

## **A. INTRODUCTION**

In accordance with City Environmental Quality Review (CEQR), this chapter presents and analyzes alternatives to the proposed project. As described in the 2012 *CEQR Technical Manual*, alternatives selected for consideration in an Environmental Impact Statement (EIS) are generally those which are feasible, considering the objectives and capabilities of the project sponsor, and have the potential to reduce, eliminate, or avoid adverse impacts of a proposed project.

The USTA Billie Jean King National Tennis Center (NTC) Strategic Vision (the proposed project) would result in a series of improvements on the project site, as described in Chapter 1, “Project Description.” This chapter summarizes the evaluation of alternatives to the proposed project. CEQR requires the examination of a No-Action Alternative, in which a proposed project would not be undertaken. The technical chapters of this EIS have described the No-Action Alternative (referred to as “the future without the proposed project”, or the “No-Action” condition) and have used it as the basis to assess the potential impacts for the proposed project. In addition to the No-Action Alternative required for examination under CEQR, this chapter examines an Alternative Without Additional Park Land, an Alternative Without New Park Land Alienation, an Alternative With Greater Expansion, and an Alternative With Modified Parking Plan.

This analysis first examines the No-Action Alternative, which describes the conditions that would exist if the proposed project was not implemented. The second alternative is the Alternative Without Additional Park Land, in which 0.94 acres of park land is not added to the NTC site. The third alternative is the Alternative Without New Park Land Alienation, in which 0.26 acres of previously alienated park land associated with the connector road is added to the NTC site, but no new alienation is undertaken. The fourth alternative is the Alternative With Greater Expansion, in which additional park land beyond the 0.94-acres anticipated with the proposed project is added to the NTC (see Figure 1-3 for the locations of these areas). The fifth alternative is the Alternative With Modified Parking Plan, in which one or both of the proposed parking garages are not built.

## **B. NO-ACTION ALTERNATIVE**

### **DESCRIPTION**

Consideration of the No-Action Alternative is mandated by ~~both~~ CEQR and is intended to provide the lead and involved agencies with an assessment of the expected environmental impacts of No-Action on their part. As described in Chapter 2, “Land Use, Zoning, and Public Policy,” in the future without the proposed project (the No-Action condition), it is expected that existing uses on the project site would remain and that the NTC’s ongoing management of capital projects would result in minor alterations to the project site. In addition, the future No-

Action condition would account for other independent, off-site development projects that are planned to be in place by 2019 absent the proposed project.

### **ALTERNATIVE COMPARED WITH THE PROPOSED PROJECT**

The effects of the No-Action Alternative in comparison to those of the proposed project are summarized below.

#### *LAND USE, ZONING, AND PUBLIC POLICY*

Like the proposed project, the No-Action Alternative would not result in any significant adverse impacts to land use, zoning, or public policy. Under the No-Action Alternative, existing land use conditions on the project site would not change, except for alterations to the project site that would result from USTA's ongoing management of capital projects, as described in Chapter 2, "Land Use, Zoning, and Public Policy." The NTC would continue to be a public tennis facility that hosts the US Open, a world-class sporting event. The NTC would also continue to be constrained by existing site plan deficiencies, such as congested circulation, and structural challenges, as Grandstand Stadium and Louis Armstrong Stadium have reached the end of their useful lives. The deterioration of these stadiums would threaten the ability of the NTC to host the US Open and function as a world class facility. Existing zoning on the project site and existing public policies are expected to remain in force.

The No-Action Alternative would not result in: an addition of land to the NTC site (including 0.68 acres of park land that would be alienated, and 0.26 acres of previously alienated park land associated with the connector road that is outside the current lease); the relocation of the connector road; a reconfiguration of uses on the project site; and an increase in stadium space, retail and operational uses, and parking facilities. While the No-Action Alternative would not result in any increases in height or bulk on the project site, it would also not result in new landscaping improvements along the NTC fence line. The No-Action Alternative would also not replace aging facilities with new modern, recreational facilities that would be open to the public 11 months of the year. In addition, the No-Action Alternative would not result in the surrender of 1.56 acres of land that is currently within USTA's alienation and lease boundaries, and it would not result in potential proposed park improvements in Flushing Meadows Corona Park, including the possible renovation of existing soccer fields and other park enhancements, may not be realized. As the No-Action Alternative would may not result in these ~~park~~ improvements, it would be less supportive of the Flushing Meadows Corona Park Strategic Framework Plan, and the City's Waterfront Revitalization Program, compared to the proposed project.

#### *OPEN SPACE AND RECREATIONAL RESOURCES*

Like the proposed project, the No-Action Alternative would not result in any significant adverse impacts to open space. Under the No-Action Alternative, the current NTC fence line would remain unchanged. The No-Action Alternative would not directly affect any previously-alienated land outside of the current NTC fence line, and would not result in the alienation of 0.68-acres of park land. The No-Action Alternative would also not result in the surrender of 1.56 acres of land that is currently within USTA's alienation and lease boundaries, for active and passive recreational uses in Flushing Meadows Corona Park. Proposed improvements to landscaping, circulation, and amenities at the NTC would not be realized. The No-Action Alternative would also not result in additional improvements for members of the public who utilize the benefit of the general public within Flushing Meadows Corona Park, including

potential renovation of existing soccer fields and other park enhancements, as would occur with the proposed project.

### *SHADOWS*

Under the No-Action Alternative, the proposed project would not be implemented, and therefore there would be no change with respect to shadows. Neither the No-Action Alternative nor the proposed project would result in adverse shadow impacts on any sun-sensitive resource. However, unlike the proposed project, four small areas adjacent to the project site within Flushing Meadows Corona Park would not experience incremental shadows with the No-Action Alternative.

### *HISTORIC AND CULTURAL RESOURCES*

Like the proposed project, the No-Action Alternative would not have a significant adverse impact on historic and cultural resources. Neither the No-Action Alternative nor the proposed project would result in ground disturbance to archaeologically sensitive areas or adversely affect the context of nearby architectural resources. Under the proposed project, a Construction Protection Plan (CPP) would be developed to prevent inadvertent construction-related impacts on two architectural resources—the Freedom of the Human Spirit sculpture and the Passerelle Building—that are located within 90 feet of construction activities for the proposed project. The No-Action Alternative would not have the potential to physically affect these two architectural resources.

### *URBAN DESIGN AND VISUAL RESOURCES*

As with the proposed project, the No-Action Alternative would not have significant adverse impacts on urban design and visual resources. Unlike the proposed project, the No-Action Alternative would not result in improvements to NTC circulation, landscaping, and visitor amenities, which would be anticipated to enhance the pedestrian experience within the project site. The No-Action Alternative would not result in new construction that would increase the height and bulk of the facility. The No-Action Alternative would also not result in modest changes to park land acreage and result in a relocated connector roadway, and would therefore not result in any changes to natural features, open spaces, or streets in the study area. Both the proposed project and the No-Action Alternative would be consistent with the existing urban design characteristics of the project site and study area.

### *NATURAL RESOURCES*

Like the proposed project, the No-Action Alternative would not have significant adverse impacts on natural resources. The No-Action Alternative would not affect approximately 349~~result in the removal of 422~~ trees within and outside of the current NTC fence line (two of which are dead), including 276 state-listed endangered willow oak trees located within the NTC in the walkway between Louis Armstrong Stadium and the Indoor Tennis Center. However, under the proposed project USTA is working with DPR's Forestry Division to minimize the number of trees that would be removed and not replanted and has currently identified approximately 45 of the 347 living trees that would be replanted in place or transplanted. The other approximately 302 affected trees are being evaluated. Under a worst case scenario those approximately 302 trees would be removed and not replanted. However, some of these trees are expected to be determined by DPR to be suitable for transplant. Trees that could not be transplanted would be replaced pursuant to City regulations. Under the proposed project, eight of the 27 existing

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willow oak trees would not be affected by the proposed project; eighteen of these trees would be temporarily removed and replaced in their original locations, and the one tree located near Parking Lot B would be removed. The No-Action Alternative would also not result in the development of previously undeveloped areas including manicured lawn. However, the No-Action Alternative would also not result in grading changes on the site that would improve drainage and flood conditions after major rainfall events.

### *HAZARDOUS MATERIALS*

Like the proposed project, the No-Action Alternative would not result in any significant adverse impacts with respect to hazardous materials. Under the No-Action Alternative, the project site is expected to continue in its current uses, which do not currently present a hazard to people or the environment.

### *WATER AND SEWER INFRASTRUCTURE*

While the No-Action alternative would generate less demand on New York City's water supply, wastewater and sanitary sewage treatment systems than the proposed project, neither the proposed project nor the No-Action Alternative would result in any significant adverse impacts on the City's water supply, wastewater or stormwater conveyance and treatment infrastructure.

The No-Action Alternative would result in a higher rate of stormwater runoff from the project site as compared to the proposed project, as it would not benefit from the incorporation of select best management practices (BMPs).

### *TRANSPORTATION*

Because the No-Action Alternative would not result in an increase in attendance, the significant adverse impact associated with the proposed project would not occur. However, under the proposed project, this temporary impact that would occur during the peak periods of the US Open would be effectively managed by the traffic management program currently in place. Transportation conditions under the No-Action Alternative are expected to be substantially the same as existing conditions. Therefore, unlike the proposed project, the No-Action Alternative would not be expected to lengthen the travel time for departing patrons exiting the US Open at the conclusion of the daytime session.

Under both the proposed project and the No-Action Alternative, the roadway network is anticipated to continue to experience congested levels of service during event conditions. Due to the traffic management program, however, conditions typically observed when intersection operations become saturated (queues extending beyond storage capacity, blocked turning movements, aggressive driver behavior, etc.) would be managed in the field. Field observations conducted during the US Open show that the traffic management program and the Traffic Enforcement Agents (TEAs) are able to effectively manage traffic flow during event peak periods.

### *AIR QUALITY*

Like the proposed project, the No-Action Alternative would not result in any significant adverse impacts with respect to air quality. Under the No-Action Alternative the small increase in carbon monoxide (CO) concentrations resulting from traffic generated by the proposed project and the proposed parking garages would not occur. The No-Action Alternative would also not result in

incremental emissions from use of natural gas in heat and hot water systems. However, with the proposed project, any incremental emissions from mobile sources would be below the corresponding guidance thresholds and ambient air quality standards, and there would be no potential for significant adverse air quality impacts from stationary sources or the heating and hot water systems for the proposed improvements. Therefore, neither the No-Action Alternative nor the proposed actions would result in significant adverse air quality impacts.

#### *GREENHOUSE GAS EMISSIONS*

Like the proposed project, the No-Action Alternative would not result in any significant adverse impacts with respect to greenhouse gas (GHG) emissions. Both the proposed project and the No-Action Alternative would incorporate sustainability measures aimed at reducing energy consumption for both the US Open period and the non-event season. As the No-Action Alternative would not increase attendance at the US Open, the No-Action Alternative would generate fewer GHG emissions than the proposed project during US Open events, when GHG emissions would be generated as a result of electricity use onsite. New stadium facilities and ancillary buildings would not be constructed with the No-Action Alternative, resulting in fewer GHG emissions from construction activities. The No-Action Alternative would not result in some of the sustainability measures that could be implemented with the proposed project. For example, under the proposed project, the use of clean power or generation of renewable or low power on-site is under consideration for the proposed building that would seek Leadership in Energy and Environmental Design (LEED) certification, subject to site design and economic feasibility.

#### *NOISE*

Like the proposed project, the No-Action Alternative would not result in any significant adverse impacts with respect to noise. Under both the No-Action Alternative and the proposed project, noise levels in Flushing Meadows Corona Park adjacent to the project site would be expected to exceed the 55 dBA  $L_{10(1)}$  guideline value recommended in the *CEQR Technical Manual* for open spaces. These conditions would be less than or comparable to noise levels in other parks and open spaces throughout New York City.

#### *NEIGHBORHOOD CHARACTER*

Like the proposed project, the No-Action Alternative would not result in any significant adverse impacts with respect to neighborhood character. The No-Action Alternative would not result in: an addition of land to the NTC site (including 0.68 acres of park land that would be alienated, and 0.26 acres of previously alienated park land associated with the connector road that is outside the current lease); relocation of a connector road in a 0.3-acre area; a reconfiguration of uses on the project site; and an increase in stadium space, retail and operational uses, and parking facilities. While the No-Action Alternative would not result in any increases in height or bulk on the project site, it would also not result in new landscaping improvements along the NTC fence line. The No-Action Alternative would also not replace aging facilities with new modern, recreational facilities that would be open to the public 11 months of the year. In addition, the No-Action Alternative would not result in the surrender of 1.56 acres of land that is currently within USTA's alienation and lease boundaries or the potential proposed park improvements in Flushing Meadows Corona Park, including renovation of existing soccer fields and other park enhancements, would not be realized.

*PUBLIC HEALTH*

The No-Action Alternative, like the proposed project, would not result in any significant adverse public health impacts associated with construction or operation of the new development on the project site.

*CONSTRUCTION IMPACTS*

Like the proposed project, the No-Action Alternative would not result in any significant adverse impacts with respect to construction. Under the No-Action Alternative, no stadium and ancillary building construction would occur on the project site. Therefore, the No-Action Alternative would avoid the temporary construction effects attributable to the proposed project, such as increases in truck traffic and construction-related noise. However, in addition to being largely confined to the project site and its perimeter (except for the relocated connector road and park improvement-projects), the construction impacts of the proposed project would be addressed (e.g., through dust-control measures and adherence to noise regulations), and would not result in any significant adverse impacts.

**C. ALTERNATIVE WITHOUT ADDITIONAL PARK LAND**

**DESCRIPTION**

Under the Alternative Without Additional Park Land, improvements would be implemented at the NTC without the additional 0.94 acres of park land, including 0.68 acres of park land that would be alienated and 0.26 acres of previously alienated park land. Two of the NTC site's existing three stadiums —Louis Armstrong Stadium and Grandstand Stadium— are approaching 50 years of age and have reached the end of their useful lives, as the stadiums were designed for the 1964-1965 World's Fair. The continued deterioration of these stadiums would threaten the ability of the NTC to host the US Open and function as a world class facility. Absent the proposed expansion of the project site, these facilities would need to be rebuilt in place. The new stadiums would continue to be constrained by an inefficient site plan, and the opportunity to improve pedestrian circulation would be lost.

Rebuilding these stadiums in place would mean that the site plan as proposed could not be achieved. Compared to the proposed project, the following objectives would not be achieved:

- **Expand public plazas and promenades and improve functionality of public spaces and open areas within the NTC.** Without an expansion of the site, new public spaces and walkways could not be provided and site circulation would continue to be congested. Therefore, this objective would not be achieved.
- **Improve circulation, comfort, and safety for visitors and players.** Without the provision of new public spaces and walkways, site circulation would continue to be congested. Existing public spaces could be improved only to a lesser extent. Therefore, this objective would not be achieved.
- **Activate underutilized spaces within the NTC site.** The alternative would maintain the current congested conditions in the northern portion of the site, thereby not achieving a dispersal of patrons.
- **Increase the capacity of the NTC site to allow for more daytime attendance at the US Open.** Without an expansion of the site, new facilities and circulation improvements could

not be provided. Thus, additional daytime attendees could not be accommodated. Therefore, this objective would not be achieved.

- **Enhance economic benefits of the US Open in Queens, New York City, and the region.** As this alternative would not allow for an increase in daytime attendance at the US Open, there would not be an increase in economic benefits to Queens, New York City, and the region, compared to the proposed project. In addition, the enhancement of the competitive status of the US Open, with respect to the four Grand Slam events, would not be achieved.

In addition, the opportunity to improve the NTC's context within Flushing Meadows Corona Park would be lost. As the daytime capacity of the NTC for the US Open could not be increased, there would not be improved economic benefits to the City. The competitive position of the NTC would decline in relative terms due to improvements at competing and peer facilities.

### **ALTERNATIVE COMPARED WITH THE PROPOSED PROJECT**

The effects of the Alternative Without Additional Park Land in comparison to those of the proposed project are summarized below.

#### *LAND USE, ZONING, AND PUBLIC POLICY*

Like the proposed project, the Alternative Without Additional Park Land would not result in any significant adverse impacts to land use, zoning, or public policy. Under the Alternative Without Additional Park Land, the NTC would continue to be constrained by existing site plan deficiencies, such as congested internal circulation and structural challenges, as Grandstand Stadium and Louis Armstrong Stadium have reached the end of their useful lives. Existing zoning on the project site and existing public policies are expected to remain in force.

The Alternative Without Additional Park Land would not result in: an addition of land to the NTC site (including 0.68 acres of park land that would be alienated, and 0.26 acres of previously alienated park land associated with the connector road that is outside the current lease); relocation of a connector road in a 0.3-acre area; a reconfiguration of uses on the project site; and an increase in stadium space, retail and operational uses, although it would result in the construction of replacement facilities for Louis Armstrong Stadium and Grandstand Stadium in their current locations, as well as two parking garages. While the Alternative Without Additional Park Land would result in less substantial changes in height or bulk on the project site compared to the proposed project, it would also not result in new landscaping improvements along the NTC fence line. In addition, the Alternative Without Additional Park Land would not result in the surrender of 1.56 acres of land that is currently within USTA's alienation and lease boundaries, and it would not result in potential proposed park improvements in Flushing Meadows Corona Park, including the possible renovation of existing soccer fields and other park enhancements, may not be realized. As the Alternative Without Additional Park Land would may not result in these ~~park~~ improvements, it would be less supportive of the Flushing Meadows Corona Park Strategic Framework Plan, and the City's Waterfront Revitalization Program, compared to the proposed project.

#### *OPEN SPACE AND RECREATIONAL RESOURCES*

Like the proposed project, the Alternative Without Additional Park Land would not result in any significant adverse impacts to open space. Under the Alternative Without Additional Park Land the current NTC fence line would remain unchanged. The Alternative Without Additional Park

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Land would not directly affect any previously-alienated land outside of the current NTC fence line, and would not result in the alienation of 0.68-acres of park land. In addition, this alternative would not result in the surrender of 1.56 acres of land that is currently within USTA's alienation and lease boundaries, for active and passive recreational uses in Flushing Meadows Corona Park. Proposed improvements to landscaping, circulation, and amenities at the NTC would not be realized. The Alternative Without Additional Park Land would also not result in additional improvements for members of the public who utilize ~~the benefit of the general public within~~ Flushing Meadows Corona Park, including potential renovation of existing soccer fields and other park enhancements, as would occur with the proposed project.

### *SHADOWS*

Under the Alternative Without Additional Park Land, the proposed project would not be implemented, and therefore there would be less substantial changes with respect to shadows, although the replacement Louis Armstrong and Grandstand Stadiums could be taller than the current height. Under the Alternative Without Additional Park Land, Parking Garage B would cast between approximately 5 minutes and an hour and 50 minutes of incremental shadow in the spring, summer, and fall on the circular plaza area adjacent to the Passerelle Building, as would occur under the proposed project. Only a small portion of this plaza would be affected by the new shadow, and even this small area would receive direct sun for most of the remaining day in those seasons due to the lack of structures to the south and east (see Chapter 4, "Shadows"). Neither the Alternative Without Additional Park Land nor the proposed project would result in significant adverse shadow impacts on any sun-sensitive resource. Unlike the proposed project, three small areas adjacent to the project site within Flushing Meadows Corona Park would be unlikely to experience incremental shadows with the Alternative Without Additional Park Land.

### *HISTORIC AND CULTURAL RESOURCES*

Like the proposed project, the Alternative Without Additional Park Land would not have a significant adverse impact on historic and cultural resources. Neither the Alternative Without Additional Park Land nor the proposed project would result in ground disturbance to archaeologically-sensitive areas or adversely affect the context of nearby architectural resources. Because construction activities associated with both the proposed project and the Alternative Without Additional Park Land would have the potential to physically affect two architectural resources within 90 feet of the project site, a CPP would be developed to prevent inadvertent construction-related impacts.

### *URBAN DESIGN AND VISUAL RESOURCES*

As with the proposed project, the Alternative Without Additional Park Land would not have significant adverse impacts on urban design and visual resources. Unlike the proposed project, the Alternative Without Additional Park Land would not result in improvements to NTC circulation, landscaping, and visitor amenities, which would be anticipated to enhance the pedestrian experience within the project site. The Alternative Without Additional Park Land would result in lesser increases to the height and bulk of the facility than the proposed project. The Alternative Without Additional Park Land would also not result in modest changes to park land acreage and result in a relocated connector roadway, and would therefore not result in any changes to natural features, open spaces, or streets in the study area. Both the proposed project and the Alternative Without Additional Park Land would be consistent with the existing urban design characteristics of the project site and study area.



*NATURAL RESOURCES*

Like the proposed project, the Alternative Without Additional Park Land would not have significant adverse impacts on natural resources. The Alternative Without Additional Park Land would not affect approximately 349 result in the removal of 422 trees within and outside of the current NTC fence line (two of which are dead), including 276 state-listed endangered willow oak trees located within the NTC in the walkway between Louis Armstrong Stadium and the Indoor Tennis Center. However, under the proposed project USTA is working with DPR's Forestry Division to minimize the number of trees that would be removed and not replanted and has currently identified approximately 45 of the 347 living trees that would be replanted in place or transplanted. The other approximately 302 affected trees are being evaluated. Under a worst case scenario those approximately 302 trees would be removed and not replanted. However, some of these trees are expected to be determined by DPR to be suitable for transplant. Trees that could not be transplanted would be replaced pursuant to City regulations. Under the proposed project, eight of the 27 existing willow oak trees would not be affected by the proposed project; eighteen of these trees would be temporarily removed and replaced in their original locations, and the one tree located near Parking Lot B would be removed. The Alternative Without Additional Park Land would also not result in the development of previously undeveloped areas including manicured lawn. However, the No-Action Alternative would also not result in grading changes on the site that would improve drainage and flood conditions after major rainfall events.

*HAZARDOUS MATERIALS*

Like the proposed project, the Alternative Without Additional Park Land would not result in any significant adverse impacts with respect to hazardous materials. As with the proposed project, the Alternative Without Additional Park Land would include appropriate health and safety/remedial measures that would precede or govern demolition, construction, and soil disturbance activities on the stadium construction sites. With the implementation of these measures, no significant adverse impacts related to hazardous materials would be expected to result from the proposed project or from the Alternative Without Additional Park Land.

*WATER AND SEWER INFRASTRUCTURE*

While the Alternative Without Additional Park Land would generate less demand on New York City's water supply, wastewater, and sanitary sewage treatment systems than the proposed project, neither the proposed project nor the Alternative Without Additional Park Land would result in any significant adverse impacts on the City's water supply, wastewater or stormwater conveyance, and treatment infrastructure.

The Alternative Without Additional Park Land would result in a higher rate of stormwater runoff from the project site as compared to the proposed project, as it would not benefit from the incorporation of select best management practices (BMPs).

*TRANSPORTATION*

Because the Alternative Without Additional Park Land would not result in an increase in attendance, the significant adverse impact associated with the proposed project would not occur. However, under the proposed project, this temporary impact that would occur during the peak periods of the US Open would be effectively managed by the traffic management program currently in place. Transportation conditions under the Alternative Without Additional Park

Land are expected to be substantially the same as the No-Action condition. Therefore, unlike the proposed project, the Alternative Without Additional Park Land would not be expected to lengthen the travel time for departing patrons exiting the US Open at the conclusion of the daytime session.

Under both the proposed project and the Alternative Without Additional Park Land, the roadway network is anticipated to continue to experience congested levels of service during event conditions. Due to the traffic management program, however, conditions typically observed when intersection operations become saturated (queues extending beyond storage capacity, blocked turning movements, aggressive driver behavior, etc.) would be managed in the field. Field observations conducted during the US Open show that the traffic management program and the TEAs are able to effectively manage traffic flow during event peak periods. Therefore, neither the Alternative Without Additional Park Land nor the proposed project would result in significant adverse transportation impacts.

#### *AIR QUALITY*

Like the proposed project, the Alternative Without Additional Park Land would not result in any significant adverse impacts with respect to air quality. Under the Alternative Without Additional Park Land the small increase in carbon monoxide (CO) concentrations resulting from traffic generated by the proposed project would not occur; however there would be a small increase in CO emissions due to the proposed parking garages. The Alternative Without Additional Park Land would also not result in incremental emissions from use of natural gas in heat and hot water systems. However, as with the proposed project, any incremental emissions from mobile sources would be below the corresponding guidance thresholds and ambient air quality standards, and there would be no potential for significant adverse air quality impacts from stationary sources or the heating and hot water systems for the proposed improvements. Therefore, neither the Alternative Without Additional Park Land nor the proposed project would result in significant adverse air quality impacts.

#### *GREENHOUSE GAS EMISSIONS*

Like the proposed project, the Alternative Without Additional Park Land would not result in any significant adverse impacts with respect to GHG emissions. Both the proposed project and the Alternative Without Additional Park Land would incorporate sustainability measures aimed at reducing energy consumption for both the US Open period and the non-event season. As the Alternative Without Additional Park Land would likely not increase attendance at the US Open, the Alternative Without Additional Park Land would generate fewer GHG emissions than the proposed project during US Open events, when GHG emissions would be generated as a result of electricity use on-site. The Alternative Without Additional Park Land would result in fewer GHG emissions from construction than the proposed project, due to the construction of fewer structures.

#### *NOISE*

Like the proposed project, the Alternative Without Additional Park Land would not result in any significant adverse impacts with respect to noise. Under both the Alternative Without Additional Park Land and the proposed project, noise levels in Flushing Meadows Corona Park adjacent to the project site would be expected to exceed the 55 dBA  $L_{10(1)}$  guideline value recommended in the

*CEQR Technical Manual* for open spaces. These conditions would be less than or comparable to noise levels in other parks and open spaces throughout New York City.

#### *NEIGHBORHOOD CHARACTER*

The Alternative Without Additional Park Land would not result in: an addition of land to the NTC site (including 0.68 acres of park land that would be alienated, and 0.26 acres of previously alienated park land associated with the connector road that is outside the current lease); the relocation of a connector road in a 0.3-acre area; a reconfiguration of uses on the project site; and an increase in stadium space, retail and operational uses, although it would result in the construction of replacement facilities for Louis Armstrong Stadium and Grandstand Stadium in their current locations, as well as two parking garages. While the Alternative Without Additional Park Land may not result in any increases in height or bulk on the project site, it would also not result in new landscaping improvements along the NTC fence line. Under both conditions, aging facilities would be replaced with new modern, recreational facilities, although this would be achieved to a lesser extent with the Alternative Without Additional Park Land. In addition, the Alternative Without Additional Park Land would not result in the surrender of 1.56 acres of land that is currently within USTA's alienation and lease boundaries, for active and passive recreational uses in Flushing Meadows Corona Park or the potential proposed park improvements in Flushing Meadows Corona Park, including renovation of existing soccer fields and other park enhancements, ~~would not be realized.~~

#### *PUBLIC HEALTH*

The Alternative Without Additional Park Land, like the proposed project, would not result in any significant adverse public health impacts associated with construction or operation of the new development on the project site.

#### *CONSTRUCTION IMPACTS*

Like the proposed project, the Alternative Without Additional Park Land would not result in any significant adverse impacts with respect to construction. Under the Alternative Without Additional Park Land, new building construction on the project site would occur to a lesser extent compared to the proposed project. The Alternative Without Additional Park Land would decrease the temporary construction effects attributable to the proposed project, such as increases in truck traffic and construction-related noise. Under both conditions, construction impacts would be largely confined to the project site and its perimeter, would be addressed (e.g., through dust-control measures and adherence to noise regulations), and would not result in any significant adverse impacts.

### **D. ALTERNATIVE WITHOUT NEW PARK LAND ALIENATION**

#### **DESCRIPTION**

Under the Alternative Without New Park Land Alienation, 0.26 acres of previously alienated park land could be added to the NTC site, but no new park land alienation would take place and the 0.68 acres of park land that would be alienated under the proposed project would not be affected (see Figure 1-3 for the locations of these areas). Under this alternative, the reduced expansion of the NTC would be insufficient to accommodate a stadium in the southwest corner

of the site and consequently, Grandstand Stadium and Louis Armstrong Stadium would need to be rebuilt in their present locations.

This alternative would not allow for the proposed project's improved site plan in which the relocated Grandstand Stadium would be built in the southwest corner of the site, in an area including: the 0.26-acre area of previously alienated park land associated with the connector road; the 1.21-acre teardrop-shaped area that is outside of the current NTC fence line, but is already included in the NTC lease; and a small portion of the 0.68-acre alienation area. It would not be feasible to limit the location of the relocated Grandstand Stadium to the existing lease boundaries, as doing so would impact existing adjacent tennis courts and would not allow sufficient space for pedestrian circulation to access the new stadium.

In addition, the existing configuration of the NTC limits access to the southwest area, due to intervening tennis courts and the lack of walkways with the capacity to handle crowds during the US Open. During the US Open, the area of greatest patron concentration is the confined area adjacent to the current cluster of stadiums in the northern portion of the site. Accommodating a stadium in the southwest corner of the site would require improvements in circulation so that crowds can safely and comfortably access that area. Under the proposed project, the locations of tennis courts would be reconfigured to allow for such access. A new approximately 45-foot wide walkway would be provided on the north side of the relocated southerly tournament courts, and a diagonal access route would be available from the relocated Grandstand Stadium to Arthur Ashe Stadium. Absent the alienation of 0.68 acres of park land, the reconfiguration of tennis courts could not take place, and the new, wider walkways could not be provided.

Thus, the southwest corner of the site would not be a feasible location for a stadium, due to physical constraints and insufficient pedestrian circulation. Consequently under this alternative, Louis Armstrong Stadium and Grandstand Stadium would need to be rebuilt in their current location, even with the addition of the 0.26 acres of previously alienated park land to the NTC.

Therefore, the Alternative Without New Park Land Alienation would result in the same development program as the Alternative Without Additional Park Land. Under either alternative, Louis Armstrong Stadium and Grandstand Stadium would be rebuilt in place, and the proposed increase in the US Open attendance cap could not be achieved. The new stadiums would continue to be constrained by an inefficient site plan, and the opportunity to improve pedestrian circulation would be lost. The competitive position of the NTC would decline in relative terms due to improvements at competing and peer facilities.

#### **ALTERNATIVE COMPARED WITH THE PROPOSED PROJECT**

As discussed above, site conditions under this alternative would be the same as the Alternative Without Additional Park Land. Therefore, the environmental effects of the Alternative Without New Park Land Alienation would be the same as the Alternative Without Additional Park Land, as analyzed in the preceding section. Because the Alternative Without New Park Land Alienation would not result in an increase in attendance, the significant adverse transportation impact associated with the proposed project would not occur. However, under the proposed project, this temporary impact that would occur during the peak periods of the US Open would be effectively managed by the traffic management program currently in place.

## **E. ALTERNATIVE WITH GREATER EXPANSION**

### **DESCRIPTION**

Under the Alternative With Greater Expansion, the proposed project would be developed with a larger expansion of the site plan than is contemplated under the proposed project. This expansion would require additional alienation of park land, compared to the 0.68 acres that would be alienated under the proposed project. With additional park land, the NTC could provide an enhanced pedestrian experience with broader walkways and additional landscaped areas and public spaces.

Currently, pedestrian circulation is congested in the NTC during the peak periods of the US Open. Addressing these conditions is a project objective in order to achieve an improved visitor experience that would strengthen the competitive position of the USTA compared to peer and competing events. Under the proposed project, a new 45-foot wide pedestrian walkway would be provided, which could be increased up to 60-foot wide under the Alternative With Greater Expansion. Other walkways and public spaces could also be enlarged, resulting in a more visitor- and player-friendly venue than could otherwise be achieved.

While this alternative would achieve most of the objectives of the proposed project (such as improving public spaces and circulation) it would fail to meet the proposed project's intention to minimize expansion beyond current NTC lease boundaries. Alienation of a substantial amount of park land in Flushing Meadows Corona Park would not be consistent with the objectives of the proposed project.

### **ALTERNATIVE COMPARED WITH THE PROPOSED PROJECT**

The effects of the Alternative With Greater Expansion in comparison to those of the proposed project are summarized below.

#### *LAND USE, ZONING, AND PUBLIC POLICY*

The Alternative With Greater Expansion would result in the same development program as the proposed project, with the addition of wider pedestrian pathways and public plazas that would be accommodated through a greater amount of park land alienation. The Alternative With Greater Expansion would result in similar increases in height and bulk on the project site, compared to the proposed project, and would result in new landscaping improvements along the NTC fence line. Similar to the proposed project, the Alternative With Greater Expansion would result in the surrender of 1.56 acres of land that is currently within USTA's alienation and lease boundaries, and could result in improvements to Flushing Meadows Corona Park, including the possible renovation of existing soccer fields and other park enhancements. As the Alternative With Greater Expansion would add more park land to the NTC site, it would be less supportive of the Flushing Meadows Corona Park Strategic Framework Plan, compared to the proposed project.

#### *OPEN SPACE AND RECREATIONAL RESOURCES*

Compared to the proposed project, the Alternative With Greater Expansion would have a greater affect on Flushing Meadows Corona Park, due to the additional park land that would be added to the NTC site. The Alternative With Greater Expansion would affect a greater number of park users than the proposed project, as more areas of open space would be added to the NTC. In addition, this alternative could affect the design integrity of the park. Under the Alternative With

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Greater Expansion, the opportunity to improve public space and pedestrian circulation within the NTC would be enhanced, compared to the proposed project. The Alternative With Greater Expansion would result in the surrender of 1.56 acres of land that is currently within USTA's alienation and lease boundaries ~~additional improvements for members of the public who utilize the benefit of the general public within Flushing Meadows Corona Park, including potential renovation of existing soccer fields and other park enhancements~~, as would occur with the proposed project.

### *SHADOWS*

The shadows effects of the Alternative With Greater Expansion would likely be similar to the proposed project. Neither the Alternative With Greater Expansion nor the proposed project would be likely to result in adverse shadow impacts on any sun-sensitive resource.

### *HISTORIC AND CULTURAL RESOURCES*

The historic and cultural resources effects of the Alternative With Greater Expansion would likely be similar to the proposed project. Neither the Alternative With Greater Expansion nor the proposed project would result in ground disturbance to archaeologically-sensitive areas or adversely affect the context of nearby architectural resources. Construction activities associated with both the proposed project and the Alternative With Greater Expansion would have the potential to physically affect two architectural resources within 90 feet of the project site. Under either condition, a CPP would be developed to prevent inadvertent construction-related impacts. However, this alternative could affect the historical design integrity of the park, as it could impact significant elements of Flushing Meadows Corona Park's original Beaux Arts plan.

### *URBAN DESIGN AND VISUAL RESOURCES*

The urban design and visual resources effects of the Alternative With Greater Expansion would likely be similar to the proposed project. Compared to the proposed project, the Alternative With Greater Expansion would result in similar improvements to NTC circulation, landscaping, and visitor amenities, and would result in wider pedestrian walkways and public spaces. Thus, the pedestrian experience of the NTC would be enhanced with the Alternative With Greater Expansion, compared to the proposed project. The Alternative With Greater Expansion would result in increases to the height and bulk of the facility that would be similar to the proposed project. The Alternative With Greater Expansion would result in greater changes to park land acreage than the proposed project, and affect more land that is currently passive open space in Flushing Meadows Corona Park. Both the proposed project and the Alternative With Greater Expansion would be consistent with the existing urban design characteristics of the project site and study area. However, this alternative could affect the design integrity of the park, as it could impact significant elements of Flushing Meadows Corona Park's original Beaux Arts plan.

### *NATURAL RESOURCES*

The Alternative With Greater Expansion would likely result in the removal of a greater number of trees within and outside of the current NTC fence line than the proposed project. The Alternative With Greater Expansion would also result in the development of a greater amount of previously undeveloped areas including manicured lawn than the proposed project. As with the proposed project, the Alternative With Greater Expansion would result in grading changes on the site that would improve drainage and flood conditions after major rainfall events.

*HAZARDOUS MATERIALS*

The hazardous materials effects of the Alternative With Greater Expansion would likely be similar to the proposed project. As with the proposed project, the Alternative With Greater Expansion would include appropriate health and safety/remedial measures that would precede or govern demolition, construction, and soil disturbance activities on the stadium construction sites.

*WATER AND SEWER INFRASTRUCTURE*

The water and sewer infrastructure effects of the Alternative With Greater Expansion would likely be similar to the proposed project. Neither the proposed project nor the Alternative With Greater Expansion would be expected to result in any significant adverse impacts on the City's water supply, wastewater or stormwater conveyance and treatment infrastructure.

As with the proposed project, the Alternative With Greater Expansion would result in the incorporation of select best management practices (BMPs) that would reduce stormwater runoff from the site, compared to existing conditions.

*TRANSPORTATION*

The transportation effects of the Alternative With Greater Expansion would likely be similar to the proposed project. Under both scenarios there would be temporary significant adverse transportation impacts during the US Open's peak periods, which would be effectively managed by the traffic management program currently in place. Like the proposed project, the Alternative With Greater Expansion would result in an increase in attendance of 10,000 persons for the daytime session, which would result in a projected peak period increase of approximately 2,030 transit trips and 954 vehicle trips. As with the proposed project, the Alternative With Greater Expansion would be expected to lengthen the travel time for departing patrons exiting the US Open at the conclusion of the daytime session, resulting in delays that would largely be confined within Flushing Meadows Corona Park and to a segment of the adjacent highway network. Under both scenarios, this congestion would be managed under either scenario with a traffic management program.

*AIR QUALITY*

The air quality effects of the Alternative With Greater Expansion would likely be similar to the proposed project. As with the proposed project, the Alternative With Greater Expansion would result in a small increase in CO concentrations resulting from traffic generated by the proposed project and the proposed parking garages. The Alternative With Greater Expansion would also result in incremental emissions from use of natural gas in heat and hot water systems that would be similar to the proposed project. However, as with the proposed project, any incremental emissions from mobile sources would likely be below the corresponding guidance thresholds and ambient air quality standards, and there would be no potential for significant adverse air quality impacts from stationary sources or the heating and hot water systems for the proposed improvements.

*GREENHOUSE GAS EMISSIONS*

The GHG emissions associated with the Alternative With Greater Expansion would likely be similar to the proposed project. Both the proposed project and the Alternative With Greater Expansion would incorporate sustainability measures aimed at reducing energy consumption for both the US Open period and the non-event season. Both the Alternative With Greater Expansion

and the proposed project would increase attendance at the US Open, resulting in an increase in GHG emissions during US Open events, when GHG emissions would be generated as a result of electricity use onsite. Both scenarios would also result in GHG emissions from construction.

#### *NOISE*

The noise effects of the Alternative With Greater Expansion would likely be similar to the proposed project. Under both the Alternative With Greater Expansion and the proposed project, noise levels in Flushing Meadows Corona Park adjacent to the project site would be expected to exceed the 55 dBA L<sub>10(1)</sub> guideline value recommended in the *CEQR Technical Manual* for open spaces. These conditions would be less than or comparable to noise levels in other parks and open spaces throughout New York City.

#### *NEIGHBORHOOD CHARACTER*

As with the proposed project, the Alternative With Greater Expansion would result in the reconfiguration of uses on the project site, and an increase in stadium space, retail and operational uses, and parking facilities. The Alternative With Greater Expansion would result in increases in height and bulk on the project site that would be similar to the proposed project. The Alternative With Greater Expansion would improve the character of the NTC by providing wider pedestrian walkways and enhanced public spaces. Like the proposed project, the Alternative With Greater Expansion would replace aging facilities with new modern, recreational facilities that would be open to the public of 11 months of the year. Both conditions would provide for improvements within Flushing Meadows Corona Park, including renovation of existing soccer fields and other park enhancements. However, this alternative could affect the historical design integrity of the park, as it could impact significant elements of Flushing Meadows Corona Park's original Beaux Arts plan.

#### *PUBLIC HEALTH*

The Alternative With Greater Expansion, like the proposed project, would be unlikely to result in any significant adverse public health impacts associated with construction or operation of the new development on the project site.

#### *CONSTRUCTION IMPACTS*

Compared to the proposed project, the construction effects of the Alternative With Greater Expansion would have a modestly greater impact on Flushing Meadows Corona Park, due to the larger area that would be affected. Under the Alternative With Greater Expansion, new building construction on the project site would be similar to the proposed project. Under both conditions, construction impacts would be largely confined to the project site and its perimeter, and would be addressed (e.g., through dust-control measures and adherence to noise regulations).

## **F. ALTERNATIVE WITH MODIFIED PARKING PLAN**

### **DESCRIPTION**

Under the Alternative With Modified Parking Plan, one or both of the proposed parking garages would not be constructed as part of the proposed project. The area proposed as the site of the parking garages would instead remain in use as surface parking. The rest of the project elements



would be implemented, including new stadium and ancillary building construction, an expansion of the NTC lease by 0.94 acres, the relocation of a connector road in a 0.3-acre area, and a 10,000 person increase in the US Open attendance cap.

Without one or both of the proposed parking garages, the proposed project's stated objective of increasing the availability of on-site parking would not be met, or would be met to a lesser extent. In addition, the objective of improving circulation, comfort and safety for visitors and players would be met to a lesser extent, as there would not be increased parking in close proximity to NTC facilities. Providing enhanced parking in close proximity to the site is an objective of the proposed project, and is important to sustaining the long-term viability of the NTC as a world-class spectator venue and outstanding public recreational facility. Without the proposed parking garages, that improvement would not be achieved. For the non-US Open period, an expanded parking supply would not be available. Visitors to the NTC and to Flushing Meadows Corona Park would continue to use Citi Field parking and other less convenient parking locations.

#### **ALTERNATIVE COMPARED WITH THE PROPOSED PROJECT**

The Alternative With Modified Parking Plan would result in limited changes to environmental conditions compared to the proposed project. Under the Alternative With Modified Parking Plan, future land use conditions would be the same as the proposed project, except that an increase in on-site parking would not be provided, or would be provided to a lesser extent. No additional land would be dedicated to parking uses, as one or both of the sites of the proposed parking garages would remain surface parking lots. Thus, there would be no changes to open space conditions, compared to the proposed project. With regard to urban design and visual resources, one or two new structures of up to 40 in height would not be built on the project site; however, the new garages would not result in significant adverse impacts to urban design and visual resources. Compared to the proposed project, views to the project site would include fewer structures on the site boundary, and incremental shadows associated with the garages would be diminished or would not occur; however, no significant adverse shadows impacts would result from the proposed garages. Under the Alternative With Modified Parking Plan, the small increases in CO emissions associated with the proposed parking garages would not occur, or would occur to a lesser extent. Fewer on-site parking spaces would be provided under this alternative than the proposed project, but no other differences in transportation conditions are anticipated. As providing structured parking within the NTC campus would result in a modest change in neighborhood character, the Alternative With Modified Parking Plan would be more in keeping with the existing character of the area than the proposed project. Construction activities would be slightly less intensive under the Alternative With Modified Parking Plan, as fewer new buildings would be constructed. The environmental effects of the Alternative With Modified Parking Plan would be substantially similar to the proposed project in the areas of historic and cultural resources, natural resources, hazardous materials, water and sewer infrastructure, noise, and public health. \*