1014 Brook Avenue Rezoning

Block 2386, Lots 1, 2, 5, 7, 8, 11, 17, 20, 21, 22, 24, 29, 30, 34, 65, 66, 67, 74, and 164
MORRISANIA, BRONX COUNTY, NEW YORK

Supplemental Phase 1A Archaeological Documentary Study

Prepared for:

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Chapter 1: Introduction and Methodology

A. INTRODUCTION

The Applicant, 1004 Brooks LLC, is proposing the redevelopment of the property at 1004 Brook Avenue in the Morrisania neighborhood of the Bronx, NY (see **Figure 1**). The project is situated within the MX-7 (M1-1/R7-2) special zoning district that was established in in 2003 as part of the larger Morrisania Rezoning (CEQR 03DCP046X) that rezoned all or portions of twelve blocks bounded by East 168th Street to the north, Washington Avenue to the west, and Third Avenue to the east. That rezoning proposal sought to encourage new residential and economic development, bring residential uses into conformance with zoning and stabilize the mixed-use character of the area.

The proposed redevelopment of 1004 Brook Avenue would require the rezoning of the western two-thirds of Block 2386, which is bounded by East 164th Street, Brook Avenue, East 165th Street, and Washington Avenue (the "Rezoning Area"). The Rezoning Area includes 22 contiguous, privately owned tax parcels, including Block 2386, Lots 1, 2, 5, 7, 8, 11, 17, 20, 21, 22, 24, 29, 30, 34, 35, 59 (part) 65, 66, 67, 74, 136 (part), and 164 (part) (see **Figure 2**). The Projected Development Site includes nineteen of the lots within the Rezoning Area, including: Block 2386, Lots 1, 2, 5, 7, 8, 11, 17, 20, 21, 22, 24, 29, 30, 34, 65, 66, 67, 74, and 164. The Applicant currently owns/controls Lots 1, 7, 8, 11, 17, 20, 21, 22, 24, and 74, and is in negotiations to acquire lots 2, 5, 29, 30, 34, 65, 66, 67 and 164, after approval of the proposed rezoning. Subsequent to the proposed rezoning, the existing buildings on the Projected Development Site (see **Table 1-1**) would be demolished and the site would be redeveloped with two mixed-use 16- to 20-story buildings with affordable housing units; space for retail, recreation, and light manufacturing; publicly accessible open space; and a below-grade parking garage. The remaining three lots within the Rezoning Area include: Lot 35, which is developed with a two-story wood frame house built ca. 1899; Lot 236, an undeveloped paved parking lot and alley; and a portion of Lot 59, which is developed with a one-story auto repair shop. These three parcels are not expected to be redeveloped subsequent to the proposed rezoning.

Table 1-1
Tax Lots Included within the Projected Development Site

Lot	Address	Development	Year of Construction
1	421 East 164th Street	One-story brick structure and parking/storage area	1960
2	992 Brook Avenue	Paved parking/storage lot with trailers	n/a
5	994 Brook Avenue	One-story brick auto repair facility	1955
7	996 Brook Avenue	Paved parking/storage lot with trailers	n/a
8	1000 Brook Avenue	One-story brick/cement auto repair facility with paved parking/storage lot	1931
11	1004 Brook Avenue	Paved parking lot	n/a
17	1014 Brook Avenue	Paved parking lot	n/a
20	412 East 165th Street	Paved parking lot	n/a
21	414 East 165th Street	Paved parking lot	n/a
22	416 East 165th Street	Paved parking lot	n/a
24	422 East 165th Street	One-story garage/industrial building with paved parking area	1931

Table 1-1 (cont'd)
Tax Lots Included within the Projected Development Site

Lot	Address	Development	Year of Construction
29	432 East 165th Street	One-story brick building with paved parking area	1931
30	434 East 165th Street	One to two-story brick commercial building with paved parking area	1931
34	442 East 165th Street	Paved parking area	n/a
65	439 East 164th Street	One-story industrial building	1998
66	437 East 164th Street	One-story industrial building	1998
67	429 East 164th Street	Two-story industrial building	1931
74	425 East 164th Street	One-story auto repair building	1931
164	441 East 164th Street	Two-story warehouses	2004

B. ENVIRONMENTAL REVIEW AND PREVIOUS ARCHAEOLOGICAL ASSESSMENT

The Proposed Development Site was included within a Phase 1A Archaeological Documentary Study of the larger Morrisania Urban Renewal Area that was completed in 1992 by Joan H. Geismar, PhD. That assessment analyzed the archaeological sensitivity of nine blocks, including Block 2386. Geismar's study included a comprehensive summary of the foundation of the 19th century village of Morrisania as well as a summary of early land ownership of the Proposed Development Site and surrounding area. The locations of archaeological sensitivity and recommended test areas (RTAs) as identified by Dr. Geismar are summarized in **Table 1-2** and shown on **Figure 3**.

Table 1-2
Previous Archaeological Sensitivity Determinations

Lot	Address	Geismar (1992) Determination	Geismar RTA
1	421 East 164th St	Potential precontact period sensitivity at extreme eastern end	A (part)
2	992 Brook Ave	Potential precontact period sensitivity at extreme eastern end	A (part)
5	994 Brook Ave	Potential precontact period sensitivity at extreme eastern end	A (part)
7	996 Brook Ave	Potential precontact period sensitivity at extreme eastern end	A (part)
8	1000 Brook Ave	Potential precontact period sensitivity at extreme eastern end	A (part)
11	1004 Brook Avenue	Potential precontact period sensitivity in southeastern quadrant	A (part)
17	1014 Brook Avenue	Site of ca. 1865[1] house	n/a
20	412 East 165th St	Potential precontact period sensitivity at extreme southern end	A (part)
21	414 East 165th St	Potential precontact period sensitivity at extreme southern end	A (part)
22	416 East 165th St	Potential precontact period sensitivity at extreme southern end; ca. 1865 building partially located on lot	A (part)
24	422 East 165th St	Potential precontact period sensitivity at extreme southern end; ca. 1865 building partially located on lot; area of "no known development" in east half	A (part)
29	432 East 165th St	ca. 1865 building partially located on lot; area of "no known development" along northern side	n/a
30	434 East 165th St	Area of "no known development" along northern side	n/a
34	442 East 165th St	Area of "no known development" in northwest corner	n/a
65	439 East 164th St	No sensitivity	n/a
66	437 East 164th St	ca. 1865 building partially located on lot	n/a

Table 1-2
Previous Archaeological Sensitivity Determinations

Lot	Address	Geismar (1992) Determination	Geismar RTA
67	429 East 164th St	ca. 1865 building located on lot; area of "no known development" along western side	n/a
74	425 East 164th St	Area of "no known development" along southern side	n/a
164	441 East 164th St	Two ca. 1865 buildings partially or fully located on lot; areas of "no known development" in southeastern portion	28 and part of 29

Note: [1] Geismar (1992) assigns a ca. 1860 publication date to the Beers, Ellis, and Soule map of Morrisania (see **Figure 4**). A hand annotation bearing the date 1860 is identified on the copy of the map held in the collection of the New York Public Library. A second copy of the same map is on file with the Library of Congress, which does not assign a specific date to the map, but suggests that it was published ca. 1865. Based on identified property owners within the Development Site, the map must have been published after 1863 and is identified as "ca. 1865" in this analysis.

Source: Geismar (1992).

C. RESEARCH GOALS AND METHODOLOGY

This Supplemental Phase 1A Archaeological Documentary Study of the 1014 Brook Avenue Rezoning Area has been designed to satisfy the requirements of the New York City Landmarks Preservation Commission (LPC). The archaeological sensitivity of the Development Site was previously assessed by Geismar (1992). The 1992 Phase 1A Study established the precontact and historic period contexts and development and occupation histories for the Development Site. However, Geismar's study was prepared at a time when geographic information systems (GIS) software was not readily available. As such, the sensitivity maps prepared for this block do not accurately depict historical and modern site conditions. This analysis includes a GIS-based comparison of historical and modern topography designed to assess the extent to which landscape modification resulted in disturbance on the Development Site (**see Figure 5**). Furthermore, the 1992 analysis does not appear to have included a thorough review of Sanborn maps published after 1902 that are now readily available (see **Figures 6, 7, and 8**).[1] Finally, new development has occurred on the Development Site following the preparation of the 1992 analysis that resulted in new disturbance. This Supplemental Phase 1A Study was therefore designed to use modern tools and newly available information to reevaluate previous disturbance on the Development Site and refine the previously determined areas of archaeological sensitivity.

This Supplemental Phase 1A Archaeological Documentary Study therefore has three major goals: (1) reassess the extent to which the Development Site has been disturbed as a result of historical development—using research materials not accessed in 1992—and as a result of new developments that occurred subsequent to the 1992 analysis; (2) revise previous determinations of the Development Site's potential archaeological sensitivity as appropriate based on new research; and (3) to make recommendations for further archaeological analysis, if necessary. The steps taken to fulfill these goals are explained in greater detail below.

The first goal of this Supplemental Phase 1A study is to determine the likelihood that archaeological resources could have survived intact within the Development Site after development and landscape alteration (e.g., erosion, grading, filling, etc.). Potential disturbance—associated with paving, utility installation, and other previous construction impacts—was also considered. As described by the New York Archaeological Council (NYAC) in their *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State*, published in 1994 and subsequently adopted by the New York State Historic Preservation Office (SHPO):

[1] While Sanborn maps published in 1919 and 1951 are cited in Table 4 of Geismar's report and were used to assess 20th century disturbance of individual properties, they do not appear to have been used to designate "areas of no known development" as identified on Figure 37a of that report, which depicts locations of archaeological sensitivity.

> *An estimate of the archaeological sensitivity of a given area provides the archaeologist with a tool with which to design appropriate field procedures for the investigation of that area. These sensitivity projections are generally based upon the following factors: statements of locational preferences or tendencies for particular settlement systems, characteristics of the local environment which provide essential or desirable resources (e.g., proximity to perennial water sources, well-drained soils, floral and faunal resources, raw materials, and/or trade and transportation routes), the density of known archaeological and historical resources within the general area, and the extent of known disturbances which can potentially affect the integrity of sites and the recovery of material from them* (NYAC 1994: 2).

The second goal of this supplemental study is to revise previous determinations of the Development Site's archaeological sensitivity. As stipulated by the NYAC standards, sensitivity assessments should be categorized as low, moderate, or high to reflect "the likelihood that cultural resources are present within the project area" (NYAC 1994: 10). For the purposes of this study, those terms are defined as follows:

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

As mentioned above, the final goal of this study is to make recommendations for additional archaeological investigations where necessary. According to NYAC standards, Phase 1B testing is generally warranted for areas determined to have moderate sensitivity or higher. Archaeological testing is designed to determine the presence or absence of archaeological resources that could be impacted by a proposed project. Should they exist on the Development Site, such archaeological resources could provide new insight into precontact occupation in the Bronx, the transition from Native American to European settlement, or the historic period occupation of the Development Site.

To satisfy the three goals as outlined above, supplemental documentary research was completed to establish a chronology of the Development Site's development and landscape alteration beyond that described in the 1992 Phase 1A Study. Data were gathered from various published and unpublished primary and secondary resources, such as historical maps and topographical analyses (both modern and historic). These published and unpublished resources were consulted at various repositories, including the Main Research Branch of the New York Public Library (including the Local History and Map Divisions), the Library of Congress, the Westchester County Archives, and the Westchester County Clerk.

Chapter 2: Background Research

A. GEOLOGY AND TOPOGRAPHY

The Bronx is found within a geographic bedrock region known as the Manhattan Prong of the New England (Upland) Physiographic Province. This region is a "rolling lowland area…of metamorphic rocks" dating to the Early Paleozoic, which began approximately 575 million years ago (Isachsen et al. 2000). The bedrock underlying the Development Site is Inwood Marble, which was formed in the Cambrian and Lower Ordovecian periods and dates to approximately 435 million years before present (Fisher, et al. 1970; Isachsen, et al. 2000). The slightly younger rocks of the Manhattan Formation are situated less than 1,000 feet to the east (Fisher, et al. 1970). Surficial geology in the immediate vicinity of the Development Site includes a mix of glacial till and exposed bedrock (Cadwell, et al. 1986). The glacial till was left behind by massive glaciers of up to 1,000 feet thick that retreated from the area towards the end of the Pleistocene. There were four major glaciations that affected the region until approximately 12,000 years ago when the Wisconsin period—the last glacial period—came to an end (Schuberth 1968). The rocks and sand deposits left behind as a result of glacial movements brought about the creation of hundreds of sand hills, some of which were nearly 100 feet tall. In many cases, the glaciers transported huge boulders, including "Pudding Rock," a glacial erratic that was in the vicinity of East 166th Street and Boston Post Road until the early 20th century (Kelly 1909). The "immense, loaf-shaped boulder of sandstone and gravel" was named by "local English farmers [who thought] the huge, purplish rock shot through with small stones looked just like a great big Christmas plum pudding" (DeVillo 2015:75). The rock was later "blown up to make room for tenements" (ibid: 224, n45).

B. ASSESSMENT OF LANDSCAPE MODIFICATION

Modern topographical information obtained from Light Detection and Ranging (Lidar) analysis as published by the City of New York in 2017[1] indicates that the ground surface in the parking lot slopes down to the south and east. The elevation in the northwestern corner of the Development Site is approximately 30 feet relative to the North American Vertical Datum of 1988 (NAVD88). The northeastern corner of the Development Site is situated at an elevation of approximately 25 feet NAVD88 and the southern half is situated at an elevation of approximately 20 feet NAVD88.

A topographical survey of the Bronx produced by the New York City Department of Public Parks in 1873 depicts an elevation contour running through the center of the project sit that was situated at an elevation of 20 feet relative to a datum of "mean high water, [that] corresponds with the Datum of street grades in the city of New York," presumably the Manhattan Borough Datum, given the time at which the map was produced (see **Figure 5**). The Manhattan Borough Datum (MBD) is situated 1.652 feet above the NAVD88 and so an elevation of 20 feet MBD is calculated as 21.65 feet NAVD88.[2] The map depicts a similar slope down to the south and east from an elevation of approximately 31.5 feet MBD (33.15 feet NAVD88) near the former intersection of Brook Avenue and East 165th Street. It therefore appears that the historical ground surface across the majority of the Development Site is within 2 to 3 feet of the modern ground surface, with minor variations occurring as a result of modern industrial and commercial development.

[1] Issued by the New York City Department of Information Technology & Telecommunications (DoITT) in 2019.

[2] For the sake of comparison, the modern Bronx Borough Datum is 2.608 feet below NGVD29.

C. SOILS

The *Web Soil Survey* maintained the National Resource Conservation Service of the United States Department of the Interior[1] indicates that Development Site is underlain by two soil complexes:

- **Urban land-Flatbush complex**: Soils of this type are typically have slopes ranging between 0 and 3 percent and feature profiles layers of loam and sandy loam below the ground surface. These soils are mapped in the eastern third of the Development Site.
- **Urban land, outwash substratum**: Soils of this type are typically have slopes ranging between 0 and 3 percent and feature profiles with up to 20 inches of "cemented material" below the ground surface over a thick layer of gravelly sand. These soils are mapped in the western two-thirds of the Development Site.

D. PREVIOUSLY IDENTIFIED INDIGENOUS ARCHAEOLOGICAL SITES NEAR THE DEVELOPMENT SITE

Geismar (1992) concluded that undisturbed areas within Block 2386 would be considered sensitive for precontact period archaeological sites. In general, Indigenous habitation sites are most often located in coastal areas with access to marine resources and near fresh water sources and areas of high elevation and level slopes (less than 12 to 15 percent) (NYAC 1994). Further indication of the potential presence of Indigenous activity near a Development Site is indicated by the number of precontact archaeological sites that have been previously identified in the vicinity. Information regarding such previously identified archaeological sites was obtained from various locations including the site files of SHPO, LPC, NYSM, and from published accounts. No sites have been identified within one mile of the Development Site in databases maintained by SHPO and NYSM accessed via the New York State Cultural Resource Information System (CRIS) and the site is not located within a generalized area of archaeological sensitivity as mapped by SHPO. Two sites are mapped within one mile of the Development Sites in LPC's site files (e.g., Boesch 1996). These sites are summarized in **Table 2-1**, below.

Table 2-1
Precontact Archaeological Sites in the Vicinity of the Development Site

Site Name/ Number	Site Type	Approximate Distance from Development Site	Source Information	Other
Boesch (1996): 32	Precontact and historic period burial site	3,250 feet	McNamara 1984	Near former intersection of Rae and Carr Streets
"Pudding Rock" Bolton (1922): 122A Boesch (1996): 107	Precontact campsite	1,500 feet	Bolton 1922	Near glacial erratic

Sources: Boesch 1996; Bolton 1922.

Minimal information is available regarding the burial site reported nearly three-quarters of a mile to the south of the Development Site. Boesch (1996:101) refers to the site as:

> *A Native American burial site [that] was reportedly located between Rae and Carr Streets and Saint Ann's Avenue. A nineteenth century cemetery also covered the site which is now occupied by Public School 38.*

Boesch cites McNamara (1984[2]) as the source for this information. McNamara describes "Rae Street" as follows: "Legend has it that this site was once an Indian burial ground" (McNamara 1991:166). Little information is known about this site or its exact location.

[1] https://websoilsurvey.sc.egov.usda.gov/

Only slightly more information is known about the Pudding Rock site, which was located several hundred feet east of the Development Site. Bolton (1922) maps the site along the line of East 166th Street between what is now Third Avenue and Boston Post Road. Bolton (1922:241) includes the following description of the site: "A glacial boulder, stated to have been used by natives as a resort, situated at the Boston road, south of East 166th Street, Borough of the Bronx…It is not near any water supply and is therefore unlikely to have been a permanent station." The site was described by the historian Francis Bergen Kelly as "Pudding rock, a gigantic glacial boulder where the Indians held their corn feasts and under the cool shade of which the tired Huguenots paused to rest on their long Sabbath journey from New Rochelle to New York" (Kelly 1909:212). Other sources report that one side of the rock had a naturally formed "fireplace" where feasts could be prepared (Mines 1893; Cook and Kaplan 1913). These accounts appear to be romanticized reports of Native American activity in the area; however, the site may indeed have been used as a location for feasting behavior during the precontact or contact periods. Geismar's 1992 assessment of the larger Morrisania Urban Renewal Area determined that "the terrain was undoubtedly attractive to [precontact] hunter-gatherers" as "rolling woodland and the presence of the Mill Brook…would have offered food and water to animals and those who hunted them" (Geismar 1992:10).

E. HISTORICAL CONTEXT

The early colonial history of the Bronx and the foundation of the village of Morrisania is detailed in Geismar (1992) and will only be briefly summarized here. The Development Site was historically included within a larger tract of land that was established as the Township of Morrisania in 1788 (Jenkins 1912). The township was named for Lewis Morris, a signer of the Declaration of Independence and one of the most notable residents and largest landowners of what is now the South Bronx. Despite Morris's attempts to have the town selected as the capital of the newly formed United States, few people settled in Morrisania and it was folded into the larger Township of Westchester in 1791 (ibid). The area was later divided into smaller towns and villages, with the Development Site being included in the town of West Farms until the mid-19th century (ibid). As depicted on the 1821 Randel map of the Bronx, Lewis Morris's home was located along the southern coast of what is now the Bronx while the large estates of other members of the Morris family lined the western coast.

By the beginning of the 19th century, the populations of the other boroughs of New York City had grown significantly, although the Bronx was still relatively isolated and undeveloped. In the first half of the 19th century, with the construction of bridges connecting it to Manhattan, the Bronx became more accessible to individuals living and working in Manhattan. With the establishment of railroad lines that connected the Bronx and Manhattan, the newly accessible Bronx quickly grew. A new bridge was constructed in 1840 to allow the New York and Harlem Railroad to continue on through the Bronx towards White Plains and other locations in upstate New York and Connecticut (Burrows and Wallace 1999). The Railroad was open for business by 1842 and the Bronx's rapid growth continued through the mid-19th century.

The smaller village of Morrisania was established in the vicinity of the Development Site between 1848 and 1855. The town was intended as a planned village with specific development requirements (Geismar 1992). As part of the town planning, streets—including Fourth Avenue, a precursor to modern East 166th Street—were laid out on the blocks formed as a result and were divided into large lots for potential development. Findlay's 1848 survey of Morrisania identifies modern East 164th and 165th Streets as Second and Third Streets, respectively, and identifies a precursor to what is now Brook Avenue as "Railroad Avenue." The southern portion of the Bronx, including the Development Site, was annexed to the City of New York in 1874 (Jenkins 1912). After its initial annexation, the Development Site was located within the 23rd Ward of New York City—continuing the municipal numbering system used in Manhattan—which officially became the Borough of the Bronx with the consolidation of the five boroughs of New York City in 1898 (Burrows and Wallace 1999).

[2] Republished in 1991.

DEVELOPMENT HISTORY

Geismar (1992) determined that the Development Site was undeveloped prior to the creation of the Morrisania subdivision in 1848. The 1848 Findlay map depicts the original division of property within what is now Block 2386. At that time, the block was divided into five large parcels. Geismar (1992) identified the original owners of these Morrisania parcels at the time of the division of the land (see **Table 2-2**).

Table 2-2
Original 1848 Grantees as Identified by Geismar (1992)

Historical Parcel/ Date of Purchase	Modern Lots Within the Development Site	Original Owner and Occupation	Conveyance Liber/Page Date
17	Part of 164	James Cooper Carpenter	Bronx: 26/277 Westchester: 131/415
18	65, 66, 67, and 74 and part of 164	Joseph Shaler Ives Organette (reed) maker	Bronx: 26/183 Westchester: 131/276
19	1, 2, 5, 7, 8, 11, 17, 20, 21, and 22 and part of Brook Avenue streetbed	Mary Ann Smith Unknown	Bronx: 26/65 Westchester: 131/85
20	24, 29, and 30	Charles Deltz Tailor	Bronx: 26/365 Westchester: 132/71
21	34 and 136	Philip J. Stannage* Piano Forte maker	Bronx: Unknown* Westchester: 138/411

Note: All conveyances were dated September 8, 1848, but the deeds were recorded with the county at various dates. Geismar (1992) appears to reference these deeds using the liber numbers recorded with Bronx County; the original deed numbers for filing with Westchester County are also included here.
*Not identified in Geismar (1992).
Source: Geismar 1992:24.

Sidney and Neff's 1851 map of Westchester identifies the "new village" of Morrisania but does not appear to depict specific buildings. The 1853 Connor map appears to depict at least three houses within the Development Site that appear to be located on historical parcels 18, 19, 20, with multiple buildings on historical parcel 17, possibly extending into the Development Site. The ca. 1865 Beers map of Morrisania (see **Figure 4**) depicts several houses within the Development Site limits, including:

- Modern Lot 164 (part of historical parcel 17): two separate developed parcels: the Walters property and the V. Sprague property, both in the southeast corner of the modern lot;
- Modern Lot 67 (part of historical parcel 18): house of J.S. Ives;
- Modern Lots 17 and 22 (part of historical parcel 19): two houses on the property of G.W. Ditchett on subdivided parcels identified as 19-n and 19-r;
- Modern Lots 24 and 29 (part of historical parcel 20): adjoining houses on the properties of C.H. Carber and C. Deltz; a small outbuilding is depicted to the rear of the Carber house on Lot 24.

Dr. Geismar conducted additional historical research on any properties where the ca. 1865 buildings appeared to still be standing or where the historical rear yards of those buildings were undisturbed. Two properties within the Development Site on Lot 164 were identified that fit these criteria. At the time of the 1992 study, Lot 164 was vacant land. Geismar (1992) identified two historical lots within that area as RTA-28 and RTA-29. RTA-28 was the house occupied by John Walters ca. 1865 and was occupied by Albert G. Warner by 1890. Geismar identifies this property as 437 East 164th Street; however, the georeferenced ca. 1865 Beers map and subsequent Sanborn maps suggest that this house was situated

at what was historically identified as 713 East 164th Street in the late 19th century and 447 East 164th Street in the mid-20th century.

RTA-29 is described by Geismar (1992) as being located at 441 East 164th Street; however, the location of the Sprague house depicted on the georeferenced ca. 1865 beers map appears to correspond with that portion of modern Lot 164 that was historically known as 715 East 164th Street in the late 19th century and 449 East 164th Street in the mid-20th century. Geismar identified the first owners of the property as James and Susan Cooper, who invested in Morrisania real estate, but did not live on this property. The house was sold to Valentine Boyd in 1849; to pattern maker William H. Stoddard in 1850; and to Sarah S. and Valentine Sprague in 1863.

AVAILABILITY OF WATER AND SEWER NETWORKS IN THE NEIGHBORHOOD IN THE LATE 19TH CENTURY

The 1879 Bromley atlas depicts fire hydrants within the streetbeds of East 166th Street and Third Avenue, confirming the presence of water lines in the broader Morrisania area, if not within the streets surrounding the Development Site. Access to clean water and adequate drainage of household waste and wastewater was a significant problem for the community of Morrisania through at least the mid-1870s. The corner of Washington Avenue and East 166th Streets was allegedly a significant problem area, and local residents voiced concerns to the local board of health in the mid-1850s regarding “stagnant pools” of water near the intersection (Schwartz 1972:239). In an 1874 report made to the New York City Board of Health, assistant sanitary inspector John E. Comfort, MD, noted that the natural springs, ponds, and streams that ran through the neighborhood created a drainage problem that flooded cellars and led to the contamination of water wells from nearby privies, which were in use in most homes. The annexation of the South Bronx to the City of New York was driven in part by the desire of the residents of those areas to gain access to the Croton Water system that provided fresh drinking water to Manhattan (Schwartz 1972). As early as the 1860s, some streets contained sewers that drained wastewater from homes and business directly into Mill Brook to the west of the Development Site, which quickly became contaminated (ibid). Geismar (1992) states that the majority of sewers were installed in the neighborhood in the mid- to late 1880s. The 1887 Robinson atlas depicts sewer lines within the streetbeds of Washington Avenue, East 164th Street, and Brook Avenue, though not in East 165th Street, which did contain a water line at the time. A sewer is first depicted in the streetbed of East 165th Street on the 1893 Bromley atlas of the Bronx.

It is therefore likely that before the annexation of the South Bronx to the City of New York in 1874, the residents of the houses on the Development Site would have relied on domestic shaft features such as privies, wells, and cisterns for the purposes of water gathering and sanitation. However, the proximity of the Development Site to Mill Brook may have made it easier for the houses on the Development Site to have been connected to the earliest sewer infrastructure available in the neighborhood.

Chapter 3: Revised Determinations of Archaeological Sensitivity

A. INTRODUCTION

The sensitivity determinations generated by Geismar (1922) appear to have been developed based on the presence of any development within an area and were not specific to the depth of disturbance associated with that development. Archaeological studies in New York City that have been completed in the decades that followed the preparation of the 1992 studies have proven that archaeological resources can survive subsequent development in certain situations. The predictive models used by urban archaeologists have changed since 1992. As such, the archaeological sensitivity of the Development Site has been reassessed in a manner consistent with LPC's *Guidelines for Archaeological Work in New York City* as issued in 2018. The revised sensitivity determinations are summarized in **Table 3-1** and described in detail in the following chapter.

Table 3-1
Summary of Revised Archaeological Sensitivity Determinations

Lot	Address	Geismar (1992) Determination	Revised Sensitivity Determination	
			Precontact Period	Historic Period
1	421 East 164th St	Precontact period sensitivity (RTA-A)	No to Low Sensitivity	No Sensitivity
2	992 Brook Ave	Precontact period sensitivity (RTA-A)	No to Low Sensitivity	No Sensitivity
5	994 Brook Ave	Precontact period sensitivity (RTA-A)	No to Low Sensitivity	No Sensitivity
7	996 Brook Ave	Precontact period sensitivity (RTA-A)	No to Low Sensitivity	No Sensitivity
8	1000 Brook Ave	Precontact period sensitivity (RTA-A)	No to Low Sensitivity	No Sensitivity
11	1004 Brook Avenue	Precontact period sensitivity (RTA-A)	No to Low Sensitivity	No Sensitivity
17	1014 Brook Avenue	Site of ca. 1865 house	No to Low Sensitivity	No Sensitivity
20	412 East 165th St	Precontact period sensitivity (RTA-A)	No to Low Sensitivity	No Sensitivity
21	414 East 165th St	Precontact period sensitivity (RTA-A)	No to Low Sensitivity	No Sensitivity
22	416 East 165th St	Precontact period sensitivity (RTA-A); ca. 1865 building partially located on lot	No to Low Sensitivity	Low to moderate sensitivity in rear yard
24	422 East 165th St	Precontact period sensitivity (RTA-A); ca. 1865 building partially located on lot	No to Low Sensitivity	Low to moderate sensitivity in rear yard
29	432 East 165th St	ca. 1865 building partially located on lot	No to Low Sensitivity	Low to moderate sensitivity in rear yard
30	434 East 165th St	No sensitivity	No to Low Sensitivity	No sensitivity
34	442 East 165th St	No sensitivity	No to Low Sensitivity	No sensitivity
65	439 East 164th St	No sensitivity	No to Low Sensitivity	No sensitivity
66	437 East 164th St	ca. 1865 building partially located on lot	No to Low Sensitivity	No sensitivity
67	429 East 164th St	ca. 1865 building located on lot	No to Low Sensitivity	Low sensitivity
74	425 East 164th St	No sensitivity	No to Low Sensitivity	No sensitivity
164	441 East 164th St	Two ca. 1865s buildings partially or fully located on lot (RTA-28 and RTA-29)	No to Low Sensitivity	Low to moderate sensitivity in rear yards

Note: See **Figure 9** for locations of areas of archaeological sensitivity.

B. REVISED DETERMINATION OF PRECONTACT PERIOD ARCHAEOLOGICAL SENSITIVITY

Geismar (1992) identified a large area or precontact period archaeological sensitivity along the western side of the Development Site, which was designated RTA-A. This area was correlated with an area identified by Geismar as an "area of no known development." RTA-A extends through the eastern portion of modern Lots 1, 2, 5, and 7. However, the scale of the sensitivity map included as Figure 37a in Dr. Geismar's report—which was prepared before the common usage of GIS in archaeological investigations—does not appear to be correctly aligned with modern landmarks (e.g., street widths) and the location and boundaries of the "area of no known development" do not correspond with undeveloped areas as shown on georeferenced historical maps and the majority of this area has been disturbed as a result of the construction and demolition of buildings with basements.

The 1919 and 1951 Sanborn maps depict four- to five-story buildings with basements on each of the historical parcels included within modern Lots 1, 2, 5, and 7. Each building featured an undeveloped rear yard between 5 and 25 feet in width and Geismar's original delineation of RTA-A appears to have attempted to have been in alignment with these rear yards. However, it is highly likely that these rear yards experienced disturbance as a result of the construction of the row of tenement buildings constructed along the Brook Avenue frontage of the Development Site and between 400 and 418 East 165th Street. The possibility also exists that the rear yards themselves were excavated to ensure the flow of light and air into the basement units, as was common of tenement buildings at the time. Further disturbance would have occurred when these buildings were demolished and the lots redeveloped and/or paved. Only the northern portion of the area originally designated as RTA-A was not affected by the excavation of basements; however, this area was disturbed by the construction of buildings and paved parking areas.

The extent to which the area originally designated as RTA-A was disturbed as a result of the construction and demolition of buildings with basements and paved lots would likely have disturbed any shallowly buried soil strata that may have contained archaeological resources. The Development Site is therefore determined to have low sensitivity for archaeological resources associated with the precontact period occupation of the area.

C. REVISED DETERMINATION OF HISTORIC PERIOD ARCHAEOLOGICAL SENSITIVITY

As shown on **Figure 3**, Geismar's 1992 study determined that six historical house locations were present on the Development Site prior to ca. 1865. These locations are discussed in detail below. Parcels that were not developed prior to 1870s the are determined to have no sensitivity for archaeological resources associated with the historic period occupation of the Development Site.

MODERN LOT 17: G.W. DITCHETT HOUSE 1

The ca. 1865 Beers map depicts a house on what is now modern Lot 17—then known as parcel 19-n—that was owned or occupied by G.W. Ditchett. The house was demolished before the publication of the 1879 Bromley atlas and the land continues to appear vacant on the 1891 Sanborn map (see **Figure 6**). The 1909 Sanborn map (see **Figure 7**) reflects the redevelopment of this area with four-story (with basement) brick tenement buildings formerly known as 1008 through 1014 Brook Avenue. Excavation associated with the construction of these buildings would have resulted in the disturbance of archaeological resources associated with the historic period occupation of this house prior to ca. 1865. This location is therefore determined to have no historic period archaeological sensitivity.

MODERN LOT 22: G.W. DITCHETT HOUSE 2

The ca. 1865 Beers map depicts a house on what is now modern Lot 22—then known as parcel 19-r—that was also owned or occupied by G.W. Ditchett. The house was demolished before the publication of

the 1879 Bromley atlas and the land continues to appear vacant on the 1891 Sanborn map. The 1909 Sanborn map reflects the redevelopment of this area with four-story (with basement) brick tenement buildings formerly known as 416 and 418 East 165th Street. Excavation associated with the construction of these buildings would have resulted in the disturbance of archaeological resources associated with the historic period occupation of this house prior to ca. 1865. An approximately 10-foot area along the rear of the historical property may not have been fully excavated as a result of the construction of buildings with basements and the area is currently a paved parking lot. The southern end of modern Lot 22 is therefore determined to have low to moderate sensitivity for domestic shaft features associated with the occupation of the 19th century house formerly located on that parcel.

MODERN LOTS 24 AND 29: HISTORICAL 430 AND 432 EAST 165TH STREET

The ca. 1865 Beers map depicts a large house owned or occupied by C. H. Carver on either side of what is now the boundary between modern Lots 24 and 29 on parcels identified on the map as lots 20-c and 20-d. A small outbuilding is depicted behind the southwest corner of this building on historical parcel 20-c. The 1891 Sanborn map depicts this structure as two adjacent two-story wood frame houses. The western house (on modern Lot 24) is identified on the map as 695 East 165th Street and its rear yard was developed with a large, narrow complex of buildings identified on the map as a "Bier Bottling" plant. The adjacent house on what is now modern Lot 29 was situated on a parcel with an undeveloped rear yard. The 1909 and 1951 Sanborn maps (see **Figures 7 and 8**) reflect the expansion of the bottling plant across the rear yards of both houses. These maps also indicate that the street was renumbered and these houses were by then known as 430 and 432 East 165th Street. While the two houses are both identified as having basements, none of the buildings within the rear yard were constructed with subsurface levels. The location of the historical rear yards behind these houses is therefore determined to have low to moderate sensitivity for historic period shaft features.

MODERN LOT 67: HISTORICAL 429 EAST 164TH STREET

The ca. 1865 Beers map depicts a house on what is now modern Lot 67—then known as parcel 18—that was also owned or occupied by J.S. Ives. The 1891 and 1909 Sanborn maps continue to depict the house which is identified as 695 East 164th Street in 1891 and 423 East 164th Street in 1909. The 1951 Sanborn map continues to depict the house, but indicates that portions of its backyard were developed with commercial/industrial buildings, some of which are still located on the property. The remainder of the lot was redeveloped in the late 20th century, and records on file with the New York City Department of Buildings (NYCDOB) indicate that at least some of the buildings on the site were constructed with basements. Modern Lot 67 is therefore determined to have low sensitivity for domestic shaft features associated with the occupation of the 19th century house formerly located on that parcel.

RTA-28/MODERN LOT 164: HISTORICAL 447 EAST 164TH STREET

Geismar's 1992 report identified a portion of modern Lot 164 as RTA-28 in association with the historical Walters house depicted in that location on the ca. 1865 Beers map. The 1891 Sanborn map depicts this house at 713 East 164th Street[1] and indicates that its side and rear yards were developed with several small buildings, including a mineral water factory and an outbuilding. The 1909 Sanborn map suggests that the location of the house was redeveloped with a four-story (with basement) brick apartment building known as 447 East 164th Street. A two-story wood frame house with the same footprint of the former Vatters house appears in what is now the northwest corner of Lot 164 on that map, possibly suggesting that the house was relocated within the property. The 1951 Sanborn map depicts the property in the same manner.

[1] Geismar (1992:33) identifies the Walters house as 703 (later 437) East 164th Street; however, that address as shown on the 1891 and 1909 Sanborn maps is consistent with modern Lot 66, which was historically an undeveloped portion of the property owned by the Ives family, whose house was located on what is now Lot 67.

An aerial photograph taken in 1996 depict this portion of Lot 164 as an unpaved, undeveloped lot while a photograph taken ca. 2001-2002 depicts it as a paved parking lot.[1] The existing building on Lot 164 were constructed in 2004, after Geismar's study was conducted. While the building does not appear to have been constructed with a basement, the construction of a modern facility on the property would have resulted in some disturbance to the subsurface soil strata beneath the building. The historical rear year of 447 East 164th Street within modern Lot 164 is therefore determined to have low to moderate sensitivity for domestic shaft features associated with the occupation of the 19th century house formerly located on the parcel identified by Geismar as RTA-28. The area of sensitivity includes only that portion of the historical lot situated north of the area disturbed for the construction of the former apartment building with a basement formerly located at 447 East 164th Street.

RTA-29/MODERN LOT 164: HISTORICAL 449 EAST 164TH STREET

Geismar's 1992 report identified a portion of modern Lot 164 as RTA-29 in association with the historical Stoddard/Sprague house depicted in that location on the ca. 1865 Beers map. The 1891 Sanborn map depicts this house at 715 East 164th Street,[2] which was a two-story wood frame house with an undeveloped rear yard. The 1909 and 1951 Sanborn maps identify the house as 449 East 164th Street and depicts it in the same manner. An aerial photograph taken in 1996 depict this portion of Lot 164 as an unpaved, undeveloped lot while a photograph taken ca. 2001-2002 depicts it as a paved or partially paved parking lot. As described previously, the existing building on Lot 164 were constructed in 2004, after Geismar's study was conducted. While this building does not appear to have been constructed with a basement, the construction of a modern facility on the property would have resulted in some disturbance to the subsurface soil strata beneath the building. The historical rear year of 449 East 164th Street within modern Lot 164 is therefore determined to have low to moderate sensitivity for domestic shaft features associated with the occupation of the 19th century house formerly located on the parcel identified by Geismar as RTA-29. The area of sensitivity includes only that portion of the historical lot that was occupied by the building's former rear yard.

[1] Aerial photographs are accessible at: https://www.arcgis.com/apps/instant/media/index.html?appid=e011fd05a86a4c09bd0b91fbc387f3eb

[2] Geismar (1992:33) identifies the Walters house as 707 (later 441) East 164th Street; however, that address as shown on the 1891 and 1909 Sanborn maps is consistent with the southwestern portion of modern Lot 164, which was historically an undeveloped portion of the property owned by the Ives family, whose house was located on what is now Lot 67.

Chapter 4: Conclusions and Recommendations

A. CONCLUSIONS

This Supplemental Phase 1A Study involved reevaluation of the research first completed by archaeologist Joan Geismar, PhD in 1992. Using modern archaeological theory and techniques—most notably the use of GIS software to georeference historical maps—the archaeological sensitivity of the Development Site was reevaluated. This analysis also accounts for disturbance that has occurred on the Development Site since the previous analysis was completed in 1992. The collected information was analyzed to reach the following conclusions.

PREVIOUS DISTURBANCE

The majority of documented disturbance across the Development Site was caused by the construction and demolition of buildings with basements. Shallower disturbance would have occurred as a result of the construction and maintenance of paved surfaces and the installation of utilities. As described in **Chapter 2, "Background Research,"** the modern ground surface is at or within 2 to 3 feet of the elevation of the historical, pre-development ground surface. Therefore, the construction of paved surfaces and basement-related excavation appears to have directly impacted the original ground surfaces and the underlying soils that may have contained archaeological resources. Full or partial disturbance by the construction of buildings with basements was documented on modern Lots 1, 2, 5, 6, 8, 11, 17, 20, 21, 22, 30, 67, 174, and 164. Those properties that are currently developed with one-story buildings without basements may not have experienced deep disturbance sufficient to destroy deeply buried archaeological resources such as domestic shaft features (e.g., privies, cisterns, and wells).

PRECONTACT PERIOD SENSITIVITY ASSESSMENT

The precontact sensitivity of project sites in New York City is generally evaluated by a site's proximity to level slopes (less than 12 to 15 percent), watercourses, well-drained soils, and previously identified precontact period archaeological sites (NYAC 1994). As described in **Chapter 2, "Background Research,"** two previously documented archaeological sites have been identified within one mile of the Development Site and the site was historically in close proximity a freshwater stream. Given the site's original topographical setting, Geismar (1992) identified a large are of precontact period archaeological sensitivity—designated RTA-A—in the western portion of the Development Site. Geismar appears to have delineated the area of sensitivity based on the location of undeveloped areas as shown on historical maps. However, a review of georeferenced historical maps—including the 1891, 1909, and 1951 Sanborn maps—indicates that large portions of this area were likely disturbed by the construction and demolition of buildings with basements and paved surfaces. Precontact period archaeological sites are typically shallowly buried and are often encountered within 5 feet of the original ground surface. Therefore, given the extent to which the area designated as RTA-A has been disturbed as a result of the construction and demolition of buildings and paved surfaces, this reevaluation of the areas of archaeological sensitivity concludes that the Development Site has no to low sensitivity for archaeological resources associated with the precontact occupation of the area.

HISTORIC SENSITIVITY ASSESSMENT

Geismar's 1992 analysis concluded that properties developed with historic period buildings prior to the 1870s—when municipal water and sewer networks were consistently accessible to neighborhood

residents—and on lots that were not subsequently redeveloped were potentially sensitive for domestic shaft features. As described in **Chapter 2, "Background Research,"** six historical houses are depicted within the Development Site on the ca. 1865 Beers map. Of these, four are situated in areas that were not fully disturbed by the subsequent construction of buildings with basements. These houses were present on what are now Lots 22 (on the parcels later known as 416–418 east 165th Street), 29 (formerly 430–432 East 165th Street), and 164 (formerly 447 and 449 East 164th Street). The residents of these houses would have relied on the use of shaft features (e.g., privies, cisterns, and wells) for the purposes of water gathering and sanitation. Such features were typically filled with household refuse after they were no longer needed for their original purpose, and are therefore of high archaeological research value. Shaft features were typically constructed of brick or stone and extended to significant depths, often to 10 to 15 feet or more below the ground surface. As such, these types of features frequently survive disturbance episodes, even if the upper portions are truncated during development involving shallow excavation. The rear yards of these historical parcels are therefore determined to have moderate sensitivity for shaft features including cisterns, privies, and wells. The area of archaeological sensitivity is depicted on **Figure 9**. These locations include portions of RTA-A, RTA-28, and RTA-29 as originally identified by Geismar (1992).

B. RECOMMENDATIONS

Given the potential historic sensitivity of the Development Site, archaeological testing in the form of a Phase 1B investigation is recommended to confirm the presence or absence of archaeological resources on the potentially sensitive portion of the Development Site. It is recommended that the Phase 1B Investigation occur after the demolition of the on-site buildings down to the depth of the existing floor slabs. The Phase 1B investigation should be completed in coordination with LPC. An Archaeological Work Plan outlining the scope of work for the investigation must be submitted to LPC for review and concurrence prior to the start of testing.

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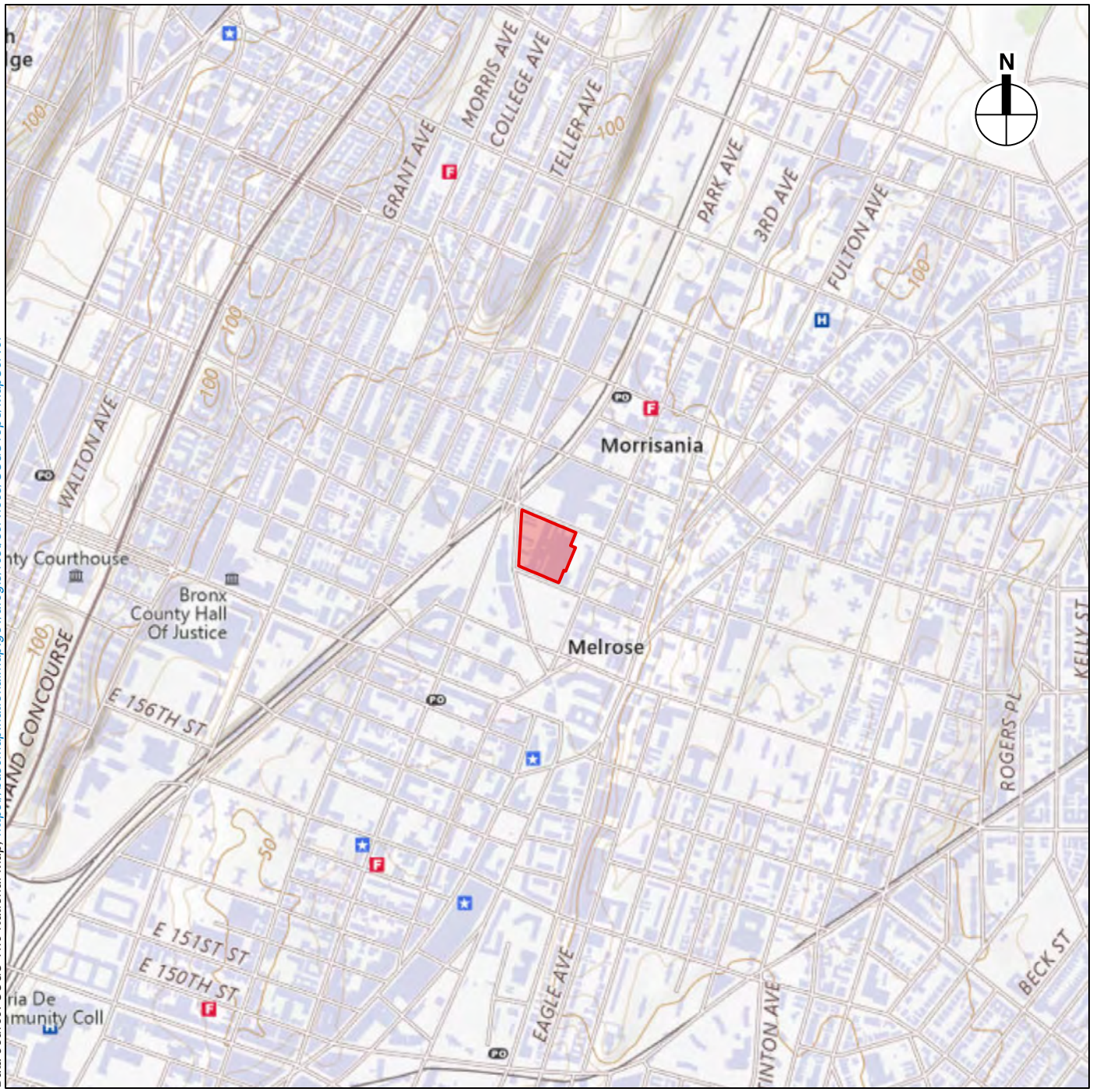
Figures



Data source: USGS The National Map, https://basemap.nationalmap.gov/arcgis/rest/services/USGSTopo/MapServer

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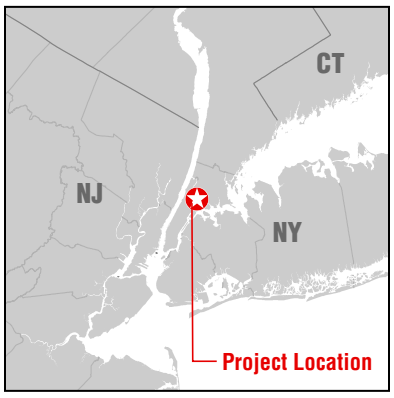


Development Site

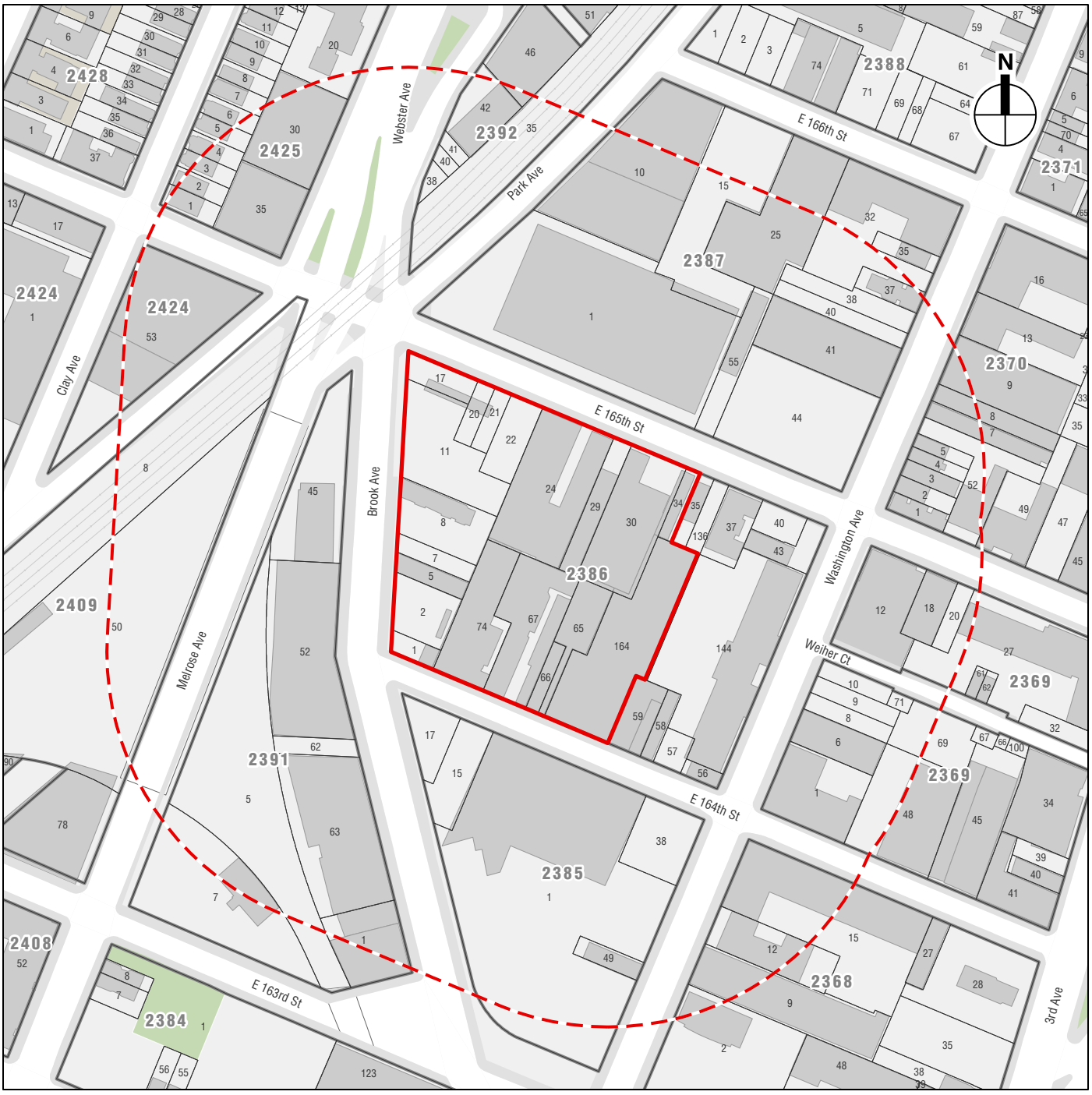
Approximate coordinates of Project Site:
73°54'39"W 40°49'37"N

USGS Topographic Map – Central Park Quadrangle

BROOK AVENUE REZONING

Figure 1

8.20.25



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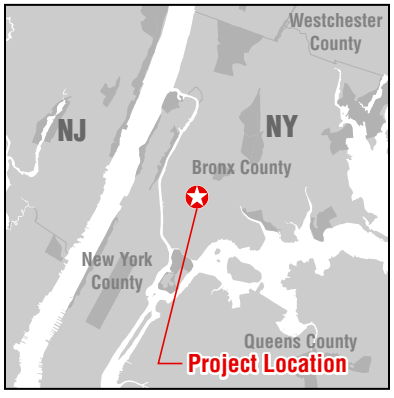
Development Site

Study Area (400-foot perimeter)

2391 *Tax Block Boundary*

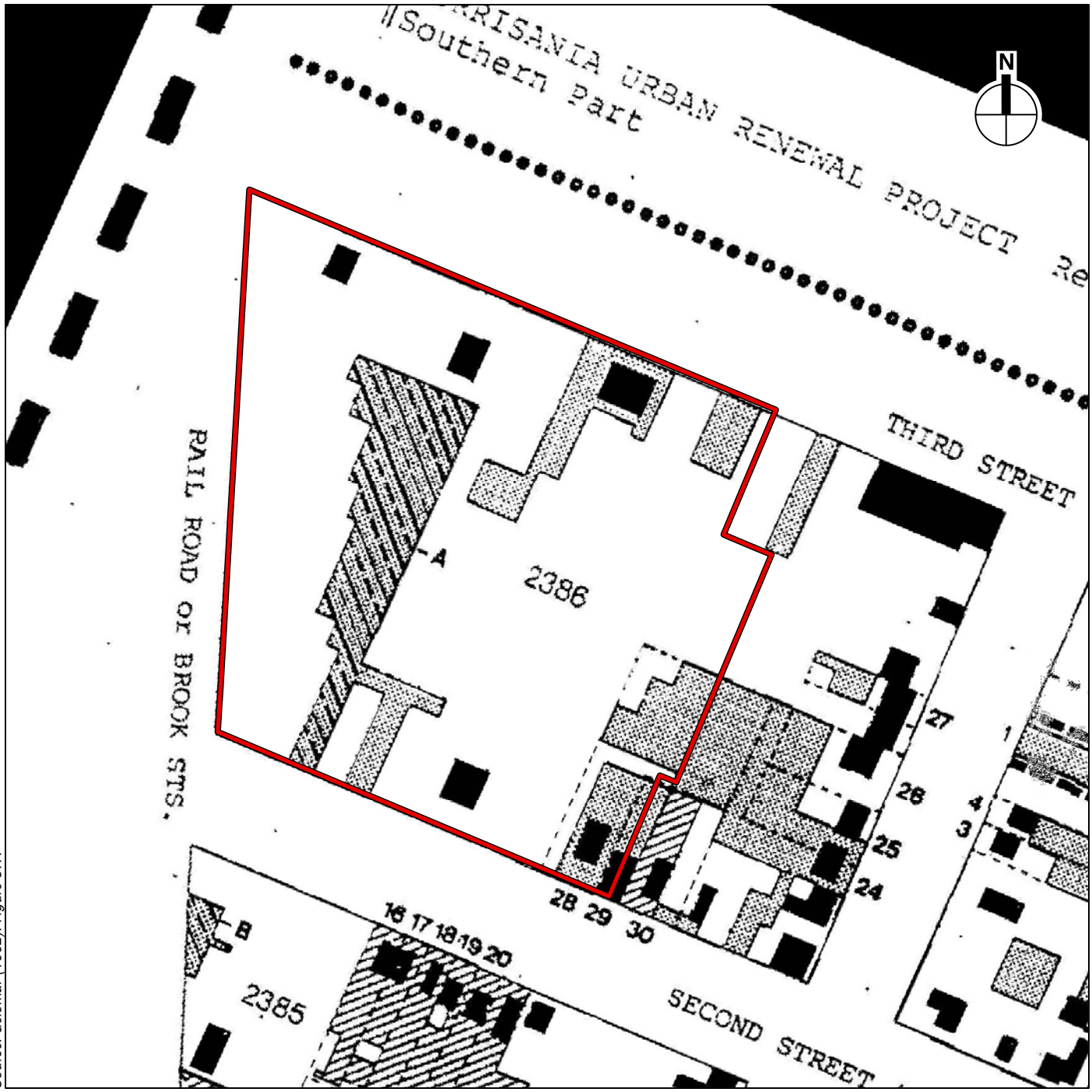
1 *Tax Lot Boundary*



Project Location

BROOK AVENUE REZONING

Figure 2



Note: The original map does not appear to have been drawn to scale.

Areas of Archaeological Sensitivity Identified in 1992

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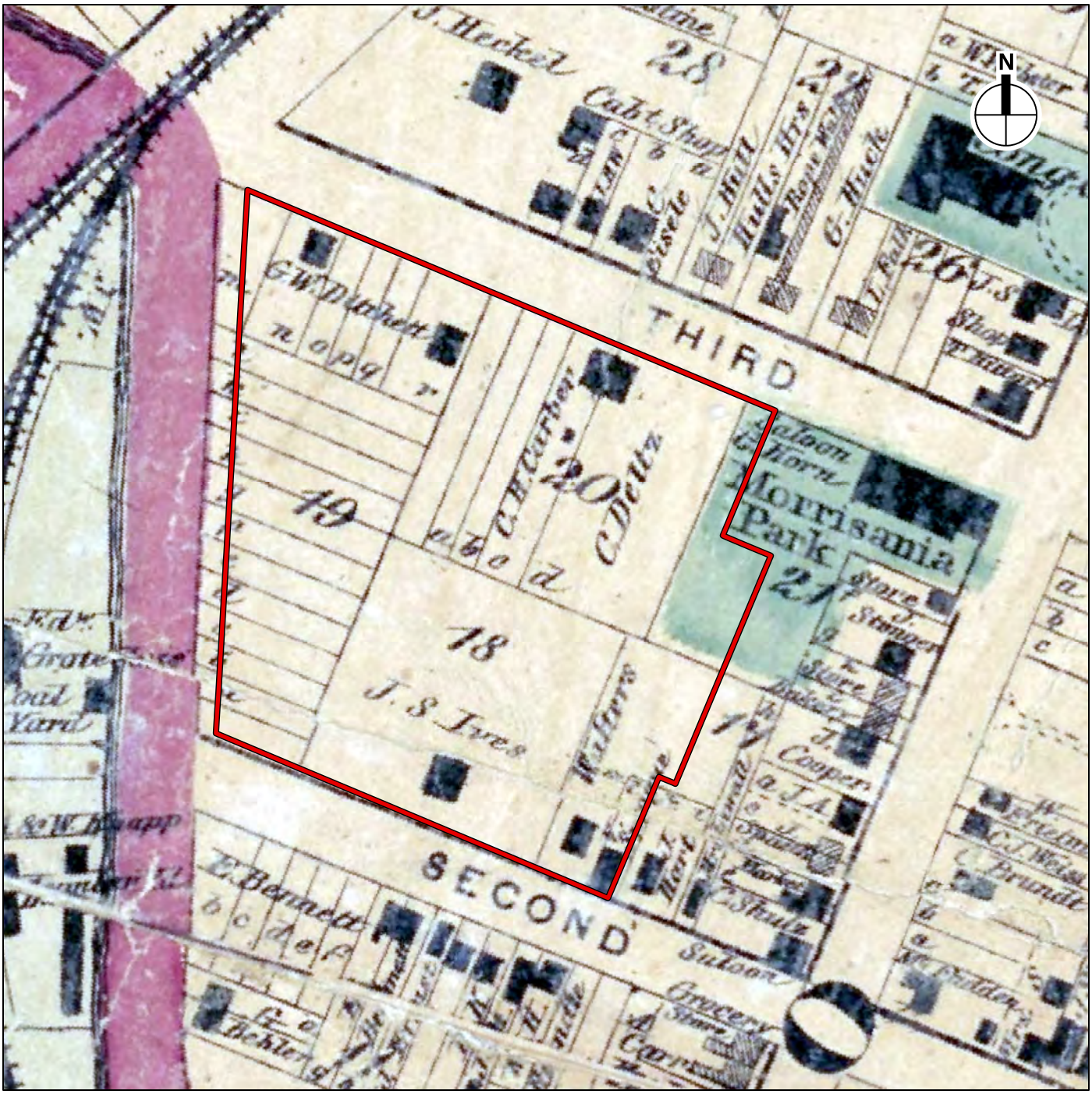

Ca. 1865 Beers Map

BROOK AVENUE REZONING

Figure 4

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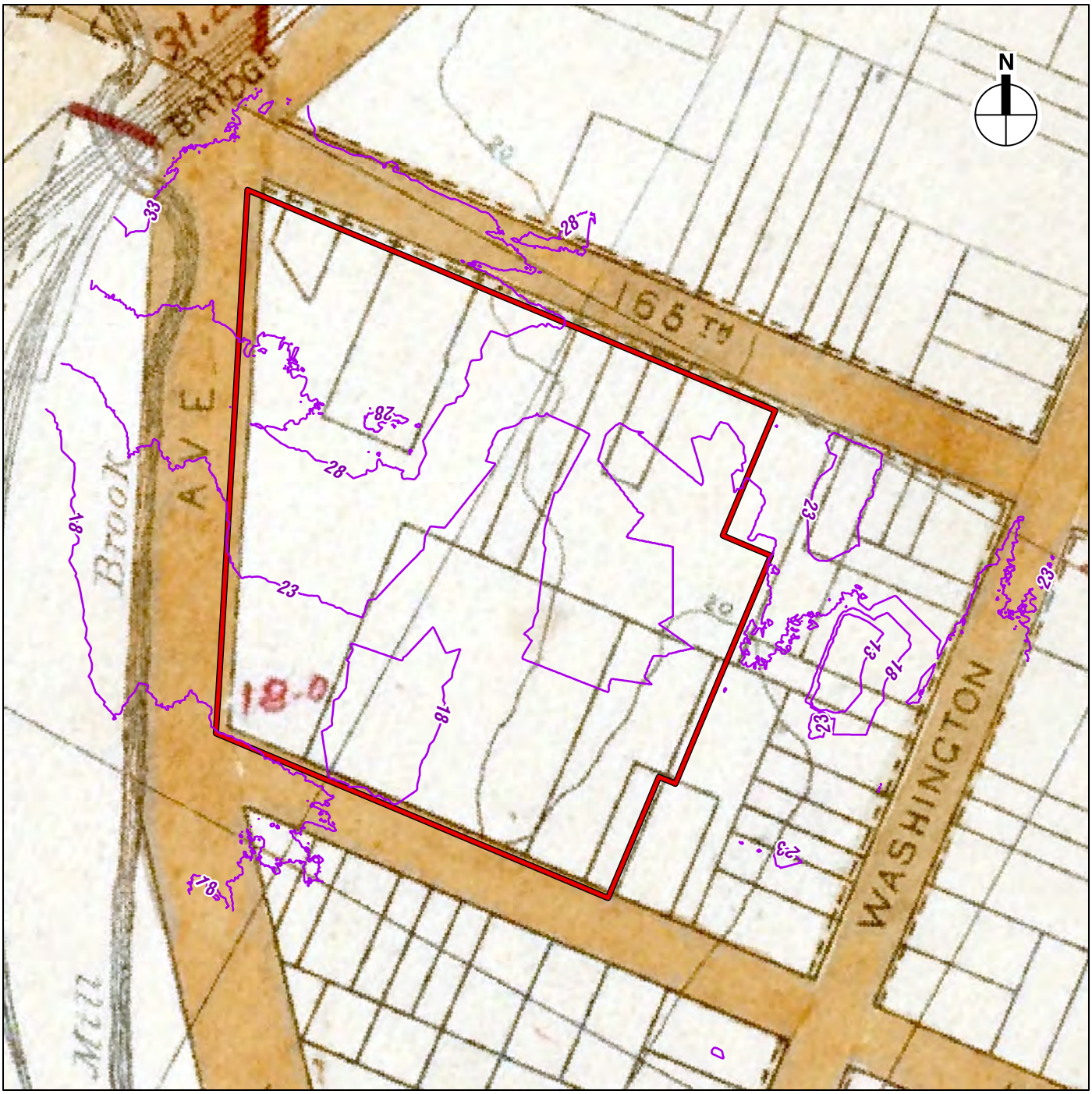

Development Site

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1873 Department of Public Parks Topographical Survey

BROOK AVENUE REZONING

Figure 5

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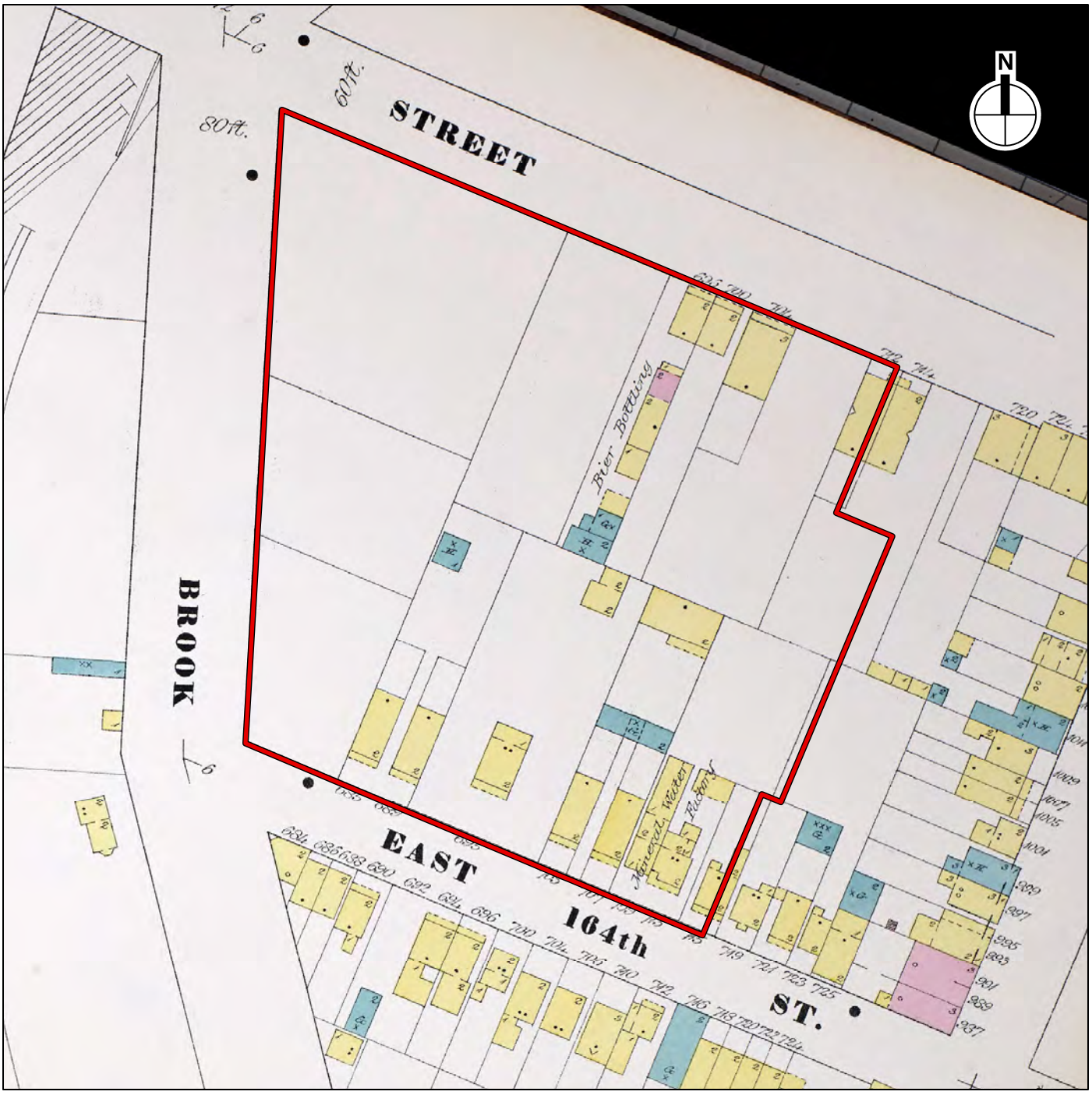

Development Site

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1891 Sanborn Map

BROOK AVENUE REZONING

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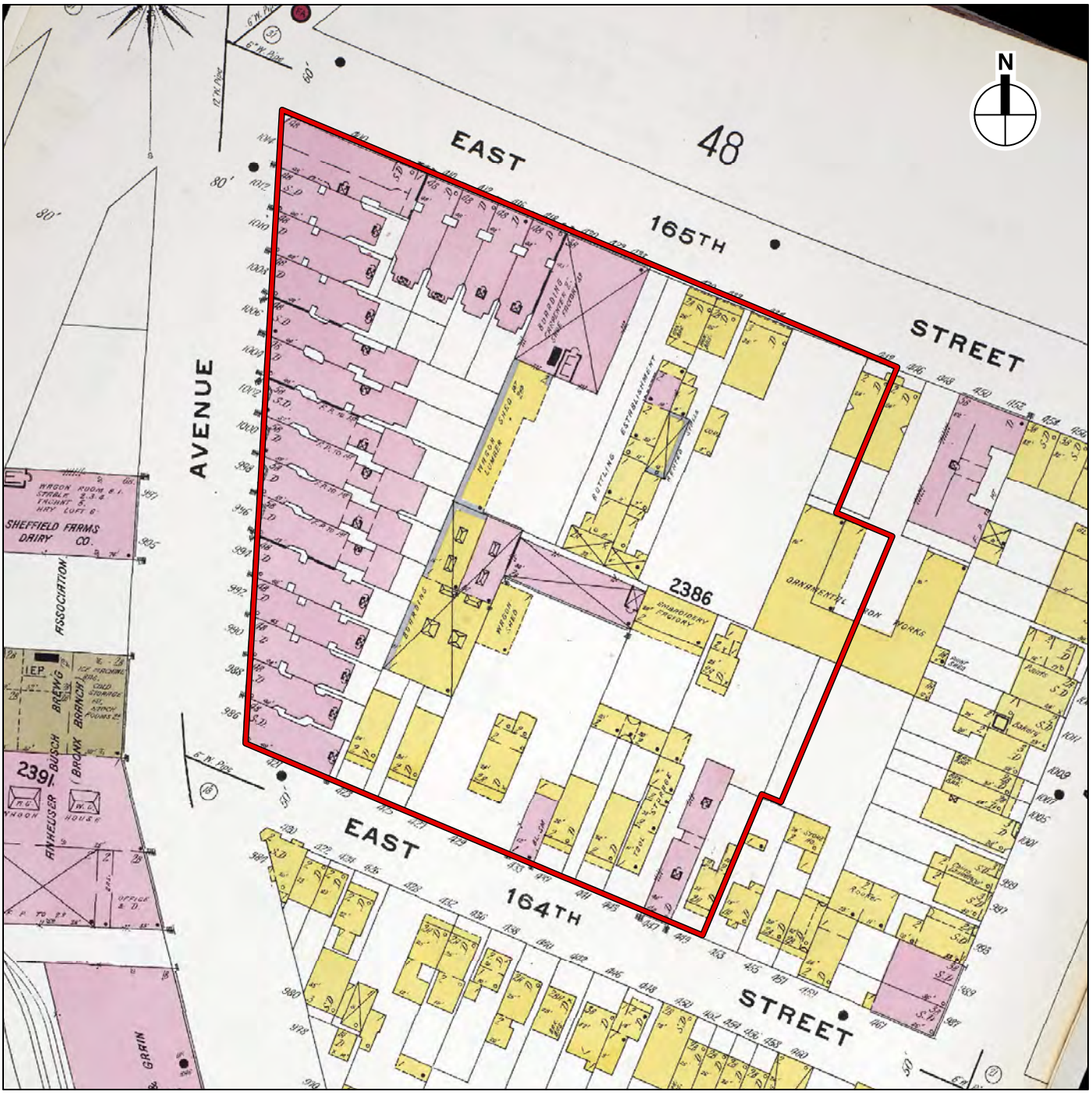

1909 Sanborn Map

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Figure 7

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Development Site

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1951 Sanborn Map

BROOK AVENUE REZONING

Figure 8

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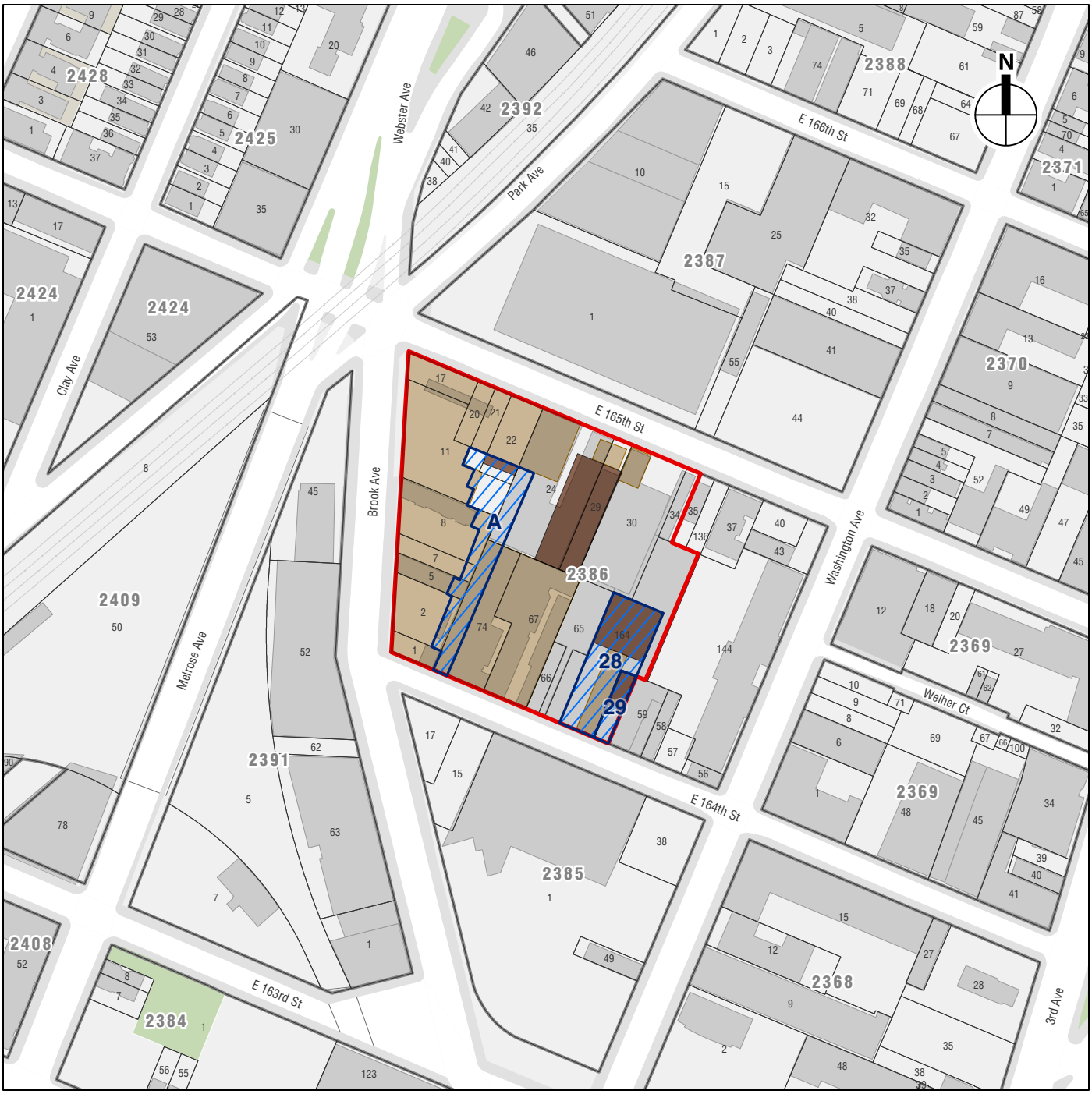

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Development Site

2391 *Tax Block Boundary*

1 *Tax Lot Boundary*

Recommended Testing Areas Identified in Geismar (1992); Corrected

Revised Areas of Archaeological Sensitivity

Approximate Locations of Buildings with Basements

Revised Areas of Archaeological Sensitivity

BROOK AVENUE REZONING

Figure 9