposed Project). The Proposed Project would be located in the West Haven neighborhood of the Bronx on Block 2356, Lot 20; Block 2357, Lots 1 and 86; and Block 2539, Lots 2 (part), 32, and 60 (part)—an approximately 26-acre parcel that is bordered by the Metro North Railroad tracks to the north, River Avenue to the east, 149<sup>th</sup> Street to the south, and the Harlem River to the west (see Figure 1). The Major Deegan Expressway and Exterior Street a/k/a Major Deegan Boulevard (the street under the Expressway) bisect the project site. The parcels east of the Expressway would be merged with portions of 150<sup>th</sup> and 151<sup>st</sup> Streets and Cromwell Avenue to form the eastern section of the project site. The Proposed Project would involve the closing of the Bronx Terminal Market and the Bronx House of Detention.

The Lead Agency for this project is the New York City Office of the Deputy Mayor for Economic Development and Rebuilding, while the project applicant is BTM Development Partners, LLC. The Lead Agency is conducting a coordinated environmental review pursuant to the National Environmental Policy Act (NEPA), the New York State Environmental Quality Review Act (SEQRA), and the New York City Environmental Quality Review (CEQR). This archaeological study was prepared as part of the environmental review process and to satisfy the requirements of Section 106 of the National Historic Preservation Act, and complies with the standards of the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) (New York Archaeological Council 1994) and the guidelines of the New York City Landmarks Preservation Commission (LPC) (CEQR 2001; LPC 2002).

The project site is currently occupied by eight buildings and a portion of a ninth, referred to as Buildings A-D, F-H, and J and the Bronx House of Detention (see Figure 2):

- ±611,500 sf, 6-story refrigerated warehouse building, vacant (Building A);
- ±111,800 sf, 2-story wholesale food market building, partially occupied (Building B);
- ±132,300 sf, 1-story warehouse building with rooftop parking (Building C);
- ±51,200 sf, 2-story wholesale food market building, partially occupied (Building D);
- A northern portion (approximately 1/3) of a ±47,900 sf, 2-story wholesale food market building, partially occupied (Building F);
- ±58,900 sf, 2-story wholesale food market building, partially occupied (Building G);
- ±65,600 sf, 2-story wholesale food market building, partially occupied (Building H);
- ±26,000 sf, 2-story powerhouse building, vacant (Building J); and
- ±300,000 sf, 8- and 10-story Bronx House of Detention building, which is currently not housing an inmate population.

Both the Bronx Terminal Market complex (Buildings B, D, F, G, H, and J) and the Bronx House of Detention have been determined eligible for listing in the National Register of

Historic Places by the NYSOPRHP (Howe 2004a, 2004b). Building A, which suffers from structural and integrity issues, and Building C are not considered to be contributing elements to the complex. Because of Building A's condition, the New York City Economic Development Corporation, acting on behalf of the Office of the Deputy Mayor for Economic Development and Rebuilding through prior arrangement with the applicant, required demolition of this building, which is occurring as of this writing.

The Proposed Project will involve the following new construction. On the eastern side of Exterior Street, beginning at 149<sup>th</sup> Street and moving north, the Proposed Project would include a series of five 1-story retail buildings of approximately 23,850 gross square foot (gsf) in size—collectively referred to as Retail Building E—with an adjacent surface parking lot of approximately 37 spaces; a 3-story, approximately 512,431 gsf building with 413,644 gsf of retail and 262 parking spaces at the ground floor (Retail Building B/F); a 6-level, approximately 899,723 gsf parking garage with a capacity of approximately 2,355 spaces and 17,111 gsf of retail on Exterior Street (Retail Building C) and 8,053 gsf of retail on River Avenue (Retail Building D); a 3-story, approximately 468,636 gsf retail building (Retail Building A); and a hotel approximately 217,500 gsf in size, with 250 rooms, a 30,000 gsf banquet facility, and approximately 225 parking spaces (see Figure 3). On the western side of Exterior Street, the Proposed Project would include a public park and waterfront esplanade totaling approximately 2 acres, and a 2-story, approximately 260,934 gsf building with 141,771 gsf of retail and 372 parking spaces at the ground floor (Retail Building G). In total, the project will comprise approximately 2,383,074 gsf of new development on the site.

This Phase IA assessment will describe current conditions on the project site (including soil and geological boring data), previous archaeological sites documented in the vicinity of the project site, the history of the property, and based upon the preceding sections, the site's sensitivity for the recovery of archaeological resources. The Area of Potential Effect (APE) will be referred to throughout this report, and constitutes the footprint of planned construction and disturbance on the site.

The HPI project team consisted of Julie Abell Horn, M.A., R.P.A., who conducted the majority of the project research and wrote the majority of this report; Sara Mascia, Ph.D., R.P.A., who wrote sections of this report; Christine Flaherty, M.A., who collected most of the historic maps and prepared the graphics; and Cece Saunders, M.A., R.P.A., who oversaw the project and provided editorial and interpretive assistance.

## **II. METHODOLOGY**

Preparation of this archaeological study involved using documentary, cartographic, and archival resources. Repositories visited (either in person or by using their on-line electronic resources) or contacted included the New York City Register; the New York City Department of Buildings; the New York Public Library; the Columbia University library; the Bronx Historical Society; the LPC; and the NYSOPRHP. AKRF, Inc. provided current site data, geotechnical data, and various maps.



A site walkover was undertaken on October 11, 2004 by Julie Abell Horn of HPI. Conditions were sunny and dry. Ms. Horn made notes and took photographs of buildings, structures, and existing ground conditions. The location and orientation of the photographs are shown on Figure 2.

### **III. ENVIRONMENTAL/PHYSICAL SETTING**

#### **A. Topography**

Prior to landfilling in the late nineteenth century, only portions of the eastern side of the APE were on fast land; the remainder of the APE fell within an area designated "mud flats" (see Figure 4). These mud flats were covered with water from the Harlem River during high tide, and exposed at low tide. The low tide boundary of the Harlem River channel follows the approximate line of the pier and bulkhead line, which was had been designated as early as 1868 but was not officially confirmed until 1890 (the low tide line was somewhat irregular; the pier and bulkhead line is generally linear). The pier and bulkhead line, however, appears to have existed only on paper within the APE until the 1890s, when the area was landfilled and the piers and bulkheads constructed.

The portions of the APE that were inboard of the historic Harlem River shoreline include areas east of Cromwell Avenue, south of the railroad tracks, and north of East 150<sup>th</sup> Street (the shoreline ran across the area now occupied by Building C and included portions of the modern Cromwell Avenue streetbed and a small area now occupied by the parking area behind Building B, just west of Cromwell Avenue). The shoreline area appears to have been somewhat sloped; River Avenue had an elevation of about 20 feet near its intersection with East 151<sup>st</sup> Street, and the area now occupied by the Bronx House of Detention was about 10 feet in elevation, whereas the Cromwell Avenue area was at about 0 elevation (Heintz 1892). Today, what is left of this former slope is contained behind concrete retaining walls.

#### **B. Geology**

The project area is located in the Bronx, part of the Hudson Valley region, which is described in geological terms as lying in the New England Upland Physiographic Province, a northern extension of the Great Appalachian Valley (Schubert 1968:74). Bedrock in this area consists of white calcite-dolomite marble (also known as Inwood Marble) interlayered with Fordham Gneiss, which exhibits a dark gray to black banded appearance. Surface geology in the Bronx was affected by late Pleistocene glaciers, which advanced and receded over the area at least three times during the last million years. Glacial activity stripped off native soils from the underlying rock surface, and left glacial till in its place. The glacial debris also formed low hills or moraines. In the Bronx these run north-south, directing local creeks and streams towards outlets along the Harlem River and the Bronx Kill. Melting ice from the receding glaciers formed marshes surrounding many of these drainages, such as Cromwell's Creek, which prior to historic landscape modifications was located immediately north of the APE (Viele 1874).

### **C. Soils**

As described above, only a small portion of the eastern end of the APE was originally located on fast land; the remainder of the APE was located between the high and low water lines of the Harlem River shoreline, in an area described as mud flats. Today, the mud flats have been filled to the edge of the pier and bulkhead line, with several slips interspersed between the piers.

Soil boring data were obtained from Langan Engineering & Environmental Services (2004). This report contained a summary and generalized soil profile of the APE, compiled from several earlier programs of soil borings undertaken in the mid-20<sup>th</sup> century, as well as limited recent soil borings undertaken as part of the current project. The overall soil profile for the APE consists of miscellaneous historic fill overlying soft organic clayey silt (the "river mud"), then a layer of peat (at the northern end of the APE only), layers of interlayered silt, clay and sand, silty sand and gravel, decomposed rock, and finally bedrock. Depths of each stratum vary according to location, with the deepest deposits occurring closest to the river. Bedrock within the APE is shallowest at the eastern end (ca. 20 feet just west of River Avenue) but dips considerably moving west, to a depth of ca. 100 feet along the pier and bulkhead line. According to the Langan report, historic fill covers the entire APE; no natural soils remain, even in the area that was once fast land (where the original upper stratum appears to have been graded away). Of note, in areas now covered by piers, soil borings encountered significant quantities of wood (presumably the original wooden piers that remain under the current concrete surface) and large boulders (used as fill; some of these are visible between the concrete and the wood elements of the piers, along the slips).

### **D. Current Conditions**

As described in the introduction, the APE currently supports a number of buildings associated with the Bronx Terminal Market, the vacant Bronx House of Detention, the streetbeds of Cromwell Avenue, and block-long portions of East 150<sup>th</sup> and 151<sup>st</sup> Streets (from River to Cromwell Avenues), various surface parking lots, and four piers (Photographs 1-6). Railroad tracks, now disused, run along the west side of Buildings F, G, H, and J, and along the east side of Building B (Photographs 7-8). The tracks formerly continued through Building A and to the north. The railroad tracks are now embedded in parking areas and piers. Although not shown on the 2004 Sanborn map (Figure 2), ramps for the Major Deegan Expressway now loop through the northern end of the APE, north of Buildings A and J, where additional Bronx Terminal Market buildings used to stand (Photographs 9-10). Also not shown on Figure 2 is the end of Cromwell Avenue, which now deadends across from the Bronx House of Detention, at the top of a ramp, which, like the northern side of East 153<sup>rd</sup> Street, is contained behind a concrete retaining wall (Photograph 11). Cromwell Avenue once continued through to East 153<sup>rd</sup> Street, but this section has now been removed. As of this writing, Building A is being demolished. Much of the ground surface surrounding Building A has been disturbed by heavy machinery and soil stockpiling (Photograph 12).

The piers within the APE contain wooden elements along the water line capped by concrete and gravel (Photographs 13-14). Large boulders used to fill in the piers are visible in places between the wood and the concrete. Many areas of the piers and bulkheads are in disrepair, with trash littering the shoreline (Photograph 15-16). The tops of the piers, some of which formerly supported buildings, are covered with gravel and concrete. In some instances, the ground surface is mounded or uneven, and concrete slabs representing the remnant foundations of former buildings are visible on the surface (Photographs 17-18). Of note, Slip 3, shown on Figure 2, has been backfilled (Photograph 19). The slips are no longer in use; any areas once dredged to allow docking of vessels have since become resilted; the shallow mud flats are once again visible at low tide (Photograph 20).

#### **IV. BACKGROUND RESEARCH/HISTORICAL OVERVIEW**

##### **A. Precontact Summary**

For this report, the word precontact is used to describe the period prior to the use of formal written records. In the western hemisphere, the precontact period also refers to the time before European exploration and settlement of the New World. Archaeologists and historians gain their knowledge and understanding of precontact Native Americans in the lower Hudson Valley area from three sources: ethnographic reports, Native American artifact collections, and archaeological investigations.

Based on data from these sources, a precontact cultural chronology has been devised for the Bronx and Westchester County area. Scholars generally divide the precontact era into three main periods, the Paleo-Indian (c. 14,000-9,500 years ago), the Archaic (c. 9,500-3,000 years ago), and the Woodland (c. 3,000-500 years ago). The Archaic and Woodland periods are further divided into Early, Middle, and Late substages. The Woodland was followed by the Contact Period (c. 500-300 years ago). Artifacts, settlement, subsistence, and cultural systems changed through time with each of these stages. Characteristics of these temporal periods have been well documented elsewhere, and in keeping with a recent request to professional archaeologists conducting work in New York State by the NYSOPRHP (2004), will not be fully reiterated here.

Scholars often characterize precontact sites by their close proximity to a water source, fresh game, and exploitable natural resources (i.e., plants, raw materials for stone tools, clay veins, etc.). These sites are often placed into three categories: primary (campsites or villages), secondary (tool manufacturing, food processing), and isolated finds (a single or very few artifacts either lost or discarded). Primary sites are often situated in locales that are easily defended against both nature (weather) and enemies. Secondary sites are often found in the location of exploitable resources (e.g., shell fish, lithic raw materials).

## **B. Precontact Site File and Literature Search Results**

Research conducted at the NYSOPRHP, the LPC, and the library of HPI revealed no precontact period archaeological sites within the APE or its immediate vicinity, although reportedly there was an Indian trail three to four blocks east of the APE, following roughly the route of the current Walton Avenue (McNamara 1984:332). A number of precontact archaeological sites have been documented within two miles of the APE by the New York State Museum (NYSM). These sites are:

1. NYSM#5475: a village site, in a broad area south of 133<sup>rd</sup> Street, about 4,000 meters southeast of the APE.
2. NYSM#4065: a village site, identified by archaeologist Arthur C. Parker, on the Manhattan shore of the Harlem River, north of West 155th Street.
3. NYSM#7248: traces of occupation were recorded on this site, on the Manhattan shore of the Harlem River, in the vicinity of Park Avenue.
4. NYSM#7249: traces of occupation along the Manhattan shore of the Harlem River near Lenox Avenue.
5. NYSM#2831: a shell refuse heap or midden on the east shore of the Bronx River (north of Bruckner Boulevard, south of the railroad crossing), in the West Farms area. The site was inventoried by Parker as BRNX-9 (Parker 1920:488).
6. NYSM#4064: a campsite identified by Parker (ACP-NYRK), on the Manhattan shore of the Harlem River, in the vicinity of the approaches to the Triborough Bridge.

These inventoried sites are on somewhat similar terrain to the current terrain of the Bronx Terminal Market APE since they lie along the shores of major waterways, the Harlem, Bronx, and East Rivers, where there were shellfish beds to be exploited in addition to marshland resources in the precontact period. A major difference, however, is the low-lying topography of the APE versus the more well-drained, elevated topography of these inventoried locales. Cromwell's Creek and its adjacent marsh/mudflats would have provided resources for exploitation by precontact period and historical Native Americans. But precontact settlement patterns show a marked preference for sheltered, elevated sites close to wetland features. With the exception of the extreme eastern side of the APE, such elevated ground did not exist within the APE.

That said, it should be noted that areas along the Harlem River shoreline that are now submerged or covered with river silt were once dry land during the Wisconsin glaciation, when sea levels were considerably lower than today. During the Paleo-Indian and Early to Middle Archaic periods (ca. 12,500 to 4,000 B.P.), the majority of the project APE would have been located along the Harlem River shoreline, instead of under mud flats. Particularly with Cromwell's Creek located so close to the north, which would have provided an additional fresh water source, the project APE would have been an attractive

settlement site to early peoples. Archaeologists have shown that a settlement pattern exists in which sites were located along streams and tidal marshes, both of which existed in or adjacent to the APE (Boesch 1994). Preservation of any such sites within the APE is dependent on the degree of marine transgression associated with rising sea levels and later tidal and current effects. Boesch (1994) offers that peat deposits (which formed in marshy areas) acted as a preservation agent, and soils beneath peat layers should date to the period prior to development of the marshes. In areas where this peat deposit is absent, Boesch claims marine transgression would have destroyed former occupation surfaces. Boesch further asserts that the peat layer itself may have scientific value. These deposits may contain data concerning climatological conditions, plant communities, and fauna from the period.

### C. History of the APE

The Bronx acquired its name only after the present borough became part of New York City in 1895. Although technically named after the river (hence, *the* Bronx) the name indirectly honors the first recorded European settler, Jonas Bronck, a Dane who settled there by 1639. Bronck's land was a 500-acre tract of this territory, lying between the Bronx and Harlem Rivers, and approximately south of present 160<sup>th</sup> Street - incorporating the APE vicinity at Cromwell's Creek (Jenkins 1912:16). Bronck's house was south of the intersection of Willis Avenue and 132<sup>nd</sup> Street, far south of the APE (Scharf 1886:769). The Bronck holdings were sold sometime between 1668 and 1670 to Captain Richard Morris. The Morris house was built near the Bronck house and later Morris' mill was erected along Cromwell's Creek. Subsequent Morris family members had their holdings confirmed as the Manor of Morrisania. The surrounding community became known as Morrisania through the ensuing years.

The Revolution was not kind to Morrisania. As General Washington and his troops withdrew from New York City, a division of American soldiers under General Heath was stationed at Morrisania. The elevated vantage point of Morris' "cedar grove" was used as a reconnaissance spot by Washington and his scout A. Corsa (McNamara 1984:332). Behind enemy lines, Morrisania was despoiled by British troops, who were quartered on the property, plundered the Morris family graves, and strewed the bones about. Timber was cut from 474 acres, and when American raids became too intense, DeLancey abandoned Morrisania for Fordham, but first burned the manor house (Bolton 1881:489,498-500).

The only commercial industry in the area through the eighteenth and most of the nineteenth century was market gardening for New York City. Although there were several sloops on Long Island Sound and the Hudson to transport produce to Manhattan, the farmers preferred to go by wagon. Immediately north of the APE in 1813 Robert Macomb erected a dam across the Harlem River. He charged a toll and it was constructed to only allow small boats through a lock system. A number of Westchester farmers finally tore down the dam in 1836. Later a wooden swing bridge was erected, only to be replaced by the existing steel structure in 1895 (McNamara 1984:165).



Morrisania's urbanization began only after the railroads linked the area with New York City. The first and most important was the New York and Harlem Rail Road, which began service in 1842. This line ran through Morrisania, on the same route as the present Conrail tracks, about five blocks east of the APE (Shonnard and Spooner 1900:573). By cutting the time and expense of travel, the railroad made it possible for people to live full-time in Morrisania and work in New York City. As a result, Morrisania was ripe for development, and the various Morris family members were ready to sell tracts of the family land.

Gouverneur Morris II agreed (1848) to sell 200 acres of farmland (about 4,500 feet east of the APE, north of the intersection of Third and Brook Avenues) to mechanics and laboring men of New York City. They established New Village, which was later known as Morrisania village. Noting the success of Morrisania village, William H. Morris developed land to the south and west of the new settlement, and named his village West Morrisania. The APE was included within the boundaries of West Morrisania, although none of it had been developed as late as the 1860s (Beers 1868). A survey map of Morris family holdings from 1864 showed that the eastern edge of the APE was within the family cedar grove while the remainder of the APE was covered by meadow and mud flats (Henwood 1864 [Figure 4]).

The new residents of Morrisania clamored for improved roads and other municipal amenities, and annexation by New York City was discussed as early as 1864. It is significant that the streets laid out near the Harlem River continued the numbers of Manhattan streets (Shonnard and Spooner 1900). When a referendum on annexation was finally held in 1873, Morrisania, West Farms and Kingsbridge voted overwhelmingly to become part of New York City, and officially became the 23<sup>rd</sup> and 24<sup>th</sup> Wards in 1874. Under the New York charter the two wards were officially designated the Borough of the Bronx in 1895.

During the 1860s, residents continued to request new transportation lines. The eastern side of the Harlem River became the focus for a new railroad corridor. On April 24, 1867, the Spuyten Duyvil and Port Morris Railroad was chartered (Jenkins 1912:233). In 1872, the New York Central and Hudson Railroad Company built the Spuyten Duyvil and Port Morris Line, linking the Harlem Line in the south Bronx to the Hudson Line proper at Spuyten Duyvil. The 1876 Beers map illustrates the route of this railroad, which was the first development within the APE, and now marks the property's northeastern boundary. Although the pier and bulkhead line is shown on this map (it was designated in 1868 and made official in 1890), no landfilling within the APE appears to have occurred at this time and many of the streets seem to be only projections.

By publication of the first Sanborn map in 1891 [Figure 5], the APE supported only a few buildings: a refrigerator manufacturer was located at the northwest corner of River Avenue and East 150<sup>th</sup> Street (the area now covered by Building C) and a saw mill was situated immediately to the south, at the southwest corner of the same intersection (the area now covered by Building D). Records available at the New York City Department of Buildings indicate these first buildings constructed within the APE were erected in the



1880s. Exterior Street and the piers and slips within the APE still had not been created as of this time, and the remainder of the property was vacant.

During the early 1890s, Exterior Street and the area west of the roadway were formed. The 1893 Bromley map illustrates that the shoreline within the APE was now filled and bulkheaded with a series of piers and slips, although no development had occurred in this area yet. No change is shown on the 1897 edition of the Bromley map, but by issuance of the 1900 Hyde map, the Barber Asphalt Paving Company plant was located on Pier 4, and a coal yard was situated east of Slip 5. An ice plant had been built north of the refrigerator (and now toy) plant on the block bounded by River Avenue, Cromwell Avenue, East 150<sup>th</sup> Street, and East 151<sup>st</sup> Street, within the footprint now occupied by Building C.

A few changes occurred within the APE during the early 1900s, most notably along the waterfront. The 1905 Bromley map shows that the sawmill north of East 149<sup>th</sup> Street had now been removed (the area was vacant), and the Barber Asphalt Paving Company plant complex exhibited a slightly different layout. By publication of the 1908 Sanborn map (Figure 6), however, waterfront businesses had grown to include the Fireproofing Manufacturing Company and the Valvoline Oil Company on Pier 2 and a contractor's store yard on Pier 3. Building H now covers the area once occupied by the Valvoline Oil Company's storage facility and part of the Fireproofing Manufacturing Company. East of Cromwell Street, the ice plant had been demolished by 1908 and a photographic mounts plant had been built in its place. This area is now covered by Building C.

In 1913, a special commission appointed by Mayor William Gaynor selected the APE for construction of the Bronx Terminal Market, which originally was to be one of five such markets in New York City (one for each borough, although the only other one ever was built in Brooklyn). Despite publication of this report, the concept for the Bronx Terminal Market stalled until 1917, when Mayor John Hylan created the Department of Public Markets, which was given complete jurisdiction over public markets and marketplaces in the city, and authorized to establish wholesale markets, terminal warehouses, and cold storage plants. The city created plans for the Bronx Terminal Market in 1918, which included Buildings A (the cold storage building) and J (the power house building). Construction of these buildings did not begin until 1924, and although dedicated the following year, the market was not operational until 1929. A Department of Public Markets weights and measures building was constructed on Pier 2, replacing the former industrial structures located there (Hyde 1933). High costs and low profits for years earned the market the nickname "Hylan's Folly" (Tangires 2004).

During Mayor Fiorello LaGuardia's administration, the Bronx Terminal Market was expanded and modernized, in an attempt to revitalize the facility. In 1934-1935, a series of two-story individual merchant stores linked by common walls, now labeled Buildings B, D, F, G, and H, were built, along with similarly configured buildings north of Buildings A and J that have since been demolished. According to an article written by the Contract Manager of the Turner Construction Company (the builders of the new market facilities), the first group of buildings (now designated Buildings B, F, G, and H) was

constructed on 1,290 cast-in-place concrete piles, averaging 46 feet in length, with the first floors set on top of fill and oriented flush with the concrete pile caps. The second group of buildings (Building D, one block of stores formerly located north of Building A, and two blocks of stores north of Building J) rested directly on fill and did not utilize concrete piles (Horr 1935).

The 1947 Sanborn map (Figure 7) illustrates the configuration of the Bronx Terminal Market facility after construction of the various buildings described above. Additionally, a group of eight long, steel sheds had been built north of East 150<sup>th</sup> Street, between River and Cromwell Avenues (these sheds have since been replaced by Building C, constructed in the 1950s), as well as the Bronx House of Detention, constructed initially in the mid 1930s (with an addition completed in the 1960s). Along the waterfront section of the APE, Pier 2 now contained the American Banana Corporation building, formerly the Department of Public Markets weights and measures building; Pier 3 housed the Colonial Sand and Stone Company; and Pier 4 continued to support a coal yard. Today, all of the piers within the APE are vacant, and the slip between Piers 2 and 3 has been filled in.

The last major change to the APE came with construction of the Major Deegan Expressway, which runs above Exterior Street along a steel viaduct. Robert Moses, then New York City's arterial coordinator, initiated the expressway project, named after Major William F. Deegan, an Army Corps of Engineers architect and WWI veteran. Construction of the 1.5 mile long section of the expressway from the Triborough Bridge to the Grand Concourse began in 1935. However, the section of the expressway linking the Grand Concourse with the Westchester County border and Interstate 87 (and including the APE) was not undertaken until 1950; it was completed in 1956. Ramps leading from the expressway were later built within the APE, north of Buildings A and J, and necessitating demolition of the Bronx Terminal Market buildings formerly located in these areas.

#### **D. Historical Archaeological Site File and Literature Search Results**

Research conducted at the NYSOPRHP, the LPC, and the library of HPI revealed no archaeological sites dating to the historic period within the APE. Two historical archaeological sites, the Mott Haven Canal (NYSOPRHP site A005-01-0014) and the J.L. Mott Iron Works (NYSOPRHP site A005-01-0021) are located north of the intersection of Bruckner Boulevard and Third Avenue, nearly one mile south of the APE. Although recent evaluations of the Bronx Terminal Market complex (Buildings B, D, F, G, H, and J) and the Bronx House of Detention by the NYSOPRHP have determined these resources *eligible for the NRHP*, only above-ground resources were reviewed in order to make this determination. No additional archaeological remains should be associated with either of these resources, as in both cases the buildings are extant, are well documented, and cover the entire footprint of the property. No subsurface archaeological features associated with these buildings should exist outside the footprint of the structures themselves.

## **E. Disturbance Record**

Two types of modern disturbance are present within the APE. The first is associated with reclamation of the former mud flats along the Harlem River through landfilling, bulkheading, and pier building. The second stems from construction of the twentieth century buildings on the property.

According to soil boring data compiled for the APE, no natural soils remain on the property; all upper strata consist of fill materials, even in areas once on fast land. The fill strata overlie deposits of river mud in areas once covered by the mud flats, and sand along the original shoreline. Beneath the river mud, a layer of peat is present in the northern portion of the APE, although not in the southern part of the APE (the exact boundary is imprecise at this time, but at a minimum the areas north of former Slip 3 and Building B appear to contain the peat layer). Under the peat layer are strata of interlayered silt, clay and sand, silty sand and gravel, decomposed rock, and bedrock. The top of the peat layer, which according to Boesch (1994) can preserve ancient cultural deposits, varies in depth from ca. 20 feet below grade in the vicinity of Building A, to ca. 70 feet below grade at the pier and bulkhead line. The peat layer varies in thickness from only a few feet (in the vicinity of Building A) to nearly 20 feet (on the west side of Exterior Street). Of note, many of the soil borings were undertaken prior to construction of overhead ramps associated with the Major Deegan Expressway, and as such reflect conditions that are no longer present, in that the ramp pilings were later sunk in the area where the borings had been excavated, creating yet more disturbance to the subsurface soil column. However, it appears that in areas not impacted by ramp construction, areas containing peat could potentially cap precontact period resources.

The footprints of areas now containing buildings associated with the Bronx Terminal Market and the Bronx House of Detention should be considered completed disturbed with regard to potential archaeological resources. As described above, most of the market buildings erected in 1934-1935 are set on deep concrete pilings. The piles were said to be an average of 46 feet in length; considering bedrock ranges from ca. 30-60 feet below grade in the areas where the buildings were constructed (Langan 2004:Sheet G5), it can be inferred that these pilings were extended down as far as the top of the bedrock. The vast number of piles (n=1,290) sunk in the APE to support Buildings B, F, G and H suggests a high degree of disturbance beneath these buildings. Although complete data are not available concerning specific construction of Buildings A, J, and C, considering the size and load bearing requirements of these structures, it can also be inferred that they, too, rest on deep pilings driven to bedrock. Limited construction plans were available at the New York City Department of Buildings office for the original Bronx House of Detention; according to these documents this structure also rests on pilings driven to bedrock.

## **F. Precontact Archaeological Sensitivity**

As described above, according to Boesch (1994), areas along the Harlem River that contain peat deposits may preserve precontact archaeological resources dating from the

Paleo-Indian to the Middle Archaic periods beneath this layer. Archaeologists also use the presence of marine shell as a potential indicator of precontact site presence. According to Langan Engineering and Environmental Services, the company conducting ongoing soil borings on the property as of this writing, trace shells have been encountered just beneath the peat layer in soil borings south of Building A, further suggesting the potential for precontact resources on the property (soil borings have not yet encountered shells along the waterfront section of the APE, although these borings are still in process; no borings are planned north of Buildings A and J at this time) (Fiorelli 2004).

Based on these data, there is a high potential for precontact archaeological resources within those portions of the APE that contain a layer of peat and that have not been previously disturbed from deep piles or other building episodes. These areas include the areas (now mostly used as parking lots) surrounding Building A on the north, east, and south; and areas west of Exterior Street, including Piers 1 and 2 (but excluding the footprints of Buildings H, J, and the former buildings on Pier 2, which may have had deep pilings). The former Bronx Terminal Market buildings once located north of Buildings A and J were not set on top of deep piles, and as such should not have impacted the peat layer or the strata below the peat layer. Although portions of the Harlem River have been dredged periodically over the years, soil borings indicate that peat still exists within at least one of the pier footprints, suggesting that any dredging here seemingly did not reach deep enough to affect potential archaeological deposits. Areas now containing supports for the Major Deegan Expressway ramps are disturbed and would not retain any archaeological potential.

#### **G. Historical Archaeological Sensitivity**

The project APE was completely undeveloped prior to ca. 1880; the first structures erected within the property boundaries were located within the footprints of modern Buildings C and D, and as such any traces of them have undoubtedly been destroyed. No other areas east of Exterior Street contained any buildings prior to construction of the Bronx Terminal Market complex.

The piers and slips within the APE were built in the early 1890s. Their construction appears to follow a standard template for these types of resources, examples of which are found throughout the New York Harbor area by this period (see for example Raber Associates 1984, 1985). The ubiquity of these types of piers and bulkheads, combined with their deteriorating condition, suggests little historical archaeological research value.

A number of structures were erected on top of the piers within the APE, beginning in ca. 1900. These included the Fire-Proofing Manufacturing Company plant, the Valvoline Oil Company storage facility, and later the Department of Public Markets weights and measures building (later occupied by the American Banana Company for storage) on Pier 2; a contractor's store yard and later the Colonial Sand and Stone Company buildings on Pier 3; the Barber Asphalt Paving Company plant on Pier 4; and a coal yard south of Pier 4. Pier 1 appears never to have supported any buildings. No records could be found at the New York City Department of Buildings office to indicate the depth of the various

foundations for these buildings, but it is possible that some of the larger buildings (such as the Fire-Proofing plant and the weights and measures building) could have utilized deep pilings for support. There appears to be little historical archaeological research value associated with the buildings formerly located on the piers within the APE. In general, the activity that occurred within these buildings would not have left a significant archaeological record. Many of the buildings were used only for storage; those that contained some sort of manufacturing entity would have used equipment and other materials within the buildings that have since been removed from the property. Although a number of the former building foundations remain on the ground surface in the form of concrete slabs, there appears to be little archaeological data that could be gleaned from these features.

Finally, the buildings associated with the Bronx Terminal Market (Buildings B, D, F-H, and J) and the Bronx House of Detention, although recently determined eligible for the NRHP, do not possess any historical archaeological research potential. These buildings are extant on the property, their construction is well documented, and no archaeological features would be expected outside of the footprint of the buildings themselves.

In summary, the historical archaeological sensitivity for the project APE is low.

## **V. CONCLUSIONS**

### **A. Precontact Period Resources**

As the preceding sections have described, portions of the project APE located within the northern end of the property contain the potential for recovery of precontact archaeological resources located beneath the layer of peat found under fill deposits and river mud. However, according to project specifications, full excavation for new buildings associated with the Gateway Center will only extend ca. 3-4 feet below grade, for construction of pile caps within proposed building footprints. This depth will not penetrate the bottom of the fill and river mud layers found across the site (which is ca. 20 feet below grade in the vicinity of Building A, to ca. 70 feet below grade at the pier and bulkhead line) and therefore will not reach the peat layer or below the peat layer. Although the pilings themselves will be sunk to bedrock, only shafts the diameter of the pilings will be driven, making archaeological testing in advance of this construction unfeasible. Future utilities planned for the site will not be located any deeper than existing utilities on the property. The only area of the APE that will require additional excavation as part of the proposed project is near the intersection of East 151<sup>st</sup> Street, River, and Cromwell Avenues, within the parking lot north of the Bronx House of Detention, where ca. 20 feet of soil will be removed. However, this area does not contain a layer of peat, being just at the edge of the original shoreline and not within a former marshy area, and the area has been previously disturbed from earlier construction. Therefore, any potential later precontact period archaeological resources in this location would already have been destroyed (Fiorelli 2004).



## **B. Historic Period Resources**

As the preceding sections have shown, historic period archaeological sensitivity for the project APE is low. The property was completely undeveloped prior to ca. 1880, and any remains from the majority of the structures on the property built between ca. 1880 and 1920s, when the Bronx Terminal Market was constructed, would have been destroyed by construction of the Bronx Terminal Market. The piers and bulkheads on the property are of a common type, and do not possess any particular archaeological value. There appears to be little historical archaeological research value associated with the buildings formerly located on the piers within the APE, as in most cases the activity that occurred within these buildings would not have left a significant archaeological record. Finally, the buildings associated with the Bronx Terminal Market (Buildings B, D, F-H, and J) and the Bronx House of Detention, although recently determined eligible for the NRHP, do not possess any historical archaeological research potential. These buildings are mostly extant on the property, their construction is well documented, and no archaeological features would be expected outside of the footprint of the buildings themselves.

## **VI. RECOMMENDATIONS**

### **A. Precontact Period Resources**

Although potential precontact resources may exist within the northern end of the project APE, project specifications for the Gateway Center indicate that future construction will only extend to the depth of these potential resources in the form of building pilings. Due to the depth of the potential precontact resources on the property and the difficulty in accessing these potential strata, which are well below the water table, no archaeological field investigations are recommended for precontact resources at this time. However, not all portions of the project APE are being immediately developed as part of the current Gateway Center project. Specifically, a future hotel site north of Building A falls within the area of high precontact archaeological sensitivity, but construction specifications for the proposed hotel have not yet been determined. If future plans for this hotel indicate it will contain a basement requiring deep excavation (i.e., excavation that would penetrate/impact the peat layer or below the peat layer), then archaeological field investigations or monitoring for the recovery of precontact resources would be a consideration.

### **B. Historic Period Resources**

No archaeological field investigations are recommended for historic period resources.



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**FIGURES**



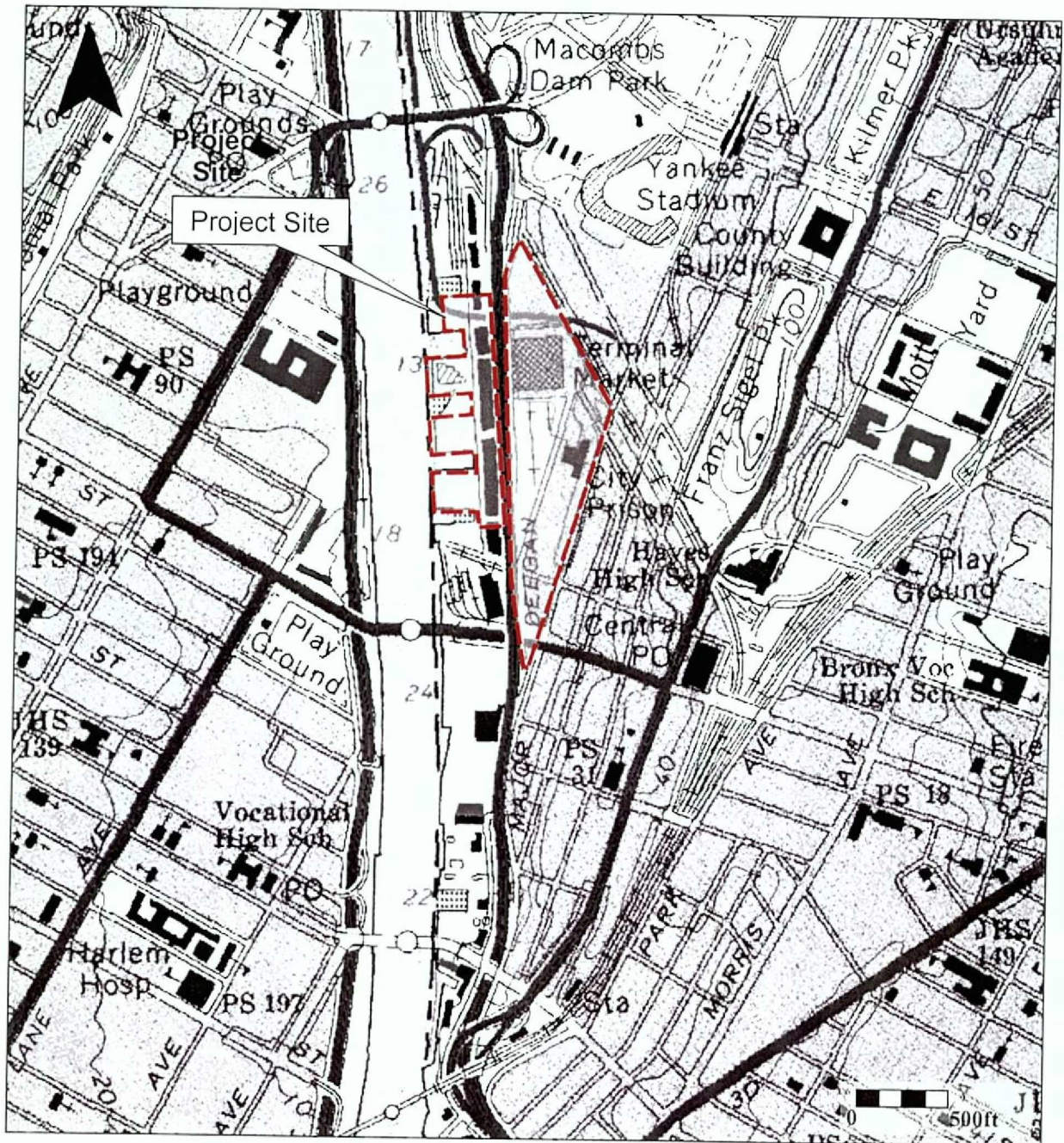
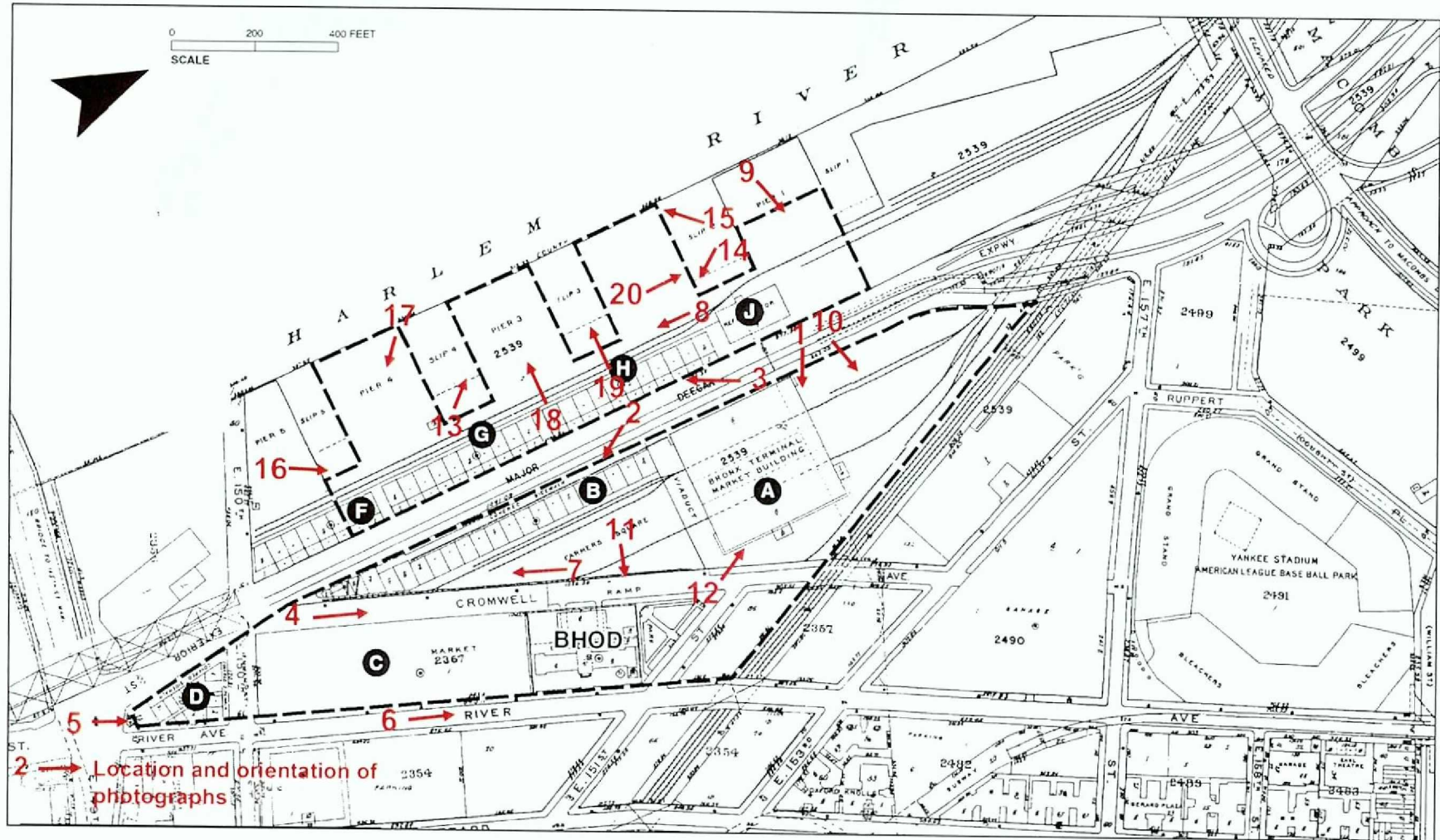


FIGURE 1  
Project APE.

*Central Park Quadrangle, New York.*  
United States Geological Survey, 1979.

Gateway Center at Bronx Terminal Market.

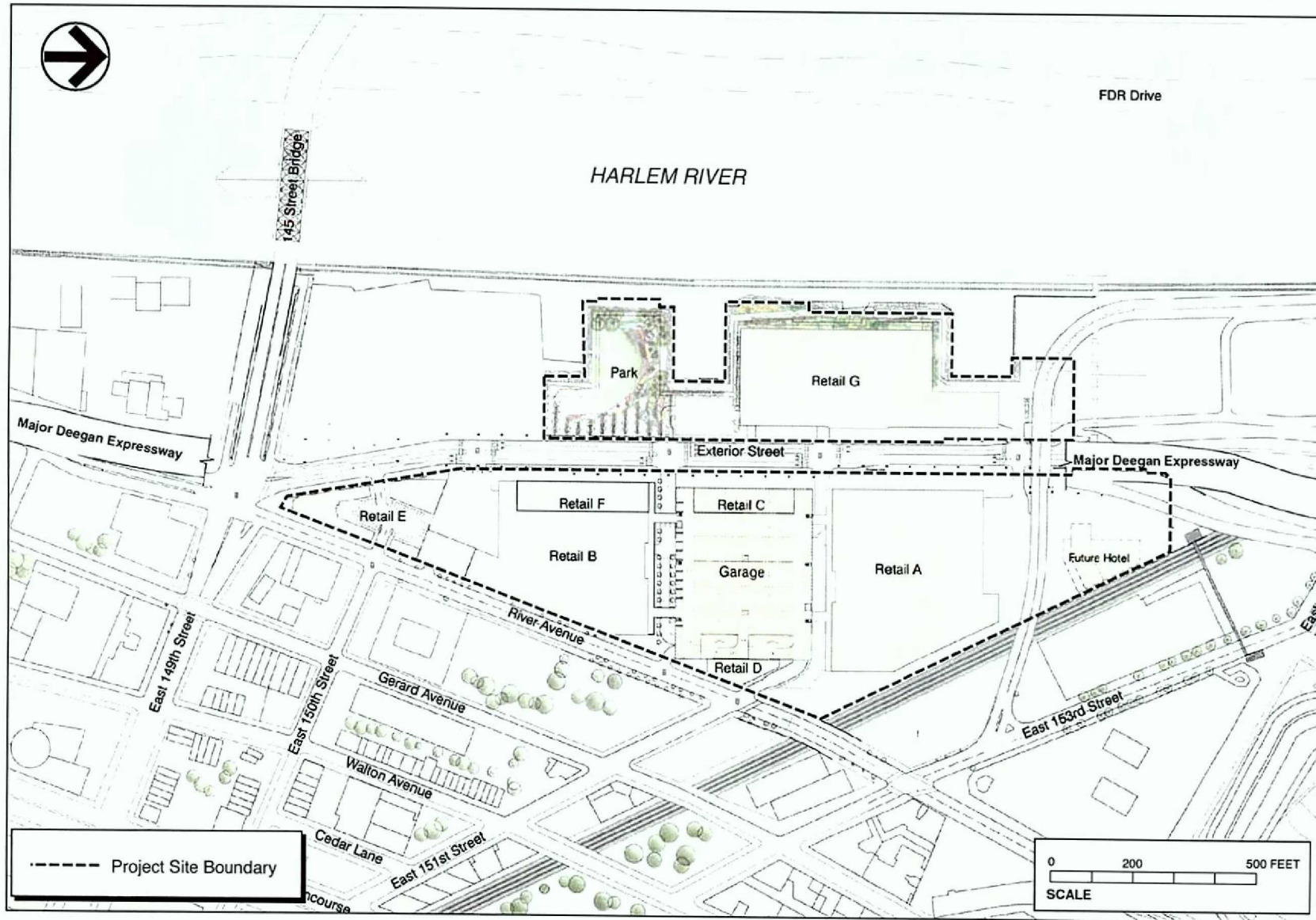




**FIGURE 2**  
Project APE showing current structures and field photographs.

*Project Site Layout.*  
AKRF, 2004.

Gateway Center at Bronx Terminal Market.



**FIGURE 3**  
Project APE showing proposed Gateway Center development.

*Site Plan.*  
AKRF, 2004.

### Gateway Center at Bronx Terminal Market.



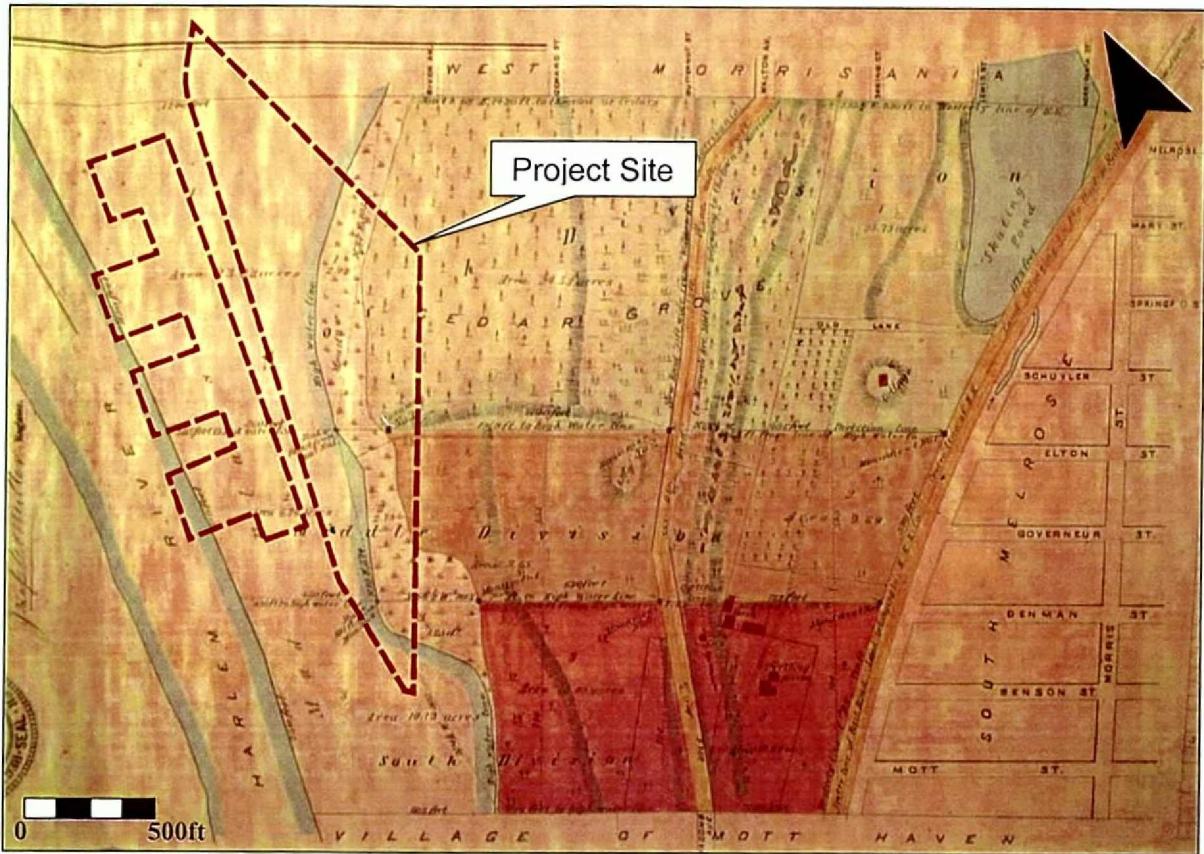


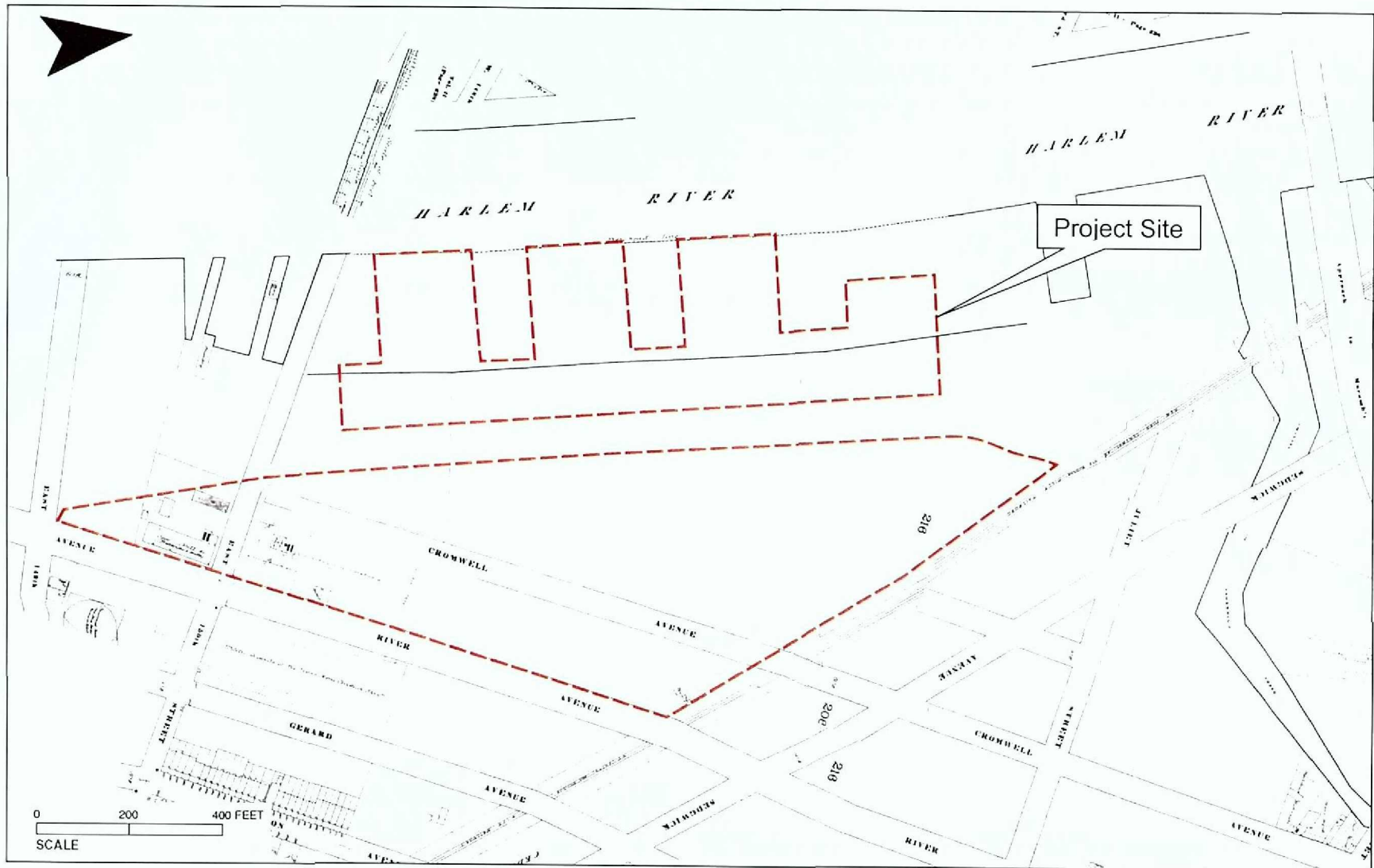
FIGURE 4

*Partition map of land belonging to G.W. Morris, Esq. and the heirs of Hy. Morris, Esq., deceased, situated in the town of Morrisania, county of Westchester, and State of New York.*

Project APE.

Henwood, 1864.

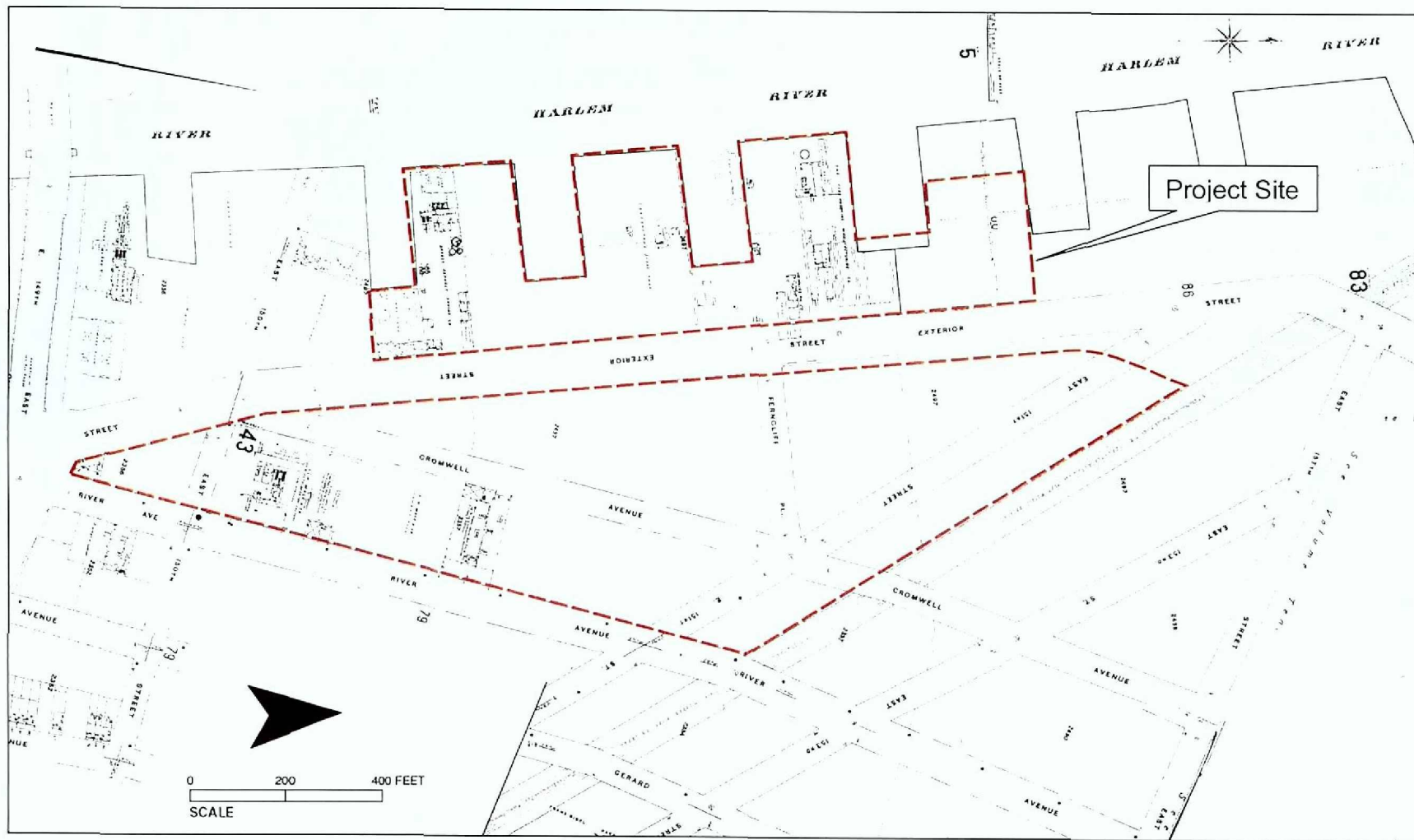
Gateway Center at Bronx Terminal Market.



**FIGURE 5**  
Project APE.

*Insurance Maps of the City of New York.*  
Sanborn, 1891.

Gateway Center at Bronx Terminal Market.

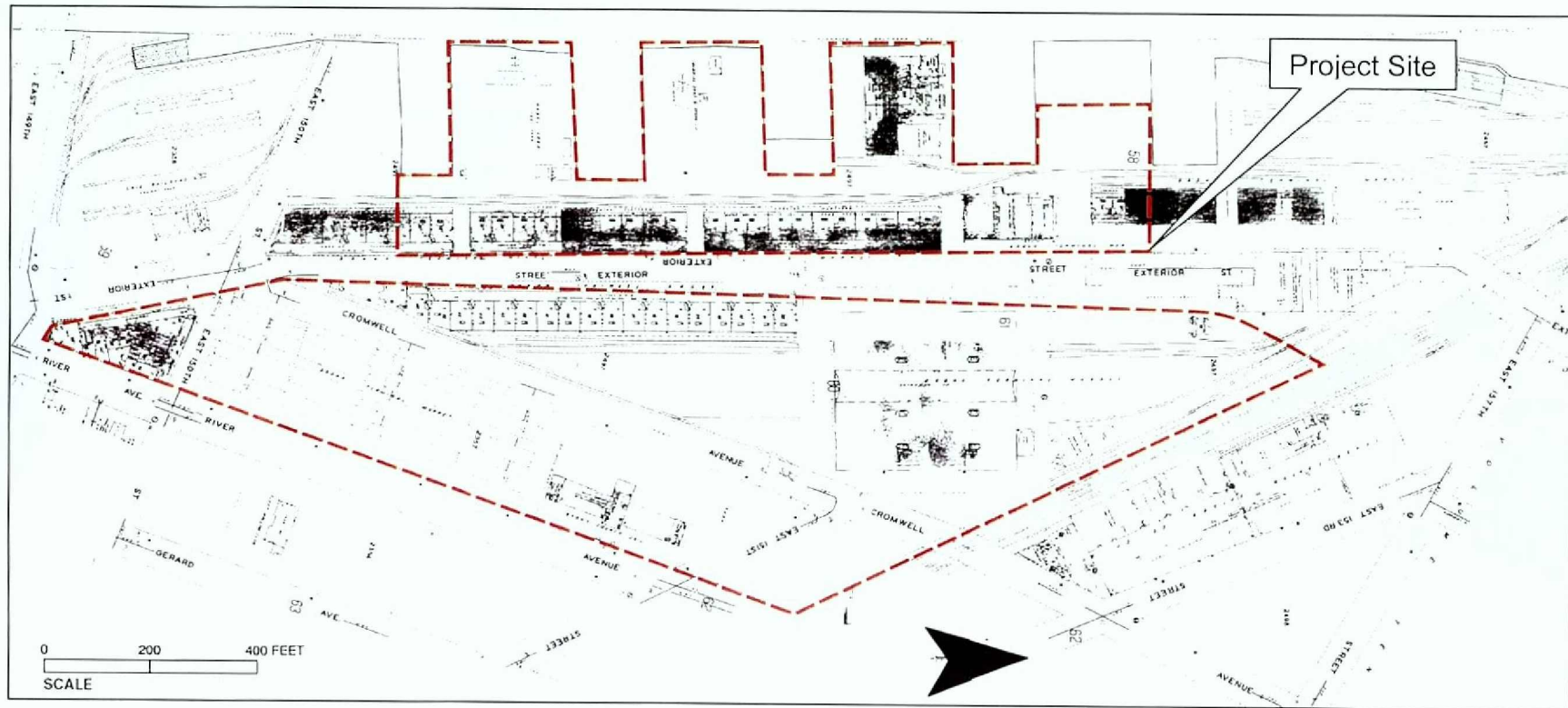


**FIGURE 6**  
Project APE.

*Insurance Maps of the City of New York: Borough of the Bronx.*  
Sanborn, 1908.

Gateway Center at Bronx Terminal Market.





**FIGURE 7**  
Project APE.

*Insurance Maps of the City of New York: Borough of the Bronx.*  
Sanborn, 1947.

Gateway Center at Bronx Terminal Market.



PHOTOGRAPHS



Photograph 1: Building A, in the process of being demolished. View looking southeast.



Photograph 2: Building B. View looking southeast with Exterior Street in the foreground and the Major Deegan Expressway overhead.





Photograph 3: Buildings J (on right) and H (on left). View looking southwest with Exterior Street in the foreground and the Major Deegan Expressway overhead.



Photograph 4: Buildings C (on right) and B (on left). View looking north down Cromwell Avenue. From right to left, Building A, Yankee Stadium, and the Bronx House of Detention are in the background.





Photograph 5: Building D. View looking northeast with River Avenue on the right and Exterior Street and the Major Deegan Expressway (overhead) on the left.



Photograph 6: Building C (on left) and the Bronx House of Detention (on right). View looking north with River Avenue in the foreground.



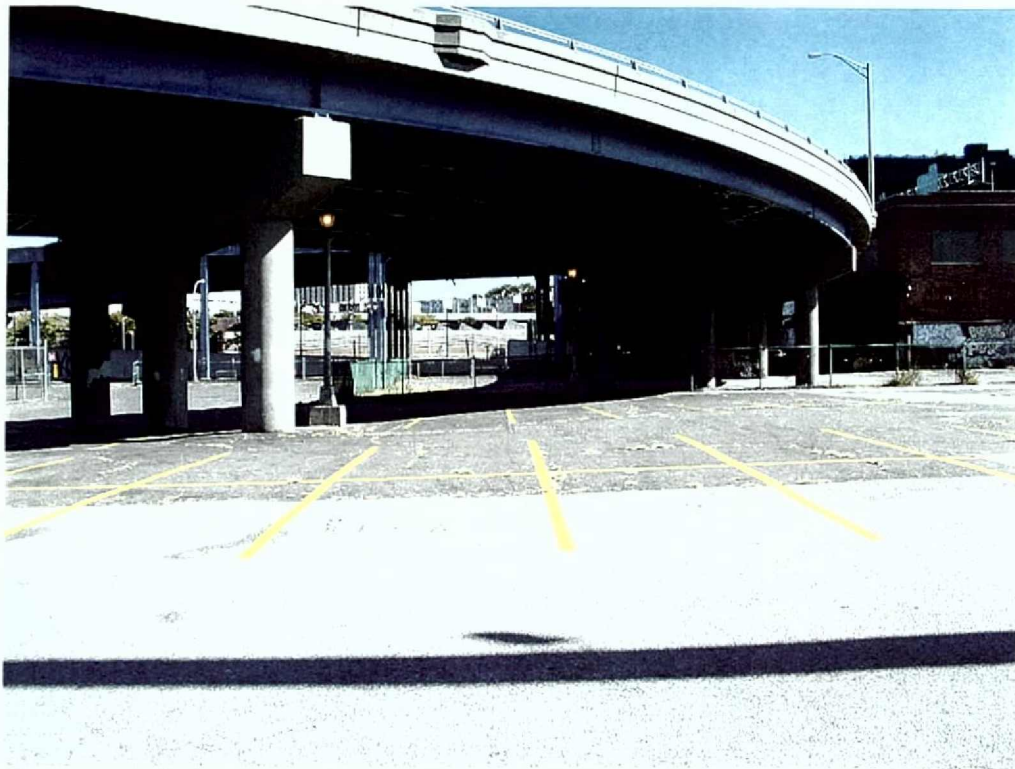


Photograph 7: Railroad tracks running along Cromwell Avenue between Buildings B (on right) and C (on left). View looking southwest.



Photograph 8: Railroad tracks running along the piers behind Buildings F, G, H, and J. View looking south along Pier 2 with former Slip 3 (now filled in) in background.





Photograph 9: Ramp for the Major Deegan Expressway on Pier 1. View looking northeast with Building J on the right.



Photograph 10: Ramp for the Major Deegan Expressway north of Building A. View looking east with Yankee Stadium on the left.





Photograph 11: Concrete retaining wall supporting Cromwell Avenue just north of the Bronx House of Detention. View looking southeast with the parking lot east of Building B in the foreground.



Photograph 12: Building A being demolished and disturbed ground surface. View looking northwest with Yankee Stadium in the background.





Photograph 13: Pier 3, with wooden elements at water line and concrete elements above. View looking northwest.



Photograph 14: Pier 2, with wooden elements at water line and concrete elements above. View looking southeast.





Photograph 15: Western end of Pier 2, with deteriorated bulkhead and trash. View looking southwest.



Photograph 16: Eastern end of Slip 5, with deteriorated bulkhead and trash. View looking northeast.





Photograph 17: Surface of Pier 4, showing uneven surface. View looking southeast with Building F in the background on the left.



Photograph 18: Surface of Pier 3, showing uneven surface and former concrete foundation. View looking west.





Photograph 19: Backfilled former Slip 3, with Pier 3 on the left and Pier 2 on the right. View looking west.



Photograph 20: Mud flats visible at low tide in Slip 2. View looking north with Pier 1 and the Major Deegan Expressway ramp in the background.