Chapter 23: Unavoidable Adverse Impacts

A. INTRODUCTION

This chapter summarizes unavoidable significant adverse impacts resulting from the Proposed Actions. According to the *City Environmental Quality Review* (CEQR) *Technical Manual*, unavoidable adverse impacts are those that would occur if a proposed project or action is implemented regardless of the mitigation employed, or if mitigation is infeasible.

As described in Chapter 21, "Mitigation," the Proposed Actions would result in significant adverse impacts with respect to community facilities (elementary schools), open space, shadows, historic and cultural resources, transportation (traffic, transit, pedestrians, and ferry service), air quality (mobile source), noise, and construction (traffic and noise). To the extent practicable, mitigation has been proposed for these identified significant adverse impacts. In the event that no practicable mitigation is identified to fully mitigate significant adverse impacts, reasonable alternatives to the Proposed Actions that would meet their purpose and need, eliminate their impacts, and not cause other or similar significant adverse impacts are explored. In other cases, mitigation has been proposed, but absent a commitment to implement the mitigation, the impacts may not be eliminated. Where impacts cannot be fully mitigated, they would constitute an unavoidable significant adverse impact of the Proposed Actions.

B. COMMUNITY FACILITIES

PUBLIC SCHOOLS

As described in Chapter 4, "Community Facilities," the Proposed Actions would result in a significant adverse impacts related to elementary schools. Under the Proposed Actions, in Subdistrict 3/CSD 30, elementary school utilization would exceed 100 percent (143.8 percent) and the Proposed Actions would generate 100 or more students (1,300) past the 100 percent utilization rate. Therefore, the Proposed Actions would result in a significant adverse impact to elementary schools in Subdistrict 3/CSD 30. To mitigate the significant adverse elementary school impact in Subdistrict 3/CSD 30, the number of incremental dwelling units (DU) generated by the Proposed Actions could be reduced to approximately 1,120, generating approximately 99 elementary school students, as compared to the No Action condition; however, this would not meet the purpose and need of the Proposed Actions, which is intended to generate housing, including affordable housing. Other mitigation measures could include increasing the capacity of elementary school seats in Subdistrict 3/CSD 30 by 1,201 elementary school seats, which would be needed to reduce the incremental increase in utilization rates to less than the *CEQR Technical Manual* impact thresholds.

To avoid the impact, the following mitigation measures could be applied in conjunction with the City's monitoring of capacity: (1) restructure or reframe existing school space under the Department of Education's (DOE) control in order to provide additional capacity; (2) relocate administrative functions to another site, thereby increasing capacity for classrooms; and/or (3) create additional capacity by constructing a new school, building additional capacity at additional schools, or leasing additional school space constructed as part of projected development.

~~These preliminary mitigation measures will be explored between the Draft Environmental Impact Statement (DEIS) and Final Environmental Impact Statement (FEIS).~~ The feasibility of these potential mitigation measures was explored between the publication of the DEIS and the FEIS and options (1) and (2) were found to be infeasible. The City will evaluate the appropriate timing and mix of measures to address increased school enrollment. If additional school capacity continues to be warranted and if new funding is available to address the new need introduced by the Proposed Actions, it will be allocated for the construction of new school(s), the expansion of capacity of existing schools, and/or leasing new school space when the capacity need would occur. The New York City Department of City Planning (DCP) will continue to explore these mitigation measures with the SCA/DOE. Additionally, between the publication of the DEIS and the FEIS, the SCA has determined that the community facility space included in Projected Development Site 1 would potentially be an appropriate location for a school and is actively discussing a potential school development with the property owner. In the event that a school is constructed on this site, it would serve to partially mitigate the impacts described above. Absent the implementation of these mitigation measures, the Proposed Actions would result in an unavoidable significant adverse impact on elementary schools.

LIBRARIES

The population added by the Proposed Actions would represent an increase of 79.44 percent over the No Action condition population at the Hunters Point Branch of the Queens Public Library (QPL) and an increase of 11.56 percent at the Long Island City Branch of the QPL. The increase at these library branches is greater than the 5 percent increase that CEQR defines as the threshold for a potential significant adverse impact. Although residents would have access to a new planned Court Square library branch near the Project Area and residents would have access to the entire QPL network through the inter-library loan system and could have volumes delivered directly to their nearest library branch, there would still be a significant adverse impact on library services in the study area as a result of the Proposed Actions. Potential mitigation measures include the provision of space for a new library of a size and at a location to be determined through additional coordination with the QPL and/or improvements to a branch facility to support the branch's programming and services year-round.

The feasibility and practicability of these potential mitigation measures ~~will be~~ was explored between the DEIS and FEIS. ~~Absent the identification and implementation of feasible mitigation measures that would fully address the shortfall,~~ No feasible and practicable mitigation measures were identified, and therefore the significant adverse impact related to libraries would be an unavoidable impact of the Proposed Actions.

EARLY CHILDHOOD PROGRAMS

In the With Action condition, early childhood programs in the study area would operate over capacity by approximately 67 slots (102.7 percent utilization) and exhibit an increase in the utilization rate of approximately 27.3 percentage points over the No Action condition. Therefore, the Proposed Actions would result in a significant adverse impact on publicly funded early childhood programs. The addition of approximately 68 slots would be needed to mitigate the significant adverse impact to early childhood programs.

Possible mitigation measures for this significant adverse impact will be developed in consultation with DOE and may include provision of suitable space on-site for a child care center, provision of a suitable location off-site and within a reasonable distance (at a rate affordable to DOE providers), provision of funding or construction of physical improvements to add capacity to existing facilities, or providing new early childhood programs within or near the Project Area. As a City agency, DOE does not directly provide new child care facilities; it contracts with providers in areas of need. DOE is also working to create public/private partnerships to facilitate the development of new early childhood programs where there is an area of need. As part of that initiative, DOE may be able to contribute capital funding, if it is available, towards such projects to facilitate the provision of new programs.

The feasibility and practicability of these potential mitigation measures ~~will be~~ was explored between the DEIS and FEIS. ~~Absent the identification and implementation of feasible mitigation measures that would fully address the shortfall,~~ No feasible or practicable mitigation measures were identified and, therefore the significant adverse impact on publicly funded early childhood programs would be an unavoidable impact of the Proposed Actions.

C. OPEN SPACE

As presented in Chapter 5, “Open Space,” the Proposed Actions would result in a significant adverse impact to open space due to the added residential demand placed on active and passive open spaces in an area that has limited available open space resources

The detailed analysis of open space concluded that with the Proposed Actions, the total open space ratio in the residential study area would decrease by approximately 18.6 percent (to 0.546 acres per 1,000 residents); the active open space ratio would decrease by approximately 20.6 percent (to 0.190 acres per 1,000 residents); and the passive open space ratio would decrease by approximately 17.5 percent (to 0.355 acres per 1,000 residents). Typically, a reduction in the open space ratio exceeding 5 percent is considered to be significant. However, in an area that has a very low open space ratio, a reduction as small as 1 percent may be considered significant. Therefore, based on the decrease in the open space ratios noted above, the Proposed Actions would result in a significant adverse impact to open space in the residential study area.

In addition, as described in Chapter 15, “Air Quality,” the Proposed Actions would result in significant adverse air quality impacts affecting the usability of one existing open space resource, Gordon Triangle. In addition, three new publicly accessible waterfront open spaces (on Projected Development Sites 65, 67, and 71) would be affected by significant adverse air quality impacts.

Further, as described in Chapter 6, "Shadows," new shadows resulting from the Proposed Actions would be extensive enough to cause significant adverse impacts to two open space resources in Long Island City: Gordon Triangle, a small public open space located on 44th Drive between Vernon Boulevard and 10th Street; and the 44th Drive Pier, a public open space located at the western end of 44th Drive.

Possible measures that could mitigate the indirect significant adverse impact to open space in the residential study area may include expanding existing parks, creating new open space on publicly owned land, encouraging owners of privately owned sites to create new open space as part of their redevelopment, making playgrounds accessible to the community after school hours through the Schoolyards to Playgrounds program, establishing new pedestrian plazas in streets through the City's Plaza program, and/or improving existing parks to allow for more diverse programming. Possible measures that could mitigate direct effects air quality impacts on open spaces may include the implementation of traffic engineering improvements related to avoid mobile source air quality impacts. Further review and evaluation was ~~will be~~ performed Between the Draft and Final EIS, which ~~is expected to make this determination.~~determined that the annual $PM_{2.5}$ *de minimis* impact would be significantly reduced, but not entirely eliminated. Absent the identification and implementation of feasible mitigation measures the impacts could remain unmitigated.

Possible measures that could mitigate direct effects shadow impacts on open spaces may include relocating sunlight-sensitive features within an open space to avoid sunlight loss; relocating, replacing, or monitoring vegetation for a set period of time; undertaking additional maintenance to reduce the likelihood of species loss; or providing for replacement facilities on another nearby site. Other potential mitigation strategies include the redesign or reorientation of the open space to provide for replacement facilities, vegetation, or other features.

These potential mitigation measures ~~are currently being~~ were explored in coordination with the lead agency, DCP, and the New York City Department of Parks and Recreation (NYC Parks) and ~~will be~~ were refined between the DEIS and FEIS. No feasible and practical mitigation measures were identified, and therefore these significant adverse impacts would be unmitigated.

As discussed in Chapter 27, "Conceptual Analysis," as part of the Proposed Actions, a zoning text amendment is proposed that would create a zoning authorization allowing for the bonus of floor area and height modification with the provision of publicly accessible open space on zoning lots zoned M-16/R9, M1-6/R10, and M1-6A/R10 that are larger than 25,000 square feet (sf). If property owners elect to seek this authorization in the future, it is anticipated that new publicly accessible open space would be introduced on inland projected development sites in the future, serving to offset the new demand introduced by the Proposed Actions.

Although many of the potential mitigation measures being considered would increase the amount and/or usability of open space resources, opportunities to create new publicly accessible open space resources in sufficient amounts within the study area to fully mitigate the identified significant adverse open space impact (approximately 16.33 acres) are very limited. As a consequence, the Proposed Actions' significant adverse open space impact may not be completely eliminated and, as a result, an unavoidable significant adverse open space impact would occur.

Absent the identification and implementation of feasible mitigation measures, the significant adverse open space impacts would be an unavoidable impact of the Proposed Actions.

D. SHADOWS

As presented in Chapter 6, "Shadows," new shadows resulting from the Proposed Actions would be extensive enough to cause significant adverse impacts to three open space resources in Long Island City: several Greenstreets medians in Queens Plaza South between Vernon Boulevard and 13th Street; Gordon Triangle, a small public open space located on 44th Drive between Vernon Boulevard and 10th Street; and the 44th Drive Pier, a public open space located at the western end of 44th Drive.

Possible measures that could mitigate significant adverse shadow impacts on open spaces may include relocating sunlight-sensitive features within an open space to avoid sunlight loss; relocating, replacing, or monitoring vegetation for a set period of time; undertaking additional maintenance to reduce the likelihood of species loss; or providing for replacement facilities on another nearby site. Other potential mitigation strategies include the redesign or reorientation of the open space to provide for replacement facilities, vegetation, or other features.

The *CEQR Technical Manual* guidance also discusses other strategies to reduce or eliminate shadow impacts, including modifications to the height, shape, size, or orientation of a proposed development that creates the significant adverse shadow impact. DCP, as lead agency, ~~will~~ explored potential mitigation measures in coordination with NYC Parks between the DEIS and FEIS, but no feasible and practicable mitigation measures were identified that would mitigate the shadows impacts discussed above. As a result. ~~Absent the implementation of feasible mitigation measures,~~ the significant adverse shadow impact would constitute an unavoidable impact of the Proposed Actions.

HISTORIC RESOURCES

ARCHITECTURAL RESOURCES

As discussed in Chapter 7, "Historic and Cultural Resources," the Proposed Actions would result in a significant adverse impact to architectural resources as a result of demolition, adjacent construction, and contextual impacts.

Demolition

The Proposed Actions would result in significant direct adverse impacts to five buildings that have been determined eligible for listing on the State and National Registers of Historic Places (S/NR-eligible) located on projected development sites, which would be demolished for redevelopment of the projected development sites in the With Action condition. Development of Projected Development Site 40 would result in the demolition of the S/NR-eligible M. Henry Chernay Building at 10-03 44th Avenue (Resource No. 15) and the S/NR-eligible Jerome Perlstein Building at 43-58 11th Street (Resource No. 16). Development of Projected Development Site 52 would result in the demolition of the S/NR-eligible former New York and Queens Electric Light and Power Substation Number 4 (Resource No. 2). Development of Projected Development Site 59 would result in the demolition of the S/NR-eligible Walter Lippmann Building at 43-42 10th Street (Resource

No. 11) and the S/NR-eligible building at 43-50 10th Street (Resource No. 12). Development of Potential Development Site G would result in the demolition of 21-23 43rd Avenue, which has been identified as a potential architectural resource (Resource F). As all of the affected architectural resources are privately owned and could be demolished and modified to allow for developments constructed as-of-right subsequent to approval of the Proposed Actions, the significant adverse impact would constitute an unavoidable impact of the Proposed Actions.

Construction-Related Impacts

Potential significant adverse impacts also could occur to 10 known and 8 potential architectural resources located within 90 feet of projected or potential development sites as a result of adjacent construction. The known architectural resources are: the S/NR-eligible former New York and Queens Electric Light and Power Substation Number 4 (Resource No. 2); the S/NR-eligible Steinway Van Storage building at 42-45 12th Street (Resource No. 3); the S/NR-eligible former Silvercup Bakery at 42-22 22nd Street (Resource No. 4); the Queensboro Bridge (Resource No. 7), which is a NYCL and S/NR-listed; the S/NR-eligible Walter Lippmann Building at 43-42 10th Street (Resource No. 11); the S/NR-eligible 43-50 10th Street (Resource No. 12); the S/NR-eligible building at 43-56 10th Street (Resource No. 13); the S/NR-eligible Tom Cat Bakery at 43-05 10th Street (Resource No. 14); the S/NR-eligible M. Henry Chernay Building at 10-03 44th Avenue (Resource No. 15); and the S/NR-eligible Jerome Perlstein Building at 43-58 11th Street (Resource No. 16). The potential architectural resources are: 10-15 and 10-27 46th Avenue (Resource B); 40-18 22nd Street (Resource I); 40-15 22nd Street (Resource J); 44-02 23rd Street (Resource K); 44-01 21st Street (Resource M); 21-49 44th Drive (Resource N); 42-25 Vernon Boulevard (Resource S); and 45-32 to 43-44 11th Street (Resource Z).

It is expected that the New York City Department of Building's (DOB) *Technical Policy and Procedure Notice* (*TPPN*) *#10/88* would be implemented for the With Action development on Projected Development Site 51, in relation to the New York City Landmark (NYCL) and S/NR-listed Queensboro Bridge (Resource No. 7). The other resources listed above would be afforded limited protection under DOB regulations applicable to all buildings located adjacent to construction sites (C26-112.4); however, since these resources are not S/NR-listed or designated NYCLs or New York City Historic Districts (NYCHD), they are not afforded special protections under *TPPN #10/88*. Since the projected and potential development sites within 90 feet of these resources are not City-owned and are not anticipated to be developed in accordance with City disposition or development agreements, there is no mechanism to require the implementation of *TPPN #10/88* or preparation of a Construction Protection Plan. Additional protective measures afforded under *TPPN #10/88* would only become applicable if the resources were listed on the S/NR or designated as NYCLs or NYCHDs in the future prior to the initiation of construction. In the absence of such protection, the construction related impacts would constitute an unavoidable impact of the Proposed Actions.

Contextual Impacts

The Proposed Actions also have the potential to result in indirect significant adverse impacts to five individual historic architectural resources, with new buildings on the projected and potential development sites in close proximity to these resources that could

adversely impact their setting. The affected resources are: the S/NR-eligible Steinway Van & Storage Company building at 42-45 12th Street (Resource No. 3); the S/NR-eligible Tom Cat Bakery at 43-05 10th Street (Resource No. 14); the S/NR-eligible building at 43-56 10th Street (Resource No. 13); and the S/NR-eligible Metropolitan Building at 44-01 11th Street (Resource No. 17). In addition, views of the "Silvercup" metal-frame sign above the S/NR-eligible former Silvercup Bakery (Resource No. 4) along Queens Plaza South and from the Queensboro Bridge would be obscured by the new development along Queens Plaza South west of 21st Street in the future with the Proposed Actions.

Measures to partially mitigate these significant adverse impacts ~~will be~~were explored in consultation with LPC between the DEIS and FEIS. ~~If n~~No feasible and practicable mitigation measures were ~~is~~ identified, and these significant adverse impacts would be unavoidable.

E. TRANSPORTATION

As discussed in Chapter 14, Transportation," the Proposed Actions would result in significant adverse impacts to: vehicular traffic at ~~44~~ 43 intersections in one or more peak hours; ~~eight~~ five stairs~~, three escalators,~~ and one fare array at ~~two~~ one subway station~~s~~; subway line haul conditions on four subway routes; bus line haul conditions on one bus route; ferry line haul conditions on one ferry route; ~~ferry landing conditions on one ferry landing;~~ and pedestrian elements at 26 sidewalks, 10 corners, and 16 crosswalks.

TRAFFIC

As described in Chapter 14, "Transportation," the Proposed Actions would result in significant adverse traffic impacts at ~~44~~ 43 study area intersections (35 signalized and ~~nine~~ eight unsignalized) during one or more analyzed peak hours; specifically, ~~68~~ 66 lane groups at ~~38~~ 37 intersections during the weekday AM peak hour, 48 lane groups at ~~29~~ 28 intersections in the midday peak hour, ~~72~~ 73 lane groups at ~~38~~ 37 intersections in the PM peak hour, and ~~47~~ 46 lane groups at 28 intersections during the Saturday peak hour.

As demonstrated below, many of these impacts could be mitigated through the implementation of traffic engineering improvements, including:

- Modification of existing traffic signal phasing and/or timing,
- Installation of new traffic signals or all-way stop controls,
- Elimination of on-street parking to add a travel lane, and
- Modifications to lane striping.

As discussed in Chapter 21, "Mitigation," implementation of traffic engineering improvements would fully mitigate the significant adverse impacts to ~~34~~ 25 lane groups in the weekday AM peak hour, ~~36~~ 29 lane groups in the midday, ~~39~~ 32 lane groups in the PM, and ~~36~~ 29 lane groups in the Saturday peak hour. Intersections where these impacts would be fully mitigated would total ~~18~~15, ~~23~~18, ~~20~~16, and ~~22~~ 18 during these same periods, respectively. In total, impacts to one or more lane group(s) would remain unmitigated in one or more peak hours at ~~25~~ 28 intersections. Consequently, these impacts would constitute unavoidable significant adverse traffic impacts as a result of the Proposed Actions.

Implementation of the recommended traffic engineering improvements are subject to review and approval by the New York City Department of Transportation (DOT). If DOT determines that an identified traffic engineering improvement is deemed infeasible, and no alternative and equivalent measure is identified, then that impact would remain unmitigated and would constitute an unavoidable adverse impact.

In order to mitigate air quality impacts associated with significant adverse traffic impacts described in the FEIS, DCP in coordination with DOT, will develop a future Air Quality/Transportation Monitoring Plan (AQTMP) for the Vernon Boulevard corridor between Borden Avenue and 44th Avenue. The AQTMP will evaluate actual project-generated demand and background conditions, as well as at full build out. The AQTMP would also verify the need for mitigation measures (identified in Table 21-1). If, prior to implementation, DOT determines that a mitigation measure identified in Table 21-1, is infeasible, the AQTMP will identify an alternative feasible mitigation measure subject to DOT review and approval. The implementation of any approved mitigation measures will be subject to the findings of the future AQTMP, as well as to the discretion of the implementing agencies. Prior to DCP undertaking the AQTMP, DCP will coordinate the scope of work with DOT, the New York City Department of Environmental Protection (DEP), and other agencies to ensure that all the data required to perform the detailed analyses are collected.

TRANSIT

SUBWAY STATIONS

The Proposed Actions would result in significant impacts to a total of five ~~eight~~ stairs~~, two escalators,~~ and one fare array at the Court Square – 23rd Street (E/G/M/7) subway station complex~~, which and one escalator at the 21st Street – Queensbridge (F) subway station would be significantly adversely impacted by project-generated demand~~ in one or both peak hours. Potential measures to mitigate significant ~~escalator~~ stair impacts include stairway widening and adding appropriate vertical processor capacity (preferably an escalator, elevator, or additional stairway) in the vicinity of the impacted stairway, ~~increasing operating speeds for escalators, and increasing escalator tread widths,~~ provided that New York City Transit (NYCT) deems it practicable. Potential measures to mitigate fare array impacts include increasing throughput capacity through the installation of additional turnstiles. Potential mitigation measures would fully mitigate the impacts at ~~to~~ the five ~~two~~ stairs and one fare array in the AM and/or PM peak hours at the Court Square – 23rd Street (E/G/M/7) subway station. ~~Absent the identification and implementation of feasible mitigation measures that would mitigate the subway stair impacts at two stairs at the Court Square – 23rd Street (E/G/M/7) subway station to the greatest extent practicable, the Proposed Actions would result in unmitigated significant adverse subway station impacts.~~ Design of the proposed improvements are subject to final review and approval by the NYCT. If any one of these measures is deemed infeasible, and no alternative and equivalent measure is identified, the corresponding ~~subway line haul~~ impacts would remain unmitigated and would constitute an unavoidable adverse impact. ~~In addition, no feasible mitigation measures were identified at six stairs, one fare array, and three escalators, and these significant adverse subway impacts would remain unmitigated and would constitute an unavoidable adverse impact.~~

SUBWAY LINE HAUL

As described in Chapter 14, "Transportation," with the Proposed Actions, AM peak hour demand on southbound 7, E, F, and G trains would exceed practical capacity, and the Proposed Actions would increase this demand by an average of more than five passengers per car. In addition, PM peak hour demand on northbound G trains would exceed practical capacity, and the Proposed Actions would increase this demand by an average of more than five passengers per car. As discussed in Chapter 21, "Mitigation," the significant adverse impacts during the AM peak hour could be fully mitigated by the addition of two southbound 7 trains, three southbound E trains, one southbound F train, and two southbound G trains. The significant adverse impacts during the PM peak hour could be fully mitigated by the addition of two northbound G trains. If any one of these adjustments is deemed infeasible, and no alternative and equivalent measure is identified, the corresponding subway line haul impact would constitute an unavoidable adverse impact.

BUS

As described in Chapter 14, "Transportation," the Proposed Actions would result in significant adverse impacts adverse bus line haul impacts are on the northbound Q103 buses in the AM and PM peak hours. As discussed in Chapter 21, "Mitigation," the significant adverse impact to bus services could be fully mitigated by the addition of a total of one standard bus on the northbound Q103 bus route in both the AM and PM peak hours. The general policy of NYCT is to provide additional bus service where demand warrants, taking into account financial and operational constraints. Absent the provision of additional bus service on this route, the corresponding impacts would remain unmitigated and would constitute an unavoidable adverse impact.

CITYWIDE FERRY SERVICE

Ferry Line Haul

As described in Chapter 14, "Transportation," with the Proposed Actions, southbound ferries on the Astoria route would be considered significantly adversely impacted at the maximum load point and ferry departure points in the AM peak hour. In addition, northbound ~~and southbound~~ ferries on the Astoria route would be considered significantly adversely impacted at the ferry departure points in the PM peak hour. As discussed in Chapter 21, "Mitigation," the significant adverse impacts during the AM peak hour could be fully mitigated increasing the operating service to every ~~27~~ 24 minutes and increasing~~e~~ the vessel capacity to 350 passengers per vessel on the southbound ferries on the Astoria route. Similarly, the significant adverse impacts during the PM peak hour could be fully mitigated by increasing the vessel capacity to 350 passengers per vessel~~operating service to every 38 minutes~~ on the northbound ferries on the Astoria route. If any one of these adjustments is deemed infeasible, and no alternative and equivalent measure is identified, the corresponding ferry line haul impact would constitute an unavoidable adverse impact.

~~*Ferry Landing*~~

~~As discussed in Chapter 21, "Mitigation," with the Proposed Actions, the significant adverse impacts ferry landing impacts to the Long Island City ferry landing on the Astoria~~

~~Route during the AM and PM peak hours could be fully mitigated by the addition of a gangway or extending the gangway by 50 feet by 19 feet as well as the increase of operating service to every 27 minutes on the northbound and southbound ferry service in the AM peak hour and to every 38 minutes on the northbound ferry service in the PM peak hour. If any one of these adjustments or improvements is deemed infeasible, and no alternative and equivalent measure is identified, the corresponding ferry landing impact would constitute an unavoidable adverse impact.~~

PEDESTRIANS

As described in Chapter 14, "Transportation," Incremental demand from the Proposed Actions would significantly adversely impact 26 sidewalks, 16 crosswalks, and 10 corners in one or more analyzed peak hours. As discussed in Chapter 21, "Mitigation," recommended mitigation measures relocation/removal of impediments to sidewalk, curb extensions at corners, and the widening of crosswalks would fully mitigate the impacts to ~~seven~~ nine sidewalks, four crosswalks, and ~~nine~~ eight corners. Implementation of the proposed mitigation measures would be subject to final review and approval by DOT and by the New York City Police Department for enforcement-related measures. Practicable mitigation measures could not be identified for significant adverse impacts in one or more peak hours at 17~~19~~ sidewalks, 12 crosswalks, and two~~one~~ corners. Absent the identification and implementation of additional feasible mitigation measures that would mitigate the pedestrian impacts to the greatest extent practicable, the projected impacts would remain unmitigated and would therefore be considered unavoidable adverse impacts.

F. AIR QUALITY

As described in Chapter 15, "Air Quality," the mobile source analyses determined that the 8-hour CO maximum concentration is predicted to exceed the National Ambient Air Quality Standard (NAAQS) at the intersection of Vernon Boulevard and 46th Avenue and the *de minimis* criteria at the intersections of Vernon Boulevard and 46th Avenue and at Vernon Boulevard and 48th Avenue. The maximum 24-hour $PM_{2.5}$ concentrations are predicted to exceed the NAAQS at the intersection of Vernon Boulevard and 46th Avenue and the *de minimis* criterion at the intersections of ~~Vernon Boulevard and 44th Drive and~~ Vernon Boulevard and 46th Avenue and Vernon Boulevard and 48th Avenue. At the intersections of Vernon Boulevard and 46th Avenue and Vernon Boulevard and 48th Avenue, the total annual $PM_{2.5}$ concentration is predicted to exceed the NAAQS. Furthermore, at each of the ~~four~~ five intersection sites analyzed, the maximum annual incremental $PM_{2.5}$ concentration is predicted to exceed the *de minimis* criterion. Implementation of traffic engineering improvements, such as signal timing changes or modifications to curbside parking regulations would provide mitigation for some of the anticipated air quality impacts. Specifically, the significant adverse impacts relative to the CO and $PM_{2.5}$ NAAQS and the CO and 24-hour $PM_{2.5}$ *de minimis* criterion would be fully mitigated. However, at ~~each~~ four of the ~~four~~ five intersection sites analyzed, the maximum annual incremental $PM_{2.5}$ concentration is predicted to exceed the *de minimis* criterion. Therefore, at these locations, the Proposed Actions would result in a significant adverse mobile source air quality impact.

Between the DEIS and FEIS, additional review and evaluation ~~will be~~was performed, ~~which is expected~~ to determine ~~that~~ whether the identified significant adverse impact related to the mobile source annual $PM_{2.5}$ increments will be avoided. Additional modeling of $PM_{2.5}$ concentrations (Grid Analysis) ~~will be~~ was performed using more ~~refined or~~ comprehensive analysis procedures to determine the magnitude and extent of neighborhood-scale $PM_{2.5}$ impacts from mobile sources. Other updates ~~may~~ included the use of newer vehicle emissions model data and projections. ~~It is anticipated that these additional measures will reduce $PM_{2.5}$ concentrations below the annual *de minimis* criterion thresholds.~~ The results of the grid analysis determined that the annual $PM_{2.5}$ *de minimis* criterion was exceeded at both analyzed grids. Therefore ~~However~~, ~~if the additional review and evaluation determines that~~ since there would still be a significant adverse mobile source air quality impact at four ~~one or more~~ of the five analyzed locations ~~and there is no feasible or practical mitigation for these impacts~~ with the traffic mitigation measures, then they would constitute an unavoidable adverse impact of the Proposed Actions.

G. NOISE

Chapter 17, "Noise," presents future increases in traffic with the Proposed Actions based on the Noise Passenger Car Equivalent (PCE) proportional analysis results, including the noise contribution from vehicular traffic on adjacent roadways. Based on noise PCE proportional analysis, Monitoring Locations 5, 8, 9, 13, and 16 resulted in significant noise increases (up to ~~3.6~~6.5 dBA) and potential significant adverse noise impacts due to the Proposed Actions. At receptor locations 5 and 9, there are no existing noise sensitive receptors in the areas represented by these locations, and at existing noise sensitive receptors represented by locations 13, and 16, With Action interior L_{10} sound levels were predicted to be lower than 45 dBA. Therefore, no significant adverse impacts are expected at these receptors. At 44-21 9th Street (hotel) represented by location 8, With Action interior L_{10} sound levels are predicted to be lower than 45 dBA, the threshold for acceptable interior L_{10} noise levels at hotel guestroom uses per CEQR criteria. However, at 9-01 44th Drive represented by location 8, With Action interior sound levels are predicted to be above 45 dBA. As such, the noise level increase at receptor location 8 would constitute a significant adverse impact at residences located at 9-01 44th Drive. Given that the façade of this building already includes insulated glass windows and through-window air conditioners, there are no feasible and practicable measures that would be effective in mitigating the predicted noise impact at this receptor. As such, the predicted ~~Therefore, the Proposed Actions could result in significant adverse noise impacts at noise receptors other than the future projected and potential development sites. Between the Draft and Final EIS, further assessment and mitigation measures will be considered for these potential impacts. Potential mitigation measures include upgrades at the noise receptor with insulated windows and an alternate means of ventilation. It should be noted that even if above mitigation measures were determined to be feasible and practicable, some~~ significant adverse noise impact~~s~~ could potentially continue to be experienced at this ~~sensitive~~ receptor~~s~~ and, as a result, would be unavoidable.

H. CONSTRUCTION

HISTORIC AND CULTURAL RESOURCES

As discussed above, potential significant adverse impacts could occur to 10 known and 8 potential architectural resources as a result of adjacent construction located within 90 feet of projected or potential development sites. It is expected DOB's *TPPN #10/88* would be implemented for the With Action development on Projected Development Site 51, in relation to the NYCL and S/NR-listed Queensboro Bridge (Resource No. 7). The other resources listed above would be afforded limited protection under DOB regulations applicable to all buildings located adjacent to construction sites; however, since these resources are not S/NR-listed or designated NYCLs or NYCHDs, they are not afforded special protections under *TPPN #10/88*. Since the projected and potential development sites within 90 feet of these resources are not City-owned and are not anticipated to be developed in accordance with City disposition or development agreements, there is no mechanism to require the implementation of *TPPN #10/88* or preparation of a Construction Protection Plan. In the absence of such measures, the construction related impacts would constitute an unavoidable impact of the Proposed Actions.

TRANSPORTATION

The third quarter of 2030 was selected as the reasonable worst-case analysis period for assessing potential cumulative transportation impacts from operational trips from completed portions of the projected developments and construction trips associated with construction activities. An assessment of transportation generated during this peak period is presented below.

TRAFFIC

During construction, traffic would be generated by construction workers commuting via autos and by trucks making deliveries to projected development sites. Each worker vehicle was assumed to arrive in the morning and depart in the afternoon or early evening, while truck deliveries would occur throughout the construction day. In the third quarter of 2030, construction-related traffic would be expected to peak during the 6 AM to 7AM and 3 PM to 4 PM periods. During the 6 to 7 AM peak hour, there would be 1,758 Passenger Car Equivalent (PCE) vehicle trips, including 1,512 inbound trips and 246 outbound trips. During the 3 to 4 PM peak hour, there would be 1,352 PCE trips, including 43 inbound trips and 1,309 outbound trips.

Potential significant adverse traffic impacts could occur during construction. The impacts would be within the range of impacts identified for the for operational traffic in the 2035 build year. The mitigation measures identified in Chapter 21, "Mitigation," for 2035 operational traffic impacts would be similarly effective at mitigating any potential construction traffic impacts.

PEDESTRIANS

During the 2030 (third quarter) peak construction period, net incremental construction and operational travel demand on area sidewalks, corners, and crosswalks would be expected to total approximately 2,447 and 7,381 trips in the 6AM to 7 AM and 3 PM to 4

PM peak construction hours, respectively. These trips would be widely distributed among the projected development sites that would be under construction in the third quarter of 2030 and would primarily occur outside the weekday AM and PM peak commuter periods and weekday midday and Saturday peak periods when pedestrians at area transit facilities typically create the greatest demand.

It is expected that potential significant adverse pedestrian impacts could occur during construction and that these impacts would be within the range of impacts identified for the 2035 With-Action conditions. The mitigation measures identified in Chapter 21, "Mitigation," operational pedestrian impacts would likely be effective at mitigating any potential construction pedestrian impacts.

NOISE

As described in Chapter 20, "Construction," the Proposed Actions would have the potential to result in significant adverse construction noise impacts throughout the Project Area. ~~Four representative construction sites (Projected Development Site 67A, and Sites J29, J48, and J67 from the *Jamaica Rezoning EIS*) with long-term (i.e., greater than 24 months) construction duration were selected for quantitative prediction of construction noise levels during each stage of construction (i.e., Demolition/Excavation/Foundation, Building Superstructure/Exterior, and Interior Fit-Out).~~ No significant adverse construction noise impacts are expected from construction of development sites whose construction duration would be considered short-term (i.e., less than 24 months). Based on the magnitude of construction noise during each stage and the duration of each construction stage at each development site according to the conceptual schedule, receptors expected to experience an exceedance of the construction noise impact thresholds were determined (refer to Figure 20-2).

Because the analysis is based on construction phases, it does not capture the natural daily and hourly variability of construction noise at each receptor. The level of noise produced by construction fluctuates throughout the days and months of the construction phases, while the construction noise analysis is based on the worst-case time periods only, which is conservative. The analysis is based on RWCDS conceptual site plans and construction schedules, with the possibility that the actual construction may be of less magnitude, in which case construction noise would be less than the analysis predicts.

Construction activities would follow the requirements of the *NYC Noise Control Code* (also known as Chapter 24 of the Administrative Code of the City of New York, or Local Law 113) for construction noise control measures. Specific noise control measures would be incorporated in noise mitigation plan(s) required under the *NYC Noise Control Code*. These measures could include a variety of source and path controls. In terms of source controls (i.e., reducing noise levels at the source or during the most sensitive time periods), the following measures would be implemented in accordance with New York City Regulations:

- Equipment that meets the sound level standards specified in Subchapter 5 of the *NYC Noise Control Code* would be utilized from the start of construction.
- As early in the construction period as logistics would allow diesel- or gas-powered equipment would be replaced with electrical-powered equipment such as welders,

water pumps, bench saws, and table saws (i.e., early electrification) to the extent feasible and practicable.

- Where feasible and practicable, construction sites would be configured to minimize back-up alarm noise. In addition, all trucks would not be allowed to idle more than three minutes at the construction site based upon Title 24, Chapter 1, Subchapter 7, Section 24-163 of the *NYC Administrative Code*.
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.

In terms of path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors), the following measures for construction would be implemented in accordance with New York City Regulations:

- Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, would be located away from and shielded from sensitive receptor locations.
- Noise barriers constructed from plywood or other materials would be erected to provide shielding; and
- Path noise control measures (i.e., portable noise barriers, panels, enclosures, and acoustical tents, where feasible) for certain dominant noise equipment would be employed to the extent feasible and practical based on the results of the construction noise calculations.

Construction activity is expected to follow the requirements of the *NYC Noise Control Code*. However, the implementation of these measures would not eliminate the identified significant adverse construction noise impacts predicted to occur during hours when the loudest pieces of construction equipment are in use. The feasibility and practicability of potential ~~I~~Further mitigation measures ~~will be~~ was explored between the DEIS and FEIS. ~~If n~~No practicable or feasible mitigation ~~is~~ was identified, and therefore, these impacts would constitute unavoidable significant adverse construction noise impacts as a result of the Proposed Actions. ✷