

8.1 INTRODUCTION

This chapter assesses the potential effects to architectural (i.e., historic) and archaeological resources as a result of the construction and operation of the Modified Design, in comparison to the effects described in the 2004 FEIS. The 2004 FEIS prepared for the Second Avenue Subway analyzed the Project's effects on architectural and archaeological resources (also collectively referred to as cultural resources or historic properties) in accordance with Section 106 of the National Historic Preservation Act (NHPA) of 1966. This law requires that federal agencies consider the effects of their actions on any properties listed on or determined eligible for listing on the National Register of Historic Places (NR). The NHPA also requires that federal agencies afford the federal Advisory Council on Historic Preservation the opportunity to comment on federal actions and that federal agencies undertake planning and actions to minimize harm to properties designated as National Historic Landmarks. NHPA also requires the opportunity for public comment on a project's effects on historic properties.

In addition, historic properties are also protected from adverse effects by Section 4(f) of the Department of Transportation Act of 1966, which prohibits actions by the Secretary of Transportation that require the "use" of a historic property that is listed in or eligible for inclusion in the NR, unless a determination is made that there is no feasible and prudent alternative to such use, and all possible planning has been undertaken to minimize harm to the 4(f) property. A Section 4(f) Evaluation for the Modified Design is included in Chapter 17 of this Supplemental EA.

A Programmatic Agreement (PA) for the Second Avenue Subway Project was prepared pursuant to Section 106 of the NHPA among the Federal Transit Administration (FTA), Metropolitan Transportation Authority (MTA) New York City Transit,¹ and the New York State Historic Preservation Officer (SHPO) and executed on April 8, 2004, to set forth the procedures that would be followed to document and protect historic properties that could be adversely affected by the construction of the subway. The New York City Landmarks Preservation Commission (LPC) is a consulting party for the PA (indicating that LPC participated in consultation related to the PA). The PA has been amended once, in 2012, with respect to vibration thresholds.

The PA sets forth the steps to be followed for any changes to the Project that would expand the Project's Area of Potential Effect (APE) for architectural resources, such as would occur for station entrances and ancillary facilities that were not included in the design as analyzed in the 2004 FEIS. As set forth in the PA and consistent with Section 106, as the Project design proceeds, if additional APEs are identified, surveys are to be conducted to identify any potential architectural

¹ New York City Transit (NYCT) was the official signatory of the Programmatic Agreement. The MTA Capital Construction Company (MTACC) is responsible for planning, design, and construction of the project and related public outreach, and New York City Transit (NYCT) will operate and maintain the service, but for purposes of this document, they are collectively referred to herein as MTA.

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resources in those APEs, and the potential architectural resources will then be evaluated in consultation with the SHPO to determine whether they are eligible for the State and National Registers of Historic Places (S/NR). The PA also sets forth the steps to be followed for any changes to the Project that introduce new Project elements that would involve subsurface construction and for which the effects of such construction have not yet been analyzed. For these areas, archaeological investigation is to be conducted in consultation with the SHPO and LPC.

The Modified Design would change the APEs for architectural and archaeological resources from what was analyzed in the 2004 FEIS. The APE for potential storage tracks along Second Avenue north of 125th Street that were proposed for the 2004 FEIS design would be eliminated, and the Modified Design would have new APEs at new or expanded locations for station entrances and ancillary facilities. Therefore, consistent with the procedures set forth in the PA, the buildings located within the new APE for architectural resources were evaluated by professional architectural historians to determine whether they appear to meet the eligibility criteria for the S/NR. The new APE for archaeological resources was evaluated by professional archaeologists to determine its potential to contain archaeological resources (i.e., its “sensitivity” for archaeological resources).

The 2004 FEIS concluded that the new Second Avenue Subway’s planned direct, subsurface connection to the historic Metro-North Harlem-125th Street Railroad Station would result in a potential adverse effect on that architectural resource. The Modified Design eliminates this connection and therefore avoids this adverse effect. The Modified Design would not result in adverse effects to any other architectural resources. The 2004 FEIS also identified archaeologically sensitive areas along the Phase 2 alignment, and concluded that if archaeological resources are found to be present and could be impacted during construction, then there is a potential for adverse effects to archaeological resources. This conclusion remains the same with the Modified Design.

8.2 FEIS FINDINGS

The 2004 FEIS evaluates the full Second Avenue Subway’s possible effect on architectural resources in Chapter 9, “Historic Resources,” and its possible effect on archaeological resources in Chapter 10, “Archaeological Resources.” For both architectural and archaeological resources, the analysis identified resources located within the Project’s APE and evaluated the Project’s impacts on those resources. The following APEs were used for the evaluation:

- **Architectural resources:** The 2004 FEIS used an APE for architectural resources that was generally the area within 50 feet of the proposed new subway alignment starting from the building line on either side of the alignment. An APE of 50 feet was also used for potential shaft sites and staging areas (in East Harlem, these were along Second Avenue north of 125th Street). An APE of 50 feet was also used around potential station entrances and ancillary buildings.
- **Archaeological resources:** The 2004 FEIS used an APE for archaeological resources that was the full alignment for the new tunnel. No APEs were defined for any of the station entrances, vents, or other ancillary facilities for the 2004 FEIS because the locations of these facilities had not been confirmed. Instead, the PA specified that additional research will be conducted for all such areas prior to any construction.

For all Project APEs, the 2004 FEIS evaluated the Project’s potential effects on “known” historic properties—i.e., properties that are National Historic Landmarks (NHLs), properties listed on or determined eligible for listing on the S/NR, properties located within historic districts that are either listed on or determined eligible for listing on the S/NR, properties designated as New York City Landmarks (NYCLs), and properties located within New York City Landmark Historic Districts.

In addition to known historic properties, the 2004 FEIS also identified and considered the “potential” historic resources that could be affected by Project elements, including station entrances and ancillary facilities, that were developed during the more refined engineering conducted for the 2004 FEIS. Potential resources are properties that were identified by a professional architectural historian as having the potential to meet the eligibility criteria for S/NR and/or designation as NYCLs. The PA stipulated that the potential historic resources should be evaluated in consultation with the SHPO to determine whether they are eligible for the S/NR.

For archaeological resources, the 2004 FEIS included an evaluation of the potential archaeological resources that could be affected by the Second Avenue Subway, based on an evaluation of the past history of the area and an assessment of the likelihood for buried resources that may be important to remain in place.

8.2.1 CONSTRUCTION IMPACTS

8.2.1.1 ARCHITECTURAL RESOURCES

Table 8-1 lists the known and potential architectural resources identified within the APE in East Harlem in the 2004 FEIS.

The 2004 FEIS identified the potential for the Project to result in an adverse effect on the S/NR-eligible MTA Metro-North Harlem-125th Street Station, located at 125th Street and Park Avenue, as a result of a direct connection planned to be constructed between the Second Avenue Subway and the existing station. The 2004 FEIS described that the historic property includes a subterranean level that incorporates the station platforms and other elements of the former 1873-74 Harlem Station of the New York Central and Hudson River Railroad. This former station was built within a cut on Park Avenue, with the present MTA Metro-North Harlem-125th Street Station built above it and incorporating the former station structure in its foundations and basements. The 2004 FEIS design could have required alterations to the basement level of the existing station, which could result in the removal or alteration of features of an earlier 125th Street Station and buried retaining walls of the earlier 1874 railroad cut in Park Avenue.

The 2004 PA required that MTA, along with FTA, consult with the SHPO regarding any proposed alterations to the Metro-North Harlem-125th Street Station to preserve and avoid, to the extent practicable, adverse effects to the significant historic station features. In addition, the PA stipulated that design specifications would be developed to ensure that above-ground visible Project elements around the Metro-North Harlem-125th Street Station, as well as an associated Comfort Station located on the south side of 125th Street and constructed in conjunction with the station, would be compatible with the station’s historic and architectural qualities. Although vacant and in disrepair, the Comfort Station is a contributing component of the Harlem-125th Street Station and is therefore also eligible for listing on the S/NR.

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**Table 8-1
Architectural Resources in the East Harlem APE
Identified in the 2004 FEIS**

Block/ Lot	Address	Name	Historic Status					
			S/NR Listed	S/NR Eligible	NYCL	Pending NYCL/ NYCL- Eligible	Potential Resource	Potential Effect (See Notes)
1722/38	2014 Fifth Ave	Mount Morris Park Historic District	✓					A
1749/66	4-12 East 125th St	Residential building		✓				A
1749/56	28-30 East 125th St/ 1944 Madison Ave	Residential building		✓				A
1750/34	81-85 East 125th St	Mount Morris Bank Building	✓		✓			A, C
N/A	Park Avenue at 125th St	Park Avenue Viaduct		✓				A, C
N/A	Park Avenue at 125th St	MTA Metro-North Harlem-125th St Station and Comfort Station		✓				A, C
1773/62	120 East 125th St	Engine Co. 36 firehouse		✓	✓			A, C
1773/58	124 East 125th St	Apple Bank for Savings	✓			✓		A, C
1774/20	145-147 East 125th St	Twelfth Ward Savings Bank		✓				A, C
1789/37	224 East 125th St	NY Public Library, 125th St Branch		✓		✓		A
N/A	125th St at Second Ave	Triborough Bridge (now the Robert F. Kennedy Bridge)		✓				A
1789/10	207 East 124th St	Tenement		✓				A, B
1667/24	2291 Second Ave	Fischer & Co. Building				✓		A, C
1646/19, 20	231, 233 East 96th St	Two tenements		✓		✓		C
1687/47	306 East 116th St	4-story brownstone					✓	C
1795/50	306 East 119th St	5-story tenement					✓	C

Notes:

- SR: New York State Register of Historic Places.
- NR: National Register of Historic Places.
- S/NR Eligible: Site has been found eligible for listing on the New York State and National Registers of Historic Places.
- NYCL: New York City Landmark.
- Pending NYCL: Site has been calendared for a public hearing or heard for designation by the New York City Landmarks Preservation Commission
- NYCL Eligible: LPC has determined that the site appears eligible for NYCL designation.
- Potential Resource: Identified for FEIS but not confirmed with the SHPO.
- Potential Effects:
 - A: Potential effect during construction because of location near possible cut-and-cover activities.
 - B: Potential effect during construction because of potential for building underpinning, other protective measures, or ground improvement.
 - C: Potential contextual effect because of location near potential station entrances and ancillary facilities.

Source: 2004 FEIS.

In addition, the 2004 FEIS disclosed that construction of the Second Avenue Subway would have the potential to result in accidental damage to architectural resources along the full Project alignment where architectural resources located in proximity to proposed construction activities. In East Harlem, such effects were identified for a number of resources along the alignment, indicated in **Table 8-1**. The 2004 FEIS and PA stipulated that detailed Construction Protection Plans (CPPs) will be developed in consultation with the SHPO for each major Project construction segment once engineering advanced further and would contain protection measures for architectural resources, as appropriate, as outlined in Exhibit E of the PA. Each CPP will specify the construction protection

measures to be implemented for each affected resource and will be implemented prior to any Project excavation or construction activities. Construction activities identified as having the potential to affect architectural resources typically include cut-and-cover construction, underpinning or other methods of providing structural support for historic buildings, construction of station entrances and ancillary facilities, ground improvement techniques, and possible vibration effects such as from drilling or controlled blasting. The PA also stipulated that MTA consult with LPC for any locally designated properties that may be directly affected by Project construction.

8.2.1.2 *ARCHAEOLOGICAL RESOURCES*

The 2004 FEIS identified areas where archaeological resources may exist within the project's APE in East Harlem (i.e., areas of archaeological sensitivity). These included potential resources associated with the precontact (Native American) resources as well as buried resources associated with historic period occupation. These areas of precontact and historic period archaeological sensitivity were identified in the 2003 Phase 1A Archaeological Documentary Study and supplemental documentary and soil borings analyses that were completed as part of the 2004 FEIS pursuant to Section 106 of the National Historic Preservation Act. No archaeological resources are present in bedrock, since there is no soil there in which subsurface remains can be buried, so bedrock areas were not identified as archaeologically sensitive. The areas of archaeological sensitivity that were identified in the 2004 FEIS are summarized in **Table 8-2** of this chapter of this Supplemental EA.

The 2004 FEIS concluded that the Second Avenue Subway has the potential to adversely affect archaeological resources associated with both the precontact and historic period occupation of the project site, if the resources are actually present in the locations affected by the Project and if they are significant resources with high research value. In other words, adverse impacts would occur to archaeological resources under the following conditions: (1) if archaeological resources are actually present in the locations and at the depths described in **Table 8-2**; (2) if those resources are eligible for listing on the S/NR; and (3) if the construction of the Second Avenue Subway would disturb those S/NR-eligible archaeological resources.

The Second Avenue Subway PA executed in 2004 stipulates that as design for the Project advances, boring logs prepared following completion of the 2004 FEIS will be reviewed by a professional archaeologist to refine the depths and locations of archaeological sensitivity. It also requires completion of supplemental documentary research for the locations of any newly added Project elements; the completion of subsurface archaeological testing in any affected areas of archaeological sensitivity; and continued consultation with the SHPO and all Section 106 consulting parties.

As described in the 2004 FEIS and summarized in the PA, if archaeological analysis completed subsequent to the 2004 FEIS confirms that an adverse effect would occur, measures would be developed to mitigate impacts on archaeological resources pursuant to Section 106. The 2004 FEIS stated that mitigation measures will be designed to address the specific resources that would be adversely affected by the Project and could include archaeological testing or monitoring.

As set forth in the PA, if the Project impacts human remains associated with either the precontact or historic period occupation of the area, mitigation measures would involve either avoidance or disinterment in consultation with the SHPO and the descendant community (or communities) as appropriate. In the event that human remains are encountered that are identified as Native American, consultation with Native American Tribal Nations will be completed as required by

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city, state, and federal laws (e.g., the Native American Graves Protection and Repatriation Act [NAGPRA]). Mitigation measures for effects to human remains are to include (but are not limited to) the identification of and consultation with an appropriate descendant community or communities prior to the archaeological investigation of areas sensitive for human remains. Mitigation measures also include the retention of a qualified physical anthropologist or forensic archaeologist to be on call or on site in areas where human remains could be encountered.

Table 8-2
Areas of Archaeological Sensitivity Identified in the 2004 FEIS

Location of Potential Resource	Type of Potential Resource	Depth of Potential Resource	Potential for Effects from Construction Disturbance?		
			No	Yes	Why*
Second Ave, 99th-105th St	Precontact	0-22 feet	✓		EST
Second Ave, 105th-106th St	Precontact	0-22 feet		✓	C&C
Second Ave, 109th-110th St	Precontact	18-23 feet	✓		EST
Second Ave, 111th-112th St (east side)	Early 19th century residential features	0-12 or 0-30 feet	✓		EST
Second Ave, 111th-116th St (outside existing subway tunnel)	Precontact	13-23 feet	✓		EST
Second Ave, 116th-118th St (outside existing subway tunnel), excluding 118th St	Precontact	13-18 feet		✓	C&C
Second Ave, 118th-120th St (outside existing subway tunnel)	Precontact	13-18 feet	✓		EST
Second Ave, 121st-124th St	Precontact	12-17 feet		✓	C&C
	Early to mid-19th century residential features (only from 122nd to 124th)	0-18 feet		✓	C&C
Southwest corner of Second Ave and 124th St (Block 1788, Lot 28)	Precontact	5-15 feet		✓	BU
	Late 17th century/early 19th century residential features	0-15 feet		✓	BU
124th St west of Second Ave	Precontact	5-15 feet	✓		TB
	Late 17th century/early 19th century residential features	0-15 feet	✓		TB
Block west of Second Ave between 124th and 125th St (Block 1789)	Precontact	5-15 feet		✓	BU
	Late 17th century/early 19th century residential features (specific lots only)	0-15 feet		✓	BU
125th St, Second to Fifth Ave, south side	Precontact	14-23 feet		✓	C&C
125th St, Second to Fifth Ave, north side	Precontact	3-15 feet		✓	C&C
Second Ave, 126th-127th St	Mid-19th century farm-related features and outbuildings	0-15 feet		✓	C&C
Train storage area on Second Ave, 125th St to Harlem River	Precontact	12-25 feet		✓	C&C
Notes: * C&C = Cut and Cover; BU = Building or other structural Underpinning; TB = Tunnel Below Depth of Potential Resource; EST = Use or Construct Within an Existing Subway Tunnel.					
Source: 2004 FEIS.					

As part of the mitigation strategy, the 2004 FEIS and PA stated that MTA would appoint a professional archaeologist who meets the standards of the New York Archaeological Council (NYAC) and the Secretary of the Interior's standards for cultural resources professionals (36 CFR 61) as the Cultural Resource Manager for the project. The Cultural Resource Manager must reside

in the New York metropolitan area and will be responsible for assessing the nature of unanticipated archaeological discoveries made during construction (and stopping construction for a certain period of time in order to do so) in order to determine the discoveries' horizontal and vertical extents and its potential significance. The Cultural Resource Manager will also be responsible for retaining the services of a physical anthropologist or forensic archaeologist if human remains are unexpectedly encountered during construction. Additional mitigation strategies outlined in the 2004 FEIS and PA involved additional levels of archaeological analysis, the curation of artifacts, and public outreach and education.

Finally, the 2004 FEIS also concluded that some areas of archaeological sensitivity that would be impacted by the project may be inaccessible, rendering it impossible to complete an archaeological investigation of those areas. Disturbance to archaeologically sensitive areas for which it would be physically impossible to complete an archaeological investigation is defined as an unmitigated adverse impact.

8.2.2 PERMANENT IMPACTS

8.2.2.1 ARCHITECTURAL RESOURCES

The 2004 FEIS determined that, given the densely developed and highly urbanized context of the historic resources and history of the use of Second Avenue for transportation, it is highly unlikely that any significant contextual effects would occur to architectural resources as a result of the construction of visible subway elements. However, the 2004 FEIS stated that permanent effects could occur if above-ground elements such as signs, stairways, vents, ventilating structures, and other ancillary facilities for the new subway were to change the setting or context of nearby architectural resources, or if any of these elements were constructed within existing historic structures (see **Table 8-1** for historic sites where the 2004 FEIS Design could potentially cause contextual effects). Therefore, in cases where entrances were to be located within or adjacent to historic structures, or where ventilation structures and other ancillary facilities were planned to be contiguous to or in close proximity to historic structures, the 2004 FEIS and PA stated that consultation would be undertaken with the SHPO. This was to include the development of design specifications to ensure that any permanent and visible Project elements that may be built within or near an architectural resource be compatible with the historic and architectural characteristics of the affected resources(s). The 2004 FEIS identified that above-grade entrance structures could affect the context of the Metro-North Harlem-125th Street Station, although the design of these entrances had not yet been completed and the effects of the construction could not at that point be determined.

Guidelines for the preparation of design specifications were included in the Project's PA. As the local historic preservation agency, LPC is a consulting party to the PA. As specified in the PA, the design specifications will be prepared in consultation with the SHPO and LPC.

8.2.2.2 ARCHAEOLOGICAL RESOURCES

The 2004 FEIS determined that potential adverse effects on archaeological resources could occur within the project corridor during the construction phase of the proposed project. Since all potential effects would be encountered by construction activities, the 2004 FEIS determined that no further effects to archaeological resources would occur because of the project's operation and that no mitigation measures would be required.

8.3 UPDATE OF BACKGROUND CONDITIONS

8.3.1 ARCHITECTURAL RESOURCES

Subsequent to the 2004 FEIS, some architectural resources near the proposed Phase 2 alignment have been determined eligible for listing on the S/NR. The SHPO recently identified a new S/NR-eligible East Harlem Historic District that extends along both sides of East 116th Street from the East River to Park Avenue and north and south along First Avenue between East 111th to East 120th Street (see **Figure 8-1**). Along Second Avenue, this new historic district includes the blocks from East 115th Street to East 117th Street on both sides of the avenue. Within the large area encompassed by the district, specific properties have been identified as contributing resources to the district, whereas other properties are not contributing.

The new historic district is centered on East 116th Street as the area's commercial spine, and includes buildings developed primarily from the 1870s to the 1920s. Contributing buildings include residential buildings (rowhouses, apartment flats, and tenements), churches and schools, and banks and commercial buildings. The district is important because of its extensive history as an enclave of working-class ethnic communities and also because of its architecture.

In addition, an extensive inventory of potential architectural resources was developed for the East Harlem Rezoning completed by the City Planning Commission on September 19, 2017.² For that study, architectural resources that appeared to meet one or more of the criteria for listing on the NR were identified based on field surveys and by using historical sources. Potential architectural resources identified were reviewed by LPC and in a letter dated March 29, 2017, LPC confirmed the sites that appeared to meet eligibility requirements.

The Modified Design results in some changes to the APE for Phase 2 of the Project. Some additional architectural resources that were not in the APE evaluated in the 2004 FEIS are located in those new areas. Those additional historic resources are discussed below in Section 8.4.1.1.

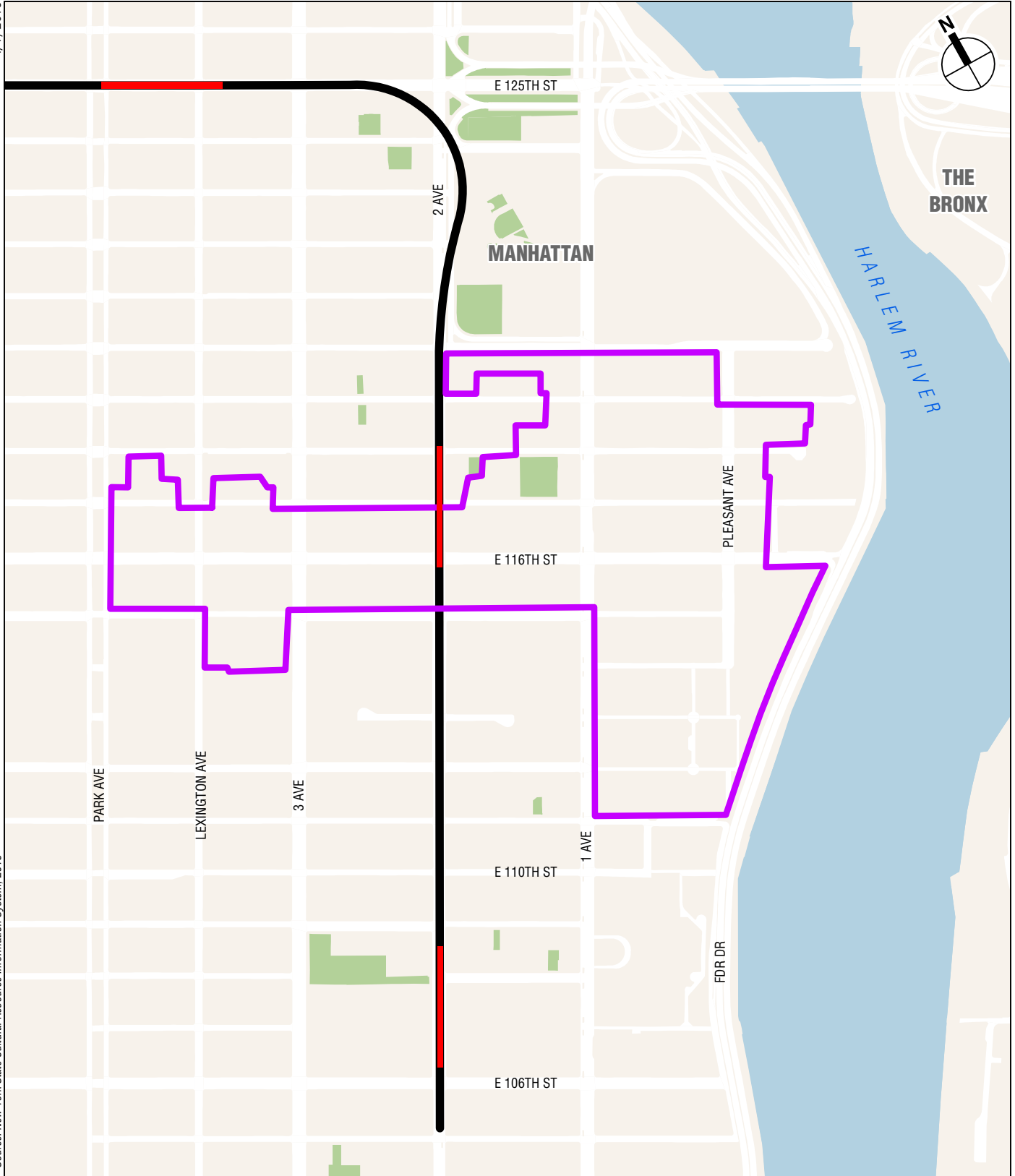
8.3.2 ARCHAEOLOGICAL RESOURCES




Since the completion of the 2004 FEIS, new archaeological data was collected from sites in northeastern Manhattan as part of unrelated projects that have resulted in changes to the archaeological sensitivity of the general area surrounding the proposed alignment. This includes a general archaeological sensitivity zone in the area bounded by East 124th Street, Second Avenue, East 127th Street, and a point east of First Avenue associated with two now-redeveloped cemeteries—the Reformed Dutch Church of Harlem Cemetery and the Harlem African Burial Ground (HABG). Recent excavations completed in association with project sponsored by the New York City Economic Development Corporation (NYCEDC) at the former NYCT bus depot on East 126th Street confirmed the presence of human remains on the site and also confirmed that the graves formerly within the HABG were disturbed and redistributed outside the mapped boundaries of the historic cemetery. The zone of sensitivity has been established to include areas where human remains may have been redistributed.

² New York City Planning Commission, East Harlem Rezoning Final Environmental Impact Statement, CEQR No. 17 DCP048M, September 19, 2017. Available at: www1.nyc.gov/site/planning/applicants/env-review/east-harlem.page.

4/9/2018

Source: New York State Cultural Resource Information System, 2018



-  SAS Phase 2 Alignment
-  Proposed Station Locations
-  East Harlem Historic District

0 800 FEET

8.4 PHASE 2 MODIFIED DESIGN—CHANGES IN IMPACTS

8.4.1 CONSTRUCTION IMPACTS

8.4.1.1 ARCHITECTURAL RESOURCES

Changes associated with the Modified Design require modifications to the APE for architectural resources analyzed in the 2004 FEIS. Consistent with guidance contained in the New York City Department of Building's (DOB) *Technical Policy and Procedure Notice (TPPN) #10/88*, an APE of 90 feet around the alignment of the Modified Design was used.³ For areas where blasting may occur, an APE of 200 feet was used, consistent with methodology employed during Phase 1 of the Second Avenue Subway. Based on geological conditions and anticipated construction methodologies, the potential for blasting to occur was assumed at the proposed locations for the 116th Street Station (including tunnel box, entrances, and ancillary facilities), the ancillary facilities for the 125th Street Station, and the ancillary facilities for both 125th Street tail track options. If additional areas of blasting are deemed necessary during construction, the APEs will be expanded in these areas, as needed, and evaluated in accordance with the PA. The modified APE is illustrated on **Figures 8-2 through 8-6**.

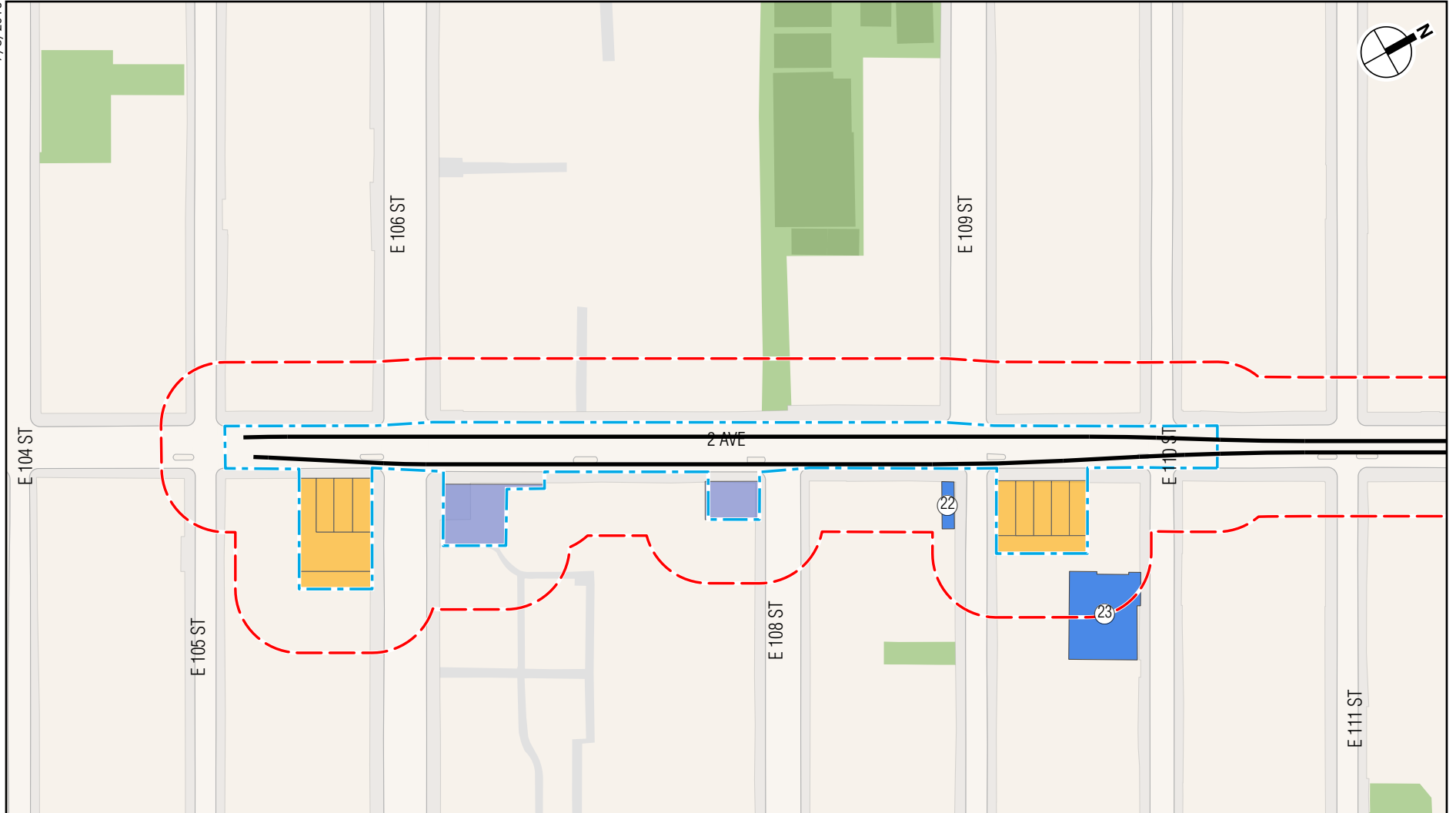
Since the completion of the 2004 FEIS, additional architectural resources have been identified in the modified APE. This includes properties that have been identified by the SHPO or LPC since 2004 as known historic properties (properties listed on or eligible for listing on the S/NR and designated and potential NYCLs). It also includes properties that fall within the modified APE that were not in the 2004 FEIS APE. **Table 8-3** lists all known architectural resources located in the modified APE, including those properties identified in the 2004 FEIS and those identified subsequently. Four known resources identified in the 2004 FEIS are no longer in the modified APE and therefore are not listed in the table: the Triborough Bridge (which is not within the APE for the Modified Design), 207 East 124th Street, and the two resources on East 96th Street (which were in the APE for the 96th Street Station, which is now completed). In addition, the 2004 FEIS also identified two potential architectural resources in the East Harlem APE, one on East 116th Street and another on East 119th Street. The architectural resource on East 116th Street is now a contributing resource to the East Harlem Historic District. Based on a review by the SHPO conducted during preparation of this Supplemental EA, the property on East 119th Street is not an architectural resource.

The southern end of the proposed 116th Street Station, the proposed ancillary facility (Ancillary 1) at the northeast corner of East 115th Street and Second Avenue, and the proposed entrance (Entrance 1) at the northeast corner of East 116th Street and Second Avenue would be located within the boundaries of the new East Harlem Historic District. However, these properties are not proposed on lots that contain buildings that are contributing resources to the significance of the historic district. Contributing buildings are listed in **Table 8-4**.

In addition to the known historic properties already identified, the modified APE also includes properties that were identified as potential architectural resources based on field surveys and a

³ TPPN #10/88 was issued by DOB on June 6, 1988, to supplement Building Code regulations with regard to historic structures. TPPN #10/88 outlines procedures for the avoidance of damage to historic structures resulting from adjacent construction, defined as construction within a lateral distance of 90 feet from the historic resource.

7/5/2018



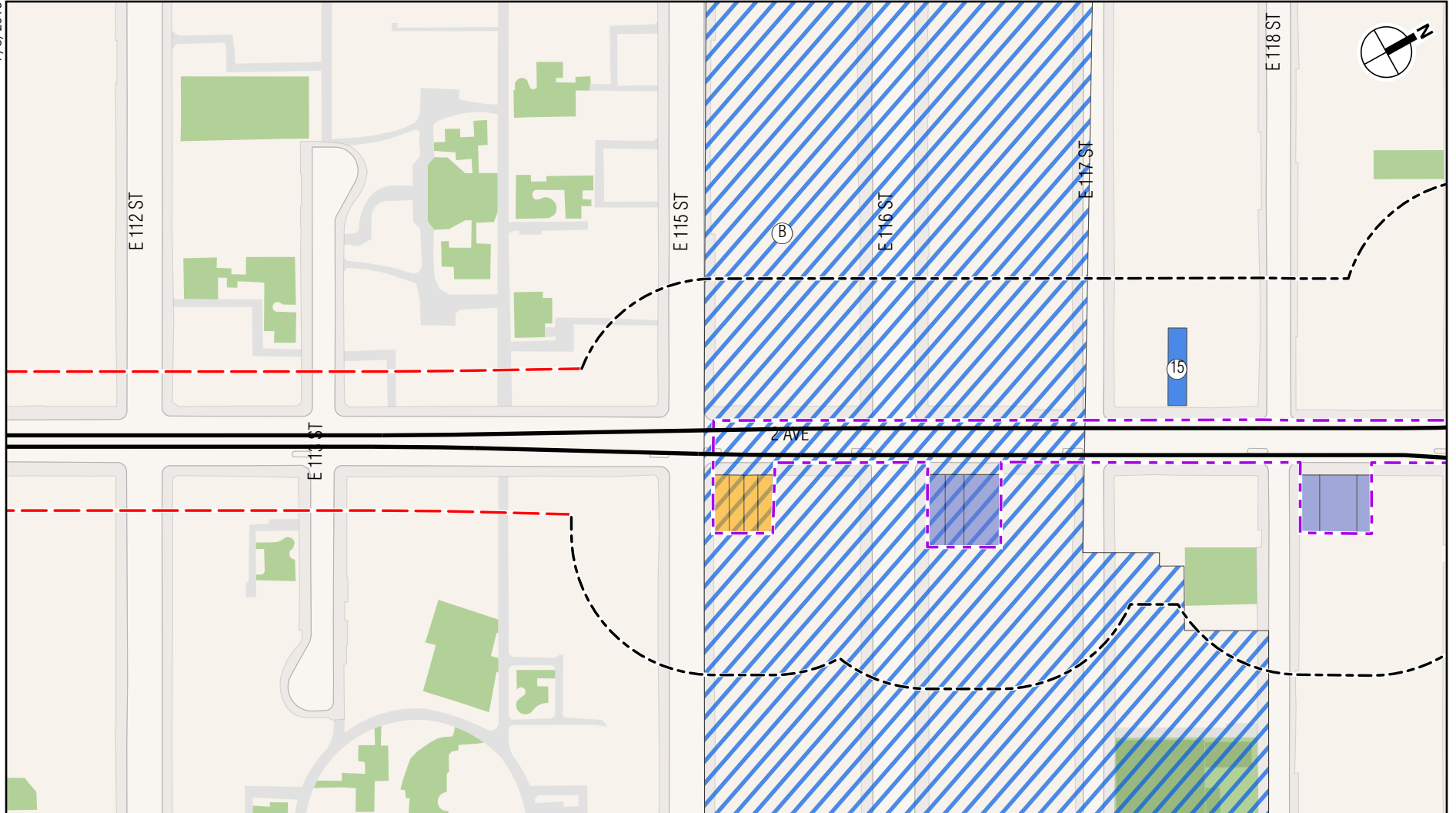
- Proposed SAS Alignment
- Proposed SAS Alignment Area of Potential Effect (90-ft boundary)
- Potential Below Ground Blasting Area of Potential Effect (200-ft boundary)
- Potential Below-Ground Blasting
- Proposed Station Alignment
- Historic Districts
- Architectural Resources
- Ancillary
- Entrance

0 200 FEET

See Table 8-3 for information on resources

Architectural Resources
106th Street Station
Figure 8-2

7/5/2018



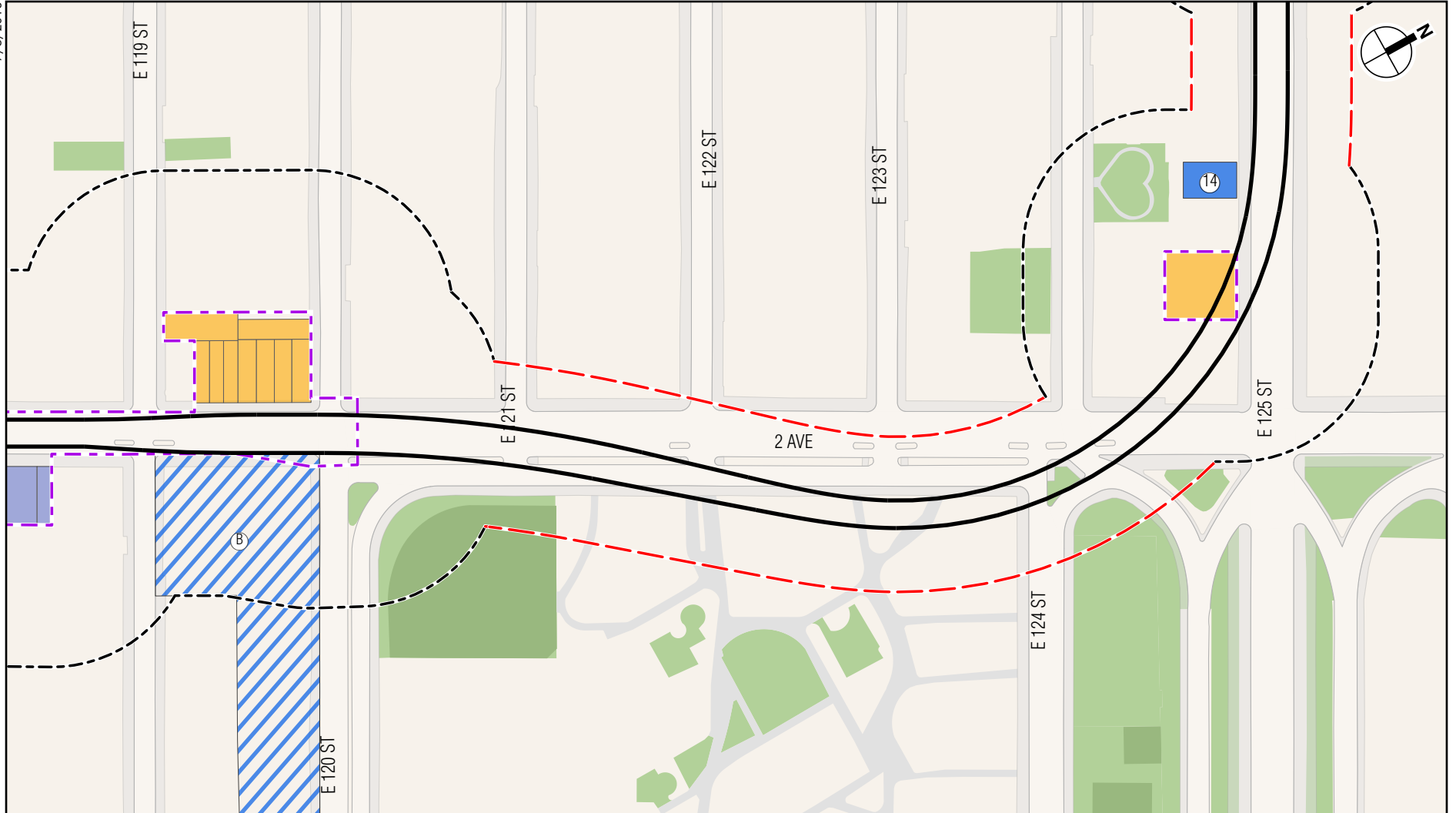
- Proposed SAS Alignment
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- Potential Below Ground Blasting Area of Potential Effect (200-ft boundary)
- Potential Below-Ground Blasting
- Proposed Station Alignment
- Historic Districts
- Architectural Resources
- Ancillary
- Entrance



See Table 8-3 for information on resources

Architectural Resources
 116th Street Station
Figure 8-3

7/5/2018

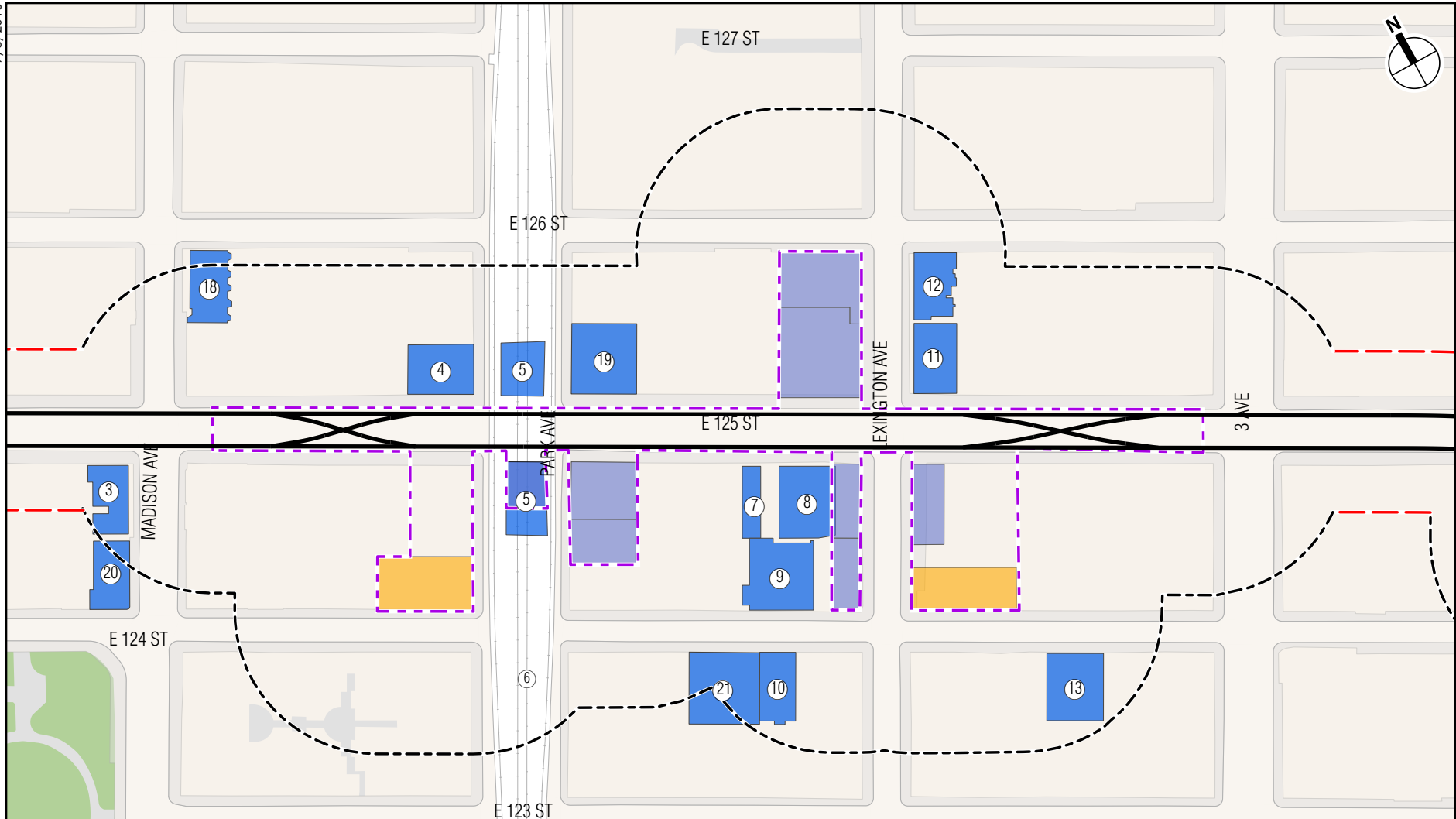


- Proposed SAS Alignment
- Proposed SAS Alignment Area of Potential Effect (90-ft boundary)
- Potential Below Ground Blasting Area of Potential Effect (200-ft boundary)
- Potential Below-Ground Blasting
- Proposed Station Alignment
- Historic Districts
- Architectural Resources
- Ancillary
- Entrance

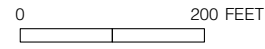


See Table 8-3 for information on resources

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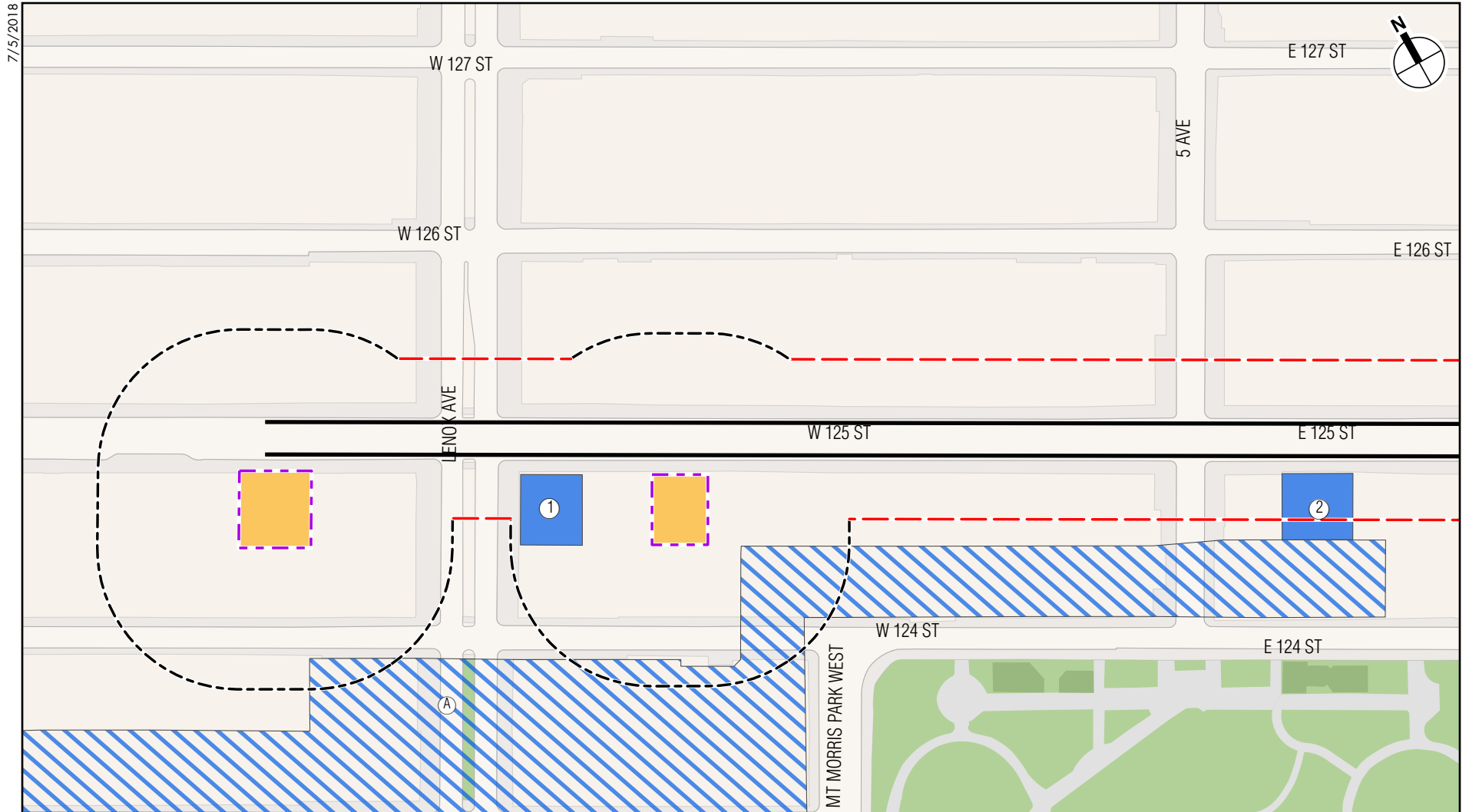


- Proposed SAS Alignment
- Proposed SAS Alignment Area of Potential Effect (90-ft boundary)
- Potential Below Ground Blasting Area of Potential Effect (200-ft boundary)
- Potential Below-Ground Blasting
- Proposed Station Alignment
- Historic Districts
- Architectural Resources
- Ancillary
- Entrance



See Table 8-3 for information on resources

Architectural Resources
125th Street Station
Figure 8-5



- Proposed SAS Alignment
- Proposed SAS Alignment Area of Potential Effect (90-ft boundary)
- Potential Below Ground Blasting Area of Potential Effect (200-ft boundary)
- Potential Below-Ground Blasting
- Proposed Station Alignment
- Historic Districts
- Architectural Resources
- Ancillary
- Entrance

0 200 FEET

See Table 8-3 for information on resources

Architectural Resources
125th Street Tail Tracks
Figure 8-6

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review of historical sources conducted by an architectural historian in 2017. For all identified potential historic resources, information was provided to the SHPO and LPC, and these agencies provided determinations of S/NR and NYCL eligibility. Those properties identified as meeting S/NR and/or NYCL eligibility criteria are included in **Table 8-3**. **Figures 8-2 through 8-6** depict the location of all architectural resources in the modified APE.

**Table 8-3
Architectural Resources in Modified APE**

Fig. Ref. No. ¹	Block / Lot	Address	Name	Historic Status			
				S/NR Listed	S/NR Eligible	NYCL	NYCL Eligible
1	1722 / 69	100-110 West 125th St	Marion Building		✓		
A	Multiple	Multiple	Mount Morris Historic District		✓		
2	1749 / 6	4-12 East 125th St	Flats and stores		✓		
3	1749 / 56	1944 Madison Ave	Flats and stores		✓		
4	1750 / 34	81 East 125th St	Mount Morris Bank	✓		✓	
5	N/A	1818 Park Ave	Metro-North Harlem-125th Street Station (including Comfort Station)		✓		
6	N/A	Park Ave from East 97th to East 132nd St	Park Avenue viaduct		✓		
7	1773 / 62	120 East 125th St	Fire Hook and Ladder No. 14	✓		✓	
8	1773 / 58	124 East 125th St	Former Harlem Savings Bank (Apple Bank)	✓			
9	1773 / 11	123 East 124th St	Former New York City Telephone Company		✓ ²		
10	1772 / 60	124 East 124th St	Former stable		✓ ²		
11	1774 / 20	141-147 East 125th St	Former Twelfth Ward Bank		✓		
12	1774 / 51	2075-2087 Lexington Ave	Apartment building		✓		
13	1772 / 45	166 East 124th St	Former stable		✓ ²		
14	1789 / 37	224 East 125th St	New York Public Library 125th Street Branch		✓	✓	
15	1667 / 24	2291 Second Ave	Fisher & Co. Building				✓
16	1666 / 19	247 East 116th St	Fiorello LaGuardia Political Association		✓ ²		
17	1687 / 49	2256 Second Ave	Banca Commerciale Italiana		✓ ²		
B	Multiple	Multiple (see below)	East Harlem Historic District		✓		
18	1750 / 50, 52, 53	1969-1961 Madison Avenue	Rowhouses		✓ ³		
19	1774 / 1	1825 Park Avenue	Former Hamilton Storage and Warehouse Co.		✓ ³		
20	1749 / 14, 16	23-25 East 124th Street	Cambridge and Oxford Flats		✓ ³		
21	1772 / 62, 64	116-120 East 124th Street	Loft building		✓ ^{3, 4}		
22	1680 / 49	2118 Second Avenue	Former Bank		✓ ³		
23	1681 / 45, 46, 11	312 East 110th St	St. Ann's Roman Catholic Church Complex		✓ ^{3, 4}		

Notes:

- ¹ See **Figures 8-2 through 8-6** for locations of resources.
- ² LPC determined S/NR eligibility of these resources in comments dated March 29, 2017 in connection with the East Harlem Rezoning FEIS.
- ³ The SHPO determined S/NR eligibility of these resources in letters dated April 11, 2018 and June 14, 2018.
- ⁴ LPC determined S/NR eligibility of these resources in comments dated May 3, 2018.

**Table 8-4
East Harlem Historic District Properties
Within Modified APE**

Block / Lot	Address	Contributing Resource	Non-Contributing Resource
East 115th Street to East 116th Street			
East of Second Avenue			
1687 / 104	305 East 115th St	X	
1687 / 5	307-311 East 115th St	X	
1687 / 8	313 East 115th St	X	
1687 / 9	315 East 115th St	X	
1687 / 11	319 East 115th St	X	
1687 / 1*	2240 Second Ave		X
1687 / 2*	2242 Second Ave		X
1687 / 102*	2244 Second Ave		X
1687 / 3*	2246 Second Ave		X
1687 / 4	2248 Second Ave	X	
1687 / 52	2250 Second Ave	X	
1687 / 151	2252 Second Ave	X	
1687 / 51	2254 Second Ave	X	
1687 / 49	2256 Second Ave	X	
1687 / 149	304 East 116th St	X	
1687 / 47	306 East 116th St	X	
1687 / 46	308 East 116th St	X	
1687 / 45	310 East 116th St	X	
1687 / 44	312 East 116th St	X	
1687 / 43	316 East 116th St	X	
1687 / 42	318 East 116th St	X	
West of Second Avenue			
1665 / 18	237 East 115th St	X	
1665 / 21	239 East 115th St	X	
1665 / 22	241 East 115th St	X	
1665 / 122	245 East 115th St		X
1665 / 23	2243 Second Ave	X	
1665 / 24	2245 Second Ave		X
1665 / 25	2249 Second Ave		X
1665 / 27	2251 Second Ave	X	
1665 / 127	2253 Second Ave	X	
1665 / 28	2255 Second Ave	X	
1665 / 30	2259 Second Ave	X	
1665 / 130	246 East 116th St	X	
1665 / 31	242 East 116th St	X	
1665 / 33	238 East 116th St	X	

**Table 8-4 (Cont'd)
 East Harlem Historic District Properties
 Within Modified APE**

Block / Lot	Address	Contributing Resource	Non-Contributing Resource
East 116th Street to East 117th Street			
East of Second Avenue			
1688 / 112	325 East 116th St	X	
1688 / 12	323 East 116th St	X	
1688 / 11	321 East 116th St	X	
1688 / 110	319 East 116th St	X	
1688 / 1*	2262 Second Ave		X
1688 / 2*	2264 Second Ave		X
1688 / 53	2270 Second Ave	X	
1688 / 52	2272 Second Ave	X	
1688 / 50	2274 Second Ave	X	
1688 / 43	318 East 117th St		X
1688 / 44	316 East 117th St	X	
1688 / 45*	306 East 117th St		X
West of Second Avenue			
1666 / 17	239 East 116th St	X	
1666 / 18	241 East 116th St	X	
1666 / 118	243 East 116th St	X	
1666 / 19	245 East 116th St	X	
1666 / 119	247 East 116th St	X	
1666 / 120	249 East 116th St	X	
1666 / 20	2261 Second Ave	X	
1666 / 21	2263 Second Ave		X
1666 / 121	2265 Second Ave		X
1666 / 22	2267 Second Ave		X
1666 / 23	2269 Second Ave		X
1666 / 24	2271 Second Ave	X	
1666 / 26	250 East 117th St	X	
1666 / 127	248 East 117th St		X
1666 / 28	244 East 117th St	X	
1666 / 30	242 East 117th St	X	
1666 / 31	236 East 117th St		X
East 117th Street, East of Second Avenue			
1689 / 5	305 East 117th St	X	
East 119th Street to East 120th Street, East of Second Avenue			
1796 / 8	313 East 119th St		X
1796 / 7	311 East 119th St		X
1796 / 106	309 East 119th St		X
1796 / 6	307 East 119th St	X	
1796 / 5	305 East 119th St	X	
1796 / 1	2322 Second Ave	X	
1796 / 2	2324 Second Ave		X
1796 / 3	2326 Second Ave	X	
1796 / 4	2328 Second Ave	X	
1796 / 54	2330 Second Ave	X	

**Table 8-4 (Cont'd)
East Harlem Historic District Properties
Within Modified APE**

Block / Lot	Address	Contributing Resource	Non-Contributing Resource
1796 / 53	2332 Second Ave	X	
1796 / 152	2334 Second Ave	X	
1796 / 52	2336 Second Ave	X	
1796 / 51	2338 Second Ave		X
1796 / 50	304 East 120th St	X	
1796 / 49	306 East 120th St	X	
1796 / 148	308 East 120th St	X	
1796 / 48	310 East 120th St	X	
Note:			
* Properties indicated with bold text and an asterisk are properties proposed for use as an ancillary facility or station entrance with the Modified Design.			

The Modified Design also includes modifications that result in changes to conclusions about adverse effects to architectural resources as identified in the 2004 FEIS. With the Modified Design, cut-and-cover construction would no longer occur in many of the locations where it would occur for the 2004 FEIS Design, including along 125th Street. Therefore, potential impacts related to proximity to cut-and-cover construction identified in the 2004 FEIS would no longer occur. In addition, the Modified Design no longer includes a direct connection to the subterranean portion of the Metro-North Harlem-125th Street Station, thereby avoiding direct effects to the existing S/NR-eligible station.

Consistent with the 2004 FEIS, an entrance (Entrance 3) is planned under the S/NR-eligible Park Avenue viaduct, but this entrance would be expanded in the Modified Design to include the property at the southeast corner of 125th Street and Park Avenue (as detailed in Chapter 2, “Description of Phase 2 Modified Design”). As design advances, additional evaluation of the viaduct structure may result in the need to place the entrance entirely on the southeast corner of 125th Street and Park Avenue. The Modified Design would not directly affect the Park Avenue viaduct; the Metro-North Harlem-125th Street Station; or the Comfort Station, a contributing component of the S/NR-eligible Metro-North Harlem-125th Street Station, although the entrance would be constructed in proximity to S/NR-eligible Comfort Station. MTA, along with FTA, will consult with the SHPO as set forth in the PA to ensure that the 125th Street Station elements that would occur in proximity to the Metro-North Harlem-125th Street Station, associated Comfort Station, and Park Avenue viaduct are compatible with the historic and architectural qualities of these historic structures and to avoid or minimize adverse effects to architectural resources. Consultation will include the preparation of design specifications, as specified in the 2004 FEIS and PA.

As stated in the 2004 FEIS and the PA, architectural resources that could be affected by construction activities will be included in a CPP prepared prior to construction, demolition, or excavation work. The CPP will set forth the specific measures to be used, and specifications that will be applied, to protect each of the architectural resources that could be affected during the construction period. Typical protective measures that will be included in a CPP are presented in Exhibit E of the Programmatic Agreement. Each of the architectural resources listed in **Table 8-3**

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will be included in the CPP. The SHPO reviewed the conclusions that are presented in this chapter and concurred with the conclusions; copies of correspondence from the SHPO are provided in **Appendix B**.

8.4.1.2 *ARCHAEOLOGICAL RESOURCES*

The Modified Design includes areas of potential disturbance outside the Archaeological APE analyzed in the 2004 FEIS. Therefore, in accordance with the PA, a Supplemental Phase 1A Archaeological Documentary Study (“Supplemental Phase 1A Study”) was prepared in November 2017 to evaluate the potential for effects on archaeological resources within the Supplemental Archaeological APE that were not assessed in the 2003 Phase 1A study or the 2004 FEIS. These newly added areas within the Supplemental Archaeological APE are summarized in **Table 8-5**.

8.4.1.2.1 *Review of Borings*

A geotechnical and environmental borings program was developed to support the Modified Design. In accordance with the PA, a qualified archaeologist has reviewed these plans to determine whether any borings would be located in areas of sensitivity for human remains. Monitoring was recommended for any borings located within the zone of sensitivity associated with the HABG. For those locations where monitoring is recommended, an archaeological monitoring plan was developed and submitted to the SHPO and LPC for review. LPC and the SHPO concurred with the monitoring plan in letters dated August 8, 2017 and August 18, 2017, respectively (see **Appendix B**). Archaeological monitoring of these borings was completed and upon the completion of the boring program, a final report will be submitted to LPC and the SHPO for review.

8.4.1.2.2 *Supplemental Phase 1A Archaeological Documentary Study*

The November 2017 Supplemental Phase 1A was prepared in accordance with the *Standards for Cultural Resources Investigations and Curation of Archaeological Collections in New York State* of NYAC, issued in 1994 and adopted by the SHPO in 1995, and the *Guidelines for Archaeological Work in New York City* issued by LPC in 2002. The study documents the development history of the proposed project corridor and its potential to yield archaeological resources, including both precontact and historic cultural resources. The Modified Design would involve tunneling at greater depths than was presented in the 2004 FEIS along the 125th Street tunnel curve and along 125th Street. The depth of these project elements is sufficient that it would not impact soils associated with past human occupation of the Supplemental Archaeological APE and the archaeological sensitivity of those project elements was therefore not assessed. The archaeological sensitivity and additional recommendations for areas within the Supplemental Archaeological APE where project-related effects would occur at depths associated with precontact or historic period occupation are described below and depicted in **Figures 8-7 through 8-9**. LPC and the SHPO reviewed the Supplemental Phase 1A Study and concurred with the findings and recommendations of the report; copies of correspondence from LPC and the SHPO are provided in **Appendix B**.

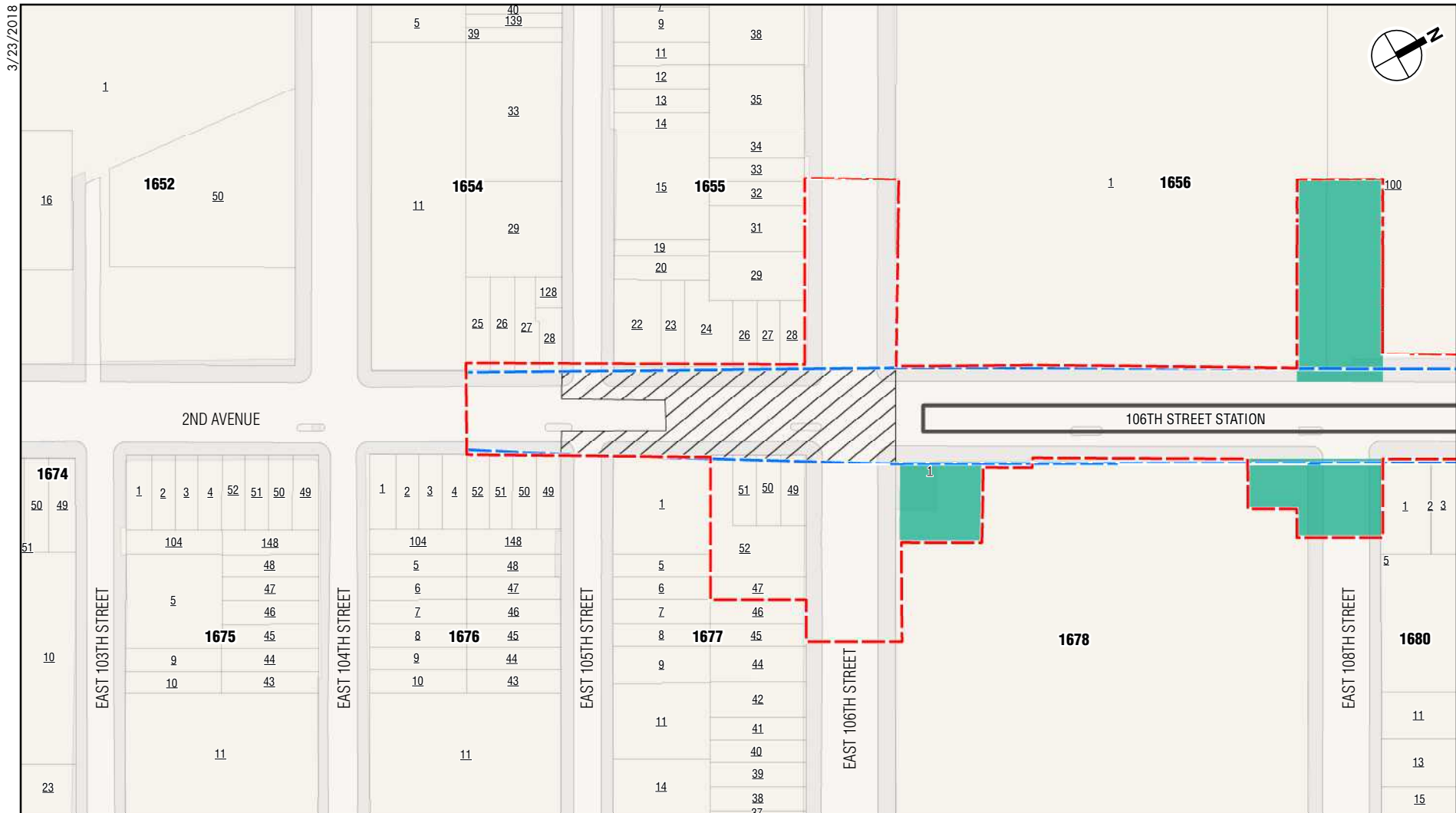
Table 8-5
Archaeological APE for the Supplemental Phase 1A Study

Project Component	Location	Block	Lot	Potential for Effects from Construction Disturbance?			Recommendations for Additional Analysis
				No	Yes	Why ¹	
106th Street Station							
Ancillary 1	Southeast corner of Second Ave and 106th St	1677	47, 49, 50, 51, 52		✓	C&C	None
Ancillary 2	Northeast corner of Second Ave and 109th St	1681	1, 2, 3, 4, 52, and 104		✓	C&C	None
Entrance 1, Option 1	Northeast corner of Second Ave and 106th St	1678	1 (part)		✓	C&C	Soil borings review
Entrance 2, Option 1	Southeast corner of Second Ave and 108th St	1678	1 (part)		✓	C&C	Soil borings review
East 106th St Improvements	Streetbed 200 ft west and 200 ft east of Second Ave	n/a	n/a		✓	C&C	None
East 108th St improvements	Streetbed 210 ft west and 85 ft east of Second Ave	1656	1 and 100		✓	C&C	Soil borings review
East 109th St improvements	Streetbed 40 ft west and 105 ft east of Second Ave	n/a	n/a		✓	C&C	None
East 110th St improvements	Streetbed 200 ft west and 205 ft east of Second Ave	n/a	n/a		✓	C&C	None
116th Street Station							
Ancillary 1	Northeast corner of Second Ave and 115th St	1687	1,2, 3, and 102		✓	C&C	None
Ancillary 2	Southwest corner of Second Ave and 120th St	1784	12 (part), 23 to 28 and 128		✓	C&C	None
Entrance 1	Northeast corner of Second Ave and 116th St	1688	1, 2, and 45 (part)		✓	C&C	None
Entrance 2	Northeast corner of Second Ave and 118th St	1795	1 to 4		✓	C&C	None
East 115th St Improvements	Streetbed 90 ft west and 50 ft east of Second Ave	n/a	n/a		✓	C&C	None
East 116th St improvements	Streetbed 200 ft west and 200 ft east of Second Ave	n/a	n/a		✓	C&C	Final project plans review
East 117th St improvements	Streetbed 200 ft west and 200 ft east of Second Ave	n/a	n/a		✓	C&C	Final project plans review
East 118th St improvements	Streetbed 200 ft west and 200 ft east of Second Ave	n/a	n/a		✓	C&C	None
East 119th St Improvements	Streetbed 50 ft west and 50 ft east of Second Ave	n/a	n/a		✓	C&C	Final project plans review
East 120th St improvements	Streetbed 200 ft west and 200 ft east of Second Ave	n/a	n/a		✓	C&C	None
125th Street Station							
Ancillary 1 and Entrance 1	Southeast corner of 125th St and Lexington Ave	1773	20 (part)		✓	C&C	Phase 1B testing
Ancillary 2	Southwest corner of Park Ave and 125th St	1749	33 (part)		✓	C&C	None
Entrance 2, Option 1	Northwest corner of Lexington Ave and 125th St	1774	17 and 56		✓	C&C	Topic intensive study
Entrance 2, Option 2	Southwest corner of Lexington Ave and 125th St	1773	17, 18, and 57		✓	C&C	Phase 1B testing

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**Table 8-5 (Cont'd)
Archaeological APE for the Supplemental Phase 1A Study**

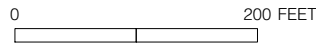
Project Component	Location	Block	Lot	Potential for Effects from Construction Disturbance?			Recommendations for Additional Analysis
				No	Yes	Why ¹	
125th Street Station (Cont'd)							
Entrance 3 (eastern portion)	Southeast corner of Park Ave and 125th St	1773	4, 69, 72		✓	C&C	None
Entrance 3 (western portion)	Within Park Ave streetbed	n/a	n/a		✓	C&C	None
Park Ave Improvements	Streetbed 200 ft south of 125th St	n/a	n/a		✓	C&C	None
Rockbolting (60- 110 ft below ground)	South side of 125th St, Third-Lexington Ave	1773	20 (part)	✓		TB	None
Rockbolting (60- 110 ft below ground)	North side of 125th St west of Third Ave	1774	Parts of 20, 30, and 33	✓		TB	None
Rockbolting (60- 110 ft below ground)	South side of 125th St, Lexington-Park Ave	1773	Parts of 7, 58, 61, 62, and 67	✓		TB	None
Rockbolting (60- 110 ft below ground)	North side of 125th St, Lexington-Park Ave	1774	Parts of 1, 5, 6, 7, 8, 9, and 17	✓		TB	None
Rockbolting (60- 110 ft below ground)	South side of 125th St, Park-Madison Ave	1749	Parts of 33, 46, 48, 49, and 50	✓		TB	None
Rockbolting (60- 110 ft below ground)	North side of 125th St, Madison-Park Ave	1750	Parts of 21, 23-28, 31, 32, and 34	✓		TB	None
125th Street Curve							
Tunnel (50-75 ft below ground surface)	East of Second Ave, 121st-124th St	1797	1 (part)	✓		TB	None
	East of Second Ave, 121st-124th St	1801	1 (part)	✓		TB	None
125th Street							
Tunnel (10-120 ft below ground surface)	Streetbed between Fifth Ave and Adam Clayton Powell, Jr. Blvd	n/a	n/a	✓		TB	None
125th Street Tail Tracks: Two-Train Tail Track Option							
Ancillary	South side of 125th St, Fifth-Lenox Aves	1722	62 and 63		✓	C&C	None
Temporary subsurface easement	North side of 125th St, Fifth-Lenox Aves	1723	10 (part)	✓		TB	None
125th Street Tail Tracks: Three-Train Tail Track Option							
Ancillary	South side of 125th St west of Lenox Ave	1909	41 (part)		✓	C&C	None
Temporary subsurface easement	North side of 125th St west of Lenox Ave	1910	1 (part) and 1272 (part)	✓		TB	None
Notes:							
¹ C&C = Cut and Cover; TB = Tunnel Below Depth of Potential Resource.							
² All areas at depths likely to contain cultural resources and that would be affected by project construction were analyzed in the Supplemental Phase 1A Study. Based on that analysis, it was determined whether further action is recommended. Any areas where construction-related effects would be at depths far greater than those likely to contain cultural resources were not assessed in the Supplemental Phase 1A study and no further archaeological investigation is warranted.							
Source: 2017 Supplemental Phase 1A Study.							



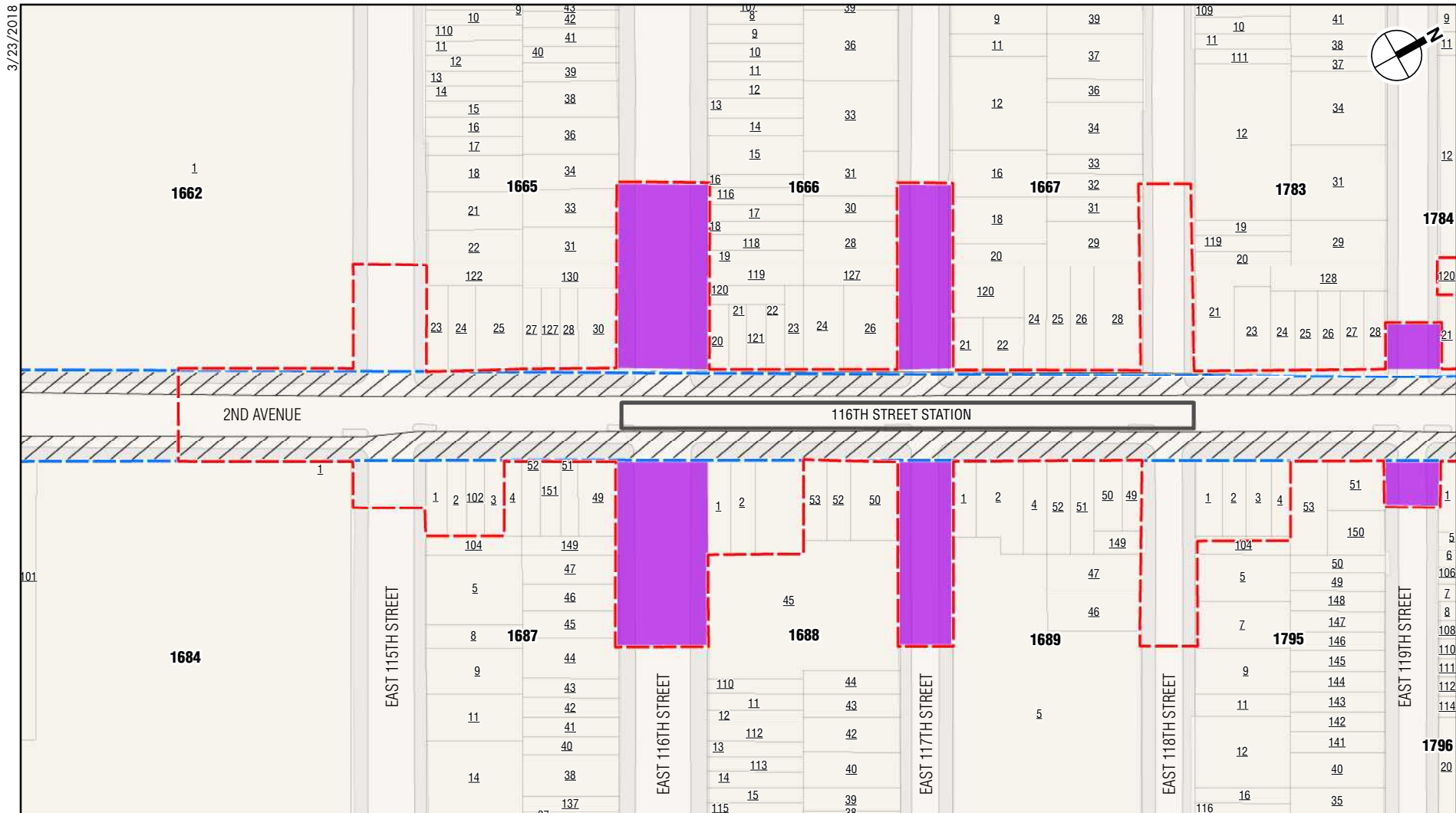
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-
- Historical and Precontact Sensitivity Identified in 2003
Precontact Sensitivity Identified in 2003
2003 Area of Potential Effect
2017 Area of Potential Effect
Location of Proposed Soil Boring Review
Location of Proposed Phase 1B Testing
Location of Final Plan Review
Location of Proposed Topic Intensive Documentary Study
- 1999 Block Number
20 Lot Number



Areas of Archaeological Sensitivity
 106th Street Station
Figure 8-7



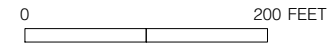
- -
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- Historical and Precontact Sensitivity Identified in 2003
 Precontact Sensitivity Identified in 2003
 2003 Area of Potential Effect
 2017 Area of Potential Effect
- Location of Proposed Soil Boring Review
 Location of Proposed Phase 1B Testing
 Location of Final Plan Review
 Location of Proposed Topic Intensive Documentary Study
- 1999 Block Number
 20 Lot Number



Areas of Archaeological Sensitivity
 116th Street Station
Figure 8-8



- Historical and Precontact Sensitivity Identified in 2003
- Precontact Sensitivity Identified in 2003
- 2003 Area of Potential Effect
- 2017 Area of Potential Effect
- Location of Proposed Soil Boring Review
- Location of Proposed Phase 1B Testing
- Location of Final Plan Review
- Location of Proposed Topic Intensive Documentary Study
- 1999** Block Number
- 20** Lot Number



Areas of Archaeological Sensitivity
125th Street Station
Figure 8-9

8.4.1.2.2.1 Precontact Archaeological Sensitivity Assessment

As described in the 2004 FEIS and in the Supplemental Phase 1A Study, extensive Native American activity has been documented near the Second Avenue Subway Phase 2 alignment since the 19th century. Native American archaeological sites are typically found at shallow depths, within the top 5 feet of the original ground surface, but given the extent of development and landscape modification during the 19th and 20th centuries, much of the pre-development ground surface was likely destroyed as a result of this development. Where the original ground surface may be present and undisturbed, those surfaces would be considered to be sensitive for precontact archaeological resources.

Each of the Supplemental Archaeological APE locations was determined to have been likely to have been the site of some form of Native American activity (e.g., habitation, camping, or resource acquisition/processing) during the precontact period. The Supplemental Phase 1A Study also determined that deeply buried resources associated with the occupation of Manhattan prior to the rise of sea levels and the formation of marshes circa 3,000 years ago may be present in formerly inundated areas that have since been filled. However, the actual sensitivity of these locations depends on the extent to which these areas were disturbed as a result of subsequent development. Many hills and elevated areas were cut down during the construction of the city's street grid and streetbed areas were then further disturbed by the installation of utilities and streetcar lines, in addition to the construction and maintenance of roads. As described in the Supplemental Phase 1A Study, areas that have been disturbed as a result of the grading of streets/installation of utilities or as a result of the construction of buildings were determined to have no precontact archaeological sensitivity. However, locations where historic marsh and river deposits were filled in advance of the construction of the modern landscape of East Harlem were identified as potentially containing deeply buried archaeological resources beneath the depths of the marsh. Additional information will be collected through the completion of a soil boring program that will provide greater information on the potential depth of such resources.

As described above, in the event that human remains are encountered that are identified as Native American, consultation with Native American Tribal Nations will be completed as required by city, state, and federal laws (e.g., NAGPRA).

8.4.1.2.2.2 Historic-Period Archaeological Sensitivity Assessment

As described in the Supplemental Phase 1A Study, the historic village of Harlem remained a relatively rural area through the mid-19th century. Several of the Supplemental Archaeological APE sites were developed with or were near houses or other buildings (e.g., historic mills) that were constructed in the late 18th or early 19th century. Most of the residential development of the neighborhood occurred beginning in the 1860s and 1870s, when water and sewer infrastructure became available in the neighborhood and train and streetcar lines increased the area's accessibility, making it an attractive residential area for commuters. All of the Supplemental Archaeological APE locations were developed with structures at some point during the 19th and 20th centuries and therefore all have experienced disturbance to some degree. However, not all structures were constructed with basements and therefore may not have been disturbed to great depths. Any site that was developed with a map-documented structure and was not subsequently impacted by basement disturbance was determined to have historic period sensitivity.

Given the extent to which project sites within the Supplemental Archaeological APE were developed, the Supplemental Phase 1A Study determined that it is possible that domestic shaft features (e.g., privies, cisterns, and wells) could still be present in certain locations. Such features

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were typically filled with household refuse after they were no longer needed for their original purpose, and therefore, are of high archaeological research value. Shaft features were typically constructed of brick or stone and often extended to great depths of 10 to 15 feet below the ground surface or more. As such, these types of features frequently survive disturbance episodes, even if the upper portions are truncated during development. Shaft features could be present in portions of the site that were not fully excavated as part of 19th and 20th century development. Therefore, any sites within the Supplemental Archaeological APE that contained or were immediately adjacent to map-documented structures pre-dating the 1850s or 1860s were determined to be potentially sensitive for archaeological resources associated with the historic period occupation of the area. The Supplemental Phase 1A Study made recommendations for future work to be conducted for these areas, consistent with the provisions of the PA, which are discussed below.

8.4.1.2.2.3 Recommendations for Additional Archaeological Analysis

As summarized in **Table 8-5**, the Supplemental Phase 1A Study recommended four types of additional archaeological analysis (i.e., Soils Boring Review, Phase 1B Testing, Final Project Plans Review, or Topic Intensive Study) for specific project elements. These recommendations will be implemented as design advances, as discussed below:

- For the 106th Street Station, the proposed locations of Entrance 1, Entrance 2, and streetbed improvements along East 108th Street are in locations where deeply buried precontact archaeological resources could be present beneath locations of filled marsh. A Geotechnical Investigation Program of the Phase 2 project corridor will be completed by MTA by the end of 2018 during development of the design. The boring logs from that investigation will be reviewed to determine the potential depth of buried ground surfaces that predate the formation of the marshes circa 3,000 years ago. If project elements would result in disturbance to those buried soil levels, then additional archaeological analysis will be conducted pursuant to the terms of the 2004 PA. As dictated by the PA, all boring logs (including those monitored by an archaeologist) will be reviewed by an archaeologist and a memorandum summarizing that review will be submitted to LPC and the SHPO. This review may result in revisions to the depths of archaeological sensitivity as determined in the 2003 Phase 1A and subsequent soil boring analysis, which relied on soil boring information that is now more than 14 years old. Any changes to the depths of potential sensitivity within the 2003 APE will be determined in consultation with LPC and the SHPO pursuant to the terms of the 2004 PA.
- For the 116th Street Station, the proposed streetbed improvements within East 116th Street, East 117th Street, and East 119th Street could impact undisturbed precontact ground surfaces that may have survived disturbance associated with the construction of streets and the installation of utilities. As design advances, a qualified archaeologist will review the final project plans to determine if the proposed improvements would impact potentially undisturbed areas.
- For the 125th Street Station, a Topic Intensive Documentary Study will be prepared for the location of Entrance 2 (Option 1) to clarify the historic boundaries of the 125th Street Methodist Church and to determine the likelihood that the burial vaults associated with the church could be located within the site. This will provide information that will ensure that human remains are not impacted during construction. If the Topic Intensive Documentary Study concludes that human remains are potentially present in this location, further archaeological analysis will proceed in consultation with LPC, the SHPO, and the descendant community pursuant to the stipulations of the PA before this site is used for construction.

- Additionally, for the 125th Street Station, Phase 1B archaeological testing will be conducted after the demolition of existing buildings in two locations. The sites of Ancillary 1, Entrance 1, and Entrance 2 (Option 2) were developed before the installation of water and sewer lines in the neighborhood and were not fully developed with buildings with basements during the 19th and 20th centuries. Buried domestic shaft features may be present on these properties. For these locations, a Phase 1B testing protocol will be prepared and submitted to the SHPO and LPC for review and concurrence pursuant to the terms of the 2004 PA and once the protocol has been developed, Phase 1B testing will be conducted.

8.4.2 PERMANENT IMPACTS

8.4.2.1 ARCHITECTURAL RESOURCES

Since the completion of the 2004 FEIS, the location and preliminary designs of Phase 2 project elements including ancillary facilities and entrances have been established. The Modified Design no longer includes a direct connection to the S/NR-eligible Metro-North Harlem-125th Street Station that was presented in the 2004 FEIS, which eliminates the direct effect to this architectural resource that was identified for the 2004 FEIS Design. The Modified Design maintains the entrance (Entrance 3) beneath the Park Avenue viaduct but it would not directly affect the Park Avenue viaduct; the Metro-North Harlem-125th Street Station; or the Comfort Station, a contributing component of the S/NR-eligible Metro-North Harlem-125th Street Station, although the entrance would be constructed in proximity to S/NR-eligible Comfort Station. If design plans change such that Entrance 3 would directly affect the Comfort Station, consultation would be undertaken with the SHPO as set forth in the PA.

The proposed ancillary facilities in the Modified Design would be approximately 80 to 100 feet wide, 80 to 110 feet deep, and would range in height depending on location. In and around 125th Street, the ancillary facilities would range in height from between 45 and 75 feet (equivalent to 5 to 8 stories). Along Second Avenue, they would range from 90 to 140 feet tall (equivalent to 9 to 14 stories). The design specifications for the new facilities would require the use of massing design and façade materials that visually break up the facades of the ancillary facilities so that they are compatible with the historic and architectural characteristics of nearby architectural resources, so as to avoid or minimize significant contextual effects to nearby resources.

No elements of the proposed 116th Street Station would affect buildings that contribute to the significance of the new East Harlem Historic District. The southern entrance (Entrance 1) and ancillary facility (Ancillary 1) would be located within the boundaries of the district. Continued consultation with the SHPO will be undertaken as the designs of the entrance and ancillary facility advance, as set forth in the PA.

The proposed ancillary facility (Ancillary 1) at the northeast corner of 115th Street and Second Avenue would introduce a taller building to the site with a larger footprint than the buildings it would replace. The ancillary facility would be approximately 120 to 140 tall (equivalent to 12 to 14 stories). The building would be similar in height to, or slightly taller than, the buildings of the New York City Housing Authority Thomas Jefferson Houses, directly across 115th Street from the new ancillary facility. Thomas Jefferson Houses occupies multiple blocks and has eight 14-story buildings along the south side of 115th Street between First and Third Avenues. As the ancillary facility would not result in the removal of any contributing buildings to the East Harlem Historic District, would be located at the corner with Second Avenue at the edge of the historic

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district and across 115th Street from the tall NYCHA housing complex, and furthermore would be designed in consultation with the SHPO, the ancillary facility would not result in an adverse effect to the East Harlem Historic District. Similarly, the southern entrance (Entrance 1) to the 116th Street Station would not remove any contributing buildings to the historic district, would be designed in consultation with the SHPO, and also would not result in an adverse effect to the East Harlem Historic District.

Additionally, ancillary facilities and entrances would be located adjacent to or in close proximity to architectural resources as listed in **Tables 8-3** and **8-4** and shown on **Figures 8-2 through 8-6**. These locations include:

- The ancillary facility on the south side of West 125th Street between Lenox Avenue and Fifth Avenue, which is near the S/NR-eligible Marion Building at 100-110 West 125th Street and the S/NR-eligible Mount Morris Historic District;
- The ancillary facility at the northwest corner of East 124th Street and Park Avenue, which is near the S/NR-eligible Park Avenue viaduct and the S/NR-eligible Metro-North Harlem 125th Street Station and associated Comfort Station;
- The entrance at the southeast corner of East 125th Street and Park Avenue, which is near the S/NR-eligible Metro-North Harlem-125th Street Station and associated Comfort Station, and the S/NR-eligible Park Avenue viaduct, which carries the Metro-North Railroad. This entrance is also located across East 125th Street from the S/NR-eligible former Hamilton Storage and Warehouse Co. at 1825 Park Avenue;
- The entrance at the southwest corner of East 125th Street and Lexington Avenue, which is adjacent to the S/NR-listed Former Harlem Savings Bank (Apple Bank) at 124 East 125th Street, the S/NR-eligible Former New York City Telephone Co. at 123 East 124th Street, and across East 124th Street from the S/NR-eligible former stable at 124 East 124th Street;
- The entrance at the southeast corner of East 125th Street and Lexington Avenue, which is across East 125th Street from the S/NR-eligible Former Twelfth Ward Bank at 141-147 East 125th Street;
- The ancillary facility at the northeast corner of East 124th Street and Lexington Avenue, which is across East 124th Street from the S/NR-eligible former stable at 166 East 124th Street;
- The entrance on the west side of Lexington Avenue between East 125th Street and East 126th Street is across Lexington Avenue from the S/NR-eligible Former Twelfth Ward Bank at 141-147 East 125th Street and the S/NR-eligible apartment building at 2075-2087 Lexington Avenue;
- The ancillary facility on the south side of East 125th Street between Third and Second Avenues, which is in proximity to the S/NR-eligible and New York City Landmark (NYCL) New York Public Library-125th Street Branch at 224 East 125th Street;
- The ancillary facility on the west side of Second Avenue between East 120th and East 119th Streets is across Second Avenue from the East Harlem Historic District (S/NR-eligible);
- The ancillary facility at the northeast corner of East 115th Street and Second Avenue is located within the boundaries of the East Harlem Historic District (S/NR-eligible) and in close proximity to the S/NR-eligible Banca Commerciale Italiana at 2256 Second Avenue;

- The entrance location at the northeast corner of East 116th Street and Second Avenue is located within the boundaries of the East Harlem Historic District (S/NR-eligible) and is across the street from the S/NR-eligible Banca Commerciale Italiana at 2256 Second Avenue;
- The ancillary facility at the northeast corner of Second Avenue and East 109th Street, which is adjacent to the S/NR-eligible St. Ann's Roman Catholic Church Complex at 312 East 110th Street, and across East 109th Street from the S/NR-eligible bank building at 2118 Second Avenue.

Therefore, as specified in the 2004 FEIS and the PA, MTA will consult with the SHPO and LPC, including with respect to the proposed construction of the entrance and ancillary facilities located within the East Harlem Historic District, potential effects to the S/NR eligible Comfort Station associated with the Metro-North Harlem-125th Street Station, and in preparing design specifications to avoid adverse contextual effects to the nearby resources.

The SHPO reviewed the conclusions that are presented in this chapter and concurred with the conclusions; copies of correspondence from the SHPO are provided in **Appendix B**.

8.4.2.2 ARCHAEOLOGICAL RESOURCES

Any effects to areas of archaeological sensitivity would occur during the construction of the project (see discussion in Section 8.4.1.2 above). Therefore, operation of the Second Avenue Subway with the Modified Design would not result in new effects on archaeological resources and no mitigation measures would be required.

8.5 CONCLUSIONS

Consistent with the 2004 FEIS, the Modified Design would not require demolition of any known architectural resource or any resource that has been determined to contribute to a historic district. The ancillary facility (Ancillary 1) located at the northeast corner of 115th Street and Second Avenue and the entrance (Entrance 1) located at the northeast corner of 116th Street and Second Avenue would be located within the East Harlem Historic District, but they would not remove any portion of a contributing architectural resource within the district.

At the same time, a potential adverse effect to the Metro-North Harlem-125th Street Station identified in the 2004 FEIS has been eliminated with the Modified Design. Consistent with the 2004 FEIS Design, the Modified Design would result in the construction of above-ground elements in proximity to the S/NR-eligible Metro-North Harlem 125th Street Station, Park Avenue Viaduct, and associated Comfort Station, although a direct connection to the Metro-North station has been eliminated. Under the Modified Design, the entrance (Entrance 3) beneath the Park Avenue Viaduct would not directly affect the S/NR eligible Comfort Station associated with the Metro-North Harlem-125th Street Station, but would be in proximity to this historic structure.

Consistent with the 2004 FEIS, for all historic properties that could be adversely affected by construction activities for Phase 2 of the subway, MTA will prepare a CPP that includes these historic properties. The CPP would be developed prior to any excavation or construction of the Project in consultation with the SHPO, in keeping with the 2004 FEIS and PA. In addition, MTA will consult with the SHPO with respect to the identification of architectural resources and the assessment of effects on any resources not previously evaluated in the 2004 FEIS. As also stated in the 2004 FEIS, MTA will develop design specifications in consultation with the SHPO and

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LPC to avoid or minimize adverse effects to architectural resources adjacent to or in proximity to above-grade Project elements as has been described above.

A Supplemental Phase 1A Study was prepared to evaluate the potential archaeological sensitivity of areas that would be affected by the Modified Design that were not evaluated in the 2004 FEIS. The Supplemental Phase 1A Study identified areas of archaeological sensitivity that could potentially result in effects on archaeological resources within some of the newly added portions of the APE and identified mitigation measures to address potential impacts of the Modified Design that are consistent with the measures developed for the 2004 FEIS and set forth in the PA.

As a result of the Phase 2 Modified Design, there will not be any new or different significant adverse impacts on architectural and archaeological resources not previously identified in the 2004 FEIS and ROD that would require an amendment to the PA, and MTA will continue to follow the procedures set forth for the Project in the PA to avoid, minimize, and mitigate potential adverse effects to historic and archaeological resources. *