

USF
2512X
HP 1995

STAGE 1A

ARCHAEOLOGICAL ASSESSMENT

RUSSIAN FEDERATION HOUSING

RIVERDALE, BRONX, NEW YORK

355 W 255 St

B 5846 L 1605

71

1995

HISTORICAL
PERSPECTIVES INC.



STAGE 1A

ARCHAEOLOGICAL ASSESSMENT

RUSSIAN FEDERATION HOUSING

RIVERDALE, BRONX, NEW YORK

Prepared For:

GLS International
43 East 19th Street
New York, NY 10003

Prepared By:

Historical Perspectives
P.O.Box 3037
Westport, CT 06880

June 28, 1995

Stage 1A Archaeological Assessment
Russian Federation Housing
Riverdale, Bronx, New York

Authors:

Betsy Kearns, S.O.P.A.
Cece Saunders, S.O.P.A.
Faline Schneiderman-Fox, S.O.P.A.

TABLE OF CONTENTS

I. INTRODUCTION.....I-1

II. RESEARCH METHODS AND GOALS.....II-1

III. ENVIRONMENTAL SETTING AND CURRENT CONDITIONS.....III-1

IV. CONTEXTUAL BACKGROUND.....IV-1

 A. PREHISTORIC BACKGROUND.....IV-1

 B. HISTORICAL BACKGROUND.....IV-18

V. DISCUSSION OF ARCHAEOLOGICAL SENSITIVITY.....V-1

 A. PREHISTORIC RESOURCES.....V-1

 B. HISTORICAL RESOURCES.....V-4

VI. CONCLUSIONS AND RECOMMENDATIONS.....VI-1

BIBLIOGRAPHY

FIGURES

PHOTOGRAPHS

APPENDIX

- A. Correspondence from the New York State Museum
- B. Correspondence from the New York State Office of Parks, Recreation, and Historic Preservation.

LIST OF FIGURES

1. U.S.G.S. Topographic Map Yonkers, N.Y. - N.J Quad
2. Project Site Boundaries
3. Geological Map: Schuberth 1968
4. Indian Trails Map
5. Historical Sketch Map 1645 - 1783
6. Topographical Atlas of the City of New York - Viele 1874
7. Atlas of the City of New York, 24th Ward - Bromley 1879
8. Composite Map - 1900 Bromley Atlas and Project Site Boundaries
9. Prehistoric Sensitivity Areas

I. INTRODUCTION

The Russian Federation proposes to build new housing on a tract of land they now occupy in Riverdale, Bronx County, New York. The seven and a half acre tract, an irregularly shaped parcel situated between Mosholu and Fieldston Avenues and West 255th Street, is currently partially developed (Figures 1, 2). The condition of the extant 20 story community facility and residential tower, and the nature of the occupants, necessitates that new housing be constructed on the site before the old structure is demolished. New housing would consist of a mid-rise community facility and residential building. The proposed construction plans require permitting by the City of New York, and thus plans underwent the City Environmental Quality Review (CEQR) process. During this review, the New York City Landmarks Preservation Commission (NYCLPC) determined that this parcel may possess archaeological resources and would require further investigations in the form of a Stage 1A Archaeological Assessment.

The southern portion of the parcel, closest to West 255th Street, now possesses a residential tower built in the early 1970s. There is also an in-ground swimming pool, playground, tennis court, and picnic pavilion on the site (Figure 2). New construction will primarily be centered on the southern portion of the parcel, in the approximate location of existing play areas and the pool. The proposed new construction will extend about 50 feet north of the in-ground pool. Also on the northern section of the property, improvements would include clearing underbrush, removing the existing tennis courts and picnic pavilion, performing limited landscaping, and installing flood lights for safety purposes.

The NYCLPC reported that a geologist active in locating lithic quarrying sites in the Northeast has identified the Russian Federation parcel as a possible prehistoric quartz quarry. Observed quartz veins in the exposed gneissic bedrock on the site, and possible associated hammerstones and lithic debris, provided the basis for this contention. In response to the concerns of the NYCLPC, and to meet the requirements of the city's CEQR process, this Stage 1A assessment is designed to accomplish several tasks toward addressing the issue of archaeological sensitivity. First, it is designed to determine the potential for prehistoric and/or historical period archaeological resources to have been deposited on site, and more specifically to determine if prehistoric quartz quarrying may have occurred at the site. Second, it is designed to address the issue of disturbance to any potential archaeological resources. This is accomplished through conducting background research aimed at establishing the continuous land use history of the site. Specific research tasks are outlined in the next chapter.

Documentary research and a walkover survey revealed that the project site has experienced extensive impacts on its southern

section, with the construction of the extant residential tower and in-ground swimming pool, and few known impacts to its northern section. Therefore, for ease of discussion, the site has been divided into two sections based on the distinction of prior ground disturbance (Figure 2). The southern section, which extends from the northern boundary of the in-ground pool south to West 255th Street, will experience the greatest degree of impacts by the proposed mid-rise community facility and residential tower. The northern section, north of the extant in-ground swimming pool, will experience impacts from proposed construction at its southern end. The bulk of the impacts to the northern section will occur from installing lighting and improving the landscape, which is expected to occur at a later date.

The literature search and the walkover survey suggest that there is a high probability that prehistoric quarrying and/or lithic processing occurred on the site. On the northern section of the site, the degree of disturbance to the possible prehistoric component superficially appears only minimal. The amount of disturbance to the northern section of the property is unknown, but the presence of surface lithic scatters observed during the walkover survey suggests that it may be slight. A comprehensive subsurface testing strategy, requiring planning and implementation, would be required before construction is to occur, and landscaping and lighting is installed. Extensive subsurface testing is recommended, however a specific field testing strategy will be formulated at a later date upon the acceptance of this report by the review agencies.

If there was once a prehistoric component on the southern section of the site, evidence strongly suggests that it has been obliterated by twentieth century construction. However, there may be a few small pockets of undisturbed land north and west of the extant residential tower which may have prehistoric cultural material. Limited field testing is required around existing structures to confirm this conclusion, and should be completed upon acceptance of this report by the review agencies. In addition, a historical dwelling, dating from the 1870s to about 1900, was once situated on the southern part of parcel, suggesting the possibility of a historical component. However, further research clearly showed that the site of the house and its associated yard was severely impacted in the 1970s with the construction of the existing 20 story residential structure, and any remains would lack the integrity necessary to fulfill National Register Nomination criteria.

II. RESEARCH METHODS AND GOALS

Background research entailed a number of tasks, each contributing to an understanding of prehistoric and historic land use within and surrounding the project site. The goal of the research was to provide information on the type and scope of potential cultural resources, and the degree and nature of previous subsurface disturbance. In order to accomplish the goals, several phases of research were performed including documentary research, cartographic analysis, site files review, informant interviews, and a field visit.

Documentary Research. Primary and secondary source material was researched in order to document the prior usage of the parcel. These resources included pertinent archaeological reports as well as local and regional source material for data on prehistoric and historical settlements. Particularly valuable were ethnographic accounts and prehistoric archaeological works by authors such as Reginald Bolton and Robert Grumet, and books by Bronx historians Stephen Jenkins, William Tieck, and John McNamara. Site reports from recent archaeological investigations in the Riverdale area proved essential for assessing potential archaeological sensitivity. No building records for the site were available from the Buildings Department as they were all removed in the 1970s for security reasons.

Cartographic Analysis. Historic maps were obtained from the New York Public Library in Manhattan and the Bronx Historical Society, and studied for early land use, topography, and historical events; atlases were studied for more modern land use, topography, and subsurface disturbance episodes.

Site Files Review. Site file reviews were conducted at the New York State Office of Parks, Recreation and Historic Preservation (SHPO), the New York City Landmarks Preservation Commission (NYCLPC), and the New York State Museum Education Department (NYSM), to determine if prehistoric or historic materials had previously been reported within or in the vicinity of the project area. The State Museum provided an assessment of archaeological sensitivity based on previously developed models (See Appendix A).

Informant Interviews. Local historians, archaeologists, and residents were sought to provide information otherwise not available on the land use history of the site. Prehistoric lithic and quarry specialists throughout the Northeast were interviewed to gain information on comparative sites. These people proved invaluable towards documenting more recent construction episodes, assessing potential sensitivity, and formulating a meaningful research framework.

Field Visit. A field visit was conducted in April, 1995 at which time photographs were taken of the current conditions of the project parcel. Obvious signs of disturbance and previous land use were recorded. Surface finds were recorded, and the locations of quartz veins were noted.

III. ENVIRONMENTAL SETTING AND CURRENT CONDITIONS

A. ENVIRONMENTAL SETTING

The project site lies in 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 (Schuberth 1968:74). Glaciers advanced and receded over the area at least three times during the last million years, in part forming the landscape we see today. During the most recent period of glacial movement, the Wisconsin episode, the Bronx was covered by ice. Abrasive glacial movement left discrete marks, or striations, in the exposed bedrock. As glaciers receded, morainal heaps and alluvial coverings were left to hide or bury the underlying gneissic contours. Glacial erratics were also deposited throughout the region as ice melted and dropped its load.

When the glaciers finally receded, a morainal dam was created at the southern terminus of what is now the Hudson River. This caused the creation of glacial Lake Hudson which covered most of the Hudson Valley below the Highlands, and may have once risen to inundate the project site. When the water level receded, the site and surrounding area was colonized by arctic and tundra like plants which subsequently were replaced by a coniferous and deciduous forest. Over the course of the last 12,000 years the fluctuating floral and faunal communities eventually stabilized, leaving the Bronx covered with oak, hemlock, beech, and chestnut trees characterized as the climax forest.

Geologically, the bedrock of the Manhattan Prong which characterizes the area is made of gneiss, schist, and quartz, which form the hills, and easily eroded marble, which forms the valleys. The major rivers draining the area, the Hudson, East and Harlem, are each underlain by marble. The rocks of the Manhattan Prong were deformed and metamorphosed during the Taconian Orogeny, about 450 million years ago (Isachsen 1991:45). The oldest rock in the Manhattan Prong is Fordham Gneiss, a rock of variable composition. During the latest Proterozoic the Manhattan Prong underwent rifting, and normal faulting occurred.

Situated on the Riverdale Ridge of the Manhattan Prong, the project site is underlain by volcanic rock including Fordham Gneiss which exhibits a dark gray to black banded appearance (Figure 3). Fractures in the country rock (country rock are those rocks established before a geological event like an intrusion), caused by thrusting, were infilled with a variety of materials including quartz. Quartz veins typically have a northwest to southeast trend, possessing "cross joints, striations and foliations along the contact with the gneiss, and have a slabby or blocky outcrop appearance" (LaPorta 1993:np). Local quartz varies in color from clear white to gray-white, to opaque white and pale pink. Gneiss

outcrops and veins of quartz can be observed on the Russian Federation property.

Before the nineteenth century and subsequent development, the project parcel appeared hilly and wooded (Galt and Hoy 1879). Several blocks to the south at about West 253rd Street, an east-west draining stream ran from what is now Mosholu Avenue east into Tibbetts Brook or Van Cortlandt Lake (Dripps 1853). A second stream ran parallel to this but further north in the vicinity of West 259th Street. The Hudson River is situated within a mile west of the project site, and Spuyten Duyvil Creek is about two miles to the south. The site is positioned in good proximity to both aquatic and upland resources.

B. CURRENT CONDITIONS

The irregularly shaped Russian Federation parcel is bounded by West 255th Street on the south, Mosholu Avenue on the southwest, and privately owned lots on the northwest, north and east. Two small spurs jut out to the north and west of the main body of the parcel, extending down to Fieldston Avenue which curves around the property (Figure 2). Currently the parcel is partially developed. For simplicity, the site will be discussed in two sections, the southern or more developed section which will be greatly impacted by proposed construction, and the northern or less developed section which will experience less disturbance as per current plans. The division is shown on Figure 2.

Southern Section: The southern part of the property (Figure 2) now possesses a high-rise residential tower, an in-ground concrete pool and decking, parking areas, landscaped yards, concrete entry stairs and walkways, and two recreational areas with picnic tables, swings, and other play equipment (Photographs A-E). Extensive earth moving was required to develop this section of the steep and rocky site. Grading was needed to form the paved parking lots, and the play areas, which are now covered with sand which was trucked in. There are also a few grass covered lawn areas which appear to have been landscaped. An exposed west facing bedrock precipice is situated directly northwest of the existing 20 story structure (Photograph F), and rocks and rubble from 1970s construction are situated to the southwest of the parking areas.

Northern Section: The northern section of the property (Figure 2) is relatively undeveloped (Photographs G, H,). In the northwestern-most corner of the site there is an old tennis court and an open-air picnic pavilion with a poured concrete floor and timber framed roofing, typical of 1950s construction (Photograph I). These are now unused and plans call for their removal. The remainder of the northern section of the property undulates, with steep, bedrock outcrops and lightly wooded declivities. Dead trees

and underbrush are currently being cleared from this area. There is little grass or natural ground cover, rather, loose soil is exposed because of intensive use. This section is clearly used by the youths inhabiting the site who hike over it frequently as evidenced by the erosion. Bedrock outcrops scattered throughout this part of the site exhibit bands of a milky white quartz (Photographs J, K).

IV. CONTEXTUAL OVERVIEW

In order to fully understand use of the project site through time it is necessary to develop a historical context for the Riverdale neighborhood and the Russian Federation site specifically. As defined by the National Park Service,

historic contexts provide a framework for the identification, evaluation, designation, and treatment of cultural resources associated with particular themes, areas, and time periods. Historic context-based planning permits recognition of individual properties as parts of larger systems. Historic contexts also help managers and others evaluate properties within their proper levels of significance. As such, they provide both a systematized basis for comparison and a comprehensive frame of reference. In so doing, historic contexts provide cultural resource managers with a guide for rational decision-making.

Grumet 1990:18

The following discussions establish a contextual framework for both the prehistoric and historic eras pertinent to the project site.

A. PREHISTORIC BACKGROUND

1. Cultural Chronology

The precise prehistoric cultural chronology for the metropolitan New York area is enigmatic, at best. Although amateur and professional archaeologists have been investigating in the region for the last century, poor preservation of materials, poorly defined stratigraphic relationships of components, and natural and cultural destruction serve to thwart the interpretation of sites that are identified. Sites that have been professionally investigated within the last twenty years have provided greater insight into prehistoric cultural practices, and new sites are slowly adding pivotal information to the data base. As technological methods of excavation and analysis are being advanced, meaningful research issues are constantly being refined. At this point in time, the accepted cultural chronology established for the Bronx is largely based upon research conducted throughout the Northeast and, more specifically, the Hudson Valley region.

Archaeologists and historians gain their knowledge and understanding of Native Americans in the lower Hudson Valley and metropolitan New York area from three sources: ethnographic reports, Native American artifact collections, and previous archaeological investigations. Based on data from these sources, a prehistoric cultural chronology has been devised for the Riverdale area. Prehistoric periods are traditionally divided into

the Paleo-Indian, Archaic, Transitional, and Woodland stages, the Archaic and Woodland usually being subdivided into Early, Middle, and Late substages. Artifacts, settlement, subsistence, and cultural systems changed through time with each of these stages.

Prehistorians currently believe that pre-European cultural groups inhabiting the region practiced a settlement and subsistence pattern of seasonal rounds exploiting a diverse array of resources. Fresh water and coastal resources would have been abundant and easily accessed in the Riverdale area, as would have upland resources. The types of sites found in the surrounding region, as reported by archaeologists, ethnographers, and amateur collectors, reflect the seasonal use of a diverse resource base and include villages, burials, smaller campsites, and temporary hunting stations.

Archaeological data strongly indicates that Native Americans arrived in the Northeast following the last glacial period, although conflicting data suggests arrival may in fact pre-date glaciation. The exact date of entry remains uncertain, although the post-glacial theory is more widely accepted. In the metropolitan New York region, no artifacts have been found predating this glacial period.

During the Wisconsin episode of the Pleistocene in the Northeast, ice reached its maximum advance between 18,000 and 16,000 years ago. After this period glaciers slowly retreated north, with glacial gravel deposited along the melting margin forming moraines. By 13,000 years ago, ice had receded north exposing the surface of the lower Hudson Valley and Westchester County for repopulation by flora and fauna. As ice melted, glacial lakes formed, eventually filling with sediments and forming swamps.

Paleo-Indian Period. Between 14,000 and 12,000 years ago the Northeast was generally characterized as open woodland, rich in spruce. Pollen analysis shows that the southeastern New York region was comprised of a mixed coniferous-hardwood forest following deglaciation (Salwen 1975:43). The Paleo-Indian period still represents the earliest documented human occupation in the Northeast, dating between about 12,000 to 9,500 years B.P. (Before Present). Artifacts attributed to this period from sites throughout the Northeast include diagnostic Clovis-type fluted projectile points. Research has led to the postulation that small bands of hunters nomadically roamed large territories, relying predominantly on post-pleistocene mega-fauna.

Alternative hypotheses of Paleo-Indian subsistence and settlement, based on research in eastern New York, propose that Paleo-Indians utilized a wide array of resources and had a restricted territory in which they operated (Eisenberg 1978:139). Additional research continues to assist in developing and refining models of subsistence and settlement. Sites that have been

identified tend to be located in three specific geographic locales: on lowland waterside camps near coniferous swamps and near larger rivers; on upland bluffs and on ridge tops in areas dominated by deciduous trees (Ibid.:138).

In the metropolitan New York region, only one Paleo-Indian site has been found and excavated. The Port Mobil site on Staten Island yielded Paleo-Indian and more recent remains suggesting the site was periodically reoccupied. Artifacts were found on a well drained terrace in proximity to a swampy shoreline (Ritchie 1980:xviii).

Archaic Period. The Archaic period, lasting about 6,500 years, has been subdivided into the Early, Middle, Late, and Terminal - or Transitional - periods. During this period the fluctuating environment gave way to a gradual warming trend allowing newly available flora and fauna to gain a foothold. This newly diverse resource base supported hunting, fishing, and gathering. The broader and more reliable resources may have facilitated regional population growth. Seasonal movements based on the exploitation of specialized resources became well established, which may have encouraged territoriality. Tool kits expanded in response to diverse resource utilization.

Sites from this period include rockshelters, open woodland camps, and areas located on high bluffs along the Hudson River. By the Late Archaic period, sea levels were much as they are today, and sites of this period would have less of a chance of being inundated. Native American populations in the Hudson River Valley grew, with abundant shell middens left along its shores dating to this period attesting to this growth (Brennan 1974:87; Schaper 1993:32).

The Hudson Valley shell middens have provided a lot of insight into the Archaic peoples in this region. Shell processing areas within the middens suggest that oyster meat was processed on site but taken elsewhere for consumption or exchange (Schaper 1993:32). Nearby in Riverdale Park, about a mile southwest of the project site, recent excavations revealed a Late Archaic component within a series of prehistoric sites. In addition to abundant oyster shells and fire cracked rocks, the artifact assemblage included diagnostic projectile points, scrapers, bifaces, utilized flakes, and lithic debitage (DeCarlo 1990:5). The artifact assemblage and faunal material suggested this site was used for shellfish procurement from the Hudson River as well as hunting in the interior uplands (Lenik 1992:24).

Several miles southeast of the project site, at the head of Pugsley's Creek and about one-quarter of a mile from the shore of Long Island Sound, a Late Archaic lithic workshop was excavated in the late 1980s (Cohn and Apuzzo 1988:5). Although there had been some disturbance to the site by collectors, nineteenth century

development, and secondary tree growth, excavations produced 40 projectile points and numerous tools, 63 percent of which were made from grayish-black flints originating in the Mid-Hudson region.

Transitional Archaic Period. Transitional Archaic groups ground and polished soapstone into bowls before pottery was introduced in the subsequent Woodland Period. Three cultural traditions persisted in the Northeast during the Transitional Archaic period (4,000-3,000 years B.P.). These include a continuation of the Laurentian tradition represented by the Vergennes phase and the Vosburg complex; the small stemmed tradition represented by the Sylvan Lake complex; and the Susquehanna tradition represented by the Snook Kill and Orient phases (Funk 1976:250). Although Funk defines these three separate traditions as persisting in the Hudson River Valley, Snow reassesses the distribution of Transitional Archaic points and suggests that the Susquehanna tradition dominated the first half of the period, marked by Snook Kill, Perkiomen and Susquehanna Broad points, while the latter half of the period was dominated by the Orient complex characterized by the Orient Fishtail Point (Snow 1980:237).

The precise sequence of Transitional Archaic traditions, complexes, and phases is a continued source of debate. It is postulated that these traditions, differentiated by tool kits and projectile point types, represent unique settlement and subsistence systems, each utilizing specific resource niches. Whether these three distinct traditions, Laurentian, small stemmed, and Susquehanna, represent the migration of new people into the area or the spread of technologically new ideas has yet to be determined.

The majority of sites encountered in the region thus far existed along the Hudson River and its major tributaries. This appears to result from high site visibility along major river drainages as opposed to the actual lack of sites in remote settings, since continued research from interior areas has produced sites of this period. Orient Points have been radiocarbon-dated to approximately 4,000 to 2,800 years B.P. in the Hudson River Valley.

Woodland Period. The Woodland period in the Northeast lasted from about 3,000 to 500 years ago. Again divided into three sub-categories, this period consists of the Early, Middle and Late sub-periods. Ceramics are first observed from Woodland period sites. Crude, undecorated, Vinette 1 pottery was often tempered with steatite. Simply designed pottery of this type has largely been recovered from sites on major waterways and tributaries. Early Woodland, Middlesex phase sites are commonly discovered during sand and gravel mining operations near a lake or river, as sites tend to be located on well drained knolls adjacent to fresh water (Ritchie 1980:201). Fish runs in rivers provided a stable and reliable resource, and fish weirs were utilized in the Hudson and smaller

tributary rivers for the recovery of large quantities of anadromous fish (Brumbach 1986:35).

As this period progressed, regional variability in ceramic styles is seen, perhaps representing the wider establishment of territorial boundaries and/or the need to communicate cultural affiliations. Subsistence and settlement patterns appear to have included semi-permanent settlements with task-specific locations utilized for the purpose of exploiting target resources. Ritchie and Funk (1973:349) identify several settlement types including recurringly-occupied small and semi-permanent large camps, small temporary camps, cemeteries, burial mounds, and workshops.

During this period, maize was introduced from Meso-America and was slowly adopted into the local diet. The nature and extent of maize use prehistorically has been much debated by archaeologists working in the Northeast (Ceci 1979:72; Braun 1987; Woods 1987; McBride and Dewar 1987; Dimmick 1994:235), and it is increasingly felt that pre-maize indigenous flora was deliberately domesticated and cultivated. Thus the introduction of maize would have done little towards affecting Native subsistence practices, already reliant on cultigens, that may have been in place.

Concurrent with the shift to more stable settlement, ceramics became technologically more advanced with vessel walls thinning and overall shape rounding. Netmarking pots was prevalent during this period, and collars and bodies were increasingly ornamented. Settlement patterns reflect a restricted wandering system, excluding large base camps and semi-permanent villages. However, general trends of the period show a move toward a settlement system incorporating semi-permanent villages. Inland rockshelter sites, coastal and island sites, inland sites on major drainages, and campsites located near swamps and along streams are still common. An annual subsistence round of seasonal movements between riverine, coastal, and inland wintering sites may have existed. The semi-permanent settlement pattern may have led to competition and defense of arable land, contributing to regional territoriality (Mulholland 1988:163).

Archaeologist Lenik points out that recent archaeological investigations in the metropolitan New York area have done little to shed light on these issues, since large Woodland Period villages have not been encountered recently (Lenik 1992:27). A comparison of artifact assemblages and environmental settings led him to conclude that "although Woodland component sites are slightly more widely distributed over the landscape, no significant distinctions are evident between Archaic and Woodland Period site locations" (Ibid.). Previous assumptions about site locations in New York City (ie. Smith 1950:101) were challenged with new data that has shown that sites were located on a broader range of geomorphic surfaces than previously hypothesized (Lenik 1992:27).

What we do know about this period in the region is largely reliant upon archaeological work conducted in the early twentieth century on Staten Island. At Skinner's Bowman's Brook site, a large village with 50 to 100 pit features, dog burials, pottery, and lithic and faunal material was recovered. This habitation site had five discernable levels of occupation dating to the Archaic through Contact periods (Skinner 1909:5-9), and was one of only three that have yielded undisputed evidence of maize specimens from either refuse pits or an apparent grave in coastal New York (Ceci 1979:47). In addition to artifactual material, human skeletal remains were found on the south side of a knoll, below three to four feet of sand.

At Clason's Point in the Bronx on the East River, many miles southwest of the project site, archaeologist Skinner also excavated a Siwanoy Indian village in 1918, unearthing storage and refuse pits, potsherds, and tools dating to approximately A.D. 1300, the Late Woodland period. Sites of the resultant named Clasons Point phase in southern New York tend to be located "on the second rise of ground above high-water level on tidal inlets and they approximate an acre in extent" (Ritchie 1980:271). Another multicomponent site located far southwest of the project site at the tip of Castle Hill peninsula was designated as a wampum factory. The site was excavated by Alanson Skinner in the early twentieth century. Excavations produced shell, pottery, drills, tool fragments, and points representing the Early Archaic through Early Woodland periods.

Contact Period. The Contact Period between 500 to 300 years B.P. is characterized by initial interactions between Native Americans and Europeans. Native settlement patterns at the beginning of this period incorporated seasonal hunting and gathering. Semi-permanent villages or hamlets, situated near planting fields, contained oval and round, bark and mat-covered structures. Large subsurface pits were located nearby for storing dried meat, fish, and corn, and eventually were filled with trash. Fields were commonly burned at the end of the planting season to encourage floral and faunal repopulating. Villages centered on horticultural land were moved every ten or twenty years as soil fertility, firewood, and nearby game resources were depleted (Salwen 1975:57). Although early historic accounts suggest the presence of stockaded villages or forts in southern New York, archaeological data indicate they did not exist before the middle of the seventeenth century (Ritchie and Funk 1973:368).

At the time of European contact, a Native American group known as the Wiechquaeskecks, a Munsee-speaking group of Lenapes, or Delawares, occupied the Bronx (Goddard 1978:214; Grumet 1981:59-60). The exact date of first contact between Native Americans and Europeans in the lower Hudson Valley is in question. Some speculate that contact may have occurred in the early sixteenth century as some accounts suggest that Spaniards had entered the

region by this time. Contact had definitely occurred by 1524 when Giovanni da Verrazzano entered New York Bay for a brief period (Kraft 1991:200). Contact was further amplified in the early seventeenth century when Henry Hudson sailed up the river now bearing his name and docked near the present day Yonkers, north of the project site (Ibid.:203).

Early traders bartered with the Native population, first concentrating along the shores of the Hudson River, and later moving inland. As non-Native cultural goods and practices were introduced, Native settlement and subsistence patterns were altered. Shell bead and wampum production was increased and furs were collected by Native Americans for exchange. Despite the many ethnohistoric accounts of trade, the archaeological record in the region bears little evidence of this (Kraft 1991:213). Early contact was predominantly peaceful, however large scale conflicts between Native Americans and Europeans ensued after 1638 with the arrival of Governor Willem Kieft and his hard-line policy toward local Indians. Conflicts and disease decimated local populations and forced native Algonquian bands to relinquish independence, disperse, and fall under Dutch control.

Europeans quickly established themselves in southeastern New York, settling on productive land along the shores of the Hudson River, and relying on the river to facilitate trade. In 1644 following the peaceful English takeover of Dutch colonies, the transformation of New Netherland from a Dutch to an English province ensued. Large land grants, previously bestowed by the Dutch during the seventeenth century, were usually honored by the English. Dutch, French, and English colonists originally settling along the Hudson, moved up its tributary river valleys in search of new land to settle and farm. The fertile river valleys they found provided soil ideal for cultivation and abundant water routes for transportation and powering mills. Inland groups of Native Americans were soon affected.

2. Known Aboriginal Sites in the Vicinity

The earliest documented evidence for aboriginal habitation in the vicinity is the Hendricks Map of 1616, which shows the Wikagyl (Wiechquaesgeek) Indians inhabiting the southern New York mainland just north of the Manhattes Indians on Manhattan Island. The Wiechquaesgeek are identified as the group of Indians living in northern Manhattan, Bronx County, and southern Westchester County in a number of seventeenth century Dutch and English manuscripts, deeds, treaties, and maps (Bolton 1934:128; Grumet 1981:59-60). Documented nearby settlements include:

- (1) Shorakapkok: near 230th Street and Broadway, twenty five blocks south of the project site (Tieck 1968:58; Bolton 1920:307; Fluhr 1960:10; Jenkins 1912:21; McNamara 1984:497).
- (2) Nipinichsen: a palisaded fort variously located in Riverdale near 230th Street, also south of the project site (Bolton 1934:140; Fluhr 1960:10; Jenkins 1912:21; Skinner 1915:56)
- (3) Gowahasuasing: far south of the project site on Tibbett's Neck (Grumet 1981:69; Kearns and Kirkorian 1986:np).
- (4) Keskeskick: in Van Cortlandt Park within a half of a mile east of the project site. A prehistoric village site just west of the lake (Bolton 1934:141; Parker 1920:488).
- (5) Saperewack: located on the Harlem River in the Marble Hill area southwest of the project site (Grumet 1981:49, 68).

Reginald Bolton's "Indian Paths in the Great Metropolis" reported the closest known Native American trail as running along Broadway, several blocks east of the project site. The trail originated at the Harlem River and ran north into what is now Westchester County (Grumet 1981:9-10; Figure 4).

Twentieth century literature supports the ethnohistoric reports of aboriginal occupation. Some of these more recently discovered sites are probably part of the same camps and/or villages reported in the earlier sources.

- (1) Kingsbridge Post Office, 5517 Broadway near 230th Street: twenty five blocks south of the project site. The site yielded projectile points, pottery, shell, and a Native American burial. Shell and prehistoric artifacts were found at "the Wading Place" (Bolton 1934:135). Tieck suggests that this may represent the village of Shorakapkok (Tieck 1968:56).
- (2) 231st Street, Kingsbridge: south of the project site. A prehistoric hearth containing a clay pot was found (Bolton 1934:12).
- (3) Ewen Park at 231st Street: south of the project site. Shell and ashes were reported, and near the Henry Hudson monument, a food storage pit was uncovered (Bolton 1934:140).

- (4) Papparinem Island: a large site was found on high ground that was originally Papparinem Island near 231st Street, south of the project site. Smaller prehistoric temporary encampments were also reported for the Island area, but their exact location was not given (Bolton 1934:134, 139).
- (5) Fieldstone Road and 247th Street: Ten blocks south of the project site. A shell heap was reported (Beauchamp 1900:10).
- (6) Van Cortlandt Park: directly east of the project site (NYSM #2823 - village; #4057 - shell middens; #7727 - campsite). Early archaeologists reported several sites here including several burials and an extensive two to three foot thick shell midden covering fourteen acres in the southwestern section of the park. Shell pockets were found near the mansion, and the parade ground had once been used as Indian planting fields. Storage pits, pottery, and stone tools were reported throughout the park (Bolton 1934:141; Tieck 1968:3; Skinner 1915:55). More recent excavations uncovered yet another bell-shaped storage pit located between .3 and .5 meters below the current surface. Oyster, clam, ash, flint flakes and quartz projectile point fragments were found in the pit (Bankoff and Winter 1991:8-9). More recent testing has not identified any additional prehistoric cultural material (Will Roberts, Greenhouse Associates, personal communication to Cece Saunders, May 3, 1995).
- (7) Chapel Farm Site: two blocks south of the project site in Riverdale (NYSM #7729 - quarry workshop, NYSOPRHP A005-01-000791). A prehistoric quartz processing site was identified on the highest knoll in the Bronx (Lenik and Gibbs 1994:55).
- (8) Riverdale Park: several blocks west of the project site on the Hudson River in Riverdale (NYSM #4058 - shell midden, and NYSOPRHP A005-01-0068). Five prehistoric sites dating to the Late Archaic, and the Early and Late Woodland periods were identified along the Hudson River. Three were shell middens, two were tool repair sites. An uninvestigated extensive shell midden is thought to exist in the northern end of the park (DeCarlo 1990:4-5). Surrounding the Wave Hill estate itself, a small terrace in proximity to a known prehistoric site in Riverdale Park was also flagged as potentially sensitive (Baugher et al 1991:50).
- (9) Spuyten Duyvil Hill: about a mile south of the project site. Several small shell deposits were found here (Skinner 1915:56).

3. Site File Searches

A site files search conducted at the New York State Museum, which inventories only prehistoric sites, reported five sites within a mile of the Russian Federation Property. NYSM site numbers 2823, 4057, 4058, 7727, and 7729 are all located nearby (See Appendix A). These sites are all described above. No sites were identified on the project parcel itself.

The SHPO site file search reported two site numbers. Site A005-01-000971, the Chapel Farm Site, was located several blocks south of the current project site. Site A005-05-0068 was a flake scatter reported from Wave Hill (See Appendix B). Both of these areas are discussed above.

4. Overview of Lithic Processing, Quarrying, and Quartz Quarry-Workshops

Quartz, a leucocratic or light mineral, is the stable modification of silica at normal temperatures and is one of the most common minerals found. Quartz has little cleavage, making it a difficult lithic to work, and is hardly altered by weathering. Throughout the Northeast quartz lithic assemblages are common in the archaeological record, as it is abundantly available. Glacially deposited cobbles are widely dispersed and can typically be found almost anywhere in the Northeast, with little effort involved in procurement. Regardless, high quality quartz outcrops were occasionally sought. In the Hudson Valley's archaeological record, quartz appears more frequently in some prehistoric periods than in others (Funk 1976:205-302). A discussion of Lithic Processing and Quarrying is presented below.

Lithic Processing. In order to clarify the lithic reduction sequence, a brief glossary of terms is presented based on Bradley (1975:5-6):

Assemblage:	All artifacts found at a site.
Blank:	Any unfinished lithic modified to an intended stage in the reduction sequence, and intended for further modification. It must have the morphological potential to be modified into more than one implement type.
Implement:	Any modified lithic in its final intended stage.
Modification:	Morphological alteration of a lithic by a human.
Morphology:	Size, shape, and volume of any object.
Preform:	Any unfinished lithic modified to an intended stage in the reduction sequence, and intended for further modification. It must have the morphological potential to be modified into only one implement type.

Preliminary

Modification: First step or steps to modify a piece of raw material into any other stage.

Primary Core: Any piece of raw material that has had flakes struck from it, the desired product being the flakes.

Primary Flake-Blank:

Any flake removed from a primary core for the purpose of further modification.

Raw Material: Any unmodified lithic suitable for modification.

Secondary Core: Any primary flake-blank with flakes struck from it, the desired product being the flakes.

Secondary

Flake-Blank: Any flake removed from a secondary core for the purpose of further modification.

Stage: A knapper's intended previsualized goal in a lithic reduction sequence.

Step: A change in a knapper's orientation which may or may not involve a change in technique.

The lithic reduction sequence generates debitage, or waste flakes. Because of the peculiarities in working quartz, and the inapplicability of adopting debitage classifications used for other types of lithics, archaeologists have adopted the following scheme to describe quartz debitage (Barber 1981:54-55).

Flat Flakes: Moderately large flakes, usually greater than 2 cm. long, removed with a hammerstone. They tend to be thin with parallel faces, often exhibiting bulbs of percussion.

Block Flakes: Chunks with greater thickness than flat flakes, generally lacking bulbs of percussion.

Bifacial Thinning Flakes:

These show arises from previous flaking on their dorsal faces and are thin and flat, usually less than 3 cm. long.

Pressure/

Shatter Flakes: Small flakes which may have formed by pressure or percussion. Differentiating the cause of formation is difficult.

Regardless of the method of initial lithic procurement, the lack of cortex on final products, either blanks, preforms, or finished tools, does not provide any clue as to whether lithics originated from quarried veins or cobbles. Therefore, little can be ascertained by macroscopically comparing finished tools to quartz sources.

Quarrying. Prehistoric quarrying is common throughout the New World. Given the vast diversity in lithic types quarried, quarry complexes undoubtedly vary in their composition. As a result, there are alternative views regarding how a quarry complex is expected to be laid out. According to geologist LaPorta, a prehistoric quarry site typically includes four distinct work areas, the first being the quarry itself where material is extracted. Secondly, the tailings pile is typically located just below the quarry face, and contains blocks of quarried material. The third, the ore dressing, milling, or transition area, is located below and within about 50 meters of a quarry face. This is where large blocks are broken down into smaller blocks for transport. Finally, the lithic reduction site is "usually located above the quarry face or on a level terrace adjacent to the quarry face" where reduced blocks are further reduced into preforms or final tools (LaPorta 1993:1).

Other researchers feel that a quarry complex undoubtedly includes all of these components, but not necessarily in any specific relation to each other. In his analysis of a possible quartz quarry-workshop located in Riverdale, archaeologist Lenik quotes Jack Cresson, a Pennsylvania archaeologist, who detailed his research at a quartz quarry complex in Pennsylvania. Apparently Cresson "observes that quarried quartz and cobble quartz go through different initial processing after procurement; quarried quartz is relieved of its matrix in the tailings pile and broken into portable, workable chunks near the quarry site (Cresson 1994)" (Lenik and Gibbs 1994:53). According to Lenik and Gibbs,

this is a more informal observation than LaPorta's model which places each work area within specific directions and distances from each other. The principle is the same, however, material is wrestled away from the quarry face, falls to the area below the quarry, is moved away from the dangerous zone of quarry fall to an area nearby where the waste material can be removed and the good stuff broken up into portable pieces; these pieces are then worked into blanks at the workshop site.

(Lenik and Gibbs 1994:53-54).

Interestingly, at the Sassafras Site in Rhode Island, a quartz quarry workshop, the distribution of flake types across the site indicated that there were no distinct primary reduction and secondary flaking areas. In other words, tool production was an "individual affair, completed from start to finish at one locus with no attempts at mass production, assembly line techniques" (Barber 1981:62). The workshop reflected all stages of tool production.

In association with a quarry one would typically expect to find a tailings pile, dressing area, and workshop. As the Sassafras Site has demonstrated, the workshop may not have a

specific configuration. Whether these components are found in precise relation to the quarry as LaPorta suggests, or simply in the general vicinity, as Cresson suggests, is incidental to the fact that they should be in proximity. Since these separate work areas are part of a greater complex, the term quarry-workshop has generally been adopted to describe the range of activities which can occur at a site (ie. Gramley 1984; Wiegand 1987).

Archaeologists active in the Northeast have investigated numerous types of lithic quarries in the past several years, but, by comparison, few to date have focused specifically on quartz extraction. Typically research focuses on less prevalent lithics which can be easily sourced such as feldspar, hornfels, rhyolite, slate, chert, and soapstone.¹ However, a few quartz quarry-workshops have been professionally investigated in the New England area (Barber 1981; Powell 1965; Wiegand 1987). Since the number of comparative quartz quarry sites in the region is minimal, a discussion of other types of lithic quarrying sites, including their nature, extent, and methods of investigation, is presented.

The history of archaeology has often ignored the study of quarries as part of an analysis of regional cultural patterns. All too often quarries were overlooked since their subtle features bear little evidence of lithic prospecting (Dunn/HAA 1993:93). Quarries that were observed were simply viewed as the place where lithics were extracted, with minimal scientific analysis involved in their interpretations. Studies were often limited to counting waste-flakes and making vague statements regarding production areas (ie. Powell 1965). With the advent of more technologically advanced methods of analysis, and more theoretically oriented research questions, quarries are now seen as a potentially untapped resource capable of revealing vast amounts of information regarding prehistoric economic and social systems (Ericson 1984:2-9; Purdy 1984:125-126). The analysis of quarries is now seen as simply one component in the more complex analysis of "lithic production systems," defined as "the total of synchronous activities and locations involved in the utilization and modification of a single source-specific lithic material for stone-tool manufacture and use

¹ For examples of lithic quarry research see Dunn/HAA 1992; Gramley 1980; LaPorta 1993; Lavin and Prothero 1992; Petraglia 1994; Powell 1965; Ritchie and Gould 1985. In an attempt to find sites comparable to the possible Russian Federation quartz quarry, archaeologists throughout the Northeast were contacted by Faline Schneiderman-Fox and Cece Saunders in April and May, 1995, including: Dr. Nicholas Bellantoni (Connecticut), Dr. Barbara Cologero (Connecticut), Dr. Joseph Diamond (New York), Dr. David Lacy (Vermont); Dr. Lucianne Lavin (Connecticut and New York), Dr. Kevin McBride (Connecticut); Dr. Stephen Pollack (Maine); Dr. Robert Grumet (Mid-Atlantic), Dr. Toni Silver (New York), and Ernest Wiegand (Connecticut and New York).

in a larger social system. Production is seen as a process of material modification with intent to form a particular object" (Ericson 1984:3).

Advances in techniques of lithic analysis employed at quarry and workshop sites include geochemical, or trace element analysis, such as neutron activation, atomic absorption, X-ray diffraction, X-ray fluorescence, and optic emissions spectrometry, each designed to provide a chemical signature of source materials. Petrographic, or thin section analysis, reveals the textural, mineralogic, and fossil attributes of a rock source through the microscopic study of slide samples (Lavin and Prothero 1992:96). Thermoluminescence dating of lithics, heated during the quarrying process, has also been proposed (Purdy 1984:123). Reassembling or refitting waste flakes, blades, and cores recovered from quarry and workshop sites has also proved invaluable towards reconstructing manufacturing processes (Leach 1984:117; Singer 1984:46; Petraglia 1994:295)

Recent research on chert quarries in the Northeast brings to light the potential for applying technologically advanced methods of analysis to address meaningful research issues. The Hudson Valley is known for its fine chert outcrops, situated to the north in Cocksackie and Athens, west of the river and just south of Albany. Because of its quality and availability, chert is prevalent in artifact collections from the Hudson Valley region and south into New Jersey, however archaeologist Lavin points out that despite this there are only a few known quarry production sites (Lavin and Prothero 1992:98). Macroscopic analysis proved useless in sourcing lithics, and microscopic sourcing studies, aimed at petrographically tracing lithic artifacts to their origin of extraction, typically only sampled known prehistoric quarries. Other primary sources, such as bedrock outcrops, and secondary sources, such as redeposited fluvial gravels, were largely omitted from sourcing studies (Ibid.:100). Lavin and Prothero's thin-section analysis sampling regional artifact collections clearly showed that these other primary and secondary sources were being exploited prehistorically (Ibid.:110-111). Their analysis clearly demonstrated the benefits of microscopic analysis, and exemplified the importance of conducting research on a regional level.

There are many other good examples of valid research issues addressed through investigating quarry-workshops. At a rhyolite quarry in New Hampshire, intensive excavations revealed variations in tool types and lithic densities between several loci at the same quarry-workshop. Gramley suggested that these variations in mining operations and tool production varied from period to period, visit to visit, and season to season (Gramley 1984:21). Exhausted tools of exotic stones, intended for service at the workshops, indicated specific off-site use and production. Archaic period hunters, hindered by the lack of water transport, had to return periodically to the quarry site to replenish their toolkits, while Woodland hunters, using canoes, had access to more quarry sites (Ibid.:20).

The Massachusetts Hill quarry complex, located just outside of Boston, Massachusetts, was the site of prehistoric hornfels quarrying. Archaeological research at the site detected two distinct types of quarry features, the first being roughly circular quarry pits ranging from one to five meters in diameter found on the talus slopes below hornfels outcrops. Secondly, trenchlike features were observed along the edges of the outcrops themselves. Quarry tools were found associated with these features, consisting of large semilunar bifaces and picks (Ritchie and Gould 1985:42). The observed variation in quarrying techniques appeared to be directly related to the physical properties of the lithics extracted. The quarry, in use for over 8000 years, was clearly a regionally important lithic source in New England.

Farther north in Vermont, a quartzite quarry was excavated over the last several years. The quarry workshop, over a mile in length, yielded extensive evidence of quarrying and lithic reduction (David Lacy, personal communication to Faline Schneiderman-Fox, April 19, 1995). Quartzite outcrops were clearly scrawled down by extensive quarrying episodes. An analysis of waste material, comparing size and weight variations, indicated that lithics were reduced in special task areas. Interestingly, oral traditions of local Native Americans describe how Shamans traditionally assigned specific tasks in the lithic production process to specific workers (Ibid.). This may account for the workshop organization observed in the archaeological record.

Quartz Quarry-Workshops. The nature of quartz and its mechanical properties are very different from many raw materials chosen by prehistoric peoples for tool production. Lithic analysts generally agree that one way to address this disparity is to conduct studies on manufacturing sequences through replication studies or quarry analysis, and to address all aspects of procurement, manufacturing and utilization (Luedtke 1981:76; Rogers 1981:125). While a greater number of studies have been conducted on quartz manufacturing and utilization (Boudreau 1981; Leveillee and Souza 1981; Luedtke 1981; Callanan 1981), to date, few quartz quarries have been identified and professionally excavated in the Northeast to the extent that they could address meaningful issues.

In northern Rhode Island, archaeologist Barber investigated the Sassafras Site, a quartz quarry in proximity to the Blackstone River (Barber 1981:50). Quartzite bedrock in the region possessed intermittent intrusions of quartz which had been quarried prehistorically. Although the quartz outcrop itself had no clear traces of quarrying because of the nature of its composition, spall scars in the adjacent quartzite bore evidence of its extraction. The poor quality of the quartzite and the quantity of quartz debitage found in the vicinity suggested that quartzite was being dislodged solely for the purpose of exposing quartz veins (Barber 1981:58). The restricted variety of artifact forms recovered at

the site suggested that manufacturing activity was primarily devoted to producing one specific type of point (Ibid.).

At the Sassafras Site, quartz was quarried from intrusive veins and then modified on site. The reduction sequence, presumably aimed to create Squibnocket Triangle points dating to the Late Archaic period, was as follows: a quarried block was reduced to a blocky flake or core. Bifacial flaking then produced a quadrilateral or triangular preform, whose end was snapped off to create a basal platform. The piece was then secondarily flaked to final form via pressure or controlled hammer flaking (Barber 1981:60). Barber concluded that the artifact assemblage reflected lithic extraction and reduction, and that no habitation had occurred on site.

In Greenwich, Connecticut, roughly within 20 miles northeast of Riverdale, another prehistoric quartz quarry-workshop was identified and professionally investigated. Archaeologist Wiegand found a small pegmatite outcrop containing a highly workable quartz in addition to feldspar, mica, and tourmaline (Wiegand 1987:15). Excavations revealed that debitage was scattered over a 1400 square meter area, and that quartz had been removed from the outcrop to a depth of about 50cm below the current surface. The presence of bifacial thinning flakes from other exotic lithics and utilized scrapers lead Wiegand to conclude that the site may have been used as a temporary campsite as well as a quarry-workshop (Ibid.:18). However, others interpret the presence of waste flakes from exotic lithics at quarry sites as evidence of the production of specialized lithic extraction tools (Gramley 1984:16). Regardless, Wiegand's research clearly demonstrated that quartz was extracted from bedrock on the site.

Also in Southwest Connecticut, a quartz quarry was investigated in the 1960s on a knoll at the Samp Mortar Reservoir in Fairfield (Powell 1965:5). The flat sides of the white quartz found at the site suggested that the initial quartz intrusion had penetrated a preexisting fracture-and fault system, since some of the contacts in the veins were along flat-faced breaks. This flat-sided nature of the quartz enabled quarriers to secure a wide range of pieces having two roughly parallel sides, constituting natural cores with ready-made striking and anvil platforms (Ibid.:9). The flat surfaces were coated with a thin layer of black tourmaline, a common occurrence when vein quartz cuts gneisses and schists (Ibid.:5.). Tourmaline flakes found on the site indicated that oblique blows were delivered by early knappers during the reduction process.

Two test trenches were excavated at the Swamp Mortar Reservoir site. Trench A was run into the knoll where chipping refuse and tailings were scattered on the surface. Within the trench, the faint outlines of "an ancient ditch or hollow were detected at the northern end" likely caused by prehistoric quarrying (Powell

1965:7). Although the surface of the site was scattered with lithic debris, 90 percent of all material was recovered from the subsoil. Testing found that blocks, chips, flakes, cores, tailings, blanks, and occasional worked pieces were scattered about in "no noteworthy variation in intensity or distribution" over the site (Powell 1965:8). No exotic lithics were present. He also noted that no hammerstones or mauls were found at the site, and offered no explanation for this anomaly.

Interestingly, Powell encountered a small ash lens in Trench A associated with a badly fire-disintegrated piece of quartz. He postulated that this was caused by historical activities, rejecting the hypothesis that heat-treating quartz was part of the prehistoric quarrying process (Powell 1965:8). More recent research supports that quartz may have been thermally altered for quarrying and processing (Leveillee and Souza 1981:46). The majority of material recovered was quarry "trash and tailings," however several "blanks and a few rough artifacts" were recovered, dating to the Middle to Late Archaic period (Ibid.:8-10). He did note two trianguloid projectile point blanks which may date to the Woodland period.

Several blocks south of the Russian Federation site, Chapel Farm II was investigated by archaeologists over the last several years. Initial field investigations revealed a considerable quartz concentration, apparently the remnants of an extensive workshop (Kearns and Kirkorian 1991:3; Lenik and Gibbs 1994:58). Although researchers suspected a quartz quarry on the site (LaPorta 1993:2), field testing found no evidence to support this, possibly because of the high degree of historical disturbance to the site (Lenik and Gibbs 1994:55). Nonetheless, this does confirm the presence of a quartz workshop, in the very least, in proximity to the Russian Federation project parcel.

B. HISTORICAL BACKGROUND

1. Historical Chronology

The first official purchase of lands from Native Americans in the Bronx took place in 1639 by the Dutch West India Company. Two years later Jonas Bronk bought 500 acres between the Harlem and Bronx Rivers and became the first white settler in the area when he built his house in what is now Morrisania. Although Bronk was the first European settler, Adriaen Van der Donck was the first substantial landowner in the vicinity of what is now Riverdale.

After arriving in New Netherland in 1641, Donck served as a schout (sheriff and prosecuting attorney) on the Rensselaerswyck manor in the vicinity of Albany. While acting as a scout, Donck, who had knowledge of the Mohawk language and customs, was instrumental in negotiating a peace treaty between the Mohawks and the governor-general, Willem Kieft. Kieft had just involved the colony in a bloody Indian war, and Donck's services proved invaluable in negotiating a treaty. As a reward for his services, Donck was permitted to purchase 24,000 acres from the local Wiechquaesgeck Indians. The tract he purchased, running along the Hudson River, extended eight miles north from the Spuyten Duyvil Creek and included the project site.

Donck named his estate the Colen Donck, or colony Donck. In it, he laid out a farm and plantation, and established corn fields near what is now the Van Cortlandt Mansion in Van Cortlandt Park, about a mile east of the project site (Bolton 1848:408). He established his homestead to the south overlooking the Spuyten Duyvil. After a politically tumultuous career, Donck died on his estate in 1655 at the age of 35. Following his death, the estate fell into the hands of his wife's brother, Elias Doughty of Flushing (Shonnard and Spooner 1900:143). In 1668 Doughty sold off most of the southern sections of Colen Donck to George Tippet and his father-in-law, William Betts of Westchester (Tieck 1968:12). Other tracts were sold off, but eventually consolidated under the ownership of Frederick Philipse.

Philipse, a native of Friesland in the northern Netherlands, arrived in New Amsterdam in 1653 at the age of 21. Through a series of successful, albeit unscrupulous, business ventures, Philipse, and his wife Margaret Hardenbroek became the wealthiest landowners in New York by the 1670s. After his wife died, he married into the Van Cortlandt family in 1692, further enhancing his affluence. In 1693 his estate was designated the hereditary Manor of Philipsburgh, which provided him many powers beyond that of a normal landowner, including jurisdiction over the civil and lower criminal courts, and the right to erect churches. He erected two mansions on the estate, one in Mt. Pleasant, and another at Yonkers, both north of the project site. The Manor of Philipsburgh encompassed the project site.

In 1683 the New York State legislature divided the Province of New York into twelve counties, one of which was Westchester County. The Manor of Philipsburg fell into what was then Westchester County, and when it was formally established in 1693, the area was further divided into two parishes, Westchester and Rye, with the project site falling into Westchester. The Westchester parish contained the towns of Westchester, Eastchester, Yonkers, and the Manor of Pelham. The Yonkers plantation included all of the land now within Riverdale, including the project site (Jenkins 1912:2). Tenant farmers established themselves, leasing land for their houses and farms.

By 1669 the Albany Post Road had been laid out through the Bronx stretching from Manhattan to the vast trading post at what is now Albany. The Post Road, which followed an old Indian trail, ran just east of the Russian Federation parcel and part of it's original route is still named the Post Road (Jenkins 1912:212; Hufeland 1982). Although postmen traveled on horseback, it was not until after the American Revolution that stage coaches ran over the road (Jenkins 1912:213).

As part of his Manorial rights, the King of England granted Philipse the right to build a bridge over the Harlem River at Spuyten Duyvil for the purpose of connecting Manhattan to the mainland. Although a ferry had been established between the two, it could not handle the increasing pedestrian traffic. To alleviate the situation, Philipse received permission to build a bridge and collect tolls. He completed the King's Bridge, a draw bridge for the passage of travelers, carts and wagons, and cattle, in 1694 (Shonnard and Spooner 1900:227). Since it was the only overland route to the main land, connecting New York City with the roads to Albany and Boston, as well as farmers to their urban markets, the bridge saw heavy use and Philipse surely profited. Much later in 1758, in retaliation to the imposed tolls, a group of farmers banded together and built the free Farmer's Bridge across the Harlem River at what is now 225th Street.

In 1699, Philipse sold his son-in-law, Jacobus Van Cortlandt, 50 acres south and east of the project site. Following this, Van Cortlandt purchased several hundred acres to the north of Philipsburgh, largely in what is now Westchester County. This tract, fronting the Hudson River, became the Van Cortlandt Manor of which Stephanus Van Cortlandt was the lord after 1697. Jacobus Van Cortlandt dammed Tibbetts Brook, creating the present Van Cortlandt Lake southeast of the project site, and built a saw mill there in c.1700 (Shonnard and Spooner 1900:273). Near the mill, his eldest son, Jacobus Van Cortlandt II, built a mansion in 1748. The mansion is still standing within Van Cortlandt Park.

By the 1750s, over a thousand people were living in Philipsburgh Manor, farming the land and clearing forests to fill the heavy demand for lumber. Most of these residents were tenant

farmers who leased land use rights from the Manorial Lord, building small houses on their leased land. Meeting houses, taverns, mills and industries were quickly established within the manor's lands. Philipsburgh remained intact for over eighty years and was finally dissolved following the American Revolution when the Philipse family, who fought with the British, lost their land rights.

Because of its location, what is now the Bronx experienced extensive Revolutionary War activity. With the commencement of hostilities between the British and Americans in 1775, the safety of New York City was paramount and a committee was selected to devise a strategy for fortifying the region. The strategic importance of passage over the Harlem River at Kingsbridge was recognized by both British and American militia. Under the command of Major-General Charles Lee, a total of seven sites were selected by the Continental Army for redoubts, two on the northern end of Manhattan, and five in the Kingsbridge area. The English numbered these forts, which are still referred to by numerical name. Three forts built on Spuyten Duyvil Neck and Tippet's Hill, south of the project site, were eventually captured by the English in November of 1776, and were abandoned by 1779. In the vicinity of the Jerome Park Reservoir, about two miles southeast of the project site, the largest of the forts, Fort Independence or Fort No. 4, was built on Tetards Hill between the Boston and Albany Roads (Jenkins 1912:127).

From 1776 to 1782 Westchester County, including what is now the Bronx, was situated between the main lines of the British army, stationed in New York City, and the American lines posted north of the Croton River. Westchester County was known as the "Neutral Ground," where British "cowboys" and Loyalist "skinners" battled for a foothold. These two groups controlled the flow of supplies between the counties to the north and the City of New York. These guerilla groups moved grain, livestock, and supplies between opposing lines, frequently robbing and abusing the residents of the "Neutral Ground." Farmers in Philipsburg and Van Cortlandt Manor surely suffered from the effects of looters seeking food and supplies.

On January 18, 1777 American troops marched south on the Albany Post Road through Yonkers to the high point above the Van Cortlandt House in an attempt to recapture Fort Independence. Their failed attempt led Washington to destroy all the forage in the area in an attempt to decrease the incentive for cowboy raids. Buildings were generally spared. In 1778 a major battle took place on the eastern edge of Van Cortlandt Park, northeast of the project site. American troops, accompanied by a group of Stockbridge Indians led by Nimham, were located on Woodland Heights guarding the Mile Square Road. On August 20, they attacked a battalion of British troops under the command of Lieutenant-Colonel Emmerick, driving them south towards Kingsbridge. On August 31, they were surprised by a group of British stationed at Fort Independence, led

by Lieutenant-Colonel J.G. Simcoe, who slaughtered the Indians. Reportedly, they were driven through Van Cortlandt's woods, over Tibbett's Brook, and into the woods on the ridge beyond. Dead were buried in Indian Field, west of what is now Van Cortlandt Park East Road and east of the Deegan Expressway (Scharf 1886:746).

Skirmishes ensued for years, with control of the nearby forts held by one side and then another. During this time, it was possible that raiding parties traveled over the project parcel, but no specific encampments or battles were associated with it (Westchester County Historical Society 1978). Following the Franco-American victory at Yorktown in 1781, the English Parliament agreed to recognize American independence. It was not until 1782 that the British evacuated Westchester County. Lands held by loyalists, such as the Philipse family, were confiscated and forfeited. Tenant farmers typically purchased their leased parcels.

In 1785 Captain John Warner of the Revolutionary army purchased a tract in what is now Riverdale from the Commissioner of Forfeiture (Jenkins 1912:325; Edsall 1886: See Figure 5). The southern boundary of his 254 acre holdings was situated at about what is now West 254th Street, placing the project site within the bounds of his property. As with the rest of the borough, Riverdale was typically farmland until the time of residential and commercial development in the mid-to-late nineteenth century.

In 1788 Westchester County was divided into townships, with Riverdale falling into the town of Yonkers. Because of the local topography, the high ridge on the west side of Broadway, formerly the Albany Post Road, historically impeded east-west travel. However, by 1853 land along the Hudson River was being developed with country houses, with Edwin Forrest establishing his estate at "Font Hill," which later became the headquarters of Mount Saint Vincent de Paul (Jenkins 1912:326). The area became a country retreat in the 1860s and estates were typically divided. The project site remained vacant at that time and was owned by A. Schermerhorn who had purchased the Warner farm (Scharf 1886:744-768; Dripps 1853). Mosholu Avenue had been laid out, forming part of the western border of the project site, taking its name from the Indian term for Tippett's Brook which may translate to "smooth stones" or "small stones" such as those found in the brook (McNamara 1984:180).

In 1872 the city of Yonkers to the north was incorporated and Kingsbridge was set off as a new township. The Bronx then became the Annexed District of New York City in 1874 and was chartered as a Borough in 1898 (Jenkins 1912:7). Riverdale was set off as an enclave in the late nineteenth century.

By 1868 the general vicinity of the project site had been further subdivided between several landholders including Samuel

Babcock, E. Goodridge, and N. Berrian, although no structures were present within the project parcel at that time (Beers 1868). By 1874 a structure had been built on the project site (Viele 1874, see Figure 6). The 1877 Beers Atlas, which did not depict any structures but did provide landowner names, indicated that part of the project parcel was owned by Charlotte W. Prime, and part was owned by Mrs. Semler (Beers 1877). The structure noted on the 1874 map would have fallen on Charlotte Prime's parcel. To the north, the bulk of the Abraham Schermerhorn estate, which had been greatly reduced, was now owned by Gouverneur Bibby. By 1879 the structure shown on the project site in 1874 was clearly labeled as belonging to Samuel D. Babcock (Bromley 1879, see Figure 7). The dwelling was located just north of what is now West 255th Street, and east of Fieldstone Road.

The parcel appeared virtually unchanged in 1882 (Bromley 1882), and in 1893 the structure was depicted as a two story wood dwelling (Bromley 1893). In 1900 the dwelling was clearly shown at approximately 100 feet north of West 255th Street, 50 feet east of Faraday Lane - a thoroughfare that was never actually laid out, 240 feet west of Fieldston Avenue, and 287 feet east of Mosholu Avenue (Bromley 1900). This would have positioned the dwelling directly beneath what is now the Russian Federation 20 story structure built in the 1970s (Figure 8). Although the structure was present in 1911 (Bromley 1911), it had been removed by 1912 (Hyde 1912). Therefore the structure stood between c.1874 and c.1911 in the location of the extant 1970s residential tower (Figure 8). If there were any associated yard features, they would also be situated beneath the 20 story residential tower or the in-ground pool directly north of it.

At the turn of the twentieth century, land adjacent to the Russian Federation parcel was subdivided and developed over time. In 1900 a number of private residential structures were built fronting both Mosholu and Fieldston Avenues, with their back yards abutting the project site. None of the lots or yards ever extended onto the Russian Federation parcel. Despite the number of houses built on these side avenues, the project site remained vacant through most of the twentieth century (Bromley 1924; Bromley 1938). By the 1970s when the Russian Federation acquired the property and built their extant housing, another dwelling had been built on the property. An undated pre-development topographic map shows a two story dwelling fronting West 255th Street. The structure, post-dating 1938, was removed with the construction of the 20 story residential tower. The west half of the dwelling would have been situated directly beneath the southeast corner of the residential tower, with the remainder located beneath what is now a parking area. The dwelling is neither in the same configuration nor location as the previous nineteenth century dwelling.

A discussion of the history of the parcel would not be complete without a evaluation of the topographic changes rendered

in the 1970s with the construction of the Russian Federation housing tower. Its construction entailed extensive land alterations. Although no construction plans are available, topographic maps clearly show changes in some of the landforms. Rock walls were obliterated, steep slopes surrounding the building were smoothed, and level areas were landscaped for recreational use and parking. Blasting was probably necessary to remove rock for the underground parking garage beneath the extant residential tower. The southern section of the tract has little remaining of its original configuration. By comparison, however, the northern section has experienced virtually no impact.

2. Historical Sites in the Vicinity

Known historical sites in the vicinity include, but are not limited to the following. To the east in Van Cortlandt Park is the Van Cortlandt House, built in 1748, near Broadway and West 242nd Street. The land surrounding the house, now comprising the park itself, was the site of various Revolutionary War operations. Overlooking the mansion is Vault Hill, containing the Van Cortlandt family vault which served to hide municipal documents during the American Revolution. Between the project site and Van Cortlandt Park was the original Albany Post Road dating to 1609.

Several blocks to the west of the project site is Wave Hill, a center for Environmental Studies. Buildings at the center date to the mid nineteenth and early twentieth centuries. Just south of this is the Riverdale Country School campus, also dating to the nineteenth century.

Riverdale is rich with historical dwellings, mostly nineteenth century country homes once belonging to the Bronx's elite. Numerous historical structures and sites are within the vicinity of the project site, but none ever stood upon it. Suffice it to say, there are numerous historical cultural resources nearby. With regard to architecturally interesting features in the Riverdale area, "to call attention to every house worth mentioning in this architectural treasure chest of a community would require a tome in itself" (Willensky and White 1988:530).

3. Site File Search

The only historical feature in the vicinity identified through a site file search at the NYSOPRHP was a canal house at Wave Hill owned by the New York City Department of Parks and Recreation (NYSOPRHP Site A005-05-0067). The Canal house was used between the 1830s and 1950s. Remains include mortared stone foundation walls, an adjoining slate patio, the partial remains of a lime kiln, and a wooden dock (See Appendix B).

V. ARCHAEOLOGICAL SENSITIVITY

A. PREHISTORIC SENSITIVITY

It is generally accepted that local pre-European cultural groups employed a settlement and subsistence pattern of seasonal rounds exploiting a diverse array of resources. Fresh water and coastal resources would have been abundant and easily accessed in the surrounding area, as would have upland resources. The types of sites found in the surrounding metropolitan region, as reported by archaeologists, ethnographers, and amateur collectors, reflect the seasonal use of a diverse resource base and include villages, burials, smaller campsites, and lithic workshops to name a few. Well drained soils in proximity to fresh water sources were the ideal choice for prehistoric use rendering areas with these characteristics more likely to have been occupied. Nearby aboriginal trails, lithic outcrops for quarrying, and the availability of other economic and ecological resources further made the Russian Federation site attractive to Native Americans. Shelter from prevailing northerly winds, typical in the lower Hudson Valley, was probably also a contributing factor in site selection, as has been demonstrated in some regions (Little 1985:26).

A review of data from prehistoric sites in New York City which were investigated by professionals in the 1980s revealed that prehistoric site locations exhibit a trend towards riparian occupation. That is, most of the sites were located on or close to the East or Hudson River shoreline (Lenik 1992:20). Other sites were typically located near prehistoric fresh water sources such as ponds, wetlands, and springs. However, more recent analysis of site locations suggests that in some cultural periods, sites were located on a broader range of geomorphic surfaces than previously hypothesized (Lenik 1992:27).

Thus far, evidence of Native American occupation has been observed to the south in Riverdale, Kingsbridge, Spuyten Duyvil, and Inwood Hill Park, east in Van Cortlandt Park and the New York Botanical Gardens, north in Yonkers, and west in Riverdale Park (Kearns and Kirkorian 1986:n.p.; DeCarlo 1992:5; Lenik and Gibbs 1994:55). The extensive documentation of aboriginal occupation throughout the area suggests that the Russian Federation parcel was, at the very least, used in a limited capacity prehistorically.

The NYSM concluded that there is a high probability of producing prehistoric archaeological data from within the Russian Federation site because: recorded sites are in the vicinity of the project site; the terrain in the site is similar to terrain in the general vicinity where recorded archaeological sites are indicated; and the physiographic characteristics of the site suggest a high probability of prehistoric use (Appendix A). However, the NYSM assessment was made without knowledge of prior disturbances and is

only applicable if the disturbance record indicates that the parcel has remained undisturbed.

In the project site, quartz veins were observed in the exposed country rock. The veins likely resulted from infilling within the conjugate joints. A walkover survey of the site conducted in April, 1995, encountered quartz debitage and blocks scattered on the surface in the northern part of the parcel, confirming the prehistoric presence. With regard to prehistoric exploitation of these quartz veins, geologist Laporta states:

Near the Russian Embassy compound...there are a number of outstanding examples of exploited quartz veins. The veins range in thickness from 2 inches to more than 1 foot, and pinch and swell according to their orientation within folds. Abundant quartzite hammerstones and quartz debitage lie on a nearby slope. Large quartz slabs invariably bear the evidence of the horizontal joint surfaces.

(LaPorta 1993:4)

The presence of quartz veins in the rock outcrops, and the observance of broken quartz blocks on the surface of the site strongly suggests that quartz extraction and/or processing was occurring on this parcel. The extent of on-site processing is unknown. The likelihood of temporary encampments, and possible longer-term occupations, is minimal given the terrain. However, it is possible that rock outcrops were also used as shelters during some prehistoric time periods, although there are no rock overhangs which alone would have afforded protection from the elements.

The southern section of the project parcel has experienced tremendous disturbance with the construction of the 1970s residential tower. There may be isolated pockets of undisturbed land surrounding the tower which are potentially sensitive for prehistoric cultural material. A comparison of pre and post-construction topographic maps indicates that these possibly undisturbed areas may exist directly west and north of the existing structure where there are now play areas. Also directly west of the pool, north of the structure, is a potentially sensitive knoll and rock outcrop.

The northern section of the parcel has the greatest potential for yielding potentially significant prehistoric deposits. If quartz quarrying was in fact pursued on the site, the lithic scatter observed on the surface may represent only a small fraction of what lies buried below. The exact nature of this lithic scatter has yet to be determined, and can only be addressed through field testing.

If impacts are to occur, subsurface investigations at this site should be pursued for a number of reasons, including its uniqueness. The probability of encountering in-situ and

undisturbed prehistoric sites in the metropolitan New York area grows slimmer with each passing year as development further impacts the land. Further, this may be the first lithic extraction site encountered in the lower Hudson Valley region, and one of only several known quartz quarries professionally investigated in the Northeast (Barber 1984; Powell 1965; Wiegand 1987). The site has the potential to address numerous important research questions.

Archaeologists in the Bronx typically assume that the abundant quartz observed in the local archaeological record was procured from locally available glacial cobbles. Historically, there were no references to quartz quarries anywhere in the Bronx. Specifically in Riverdale, quartz outcrops were unheard of, and in the immediate region, no quartz quarries were identified. This widely held traditional belief regarding quartz procurement would be challenged.

B. HISTORICAL SENSITIVITY

The documentary and cartographic review clearly showed that prior to 1874 the project site was vacant. A two story dwelling belonging to Samuel Babcock, stood on the parcel between c.1874 and c.1911, however the site of the structure and its surrounding yard were directly impacted with the 1970s construction of a 20 story community facility and residential tower and adjacent in-ground cement lined pool (Figure 8). The extant structure literally sits on top of the site of the nineteenth century dwelling as it was portrayed in 1900 (Bromley 1900). Therefore, since any remains were extensively impacted and disturbed, there is no historical sensitivity for this structure.

In addition, another dwelling was once present on the parcel, built after 1938 and before the 1970s. The structure was removed with the 1970s Russian Federation construction. The late date of the dwelling, post dating the installation of sewer and water lines in the Bronx at the turn of the twentieth century, precludes its archaeological sensitivity. There would be no associated shaft features, such as those created by privies and wells, worthy of archaeological investigations. Further, the house site was also impacted by 1970s construction and driveway grading. Therefore, there is no archaeological sensitivity for this structure either.

Between 1893 and 1900 a number of dwellings had been built on Mosholu and Fieldston Avenues, with their back yards abutting the project site. However, their back-yards never extended onto the project site, and any associated features would be located within the lots they are built on, outside of the project site. Therefore, there is no sensitivity for these structures either.

Based on the cartographic research documenting historical construction episodes, there is no sensitivity for any historical cultural remains within the Russian Federation project site.

VI. CONCLUSIONS AND RECOMMENDATIONS

Prehistoric Resources. The background research and walkover survey clearly indicate that the project site has a strong prehistoric archaeological potential. In addition, resources that may exist could address important research questions on the nature, extent, and diversity of prehistoric quarrying. Because of the site's potential importance, Stage 1B Field Testing, designed to ascertain the presence/absence of prehistoric cultural materials, should be pursued throughout the site where there is no known prior subsurface disturbance (Figure 9).

Subsurface testing around extant structures should entail hand excavating several 50 x 50 cm shovel test pits (stps) in areas which may have not been extensively impacted (Figure 9). This includes land west of the pool and just northwest of the residential tower. A total of about 15 stps should provide adequate coverage to determine if resources are present. Given that the bedrock is shallow at the site, and impacts were great, the likelihood that intact in-situ prehistoric remains exist in this area is minimal.

North of the in-ground pool, the project site requires more extensive investigations (Figure 9). The proposed mid-rise residential facility will extend about 50 feet north of the in-ground pool, onto the northern section. Throughout this northern section there is a great deal of undeveloped, relatively undisturbed land which may bear evidence of prehistoric quarries and/or lithic workshops. The likelihood of habitation is minimal given the topography, but there is the chance that rock outcrops were used as shelters.

Field testing in the northern portion of the site should also be designed to ascertain the degree of prior disturbance, and the location of prehistoric cultural material. This section of the site is hilly with jagged rock outcrops, and is most likely to produce intact cultural remains. The undulating terrain will make it difficult to guarantee accurate measurements between units without the aid of a survey team. Therefore, before field testing is begun, a survey team should be brought onto the site to coordinate their efforts with the archaeologists in order to ensure testing accuracy. Following this, subsurface testing in the form of STPS should be conducted. The testing strategy for this section will require a combination of efforts, including excavating stps in blocks and judgmentally.

In one area on the northeastern end of the property there is an extant tennis court and picnic pavilion. Judgmental test pits will be dug around these. In the event they are eventually removed, testing should be done where their footprints lay, in order to determine the extent of prior disturbance.

In total, about 97 to 100 STPS will be shovel dug to ascertain the presence/absence of cultural material throughout the northern part of the project site. This would probably take a team of three archaeologists about six to seven days to complete, depending on how much cultural material is found, and the depth of bedrock.

Historical Resources. The documentary research clearly shows that only two historical structures were built on the site. The earliest, dating between c.1874 and c.1911, was situated directly beneath the site of the extant Russian Federation residential tower, and therefore is considered entirely disturbed. The second dwelling, dating to the mid to late twentieth century, was clearly demolished with the 1970s Russian Federation construction and post-dated public sewer and water lines by several decades. The late date makes it not potentially archaeologically significant. Numerous dwellings were built fronting Mosholu and Fieldston Avenues at the turn of the twentieth centuries. Although their back yards abutted the Russian Federation property, none ever extended onto the project site. Therefore, no remains from people living in these structures should be on the site either. In conclusion, the project site has very low sensitivity for historical period archaeological resources.

BIBLIOGRAPHY

- Bankoff, H. Arthur and Frederick A. Winter
1991 Van Cortlandt House Excavations, 1990 and 1991. Brooklyn College CUNY, Brooklyn, New York.
- Barber, Russell J.
1981 "Quartz Technology At The Sassafras Site, A Prehistoric Quarry-Workshop." In Quartz Technology in Prehistoric New England. Institute for Conservation Archaeology, Peabody Museum, Harvard University, Cambridge, Massachusetts. pp.49-62.
- Baugher, Sherene, Edward J. Lenik and Daniel N. Pagano
1991 Design Through Archaeology: An Archaeological Assessment of Fifteen City-Owned Cultural Institutions. New York Landmarks Preservation Commission. Prepared for The New York City Department of Cultural Affairs, New York.
- Beauchamp, William M.
1900 "Aboriginal Occupation of New York." Bulletin of the New York State Museum. Albany, New York, 32(7). February, 1900.
- Bolton, Reginald
1922 "Indian Paths in the Great Metropolis." Indian Notes and Monographs, Museum of the American Indian, Heye Foundation Misc. No. 23.

1934 Early History and Indian Remains on the Throg's Neck, Borough of the Bronx, City of New York. Bronx Society of Arts and Sciences, New York
- Boudreau, Jeffrey
1981 "Replicating Quartz Squibnocket Small Stemmed and Triangular Projectile Points." In Quartz Technology in Prehistoric New England. Institute for Conservation Archaeology, Peabody Museum, Harvard University, Cambridge, Massachusetts. pp.5-34.
- Bradley, Bruce A.
1975 "Lithic Reduction Sequences: A Glossary and Discussion." In Lithic Technology: Making and Using Stone Tools. Earl Swanson, ed. World Anthropology, Mouton Publishers, The Hague, Paris.

- Braun, David P.
 1987 "Coevolution of Sedentism, Pottery Technology, and Horticulture in the Central Midwest, 200 B.C. - A.D. 600. Emergent Horticultural Economies of the Eastern Woodlands. William F. Keegan ed. Occasional Paper No. 7. Southern Illinois University at Carbondale, Center for Archaeological Investigations.
- Brennan, Louis A.
 1974 "The Lower Hudson: A Decade of Shell Middens." Archaeology of Eastern North America 2(1):81-93.
- Brumbach, Hetty Jo
 1986 "Anadromous Fish and Fishing: A Synthesis of Data From the Hudson River Drainage." Man in the Northeast 32:35-66.
- Callanan, Kevin
 1981 "Quartz Technology Within the Narragansett Basin Region: A Challenge in Lithic Analysis." In Quartz Technology in Prehistoric New England. Institute for Conservation Archaeology, Peabody Museum, Harvard University, Cambridge, Massachusetts. pp.77-84.
- Ceci, Lynn
 1979 "Maize Cultivation in Coastal New York." North American Archaeologist 1(1):45-74.
- Cohn, Michael and Robert Apuzzo
 1988 "The Pugsley Avenue Site." The Bulletin: Journal of the New York State Archaeological Association. 96:5-7.
- DeCarlo, Valerie
 1990 Interim Report: Archaeological Survey of Riverdale Park Conducted by Wave Hill, 1985 to 1989. Prepared by Wave Hill, Bronx, New York.
- Dimmick, Frederica
 1994 "Creative Farmers of the Northeast: A New View of Indian Maize Horticulture." North American Archaeologist. 15(3):235-252.
- Dunn/HAA
 1992 Cultural Resources Survey: Stage 1 & 2. Goshen Quarry Future Mining Area. Dutchess Quarry and Supply Company. Town of Goshen. Orange County, New York.
- Eisenberg, Leonard
 1978 "Paleo-Indian Settlement Patterns in the Hudson- Delaware River Drainages." Occasional Publications in Northeastern Anthropology No. 4.

- Ericson, Jonathon E.
1984 "Toward the Analysis of Lithic Production Systems." In Prehistoric Quarries and Lithic Production. Jonathan E. Ericson and Barbara A. Purdy, eds. Cambridge University Press, Cambridge.
- Funk, Robert E.
1976 Recent Contributions to Hudson Valley Prehistory. Memoir 22, New York State Museum. The University of the State of New York, The State Education Department, Albany, New York.
- Goddard, Ives
1978 "Eastern Algonquian Languages." In Northeast, edited by Bruce G. Trigger, pp. 70-77. Handbook of North American Indians, Vol. 15, William G. Sturtevant, general editor. Smithsonian Institution, Washington, D. C.
- Gould, R.A., D.A. Koster and A.H.L. Sontz
1971 "The Lithic Assemblage of the Western Desert Aborigines of Australia." American Antiquity 36:149-169.
- Gramley, Richard M.
1980 "Prehistoric Industry at the Mt. Jasper Mine, Northern New Hampshire." Man in the Northeast. 20:1-24.

1984 "Mount Jasper: A Direct-Access Lithic Source Area in the White Mountains of New Hampshire." In Prehistoric Quarries and Lithic Production. Jonathan E. Ericson and Barbara A. Purdy, eds. Cambridge University Press, Cambridge.
- Grumet, Robert S.
1981 Native American Place Names in New York City. Museum of the City of New York, New York.

1990 "Historic Contact: Indians and Colonists in Northeastern North America, 1497-1783." Draft National Historic Landmark Theme Study. United States Department of the Interior, National Park Service. October 1990.
- Isachsen, Y.W., E. Landing, J.M. Lauber, L.V. Rickard and W.B. Rogers, eds.
1991 Geology of New York: A Simplified Account. Educational Leaflet No. 28. The New York State Museum/Geological Survey, The University of the State of New York. The State Education Department, Albany, New York.
- Jenkins, Stephen
1912 The Story of the Bronx. New York: G.P Putnam's Sons

- Kearns, Betsy and Cece Kirkorian
1986 "Archaeological Sensitivity Study for the Quality Housing Rezoning Project." Prepared for Allee, King Rosen, and Fleming, Inc., New York.
- 1991 Chapel Farm II, Bronx New York, Cultural Resource Investigations, Stage II. Historical Perspectives, Inc., Riverside, Connecticut.
- Kraft, Herbert C.
1991 "The Indians of the Lower Hudson Valley at the Time of European Contact." The Archaeology and Ethnohistory of the Lower Hudson Valley and Neighboring Regions: Essays In Honor of Louis A. Brennan. Herbert C. Kraft, ed. Occasional Publications in Northeastern Anthropology, No. 11. Archaeological Services, Bethlehem, Connecticut. pp. 193-222.
- LaPorta, Philip
1993 Memo to Gail Guillet Re: Chapel Farm Estate Project. Philip Laporta, Glenwood, New Jersey. March 1993.
- Lavin, Lucianne and Donald R. Prothero
1992 "Prehistoric Procurement of Secondary Sources: The Case for Characterization." North American Archaeologist. 13(2):97-130.
- Lenik, Edward J.
1990 The Primrose Site: A Prehistoric Lithic Workshop. Prepared for Jonas Bastys Baltic Estates Inc., Croton-On-Hudson, New York.
- 1992 "Native American Archaeological Resources in Urban America: A View From New York." The Bulletin: Journal of the New York State Archaeological Association, No. 103:20-30.
- Lenik, Edward J. and Nancy L. Gibbs
1994 An Evaluation of Prehistoric Cultural Resources at the Chapel Farm Estate Property, Bronx, New York. SEQR #89PR11, CEQR #85-325-X. Prepared by Sheffield Archaeological Consultants for The Miller Associates, Cold Spring, New York.
- Lenik, Edward J., Ronald Dupont, Jr. and Philip LaPorta
1989 Cultural Resource Survey of the Centennial Hill Subdivision Property, Town of Warwick, Orange County, New York. Sheffield Archaeological Consultants, Wayne, New Jersey.

- Leudtke, Barbara E.
 1981 "Quartz Technology on Prudence and Patience Islands, Rhode Island." In Quartz Technology in Prehistoric New England. Institute for Conservation Archaeology, Peabody Museum, Harvard University, Cambridge, Massachusetts.
- 1984 "Lithic Material Demand and Quarry Production." In Prehistoric Quarries and Lithic Production. Jonathan E. Ericson and Barbara A. Purdy, eds. Cambridge University Press, Cambridge.
- Leveillee, Alan D. and Donna J. Souza
 1981 "Heat Treating Quartz: A Controlled Experiment." In Quartz Technology in Prehistoric New England. Institute for Conservation Archaeology, Peabody Museum, Harvard University, Cambridge, Massachusetts.
- Little, Elizabeth A.
 1985 "Prevailing Winds and Site Aspects: Testable Hypothesis About the Seasonality of Prehistoric Shell Middens at Nantucket, Massachusetts." Man in the Northeast. 29:15-27.
- McNamara, John
 1984 History in Asphalt. Bronx, N.Y.: The Bronx County Historical Society.
- Mulholland, Mitchell T.
 1988 "Territoriality and Horticulture: A Perspective for Prehistoric Southern New England." In Holocene Human Ecology in Northeastern North America, George P. Nichols, editor, pp. 137-166. Plenum Press, New York.
- New York State Archaeological Site Inventory Map
 1989 New York State Archaeological Site Inventory Map.
- Pagoulatos, Peter
 1993 "The Functions of Thermally Altered Stones: A Preliminary Study." The Bulletin: Journal of the New York State Archaeological Association. 105:26-30.
- Parker, Arthur C.
 1920 "The Archaeological History of New York." New York State Museum Bulletin. Nos. 235, 236. The University of the State of New York, New York State Museum, Albany, New York. July and August, 1920.
- Petraglia, Michael D.
 1994 "Reassembling the Quarry: Quartzite Procurement and Reduction along the Potomac." North American Archaeologist 15(4):283-320.

- Powell, Bernard W.
 1965 "An Aboriginal Quartz Quarry At Swamp Mortar Reservoir, Fairfield, Connecticut." Bulletin of the Archaeological Society of New Jersey 22:5-11.
- Purdy, Barbara A.
 1984 "Quarry Studies: Technological and Chronological Significance." In Prehistoric Quarries and Lithic Production. Jonathan E. Ericson and Barbara A. Purdy, eds. Cambridge University Press, Cambridge.
- Ritchie, Duncan and Richard A. Gould
 1985 "Back to the Source: A Preliminary Account of the Massachusetts Hill Quarry Complex." In Stone Tool Analysis: Essays in Honor of Don E. Crabtree. University of New Mexico Press, Albuquerque.
- Ritchie, William A.
 1977 "Some Regional Ecological Factors in the Prehistory of Man in the Northeast." The Bulletin of the New York State Archaeological Association 75:14-23.
 1980 The Archaeology of New York State. Revised edition. Harbor Hill Books, New York.
- Ritchie, William A. and Robert E. Funk
 1973 Aboriginal Settlement Patterns in the Northeast. Memoir 20, New York State Museum and Science Service, The State Education Department, Albany, New York.
- Rogers, Ann Frazer
 1981 "The Interpretation of Quartz Technology: Old Problems and New Potential." In Quartz Technology in Prehistoric New England. Institute for Conservation Archaeology, Peabody Museum, Harvard University, Cambridge, Massachusetts. pp. 123-130.
- Salwen, Bert
 1975 "Post-Glacial Environments and Cultural Change in the Hudson River Basin." Man in the Northeast 10:43-70.
- Sappington, Robert L.
 1984 "Procurement Without Quarry Production: Examples from Southwestern Idaho." In Prehistoric Quarries and Lithic Production. Jonathan E. Ericson and Barbara A. Purdy, eds. Cambridge University Press, Cambridge.
- Schaper, Hans F.
 1993 "Oysters and Settlement in the Lower Hudson Valley." The Bulletin: Journal of the New York State Archaeological Association. 106:24-36.

- Scharf, J. Thomas ed.
1886 History of Westchester County, New York, Including Morrisania, Kingsbridge, and West Farms which have been annexed to New York City. L.E. Preston and Company, Philadelphia.
- Schuberth, Christopher J.
1968 The Geology of New York City and Environs. Garden City, New York: National History Press.
- Shonnard, Frederic and W.W. Spooner
1900 History of Westchester County New York from Its Earliest Settlement to the Year 1900. New York History Company, New York.
- Singer, Clay A.
1984 "The 63-Kilometer Fit." In Prehistoric Quarries and Lithic Production. Jonathan E. Ericson and Barbara A. Purdy, eds. Cambridge University Press, Cambridge.
- Skinner, Alanson
1915 The Indians of Manhattan Island and Vicinity. Reprint Ira J. Friedman, Inc., Port Washington, 1961.
- Tieck, William A.
1968 Riverdale, Kingsbridge, Spuyten Duyvil. Fleming H. Revell Company, Old Tappan, New Jersey.
- Wiegand, Ernest A.
1987 Archaeological Reconnaissance Survey of the Rosenstiel Property, Greenwich, Connecticut. Prepared for S.E. Minor and Company, Greenwich, Connecticut.
- Willensky, Elliot and Norval White
1988 AIA Guide to New York City. Harcourt Brace Jovanovich, New York.

MAPS AND ATLASES.

Beers, Frederick

- 1868 Town of Yonkers, Westchester County, New York. F.W. Beers and Co., New York. Plate 21.
- 1877 Northern Half of Map of 24th Ward, Volume III, New York City. F.W. Beers and Co., New York. Plate K.

Bromley, George W. and Walter S.

- 1879 Atlas of the City of New York, 24th Ward. George W. and Walter S. Bromley, Philadelphia. Plate 40.
- 1882 Atlas of Westchester County, New York. George W. and Walter S. Bromley, Philadelphia. Plate R.
- 1893 Atlas of the City of New York, 23rd and 24th Wards. George W. and Walter S. Bromley, Philadelphia. Plates 37 and 38.
- 1900 Atlas of the City of New York, Borough of the Bronx, 23rd and 24th Wards. George W. and Walter S. Bromley, Philadelphia. Plates 34 and 38.
- 1905 Atlas of the City of New York, Borough of the Bronx. George W. and Walter S. Bromley, Philadelphia.
- 1911 Atlas of the City of New York, Borough of the Bronx. George W. and Walter S. Bromley, Philadelphia.
- 1924 Atlas of the City of New York, Borough of the Bronx. G.W. and Walter S. Bromley, Philadelphia. Plate 37.
- 1938 Atlas of the City of New York, Borough of the Bronx, North of 172nd Street. George W. and Water S. Bromley, Philadelphia. Plates 37 and 38.

Colton, G.W. and C.B.

- 1877 Coltons Map of the County of Westchester. G.W. and C.B. Colton, New York.

Des Barres, J.F.W.

- 1777 A Sketch of the Operations of His Majesty's Fleet and Army Under the Command of Vice Admiral The Knight Honorable Lord Viscount howe and General Sir William Howe. K.B. Des Barres. Repository: New York Public Library.

Dripps, Matthew

- 1853 Maps of the Southern Part of Westchester County, New York. M. Dripps, New York.

- Edsall, Thomas Henry
 1886 "Historic Sketch Map of Kingsbridge, 1645-1783." In J. Thomas Scharfs's History of Westchester County, New York, Including Morrisania, Kingsbridge, and West Farms which have been annexed to New York City. Volume 1. L.E. Preston and Company, Philadelphia. p. 746.
- Erskine, Robert
 1778 Route of Andre Ms. Survey. R. Erskine. Repository: New York Public Library.
 1780 Ms. Survey of Westchester County. R. Erskine, 1778-1780. Repository: New York Public Library.
- Galt and Hoy
 1879 A Birds Eye View of the City of New York. Galt and Hoy, New York.
- Hyde, E. Belcher
 1901 Atlas of the Borough of the Bronx, City of New York. Part of the 24th Ward. E. Belcher Hyde, New York.
 1912 Atlas of the Borough of the Bronx. Volume 2B. Update of 1900. E. Belcher Hyde and Company. Plate 5.
- Robinson, Edward
 1897 Certified Copies of Maps of the Annexed District, County of Westchester. Edward Robinson, New York.
 1890 Certified Copies of Important Maps Appertaining to the 23rd and 24th Wards, City of New York. Volume 2, Plate 16. Edward Robinson, New York.
 1888 Certified Copies of Important Maps Appertaining to the 23rd and 24th Wards, City of New York. Volume 1, Edward Robinson, New York.
- Sauthier/Faden
 1777 Plan of the Operations of the King's Army Under the Command of General Sr. William Howe, K.B. Repository: Cooper Hewitt Museum, New York.
- Topographic Map
 c1970s Topographic Map of Block 5848 Prior to Russian Federation Construction. Provided by Wall and Associates, Inc., New York.
- Viele, Egbert
 1874 Topographical Atlas of the City of New York Including Annexed Territory. New York: Egbert L. Viele.

Westchester County Historical Society

1978 Westchester Heritage Map: Indian Occupation, Colonial
And Revolutionary Names, Structures and Events. Roads
Originally Surveyed by Robert Erskine in 1778-1780.
The Junior League of Westchester-On-Hudson, Westchester
County Historical Society.

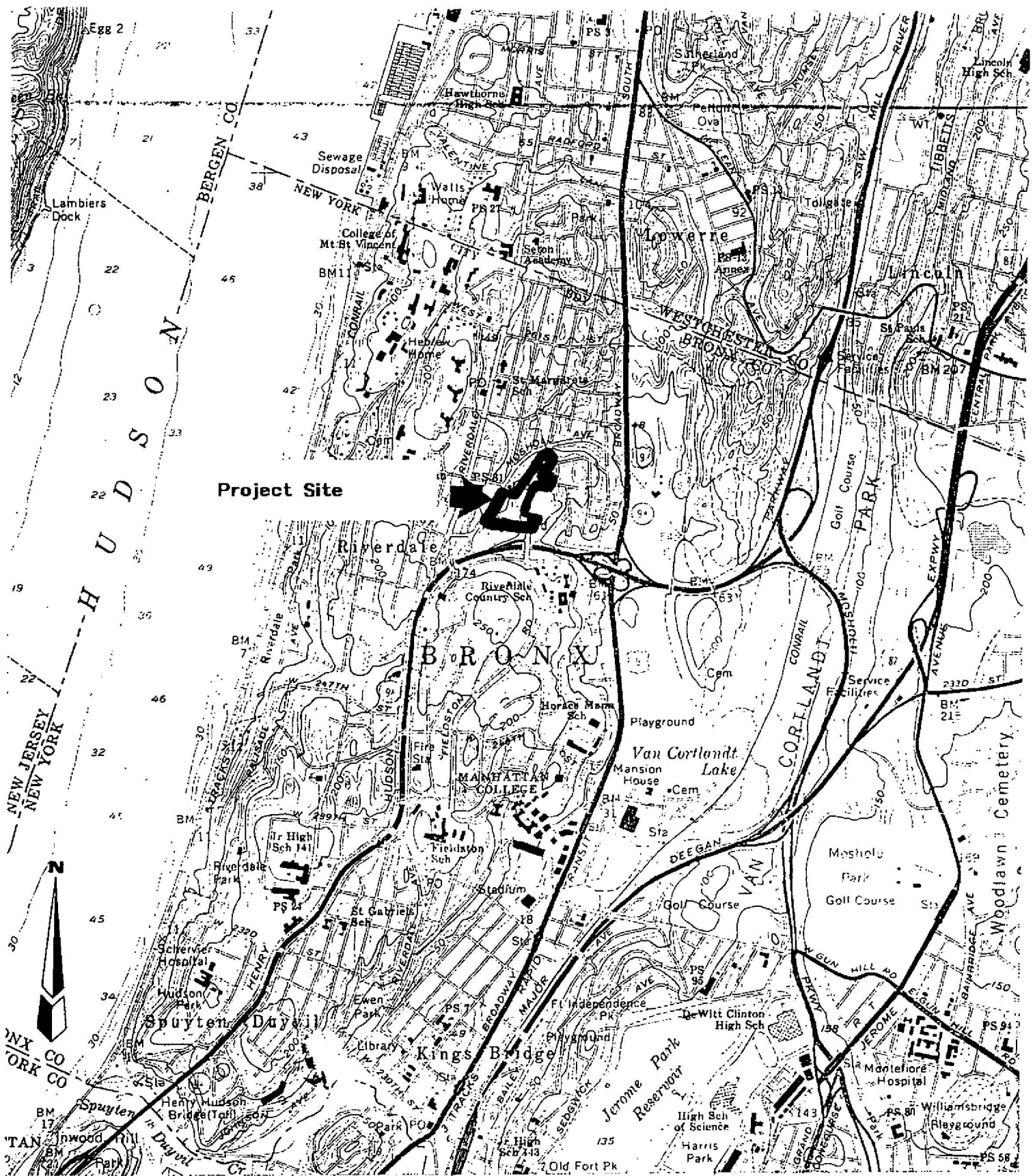


FIGURE 1

U.S.G.S. Topographic Map - Yonkers, N.Y. - N.J. Quad
 1979
 Scale 1:24000

Maps

Approximate Distribution of Bedrock Types in Northern New York City and Adjacent Westchester County

Figure 3

Project Site

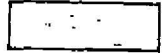
Manhattan Formation (Schists)



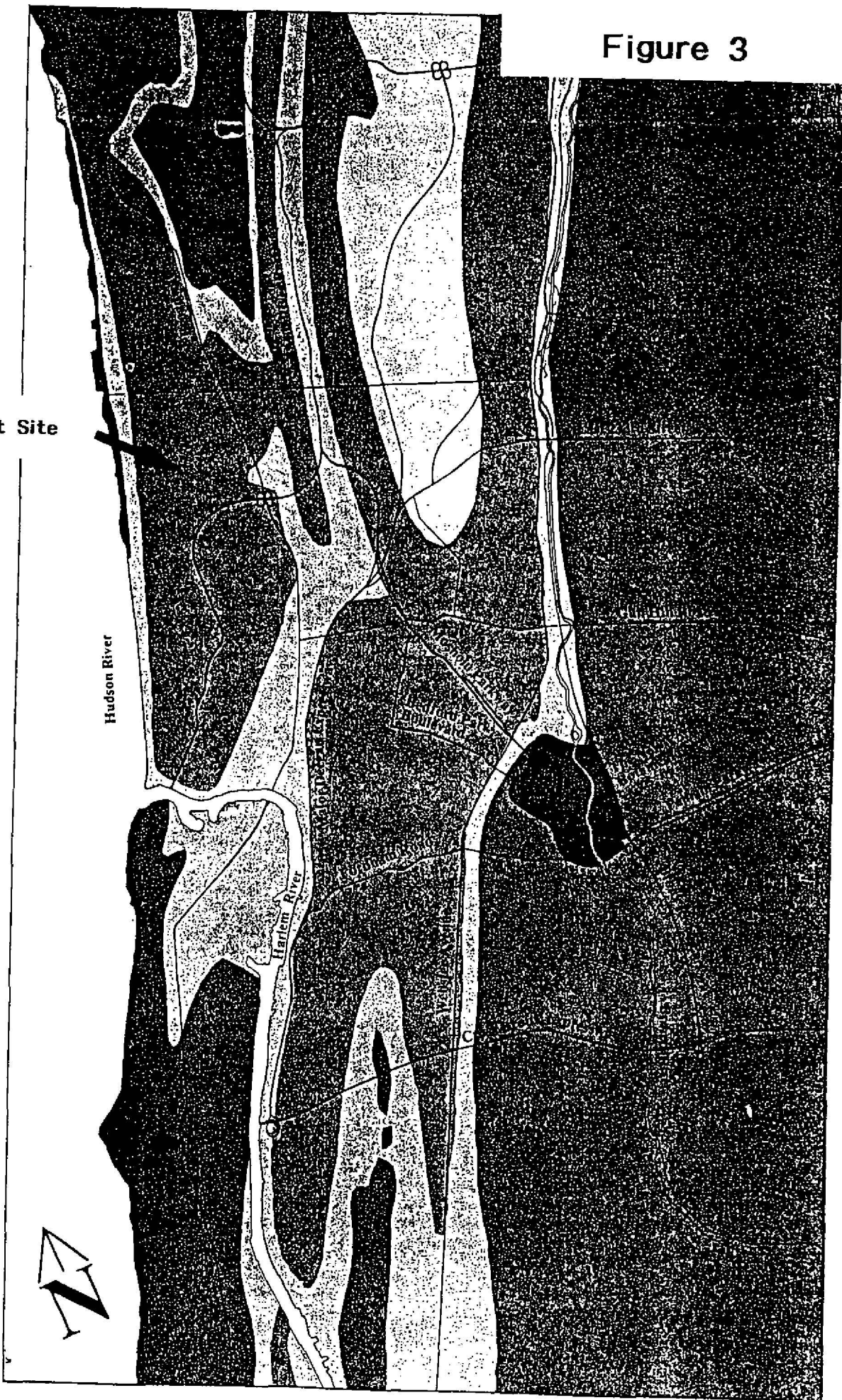
Fordham Gneiss



Yonkers Gneiss



Inwood Marble



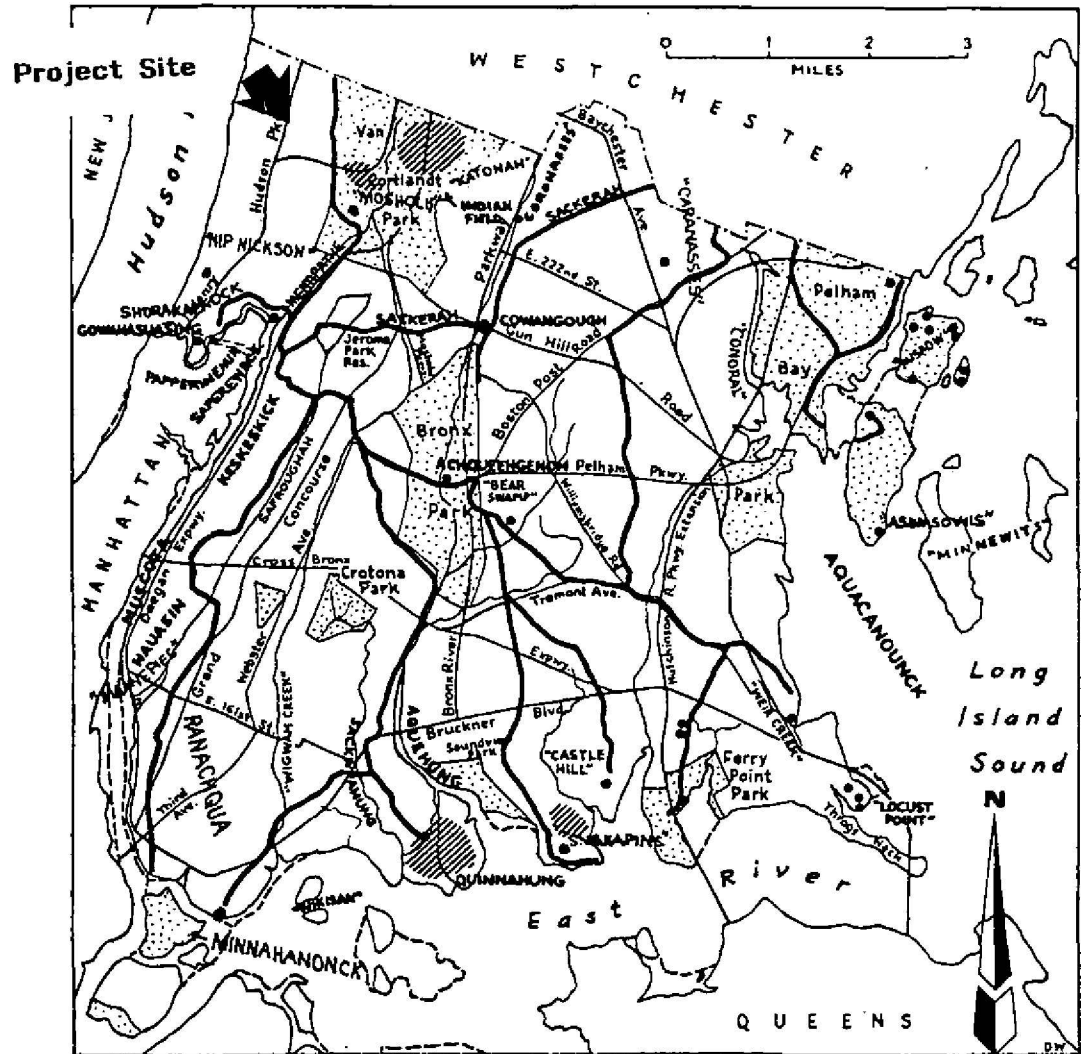


FIGURE 4
 Bolton's Indian Paths in the Great Metropolis.

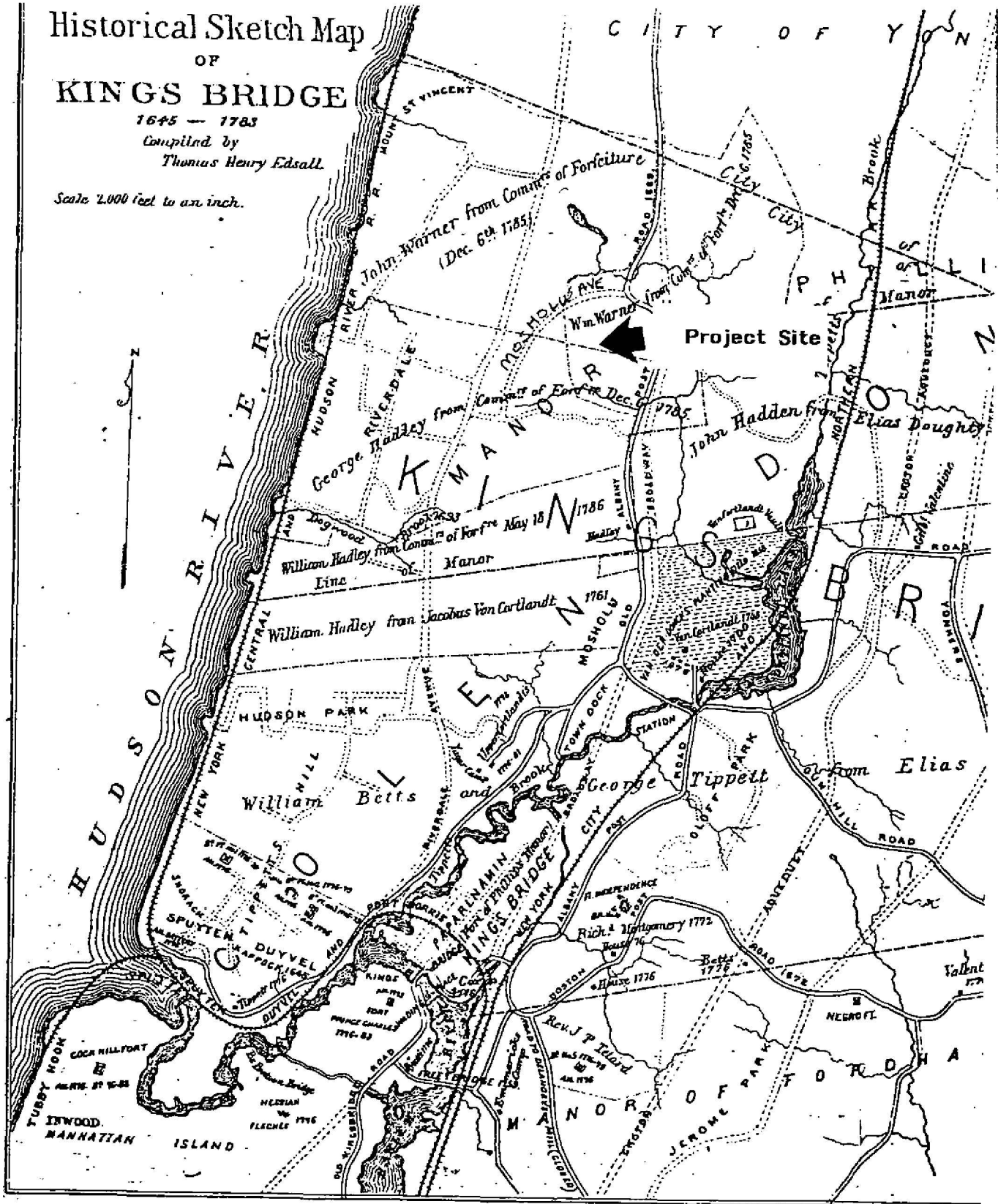


FIGURE 5

Edsall Historical Sketch Map of Kingsbridge, 1645 - 1783

Source: Scharf 1886 History of Westchester County, New York, Including Morrisania, Kingsbridge, and West Farms which have been annexed to New York City. p.746.



FIGURE 6

Viele Topographic Atlas of the City of New York
Including Annexed Territory. 1874.

No Scale

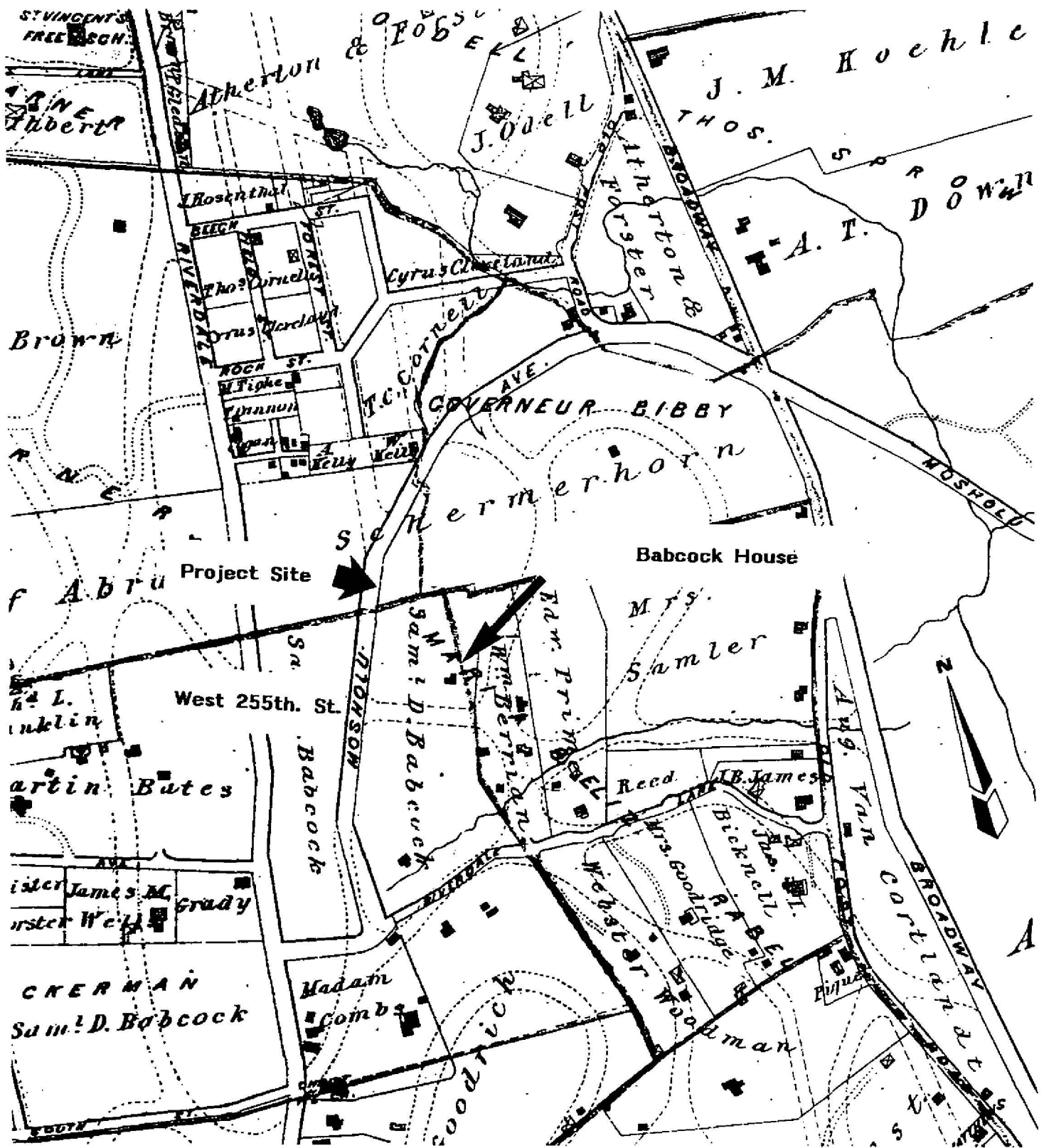


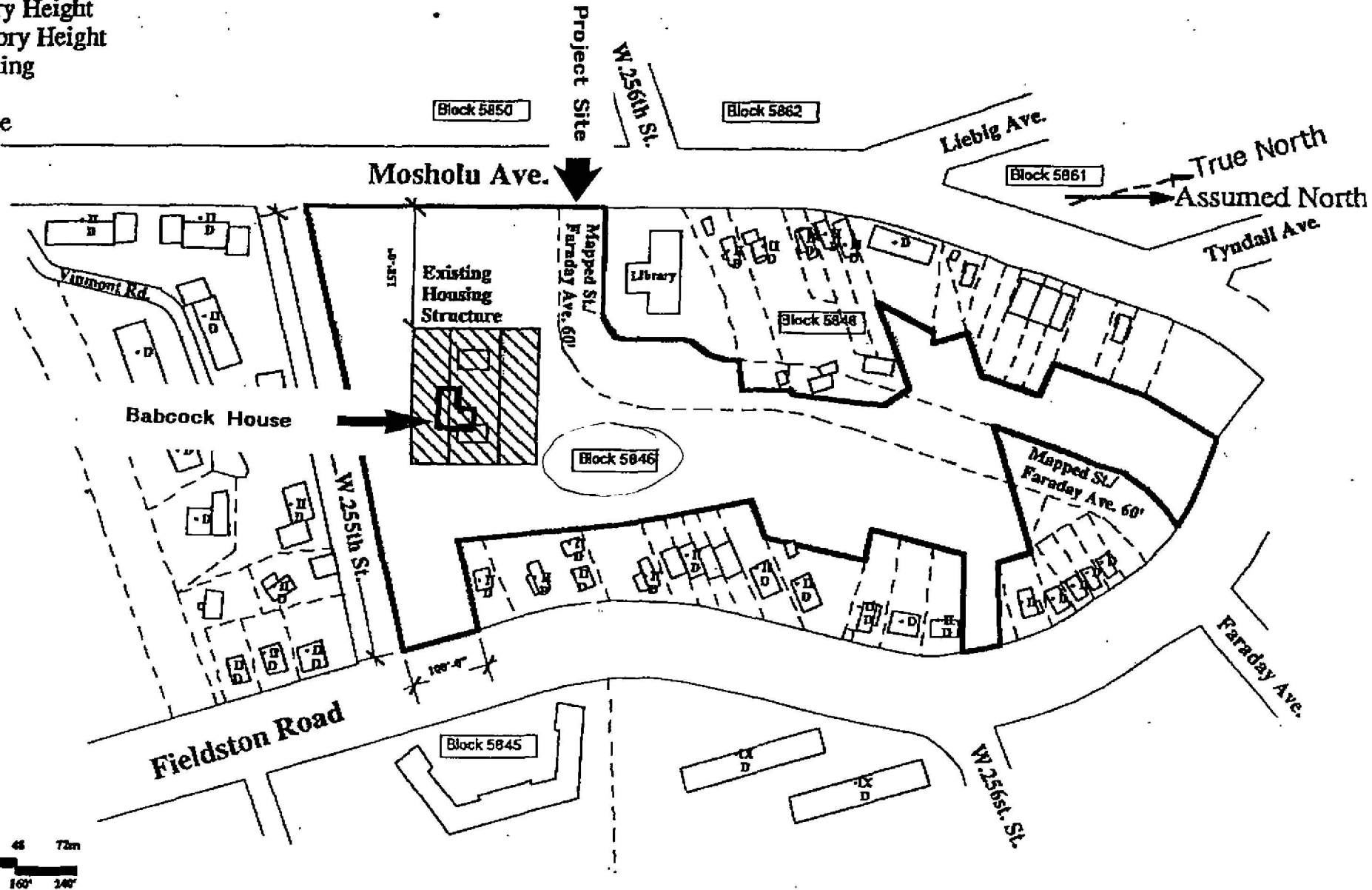
FIGURE 7

Bromley Atlas of the City of New York, 24th Ward. 1879
 Plate 40

Scale 1" = 600'

Legend For Surrounding Structures

- II- 2 Story Height
- IX- 11 Story Height
- D- Dwelling
- S- Store
- G- Garage
- L- Loft
- Of- Office



Site Plan:
 Existing Block Diagram
 Preliminary: 04/ 1995

Site of Russian Housing Compound



FIGURE 8 Composite of Bromley 1900 Atlas of the City of New York, Borough of the Bronx, 23rd and 24th Wards and current project site plans.

Legend For Surrounding Structures

- II- 2 Story Height
- IX- 11 Story Height
- D- Dwelling
- S- Store
- G- Garage
- L- Loft
- Of- Office

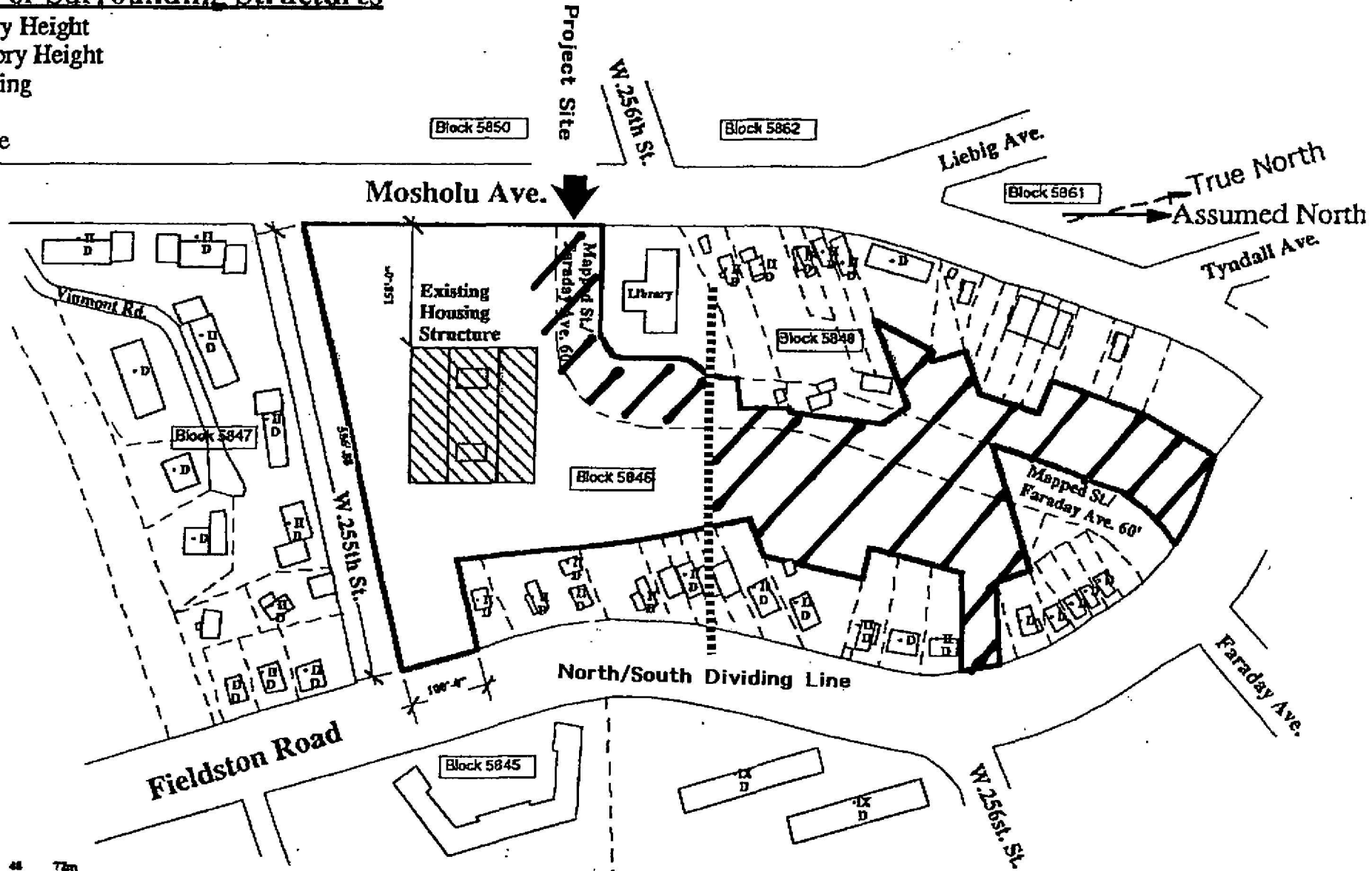


Figure 9

PREHISTORIC ARCHAEOLOGICAL SENSITIVITY

Site Plan:
Existing Block Diagram
Preliminary: 04/ 1995

Dark hatch marks portray archaeologically sensitive areas. Proposed building impacts will occur primarily on southern section and 50 feet +/- north onto northern section.



A. Extant residential tower on Russian Government property.
Facing east from Mosholu Avenue.



B. Recreational area just north of residential tower.
Facing south.



C. Playground on level area next to Mosholu Avenue, just northwest of tower. Note precipice in background. Facing east from Mosholu Avenue.



D. In-ground pool on right, play areas on left. Directly north of residential tower. Facing north.



E. Subsurface piping for the pool's filtration system, directly southeast of in-ground pool. Note the retaining wall - indicative of extensive land manipulation. Facing northeast.



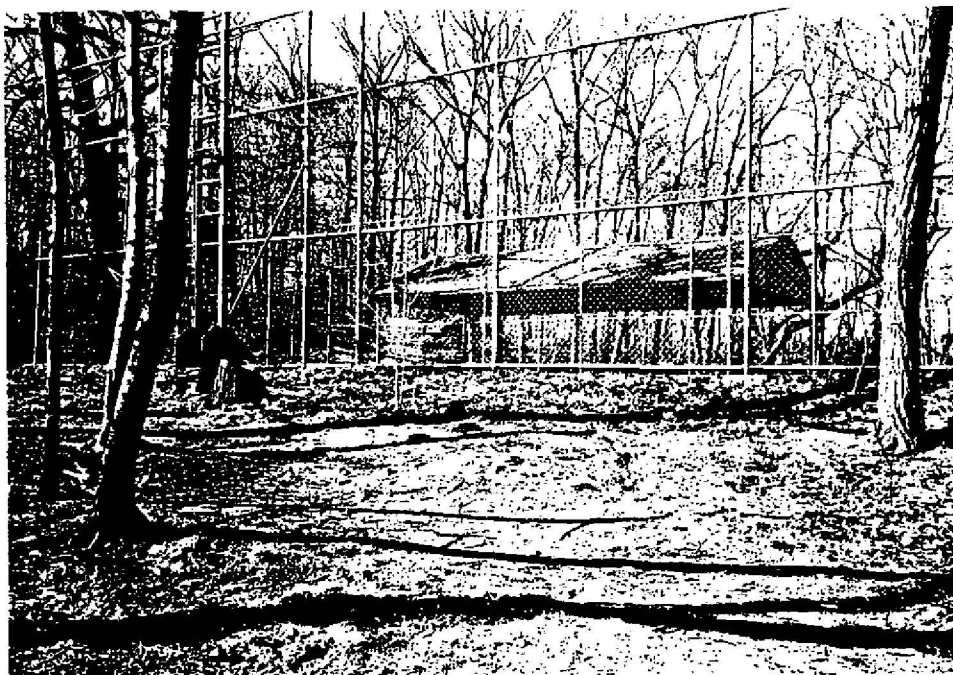
F. East facing precipice directly north of the residential tower. Facing east from Mosholu Avenue.



G. Rocky terrain north of residential tower. Facing south.



H. Undeveloped northern half of property site. Note rock outcrops and lack of ground cover. Facing north.



I. Picnic pavilion and tennis court at northern end of property. Facing southeast.



J. Undeveloped wooded knolls with rock outcrops on northern half of property site. Facing southeast.



K. Quartz veins in the rock outcrops on northern half of project site. Facing east.

APPENDIX

- A. Correspondence from New York State Museum
- B. Correspondence from New York State Office
of Parks, Recreation, and Historic Preservation

NEW YORK STATE MUSEUM

3122 Cultural Education Center
Albany, NY 12230
518/474-5813 FAX 518/473-8496

Anthropological Survey

Page 1 of 2

DATE: 5/3/95

To:
CECE KIRKORIAN
HISTORICAL PERSPECTIVES
P.O. BOX 3037
WESTPORT, CT 06880

Proposed Project: RUSSIAN GOV'T. HOUSING
7.5' U.S.G.S. Quad: YONKERS

In response to your request our staff has conducted a search of our data files* for locations and descriptions of prehistoric archaeological sites within the area indicated above. The results of the search are given below.

If specific information requested has not been provided by this letter, it is likely that we are not able to provide it at this time, either because of staff limitations or policy regarding disclosure of archaeological site data.

Questions regarding this reply can be directed to the site file manager, at (518) 474-5813 or the above address. Please refer to the N.Y.S.M. site identification numbers when requesting additional information.

Please resubmit this request if action is taken more than one year after your initial information request.

*[NOTE: Our files normally do not contain historic archeological sites or architectural properties. For information on these types of sites as well as prehistoric sites not listed in the N.Y.S.M. files contact The State Historic Preservation Office; Office of Parks, Recreation & Historic Preservation; Agency Building #1; Empire State Plaza; Albany, NY, 12238 at (518) 474-0479.

RESULTS OF THE FILE SEARCH:

Recorded sites ARE located in or within one mile of the project area. If so, see attached list.

Code "ACP" = sites reported by Arthur C. Parker in The Archeology Of New York, 1922, as transcribed from his unpublished maps.

SEARCH CONDUCTED BY: Bu (initials) Anthropological Survey, NYS Museum

cc: N.Y.S. OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION; HISTORIC PRESERVATION FIELD SERVICES BUREAU

5/3/95 To: CECE KIRKORIAN, HISTORICAL PERSPECTIVES

Project: RUSSIAN GOV'T. HOUSING Topo. Maps: YONKERS
BIA (initials) Anthropological Survey, NYSM

New York State Museum Prehistoric Archaeological Site Files
EVALUATION OF ARCHAEOLOGICAL SENSITIVITY FOR PREHISTORIC (NATIVE AMERICAN) SITES
Examination of the data suggests that the location indicated has the following sensitivity rating:

HIGH PROBABILITY OF PRODUCING PREHISTORIC ARCHAEOLOGICAL DATA.

The reasons for this finding are given below:

- A RECORDED SITE(S) IS(ARE) INDICATED IN, ADJACENT TO, OR IN THE VICINITY OF THE LOCATION AND WE HAVE REASON TO BELIEVE IT(THEY) COULD BE IMPACTED BY THE PROPOSED ACTIVITY.
- A RECORDED SITE IS INDICATED IN THE GENERAL VICINITY OR SOME DISTANCE AWAY. DUE TO THE MARGIN OF ERROR IN THE LOCATION DATA IT IS POSSIBLE THE SITE ACTUALLY EXISTS IN OR IMMEDIATELY ADJACENT TO THE LOCATION.
- THE TERRAIN IN THE LOCATION IS SIMILAR TO TERRAIN IN THE GENERAL VICINITY WHERE RECORDED ARCHAEOLOGICAL SITES ARE INDICATED.
- THE PHYSIOGRAPHIC CHARACTERISTICS OF THE LOCATION SUGGEST A HIGH PROBABILITY OF PREHISTORIC OCCUPATION OR USE.
- THE PHYSIOGRAPHIC CHARACTERISTICS OF THE LOCATION SUGGEST A MEDIUM PROBABILITY OF PREHISTORIC OCCUPATION OR USE.
- THE PHYSIOGRAPHIC CHARACTERISTICS OF THE LOCATION SUGGEST A LOW PROBABILITY OF PREHISTORIC OCCUPATION OR USE.
- EVIDENCE OF CULTURAL OR NATURAL DESTRUCTIVE IMPACTS SUGGESTS A LOSS OF ORIGINAL CULTURAL DEPOSITS IN THIS LOCATION.
- THE PHYSIOGRAPHIC CHARACTERISTICS OF THE LOCATION ARE MIXED, A HIGHER THAN AVERAGE PROBABILITY OF PREHISTORIC OCCUPATION OR USE IS SUGGESTED FOR AREAS IN THE VICINITY OF EITHER PRESENT OR PREEXISTING BODIES OF WATER, WATERWAYS, OR SWAMPS. A HIGHER THAN AVERAGE PROBABILITY IS SUGGESTED FOR ROCK FACES WHICH AFFORD SHELTER OR FOR AREAS SHELTERED BY BLUFFS OR HILLS. AREAS IN THE VICINITY OF CHERT DEPOSITS HAVE A HIGHER THAN AVERAGE PROBABILITY OF USE. DISTINCTIVE HILLS OR LOW RIDGES HAVE AN AVERAGE PROBABILITY OF USE AS A BURYING GROUND. LOW PROBABILITY IS SUGGESTED FOR AREAS OF EROSIONAL STEEP SLOPE.
- PROBABILITY RATING IS BASED ON THE ASSUMED PRESENCE OF INTACT ORIGINAL DEPOSITS, POSSIBILITY UNDER FILL, IN THE AREA. IF NEAR WATER OR IF DEEPLY BURIED, MATERIALS MAY OCCUR SUBMERGED BELOW THE WATER TABLE.
- INFORMATION ON OTHER SITES MAY BE AVAILABLE IN A REGIONAL INVENTORY MAINTAINED AT THE FOLLOWING LOCATION(S).

COMMENTS:

cc: N.Y.S. OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION; H. P. FIELD SERVICES BUREAU



H
U
D
S
O
N



4058

ROAD CLASSIFICATION

- Heavy-duty
- Medium-duty
- Light-duty
- Unimproved dirt
- Interstate Route
- U.S. Route
- State Route

1/2 mile radius
 1929
 MEAN LOW WATER
 IS VARIABLE
 LINE OF MEAN HIGH WATER
 FEET



QUADRANGLE LOCATION

compiled from aerial photographs

YONKERS, N. Y. - N
 NW 1/4 HARLEM 13' QUADRANGLE
 N4052.5 - W7352.5 7 5

N.Y.S.M. SITE FILES
ROOM 3122
CULTURAL EDUCATION CENTER
ALBANY, NEW YORK 12230

PHONE: (518) 474-5813
FAX: (518) 473-8496

NEW YORK STATE MUSEUM: OFFICE OF THE STATE ARCHEOLOGIST
PREHISTORIC SITE PROJECT SCREENING FILE: USE REQUEST FORM
Screening file site locations are by generalized .5 mile circle.

NAME Cecilia Kuskorian

AGENCY/COMPANY/INSTITUTION REPRESENTED Historical Perspectives

ADDRESS P.O. Box 3037
Westport CT 06881 Phone # (203) 226-7637

RESUBMIT THIS REQUEST IF ACTION IS TAKEN MORE THAN ONE YEAR AFTER RESPONSE DATE.

PURPOSE OF REQUEST: Identify the proposed project, contractor, and nature of the work.
Project identifier Russian Govt Housing

EVENTUAL DISTRIBUTION OF DATA: (Specify range of data use and distribution, publication, reproduction, etc.).
Client Municipality & review agency

REQUESTED APPOINTMENT: Appointments are on the hour between 9 a.m. and 12 noon on Wednesdays.

1st Choice _____ date _____ time (or any) _____
2nd Choice _____ date _____ time (or any) _____

Appointments may be made by phone on Tuesday mornings or may be requested by mail. Requests should be mailed at least 2 weeks in advance of appointment date. You will be notified of your appointment date by mail.

U.S.G.S. 7.5' MAPS REQUESTED: (indicate if 15' maps)

Yonkers

FOR THE FOLLOWING PLEASE ATTACH
a copy of: 1. The project map
2. Site data list

The following site(s) may be within
or adjacent to the project area.
If so, please provide the
location of:

SITE #.	7.5' MAP
<u>7729</u>	<u>Yonkers</u> <u>virtually BW 5/95</u>
_____	_____
_____	_____
_____	_____
_____	_____

I understand that the information provided is to be used solely for the preparation of an environmental impact statement as required by State or Federal law and must be marked and maintained as 'Confidential' for use only as required by State or Federal Law or with the written permission of the State Archeologist.

Mr. Blair 5/1/95
(Signature) (Date)

Further listings on back

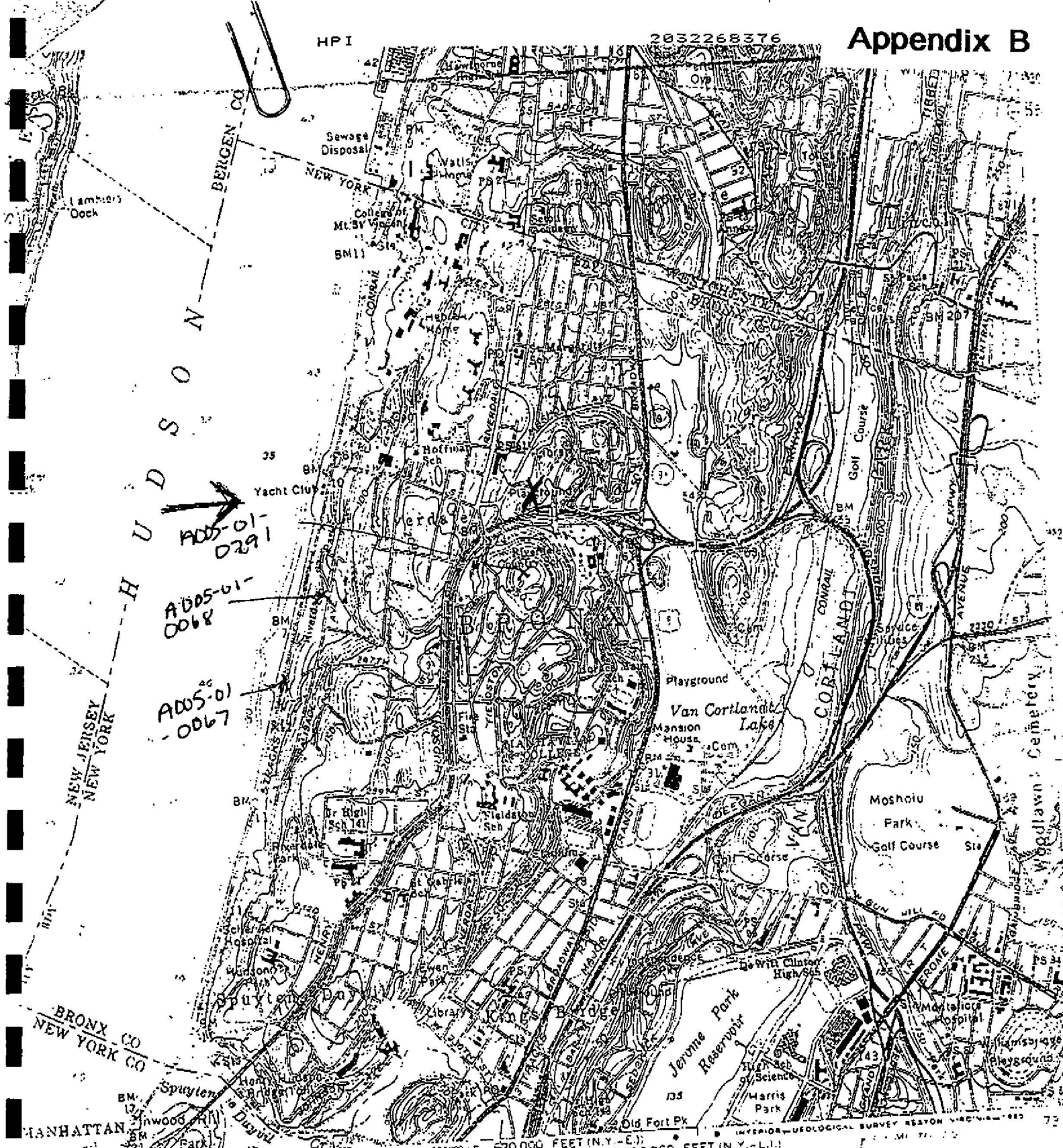
Please provide a sensitivity rating for the attached project area

Indicate which you prefer
 Mail my response (addressed envelope attached)
 Hold my response for pick-up on (give date & time)

N.Y.S. MUSEUM ARCHAEOLOGICAL SITE FILE
 RM. 3122, C.E.C., ALBANY, N.Y., 12230
 CONFIDENTIAL: INFORMATION FOR RELEASE ONLY AS REQUIRED BY LAW
 OR AS AUTHORIZED BY THE STATE ARCHAEOLOGIST

ALT OLD #	SITE NAME	---K SITE AGE	N O W SITE TYPE	N--- STRA TIG.	REMARKS	7.5', +(15') TOPOS	REPORTER CO.	PROJ- ECT ID.
3	ACD Brick 1		village					
197	ACD NYCK 7	ACD Brick 12 #	Shell middens					
8	ACD NYCK 8	ACD Brick not #	Shell midden					
27	ACD Brick not #		Camp					
9	Chapel Farm II		quartzite quarry workshop					

2032268376



1:50,000
 620,000 FEET (N.Y.-E.)
 2,030,000 FEET (N.Y.-L.I.)
 1:50,000 METRIC BRIDGE 6:1

ROAD CLASSIFICATION
 Heavy-duty ————— Light-duty —————
 Medium-duty ————— Unimproved dirt —————
 Interstate Route U.S. Route State Route

1 MILE
 1 FOOT
 YEAR OF 1929
 THIS IS MEAN LOW WATER
 HEIGHT IS VARIABLE
 LINE OF MEAN HIGH WATER

NEW JERSEY
 QUADRANGLE LOCATION

YONKERS, N.Y. - N.
 NW/4 HARLEM 15' QUADRANGLE
 N4052.5 - W7352.5/7.3

NEW YORK STATE HISTORIC ARCHAEOLOGICAL SITE INVENTORY FORM

For Office Use Only--Site Identifier A005-01-0067

Project Identifier Riverdale Park Survey
A005-01-0067

Date 11/27/85
Phone (212) 549-3200

Your Name VALERIE DECARLO
Address 675 WEST 252ND ST.
BRONX, NY
zip 11374

Organization (if any) WAVE HILL

1. Site Identifier(s) CANAL HOUSE ; FEATURE 2
2. County BRONX One of following: City NEW YORK
Township _____
Incorporated Village _____
Unincorporated Village or Hamlet _____

3. Present Owner NYC. DEPARTMENT PARKS & RECREATION
Address THE ARSENAL - CENTRAL PARK
NEW YORK, NY
zip 10021

4. Site Description (check all appropriate categories):
Structure/site
Superstructure: complete partial collapsed not evident
Foundation: above below (ground level) not evident
Structural subdivisions apparent Only surface traces visible
Buried traces detected
List construction materials (be as specific as possible):
mortared stone foundation walls with adjoining slate patio; carriage road; partial remains lime kiln; wooden dock
Grounds
Under cultivation Sustaining erosion Woodland Upland
Never cultivated Previously cultivated Floodplain Pastureland
Soil Drainage: excellent good fair poor
Slope: flat gentle moderate steep
Distance to nearest water from structure (approx.) 100'
Elevation: approx 38' above USCGS datum

5. Site Investigation (append additional sheets, if necessary):
Surface--date(s) 12/6/85
Site Map (Submit with form*)
Collection
Subsurface--date(s) 11/15/85
Testing: shovel coring other drilling w/ some shovel cleaning unit size _____
no. of units _____ (Submit plan of units with form*)
Excavation: unit size _____ no. of units _____
(Submit plan of units with form*)
* Submission should be 8 1/2"x11", if feasible

Investigator VALERIE DECARLO
Manuscript or published report(s) (reference fully):
DeCarlo, Valerie. 1985. Riverdale Park Archaeological Project: Draft Report: Documentary Research & Proposed Field Strategy. unpublished report on file with NYC Department Cultural Affairs; NYC Department Parks & Recreation; Wave Hill.
Present repository of materials WAVE HILL ARCHAEOLOGY LAB

6. Site inventory:

- a. date constructed or occupation period 1830's-1950's
- b. previous owners, if known Joseph Delafield, Cleveland E. Dodge
- c. modifications, if known unknown, at present
(append additional sheets, if necessary) see attachment

7. Site documentation (append additional sheets, if necessary):

a. Historic map references

- 1) Name southern part of Westchester Co. Date 1853 Source M. Driggs map at New York Public Library
Present location of original, if known _____
- 2) Name Map of Yonkers, N.Y. & vicinity Date 1868 Source F.W. Beers map at N.Y. Public Library
Present location of original, if known _____

b. Representation in existing photography

- 1) Photo date ? 1890 ? Where located Tieck, Wm. A. 1968. Riverdale, Kingsbridge, Spuyten Duyvil.
- 2) Photo date _____ Where located F.H. Revell Co., N.J.

c. Primary and secondary source documentation (reference fully)

Tieck, Wm. A. 1968. Riverdale, Kingsbridge, Spuyten Duyvil. F.H. Revell Co., NJ.
Kane, Mary. 1947. Yesterday in Riverdale, Spuyten Duyvil. Unpublished report on file at Riverdale Neighborhood + Library Association, N.Y.

d. Persons with memory of site:

- 1) Name _____ Address _____
- 2) Name _____ Address _____

8. List of material remains other than those used in construction (be as specific as possible in identifying object and material):

If prehistoric materials are evident, check here and fill out prehistoric site form. _____

9. Map References: Map or maps showing exact location and extent of site must accompany this form and must be identified by source and date. Keep this submission to 8 1/2"x11", if feasible.

USGS 7 1/2 Minute Series Quad. Name Yonkers

For Office Use Only--UTM Coordinates _____

10. Photography (optional for environmental impact survey): Please submit a 5"x7" black and white print(s) showing the current state of the site. Provide a label for the print(s) on a separate sheet.

The size of the site makes it difficult to represent in photographs taken at ground level. No overhead photographs are available for this site.

NEW YORK STATE PREHISTORIC ARCHAEOLOGICAL SITE INVENTORY FORM

For Office Use Only--Site Identifier A005-01-0068

Project Identifier Riverdale Park Archaeological Project Date 1/12/88

Your Name Valerie DeCarlo
 Address Wave Hill
675 W. 252 St., Bronx, NY
Zip 11374

Phone (212) 549-3200

Organization (if any) Wave Hill

1. Site Identifier(s) Site 0068 (A005-01-0068); Flake Site
 2. County Bronx One of following: City New York (Riverdale section)
Township
Incorporated Village
Unincorporated Village or
Hamlet

3. Present Owner NYC Parks & Recreation
 Address The Arsenal - Central Park
New York, NY
Zip 10021

4. Site Description (check all appropriate categories):

Site

<input type="checkbox"/> Stray find	<input type="checkbox"/> Cave/Rockshelter	<input type="checkbox"/> Workshop
<input type="checkbox"/> Pictograph	<input type="checkbox"/> Quarry	<input type="checkbox"/> Mound
<input type="checkbox"/> Burial	<input type="checkbox"/> Shell midden	<input type="checkbox"/> Village
<input type="checkbox"/> Surface evidence	<input type="checkbox"/> Camp	<input type="checkbox"/> Material in plow zone
<input checked="" type="checkbox"/> Material below plow zone	<input checked="" type="checkbox"/> Buried evidence	<input type="checkbox"/> Intact occupation floor
<input type="checkbox"/> Single component	<input type="checkbox"/> Evidence of features	<input type="checkbox"/> Stratified
	<input type="checkbox"/> Multicomponent	

Location

<input type="checkbox"/> Under cultivation	<input type="checkbox"/> Never cultivated	<input checked="" type="checkbox"/> Previously cultivated
<input type="checkbox"/> Pastureland	<input checked="" type="checkbox"/> Woodland	<input type="checkbox"/> Floodplain
<input type="checkbox"/> Upland		<input type="checkbox"/> Sustaining erosion

Soil Drainage: excellent good fair poor
 Slope: flat gentle moderate steep
 Distance to nearest water from site (approx.) 70 ft.
 Elevation: 50 - 60 ft. above Hudson

5. Site Investigation (append additional sheets, if necessary):

Surface date(s) _____
 Site Map (Submit with form*)
 Collection

Subsurface--date(s) Spring 1986
 Testing: shovel coring other _____ unit size 1 1/2 - 2 ft dia
 no. of units 5 (Submit plan of units with form*)

Excavation: unit size 3 X 3 ft. no. of units 3
 (Submit plan of units with form*)

* Submission should be 8 1/2"x11", if feasible

Investigator Valerie DeCarlo

Manuscript or published report(s) (reference fully):

Present repository of materials Wave Hill

6. Component(s) (cultural affiliation/dates):

No diagnostic artifacts recovered

7 List of material remains (be as specific as possible in identifying object and material):

Chert, quartz, and quartzite flakes (apparently retouch)

If historic materials are evident, check here and fill out historic site form. X historic materials in plow zone above: represent early 20th c. estate gardens related to Wave Hill

8. Map References: Map or maps showing exact location and extent of site must accompany this form and must be identified by source and date. Keep this submission to 8 1/2"x11", if possible.

USGS 7 1/2 Minute Series Quad. Name Yonkers

For Office Use Only UTM Coordinates

9. Photography (optional for environmental impact survey): Please submit a 5"x7" black and white print(s) showing the current state of the site. Provide a label for the print(s) on a separate sheet.

Poor light conditions under dense forest cover rendered all site photos useless.

CONFIDENTIAL

NEW YORK STATE PREHISTORIC ARCHAEOLOGICAL SITE INVENTORY FORM

For Office Use Only - Site Identifier A00501.000791

Project Identifier Chapel Farm II Date January 30, 1991
(93221505)

Your Name Faline Schneiderman-Fox, S.O.P.A. Phone (203) 698-1147
Address P.O. Box 331
Riverside, CT 06878

Organization (if any) Historical Perspectives, Inc.

1. Site Identifier(s) Chapel Farm II,
2. County Bronx One of the following: City New York
Township _____
Incorporated Village _____
Unincorporated Village or Hamlet Riverdale

3. Present Owner Robert Kahn
Address 390 West 253rd Street
Bronx, New York 10971

4. Site Description (check all appropriate categories):

Site

<input type="checkbox"/> Stray find	<input type="checkbox"/> Cave/Rockshelter	<input checked="" type="checkbox"/> Workshop
<input type="checkbox"/> Pictograph	<input type="checkbox"/> Quarry	<input type="checkbox"/> Mound
<input type="checkbox"/> Burial	<input type="checkbox"/> Shell midden	<input type="checkbox"/> Village
<input type="checkbox"/> Surface evidence	<input type="checkbox"/> Camp	<input checked="" type="checkbox"/> Material
<input type="checkbox"/> Material below plow zone	<input type="checkbox"/> Buried evidence	<input type="checkbox"/> In plow zone
<input checked="" type="checkbox"/> Single component	<input type="checkbox"/> Evidence of features	<input type="checkbox"/> Intact occupation floor
Location	<input type="checkbox"/> Multicomponent	<input type="checkbox"/> Stratified
<input type="checkbox"/> Under cultivation	<input type="checkbox"/> Never cultivated	<input type="checkbox"/> Previously cultivated
<input type="checkbox"/> Pastureland	<input checked="" type="checkbox"/> Woodland	<input type="checkbox"/> Floodplain
<input type="checkbox"/> Upland		<input type="checkbox"/> Sustaining erosion

Soil Drainage: excellent ___ good fair ___ poor ___
Slope: flat gentle ___ moderate ___ steep ___
Distance to nearest water from site (approx.) ___ ?
Elevation 180 ft.

5. Site Investigation (append additional sheets, if necessary):

Surface--date(s) _____

Site Map (Submit with form*) _____

Collection _____

Subsurface--date(s) 12/11-12/14/1990

Testing: shovel X coring other _____ unit size 50x50cm.

no. of units 3 (Submit plan of units with form*)

Excavation: unit size 1x1m. no. of units 15

(Submit plan of units with form*)

Investigator Historical Perspectives, Inc.

Manuscript or published report(s) (reference fully):

City/Scape: Cultural Interpretations

Revised Cultural Resources Report for Chapel Farm II,
Riverdale, New York. June 1990.

Hartgen Archeological Associates, Inc.

Archeological Field Reconnaissance SEQR 1B, Chapel Farm II,
Bronx, New York. Prepared for Kahn Associates, Bronx, New
York. October 1990.

Present repository of materials: Historical Perspectives, Inc.,
to be transferred to Mr. Robert Kahn.

6. Component(s) (cultural affiliation/dates):

Probably Late Archaic due to predominance of quartz material (no
diagnostics, no charcoal samples).

7. List of material remains (be as specific as possible in
identifying object and material):

The prehistoric site consisted only of lithic material, pre-
dominately quartz. Of the 15 1x1 meter units, a total of 264 +/-
lbs. of quartz, and 2.5 +/- lbs. of quartzite was recovered. The
majority of quartz fragments were blocks and trim which appeared
to result from primary lithic reduction. Only a few identifiable
biface-reduction flakes represent secondary processing. The
following was noted during an examination of the lithics:

Quartz Flakes:	329
Quartz Bifaces (whole or fragmented):	44
Quartz Large Cores/Cobbles:	8
Quartz Tools-(ie. scrapers):	9
Quartzite Flakes:	3
Quartzite Large Cores/Cobbles:	1
Sandstone Flake:	1
Sandstone Gouge Tip (possible):	1
Hammerstone:	1

If historic materials are evident, check here and fill out historic site form. X

Scattered secondary deposits of 20th century cultural materials not considered potentially significant.

8. Map references: Map or maps showing exact location and extent of site must accompany this form and must be identified by source and date. Keep this submission to 8 1/2" x 11", if possible.

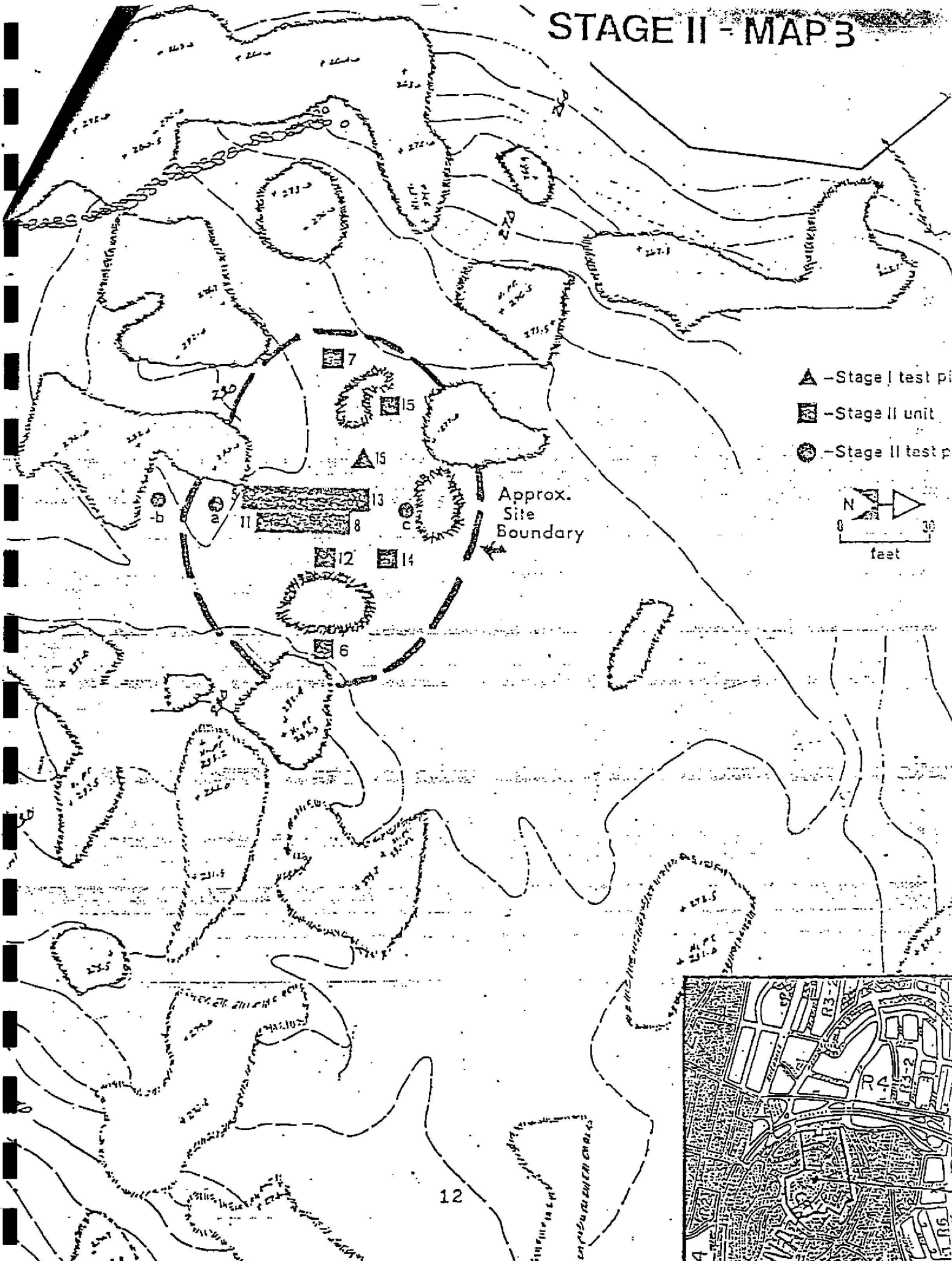
USGS 7 1/2 Minute Series Quad. Name Yonkers

For Office Use Only - UTM Coordinates _____

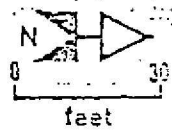
9. Photography (optional for environmental impact survey): Please submit a 5" x 7" black and white print(s) showing the current state of the site. Provide a label for the print(s) on a separate sheet.

See Appendix E.

STAGE II - MAP 3

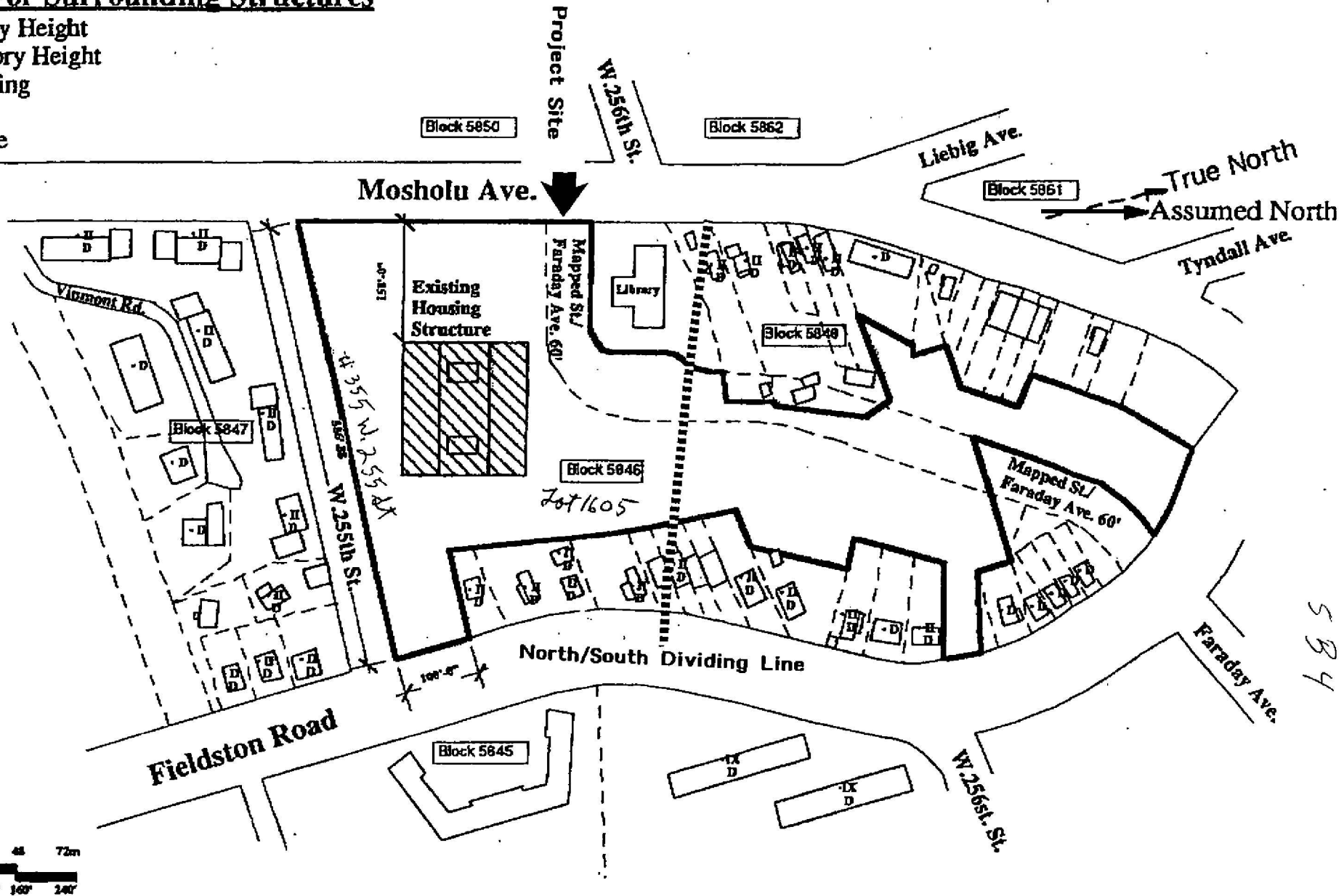


- ▲ - Stage I test pit
- - Stage II unit
- - Stage II test pit



Legend For Surrounding Structures

- II- 2 Story Height
- 1X- 11 Story Height
- D- Dwelling
- S- Store
- G- Garage
- L- Loft
- Of- Office



Site Plan:
 Existing Block Diagram
 Preliminary: 04/ 1995

Site of Russian Housing Compound



FIGURE 2 Project Site Boundaries