145 Broome Street Senior Housing Development

145 BROOME STREET; BLOCK 341, LOT 62

NEW YORK, NEW YORK

Phase 1B Archaeological Investigation

Prepared for:
Ridge Street Associates LLC
c/o Olive Branch Consulting, Ltd.
201 West Broadway, Unit 216
Port Jefferson, New York 11777

Prepared by:

AKRF, Inc.
440 Park Avenue South
New York, NY 10016
212-696-0670

NOVEMBER 2023

Management Summary

OPRHP Project Review Number:	22PR02661
LPC Unique Project Identifier:	34101
Involved Agencies:	New York City Housing Development Corporation
Phase of Survey:	Phase 1B Archaeological Investigation
Location Information	
Location:	145 Broome Street; Manhattan (Block 341, Lot 62)
Minor Civil Division:	06101
County:	New York
Survey Area:	
Length:	100 feet
Width:	30 feet
Area:	0.07 acres (3,000 square feet)
USGS 7.5 Minute Quadrangle Map:	Brooklyn
Archaeological Survey Overview:	
Number of Trenches:	4
Number of Shovel Tests/Units:	0
Width of Plowed Strips:	n/a
Surface Survey Transect Interval:	n/a
Results of Archaeological Survey:	
Number of Prehistoric Sites Identified:	None
Number of Historic Sites Identified:	None
Sites Recommended for Phase 2/Avoidance:	None
Report Authors:	A. Michael Pappalardo, RPA Elizabeth Meade, Ph.D., RPA
Date of Report:	November 2023

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Photograph 14: Facing south towards location of Trench 4, which was excavated adjacent to the rear wing of the 1-story brick building.

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Chapter 1: Introduction and Project Background

A. INTRODUCTION AND PROJECT DESCRIPTION

Ridge Street Associates LLC ("the applicant") is proposing to construct a 100 percent affordable mixed-use senior residential and community facility building (Building 3-6) as part of a larger development project on a Project Site in the Lower East Side of Manhattan (see **Figures 1 and 2**). The proposed project is located on Block 341, Lot 62, which encompasses a portion of Parcel 3 of the Seward Park Extension East Large Scale Residential Development (LSRD) ("the "project site") (see **Figure 2**). The project site is bounded by Broome Street to the northeast, by Pitt Street to the southeast, by Grand Street to the southwest, and by Clinton Street to the northwest. In order to facilitate the construction of the proposed project, the applicant proposed a minor modification to the LSRD ("the project area") site plan (described below) to allow for the construction of two new buildings (165 Broome Street/Building 3-5 and 145 Broome Street/Building 3-6), which was approved by the New York City Planning Commission (CPC) in December 2020 (see **Figure 2**).

A Phase 1B Archaeological Investigation was previously completed for the site of proposed Building 3-5, located on Block 341, Lot 60 (AKRF 2022) (see **Figure 3**). That building is currently under construction. The present Phase 1B Archaeological Investigation was completed for the site of proposed Building 3-6, located on Block 341, Lot 62 in October 2023 (the "145 Broome Street Test Area") (see **Figures 2 and 4**).

B. PROJECT BACKGROUND AND PREVIOUS ENVIRONMENTAL REVIEW

The proposed development project was subject to City Environmental Quality Review (CEQR). As described below, the initial archaeological analysis and environmental review was completed pursuant to CEQR with CPC serving as lead agency. Subsequent to the CEQR review, it was determined that the project will also be seeking funding from the New York City Housing Development Corporation (HDC) and is subject to Section 14.09 of the New York State Historic Preservation Act.

Pursuant to CEQR, consultation was previously initiated with the New York City Landmarks Preservation Commission (LPC) regarding the project area's potential archaeological significance. In a comment letter dated April 3, 2019, LPC determined that the project area was potentially archaeologically significant. To satisfy LPC's request, a Phase 1A Archaeological Documentary Study ("Phase 1A Study") of the project site was prepared by AKRF in June 2019. The conclusions of the Phase 1A Study are summarized below, in "Project Site History and Summary of Phase 1A Study Conclusions." LPC concurred with the conclusions and recommendations of the Phase 1A Study in a comment letter dated July 11, 2019, and requested a scope of work for archaeological testing on the project site. A Phase 1B Archaeological Work Plan/Testing Protocol was drafted in August 2019 and approved by LPC in a comment letter dated August 19, 2019.

Following the approval of the Work Plan and CPC land use and CEQR approvals, the project was delayed and the construction of Buildings 3-5 and 3-6 were separated into separate development projects. As such, a Phase 1B Archaeological Investigation was completed only for the location of Building 3-5 (165 Broome Street) on Block 341, Lots 60 in 2022 ahead of that building's construction. A memorandum outlining changes to the project—including the reassignment of lot numbers, an updated schedule, and information on changes to the project funding—was submitted to LPC on April 11, 2022. In comments issued by email on April 12, 2022,

LPC confirmed that archaeological testing could proceed according to the scope of work outlined in the previously approved 2019 Work Plan. LPC requested additional confirmation about the potential impact of the project on the historical streetbeds of Attorney and Ridge Streets, which were determined to have potential archaeological sensitivity in the Phase 1A Study. After being provided additional analysis on Attorney Street, LPC confirmed in comments provided by email on May 4, 2022, that there are no further archaeological concerns regarding the streetbed of Attorney Street. A separate memorandum is currently being prepared regarding the archaeological potential of Ridge Street.

This Phase 1B Archaeological Investigation addresses the second proposed development project, construction of Building 3-6 (145 Broome Street).

C. PROJECT SITE HISTORY AND SUMMARY OF PHASE 1A STUDY CONCLUSIONS

The research completed as part of the Phase 1A Study concluded that the project site was included within the larger farm and estate of James DeLancey in the 18th century and was later included within a smaller estate granted to DeLancey's son-in-law, Thomas Jones. By the 1820s and 1830s, the former DeLancey farm had been divided into blocks and lots and became increasingly developed and redeveloped throughout the 19th and 20th centuries. The historical streetbeds of Attorney and Ridge Streets—now de-mapped—formerly ran through the project site. The project site was historically divided into more than a dozen smaller development lots that were developed with houses and commercial buildings by the early 19th century. Most of the historical lots located within the project site were disturbed by the construction of buildings with basements in the 19th and 20th centuries.

Given the extensive disturbance resulting from 19th and 20th century development on the project site, it was determined to have no sensitivity for archaeological resources dating to the precontact period. However, those historical lots for which no disturbance could be documented within rear yard areas were identified as potentially archaeologically sensitive, as those rear yards could potentially contain water-gathering and sanitary infrastructure (e.g., privies, cisterns, and wells) that pre-date the installation of water and sewer lines in the second half of the 19th century. In addition, undisturbed portions of the historical streetbed of Ridge Street between Broome and Grand Streets were identified as archaeologically sensitive for resources associated with the occupation of the DeLancey and Jones estates or earlier phases of occupation. The locations of archaeological sensitivity as identified in the Phase 1A Study are depicted on **Figure 3**. The Phase 1A Study recommended a Phase 1B Archaeological Investigation to confirm the presence or absence of archaeological resources within those sensitive lots within the project site that would be disturbed by the proposed project.

D. SITE CONDITIONS AT THE TIME OF THE PHASE 1B INVESTIGATION

The project site is currently developed with an irregularly shaped 1-story brick building, which encompasses a majority of the lot (**Photo 1**). During a site visit conducted during this investigation, it was determined that a basement extending approximately 12 feet below the adjacent street elevation occupies much of the east half of the building. The basement houses the building's furnace, a sump pump extending below the basement's floor, utility connections, and a storage space. The Broome Street facing portion of the lot contains a small playground area and the east side is occupied by a strip of grassy area. These two portions of the lot as well as the building's footprint have no archaeological sensitivity. The test area for this investigation is a roughly 30- by 100-foot play area located behind the 1-story brick building, an area that could have been used for the construction of such backyard features as privies and wells during the 19th century.

The level, asphalt paved test area has an elevation of about 26.5 feet relative to the North American Vertical Datum of 1988 (NAVD88). The area is bounded by the 1-story building to north and east, by an out parcel

occupied by a 6-story building to the west (**Photo 3**), and a higher elevation grassy area and public walkway to the south (about 31 feet NAVD88) (**Photo 2 and Figure 4**). There are two jungle gyms, which are both constructed on rubber matting, and a 1-story brick storage/utility structure in the test area (**Photos 2 through 5 and 9, 11, and 14**). A low brick retaining wall and two sets of concrete stairs separate the test area from the higher elevation grassy area and public walkway to the south (see **Photos 2 and 5**).

Chapter 2: Research Design and Field Methodology

A. INTRODUCTION

The Phase 1B Archaeological Investigation of the project site was completed in October 2023. A. Michael Pappalardo supervised the investigation and served as Principal Investigator. Mr. Pappalardo exceeds the requirements for the professional qualifications standards for archaeologists as defined by the Secretary of the Interior (36 CFR 61)[1] and complies with the codes and standards outlined by the RPA.[2] Backhoe services were provided by Brookside Environmental, Inc.

B. POTENTIAL ARCHAEOLOGICAL RESOURCES IDENTIFIED IN THE PHASE 1B WORK PLAN

As stated in the 2018 LPC guidelines, although documentary research determines archaeological potential, testing is required to confirm the presence of those resources and to determine their significance. LPC's guidelines indicate that "archaeological resources are significant if they provide new insight about the past and answer important research questions" (LPC 2018: 19). As described in the Phase 1B Work Plan, the objective of the Phase 1B Archaeological Investigation of the project site was to document the subsurface conditions of the project site to determine if soil levels are present that could potentially contain intact archaeological resources from the historic period occupation of the site. As described below, the Phase 1B Work Plan outlined possible archaeological resource types that could be present on the project site.

Throughout the mid-19th century, every lot within the project site was occupied by one or more structures and nearly all had an open rear or center yard. By the end of the 19th century, the Lower East Side had become flooded with lower-class residents—including Irish; German; and, later, Jewish immigrants—living in overcrowded tenements. As described above, those historic lots that were not fully disturbed by basement excavation were determined to have moderate to high sensitivity for archaeological resources associated with the 19th century residential occupation of those lots. These archaeological resources were expected to include domestic shaft features, such as privies, cisterns, and wells, in the historic lots' rear yards. Privies—the shaft features constructed beneath outhouses—are typically expected to be located at the rear of the historic property, while wells and cisterns are typically located closer to a dwelling. These features would have remained in use until municipal water and sewer networks became available in the mid- to late 19th century, and possibly for decades after.

C. RESEARCH QUESTIONS AND GOALS

The determination of an archaeological site's significance is directly related to whether the identified resources on that site are considered to be of high research value. In order to determine if any archaeological resources from the project site would be considered to have significant research value, a list of research questions was developed that can be applied to any identified archaeological resources within the project

[1] https://www.nps.gov/history/local-law/arch_stnds_9.htm

[2] https://rpanet.org/page/CodesandStandards

site in an attempt to determine their research value. These research topics were specific to the types of potential archaeological resources that could be encountered within the project site as described in the previous section, e.g., domestic shaft feature.

Domestic shaft features—such as those that may be located within the former rear yards of the houses formerly within the project site—can contain important archaeological resources. As described above, these features were frequently filled with domestic refuse after they were no longer used for their original purposes. In the case of privies, such refuse deposition would typically also have occurred during the period of active use, as there were few alternate methods of garbage disposal at the time. As such, filled shaft features often contain valuable information about the daily lives of a site's residents.

Artifacts recovered from trash or surface deposits are the material remains of what an individual purchases and/or uses on a daily or routine basis and they can provide insight into certain aspects of his or her life. Such consumption patterns are strongly influenced by socioeconomic status, occupation, household composition, and ethnicity. Archaeological evidence from residential lots can provide information on how different characteristics, such as socioeconomic status or ethnicity, have influenced consumer choice behavior. Information that can be gathered from domestic shaft features can be used to make generalizations about what life was like for the individuals and families that resided on a property. This information can then be compared and contrasted with data associated with similar populations elsewhere in the City. Similarly, if resources associated with the industrial use of the project site are encountered, they can be compared and contrasted with other archaeological sites in the region to identify broader patterns. These comparisons could yield previously unknown insights into the ways of life of the individuals living in this area of the Lower East Side during the 18th and 19th centuries.

D. FIELD AND ANALYTICAL METHODS

As described previously, this Phase 1B Archaeological Investigation was designed to confirm the presence or absence of archaeological resources and to determine if additional fieldwork would be required to evaluate the site's potential eligibility for listing on the State and National Registers of Historic Places (i.e., a Phase 2 Archaeological Survey/Evaluation). The Phase 1B Archaeological Investigation was conducted in accordance with LPC's "Guidelines for Archaeology work in New York City," issued in 2018,[1] with the standards for Historic and Cultural Resources analyses as specified in the *CEQR Technical Manual* as amended in 2014;[2] OPRHP's *Phase I Archaeological Report Format Requirements* as issued in 2005;[3] and the "Standards for Cultural Resources Investigations and the Curation of Archaeological Collections in New York State" as issued by the New York Archaeological Council (NYAC) in 1994 and adopted by OPRHP in 1995.[4]

Based on available mapping, the Phase 1A study concluded that the 1-story brick building was constructed without a basement and identified portions of the lot beneath the building's foundation as archaeologically sensitive. Based on that conclusion, the approved Phase 1B Work Plan recommended delaying completion of the archaeological investigation until the building had been demolished. However, during a site visit conducted prior to the initiation of this investigation, it was determined that a basement extending approximately 12 feet below the adjacent street elevation occupies much of the east half of the building. Construction of this basement would have destroyed any archaeological features once present in the areas

[1] http://www.nyc.gov/html/lpc/downloads/pdf/pubs/ayguide.pdf

[2] http://www.nyc.gov/html/oec/downloads/pdf/2014_ceqr_tm/09_Historic_Resources_2014.pdf

[3] https://parks.ny.gov/documents/shpo/environmental-review/PhaseIReportStandards.pdf

[4] http://nyarchaeology.org/wp-content/uploads/2013/12/NYACStandards.pdf

previously identified as sensitive beneath the building. Therefore, all archaeological testing occurred within the play area in back of the 1-story brick building in the locations depicted on **Figure 4**.

FIELD METHODS

Subsurface testing consisted of four mechanically excavated trenches. As no historical ground surfaces or archaeological features/artifact deposits were observed, the hand-excavation of shovel test pits (STPs) or testing units was not required. Each trench measured approximately 5 feet in width by 18 to 20 feet in length. Prior to determining the location of the trenches, a geophysical survey was completed across the test area to identify utility lines or other subsurface obstructions. The trenches were then established using fiberglass tapes and marked with spray paint in areas free of obstructions where there was sufficient room for the backhoe to operate (e.g., sufficient space for the safe rotation/operation of the machine and for stockpiling of excavated soils) without presenting safety hazards to either the archaeological team or employees or the pedestrian walkway to the south of the site.

All trenches were measured and marked with spray paint prior to their excavation. The breakup and removal of existing concrete slab was completed using the backhoe outfitted with a hammer attachment. Once the concrete was removed, excavation proceeded with the backhoe outfitted with a standard toothed bucket. At each trench, the backhoe slowly and gently excavated soils within the trench under the direction and observation of the archaeological team. Because the soils underlying the slab were unexpectedly very loose, the excavation of each of the six trenches was delayed by collapsing soils from the sides of the trench walls, requiring additional excavation to reach the pre-collapse depth. Because the collapsing trench walls presented a safety hazard, the archaeological team did not enter any trenches at any depth. All observations were made from the stable ground surface and observations regarding soils and artifacts were collected from backdirt piles or from soils within the backhoe bucket before they were dumped. All measurements of soil stratigraphy are therefore approximate except for those locations where it is noted that more specific measurements could be directly recorded. At each trench, excavation proceeded until seemingly undisturbed subsoil was observed or until the machine could no longer excavate to greater depths. Each test location was backfilled following its excavation.

The archaeological team regularly troweled through the backdirt to make observations and collect artifacts. Collected artifacts and samples were placed in labeled zip-top polyethylene archaeological specimen bags. Modern refuse (e.g., 20th century trash and Styrofoam) was not collected.

Professional standards for excavation, screening, recording features and stratigraphy, labeling, mapping, and photographing any identified archaeological resources were applied during the Phase 1B Archaeological Investigation. All fieldwork was documented through notes, digital photographs, and drawings, and all relevant professional standards were applied.

Soil profiles including colors—recorded using Munsell® soil color charts—and texture/inclusions were recorded in field notes. Testing locations were recorded in field notes and field maps using standard nomenclature and established using measuring tapes in reference to surveyed structures. All on-site testing was recorded relative to an on-site datum (e.g., the paved ground surface) and converted to NAVD88 based on spot elevations included on recent site surveys (a generic elevation of 26.5 feet NAVD88 was used for the ground surface of the test trenches based on those surveys).

ANALYTICAL METHODS

As the only artifacts observed in the urban fills excavated from each of the four trenches consisted of 20th-century refuse such as aluminum soda cans, a few fragments of non-diagnostic earthenware flowerpots, and miscellaneous demolition debris such as bricks, concrete, and window glass, no laboratory analysis was necessary. These artifacts were determined to have no research value and were not collected.

Chapter 3: Results of Survey

A. RESULTS OF GEOPHYSICAL INVESTIGATION

Prior to conducting subsurface testing, a geophysical survey of the study area was completed by Coastal Environmental Solutions, Inc. The geophysical technician used three types of equipment for the investigation: an ImpulseRadar PinPointR Ultra-Wide Band (UWB) Penetrating Radar System; a Vivax-Metrotech vLoc3-Pro Receiver/Transmitter; and a TW-6 Pipe and Cable Locator. The ImpulseRadar PinPointR UWB ground-penetrating radar (GPR) utilized a dual band 400/800 MHz HS antenna mounted to a stroller frame which rolls over the surface. Although this system can technically penetrate to a depth of up to 10 feet, it was only able to penetrate to a depth of approximately 3 feet in the study area due to the presence of conductive materials such as metal.

The geophysical investigation resulted in the identification of multiple utilities including natural gas, electric, water, and storm drain lines across the project site, all of which were marked with spray paint. The only subsurface feature identified in the study area itself was a drainage line adjacent to the rear wall of the 1-story brick building at a depth of approximately 18 inches (**Photo 12**).

B. RESULTS OF GEOTECHNICAL BORINGS

A 2017 geotechnical survey of the project site completed by Tectonic Engineering & Surveying Consultants P.C. included the completion of a single soil boring in the study area. This boring (No. B-14) used a rotary drill within a 4-inch casing and was performed in the northwest corner of the test area (**Figure 2**). The soil log for this boring is included as Appendix A and encountered the following general stratigraphy:

- Coarse to fine brown and gray sandy fill with brick and concrete fragments to a depth of 12 feet below ground surface (14.5 feet NAVD88).
- Medium to fine sand with silt from 15 to 22 feet below ground surface (11.5 to 4.5 feet NAVD88).

It is assumed that the deeper sands are natural.

C. RESULTS OF ARCHAEOLOGICAL INVESTIGATION

The archaeological investigation consisted of the excavation of four backhoe trenches across the 30- by 100-foot test area (see **Figure 4**). The trenches were placed to avoid existing foundation walls, utilities, and the brick storage/utility structure and to provide a representative sample of the study area. The only access to the study area was along sidewalks and the public walkway behind the 145 Broome Street building. Therefore, it was necessary to use a relatively small excavator (Caterpillar 304 CR mini excavator), which had a maximum excavation depth of 11 feet. The excavator had a two-foot-wide toothed bucket and a hydraulic hammer attachment (which was necessary to demolish the retaining wall in order to access the test area).

The trenches ranged in length from 20 to 15 feet and ranged in width from 5 to 6 feet. Each trench encountered a one- to two-inch-thick layer of asphalt, a few inches of bedding material, followed by mixed medium to coarse brown sandy fill. In each trench, the fill included a substantial quantity of demolition

debris such as bricks, brick rubble, concrete, large segments of steel I-beams, and boulders of various sizes. Excavation of Trench 1 encountered a layer of apparently clean grey sand at a depth of about 9 feet below ground surface (17.5 feet NAVD88). However, due to the repeated collapsing of the loose brick rubble of the trench's walls, it was impossible to expose and photograph this layer (see **Photos 6 through 8**). An aluminum Coca Cola can and other modern refuse was observed in the fill. No evidence of shaft features; in situ historical artifact deposits; or original or buried ground surfaces were observed in this trench.

Trenches 2, 3, and 4 each encountered solid concrete and brick foundation floors (see **Photos 10 and 13**). The foundation floor was encountered at a depth of 6.5 feet (20 feet NAVD88) in Trench 2 and at 8 feet (18.5 feet NAVD88) in Trenches 3 and 4. Once again due to collapsing trench walls, it was impossible to clear and photograph the foundation in Trench 4 (**Photo 15**). No evidence of shaft features; in situ historical artifact deposits; or original or buried ground surfaces were observed in trenches 2, 3, or 4.

The only artifacts observed during excavation of the four trenches consisted of demolition debris, modern refuse, and a few isolated fragments of flowerpots.

Chapter 4: Conclusions and Recommendations

A. CONCLUSIONS

The Phase 1B Archaeological Investigation identified evidence of extensive previous disturbance across the test area. Each of the four trenches encountered substantial quantities of urban fill and demolition debris including small quantities of clearly 20th century refuse to a maximum depth of 9 feet below ground surface (17.5 feet NAVD88). In addition, a substantial concrete and brick foundation floor was encountered across the bottom of three of the trenches, in one at a depth of 6.5 feet below ground surface (20 feet NAVD88) and at a depth of 8 feet (18.5 feet NAVD88) in the other two trenches. Further evidence of substantial disturbance in the test area is indicated by the soil log of the single geotechnical soil boring completed in the area of archaeological sensitivity (Boring B-14 on **Figure 2**). This boring encountered fill with brick and concrete fragments to a depth of 12 feet below ground surface (14.5 feet NAVD88).

Although the Phase 1A study concluded that the backyard areas of the 19th century residences once located on the project site were likely unaffected by subsequent development, it appears that more recent construction included deeper excavation and basements. It is unlikely that any archaeological resources once present in this area would have survived this more recent disturbance.

No evidence of shaft features, original ground surfaces, or artifact deposits were observed in any of the trenches. Given the extent of previous disturbance, the test area is determined to have no archaeological sensitivity.

B. RECOMMENDATIONS

Due to the absence of evidence of archaeological features and extensive evidence of previous disturbance, the project is unlikely to result in impacts on archaeological resources and no further fieldwork or analysis are recommended.

References

AKRF, Inc.

2011 Phase 1A Archaeological Documentary Study: Seward Park Mixed-Use Development Project; Block 346, Lot 40; Block 347, Lot 71; Block 352, Lots 1 and 28; Block 353, Lot 44; Block 354, Lots 1 and 12; Block 409, Lot 56; and Block 410, Lot 38 Lower East Side, New York, New York. Prepared for: New York City Economic Development Corporation; New York, NY.

2014 Phase 1B Archaeological Investigation: Essex Crossing (Seward Park Mixed-Use Development Project); Block 346, Lot 40; Block 347, Lot 71; Block 352, Lots 1 and 28; Block 353, Lot 44; Block 354, Lots 1 and 12; Block 409, Lot 56; and Block 410, Lot 38 Lower East Side, New York, New York. Prepared for: Delancey Street Associates, LLC; New York, NY

2022 Phase 1B Archaeological Investigation: Clinton Broome Apartments; 165 Broome Street, New York, NY; Block 341, Lots 60 and 158. Prepared for: Olive Branch Consulting, Ltd.

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Coastal Environmental Solutions Inc.

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New York Archaeological Council

1994 *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State*. The New York Archaeological Council.

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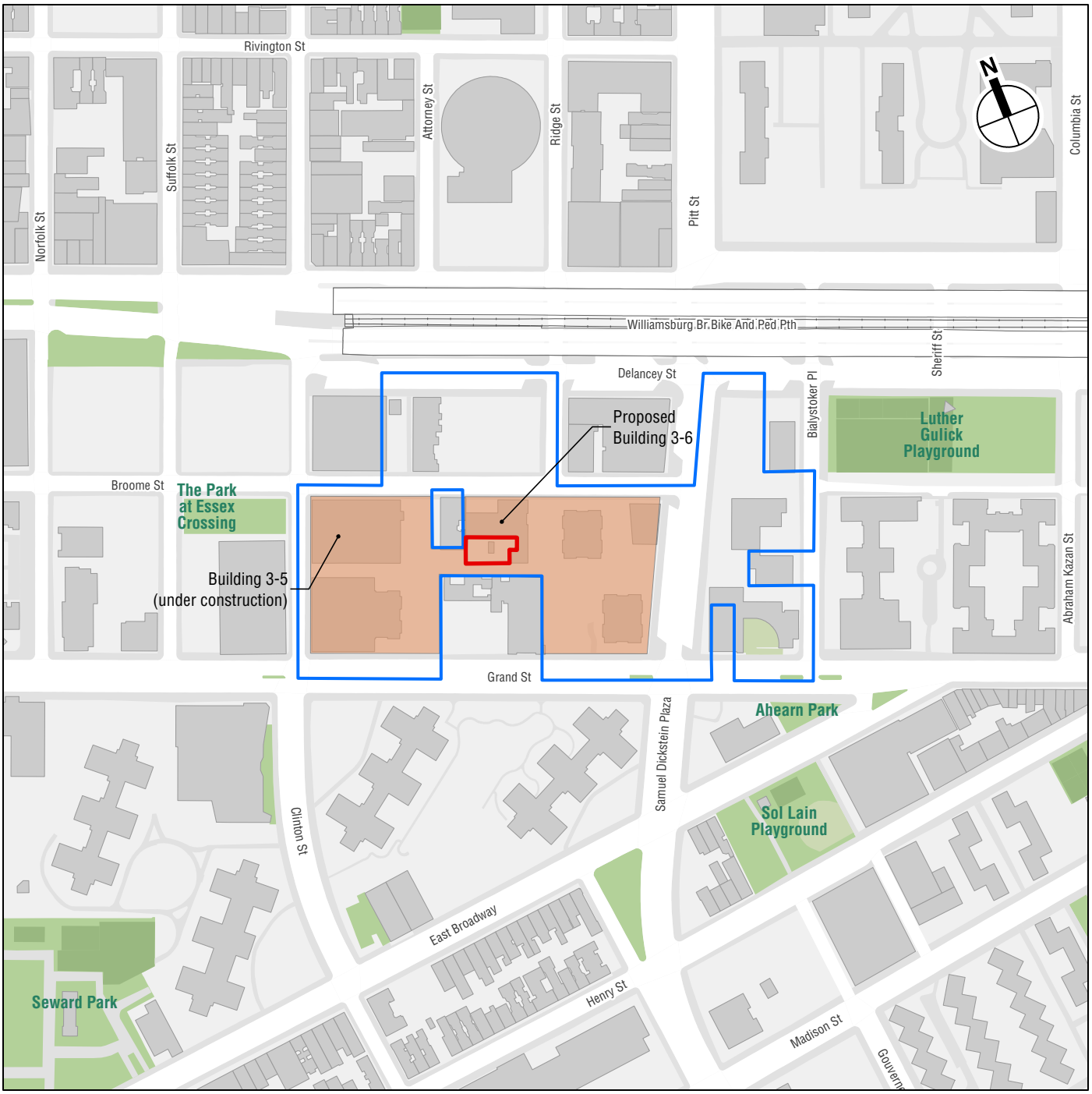
2018 *Guidelines for Archaeological Work in New York City*. https://www1.nyc.gov/assets/lpc/downloads/pdf/2018_Guidelines%20for%20Archaeology_Final_high%20res.pdf

Tectonic Engineering & Surveying Consultants P.C.

2017 Geotechnical Evaluation, Proposed Residential Towers, Grand Street Guild, Manhattan, New York. Prepared for Grand Street Guild Housing Development Fund Company, Inc.

Figures

11.22.23



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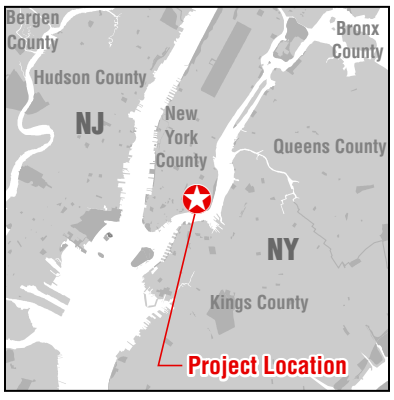
Project Site (Parcel 3 Boundary)

Project Area (Eastern Seward Park Extension Large-Scale Residential Development Boundary)

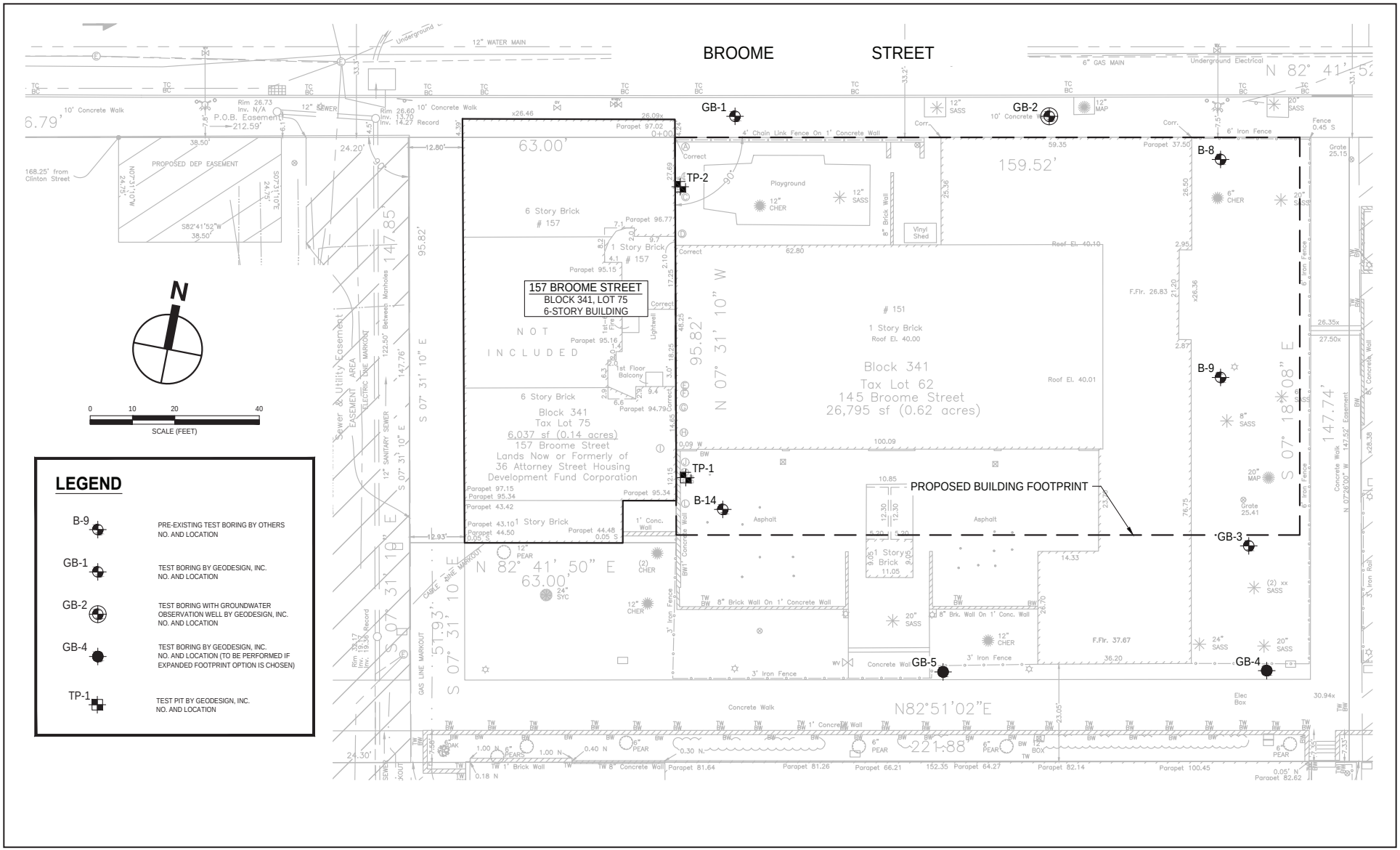
145 Broome Street Test Area



Project Location

145 BROOME STREET

Figure 1



Proposed Building 3-6

145 BROOME STREET

Figure 2

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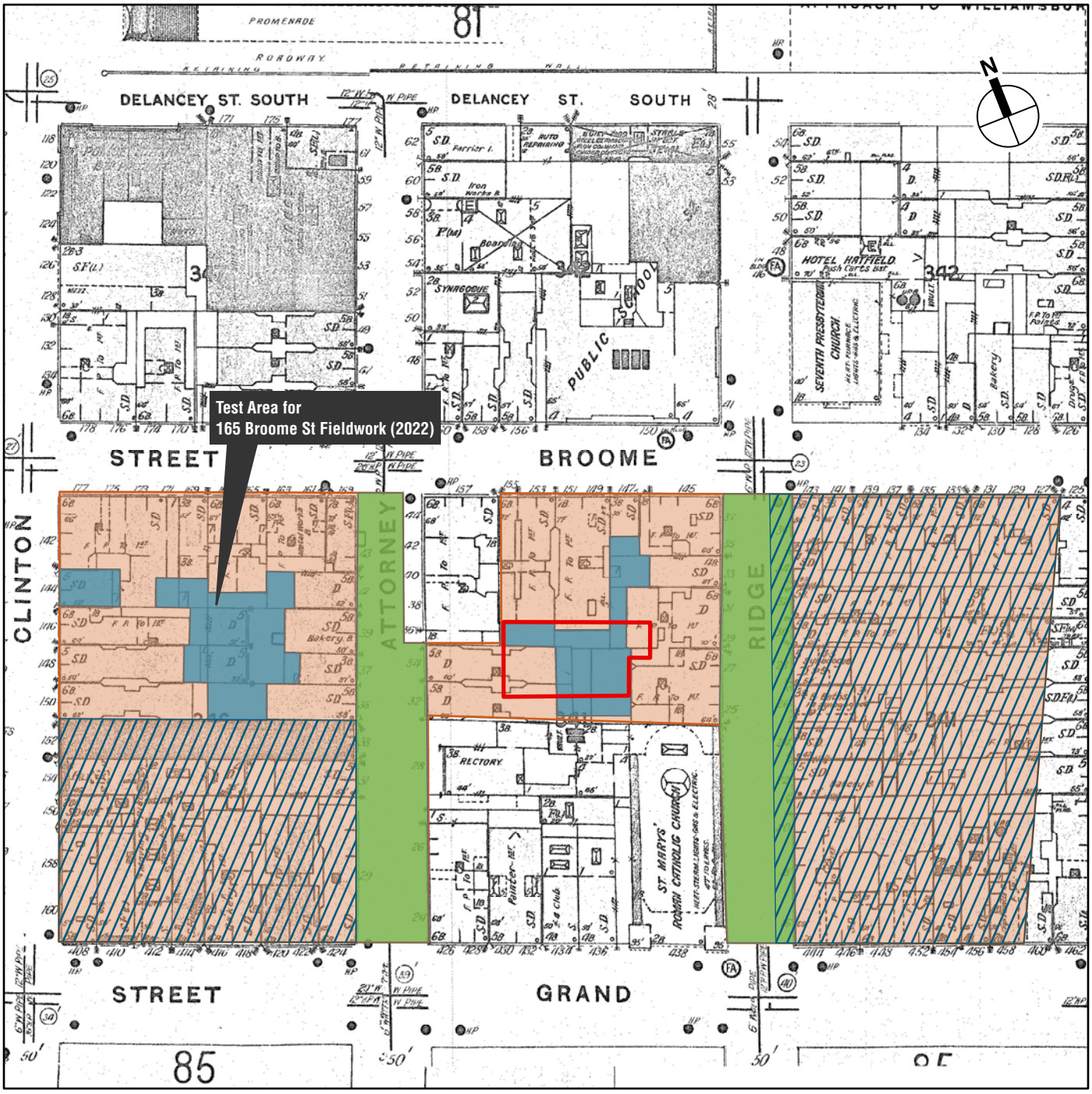


Project Site (Parcel 3 Boundary)

Areas Where Subsurface Disturbance is not Proposed

Areas Sensitive for Rear Yard Shaft Features

Streetbeds with Archaeological Sensitivity in Undisturbed Areas

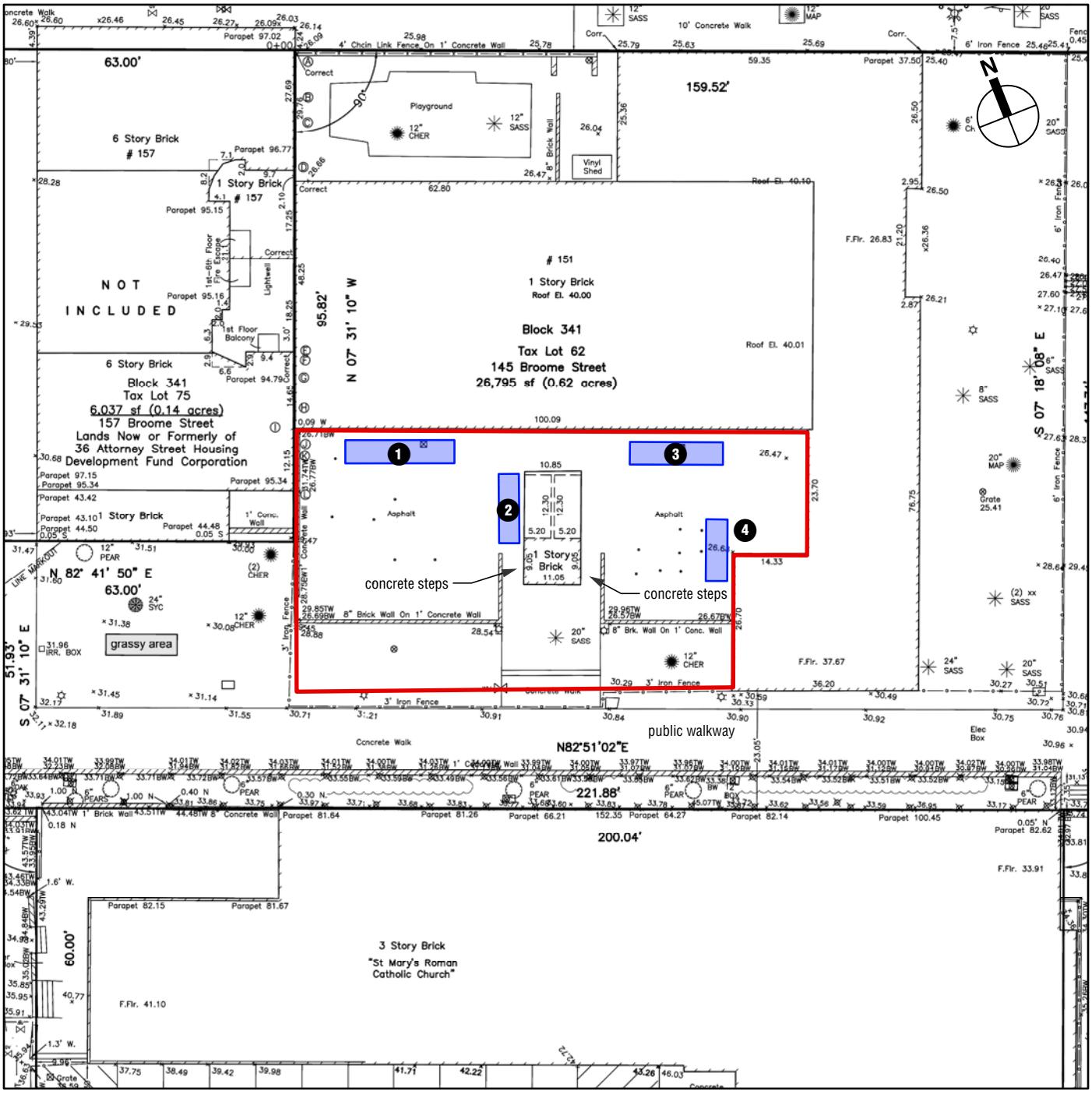
145 Broome Street Test Area

Areas of Archaeological Sensitivity

GRAND STREET HOUSING

Figure 3

11.21.23



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145 Broome Street Test Area

Trench Location

Trench Locations

GRAND STREET HOUSING

Figure 4

Photographs

Facing northeast from public walkway toward rear yard of 145 Broome Street. Note higher elevation area in foreground and retaining wall and then drop in elevation of three feet, closer to the 1-story brick building **1**

Facing southwest from back of 1-story building towards retaining wall and higher elevation public walkway. Note brick storage/utility structure and concrete stairs to the left and play area to the right. Trench 2 was excavated on the left side of photo **2**

Facing west along back of 1-story building showing location of Trench 1 **3**

Facing east along back of 1-story building showing location of Trench 3. Note brick storage/utility structure on the right **4**

Facing southwest from back of 1-story building along east side of brick storage/utility structure (on the right). Trench 4 was excavated at the leftmost edge of this photo, adjacent to the rear wing of the 1-story brick building **5**

Facing southeast from back of 1-story building showing excavation of Trench 1. Note loose brown urban fill with demolition debris **6**

Northwest half of Trench 1 showing loose, mixed urban sandy fill, demolition debris, and a disarticulated drainage pipe. The isolated area of lighter brown sandy soil in the trench floor towards the bottom of the photo is approximately 9 feet below ground surface and appears to be undisturbed sand **7**

Detail of the north wall of Trench 1 showing collapsing soils undercutting the adjacent building's foundation **8**

Facing east towards Trench 2, adjacent to the brick storage/utility structure **9**

Detail of the floor of Trench 2 showing a concrete and brick foundation floor encountered at a depth of 6.5 feet below ground surface. The overlying soils consisted of loose sandy urban fill and brick demolition debris **10**

Facing northwest towards Trench 3, which was excavated adjacent to the 1-story brick building **11**

Facing northwest towards Trench 3 showing drainage line approximately 1.5 feet below ground surface and loose sandy urban fill and brick demolition debris **12**

Detail of the floor of Trench 3 showing a concrete and brick foundation floor encountered at a depth of 8 feet below ground surface. The overlying soils consisted of loose sandy urban fill and brick demolition debris **13**

Facing south towards location of Trench 4, which was excavated adjacent to the rear wing of the 1-story brick building **14**

Facing northeast showing excavation of Trench 4. Note collapsing trench walls consisting of loose urban fill and brick demolition debris. A foundation was encountered at a depth of approximately 8 feet below ground surface in this trench though it was immediately obscured by collapsing walls.

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Appendix A: Soil Boring Log

TECTONIC *ENGINEERING & SURVEYING CONSULTANTS P.C.*

BORING No. B-14

PROJECT No.	8701.01
PROJECT:	Grand Street Guild
LOCATION:	New York, NY
SHEET No. 1 of 3	

CLIENT:	Grand St Guild Housing Development Fund Comp., Inc.	INSPECTOR:	Barry Ouimet
CONTRACTOR:	Craig Test Boring Co., Inc.	DRILLER:	Rob Dollar
		SURFACE ELEVATION:	26.7
		DATUM:	See Remarks
		DATE START:	2/20/17
		DATE FINISH:	2/20/17

GROUND WATER	DATE	TIME	DEPTH

METHOD OF ADVANCING BORING	DIA.	DEPTH	
POWER AUGER:			TO
ROT. DRILL:	3 7/8"	0	TO
CASING:	4"		TO
DIAMOND CORE:			TO
CME 55LC Track Rig with Automatic Hammer			

MON. WELL ☐ YES ☒ NO

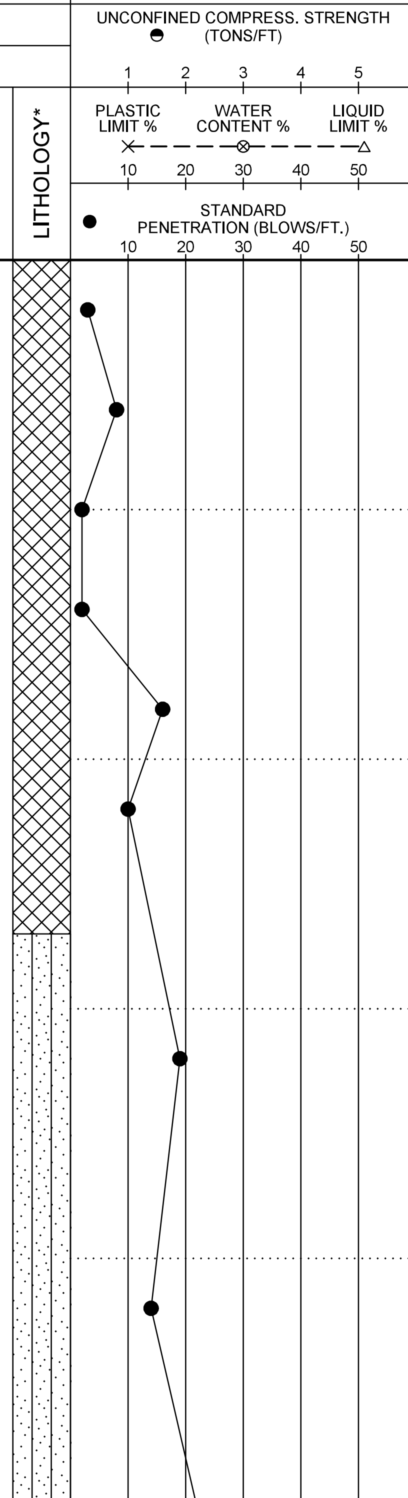
SCREEN DEPTH: --- TO ---

WEATHER: Clear TEMP: 30° F

DEPTH TO ROCK: Not Encountered'

*CHANGES IN STRATA ARE INFERRED

DEPTH (FT.)	N OR MIN./FT.	PENETRATION RESISTANCE (BL/6 IN.)	SAMPLE NUMBER	RECOV. LENGTH (IN.)	RECOV. RQD (%)	MOISTURE	UNIFIED SOIL CLASS.	DESCRIPTION OF MATERIAL	ELEVATION (FT.)
0–2	3	2, 1, 2, 4	S-1	12		M		Bwn c-f SAND, and Silt with brick (FILL) (Class 7)	
2–4	8	5, 5, 3, 3	S-2	18		M		Gy c-f SAND, little f Gravel, trace Silt (FILL) (Class 7)	
4–6	2	4, 1, 1, 1	S-3	6		M		Gy c-f SAND, little Silt, with concrete fragments (FILL) (Class 7)	21.7
6–8	2	1, 1, 1, 1	S-4	6		M		Bwn c-f SAND, little Silt with concrete fragments (FILL) (Class 7)	
8–10	16	6, 4, 12, 6	S-5	6		M		Bwn c-f SAND, little Silt with brick (FILL) (Class 7)	16.7
10–12	10	16, 6, 4, 2	S-6	6		M		Bwn c-f SAND, little Silt, trace f Gravel with brick particles (FILL) (Class 7)	
15–17	19	6, 7, 12, 12	S-7	16		M	SM	Bwn m-f SAND, little Silt with 6" Silt layer (Class 3b)	11.7
20–22	14	5, 7, 7, 6	S-8	14		M	SM	Bwn f SAND, some Silt (Class 3b)	6.7
25									1.7



REMARKS: Surface elevation estimated from spot elevations and elevation contours on drawing "Topographic Survey, Map of Property at 131 Broome Street, Manhattan, New York County New York", (Borough of Manhattan Highway Datum), dated 5/1/07 by Joseph Nicoletti Associates. Elevations were converted to NAVD 88 by adding 1.7 feet. See boring B-11 for groundwater observations.