

## 7.0 UNAVOIDABLE ADVERSE IMPACTS

### 7.1 INTRODUCTION

According to the *CEQR Technical Manual*, unavoidable significant adverse impacts are defined as those that meet the following two criteria:

- There are no reasonably practicable mitigation measures to eliminate the Proposed Project's impacts; and
- There are no reasonable alternatives to the Proposed Project that would meet its purpose and need, eliminate its impacts, and not cause other or similar significant adverse impacts.

As described throughout this EIS and summarized in **Chapter 4.0**, "Mitigation Measures," most of the potential significant adverse impacts of the Proposed Project could be avoided or mitigated by implementing a number of measures. However, in a few instances, no practicable mitigation was identified to fully mitigate significant adverse impacts, and there are no reasonable alternatives to the Proposed Project that would meet its purpose and need, eliminate its impacts, and not cause other or similar significant adverse impacts. The following is a summary of the potential for those "Unavoidable Adverse Impacts."

### 7.2 HISTORIC AND CULTURAL RESOURCES

#### 7.2.1 Year 2015

As further demonstrated in **Chapter 2.6**, "Historic and Cultural Resources," by the year 2015 the proposed development activities would potentially disturb or destroy portions of the following archaeological site located within the Development Area, identified through prior archaeological survey work. These activities could result in potential adverse impacts to this archaeological resource:

- *Site C4-MCB-1 (NYS Site A08501.002766)*. This prehistoric site was located during the Phase 1B survey atop a prominent knoll in the east-central portion of the current Project Area. According to project mapping, this site is located in Block 7452, Lot 75, proposed Retail Site "A". The potential resources within this site are considered to be archaeologically significant.

While development of this site would potentially disturb or destroy these resources, as noted in **Chapter 4.0**, "Mitigation Measures," further archaeological investigation will be required to be undertaken in the parkland and on Retail Site "A" prior to construction or any ground disturbing activities. A Scope of Work for archaeological field testing will be prepared and submitted to the New York City Landmarks Preservation Commission ("NYCLPC") for review and approval. Remedial measures, including Phase 1B testing, any necessary Phase 2 and 3 investigations, and continued consultation with NYCLPC and/or OPRHP, will be required to be undertaken by the developer(s) through provisions in the Contract of Sale between NYC and the developer(s). For City properties that may be managed by the NYCEDC, remedial measures, including Phase 1B testing, any necessary Phase 2 and 3 investigations, and continued consultation with NYCLPC and/or OPRHP, will be required to be undertaken by the developer(s) through the provisions of a contract for sale or lease, or other legally binding agreement between NYCEDC and the developer(s).

#### 7.2.2 Year 2020

Construction of the remainder of the Project Area by the year 2020 has the potential to disturb or destroy portions of one or more historic or prehistoric archaeological site located within the remaining sections of

the Project Area, which was identified through prior archaeological survey work. In addition, there are portions of the remainder of the Project Area that possess archaeological potential that have never been surveyed. These resources are noted below:

### **Senior Housing Site Area**

- *Fairview Prehistoric Site (NYS Site A08501.002815)*. This prehistoric site was located in 1999 during JMA Phase II excavations at the Balthasar Kreischer Estate Ruins Site. Most of the prehistoric material was recovered from a small, 60-foot-by-40-foot area to the southeast of the main house foundation remains, but prehistoric cultural material was also recovered from test units to the northwest and east of the main house foundation. This prehistoric site may once have covered the entire landform. The limited testing conducted to date suggests that at least portions of the prehistoric site retain sufficient integrity to contribute important archaeological data; the site is considered to be archaeologically significant.
- *Balthasar Kreischer Estate (Fairview) Ruins*. Phase II fieldwork conducted at the Kreischer Estate in 1999 documented 18 features with visible surface remains across the estate ruins. The features included the main house foundation, an extensive complex of foundation remains, intact archaeological features (such as possible cisterns and wells), landscape features (such as summer house/gazebo remains, pond, and driveways), and mid-Late-19<sup>th</sup> century and Early-20<sup>th</sup> century sheet middens (ceramic and glass sherds, etc). The site is historically significant in local terms for its association with the Kreischer Brickworks, the establishment of Kreischerville (Charleston), and other 19<sup>th</sup> century works that were sponsored by the Kreischer family. The site is also significant as an intact archaeological example of a 19<sup>th</sup> century elite residence and its associated features.

### **Englewood Avenue Area**

- *Site A7-MCB-1 (NYS Site A08501.002767)*. This prehistoric site was located during the Phase IB survey on a small, pronounced knoll or hill with a flat summit just south of the proposed route of Englewood Avenue, within the (now) existing conservation area. The site is estimated to cover an area approximately 65 feet by 25 feet. The site is considered to be archaeologically significant. The Proposed Project would include no development component at this site, which lies within the existing Conservation Area. However, completion of Englewood Avenue along the northern boundary of the Conservation Area has the potential to adversely impact this prehistoric site. It is recommended that the site location be fenced off prior to the initiation of construction activity in this area, which could minimize or avoid any impacts to this resource.
- *Block 7494: Lots 8, 90, 95, 97, and 183 - Retail Site "B"*. Completion of Retail Site "B" may disturb or destroy potential archaeological resources. It is possible that early features associated with the tenure of the Shea family (ca.1853-1887) are present on this property. Such features could include wells, cisterns, or privies, in addition to foundation remains of the house itself. It is equally possible that features associated with the tenure of the Beckman family (ca.1887-ca.1917) are present. It is also possible that remains of prehistoric occupation are present on this parcel. Given the number of previously identified prehistoric sites and traces of occupation noted for the southwestern portion of Staten Island, including those located within the Project Area itself, it is quite possible that intact prehistoric resources are located on this parcel.
- *Englewood Avenue Extension and Pedestrian/Bicycle Path*. It is possible that remains of prehistoric occupation are present in this 80-foot wide linear corridor. Given the density of prehistoric site locations already identified for this portion of Staten Island, including a site located less than 50 feet south of Englewood Avenue on the Project Area itself, it is possible that intact prehistoric resources are present.

### Retail Site “B”

- *Block 7487, Lot 100 – Retail Site B.* Block 7487, Lot 100 lies in the southwestern portion of the current Project Area. This Block has been impacted by recent development, notably the construction of the MTA Bus Depot that fronts on Arthur Kill Road. The bus annex occupies approximately one third of Block 7487. However, the portion of Block 7487 that lies to the south of the bus depot and north of Block 7494 and the extant sewer line running along the southern block boundary has not been previously surveyed.
- *Retail Site “B” and Proposed Utility/Roadway Corridor:* There are unsurveyed areas of archaeological potential in these sections of the Project Area that may be impacted by development in 2020 or later. A new 50-foot-wide corridor is proposed to potentially provide future utility and/or roadway connections to Bricktown Way from Arthur Kill Road. The corridor runs along the southern boundary of Block 7487, Lot 100, just north of the existing 35-foot-wide sanitary sewer easement that runs from Bricktown Way to Arthur Kill Road. The western half of Block 7487, south of the MTA Bus Annex and north of this sewer easement has not been previously surveyed. It is possible that remains of prehistoric occupation are present on this parcel.

At this time, there are no specific development proposals for Site Retail Site “B” and future developers will be selected pursuant to a RPF process. Further archaeological investigation will be required to be undertaken by the developer(s) after selection. For all developments in the Project Area to be completed by the year 2020, remedial measures, including Phase 1B testing, any necessary Phase 2 and 3 investigations, and continued consultation with NYCLPC and/or OPRHP, will be required to be undertaken by the developer(s) through provisions in the Contract of Sale between New York City and the developer(s). For City properties that may be managed by the NYCEDC, remedial measures, including Phase 1B testing, any necessary Phase 2 and 3 investigations, and continued consultation with NYCLPC and/or OPRHP, will be required to be undertaken by the developer(s) through the provisions of a contract for sale or lease, or other legally binding agreement between NYCEDC and the developer(s).

## 7.3 NATURAL RESOURCES

### 7.3.1 Year 2015

As further discussed in **Chapter 2.8**, implementation of the Proposed Project by the year 2015 would impact approximately 0.106 acres of wetland habitats. No impacts to NYSDEC regulated wetlands or USACE jurisdictional wetlands would occur (**Table 7-1**).

**Table 7-1**  
**Estimated Impacts to Wetland Habitats and Regulated Wetlands**  
**Under the 2015 Development**

Wetlands	Impacted Wetlands (acres)
Non-regulated Wetland Habitats (isolated wetlands)	0.106
NYSDEC-Regulated Wetlands and USACE Jurisdictional Wetlands *	0.000
Notes: *Awaiting concurrence from the USACE on the wetland delineation. It is assumed the USACE will identify wetlands B, C, H, HA, NB, and NW as jurisdictional.	

The developments from the 2015 analysis year would remove or alter approximately 20.5 acres of habitat for flora and fauna on site. These habitats are largely successional woodlands and fields. None of the habitats are rare or unique and are common in southern New York State. The Development Area supports a variety of mammals (e.g., mice, voles, raccoons, deer, etc.). Displacement of wildlife within the Development Area would be either temporary or permanent, depending upon the whether the construction would permanently alter the existing landscape and remove sufficient habitat to render the remaining habitat unsuitable for some species. Where habitats would be permanently impacted, motile species would likely relocate to contiguous tracts of land adjacent to or near the Development Area, thereby putting additional pressure on these habitats due to the over population of some species. Once construction is complete, it is anticipated that the fauna utilizing the Development Area would adapt to the available habitats. Overall, no unavoidable impacts to flora and fauna are project in 2015.

Development by the year 2015 would impact 538 of the surveyed trees within the Development Area. **Table 7-2** identifies the number of trees, per species that would be impacted. A portion of these trees, especially those displaced from Fairview Park, would be replaced elsewhere in the Project Area or in other locations within Staten Island. The exact number, location and type of trees involved will be determined in the future as the plans for Fairview Park are finalized.

The Development Area is approximately one fourth the size of the Clay Pit Ponds State Park Preserve (“CPPSP”) and impacts would result in further encroachment in the preserve. The removal of the habitats within the Development Area may have indirect impacts to the preserve, as they serve as a vegetated buffer to the CPPSP . In the last century, the development of Staten Island, especially southern Staten Island, has removed large parcels of vegetated land. The removal of additional vegetated areas would further reduce available habitats for species that are not adapted to disturbed environments.

As noted previously, the full potential for the Proposed Project to result in significant adverse impacts on natural resources in 2020 is not fully understood. The plans for Englewood Avenue, the senior housing and school sites, and Retail Site “B” are presently conceptual in nature, with future opportunities to minimize or avoid some of the potential impacts noted above. Further site testing, including Phase 1B assessments if warranted, could be performed in the future as plans for these project elements advance further in the development process. This would confirm the potential resources in these areas and define ways for proposed future developments to minimize or avoid impacts to those resources.

Two endangered and one threatened plant species were observed within the proposed areas of the 2015 year developments. Two species, the bonesets (one threatened and one endangered), were observed in open areas (e.g., successional old fields Variants I and II, and unpaved paths) throughout the Development Area. As such, the removal and/or disturbance of open areas would impact the bonesets through habitat loss and direct removal of individual plants. Due to the observed prevalence of bonesets throughout the site, it is not anticipated that the removal of some of the onsite open area habitats as part of the 2015 year analysis would pose a significant unavoidable impact to the species.

**Table 7-2  
Impacted Surveyed Trees Under the 2015 Development**

Species	Number
Black Oak	3
Black Locust	2
Big tooth Aspen	291
Grey Birch	3
Unknown*	38
Pin Oak	141
Poplar sp.	1
Post Oak	1
Quaking Aspen	3
Red maple	4
Sassafras	1
Sweetgum	2
Swamp White Oak	2
White oak	46
<b>Total</b>	<b>538</b>
Note: Unknown refers to trees whose location was surveyed by a licensed surveyed but could not be located during the tree survey. Note Hurricane Sandy felled many trees on site, which may account for the inability to locate the trees.	

Torrey's Mountain Mint, an endangered species, occurs in one discreet location on the southern border of Retail Site "A." Review of the New York State Natural Heritage Program ("NYSNHP") website indicates *"There are three existing populations in New York but all of them are small or highly threatened"* and *"A recently discovered population on Staten Island was almost destroyed by the construction of a shopping center."* NYSNHP conservation and management strategies for the species identify that "open areas need to be maintained without directly damaging existing plants."

The removal of one of the remaining three sites for this species would be viewed as a significant impact by regulatory agencies. Various measures are proposed in Chapter 4: Mitigation, to identify suitable areas within the western portions of the proposed Fairview Park or other appropriate locations nearby that would provide suitable habitat for this species. That proposal, along with other proposed actions to be developed in consultation with applicable regulatory agencies, would support the continued presence of Torrey's Mountain Mint in this area.

### 7.3.2 Year 2020

As further discussed in **Chapter 2.8**, implementation of developments under the 2020 year analysis on Retail Site "B," the senior housing site and the school site would impact approximately 0.30 acres of wetland habitats, none of which would be determined to be jurisdictional. The development of Englewood Avenue and specifically the segment between CPPSPP and the Conservation Area under the 80-foot wide concept plan would impact about 0.07 acres of NYSDEC-regulated wetlands (Wetlands B and C) and USACE jurisdictional wetlands.. Also, under the 80-foot width of Englewood Avenue, approximately 0.89 acres of NYSDEC-regulated adjacent area would be impacted (**Table 7-3**). Actions to mitigate the impacts to these regulated and jurisdictional wetlands would review by the two regulatory agencies.

Representatives of the USACE noted during a recent field visit that impacts to these types of jurisdictional forested wetlands should be reduced to the greatest extent practicable and unavoidable impacts would require mitigation.

**Table 7-3**  
**Estimated impacts to Wetland Habitats and Regulated Wetlands**  
**Under the 2020 Development**

Wetlands	School, Senior Housing, and Retail Site "B"	Englewood Avenue (80 foot Width)
Non-regulated Wetland Habitats (isolated wetlands)	0.30	-
NYSDEC-Regulated Wetlands and USACE Jurisdictional Wetlands *	-	0.07
Notes: * Awaiting concurrence from the USACE on the wetland delineation. It is assumed the USACE would identify wetlands B, C, H and HA as jurisdictional. Under the 80foot option, the only wetlands to be impacted are Wetlands B and C, which are both NYSDEC-regulated and USACE-jurisdictional wetlands. Under the 80-foot width of Englewood Avenue, approximately 0.89 acres of NYSDEC-regulated Adjacent Areas.		

Implementation of developments under the 2020 year analysis would bifurcate remaining undeveloped habitats within the Development Areas from the CPPSPP and the Conservation Area. Although many of the directly impacted habitats are generally successional habitats that are common to New York State, the proposed uses within the Development Area would have further indirect impacts on the preserve and Conservation Area through removal and bifurcation of a large contiguous vegetated buffer area.

Approximately 2,013 of the survey trees would be impacted in 2020 (including those impacted by the year 2015). **Table 7-4** identifies the number of trees, per species that would be impacted under the 2020 year analysis of the remaining development components and the 80-foot wide build option of Englewood Avenue.

The construction of Englewood Avenue would result in substantial direct impacts to wildlife that uses the CPPSPP and the Conservation Area. The current dirt path that separates CPPSPP from the Conservation Area is not an impediment to fauna moving between these areas. Moreover, the canopies of the trees in both parcels intermingle in some locations, which provide an undisturbed continuous canopy. The preserve is a NYSDEC Bird Conservation Area, and bird species, including listed species that live in the preserve and likely transit to the Conservation Area for usage of the habitat there. Removal of the undisturbed continuous canopy for the new road would result in bifurcating valuable habitat and would have negative impacts on fauna within the preserve and the Conservation Area. Moreover, unlike the Development Area, the forest habitats in the CPPSPP and the Conservation Area have fully developed mature canopies, which have limited the undergrowth of dense vines that are stressing trees within the area. The opening of roadway through this forested area would create an "edge effect" on both sides of the road and would likely contribute to localized increases of dense understory vegetation, which would further impact the value of the habitat on the parcels. The New York State-listed rare red-maple sweetgum swamp habitat is also present within the Englewood Avenue's build footprint. The implementation of this option would remove approximately 0.26 acres of this habitat type. In addition, 319 of the surveyed trees would be impacted under this option (see **Table 7-4**).

Cumulatively, construction of the entire Proposed Project by the year 2020 would remove approximately 16.3 acres (74 percent) of the current habitat that could support threatened and endangered bonesets. This would represent a significant impact to natural resources. Various measures are proposed in Chapter 4: Mitigation, to maintain the existing open field areas within the Development Area, which along

with other potentially actions to be developed in consultation with applicable regulatory agencies would support the presence of bonesets on site and offset the impact of this loss of habitat.

**Table 7-4  
Impacted Surveyed Trees Under the 2020 Development**

Species	Retail Site "B", Senior Housing and School Areas	Englewood Avenue (80 Feet Wide)
Ash sp.		1
Black Cherry	43	6
Black oak	3	
Black Locust	171	
Big Tooth Aspen	143	74
Catalpa	1	
Chestnut Oak		1
<i>Dead trees</i>	3	1
Eastern Cottonwood	83	
Elm sp.	4	
Grey Birch	2	
Honey locust	1	
Unknown	53	
Mockernut Hickory		14
Norway maple	12	
Oak sp.		11
Paulownia	22	4
Pin Oak	273	24
Pitch Pine	11	
Quaking Aspen	24	
Red Mulberry	4	
Red maple	44	16
Red oak	14	26
Sassafras	123	18
Silver Maple	3	
Swamp White Oak		4
Sweetgum		50
Sycamore	5	
Tilia	4	
Tree of Heaven	79	
White Mulberry	2	
White Oak	29	69
<b>Total</b>	<b>1,156</b>	<b>319</b>
<p>Note: Unknown refers to trees whose location was surveyed by a licensed surveyed but could not be located during the tree survey. Note Hurricane Sandy felled many trees on site, which may account for the inability to locate the trees.</p>		



Listed species occur in the CPPSPP and the Conservation Area. Many of these species either move between these two areas or depend on the contiguous habitats to provide a vegetated buffer from anthropogenic disturbance. The bifurcating of habitats, from the construction of Englewood Avenue, would have a negative effect on wildlife. Although, there were no direct observations of listed species within the roadway's footprint, Wetlands B and C and adjacent parcels provide habitat conditions favorable to listed species that occur within that area. These habitats would be impacted and partially removed. A range of possible actions to reduce or mitigate these impacts, as discussed in Chapter 4: Mitigation, would have to be developed in consultation with the involved regulatory agencies (especially NYSDEC and the USACE) as the plans for Englewood Avenue are developed further later in the development process.

## 7.4 TRANSPORTATION

### 7.4.1 Year 2015

After the implementation of mitigation measures (see **Chapter 4.0**), the following potential significant traffic impacts due to the Proposed Project are projected to remain in 2015:

#### ***Veterans Road West/Bricktown Way/Korean War Veterans Parkway westbound off-ramp:***

Potential significant traffic impacts are projected to remain for the eastbound left-turn movement, the northbound approach, and the southbound through/right-turn lane during the Saturday midday peak hour.

However, the New York State Department of Transportation ("NYSDOT") has announced that it will implement improvements to the southbound on- and off-ramps on the West Shore Expressway ("WSE") between Bloomingdale Road and Englewood Avenue by 2015. By improving the connection between the southbound WSE and its adjacent service road (Veterans Road West), traffic heading south on the WSE could more easily access the major traffic generators along Veterans Road West (including the Bricktown Center). The projected resultant traffic shifts would reduce the volume of traffic added by the Proposed Project to this intersection, potentially reducing or eliminating the unmitigated traffic impacts noted above. The effects of these announced WSE ramp improvements at this and other study area intersection will be analyzed and presented in the FEIS.

#### ***Boscombe Avenue/Outerbridge Crossing Ramps:***

Potential significant traffic impacts are projected to remain for westbound right-turn movements at this intersection during the weekday midday and weekday PM peak hours.

### 7.4.2 Year 2020

After the implementation of mitigation measures, the following potential significant traffic impacts due to the Proposed Project are projected to remain in 2020:

#### ***Veterans Road West/Bricktown Way/Korean War Veterans Parkway westbound off-ramp:***

Potential significant traffic impacts at this intersection are projected to remain for:

- Westbound left-turn movements during the weekday midday and Saturday midday peak hours;
- The northbound approach during the weekday midday, weekday PM, and Saturday midday peak hours; and

- Eastbound left-turn movements and the southbound through/right-turn lane during the Saturday midday peak hour.

However, as discussed above under Year 2015, improvements to the southbound on- and off-ramps on the WSE are projected to result in traffic shifts that would reduce the volume of traffic added by the Proposed Project to this intersection, potentially reducing or eliminating the unmitigated traffic impacts noted above. The effects of these announced WSE ramp improvements at this and other study area intersection will be analyzed and presented in the FEIS.