

**A. INTRODUCTION**

This chapter assesses the potential for significant adverse construction effects on architectural and archaeological resources.

The proposed project's primary Area of Potential Effect (APE), in which construction of the proposed project may directly or indirectly affect historic properties is described in this chapter. To facilitate the analysis of effects, the primary APE has been subdivided to indicate the area in which the proposed project could cause potential direct construction-related effects (within 90 feet) and the area in which the proposed project could cause indirect visual or contextual effects (within 400 feet).

**B. PRINCIPAL CONCLUSIONS****ARCHAEOLOGICAL RESOURCES**

Two Phase 1A Archaeological Documentary Studies were prepared for the APE in March 2016, and a Supplemental Phase 1A Archaeological Documentary Study was prepared in March 2019. The March 2016 reports identified the following broad categories of historic-period archaeological resources that could be located in the APE—river bottom remains, landfill retaining structures and landfill deposits, historic streetbed resources, and former city block resources. Because of the potential presence of these resources, as mitigation, additional archaeological investigation will be performed in accordance with Section 106 regulations, based on a scope of work reviewed and approved by the New York City Landmarks Preservation Commission (LPC) and the New York State Historic Preservation Office (SHPO); this archaeological investigation would include pre-construction testing and/or monitoring during project construction performed in accordance with the Secretary of the Interior's *Standards and Guidelines for Archaeology*, ACHP's *Section 106 Archaeological Guidance*, and the New York Archaeological Council's *Standards for Cultural Resource Investigations and Curation of Archaeological Collections*. The scope of work for additional archaeology would include: a sampling strategy that will select specific areas of the APE to be further investigated; identification of those areas that are believed to be most sensitive for recovering landfill retaining structures across the overall APE; a description of the basis for the proposed sampling design, including a tabulation of the various archaeological contexts within the APE and a quantification of the sample fraction for each context; and an unanticipated discoveries protocol. If significant archaeological resources are identified during testing and/or monitoring, further archaeology and/or mitigation would be completed in accordance with Section 106 regulations and the guidelines in the 2014 *City Environmental Quality Review (CEQR) Technical Manual*. In written communications dated April and May 2016, representatives of the Delaware Nation, Delaware Tribe of Indians, and Stockbridge-Munsee Community Band of Mohicans requested, in the case of an unanticipated discovery of an archaeological site or artifacts, that work be

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halted until the tribe is notified and the artifact can be evaluated by an archaeologist. The additional archaeological investigation is stipulated in a Programmatic Agreement (PA) that is being prepared; a draft PA is included in Appendix E of this Final EIS (FEIS). The PA will be executed among the New York City Office of Management and Budget (OMB), SHPO, and the Advisory Council on Historic Preservation (ACHP) and also signed by four consulting parties—NYC Parks, LPC, the Municipal Art Society, and the New York Landmarks Conservancy.

### ARCHITECTURAL RESOURCES

#### *NO ACTION ALTERNATIVE (ALTERNATIVE 1)*

Three projects within the 400-foot portion of the Primary APE could affect architectural resources in the No Action Alternative—reconstruction of the Baruch Playground within the Bernard Baruch Houses (#9, S/NR-eligible), resiliency measures at the Baruch Houses (#9, S/NR-eligible), and rehabilitation work at the Asser Levy Public Baths (#12, NYCL, S/NR).

#### *PREFERRED ALTERNATIVE (ALTERNATIVE 4)*

Construction of the Preferred Alternative would directly affect the Franklin Delano Roosevelt East River Drive (FDR Drive), which is an architectural resource that has been determined eligible for listing on the S/NR (#1, S/NR-eligible). Therefore, as stipulated in the PA, the City, in consultation with LPC and SHPO, would develop and implement a Construction Protection Plan (CPP) for the FDR Drive to avoid inadvertent construction-period damage from ground-borne vibrations (i.e., from pile driving), falling debris, collapse, dewatering, subsidence, or construction equipment. The CPP would also be developed in consultation with NYC Parks, the Municipal Art Society, and the New York Landmarks Conservancy, and the plan would be expected to follow the guidelines of the New York City Department of Buildings (DOB) Technical Policy and Procedure Notice (TPPN) #10/88, which “requires a monitoring program to reduce the likelihood of construction damage to adjacent historic structures and to detect at an early stage the beginnings of damage so that construction procedures can be changed.” It is expected that the CPP will also be prepared in accordance with LPC’s guidance document *Protection Programs for Landmarked Buildings* and the National Park Service’s *Preservation Tech Notes, Temporary Protection #3: Protecting a Historic Structure during Adjacent Construction*. In addition, construction affecting the FDR Drive would be coordinated with NYC DOT to ensure that it is protected during construction of the Preferred Alternative.

Construction under the Preferred Alternative would occur within 90 feet of the following architectural resources: the FDR Drive (#1, S/NR-eligible); Williamsburg Bridge (#2, S/NR-eligible); East River Bulkhead (#3, S/NR-eligible); Engine Co. 66 Fireboat House (#4, S/NR-eligible); Gouverneur Hospital (#5, S/NR); Gouverneur Hospital Dispensary (#6, S/NR-eligible); a portion of the Vladeck Houses within the Lower East Side Historic District (#7, S/NR); a portion of the Baruch Houses (#9, S/NR-eligible); the Asser Levy Public Baths (#12, S/NR, NYCL); a portion of the East River Housing Cooperative (#13, S/NR-eligible); a portion of the Jacob Riis Houses (#15, S/NR-eligible); a portion of Stuyvesant Town (#16, S/NR-eligible); and a portion of Peter Cooper Village (#17, S/NR-eligible). Therefore, as stipulated in the PA, the City, in consultation with LPC and SHPO, would develop and implement CPPs for these architectural resources to avoid inadvertent construction-period damage from ground-borne vibrations, falling debris, collapse, dewatering, subsidence, or construction equipment. The CPPs would also be developed in consultation with NYC Parks, the Municipal Art Society, and the New York Landmarks Conservancy.

### *OTHER ALTERNATIVES*

As under the Preferred Alternatives, construction under Alternatives 2, 3, and 5 would directly affect the FDR Drive and be within 90 feet of the following architectural resources: the FDR Drive (#1, S/NR-eligible); Williamsburg Bridge (#2, S/NR-eligible); East River Bulkhead (#3, S/NR-eligible); Engine Co. 66 Fireboat House (#4, S/NR-eligible); Gouverneur Hospital (#5, S/NR); Gouverneur Hospital Dispensary (#6, S/NR-eligible); a portion of the Vladeck Houses within the Lower East Side Historic District (#7, S/NR); a portion of the Baruch Houses (#9, S/NR-eligible); the Asser Levy Public Baths (#12, S/NR, NYCL); a portion of the East River Housing Cooperative (#13, S/NR-eligible); a portion of the Jacob Riis Houses (#15, S/NR-eligible); a portion of Stuyvesant Town (#16, S/NR-eligible); and a portion of Peter Cooper Village (#17, S/NR-eligible). Therefore, as stipulated in the PA, the City, in consultation with LPC and SHPO, would develop and implement CPPs for these architectural resources under the Other Alternatives to avoid inadvertent construction-period damage from ground-borne vibrations, falling debris, collapse, dewatering, subsidence, or construction equipment. The CPPs would also be developed in consultation with NYC Parks, the Municipal Art Society, and the New York Landmarks Conservancy.

### **MITIGATION**

#### *ARCHAEOLOGICAL RESOURCES*

As stipulated in the PA, additional archaeological investigation prior to or during construction will be performed in accordance the Secretary of the Interior’s *Standards and Guidelines for Archaeology*, ACHP’s *Section 106 Archaeological Guidance*, and the New York Archaeological Council’s *Standards for Cultural Resource Investigations and Curation of Archaeological Collections*, and such scope of work will be prepared in consultation with LPC and SHPO, and the City will complete any further phase of archaeological work If significant archaeological resources are identified during testing and/or monitoring, further archaeological testing and/or mitigation would be completed.

#### *ARCHITECTURAL RESOURCES*

As stipulated in the PA, the City, in consultation with LPC and SHPO, would develop and implement CPPs for architectural resources located within 90 feet from the construction area of the proposed project to avoid inadvertent construction-period damage from ground-borne vibrations, falling debris, collapse, dewatering, subsidence, or construction equipment.

### **C. REGULATORY CONTEXT/METHODOLOGY**

The analysis in this chapter follows the methodologies of the *CEQR Technical Manual* and was also prepared in accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as implemented by federal regulations appearing in 36 CFR § 800, in consultation with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP), acting in its capacity as SHPO, and LPC. Additional details on the regulatory context and methodology for the historic and cultural resources analysis are presented in Chapter 5.4, “Historic and Cultural Resources.”

## D. ENVIRONMENTAL EFFECTS

The proposed project has two APEs: a primary APE, in which construction of the proposed project may directly or indirectly affect historic properties; and a more expansive, secondary APE, in which the absence of the proposed project could result in direct effects to historic properties from future flood events. The portion of the primary APE with the potential for the proposed project to cause direct effects on a historic resource includes all locations that could potentially be subject to direct ground-disturbing activities and adjacent areas within 90 feet, as defined in *TPPN #10/88* and in conformance with New York City Building Code Chapter 3309.4.4. Direct effects on archaeological and architectural resources from the construction of the proposed project may include physical damage or destruction of a resource or its setting.

Project construction activities are anticipated to include demolition, excavation, pile-driving, cutting and filling, and staging. Based on information presented in Chapter 5.4, “Historic and Cultural Resources,” the sections below assess the potential for project construction of Alternatives 2 through 5 to adversely affect archaeological resources, identify the architectural resources that could be adversely affected by project construction, and propose measures to avoid adverse construction-related effects.

### NO ACTION ALTERNATIVE (ALTERNATIVE 1)

#### *ARCHAEOLOGICAL RESOURCES*

As described in Chapter 5.4, “Historic and Cultural Resources,” the plan to construct an exterior entrance ramp to the former Marine Engine Co. 66 Fireboat House at Grand Street and the construction of the Lower East Side Ecology Center could potentially affect archaeological resources that could potentially be present in the APE. In addition, the Phase 1A Archaeological Documentary Study prepared for the northern portion of the project area identified historic-period archaeological sensitivity for the East 23rd and East 25th Street portions of the APE, and the Supplemental Phase 1A Archaeological Documentary Study determined that the sites of the M22-M23 parallel conveyance and the South Interceptor Gate and Building possess potential archaeological sensitivity. However, there are no planned projects that could potentially affect archaeological resources that could potentially be present in these portions of the APE.

#### *ARCHITECTURAL RESOURCES*

##### *Project Area One*

Under the No Action Alternative, no new comprehensive coastal protection system would be installed in Project Area One.

There are, however, several projects planned or under construction in Project Area One, as described more fully in Chapter 2.0, “Project Alternatives,” and in **Appendix A1**. Three projects that could affect architectural resources in the No Action Alternative are described in detail in Chapter 5.4, “Historic and Cultural Resources.”

##### *Project Area Two*

There are no projects planned or under construction in Project Area Two that could affect architectural resources.

*400-Foot Portion of the Primary Area of Potential Effect*

There are, however, several projects planned or under construction in the 400-foot portion of the Primary APE. Three of these projects could affect architectural resources and are described in detail in Chapter 5.4, “Historic and Cultural Resources.”

**PREFERRED ALTERNATIVE (ALTERNATIVE 4): FLOOD PROTECTION SYSTEM WITH A RAISED EAST RIVER PARK**

*ARCHAEOLOGICAL RESOURCES*

As described in Chapter 5.4, “Historic and Cultural Resources,” for the portion of the project area between Montgomery and Rivington Streets, most construction activities are expected to consist of excavation to depths of 2 to 4 feet below current grade to install the upper components of floodwalls and closure structures, and for pile caps. Impacts below these depths would be by sheet piles, which would be mechanically driven into the ground to depths of approximately 40 feet and would not afford visibility of any underlying soils. The Preferred Alternative would also include the installation of new sewers within East River Park, and the installation of the new sewers would involve the excavation of trenches to depths of between 15 and 20 feet below existing grade. Therefore, additional archaeological investigation will be performed prior to or during construction as stipulated in the PA.

For the East 23rd and East 25th Street portions of the APE, the different types of potential archaeological resources within the sensitive areas may be found below the existing and former street and sidewalk pavement layers and bedding, which generally extend at least one foot below the present grade. Therefore, potential resources may be located beginning at one foot below grade. As discussed above, most project effects of the Preferred Alternative would consist of excavation to depths of 2 to 4 feet below the current grade to install the upper components of floodwalls and closure structures, and for pile caps. Disturbance below these depths would require additional archaeological investigation to be performed prior to or during construction as stipulated in the PA.

The Supplemental Phase 1A Archaeological Documentary Study identified historic-period archaeological sensitivity for the locations of the proposed M22-M23 parallel conveyance and the South Interceptor Gate and Building. The interceptor gate would be installed at a depth of at least 36 feet below existing grade to connect with the existing interceptor. The new parallel conveyance would be installed between approximately 10 and 28 feet below grade. Therefore, additional archaeological investigation will be performed prior to or during construction as stipulated in the PA.

A scope of work for the additional investigation will be prepared in consultation with LPC and SHPO in accordance with Section 106 regulations, and the City will complete any further phase of archaeological work per the guidance in the *CEQR Technical Manual* and in accordance with the Secretary of the Interior’s *Standards and Guidelines for Archaeology*, ACHP’s *Section 106 Archaeological Guidance*, and the New York Archaeological Council’s *Standards for Cultural Resource Investigations and Curation of Archaeological Collections*. This further phase of archaeological work is stipulated in the PA and would include testing and/or monitoring conducted in consultation with LPC and SHPO. The testing and/or monitoring would not be done during the EIS process but would occur before and/or during project construction. The scope of work for additional archaeology would include: a sampling strategy that will select specific areas of the APE to be further investigated; identification of those areas that are believed

to be most sensitive for recovering landfill retaining structures across the overall APE; a description of the basis for the proposed sampling design, including a tabulation of the various archaeological contexts within the APE and a quantification of the sample fraction for each context; and an unanticipated discoveries protocol. If significant archaeological resources are identified during testing and/or monitoring, further archaeology and/or mitigation would be completed in accordance with Section 106 regulations and the guidance in the *CEQR Technical Manual*. In written communications dated April and May 2016, representatives of the Delaware Nation, Delaware Tribe of Indians, and Stockbridge-Munsee Community Band of Mohicans requested, in the case of an unanticipated discovery of an archaeological site or artifacts, that work be halted until the tribe is notified and the artifact can be evaluated by an archaeologist.

### *ARCHITECTURAL RESOURCES*

#### *Project Area One*

In Project Area One, the Preferred Alternative would directly affect the FDR Drive (#1, S/NR-eligible)<sup>1</sup> through the construction of closure structures across the highway in the vicinity of Montgomery Street and East 13th Street. Construction affecting the FDR Drive would be coordinated with the New York City Department of Transportation (NYCDOT) to ensure its protection during construction. In addition, construction of the Preferred Alternative would occur within 90 feet of the following four S/NR-eligible architectural resources located within Project Area One: the FDR Drive (#1, S/NR-eligible); Williamsburg Bridge (#2, S/NR-eligible); East River Bulkhead (#3, S/NR-eligible); and Engine Co. 66 Fireboat House (#4, S/NR-eligible) (see Figure 5.4-20). Direct effects on these resources could result from ground-borne vibrations (i.e., from pile-driving), collapse, dewatering, subsidence, or construction equipment.

As stipulated in the PA, the City, in consultation with LPC and SHPO, would develop and implement CPPs for the four S/NR-eligible architectural resources identified above to avoid inadvertent construction-period damage from ground-borne vibrations, falling debris, collapse, dewatering, subsidence, or construction equipment. The CPPs would also be developed in consultation with NYC Parks, the Municipal Art Society, and the New York Landmarks Conservancy, and the plans would be expected to follow the guidelines of the DOB TPPN #10/88, which “requires a monitoring program to reduce the likelihood of construction damage to adjacent historic structures and to detect at an early stage the beginnings of damage so that construction procedures can be changed.” It is expected that the CPPs will also be prepared in accordance with LPC’s guidance document *Protection Programs for Landmarked Buildings* and the National Park Service’s *Preservation Tech Notes, Temporary Protection #3: Protecting a Historic Structure during Adjacent Construction*. With the CPPs in place, construction would not be expected to result in adverse effects to the FDR Drive (#1); Williamsburg Bridge (#2); East River Bulkhead (#3); and Engine Co. 66 Fireboat House (#4). Further, construction adjacent to the FDR Drive and the Williamsburg Bridge would be coordinated with NYCDOT to ensure that these resources are protected during construction of the Preferred Alternative.

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<sup>1</sup> The architectural resource status designations and reference numbers in this chapter are those used in Chapter 5.4, “Historic and Cultural Resources.” See Table 5.4-1 and Figure 5.4-1.

*Project Area Two*

In Project Area Two, the Preferred Alternative would directly affect the FDR Drive (#1, S/NR-eligible) through the construction of closure structures across the highway at Avenue C, and construction of other elements that would occur within 90 feet of the FDR Drive (#1, S/NR-eligible) (see Figure 5.4-21).

Therefore, as stipulated in the PA, the City, in consultation with LPC and SHPO, would develop and implement a CPP for the FDR Drive that would be expected to follow the guidance documents noted above. The CPP would also be developed in consultation with NYC Parks, the Municipal Art Society, and the New York Landmarks Conservancy. With the CPP in place, construction would not be expected to result in adverse effects to the FDR Drive. Further, construction adjacent to the FDR Drive would be coordinated with NYCDOT to ensure that it is protected during construction of the Preferred Alternative.

*400-Foot Portion of the Primary Area of Potential Effect*

Construction of the Preferred Alternative would occur within 90 feet of the Asser Levy Public Baths (#12, S/NR, NYCL); and a small portion of the Jacob Riis Houses (#15, S/NR-eligible) (see Figures 5.4-16 and 5.4-17). In addition, construction of the drainage management components of the Preferred Alternative would occur within 90 feet of Gouverneur Hospital (#5, S/NR); Gouverneur Hospital Dispensary (#6, S/NR-eligible); a portion of the Vladeck Houses within the Lower East Side Historic District (#7, S/NR); a portion of the Baruch Houses (#9, S/NR-eligible); a portion of the East River Housing Cooperative (#13, S/NR-eligible); a portion of the Jacob Riis Houses (#15, S/NR-eligible); a portion of Stuyvesant Town (#16, S/NR-eligible); and a portion of Peter Cooper Village (#17, S/NR-eligible).

As stipulated in the PA, the City, in consultation with LPC and SHPO, would develop and implement CPPs for these architectural resources to avoid inadvertent construction-period damage from ground-borne vibrations, falling debris, collapse, dewatering, subsidence, or construction equipment. The CPPs would also be developed in consultation with NYC Parks, the Municipal Art Society, and the New York Landmarks Conservancy, and they would be expected to follow the guidance documents noted above and, with their implementation, construction would not be expected to result in adverse effects to these architectural resources.

**OTHER ALTERNATIVE (ALTERNATIVE 2): FLOOD PROTECTIONS SYSTEM ON THE WEST SIDE OF EAST RIVER PARK – BASELINE**

*ARCHAEOLOGICAL RESOURCES*

The potential effects on archaeological resources under Alternative 2 would be similar to those described under the Preferred Alternative above. Additional archaeological work is stipulated in the PA and performed in consultation with LPC and SHPO as described above.

*ARCHITECTURAL RESOURCES*

The effects to architectural resources during construction would be the same with Alternative 2 as with the Preferred Alternative, described above. As is stipulated in the PA, the City, in consultation with LPC and SHPO, would develop and implement CPPs for the same architectural resources as described above under the Preferred Alternative. The CPPs would also be developed in consultation with NYC Parks, the Municipal Art Society, and the New York Landmarks Conservancy.

**OTHER ALTERNATIVE (ALTERNATIVE 3): FLOOD PROTECTION SYSTEM ON THE WEST SIDE OF EAST RIVER PARK – ENHANCED PARK AND ACCESS**

*ARCHAEOLOGICAL RESOURCES*

The potential effects on archaeological resources under Alternative 3 would be similar to those described under the Preferred Alternative above. Additional archaeological work is stipulated in the PA and performed in consultation with LPC and SHPO as described above.

*ARCHITECTURAL RESOURCES*

The effects to architectural resources during construction would be the same with Alternative 3 as with the Preferred Alternative, described above. As is stipulated in the PA, the City, in consultation with LPC and SHPO, would develop and implement CPPs for the same architectural resources as described above under the Preferred Alternative. The CPPs would also be developed in consultation with NYC Parks, the Municipal Art Society, and the New York Landmarks Conservancy.

**OTHER ALTERNATIVE: FLOOD PROTECTION SYSTEM EAST OF FDR DRIVE (ALTERNATIVE 5)**

*ARCHAEOLOGICAL RESOURCES*

The potential effects on archaeological resources under Alternative 5 would be similar to those described under the Preferred Alternative above. Additional archaeological work would be performed in consultation with LPC and SHPO as described above and as is stipulated in the PA.

*ARCHITECTURAL RESOURCES*

*Project Area One*

The effects to architectural resources during construction would be the same with Alternative 5 as with the Preferred Alternative, described above. As stipulated in the PA, the City, in consultation with LPC and SHPO, would develop and implement CPPs for the same architectural resources as described above under the Preferred Alternative. The CPPs would also be developed in consultation with NYC Parks, the Municipal Art Society, and the New York Landmarks Conservancy.

*Project Area Two*

This alternative would reconstruct the section of the FDR Drive (#1, S/NR-eligible) between approximately East 13th and East 18th Streets. However, it is not expected that this work would adversely affect on the FDR Drive, as only an approximately five-block section of the 9.44-mile-long FDR Drive would be reconstructed. Further, because the FDR Drive currently has elevated sections, raising the northbound lanes within a portion of Project Area Two would not affect the overall appearance of the highway, and it would still convey its historic significance. Also, the FDR Drive has been altered over time. Further, as with other alternatives, construction affecting the FDR Drive would be coordinated with NYCDOT to ensure that it is protected during construction of Alternative 5. With a CPP in place for work north of East 18th Street, adjacent construction would not be expected to result in adverse effects to the FDR Drive.

*400-Foot Portion of the Primary Area of Potential Effect*

Construction of Alternative 5—like the Preferred Alternative and Alternatives 2 and 3—would occur within 90 feet of Gouverneur Hospital (#5, S/NR); Gouverneur Hospital Dispensary (#6, S/NR-eligible); a portion of the Vladeck Houses within the Lower East Side Historic District (#7, S/NR); the Baruch Houses (#9, S/NR-eligible); Asser Levy Public Baths (#12, S/NR, NYCL); a portion of the East River Housing Cooperative (#13, S/NR-eligible); a portion of the Jacob Riis Houses (#15, S/NR-eligible); a portion of Stuyvesant Town (#16, S/NR-eligible); and a portion of Peter Cooper Village (#17, S/NR-eligible). Therefore, as stipulated in the PA, the City, in consultation with LPC and SHPO, would develop and implement CPPs and, with these CPPs in place, construction would not be expected to result in adverse effects to these architectural resources. The CPPs would also be developed in consultation with NYC Parks, the Municipal Art Society, and the New York Landmarks Conservancy.

**MITIGATION**

*ARCHAEOLOGICAL RESOURCES*

As described above, additional archaeological investigation will be performed prior to or during construction as stipulated in the PA. A scope of work will be prepared in consultation with LPC and SHPO, and the City will complete any further phase of archaeological work per the guidance in the *CEQR Technical Manual* and in accordance with the Secretary of the Interior's *Standards and Guidelines for Archaeology*, ACHP's *Section 106 Archaeological Guidance*, and the New York Archaeological Council's *Standards for Cultural Resource Investigations and Curation of Archaeological Collection*.

*ARCHITECTURAL RESOURCES*

As stipulated in the PA, the City, in consultation with LPC and SHPO, would develop and implement CPPs for architectural resources located within 90 feet from the construction area of the proposed project to avoid inadvertent construction-period damage from ground-borne vibrations, falling debris, collapse, dewatering, subsidence, or construction equipment. The CPPs would also be developed in consultation with NYC Parks, the Municipal Art Society, and the New York Landmarks Conservancy. \*