Chapter 23: Alternatives

A. INTRODUCTION

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

In addition to a comparative impact analysis, the alternatives in this chapter are assessed to determine to what extent they would meet the goals and objectives of the proposed project, which include: 1) the creation of a substantial amount of housing, including affordable housing; 2) the creation of physical and visual access to the East River waterfront, with the creation of a substantial amount of publicly accessible open space, including an esplanade, upland connections, and connections to two existing parks; 3) transformation of a largely underused waterfront area into a new, enlivened mixed-use development; 4) provision of neighborhood retail amenities that are currently lacking in this underserved area, including a supermarket; 5) improvement of circulation in the area and creation of a better connection to the surrounding community with a new connecting street segment between existing mapped portions of Astoria Boulevard; and 6) providing revenue to support the New York City Housing Authority's (NYCHA) affordable housing mission through the proposed disposition of the land for Buildings 6 and 7 to the Applicant and Building 8 pursuant to a future request for proposals (RFP) and the introduction of an economically diversified population within the Astoria Houses Campus (see Chapter 1, "Project Description").

This chapter considers three alternatives to the proposed project:

- A No Build Alternative, which is mandated by CEQR and SEQRA, and is intended to provide the lead and involved agencies with an assessment of the expected environmental impacts of no action on their part. For the proposed project, the No Build Alternative assumes the continuation of the existing M1-1 and R6 zoning on the site, continuation of the existing vacant and underutilized industrial uses along the waterfront, and no new development or connecting street segment on the NYCHA Astoria Houses Campus;
- A No Unmitigated Significant Adverse Impacts Alternative, which considers a project program that would eliminate the proposed project's unmitigated significant adverse impacts in the areas of public elementary schools, child care centers, open space, traffic, construction traffic, and construction noise; and
- A Reduced Density Alternative, which considers a project program that does not include development of Building 8.

PRINCIPAL CONCLUSIONS

The conclusion of the alternatives analysis is that the No Build Alternative and No Unmitigated Significant Adverse Impacts Alternatives would not substantively meet the goals and objectives of the proposed project, while the Reduced Density Alternative would meet the goals and objectives of the proposed project to a lesser degree than the proposed project. Each of the alternatives is summarized briefly below, followed by a more detailed chapter analysis.

NO BUILD ALTERNATIVE

The No Build Alternative assumes no discretionary actions would occur and that the proposed project would not be implemented. The project site would remain in its current underutilized state under the existing M1-1 manufacturing zoning along the waterfront, including a building materials storage yard, a building used for construction materials storage, two vacant buildings, a vacant parcel, and a partially vacant industrial building. This alternative would avoid the proposed project's significant adverse impacts relating to public elementary schools, public funded child care facilities, open space, transportation, and construction impacts related to transportation and noise. The anticipated development projects in the study area (as detailed in Table 2-1 in Chapter 2, "Analytical Framework") would substantially increase the background demand for schools and child care facilities, and would result in declines in the level of service (LOS) at up to 18 study area intersections. However, in this alternative, there would be no market-rate or affordable housing developed on the project site and no new publicly accessible open space or a public waterfront esplanade with upland connections and connections to Hallet's Cove Playground and Whitey Ford Field. Furthermore, no neighborhood retail amenities would be introduced and the No Action Alternative would not provide revenue to support NYCHA's mission. In short, the No Build Alternative would fail to meet all six of the proposed project's principal goals.

NO UNMITIGATED SIGNIFICANT ADVERSE IMPACTS

The No Unmitigated Significant Adverse Impacts Alternative considers several modifications of the proposed project to eliminate its significant adverse impacts on public elementary schools, child care centers, open space, traffic, and construction impacts related to traffic and noise. To eliminate all unmitigated significant adverse impacts, the proposed project would have to be modified to a point that its principal goals and objectives would not be realized.

REDUCED DENSITY ALTERNATIVE

The Reduced Density Alternative considers a project program in which the site for Building 8 would not undergo a Section 18 disposition nor be subject to an RFP for site development, and therefore would not be developed. In general, this alternative would result in effects substantially similar to the proposed project but would result in 240 fewer residential units (market-rate) and would therefore be less supportive of the PlaNYC goal of creating enough housing for almost a million more people. In addition, this alternative would be less supportive of NYCHA's goal of repositioning its assets to generate revenue for operation of its affordable housing mandate, particularly at the Astoria Houses Campus, and would be less supportive of the public policy goals of Plan NYCHA. This alternative would result in the same impacts as those identified for the proposed project, and could also result in an unmitigated schools impact since without the disposition of Building 8, the School Construction Authority (SCA) would be required to pay fair market value for the Building 8 site for the school. Absent sufficient funding to acquire the

site, no school would be built; therefore, it is expected that this alternative would result in an unmitigated impact on elementary schools. This alternative would also be less supportive of the goals and objectives of the project, particularly the goal to provide revenue to support NYCHA's affordable housing mission through the proposed disposition of the land for Building 8 pursuant to a future RFP and the introduction of an economically diversified population within the Astoria Houses Campus. Overall, although the Reduced Density Alternative would meet a number of the goals and objectives of the proposed project, it would do so to a lesser degree than the proposed project because it would introduce fewer residential units and provide less revenue to support NYCHA's affordable housing mission.

B. NO BUILD ALTERNATIVE

DESCRIPTION OF THE NO BUILD ALTERNATIVE

The No Build Alternative assumes no discretionary actions would occur since all uses would be permitted as-of-right under the existing M1-1 and R6 zoning. The project site would remain in its existing condition and the proposed project would not be implemented. This condition is described earlier in Chapter 2, "Analytical Framework," as the "future without the proposed project" or the "No Build" condition, and it has been used in other chapters of this EIS as the baseline against which impacts of the proposed project are measured. This section compares the potential effects of the No Build Alternative to those of the proposed project.

NO BUILD ALTERNATIVE COMPARED WITH THE PROPOSED PROJECT

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

LAND USE, ZONING, AND PUBLIC POLICY

In the No Build Alternative, the project site would remain vacant and underutilized, and the zoning of the project site would remain M1-1 and R-6. None of the public open space, retail, and other commercial uses that would be introduced by the proposed project would be created under the No Build Alternative.

Unlike the proposed project, the public policy goals relating to the project site would not be met in the No Build Alternative. None of the objectives of the city's *Comprehensive Waterfront Plan* and PlanNYC 2030 would be advanced by the No Build Alternative since under this alternative no new housing with supporting infrastructure and open space would be created on the project site, and the project site would remain underutilized. In addition, unlike the proposed project, this alternative would not be consistent with all applicable Waterfront Revitalization Program policies.

Neither the proposed project nor the No Build Alternative would result in significant adverse impacts to land use, zoning, or public policy. However, unlike the No Build Alternative, the proposed project would rehabilitate the project site, introduce complementary land uses that would enliven the site, and advance various public policy goals. The proposed project would also help facilitate the New York City Housing Authority's (NYCHA) goal of repositioning its assets to generate much needed revenue for operation of its affordable housing mandate, particularly at the Astoria Houses Campus.

SOCIOECONOMIC CONDITIONS

The No Build Alternative, like the proposed project, would not result in any significant adverse impacts to socioeconomic conditions. Neither the proposed project nor the No Build Alternative would result in any significant adverse impacts due to direct or indirect residential displacement. The No Build Alternative and the proposed project also would not have significant adverse effects on specific industries. Unlike the No Build Alternative, the proposed project would result in the direct displacement of two businesses supporting an estimated 43 jobs. However, neither the No Build Alternative nor the proposed project would result in significant adverse impacts due to direct business displacement. While the proposed project's uses would be a substantial addition to the ½-mile study area, they would not be new types of uses within the study area, and therefore would not introduce a new trend that could alter economic patterns and result in potential indirect business displacement due to increased rents or competition. Furthermore, unlike the No Build Alternative, the new uses introduced as a result of the proposed project would serve to enliven the site and provide new, complementary retail serving the surrounding area and the city as a whole.

COMMUNITY FACILITIES

With the No Build Alternative, in contrast to the proposed project, there would no increase in the residential population on the project site. This alternative would not result in the significant adverse impacts predicted to occur as a result of the proposed project on elementary schools within Sub-district 3 of Community School District (CSD) 30 or on publicly-funded child care services.

In the No Build Alternative, the many new development projects recently completed or anticipated in the future would substantially increase demand for community facilities, and elementary schools and child care services would be overtaxed. Elementary schools in Sub-district 3 are predicted to be operating at 120 percent of capacity in the No Build Alternative, with 937 more students than available seats (a change from 79 percent utilization with 928 available seats). Publicly funded child care would operate at 119 percent of capacity with a deficit of 86 slots under this alternative (a change from 98 percent of capacity and 9 surplus slots in the existing condition).

As with the proposed project, the No Build Alternative would not result in any significant adverse impacts with regard to library services, police services, fire protection, and emergency medical services.

OPEN SPACE

Neither the No Build Alternative nor the proposed project would remove or alter any existing publicly accessible open spaces. With no changes to the project site in the No Build Alternative, and like with the proposed project, study area open spaces also would not experience significant adverse shadows, air quality, or noise impacts once the project is operational. Therefore, neither the No Build Alternative nor the proposed project would result in any significant adverse direct impacts to open space.

Unlike the No Build Alternative, there is the potential for the residential population introduced in the ½-mile study area as a result of the proposed project to diminish the ability of open spaces in the area to serve the total future population. The proposed project would decrease the total, active, and passive open space ratios in the study area by more than 5 percent. However, because

the passive open space ratio would remain above the city's passive open space guideline in the future with the proposed project, the proposed project would not result in a significant adverse impact on passive open space. With respect to the total and active open space ratios, the study area is currently underserved, and would continue to be in the No Build Alternative as well as the future with the proposed project. Based on *CEQR Technical Manual* methodology and accounting for the robust level of background growth accounted for in the open space analysis, the proposed project would result in a significant adverse impact on total and active open space that would not occur under the No Build Alternative. However, the proposed project also includes substantial open space benefits and recreational amenities, including 2.35 acres of publicly accessible open space and a waterfront esplanade that would provide a cohesive transition and connection between the project site and surrounding open space resources. These open space benefits would not occur with the No Build Alternative.

SHADOWS

Under the No Build Alternative, the project site would remain unchanged, and therefore there would be no change with respect to shadows. While the proposed project would result in new shadows on several nearby open spaces, including Hallet's Cove Esplanade, Hallet's Cove Playground, Whitey Ford Field, and the NYCHA Astoria Houses Campus open spaces, as well as on the East River, vegetation in all areas affected by project shadow would continue to receive a minimum of four hours of direct sunlight throughout the growing season. For users of these open spaces, despite the new incremental shadows, alternative sunlit open spaces would be available for use nearby during the affected times, along the waterfront and in the Astoria Houses development. Therefore, neither the No Build Alternative nor the proposed project would result in significant adverse shadow impacts to either the vegetation or the users of these open spaces, nor to the biota of the river.

HISTORIC AND CULTURAL RESOURCES

As the project site is not sensitive for archaeological resources, the No Build Alternative, like the proposed project, would not result in any significant adverse impacts on archaeological resources. As there are no architectural resources on the project site or in the study area, the No Build Alternative, like the proposed project, would not result in adverse impacts to architectural resources.

URBAN DESIGN AND VISUAL RESOURCES

Like the proposed project, the No Build Alternative would not result in significant adverse impacts on the urban design, view corridors, or visual resources in the ¼-mile study area. However, unlike the proposed project, the No Build Alternative would not result in improvements to the pedestrian experience or enliven streets within the project site with active ground-floor and retail uses. The proposed project would result in new buildings on the project site and would create new publicly accessible open spaces connecting to a waterfront esplanade. In the No Build Alternative, there would be no improvement to the largely vacant and underutilized stretch of industrial and manufacturing buildings along 1st Street and the west end of 26th Avenue and no improvement to the pedestrian experience on the project site. There would also be no new publicly accessible views of the Manhattan skyline and East River waterfront and islands in the No Build Alternative. Overall, compared to the proposed project, the No Build Alternative would not enhance the existing streetscape and pedestrian environment in the project site and study area.

NATURAL RESOURCES

As with the proposed project, the No Build Alternative would not result in significant adverse impacts to groundwater, floodplains, water quality, aquatic biota, wetlands, terrestrial natural resources, and threatened or endangered species within project site and ½-mile study area. Similarly, neither the No Build Alternative nor the proposed project would result in increased flooding on or adjacent to the project site. However, unlike the proposed project, there would be no stabilization and rehabilitation of the presently armored shoreline of the East River in the No Build Alternative. Although there would be no tree removal in the No Build Alternative, as noted in Chapter 10, "Natural Resources," tree removal as a result of the proposed project would be minimal and would not eliminate or degrade valuable wildlife habitat. Therefore, neither the No Build Alternative nor the proposed project would result in significant adverse impacts to natural resources within the project site and study area.

HAZARDOUS MATERIALS

Unlike the proposed project, there would be no construction on the project site in the No Build Alternative. While any construction involving soil disturbance on the project site could potentially increase pathways for human exposure to any subsurface hazardous materials present in those areas, impacts as a result of the proposed project would be avoided by performing a number of measures in accordance with the New York City Department of Environmental Protection (DEP), as noted in Chapter 11, "Hazardous Materials." Therefore, neither the proposed project nor the No Build Alternative would result in any significant adverse impacts with respect to hazardous materials.

WATER AND SEWER INFRASTRUCTURE

The No Build Alternative would not result in any increased demand on New York City's water supply and would not result in any change in wastewater and sanitary sewage generation. Neither the No Build Alternative nor the proposed project would result in any significant adverse impacts on the City's water supply, wastewater, or stormwater conveyance and treatment infrastructure.

SOLID WASTE AND SANITATION SERVICES

Unlike the proposed project, the No Build Alternative would not generate additional solid waste. However, neither the No Build Alternative nor the proposed project would result in significant adverse impacts on solid waste and sanitation services.

ENERGY

The No Build Alternative would not increase demand for electricity. However, the proposed project would generate an incremental increase in energy demand that would be negligible when compared to the overall demand within Con Edison's New York City and Westchester County service area. Therefore, neither the No Build Alternative nor the proposed project would result in significant adverse impacts with respect to the transmission or generation of energy.

TRANSPORTATION

Under the No Build Alternative, it is expected that existing uses on the building sites would remain. Although the No Build Alternative would not result in any of the travel demand

associated with the proposed project (and would therefore not generate any new vehicular trips), traffic volumes in the study area would be expected to increase as a result of background growth and planned development in the study area. The overall levels of service would be expected to deteriorate in the No Build Alternative as compared to the existing conditions since traffic increases from a major nearby mixed-use residential and retail development and other expected development projects would be substantial.

The No Build Alternative would not result in the significant adverse traffic impacts identified for the proposed project, which would occur at a number of intersections, nor would this alternative result in the bus line-haul impacts identified for the project. Some of the proposed project's traffic impacts could be mitigated with readily implementable traffic improvement measures, including signal timing and phasing changes, parking regulation changes and lane restriping, while some could be unmitigatable. The bus line-haul impacts could be mitigated by improving service frequencies, subject to fiscal and operational constraints of the responsible agencies.

Neither the No Build Alternative nor the proposed project would result in any significant adverse parking or pedestrian impacts.

AIR QUALITY

The No Build Alternative would not result in emissions from vehicle trips generated by the proposed project or the proposed parking facilities. The No Build Alternative also would not result in incremental emissions from new heat and hot water systems associated with the proposed project. 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 heating and hot water systems for the proposed project. Therefore, neither the No Build Alternative nor the proposed project would result in significant adverse air quality impacts.

GREENHOUSE GASES

Unlike the proposed project, the No Build Alternative would not result in an increase in energy use, fuel consumption, or vehicle trips, and would therefore not result in the increase in greenhouse gas emissions that would result from the proposed project. However, the proposed project would be consistent with PlaNYC GHG emissions reduction goals.

NOISE

Like the proposed project, the No Build Alternative would not generate sufficient traffic to have the potential to cause a significant adverse noise impact. Because the No Build Alternative would not include the new connecting segment of Astoria Boulevard in the NYCHA Astoria Houses, this area would not experience the increase in noise levels that would occur with the proposed project. However, under the proposed project the increase in noise levels along the new connecting segment would not result in significant adverse impacts. Under the No Build Alternative, no new public open space would be created on the project site. Therefore, the elevated noise levels in the proposed project's open spaces would not occur under the No Build Alternative, as these spaces would not exist. However, although the noise levels in the proposed project's open spaces would be greater than the 55 dBA $L_{10(1)}$ prescribed by CEQR criteria, the noise levels would be comparable to other parks around New York City. Overall, noise levels with the proposed project and the No Build Alternative would be typical of urban areas.

NEIGHBORHOOD CHARACTER

Like the proposed project, the No Build Alternative would not result in any significant adverse impacts to neighborhood character. However, the No Build Alternative would not result in enlivening largely vacant and underutilized lots with new, mixed-use buildings with active ground-floor uses, nor would it add new publicly accessible open space. Unlike the proposed project, the No Build Alternative also would not activate the waterfront area along the East River with a publicly accessible esplanade and recreational space. The benefits to neighborhood character that would result from the proposed uses and design of the proposed project would not be realized under the No Build Alternative.

CONSTRUCTION

Under the No Build Alternative, no construction would occur on the project site. The buildings would remain in their current condition.

The No Build Alternative would not result in the additional vehicle trips or increased parking demand generated by the proposed project's construction activities. The No Build Alternative also would not result in any air pollutant emissions or increased noise levels that would be associated with the construction of the proposed project. As such, the No Build Alternative would not result in the significant adverse impacts to traffic, transit, and noise during the construction period. As with the proposed project, the No Build Alternative would not result in significant adverse construction impacts with respect to air quality, historic and cultural resources, hazardous materials, open space, socioeconomic conditions, community facilities, natural resources, and land use and neighborhood character.

PUBLIC HEALTH

The No Build Alternative, like the proposed project, would not result in any significant adverse public health impacts.

C. NO UNMITIGATED SIGNIFICANT IMPACTS ALTERNATIVE

INTRODUCTION

As discussed in Chapter 22, "Mitigation," the proposed project could result in unmitigated significant adverse impacts on public elementary schools, child care centers, open space, traffic, construction traffic, and construction noise. Therefore, alternatives were developed to explore modifications to the proposed project that would allow for the mitigation of these impacts.

PUBLIC SCHOOLS

The proposed project would result in a significant adverse impact on public elementary schools. To avoid this impact, development at the project site would need to be significantly reduced in size to a development smaller than the proposed project; specifically, 941 residential units that introduce public elementary school children.

Limiting the total number of new housing units on the project site to this number would substantially reduce the amount of new housing that would be created on the project site, which would result in less population to support neighborhood retail amenities and no revenue to support NYCHA's affordable housing mission since all of the 941 units would be constructed on

sites owned by the Applicant and there would be no disposition of NYCHA property under this alternative. It is unlikely that a development that includes just 941 units would result in 2.35 acres of publicly accessible open space and waterfront access. Overall, this alternative would be less successful than the proposed project at transforming the site into an enlivened new, mixed-use development and would be inconsistent with the goals and objectives of the proposed project.

CHILD CARE CENTERS

The proposed project would result in a significant adverse impact on publicly funded child care centers. To avoid this impact, development at the project site would need to be significantly reduced in size to a development of 132 affordable residential units. Limiting the number of affordable units on the project site would be inconsistent with the proposed project's goal of providing a substantial amount of new housing, including affordable housing.

OPEN SPACE

The proposed project's new residential population would place new demands on the area's open space resources. Although the proposed project's open space would include some active open space resources, such as a playground, it would not be sufficient to satisfy the city's planning goal open space ratio of 2.5 acres of total open space per 1,000 residents, including 2.0 acres of active open space per 1,000 residents. While these goals are recognized as infeasible for many areas of the city and are not considered impact thresholds, given the anticipated decrease in the total and active open space ratios in the residential study area and the fact these open space ratios would remain below the city guideline ratios, the proposed project would result in a significant adverse impact to total and active open space resources in the study area. The Applicant is exploring possible measures to mitigate these impacts, in consultation with DCP and DPR. Absent the implementation of such measures, the proposed project could have an unmitigated significant adverse impact on open space.

To avoid the total open space impact, this alternative would need to limit the proposed project to 1,137 units. To avoid an impact on active open space, this alternative would need to limit the proposed project to 838 new units. Limiting the number of housing units on the project site to these numbers would substantially reduce the amount of new housing that would be created on the project site, which would result in less population to support neighborhood retail amenities and no revenue to support NYCHA's affordable housing mission. At this project size, the Applicant would be unlikely to develop the entire waterfront site and, therefore, this alternative would result in the introduction of even less public open space than is currently proposed. Overall, this alternative would be less successful than the proposed project at transforming the site into an enlivened new, mixed-use development and would be inconsistent with the goals and objectives of the proposed project.

TRAFFIC

The proposed project would result in significant adverse traffic impacts at several intersections within the study area that cannot be fully mitigated with standard traffic capacity improvement measures. Specifically, 10 of the 25 study locations would have significant adverse traffic impacts that could not be fully mitigated in at least one peak hour. Because of existing congestion at a number of these intersections, even a minimal increase in traffic would result in unmitigated impacts. A sensitivity analysis determined that the addition of just two vehicle trips

added per direction along Astoria Boulevard during the weekday PM peak hour at the intersection of Astoria Boulevard and Crescent Street would result in a significant adverse impact that would not be fully mitigated. This level of traffic increase would result from almost any new development on the project site, thus no reasonable alternative could be developed to completely avoid unmitigated traffic impacts without substantially compromising the goals of the proposed project.

CONSTRUCTION NOISE

The proposed project would result in significant adverse construction noise impacts at some nearby existing residential and open space locations, and Buildings 6A/6B and 7A/7B if either segment of either building is occupied during the construction of the other segment of the building. Between the Draft EIS (DEIS) and Final EIS (FEIS), a refined construction noise analysis will be undertaken to more precisely determine the magnitude and duration of the elevated noise levels resulting from construction at these locations. Some potential receptor controls that could be used to mitigate the impacts at residential locations where interior L_{10} values would be expected to exceed the value considered acceptable by CEQR criteria could include the provision of air-conditioning so that the impacted structures can maintain a closed-window condition, the installation of operable storm windows, and/or improvements in the sealing of existing windows. As noted above, many receptor locations already have double-glazed windows and an alternate means of ventilation, and additional receptor controls would be unlikely to fully mitigate the construction noise impacts. Such mitigation measures may affect the ability to achieve project goals with regard to the development of affordable housing; however, further exploration of the measures will be conducted between the DEIS and FEIS to determine the practicability and feasibility of implementing these measures to minimize or avoid the potential significant adverse impacts, taking into account the practicability relative to project goals. Should it be determined that there are no practicable mitigation measures, taking into account project goals, and should the proposed project be developed and constructed as conservatively presented in this conceptual construction schedule, up to 51 existing locations would be expected to experience an unmitigated significant adverse impact at various times.

These mitigation measures would partially mitigate significant project impacts (and substantially reduce construction-related noise levels) at some locations. However, absent the implementation of additional mitigation measures which result in lower noise levels, there is no feasible alternative that could fully avoid these impacts. Even accounting for the types of measures incorporated into the proposed project to reduce construction noise, any development comparable in scale to the proposed project (i.e., substantial below-grade excavation, multi-year construction at any one location) would have the potential to result in unmitigated significant adverse impacts at the locations mentioned above, particularly at adjacent open spaces. However, it is noted that development outside of the proposed Large-Scale General Development (LSGD) Plan approval would also result in construction impacts. In fact, development outside of the proposed LSGD approval could have greater noise impacts because it would not include measures being committed to as part of the proposed project to minimize construction noise impacts.

D. REDUCED DENSITY ALTERNATIVE

DESCRIPTION OF THE REDUCED DENSITY ALTERNATIVE

Under the Reduced Density Alternative, Building 8, which would be located within the existing NYCHA Astoria Houses Campus, would not undergo a Section 18 disposition nor be subject to an RFP for site development, and therefore would not be developed. The site would continue to contain surface parking area, walkways, and a small amount of landscaped area instead of being developed with a 27-story (270-foot) high-rise building containing market-rate residential units and retail uses and garage parking.

The proposed actions for the Reduced Density Alternative would be the same as with the proposed project except for those actions necessary to allow the development of Building 8; i.e., with this alternative, no separate future Section 18 disposition action would be required for the site of Building 8.

As shown in **Table 23-1**, the Reduced Density Alternative would result in 240 fewer residential units (market-rate); 3,000 gsf less retail space; and 171 fewer garage parking spaces.

Table 23-1
Reduced Density Alternative Compared to the Proposed Project

Use	Proposed Project	Reduced Density Alternative	Difference
Total Residential Units	2,644	2,404	240
Market-Rate Units	*2,161*	*1,921*	*240*
Affordable Units	*483*	*483*	*0*
Retail gsf	68,663	65,663	3,000
Garage Parking Spaces[1]	1,347	1,176	171
Surface Parking Spaces[1]	53	53	0
Open Space	2.35 acres	2.35 acres	0 acres

Note: [1] All parking would be accessory.

All other aspects of the proposed project—i.e., the proposed development of Buildings 1 through 7, the new publicly accessible open space and waterfront esplanade, the infrastructure improvements, the road network improvements, and the transit service improvements (i.e., bus layover facility)—would remain the same as under the proposed project.

COMPARISON OF THE REDUCED DENSITY ALTERNATIVE TO THE PROPOSED PROJECT

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

LAND USE, ZONING, AND PUBLIC POLICY

As described above, the Reduced Density Alternative would result in the same mix of uses as the proposed project, but would result in 240,000 gsf less residential space (240 market-rate units); 3,000 gsf less retail space; and 171 fewer garage parking spaces. With the same mix of uses and the same zoning actions as the proposed project, this alternative would not result in significant adverse impacts to land use, zoning, and public policy. Because this alternative would result in fewer residential units, it would be less supportive of the PlaNYC goal of creating enough

housing for almost a million more people. In addition, this alternative would be less supportive of NYCHA's goal of repositioning its assets to generate revenue for operation of its affordable housing mandate, particularly at the Astoria Houses Campus, and would be less supportive of NYCHA's plan to preserve public housing in the city, as detailed in Plan NYCHA.

SOCIOECONOMIC CONDITIONS

Like the proposed project, the Reduced Density Alternative would not result in impacts related to either direct or indirect displacement of residences or businesses nor would it result in impacts on specific industries.

COMMUNITY FACILITIES

With 240 fewer market-rate units, the Reduced Density Alternative would result in less demand for school seats by introducing 96 fewer elementary and intermediate school students and 34 fewer high school students. However, even with this reduction in demand, the Reduced Density Alternative would, like the proposed project, result in significant adverse impacts on public elementary schools. Neither this alternative nor the proposed project would result in significant adverse impacts on intermediate or high schools.

As discussed in Chapter 22, "Mitigation," preliminary discussions have been held among the Applicant, NYCHA, DCP, and the School Construction Authority (SCA), and are expected to continue between the DEIS and FEIS, with regard to the provision of a new school building serving kindergarten through grade 8 within the NYCHA Astoria Houses Campus. With the proposed project, the new school building would be located adjacent to Building 8. Under the Reduced Density Alternative, the Building 8 site would neither undergo a Section 18 disposition nor be subject to a RFP for site development. Without the disposition of Building 8, SCA would be required to pay fair market value for the site for the school. Absent sufficient funding to acquire the site, no school would be built; therefore, it is expected that this alternative would result in an unmitigated impact on elementary schools.

Since the Reduced Density Alternative would not result in a change in the number of affordable housing units, there would be no change in demand for publicly-funded child care services between this alternative and the proposed project. The proposed project's significant adverse impact to publicly funded child care facilities would remain the same with this alternative and would require the same mitigation measures as those discussed in Chapter 22.

Neither the Reduced Density Alternative nor the proposed project would result in significant adverse impacts on police, fire, or healthcare services.

OPEN SPACE

With 240 fewer residential units, the Reduced Density Alternative would result in approximately 560 fewer residents at the site (based on the 2010 average household size of 2.34 persons per household for Queens Community District 1). This would reduce demand for both passive and active open spaces. However, although the same amount of open space would be included in this alternative as in the proposed project, this alternative would still introduce over 5,000 new residents, and therefore, is expected to have similar effects on open space ratios as the proposed project—resulting in significant adverse impacts on total and active open space and requiring similar mitigation measures.

SHADOWS

With no development on the site of Building 8, the Reduced Density Alternative would result in less shadow than the proposed project on portions of Hallet's Cove Playground and the Hallet's Cove Esplanade on all four analysis days and on a small portion of Lighthouse Park (Roosevelt Island) in the morning of the June analysis day. Shadow from Buildings 1 through 7 with this alternative would be the same as with the proposed project, and neither the project nor this alternative would result in significant adverse shadow impacts.

HISTORIC AND CULTURAL RESOURCES

The Reduced Density Alternative, like the proposed project, would have no adverse impact on archaeological resources as the project site is not sensitive for pre-contact or historic period archaeological resources.

The Reduced Density Alternative, like the proposed project, would have no adverse impact on architectural resources as there are no architectural resources located on the project site or in the study area.

URBAN DESIGN AND VISUAL RESOURCES

The Reduced Density Alternative would result in similar changes to urban design and visual resources as the proposed project, and while both would result in substantial changes to the urban design of the project site, neither would have significant adverse impacts related to urban design within the project site and study area. Both would replace a largely vacant and underutilized stretch of industrial and manufacturing buildings with buildings containing active ground-floor uses, including retail. Both this alternative and the proposed project would result in waterfront and open space changes that would provide recreational areas and would visually enhance the experience of walking around the project site. Neither this alternative nor the proposed project would obstruct views to visual resources, such as the Manhattan skyline and East River waterfront and islands.

The Reduced Density Alternative would not include Building 8, which would be 270 feet in height under the proposed project, substantially taller than the existing seven-story buildings on that parcel. Therefore, this alternative would result in a less notable change to the pedestrian's experience of the appearance and character of this portion of the project site.

This alternative would have similar pedestrian wind effects as the proposed project.

NATURAL RESOURCES

The Reduced Density Alternative, like the proposed project, would not result in significant adverse impacts to natural resources, including groundwater, floodplains, vegetation, wildlife, threatened and endangered species, and littoral zone tidal wetlands and aquatic resources of the East River. With the elimination of Building 8 under the Reduced Density Alternative, the amount of required tree removal within the NYCHA Astoria Houses Campus would be reduced, but as discussed in Chapter 10, "Natural Resources," tree removal would not have significant adverse impacts to the tree species' local populations or the quantity and quality of wildlife habitat in the area.

HAZARDOUS MATERIALS

With the Reduced Density Alternative, the same measures as with the proposed project would be incorporated for development of Buildings 1 through 7 (see Chapter 11, "Hazardous Materials"). With no development of Building 8, these measures would not be required for the Building 8 site since there would be no subsurface disturbance.

WATER AND SEWER INFRASTRUCTURE

With 240 fewer residential units and a corresponding reduction in the number of residents, the Reduced Density Alternative would result in less water demand and a reduction in sanitary sewage flows than the proposed project. Therefore, like the proposed project this alternative would not result in significant adverse impacts to either the water supply or sanitary sewage systems.

The Reduced Density Alternative would result in a slight reduction in the runoff rate since the Building 8 site would remain a parking lot and landscaped area under this alternative. Like the proposed project, this alternative would introduce new infrastructure, including new sanitary sewers, new stormwater outfalls, and stormwater Best Management Practices, and would not result in significant adverse impacts to the stormwater conveyance system.

SOLID WASTE

With 240 fewer residential units and a corresponding reduction in the number of residents, the Reduced Density Alternative would result in less solid waste generation than the proposed project. Therefore, like the proposed project this alternative would not result in significant adverse impacts to solid waste.

ENERGY

With 240 fewer residential units and a corresponding reduction in the number of residents, the Reduced Density Alternative would result in less energy demand than the proposed project. Therefore, like the proposed project this alternative would not result in significant adverse impacts to energy.

TRANSPORTATION

The transportation analyses were prepared based on a slightly smaller version of the development program than the proposed project. Accordingly, although the Reduced Density Alternative based on the development program addressed in this DEIS would include 2,404 dwelling units and 1,176 garage spaces, the analysis below pertains to 2,333 dwelling units and 1,151 garage spaces. Between the DEIS and FEIS, the transportation and transportation-related analyses will be updated to reflect the proposed project's programming changes, as well as background changes associated with other projects and the addition of new study area traffic intersections. These changes could result in new, different, or worsened significant adverse impacts, all of which will be further detailed in the FEIS.

Based on the trip generation assumptions detailed in Chapter 15, "Transportation," the Reduced Density Alternative would generate 2,209, 2,567, and 3,104 person trips and 612, 384, and 697 vehicle trips during the weekday AM, midday, and PM peak hours, respectively. In comparison, the proposed project would generate up to approximately 3,363 peak hour person trips and 769 peak hour vehicle trips (see Table 15-6). As summarized in **Tables 23-2** and **23-3**, compared to the proposed project, the

Reduced Density Alternative would yield up to approximately 259 fewer peak hour person trips and 72 fewer peak hour vehicle trips.

Table 23-2
Comparison of 2022 Build Person Trips by Mode
Reduced Density Alternative vs. Proposed Project

Development Scenario	Auto		Taxi		Subway		Bus		Walk Only		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In+Out
AM Peak Hour													
Reduced Density Alternative	123	476	10	30	213	824	32	103	156	242	534	1,675	2,209
Proposed Project	135	525	12	33	234	907	35	113	163	259	579	1,837	2,416
Difference	**-12**	**-49**	**-2**	**-3**	**-21**	**-83**	**-3**	**-10**	**-7**	**-17**	**-45**	**-162**	**-207**
Midday Peak Hour													
Reduced Density Alternative	171	167	32	33	304	296	75	76	688	725	1,270	1,297	2,567
Proposed Project	187	183	34	35	334	325	81	82	727	762	1,363	1,387	2,750
Difference	**-16**	**-16**	**-2**	**-2**	**-30**	**-29**	**-6**	**-6**	**-39**	**-37**	**-93**	**-90**	**-183**
PM Peak Hour													
Reduced Density Alternative	435	242	38	27	755	421	112	74	508	492	1,848	1,256	3,104
Proposed Project	480	267	41	30	832	463	122	81	535	512	2,010	1,353	3,363
Difference	**-45**	**-25**	**-3**	**-3**	**-77**	**-42**	**-10**	**-7**	**-27**	**-20**	**-162**	**-97**	**-259**

Table 23-3
Comparison of 2022 Build Vehicle Trips by Mode
Reduced Density Alternative vs. Proposed Project

Development Scenario	Auto		Taxi		Delivery		Total		Total
	In	Out	In	Out	In	Out	In	Out	In+Out
AM Peak Hour									
Reduced Density Alternative	107	423	32	32	9	9	148	464	612
Proposed Project	118	466	37	37	11	11	166	514	680
Difference	**-11**	**-43**	**-5**	**-5**	**-2**	**-2**	**-18**	**-50**	**-68**
Midday Peak Hour									
Reduced Density Alternative	145	141	42	42	7	7	194	190	384
Proposed Project	159	155	46	46	8	8	213	209	422
Difference	**-14**	**-14**	**-4**	**-4**	**-1**	**-1**	**-19**	**-19**	**-38**
PM Peak Hour									
Reduced Density Alternative	384	211	50	50	1	1	435	262	697
Proposed Project	423	232	55	55	2	2	480	289	769
Difference	**-39**	**-21**	**-5**	**-5**	**-1**	**-1**	**-45**	**-27**	**-72**

With a reduction of 9 to 10 percent in project-generated peak hour vehicle trips, the Reduced Density Alternative is expected to result in the same or a slightly fewer number of significant adverse traffic impacts than the proposed project, depending on the peak analysis hour. As shown in **Table 23-4**, 17 intersections would be significantly impacted in the weekday AM peak hour, 10 intersections would be impacted in the midday peak hour, and 15 intersections would be impacted in the PM peak hour. Compared to the proposed project, there would be one less impact during the weekday AM peak and two less impacts during the PM peak hour. The two intersections that would improve from experiencing mitigated impacts under the proposed project to not being impacted under the Reduced Density Alternative would be Astoria Boulevard at 8th Street (during the AM and PM peak hours), and Astoria Boulevard at 23rd Street (during the PM peak hour).

Table 23-4
Lower Density Alternative
Traffic Impact and Mitigation Summary

Intersections	AM Peak Hour	Midday Peak Hour	PM Peak Hour
No significant impact	8	15	10
Impact could be fully mitigated	7	7	9
Impact could be partially mitigated	4	1	2
Unmitigated impact	6	2	4

These impacts could be mitigated using the same mitigation measures identified for the proposed project. The Reduced Density Alternative would result in the same unmitigated traffic impacts as the proposed project.

For transit, the Reduced Density Alternative would result in a reduction of approximately 7 to 9 percent in project-generated peak hour bus trips. Nonetheless, the bus line-haul impacts predicted for the proposed project would likely still occur, requiring the same type of mitigation. For pedestrians, the significant adverse impact predicted for the proposed project as a result of one traffic mitigation measure would be of lesser magnitude with the approximately 7 to 9 percent lower project-generated peak hour person trips realized by the Reduced Density Alternative. This impact could be similarly addressed with the same measures recommended to mitigate the proposed project's significant adverse pedestrian impact.

Parking

Under the Reduced Density Alternative, there would be a reduction in both overall parking demand and overall parking supply. Under this alternative, Building 8 would not be built which would result in a decrease in overnight parking demand of 144 spaces as compared to the proposed project. However, there would also be 171 fewer parking spaces provided. Under the proposed project, there would be an overnight surplus of 27 parking spaces in the Building 8 garage which could partially satisfy overnight parking shortfalls occurring in other project garages. So with the absence of these surplus parking spaces in the Reduced Density Alternative, the overall overnight parking shortfall would increase by 27 spaces, from 173 to 200, as compared to the proposed project.

AIR QUALITY

Neither the Reduced Density Alternative nor the proposed project would result in any significant adverse air quality impacts on sensitive uses in the surrounding community from either mobile or stationary sources, and neither would be adversely affected by existing sources of air emissions in the project area. The restrictions regarding fuel type and exhaust stack locations identified in Chapter 16, "Air Quality," would be required for the Reduced Density Alternative as well as for the proposed project.

GREENHOUSE GAS EMISSIONS

Both the proposed project and the Reduced Density Alternative would be designed to meet New York City Energy Conservation Code requirements and would be committed to reducing energy consumption. The additional commitments and goals outlined in Chapter 17, "Greenhouse Gas

Emissions," would be applicable to both the proposed project and the Reduced Density Alternative.

NOISE

The Reduced Density Alternative would result in substantially similar noise effects as the proposed project. This alternative would result in less traffic than the proposed project, but is expected to (like the proposed project) result in a noticeable increase in noise levels at locations immediately adjacent to the new roadway segment connecting Astoria Boulevard between 1st Street and 8th Street but these would be below the absolute noise level of 65 dBA $L_{eq(1)}$. Neither this alternative nor the proposed project would result in significant adverse mobile source noise impacts.

The building attenuation measures identified for the proposed project for Buildings 1 through 7 would also be required for this alternative.

This alternative would also result in noise levels in the proposed open space and waterfront esplanade similar to the proposed project—greater than the 55 dBA $L_{10(1)}$ CEQR guideline. These noise levels are comparable to other parks around New York City and therefore, the future projected noise levels for either the proposed project or the Reduced Density Alternative would not constitute a significant adverse noise impact.

NEIGHBORHOOD CHARACTER

Like the proposed project, the Reduced Density Alternative would result in substantial changes to the project site, and neither would have significant adverse impacts on the neighborhood character of the area. Rather, both this alternative and the proposed project would improve the neighborhood character of the area by replacing industrial buildings and largely underutilized lots with new, mixed-use buildings with active ground-floor uses, providing publicly accessibly open space, including landscaped, pedestrian connections to a waterfront esplanade, and improving access to the waterfront and circulation on the project site. With no Building 8, this alternative would limit the positive neighborhood character effects by not introducing new uses to enliven Astoria Boulevard.

CONSTRUCTION

Under the Reduced Density Alternative, construction similar to what has been described in Chapter 20, "Construction," would occur on the project site under the reasonable worst-case conceptual construction schedule, with the exception of Building Site 8, which would not be disturbed under this alternative.

The Reduced Density Alternative would result in the same level of additional vehicle trips and increased parking demand generated by the proposed project's construction activities during the majority of the project's anticipated construction period. The exception would be during the final approximately 2 years of the project's overall construction, the anticipated vehicle trips and parking demands would be less than those anticipated for the proposed project, because construction would not be simultaneously occurring at Building Site 8 under this alternative. However, even without construction occurring at Building Site 8, the peak construction period for the Reduced Density Alternative would still occur during the first quarter of 2021, with concurrent construction activities occurring at Building Sites 5 and 7B, with both building sites

undergoing labor intensive overlapping construction stages (building core, shell, and finishing) simultaneously during that quarter.

Under the Reduced Density Alternative, the average number of workers would decrease to about 201 per day throughout the construction period (compared with about 230 per day under the proposed project). Under the Reduced Density Alternative, the peak average number of workers would be 419 per day in the first quarter of 2021, compared with a peak for the proposed project of 628 workers per day (also during the first quarter of 2021). For truck trips, the average number of trucks under the Reduced Density Alternative would be 23 per day (three per day less than with the proposed project), and the peak average would also occur in the first quarter of 2021 with 46 trucks per day (21 less than with the proposed project).

The Reduced Density Alternative would also result in many of the air pollutant emissions and increased noise levels that would be associated with the construction of the proposed project. As such, the Reduced Density Alternative would be anticipated to result in significant adverse impacts to traffic, transit, and noise similar to those described for the proposed project during the construction period, and these impacts would require similar mitigation measures. As with the proposed project, the Reduced Density Alternative would not result in significant adverse construction impacts with respect to air quality, historic and cultural resources, hazardous materials, open space, socioeconomic conditions, community facilities, natural resources, and land use and neighborhood character.

PUBLIC HEALTH

As described Chapter 21, "Public Health," and above, neither the proposed project nor the Reduced Density Alternative would result in significant adverse impacts in the following technical areas: air quality, water quality, hazardous materials, or operational noise.

While during some periods of construction, both the alternative and the proposed project would result in significant adverse impacts related to noise as defined by CEQR thresholds, the predicted overall changes to noise levels would not be large enough to significantly affect public health. Therefore, neither the Reduced Density Alternative nor the proposed project would result in significant adverse public health impacts. ✷