



Phase 1A Archaeological Documentary Study

**Bloomfield Residential Project
4680 Fieldston Road**

**Block 5819, Lots 2167, 2168, 2170, and 2175
Fieldston Historic District, Bronx County, New York**

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A. PROJECT OVERVIEW AND BACKGROUND

AKRF, Inc. has been retained by Fieldston Brothers Project, Inc. to provide environmental consulting services in connection with a proposed development project at 4680 Fieldston Road in the Fieldston section of the Bronx (see **Figure 1**). The proposed project site is bounded by Fieldston Road to the west, Indian Road to the north, a private park and the mapped roadway of Livingston Avenue to the east, and a residential property to the south. The project site comprises Block 5819, Lots 2167, 2168, 2170, and 2175 (see **Figure 2**). The project site is located within the Fieldston Historic District, a New York City Historic District.

The project site is currently developed with a single-family dwelling. As part of the proposed project, three additional detached single-family dwellings would be constructed on the undeveloped portions of the project site. Each of the three houses would be constructed with a cellar or basement. The proposed project would also include the relocation of an existing driveway and the removal and subsequent replacement of existing trees.

The project site is located in an R1-2 zoning district, within Special Natural Area District 2, and the proposed project would require authorizations from the New York City Planning Commission (CPC) in coordination with the Department of City Planning (DCP). In addition, as the project site is located in the Fieldston Historic District, a Certificate of Appropriateness is required from the New York City Landmarks Preservation Commission (LPC). These authorizations are discretionary actions requiring environmental review in accordance with the City Environmental Quality Review (CEQR) process. CPC in coordination with DCP will serve as lead agency for environmental review.

FIELDSTON HISTORIC DISTRICT

The project site is located within the boundaries of the Fieldston Historic District, which was designated by LPC in 2006 (see Figure 2). The historic district is an early 20th century suburban development created on land purchased by descendants of Major Joseph Delafield in 1829. The development of the property did not begin until 1909 when subway service had reached 242nd Street and Broadway. Plans for the property's development were prepared by civil engineer Albert E. Wheeler and were based on recommendations made by Frederick Law Olmsted and James R. Croes in 1876. The plans preserved much of the area's wooded character and incorporated roadways following the area's natural topography. Construction of the first houses began in 1911. Most houses were designed in picturesque historic revival styles—including the Medieval, English Tudor, Mediterranean, Dutch, and Georgian Colonial styles—that were encouraged by a handbook containing a list of approved architects. Houses were sited on their lots to take advantage of the area's varied and picturesque topography. No businesses, two-family homes, or apartment buildings were allowed in the neighborhood. The Fieldston Property Owners Association (FPOA) established design guidelines for the Fieldston neighborhood. These guidelines were relaxed in the 1950s which has allowed for the construction of more eclectic house styles (LPC 2006).

The project site and study area are under the jurisdiction of the FPOA, which owns all the streets and common areas in the Fieldston neighborhood. FPOA is responsible for numerous municipal functions and collects annual dues that are paid by the approximately 250 homeowners who make up the association. Once per year, streets in Fieldston are closed to non-residents to maintain private ownership. Parking is restricted to residents and their guests, as is use of Delafield Park, and any other common resources.

B. RESEARCH GOALS AND METHODOLOGY

This Phase 1A Archaeological Documentary Study has four major goals: (1) to determine the likelihood that the project site was occupied during the precontact (i.e. Native American) and/or historic periods; (2) to determine the effect of subsequent development and landscape alteration on any potential archaeological resources that may have been located at the project site; (3) to make a determination of the project site's potential archaeological sensitivity; and (4) to make recommendations for further archaeological analysis, if necessary. The steps taken to fulfill these goals are explained in greater detail below. The study has been designed to satisfy the requirements of LPC and it follows the guidelines of the New York Archaeological Council (NYAC).

The first goal of this documentary study is to determine the likelihood that the project site was inhabited during the precontact or historic periods and identify any activities that may have taken place on the project site that would have resulted in the deposition of archaeological resources. In order to determine the likelihood of the project site's occupation during the precontact and historic periods, documentary research was completed to establish a chronology of the project site's development, landscape alteration, and to identify any individuals who may have owned the land or worked and/or resided there and to determine if buildings were present on the project site in the past. Data were gathered from various published and unpublished primary and secondary resources, such as historic maps, topographical analyses (both modern and historic), historic photographs, newspaper articles, local histories, previously conducted archaeological surveys, and information from the files of LPC regarding previously identified archaeological sites within 1 mile of the project site. On-line textual archives, such as Google Books and the Internet Archive Open Access Texts, were also accessed.

The second goal of this Phase 1A study is to determine the likelihood that archaeological resources could have survived intact on the project site after development and landscape alteration (i.e. erosion, grading, filling, etc). Historic maps documenting structures on the project location were analyzed and historic and current topographical maps were compared to determine the extent to which the project site have been disturbed. Potential disturbance associated with paving and utility installation was also considered.

After identifying the likelihood that archaeological resources were deposited on the project site and that the likelihood that they could remain intact given subsequent development and landscape alteration, a sensitivity determination was made for the project site for both precontact and historic period resources. As described by NYAC in their *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State* (1994: 2):

An estimate of the archaeological sensitivity of a given area provides the archaeologist with a tool with which to design appropriate field procedures for the investigation of that area. These sensitivity projections are generally based upon the following factors: statements of locational preferences or tendencies for particular settlement systems, characteristics of the local environment which provide essential or desirable resources (e.g. proximity to perennial water sources, well-drained soils, floral and faunal resources, raw materials, and/or trade and transportation routes), the density of known archaeological and historical resources within the general area, and the extent of known disturbances which can potentially affect the integrity of sites and the recovery of material from them.

As stipulated by the NYAC standards, sensitivity assessments should be categorized as low, moderate, or high to reflect “the likelihood that cultural resources are present within the project area” (NYAC 1994: 10). For the purposes of this study, those terms are defined as follows:

- **Low:** Areas of low sensitivity are those where the original topography would suggest that Native American sites would not be present (i.e. locations at great distances from fresh and salt water resources), locations where no historic activity occurred before the installation of municipal water and sewer networks, or those locations determined to be sufficiently disturbed so that archaeological resources are not likely to remain intact.
- **Moderate:** Areas with topographical features that would suggest Native American occupation, documented historic period activity, and with some disturbance, but not sufficient disturbance to eliminate the possibility that archaeological resources are intact on the project site.
- **High:** Areas with topographical features that would suggest Native American occupation, documented historic period activity, and minimal or no documented disturbance.

A. GEOLOGY AND TOPOGRAPHY

The Bronx is found within a geographic bedrock region known as the Manhattan Prong of the New England (Upland) Physiographic Province. This region is a “rolling lowland area...of metamorphic rocks” dating to the Early Paleozoic, which began approximately 575 million years ago (Isachsen et al. 2000). Although less is known about the bedrock types to the east of the Bronx River (Schuberth 1968), the bedrock in the vicinity of the project site—which is known as the Riverdale Ridge—includes Fordham Gneiss. The Fordham Gneiss is the oldest rock in the Manhattan Prong, formed approximately 1.2 billion to 900 million years ago during the Grenville Orogeny (Isachsen et al. 2000). Within the southern Bronx area, the top of the Fordham Gneiss bedrock is near the surface, and is exposed at the surface (rock outcrop) at five locations within the project site. Depth to bedrock on the Project Site generally ranges from 20 to 40 feet.

Throughout the majority of the Manhattan Prong, the bedrock is covered with glacial till known as the Atlantic Coastal Plain deposits (Schuberth 1968). These deposits were left behind by massive glaciers of up to 1,000 feet thick that retreated from the area towards the end of the Pleistocene. There were four major glaciations that affected the region until approximately 12,000 years ago when the Wisconsin period—the last glacial period—came to an end. The rocks and sand deposits left behind as a result of glacial movements brought about the creation of hundreds of sand hills, or kames, some of which were nearly one hundred feet tall. In many cases, the glaciers transported huge boulders, including the “rocking stone” a tremendous boulder which was naturally deposited within the boundaries of the Bronx Zoo to the southeast of the project site (Reeds 1925). A massive sloping rock outcrop at 5455 Fieldston Road, north of the Henry Hudson Parkway was historically known as the “Indian Steps” (McNamara 1991).

The overall topography of the project site is moderately sloped, with an average percent of slope of about 11 percent. The site’s highest elevation—224 feet above sea level—is located near the south-central edge of the project site and the lowest elevation—206 feet above sea level—is located near the northwest corner of the site. Current topographic information (see Figure 1) suggests that the property is situated at an elevation of approximately 210 to 220 feet above the National Geodetic Vertical Datum of 1929 (NAVD29). A topographical survey of the Bronx dating to 1873 (see **Figure 3**) suggests that the overall topography of the area has remained largely unchanged since the late 19th century, suggesting that the site has not experienced significant landscape modification (i.e. grading or filling associated with development).

B. HYDROLOGY

Many small streams, rivers, and lakes were also created by the glacial runoff. As temperatures increased and this runoff ceased, many of these small water courses evolved into swamps and marshlands punctuated with brooks, streams, and ponds. The project site is situated approximately 4,000 feet east of the Hudson River and a small pond—called “Delafield Pond” or “Indian Pond”—is located to the east of the site. This pond is identified by the United States Fish and Wildlife Service’s National Wetlands Inventory (NW) as a palustrine pond with an unconsolidated bottom that has been excavated or modified by humans. A smaller narrower pond is depicted in this location on historic maps as early as 1873 (see Figure 3), suggesting that while portions of the pond may be natural, the pond’s size and shape have been modified over time. Additional ponds were historically present in the vicinity of the project site, for example the now-filled Dodge Pond, which was located approximately 1,750 feet southwest of the project site near the intersection of 247th Street and Arlington Avenue (Boesch 1996).

The lake within Van Cortlandt Park, which is fed by Tibbits Brook, is located approximately 3,500 feet to the east of the project site. Historic maps show that smaller streams and tributaries of Tibbits Brook

ran to the north of the project site in the vicinity of the modern Henry Hudson Parkway. Historically, the outlet of Tibbits Brook that ran to the south of Van Cortlandt Lake was surrounded by a thick tract of marshland (see Figure 3).

C. SOILS

The *New York City Soil Reconnaissance Survey* published by the National Resource Conservation Service (2005) indicates that the project site is characterized by the “Chatfield-Greenbelt-Pavement and Buildings” soil complex. This complex is found in Manhattan and the Bronx, typically in “areas of bedrock controlled hills and ridges modified by glacial action that have been partially cut and filled, mostly for parks and low density residential use; a mixture of moderately deep gneissic till soils and anthropogenic soils, with more than 15 percent impervious pavement and buildings covering the surface” (New York City Soil Survey Staff 2005: 14). These soils are present in two types of topographical settings in the vicinity of the project site: in nearly level to gently sloping areas with 0 to 8 percent slopes and in moderately steep to very steep areas with slopes of 15 to 50 percent.

D. PALEOENVIRONMENT

Due to the extended glacial period that left the Northeast blanketed in thick ice sheets for thousands of years, the area was not inhabited by humans until approximately 11,000 years ago. As temperatures increased, a variety of flora and fauna spread throughout the region. At this time, large open forests of spruce, fir, pine, and other tree species expanded across the Northeast, interspersed with open meadows and marshland. A wide variety of animal life could also be found, including large mammals such as mammoth, mastodon, caribou, musk ox, moose, as well as smaller mammals such as fox, beaver, hare, and many kinds of marine animals.

Climate changes continued to reshape the environment of the Northeast as time progressed. As the climate grew increasingly warmer, jack pine, fir, spruce, and birch trees were replaced with hardwood forests of red and white pine, oak, and beech (Ritchie 1980). Furthermore, a decrease in glacial runoff resulted in the creation of small bodies of water such as lakes as well as, later on, low-lying marshes and swampy areas. By the time of the Early Archaic period, beginning approximately 10,000 BP, there was “considerable environmental diversity, with a mosaic of wetlands, oak stands, and a variety of other plant resources...[making it]...an attractive and hospitable quarter for both human and animal populations” (Cantwell and Wall 2001: 53). Warmer temperatures forced the herds of large mammals to travel north before eventually dying out. The new surroundings attracted other animals such as rabbit, turkey, waterfowl, bear, turtles, and white-tailed deer. The expanded water courses became home to a variety of marine life, including many varieties of fish, clams, oysters, scallops, seals, and porpoises, among others (ibid).

E. CURRENT CONDITIONS

The project site is currently a 1.26-acre residential property containing a two-and-a-half-story dwelling (Lot 2170). The house was designed by the architecture firm Mann & MacNeille in the Tudor Revival style and was built between 1917 and 1918 (see **Figures 4** and **5**). A circular gravel and asphalt driveway is located to south of the dwelling and leads to Fieldston Road (see Figure 4). A fieldstone retaining wall runs along the property lines on Fieldston and Indian Roads. Delafield Park, a private park that is owned by the FPOA, is located immediately east of the project site. A pond enclosed with a stone wall is located in this park (see **Figure 6**).

Slopes within the site are variable and many areas are steep with slopes greater than 15 percent (see **Figure 7**). The areas of steep slope are located within the northern portion of the site (Lot 2175) and near the site’s southwest and southeast corners (Lots 2168 and 2167, respectively). The steeply sloped areas are located near the areas of higher elevation and are largely associated with the rock outcroppings that

are present on the site. These areas are covered with trees and low vegetation. The more level portions of the project site are landscaped or covered with grass (see Figure 6).

A. PRECONTACT CONTEXT

Archaeologists have divided the time between the arrival of the first humans in northeastern North America and the arrival of Europeans more than 10,000 years later into three periods: Paleo-Indian (11,000-10,000 BP), Archaic (10,000-2,700 BP), and Woodland (2,700 BP–AD 1500). These divisions are based on certain changes in environmental conditions, technological advancements, and cultural adaptations, which are observable in the archaeological record.

PALEOINDIAN PERIOD (11,000-10,000 BP)

As mentioned in Chapter 2, human populations did not inhabit the Northeast until the glaciers retreated some 11,000 years ago. These new occupants included Native American populations referred to by archaeologists as PaleoIndians—the ancestors of the *Munsee* that would later inhabit the region—who would inhabit the land in later years.

The PaleoIndians most likely exploited all the different resources provided by their environment. It has been suggested that they did not only actively hunt the large mammals that roamed about the region (mammoth, mastodons, etc.), but they also hunted and trapped smaller animals and supplemented their diet with fish and gathered plants (Cantwell and Wall 2001).

There was a very distinct Paleo-Indian style of lithic technology, typified by fluted points. These were elaborately detailed stone points that would have been used for a variety of functions, most notably for hunting. They were often made of high-quality imported chert, but were also known to have been crafted from local materials. Other stone tools manufactured at this time included knives, scrapers, drills, and graters. Wood, ivory, and other materials were also used for the manufacture of composite tools, such as hunting spears.

Archaeological evidence suggests that the PaleoIndians were likely highly mobile hunters and gatherers. They appear to have lived in small groups of fewer than 50 individuals (Dincauze 2000) and did not maintain permanent campsites. In addition, most of the PaleoIndian sites that have been investigated were located near water sources.

It is because of the close proximity of PaleoIndian sites to the coastline that so few of them have been preserved in the New York City area. As the glaciers continued to melt, sea levels rose and much of what was once adjacent to the water line became submerged. In fact, only one Paleo-Indian site has been discovered in the entire New York City area—that of Port Mobil, on Staten Island. This location has yielded nothing more than a collection of fluted points and other stone tools characteristic of the period.

ARCHAIC PERIOD (10,000-2,700 BP)

The Archaic period has been sub-divided into three chronological segments, based on trends identified in the archaeological record which reflect not only the ecological transformations that occurred during this period, but the cultural changes as well. These have been termed the Early Archaic (10,000–8,000 BP), the Middle Archaic (8,000–6,000 BP) and the Late Archaic (6,000–2,700 BP) (Cantwell and Wall 2001). The Late Archaic is sometimes further divided to include the Terminal Archaic (3,000-2,700 BP).

The aforementioned environmental transformations included a continued post-glacial warming trend, the extension of hardwood forests, and a decrease in glacial runoff which resulted in the creation of lakes and other small bodies of water. There was a subsequent migration of new animal and plant species into the area, while the herds of large mammals traveled north, eventually dying out. The new surroundings attracted smaller animals, such as rabbit, turkey, waterfowl, and white-tailed deer.

As the Archaic period progressed and the number of plant and animal species inhabiting the area increased, the size of the human population did as well. In general, archaeological research has shown that Archaic Native American sites were most often located near water sources. The abundance of food resources which arose during this period allowed the Archaic Native Americans to occupy individual sites on a permanent or semi-permanent basis, unlike their nomadic Paleo-Indian predecessors. These individuals migrated on a seasonal basis within specific territories and consistently returned to and reoccupied the same sites.

The arrival of new food sources allowed the human population to expand their subsistence strategies and at the same time forced them to develop different technologies that would allow such resources to be exploited. Perhaps the most important of these developments was the advent of fishing technology, which occurred during the Middle Archaic in response to an increasing dependence on the area's marine resources. The new technology included hooks and stone net sinkers. In addition, the influx of nut- and seed-bearing foliage resulted in the development of stone mortars and pestles in addition to stone axes used to process plant material.

In order to successfully hunt the smaller game animals that had established themselves in the region, narrower spear points and knives were manufactured, along with weighted spear throwers. Domestic technology was advanced at the same time, with the development of a wider variety of hide scrapers and, later in the period, the introduction of bowls made from steatite or soapstone. Tools continued to be crafted in part from foreign lithic materials, indicating that there was consistent trade among Native American groups from various regions in North America throughout the Archaic period.

Rising sea levels coupled with the dominance of coniferous forests created a habitat that was ill-fitted to human habitation (Boesch 1994). Few Early Archaic sites have been identified in New York City. Most of those that have been identified are located on Staten Island; including Ward's Point, Richmond Hill, the H. F. Hollowell site, and the Old Place site. Sites such as Ward's Point—a domestic habitation location which due to lowered sea levels was originally inland—tend to be deep and stratified and have yielded stone tools related to cooking, woodworking, and hide processing. Many years of constant Native American occupation caused the artifacts to be deeply buried under more recent debris deposits (Cantwell and Wall 2001). However, at the Old Place Site, the only artifacts which were discovered—stone tool assemblages—were found at relatively shallow depths of around 42 inches (Ritchie 1980).

There are also few Middle Archaic sites in the region. The majority of these tend to consist of large shell middens, which are often found near major water courses such as the Hudson River, although stone points have also been found in such locations. These sites were in great danger of obliteration because of their proximity to the shrinking coastlines.

Unlike the Early and Middle periods, several Late Archaic sites have been found in the New York City area. Two notable sites, Tubby Hook and Inwood, are located at the northern end of the island of Manhattan. Both sites contain large shell middens, while the Inwood site also features rock shelters that were inhabited by Archaic populations. Both sites were continuously occupied for several thousand years.

In addition, many Terminal Archaic sites from all across the city have provided examples of the Orient culture, which is characterized by its long fishtail stone points and soapstone bowls. Although there are extremely elaborate burial sites attributed to the Orient culture on eastern Long Island, none have been identified in the immediate vicinity of New York City.

WOODLAND PERIOD (2,700 BP-AD 1500)

The Woodland period represents a cultural revolution of sorts for the Northeast. During this time, Native Americans began to alter their way of life, focusing on a settled, agricultural lifestyle rather than one of nomadic hunting and gathering. Social rituals begin to become visible in the archaeological record at this

time. There have been many elaborate human and canine burial sites identified from this period. The first evidence of smoking has also been found—stone pipes have been uncovered at Woodland sites—and it was at this time that pottery began to be produced.

In general, there was a greater emphasis placed on composite tools during the Woodland period. While stone scrapers, knives, and hammerstones were still in use, there was an increased use of bone, shell, and wood in tool making. Furthermore, the development of bows and arrows revolutionized hunting practices. Many tools were made from imported materials, indicating that the trade networks established earlier were still being maintained (Cantwell and Wall 2001).

Pottery was introduced into Native American society early in the Woodland period and by the time of European contact in the 1500s, well-crafted and elaborately decorated pottery was being manufactured. Like the Archaic period, the Woodland has been divided into Early, Middle, and Late sections, which differ mostly based on the style of pottery which was produced at that time. Woodland pottery had simple beginnings; the first examples were coiled pots with pointed bases, which were made with grit temper. These were replaced during the Middle Woodland period by shell-tempered vessels bearing a variety of stamped and imprinted decorations. As the period drew to a close, the decorative aspect of the pottery was further augmented with the addition of intricate ornamental rims (Louis Berger Group 2004).

Woodland-era sites across North America indicate that there was an overall shift toward full-time agriculture and permanently settled villages. Archaic sites in New York City, however, suggest that the Native Americans there continued to hunt and forage on a part-time basis. This was most likely due to the incredibly diverse environmental niches that could be found across the region throughout the Woodland period (Cantwell and Wall 2001, Grumet 1995). Nevertheless, Woodland societies were considerably more sedentary than were their predecessors and there was some farming of maize, beans, squash, and tobacco. The development of pottery, increasingly complex burial sites, and the presence of domesticated dogs are all consistent with sedentary societies, which have a close association with a particular territory or piece of land.

In the Bronx, a Late Woodland-Early Contact period habitation site named “Ranachqua” was identified at Cypress Avenue between 133rd and what was formerly 130th Streets, to the southeast of the project site. The exact location of this site is unclear, however, as much of the area below 133rd Street was marshland and firmer terrain was created by landfilling, centuries after the Woodland Period ended. The site reportedly contained shell middens, hearths, and human interments (Bolton 1975). It was excavated by Carver and Bolton in the early 20th century and has since been filled in. The Triborough Bridge approach road now occupies the site (Boesch 1996). Grumet (1981) also identified this site and his map labels the entire area below today’s East 161st Street, west of the Bronx River, as being part of *Ranachqua*, which means “the end place.”

CONTACT PERIOD (AD 1500-1700)

The Woodland period ended with the arrival of the first Europeans in the early 1500s and the first journey up the Hudson River, made by Henry Hudson in 1609. At that time, the Bronx was inhabited by a group of Delaware (or Munsee) Indians known as the *Reckgawanac*, a group that inhabited northern Manhattan and the Hudson River waterfront in the Bronx. This group was closely associated with the *Wiechquaesgec*, whose central habitation site was located in Dobbs Ferry, in Westchester County, New York. These groups migrated into the area during the Late Woodland (ibid). The first documented interaction between European explorers and the Native Americans in this portion of New York City occurred during Henry Hudson’s 1609 voyage up the river that now bears his name. The encounter was violent, and in the skirmish between Hudson’s crew members and a small group of *Reckgawanac*, several of the Native Americans were killed (Boesch 1996).

Evidence of Native American activity was documented by archaeologist Reginald P. Bolton in the southwestern corner of modern Van Cortlandt Park. Bolton called the site *Mosholu*, after the precontact name for Tibbets Brook, which runs through the area (Grumet 1981). Indian planting fields were located within the park and the line of modern Broadway, which serves as the park’s western boundary, runs along the line of a former Native American trail (ibid). What is now the Riverdale section of the Bronx may have been referred to as *Mentipathe* by the Native Americans that resided there (ibid), although Bolton (1975) also notes that *Mentipathe* was the name for Cromwell’s Creek, a former branch of the Harlem River in the southern portion of the Bronx (McNamara 1991) .

With the introduction of European culture into indigenous populations, the way of life once maintained by the Native Americans was thoroughly and rapidly altered. European guns, copper, glass beads, and alcohol soon became incorporated into the Native American economy, while European diseases brought about the demise of huge portions of the population. Native Americans at first maintained the village sites they had established near water sources and as trade with European settlers intensified, they became increasingly sedentary. However, as the European population increased and required more land, the relationship between the two groups became increasingly adversarial. Fierce wars broke out between the Europeans and the Indians, which was especially true of the *Wiechquaesgeck*. Throughout the 1640s and 1650s, the tribe was at war with both Dutch settlers and other Native American tribes (Grumet 1981). With their numbers depleted, the *Wiechquaesgeck* left the area after selling their land to the British, who had taken over the colony from the Dutch in 1664 (ibid).

B. DOCUMENTED NATIVE AMERICAN ACTIVITY IN THE VICINITY OF THE PROJECT SITE

A review of information on file with LPC, previously conducted cultural resources surveys in the vicinity of the project site, and 20th century works documenting Native American activity revealed that there are numerous Native American archaeological sites that have been identified within 1 mile of the project site, including one that may have been situated within or in the immediate vicinity of the project site (see **Table 1**). Most of the sites were identified by avocational archaeologists in the early 20th century, and as a result of their inadequate documentation, little is known about the sites or what was found there. The majority of the sites were seasonal campsites, shell middens, or isolated finds although one village site and a lithic workshop have also been identified within one mile of the site. LPC’s sensitivity model for the Borough of the Bronx, prepared by Eugene Boesch, Ph.D. in 1996, identify the Hudson River shoreline of the Bronx as an area that is highly sensitive for precontact campsites and shell middens, many of which have been identified in the area.

Table 1
Previously Identified Precontact Archaeological Sites within 1 Mile of the Project Site

Site Name	Boesch (1996) Site #	Approximate Distance from Project Site	Time Period	Site Type	Additional Reference(s)
Chapel Farm II	2	0.09 miles (500 feet)	Possibly Archaic	Quartz quarry and lithic debris	Sheffield Archaeological Consultants (1994)
<i>Mosholu/ Keskeskick/ Van Cortlandt Park Planting Field</i>	3	0.38 miles (2,000 feet)	Woodland, possibly Contact	Approximately 14-acre planting field on level ground in the western part of Van Cortlandt Park. Artifact assemblage included stone and bone tools and debitage, faunal remains, trash middens, storage pits, and hearths	Bolton (1922)

Table 1 (continued)
Previously Identified Precontact Archaeological Sites within 1 Mile of Project Site

Site Name	Boesch (1996) Site #	Approximate Distance from Project Site	Time Period	Site Type	Additional Reference(s)
Vault Hill in Van Cortlandt Park	5	0.66 miles (3,500 feet)	Precontact, possibly Woodland	Traces of activity; likely a campsite associated with the <i>Mosholu</i> site	
Van Cortlandt Park Mansion House	6	0.52 miles (2,750 feet)	Precontact, possibly Woodland	Trash pit with shell and lithic debitage	
Fieldston Road/Pascal Place and 247th Street	7	Possibly within or immediately adjacent to the project site	Precontact, possibly Woodland	Campsites and shell heaps possibly near modern Indian Road	Bolton (1922)
Sedgwick Avenue and Giles Street	44	1 mile (5,280 feet)	Precontact, possibly Late Woodland	Campsite with shell deposits near a Native American path	Bolton (1922)
<i>Shorakapkokk</i> /Dodge Pond	60	0.33 miles (1,750 feet)	Precontact	Campsite	McNamara (1984)
Ewen Park	63	0.95 miles (5,000 feet)	Precontact	Shell and ash deposits	Bolton (1934)
<i>Paparinemin</i>	65	1 mile (5,280 feet)	Late Woodland to Contact	Village site situated on a former marshy island; shell pits, hearths, lithics and ceramics found.	Bolton (1922)
Tibbets Brook I	66	0.75 miles (4,000 feet)	Precontact	Traces of occupation	Parker (1920)
Unnamed Camp Site	71	0.52 miles (2,750 feet)	Precontact, possibly Woodland	Campsite with shell and trash middens	Bolton (1922) Parker (1920)
Albany Avenue	73	1 mile (5,280 feet)	Precontact, possibly Woodland	Campsite with shell pocket and pottery sherds	Bolton (1922)
Riverdale Station	111	0.85 miles (4,500 feet)	Precontact	Shell midden	Parker (1920)
Wave Hill Park	112	1 mile (5,280 feet)	Precontact, possibly Woodland	Shell deposit and fishing camp	Bolton (1922)
Riverdale Park Archaeological District	113	0.62 miles (3,250 feet)	Woodland, possibly Archaic	10 shell middens	
Isolated Find	127	0.75 miles (4,000 feet)	Precontact	Projectile point	
Isolated Find	130	0.75 miles (4,000 feet)	Precontact	Chert biface	
Source: Boesch (1996).					

Reginald P. Bolton, who documented Native American sites throughout New York City in the late-19th and early 20th centuries, noted that “traces of native stations” were documented near the former intersection of Fieldston Road and 247th Street (Bolton 1922: 94). This intersection does not appear to have ever been formally constructed, although historic maps indicate that it was planned and mapped in the vicinity of the project site. Bolton hypothesized that the stations were associated with *Keskeskick*, a village site, also called *Mosholu*, a large 14-acre site that was located less than a half mile east of the project site within what is now Van Cortlandt Park (ibid). Shell middens and burial pits were among the features identified during archaeological investigations at this site in the early 20th century (Bolton 1975). Parker (1920) provides a map of the village site and identifies the locations of fire pits near the western shore of Van Cortlandt Lake.

Another precontact archaeological site that has been better documented in the vicinity of the project site is known as Chapel Farm II. The site is situated approximately 500 feet to the north of the property at 4680 Fieldston Road and is generally bounded by Fieldston Road and West 250th and 253rd Streets. The Chapel Farm II site features topography similar to that seen at 4680 Fieldston Road: moderately to steep slopes with plateaus, rock outcroppings, and level grassy areas (City/Scape 1990). Numerous archaeological investigations of the site were completed by City/Scape (1990 and 1993), Hartgen Archaeological Associates (1990), Historical Perspectives, Inc. (1991 and 1993), LaPorta Associates (1993), and Sheffield Archaeological Consultants (1994). Ultimately, it was determined that the site represented a “lithic workshop at which quarried quartz was reduced to blanks suitable to be further worked into tools” (Sheffield Archaeological Consultants 1994: 53). However, as a result of significant disturbance to the site as a result of 20th century development and landscaping, the site was determined to be ineligible for listing on the State and National Registers of Historic Places and no further archaeological investigations of the site were warranted.

One Native American village was identified within one mile of the project site. The site, known as *Paparinemin*, was a semi-permanent settlement located approximately 1 mile to the south of the project site on what was formerly an island surrounded by marshland on the southern shore of the Bronx near Spuyten Duyvil (Boesch 1996). The site was allegedly used as a shellfish processing and hunting and gathering station and was considered a “favorite resort of the *Reckgawawanc*” (Bolton 1975: 83). It appears to have been in use through the end of the 17th century (Boesch 1996). Bolton (1975) identified another Native American village, *Nappeckamak*, another *Reckgawawanc* “resort” in what is now Yonkers.

Portions of modern Bailey Avenue and Broadway were constructed along the line of a former Native American trail which connected the *Reckgawawanc* settlements along the southern shore of the Bronx near Spuyten Duyvil with the site in modern Van Cortlandt Park and other sites to the north (Grumet 1981). It has been suggested that Indian Road, which forms the northern boundary of the project site, may indicate the general location of a Native American campsite (Boesch 1996). However, the name “Indian Road” was given to the property by its former owner, Major Joseph Delafield likely because it was fashionable at the time to use Native American-influenced names in the late-19th century and the name may have nothing to do with the area’s history (McNamara 1991).

A. THE EARLY HISTORY OF THE BRONX

New York was “discovered” by Giovanni de Verrazano in 1524 and explored by Henry Hudson in 1609, thus marking the beginning of European occupation in the area. By 1621, the area had become part of a Dutch colony and the States-General in the Netherlands chartered the Dutch West India Company (“WIC”) to consolidate Dutch activities in the New World. It was at this time that the WIC began to purchase large tracts of land from the Native Americans. The WIC purchased *Keskeskeck* from the local Native Americans in 1639 (Hansen 1950).

Towards the end of the 17th century, the increasing European population rapidly displaced the Native American population in the Dutch colony of New Amsterdam and the English colony of New York. The first settler of the area was Adriaen van der Donck, who in 1646 was granted a patroonship that included a large area extending 16 miles north of Spuyten Duyvil at the tip of Manhattan and as far east as the Bronx River (Hansen 1950). As part of his role as patroon, Van der Donck was responsible for finding settlers to inhabit the land. He advertised the land as having an abundance of “woods, marshes, meadows, pastures, waters, lakes, creeks, rivulets, fishing, hunting, fowling, [and] timber” (ibid: 22). The Albany Post Road, built along the line of a Native American trail in the vicinity of modern Broadway, was constructed in 1669 (Jenkins 1912).

After Van der Donck’s death, his widow sold the land to Elias Doughty who then divided it and sold it in 6 smaller parcels (City/Scape 1990). The project site was included within a large tract that was sold by Doughty to William Betts and George Tippet, for whom the nearby brook was named (Jenkins 1912). The property to the north of the project site was sold to Frederick Philipse, who then established the Manor of Philipsburg (ibid). Many vast tracts of land were originally included within larger properties that were purchased from the Native Americans before being officially chartered as Manors by the British crown. The manor system as it existed in the Americas was not a feudal system, as it was in England, but instead a way for the British to grant land in such a way that it promoted “the growth and development of their new possession under their own laws and customs” (DeLancey 1886: 90). Tenants leased their farms for life-long periods, and in some instances, were eventually able to buy their property from their landlord (Hansen 1950). Philipse received his patent from the British crown in 1680 (ibid). The land was made into a Manor in 1697 (DeLancey 1886). Beginning in 1699 Colonel Jacobus Van Cortlandt, the son-in-law of Frederick Phillipse and Mayor of New York from 1710 to 1719, began to purchase land in the area as well (Jenkins 1912). Van Cortlandt was responsible for damming Tibbett’s Brook and creating Van Cortlandt Lake (ibid).

B. 17TH AND 18TH CENTURY DEVELOPMENT

During the 17th and 18th centuries, the project site does not appear to have been developed and because of the shallow bedrock and sloping terrain, was most likely not used for agricultural purposes. No Revolutionary War activity appears to have been documented in the project site or the immediate vicinity (City/Scape 1990). C.J. Sauthier’s 1777 map of military activities that took place in the area in 1776 shows that troops marched up and down the Albany Post Road to the east of the project site and soldiers camped in areas to the north and in what is now Van Cortlandt Park to the east. Additional troops moved along the Hudson River waterfront to the west of the project site as they traveled between New Jersey and Spuyten Duyvil/Kingsbridge, where a great deal of military activity occurred during the war and where several forts were located.

Although there were few residents in the area at the time, life was difficult for citizens of Westchester County, in which the Bronx was located at the time, during the war. Soldiers stationed in the area

commandeered clothes, blankets, food, and other provisions from the area's residents. Tensions between British loyalists and American patriots peaked in the late 1770s. In 1779, the New York Legislature confiscated the land of many loyalists, including that of Frederick Phillipse. After the war was over, the confiscated land was sold off by the Commissioners of Forfeiture, most often to the tenants already inhabiting it (Pelletreau 1886). The few individuals residing in the area during the war included the Hadley family, who appear to have had a presence in the area since Joseph Hadley settled there before 1687 (Bolton 1848). William and George Hadley were supportive of the American cause (Jenkins 1912). The project site appears to have been included within the land of William Hadley, which was south of George Hadley's property in Riverdale and covered 257 acres situated between the Hudson River and the Albany Post Road (ibid). William Hadley acquired a portion of the property from Colonel Jacobus Van Cortlandt in 1761 and the rest from the Commissioners of Forfeiture in 1786 (ibid). The farmhouse associated with the Hadley property was located to the east of the project site along the Albany Post Road (Scharf 1886).

C. CHANGES TO THE AREA IN THE 19TH CENTURY

Relative to the growing city in Lower Manhattan, the Bronx remained largely vacant throughout the city's early development. Although individual farms were scattered throughout the area, there were few substantial communities until the early to mid-19th century, only a few "miniscule towns" that were established along the Boston Post Road (Burrows and Wallace 1999: 661). In the first half of the 19th century, with the construction of bridges connecting it to Manhattan, the Bronx finally became accessible to individuals living and working in Manhattan. However, it was still far enough from the city to render a daily commute impossible. Nevertheless, with the establishment of railroad lines that connected the Bronx and Manhattan, the newly-accessible Bronx quickly grew. A new bridge was constructed in 1840 to allow the New York and Harlem Railroad to continue on through the Bronx towards White Plains and other locations in upstate New York and Connecticut (Burrows and Wallace 1999). The Railroad was open for business by 1842. The newly constructed railroad lines allowed for the Bronx' rapid growth to continue. With the increased accessibility brought to the Bronx by these railroad installations, the area began to become fully populated towards the end of the 19th century. As a result, the portion of the Bronx west of the Bronx River (referred to as the 23rd and 24th Wards of New York County) was annexed to the City of New York in 1874 (Jenkins 1912).

In 1829, Major Joseph Delafield, a hero of the War of 1812, purchased William Hadley's estate from his heirs (Jenkins 1912). Delafield and his heirs would own the property through the early 20th century. The 1853 O'Conner map of Westchester—as reproduced in City/Scape's 1990 Phase 1A investigation of the nearby Chapel Farm II site—does not depict any structures within the Delafield estate in the vicinity of the project site. Buildings were located along the Albany Post Road to the east and in the vicinity of Fieldston, the Delafield homestead along the Hudson River waterfront. The map published by F.W. Beers in 1868 depicts the project site in a similar manner. "Fieldston" was the name of the Delafield family's estate in England and Joseph Delafield borrowed the name for his home in New York (McNamara 1991). Fieldston Road, which was not laid out until 1919, and the neighborhood of Fieldston were in turn named after the Delafield home (ibid).

The 1873 topographic map produced by the Parks Department (Figure 3) does not depict any structures in the vicinity of the project site. That map does, however, depict a pond near the project site; a smaller precursor to the modern Delafield Pond. McNamara (1991:274) describes the historic Delafield Pond, also called "Duck Pond" or "Indian Pond" as "an almost circular pond formerly located at Livingston Avenue and Waldo Avenue at 248th Street." While not depicted as perfectly round on any historic plans, only one pond is shown in the location of the modern pond on 19th century maps. A forked path crossed through the Delafield property in the vicinity of the project site. The northern branch connected a house on the Delafield property along the former Albany Post Road with Riverdale Avenue (now the Henry

Hudson Parkway). The southern branch continued along the southwestern side of the pond and connected to Delafield Lane, a narrow road in the vicinity of modern West 246th Street. The orientation of the paths as depicted on the 1873 topographic map indicates that the northern path passed through the project site.

The 1879 Bromley atlas does not depict any structures near the project site, nor does it depict the pond, although the dirt paths seen on the previous map are shown. The map also depicts a network of proposed streets throughout the Delafield Estate, including one through the location of the project site. These roads were laid out by Frederick Law Olmsted, who helped to design Central Park, and James R. Croes as part of a survey of the 23rd and 24th Wards that was completed in 1876 (LPC 2006). Whereas streets in Manhattan had been designed in a uniform grid, the roads laid out by Olmsted and Croes were winding in order to take advantage of the area's natural topography and to give the area a more suburban feel relative to other parts of the city (ibid). The 1885 Robinson-Pidgeon map is nearly identical, and indicates that the new streets were proposed and not constructed. An updated Bromley atlas published in 1893 is the same, although it once again depicts the pond seen on earlier maps.

The portion of the borough located to the east of the Bronx River was annexed to New York City in 1895 and in 1898 that area was combined with the 23rd and 24th Wards and was named the Borough of the Bronx. A topographic map of the Bronx produced by the New York Topographical Bureau in 1895 depicts a greater number of proposed streets within and surrounding the project site than was seen previously. The map depicts the dirt paths from the Delafield estate, the previously depicted proposed roads, which may have been partially constructed by that time, and a new set of proposed streets in a neat grid. The proposed line of Fieldston Road is depicted on the map as a straight north-south line that would have passed through the project site. An 1896 Sanborn map does not depict these new streets, although it does indicate that Fieldston Road had been constructed in its current configuration. No structures were depicted in or near the project site on that map. Subsequent maps including the 1900 Sanborn and 1907 Mueller maps also depict the new set of proposed streets but do not indicate that any roads had been constructed in or near the project site, including Fieldston Road.¹

D. THE DEVELOPMENT OF THE FIELDSTON NEIGHBORHOOD IN THE 20TH CENTURY

After the Interborough Rapid Transit lines connected the Bronx and Manhattan in 1904, the population of the Bronx continued to grow. With the growth of the borough, development slowly began to increase in the Bronx, beginning with the construction of new streets. The advent of the automobile brought about a need for new networks of highways and parkways that were constructed throughout the Bronx during the 20th century.

During the early 20th century, the Delafield heirs, who continued to own the property, invested in the construction of streets and installation of utilities in advance of the area's development for residential purposes (LPC 2006). The sale of individual lots and the construction of homes began in the early 1910s. The 1914 Sanborn map depicts the streets in their current configurations and shows that the Delafield property had been divided into lots, although no structures were present on the project site at that time. The home at 4680 Fieldston Road was constructed in 1918 and was originally owned and occupied by H.E. Freeman (ibid).

¹ An atlas of the Bronx published by Hugo Ullitz in 1901 depicts both the proposed and constructed streets, although it suggests that the stretch of Fieldston Road on which the project site fronts—labeled “New Fieldston Road” on this map—was the only portion of the road that had not yet been completed. The map also depicts a small lot in the approximate location of the existing structure at 4680 Fieldston Road that is labeled “Building Under Construction.” However, this map appears to have been updated with paste-over edits at a later date and may not reflect the site as it existed in 1901.

The home is depicted on the 1923 (revised 1926), 1928, and 1938 Bromley atlases of the Bronx and the 1951 Sanborn map, which do not depict any other structures or other developments on the project site.

A. SENSITIVITY ASSESSMENT

As part of the background research for this Phase 1A Archaeological Documentary Study, various primary and secondary resources were analyzed, including historic maps and atlases, historic photographs and lithographs, newspaper articles, and local histories. The information provided by these sources was analyzed to reach the following conclusions.

DISTURBANCE ASSESSMENT

Little disturbance has been documented within the project site and all documented disturbance appears to be associated with the construction of the existing dwelling at 4680 Fieldston Road and its associated driveways, etc. Landscaping may have impacted some of the natural soil levels which may be thin because of the shallow bedrock in this area.

PRECONTACT SENSITIVITY ASSESSMENT

The precontact sensitivity of a project site is generally evaluated by the presence of high, level ground (not exceeding 12 to 15 percent slopes), fresh water courses, well-drained soils, and close proximity to previously identified precontact archaeological sites (NYAC 1994). The project site is situated on the Riverdale Ridge, the highest area in the Bronx. While portions of the site are very steep with slopes of 15 to 25 percent or more, other areas are level. The topography of the area does not appear to have changed significantly since the late-19th century, before the site was developed.

While the project site is not in close proximity to natural sources of fresh water (it is unclear if the pond adjacent to the project site is natural or if it was first excavated as part of the Delafield Estate), numerous precontact archaeological sites have been identified within one mile of the project site, including one that was potentially within or immediately adjacent to the site. Because of the documented Native American activity in the vicinity of the project site, it is extremely likely that there was some precontact occupation of the project site, most likely as a campsite, shell midden, or quarrying location. The construction of the dwelling at 4680 Fieldston Road and its driveway would have resulted in the disturbance of any precontact archaeological resources in those areas. In addition, Lot 2175 on the northern portion of the site and areas along the southern and eastern boundaries of the site feature steep slopes (15 to 25 percent or more) and exposed rock outcrops; it is not likely that there are buried archaeological resources in those locations.

Therefore, the portions of the project site with slopes less than 15 percent and to the south of the existing dwelling are determined to be highly sensitive for precontact archaeological resources. The steeply sloping areas surrounding rock outcrops are determined to have low to moderate sensitivity for precontact resources associated with quarrying activities; these resources would be expected to be found on or close to the ground surface. The location of the existing dwelling and the adjacent driveway are determined to have no sensitivity for precontact archaeological resources.

HISTORIC SENSITIVITY ASSESSMENT

The project site was undeveloped until the existing structure at 4680 Fieldston Road was constructed in 1918. The existing dwelling was built after the installation of water and sewer lines. While the project site was included within the historic Delafield estate and may have been crossed by a dirt road associated with that estate, no documented activity occurred within the project site during the majority of the historic period. Therefore, the project site is determined to have low sensitivity for archaeological resources dating to the historic period.

B. RECOMMENDATIONS

Phase 1B Archaeological Testing is recommended for the portions of the project site that were determined to have high sensitivity for precontact archaeological resources. In addition, a surface survey is recommended for the areas surrounding the rock outcrops to identify potential quarrying activities. These locations are depicted in on **Figure 8**.

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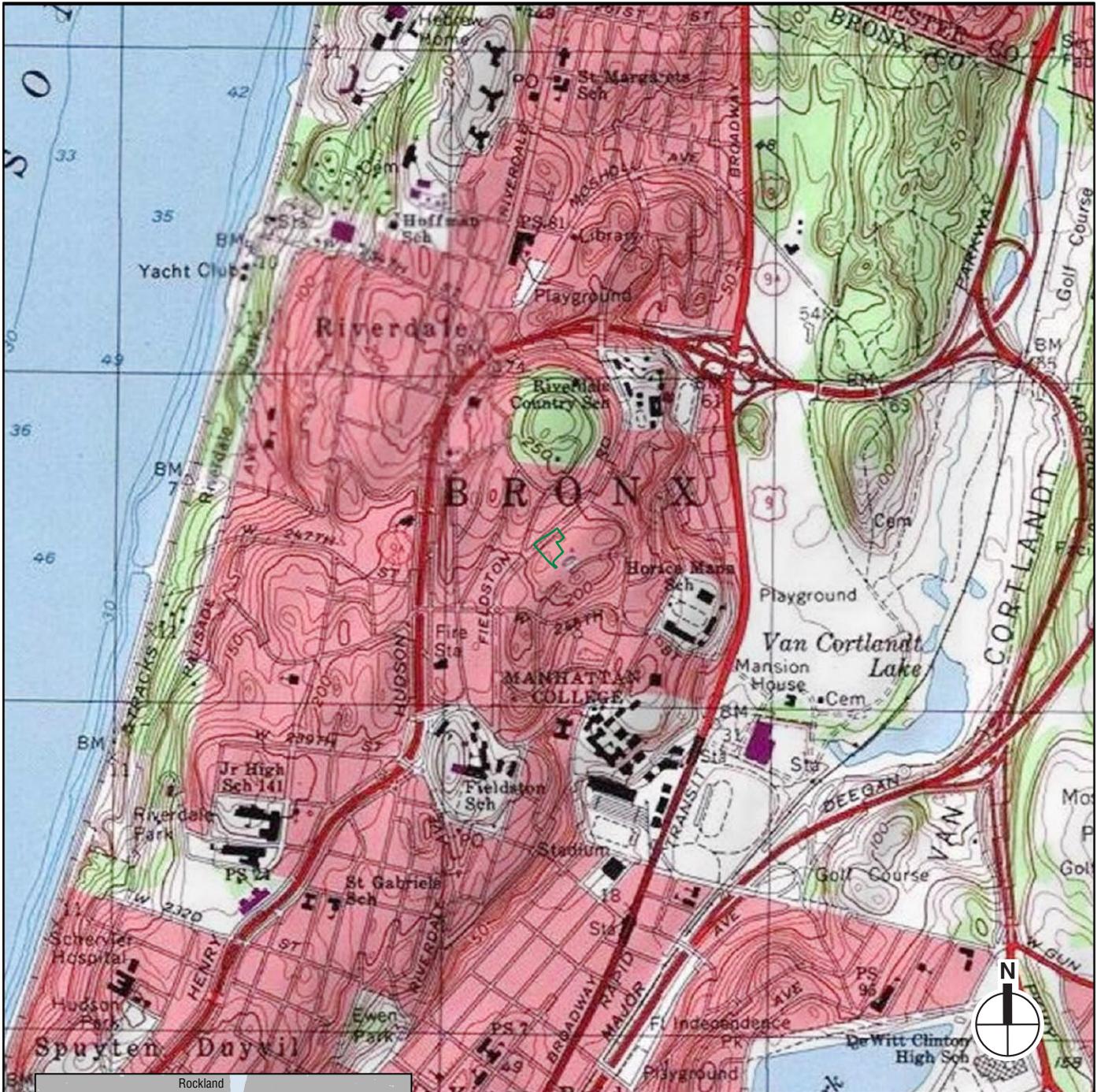
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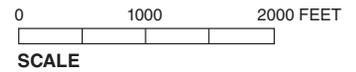
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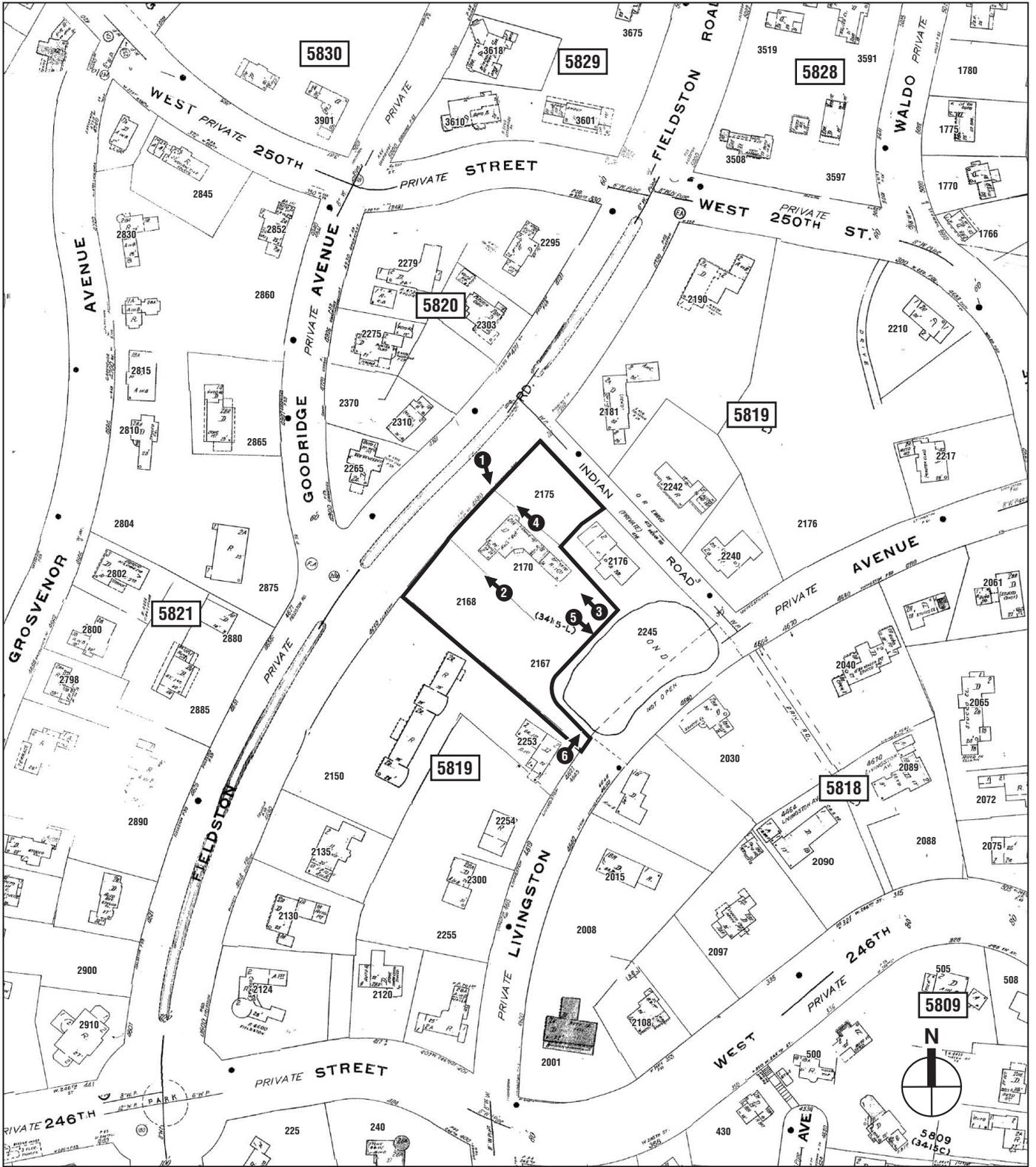


AREA OF DETAIL

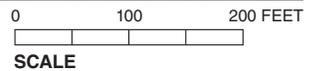
Approximate coordinates of Project Site:
 40° 53'43"N 73° 54'13"W

 Project Site





-  Project Site Boundary
-  Block Number
-  Lot Number
-  Photograph Location and Direction





— Project Site Boundary

0 200 500 FEET
SCALE

Topographic Map made from Surveys by the
Commissioners of the Department of Public Parks, 1873
Figure 3



The house at 4680 Fieldston Road; note the steep slope of the front yard leading down to the street 1



The existing driveway to the south of the house 2



Looking west at the rear of the existing home at 4680 Fieldston Road showing the property's landscaping and variable topography **3**



The northern facade of the house, showing higher elevations and rock outcrops within Lot 2175 to the north (at the right of the photo) **4**



A level area to the east of the house; Delafield Pond is in the background 5



The existing pond to the east of the project site 6



- Project Site Boundary
-  Areas of Precontact Archaeological Sensitivity; Phase 1B testing Recommended
-  Areas with Steep Slopes and/or Rock Outcrops; Surface Survey Recommended