Chapter 18: Alternatives

A. INTRODUCTION

As described in Chapter 1, "Project Description," the New York Blood Center (the Applicant) is requesting a rezoning and other discretionary actions (the Proposed Actions) to facilitate the construction of the Proposed Project, an approximately 596,200 gross-square-foot (gsf) building on the site of its existing New York Blood Center (NYBC) building at 310 East 67th Street, Block 1441 Lot 40 (the Development Site). Block 1441 is bounded by East 66th and East 67th Streets and First and Second Avenues and is part of a larger Rezoning Area which also includes Block 1441, Lots 1001-1202, and Block 1421, p/o Lot 21.

This chapter considers alternatives to the proposed project, including the No Action Condition and a smaller building that would avoid or reduce the significant adverse shadows impact of the Proposed Project.

PRINCIPAL CONCLUSIONS

NO ACTION ALTERNATIVE

The No Action Alternative is the Future without the Proposed Actions (No Action Condition), described in Chapter 1, "Project Description," and analyzed in Chapters 2 through 15. At 229,092 gsf, it would be 367,108 gsf smaller than the Proposed Project with 596,200 gsf. At a total roof height of 75 feet, it would be 259 feet shorter than the 334-foot-tall Proposed Project. Being a much shorter building, it would avoid the significant adverse shadow impact on St Catherine's Park. However, the No Action Alternative would not create a life sciences hub, and it would not support the City's strategic initiatives to strengthen the life sciences ecosystem, create jobs, and advance research and development. The No Action Alternative would have a smaller worker population than the Proposed Project, but it would generate more visitors as patients and caregivers coming to medical appointments. Although construction of the No Action Alternative would be smaller scale than the Proposed Project, the No Action Alternative would still have the potential to result in significant adverse impacts with respect to construction noise. As construction of the No Action Alternative can occur as-of-right without any discretionary approvals, the mitigation measures proposed under the Proposed Project would not be implemented and potential construction noise impacts would be unmitigated.

NO SIGNIFICANT ADVERSE SHADOW IMPACT ALTERNATIVE

The No Significant Adverse Shadow Impact Alternative would be approximately half the height of the Proposed Project. The shorter building is not considered financially feasible by the Applicant or its Partners. It would reduce—but not completely remove—the shadow impact on St. Catherine's Park. Effects on other analysis areas would be reduced; however, there would still be a significant adverse construction noise impact.

B. NO ACTION ALTERNATIVE

Absent the Proposed Actions, the Applicant would construct a new building as-of-right containing laboratory space as well as other Use Group 4 (UG-4) community facility uses, specifically medical offices. The No Action Alternative would be an approximately 229,092-gsf split between 40,161 gsf of medical offices and 188,931 gsf of space for the Applicant's operations. Two below-grade levels of the structure would occupy the entire Development Site and six-story-wings would rise on both street frontages to a maximum base height of approximately 60 feet, a maximum roof height of approximately 75 feet (see **Figure 18-1**). No development is anticipated in the remainder of the Rezoning Area.

LAND USE, ZONING AND PUBLIC POLICY

LAND USE

Similar to the Proposed Project, the No Action Alternative would be compatible with existing land use in the surrounding area, and it would not result in any significant adverse impacts to land use, zoning, and public policy. It would not require any of the land use actions necessary for the Proposed Project, and it would conform to existing zoning. Like the Proposed Project, the No Action Alternative would not result in any significant adverse impacts to land use on the project site or in the study area.

Similar to the Proposed Project, the No Action Alternative would require demolition of the existing building on the Development Site. The No Action Alternative would only have an FAR of 5.1 and a floor area of 229,092 gsf as compared to the Proposed Project at 10.0 FAR and 696,240 gsf. The No Action Building would cover the entire site at the cellar and sub-cellar levels. Above grade, it would be divided in two structures fronting the sidewalks on East 66th and East 67th Streets. Parking access would be on East 67th Street, as would the main entrance to the Applicant's laboratories. Medical office access and other service access would be located on East 66th Street. Space for the Applicant's operations would be somewhat smaller at 188,931 gsf as compared with 206,440 gsf with the Proposed Project. However, the Applicant would not have the large floor plates needed for modern research facilities, and some elements could not be right-sized. Instead of laboratory and research partners, the No Action Alternative would contain medical offices occupying approximately 40,162 gsf. Further, by not creating a life sciences hub, the No Action Alternative would not support the City's strategic initiatives to strengthen the life sciences ecosystem, create jobs, and advance research and development.

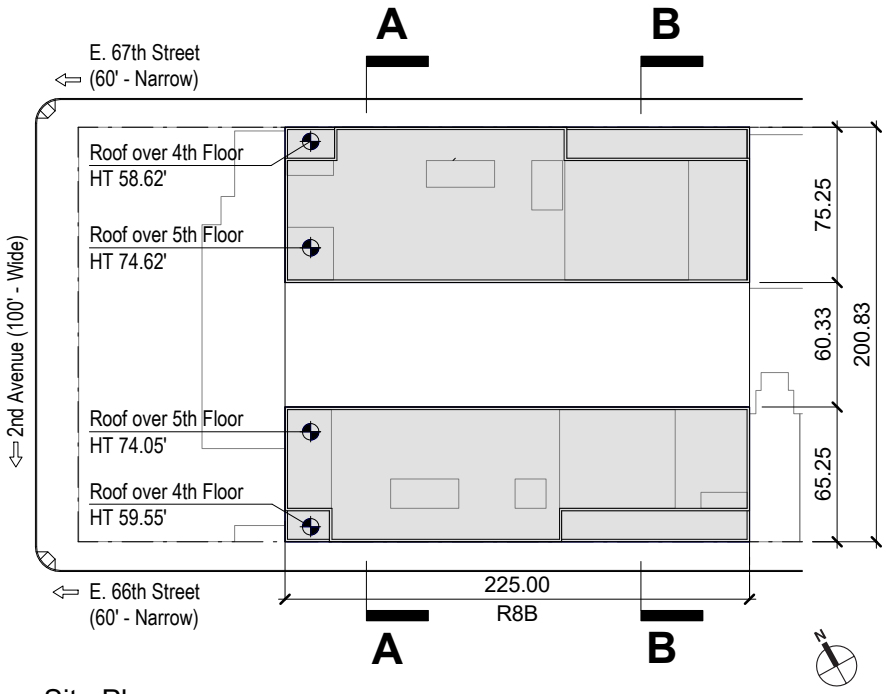
The anticipated number of workers would be 670, as compared to the Proposed Project's estimated 2,630 workers. However, in addition to workers, the medical offices would bring a daily stream of patients, some accompanied by caregivers, to the building.

ZONING

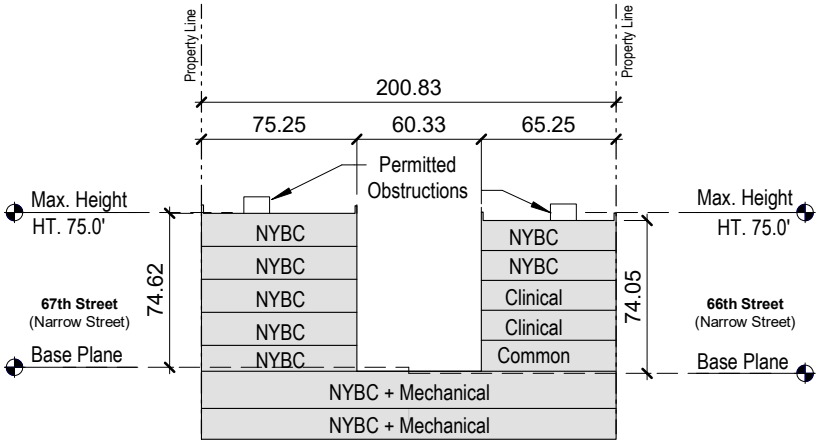
The No Action Alternative would have uses similar to those in the study area and would comply with existing zoning. As with the Proposed Project, the No Action Alternative would not result in significant adverse land use or zoning impacts in the study area.

PUBLIC POLICY

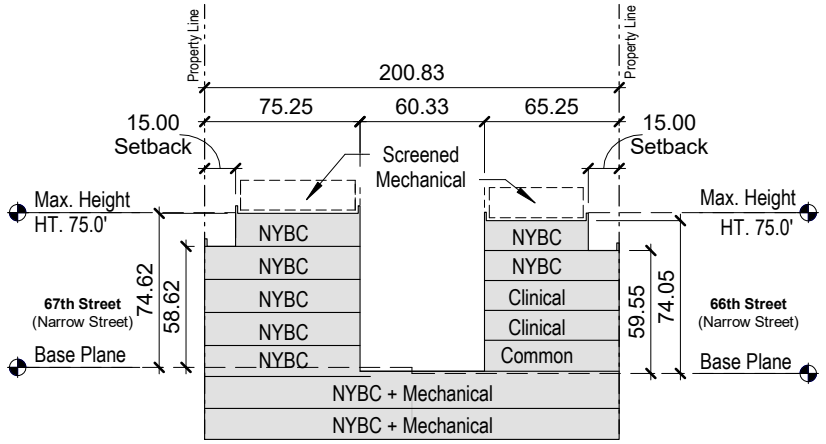
By not providing the additional floor area for laboratories, the No Action Alternative would be less supportive of the public policies relating to the expansion of life sciences in New York City



Site Plan



Section AA



Section BB



Source: Ennead Architects

No Action Construction

No Action Building Site Plan and Sections

NEW YORK BLOOD CENTER—CENTER EAST

Figure 18-1

than the Proposed Project. As with the Proposed Actions, the No Action Alternative would not result in any significant adverse impacts to public policy.

OneNYC

The mission of *OneNYC* is a plan for growth, sustainability, resiliency, and equity. The No Action Alternative would not contribute to *OneNYC*'s goal for growth in emerging fields.

New York Works

The No Action Alternative would not be as supportive of the goal of New York Works to expand the life sciences and healthcare industry.

LIFESCI NYC Initiative

The No Action Alternative would not advance the City's policy of becoming a leader in the life sciences because it would not do more than replace the old NYBC space with new NYBC space. It would not expand the types of activities either at NYBC or within the institutional complex in the East 60s, and it would not provide a major visible contribution to LIFESCI NYC that the proposed Center East would.

SOCIOECONOMICS

Similar to the Proposed Project, the No Action building would not result in significant adverse socioeconomic impactsand, more specifically, it would not result in significant adverse impacts due to indirect business displacement. The No Action Alternative would not introduce new economic activities to the study area, as the study area already has a well-established medical, research, and institutional presence. The study area is home to major medical centers such as the New York Presbyterian/Weill Cornell Medical Center and the Memorial Sloan-Kettering Cancer Center and major institutions such as the Rockefeller University. These medical and institutional uses are dispersed within the largely residential and mixed residential and commercial Upper East Side. The study area includes over 5 million gsf of medical and research space and 13.4 million gsf of commercial space overall. The Health Care and Social Assistance sector accounts for 58.5 percent of the employment in the study area, followed by the Professional, Scientific, and Technical Services sector at 10.4 percent. Therefore, the community facility development resulting from the No Action Alternative would not constitute new economic activity in the study area and would not substantively alter existing economic patterns; however, the No Action Alternative would be much less supportive of the existing cluster of medical, research, and other institutional uses in the Upper East Side than the Proposed Project.

OPEN SPACE

Similar to the Proposed Project, the No Action Alternative would not alter or eliminate any publicly accessible open space resources in the Rezoning Area. At a maximum of 75 feet the No Action Alternative would cast less shadow than the Proposed Project on St. Catherine's Park (see Shadows, below).

The No Action Alternative would introduce approximately 1,960 fewer new workers to the open space study area than the Proposed Project. Although the medical offices would also bring patients and some with their caregivers to the area, the patient/caregiver population would place less demand on publicly accessible open space resources. Currently, the passive open space ratio in the study area for non-residential users (0.065 acres/1,000 people) is below the City's guideline of 0.15 as indicated in the 2020 *City Environmental Quality Review (CEQR) Technical Manual*;

it would remain below the guideline with the No Action Alternative as it would with the Proposed Project.

SHADOWS

The No Action Alternative would be over 200 feet shorter than the Proposed Project, and would cast less shadow for shorter durations on St. Catherine's Park during the afternoons in the spring/fall, summer, and winter than the Proposed Project. This would avoid the potential significant adverse shadows impact anticipated with the Proposed Project (see **Figures 18-2 to 18-9**). In addition, the No Action building's shadows would only cast a small shadow on 265 East 66th Street on the December 21 analysis day, approx. 8:51 AM to 9:30 AM and an even smaller shadow on the Manhattan House on May 6/August 6 and June 21 for around 10 minutes.

HISTORIC AND CULTURAL RESOURCES

As with the Proposed Project, the No Action Alternative would not result in the demolition or alteration of any historic resources. Also similar to the Proposed Project, construction of the No Action Alternative has the potential to damage the adjacent Library Building at 328 East 67th Street which may be determined S/NR-eligible or NYCL-eligible. Therefore, a Construction Protection Plan (CPP) would be needed to protect the Library Building from inadvertent construction-related damage including ground-borne vibration, falling debris, and accidental damage from heavy machinery associated with the construction of the No Action Alternative.

The No Action Alternative would not result in any visual or contextual impacts to other historic or potential historic resources in the study area (Manhattan House, 210 East 68th Street, 215 East 68th Street/1299 Second Avenue, and 333 East 68th Street) due to distance or buildings.

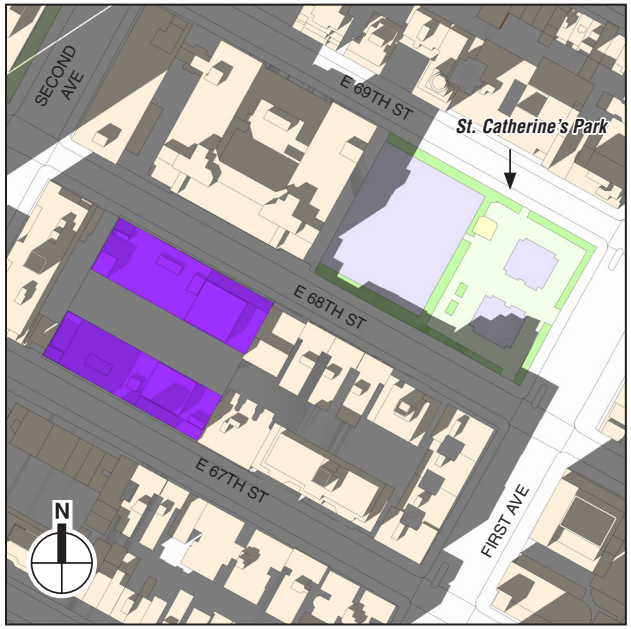
Similar to the Proposed Project, the No Action Alternative would not result in any significant adverse impacts to historic and cultural resources.

URBAN DESIGN AND VISUAL RESOURCES

The No Action Alternative would comply with existing zoning and would not adversely affect urban design features in the study area or alter the context of a natural or significant built resource. As with the Proposed Project, the No Action Alternative would have no significant adverse impacts on urban design or visual resources, or the pedestrian's experience of these characteristics of the built and natural environment. The No Action Alternative would not adversely impact the vitality, the walkability, or visual character of the area. Therefore, no further analysis of urban design and visual resources is warranted.

HAZARDOUS MATERIALS

Similar to the Proposed Project, the No Action Alternative would entail demolition of the existing structure and excavation for the new development and, therefore, could result in significant adverse impacts related to hazardous materials unless such impacts are precluded through compliance with existing regulatory requirements and the completion of a NYC Department of Environmental Protection (DEP)-approved Subsurface (Phase II) Investigation and Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP). Although the No Action Alternative is as-of-right, material classification would be required, and, if materials are deemed hazardous, the No Action Alternative would require the same efforts and protocols as the proposed building.



No Action Alternative



No Significant Adverse Impact Alternative



With Action

Incremental Shadow

NOTE: Only the areas of shadow highlighted in red represent incremental shadow resulting from the building on the development site. All other shadow is future No Action shadow, i.e., baseline shadow from existing and future No Action buildings. Daylight Saving Time not used, per CEQR Technical Manual guidelines. However, it is in effect on this date, so add one hour to the given time to determine the actual clock time.

March 21/September 21
3:00 PM

NEW YORK BLOOD CENTER—CENTER EAST

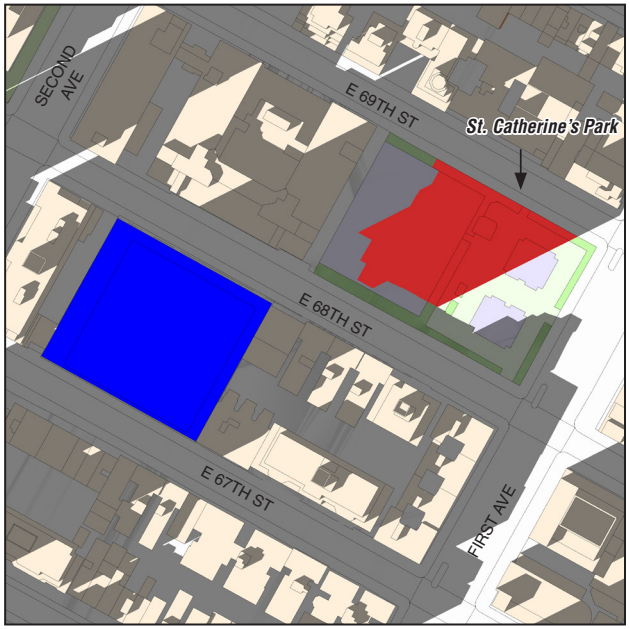
Figure 18-2



No Action Alternative



No Significant Adverse Impact Alternative



With Action

Incremental Shadow

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March 21/September 21
3:30 PM

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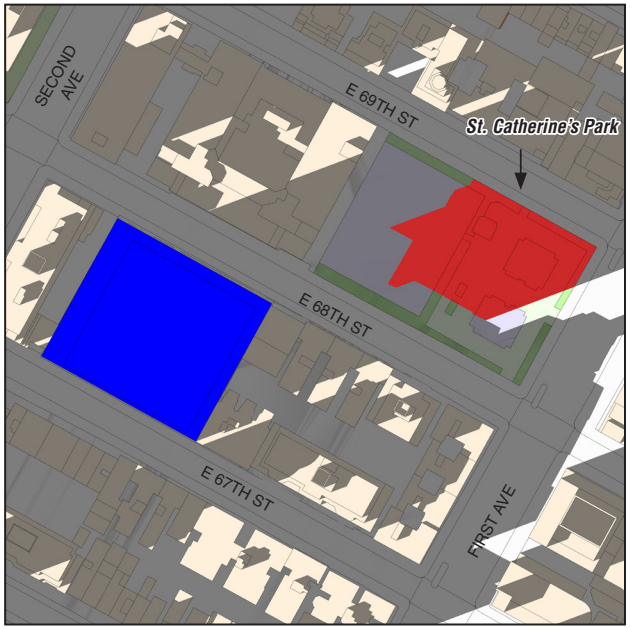
Figure 18-3



No Action Alternative



No Significant Adverse Impact Alternative



With Action

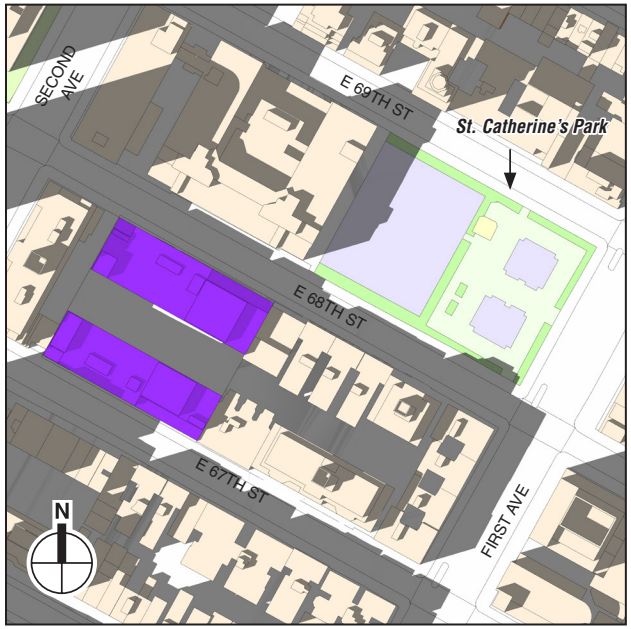
Incremental Shadow

NOTE: Only the areas of shadow highlighted in red represent incremental shadow resulting from the building on the development site. All other shadow is future No Action shadow, i.e., baseline shadow from existing and future No Action buildings. Daylight Saving Time not used, per CEQR Technical Manual guidelines. However, it is in effect on this date, so add one hour to the given time to determine the actual clock time.

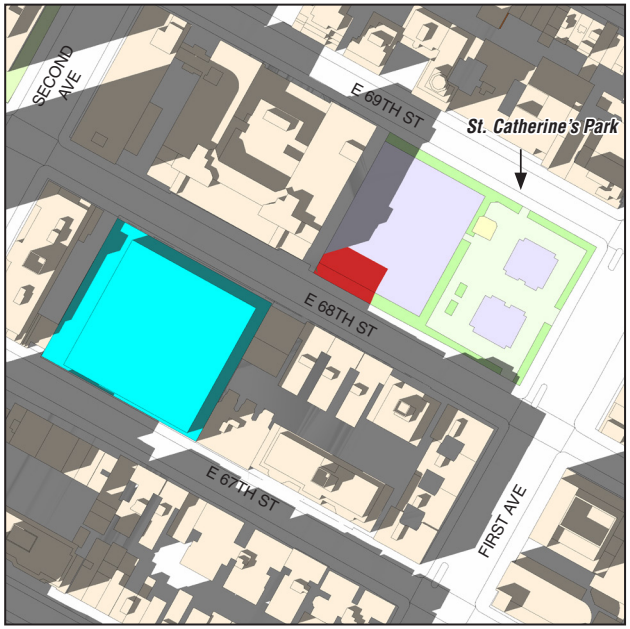
March 21/September 21
4:00 PM

NEW YORK BLOOD CENTER—CENTER EAST

Figure 18-4



No Action Alternative



No Significant Adverse Impact Alternative



With Action

Incremental Shadow

NOTE: Only the areas of shadow highlighted in red represent incremental shadow resulting from the building on the development site. All other shadow is future No Action shadow, i.e., baseline shadow from existing and future No Action buildings. Daylight Saving Time not used, per CEQR Technical Manual guidelines. However, it is in effect on this date, so add one hour to the given time to determine the actual clock time.

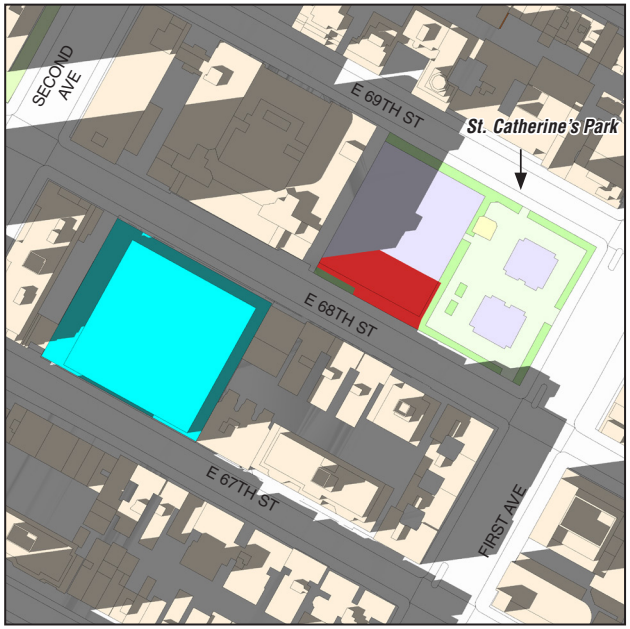
May 6 / August 6
3:00 PM

NEW YORK BLOOD CENTER—CENTER EAST

Figure 18-5



No Action Alternative



No Significant Adverse Impact Alternative



With Action

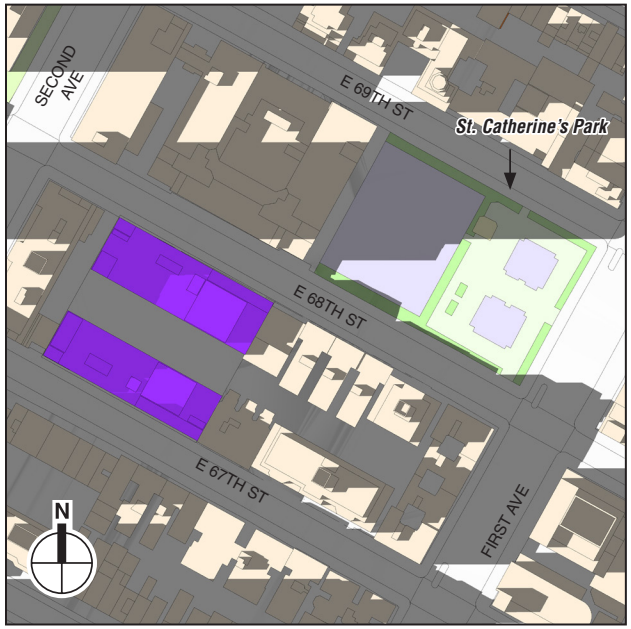
Incremental Shadow

NOTE: Only the areas of shadow highlighted in red represent incremental shadow resulting from the building on the development site. All other shadow is future No Action shadow, i.e., baseline shadow from existing and future No Action buildings. Daylight Saving Time not used, per CEQR Technical Manual guidelines. However, it is in effect on this date, so add one hour to the given time to determine the actual clock time.

May 6 / August 6
3:45 PM

NEW YORK BLOOD CENTER—CENTER EAST

Figure 18-6



No Action Alternative



No Significant Adverse Impact Alternative



With Action

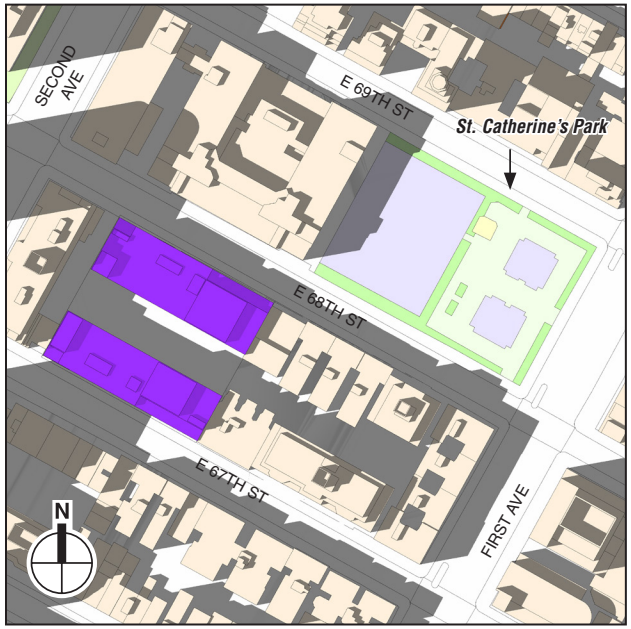
Incremental Shadow

NOTE: Only the areas of shadow highlighted in red represent incremental shadow resulting from the building on the development site. All other shadow is future No Action shadow, i.e., baseline shadow from existing and future No Action buildings. Daylight Saving Time not used, per CEQR Technical Manual guidelines. However, it is in effect on this date, so add one hour to the given time to determine the actual clock time.

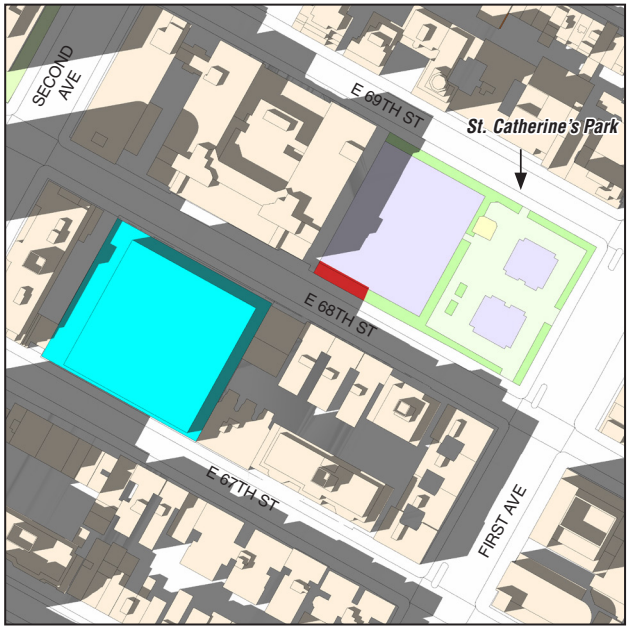
May 6 / August 6
4:30 PM

NEW YORK BLOOD CENTER—CENTER EAST

Figure 18-7



No Action Alternative



No Significant Adverse Impact Alternative



With Action

Incremental Shadow

NOTE: Only the areas of shadow highlighted in red represent incremental shadow resulting from the building on the development site. All other shadow is future No Action shadow, i.e., baseline shadow from existing and future No Action buildings. Daylight Saving Time not used, per CEQR Technical Manual guidelines. However, it is in effect on this date, so add one hour to the given time to determine the actual clock time.

June 21
3:00 PM

NEW YORK BLOOD CENTER—CENTER EAST

Figure 18-8



No Action Alternative



No Significant Adverse Impact Alternative



With Action

Incremental Shadow

NOTE: Only the areas of shadow highlighted in red represent incremental shadow resulting from the building on the development site. All other shadow is future No Action shadow, i.e., baseline shadow from existing and future No Action buildings. Daylight Saving Time not used, per CEQR Technical Manual guidelines. However, it is in effect on this date, so add one hour to the given time to determine the actual clock time.

June 21
4:30 PM

NEW YORK BLOOD CENTER—CENTER EAST

Figure 18-9

WATER AND SEWER INFRASTRUCTURE

As compared to the Proposed Project (which would not result in any significant adverse impacts on the City's water supply or wastewater and stormwater conveyance and treatment infrastructure), the No Action Alternative would result in a smaller increase in water consumption and sewage generation. An analysis of water supply is not warranted since it is expected that there would be adequate water service to meet the incremental demand, and there would be no significant adverse impacts on the City's water supply.

Located in the service area of the Newtown Creek Wastewater Treatment Plant (WWTP), neither the Proposed Project (which would generate 59,620 gallons per day [gpd] of sanitary sewage) nor the No Action Alternative (which would generate 22,909 gpd of sanitary sewage) would result in an exceedance of the plant's permitted capacity. Therefore, neither the Proposed Project not the No Action Alternative would result in a significant adverse impact to the City's sanitary sewage conveyance and treatment system.

Because the Development Site is almost entirely covered with rooftop or paved surfaces in existing conditions, the No Action Alternative, similar to the Proposed Project, would not result in a substantial increase in impervious surface; therefore, there would be a minimal increase in stormwater runoff. Therefore, similar to the Proposed Project, the No Action Alternative would not have a significant adverse impact on the City's combined sewer system or the City's sewage treatment system.

TRANSPORTATION

TRAFFIC

The No Action Alternative would result in increases of 54, 36, and 34 vehicle trips during the weekday AM, midday, and PM peak hours, respectively as compared to the Proposed Project. Similar to the Proposed Project, the No Action Alternative would not cause any significant adverse impacts on traffic.

TRANSIT

The No Action Alternative would result in 42, 116, and 43 more person trips by subway during the weekday AM, midday, and PM peak hours, respectively. Although the No Action Alternative would have more substantial effects on the subway system because of its higher overall peak hour volumes of subway trips, the trips would be distributed between the multiple subway lines at the 72nd Street Station at Second Avenue, Lexington Avenue/63rd Street Station at Third Avenue, and 68th Street/Lexington Avenue Station. Therefore, similar to the Proposed Project, the No Action Alternative would not cause any significant adverse subway impacts.

The No Action Alternative would result in 28, 22, and 22 fewer person trips by rail during the weekday AM, midday, and PM peak hours, respectively. Similar to the Proposed Project, the No Action Alternative would not cause any significant adverse rail impacts.

The No Action Alternative would result in 27, 13, and 19 more person trips by bus during the weekday AM, midday, and PM peak hours, respectively. Similar to the Proposed Project, the No Action Alternative would not cause any significant adverse bus impacts.

PEDESTRIANS

The No Action Alternative would not result in an increase of 21 person trips in the AM peak hour or decreases of 124 and 3 person trips in the midday and PM peak hours, which would traverse the area's sidewalks, corner reservoirs, and crosswalks. Although the No Action Alternative would have more substantial effects on pedestrian elements during the weekday midday and PM peak hours because of its higher overall pedestrian trips, the trips would be distributed among many individual pedestrian elements in the area, i.e., sidewalks, corner reservoirs, and crosswalks. Therefore, similar to the Proposed Project, the No Action Alternative would not cause any significant adverse pedestrian impacts.

AIR QUALITY

The maximum pollutant concentrations and concentration increments from mobile sources with the Proposed Actions are projected to be lower than the corresponding CEQR *de minimis* criteria. The No Action Alternative would result in fewer vehicle trips than the Proposed Project.

Since no businesses were found to have a New York State Department of Environmental Conservation (NYSDEC) air permit or New York City Department of Environmental Protection (DEP) certificate of operation within the study area, and no other potential sources of concern were identified, there would be no potential significant adverse air quality impacts on the No Action Alternative from industrial sources.

The analysis of the existing large source of emissions determined there would be no significant adverse air quality impact on the Proposed Project. Therefore, there would be no impact on the No Action Alternative.

Based on a detailed dispersion modeling analysis, no potential significant adverse air quality impacts were predicted from the Proposed Project's heating and hot water systems. Since the No Action Alternative is a smaller building and would have smaller heating and hot water systems, no significant adverse impacts would be anticipated.

NYBC laboratories would be required to meet all federal, State, and City regulations for handling hazardous materials and provide all necessary safe guards in the event of a chemical spill.

GREENHOUSE GAS AND CLIMATE CHANGE

As compared to the Proposed Project, the No Action Alternative would be smaller and have less floor area, and, therefore, would use less energy. However, as an as-of-right building it would not require consideration of greenhouse gas and climate change. While in general emissions associated with consumption of grid electricity is expected to decrease as New York State and New York City target 100 percent renewable electricity, the No Action Alternative would only be required to consider energy efficiency measures, the inclusion of renewable energy, and carbon emission reductions as required by the Building and Energy Codes. As a smaller structure than the Proposed Project, total GHG emissions associated with the construction of the No Action Alternative, including direct emissions and upstream emissions associated with construction materials, would be expected to be less that for the Proposed Project.

The *CEQR Technical Manual* defines five goals by which a project's consistency with the City's emission reduction goal is evaluated: (1) efficient buildings; (2) clean power; (3) sustainable transportation; (4) construction operation emissions; and (5) building materials carbon intensity.

The No Action Alternative would be required to achieve the energy efficiency requirements of the New York City Building Code and the 2020 Energy Conservation Code of New York State (2020

ECCNYS), which substantially increased the stringency of the building energy efficiency requirements and adopted the ASHRAE 90.1-2016 standard as a benchmark, and aligns with NYStretch Energy Code 2020 developed by New York State Energy Research and Development Authority (NYSERDA).

There would be no requirement that additional energy savings be achieved via guidance for tenant build-out, although the No action Alternative would be required to meet the City's updated building code energy requirements as part of the City's GHG reduction goal.

The No Action Alternative would align with other GHG goals by virtue of its proximity to public transportation. However, it would not be required to align with the City's emissions reduction goals, as defined in the *CEQR Technical Manual*.

NOISE

As with the Proposed Project, there would be no significant adverse noise impacts with operation of the No Action Alternative, as neither would generate sufficient traffic to cause a significant mobile source noise impact. Further, both buildings' mechanical systems (i.e., heating, venting, and air conditioning [HVAC] systems) would be designed to meet all applicable noise regulations and to avoid producing levels that would result in any significant increase in ambient noise levels. Therefore, similar to the Proposed Project, the No Action Alternative would not result in any significant adverse noise impacts related to building mechanical equipment.

The Proposed Project, due to existing high levels of ambient noise in the area, would require a Noise (E) Designation for building attenuation to ensure that interior noise levels meet CEQR criteria at all new construction. In the No Action Alternative, there would be no environmental review and, therefore, no requirement for a Noise (E) Designation and no required levels of window/wall attenuation.

CONSTRUCTION

The overall construction duration for the No Action Alternative is anticipated to be 44 months, approximately seven months shorter than the construction duration for the Proposed Project.

With the No Action Alternative, it is anticipated that construction would be smaller in scale and of a shorter duration than what would be undertaken for the Proposed Project. However, the No Action Alternative would require a level of demolition, excavation, and foundation construction work comparable to that for the Proposed Project, which would result in comparable maximum construction noise levels for a comparable duration at receptors near the project site. Consequently, maximum interior noise levels at these receptors would be comparable to those predicted for the Proposed Project, i.e., up to approximately 17 dBA greater than the level considered acceptable according to *CEQR Technical Manual* noise exposure guidelines. Therefore, similar to the Proposed Project, the No Action Alternative would have the potential to result in significant adverse impacts with respect to construction noise. As construction of the No Action Alternative can occur as-of-right without any discretionary approvals, the mitigation measures proposed under the Proposed Project would not be implemented and potential effects would remain unmitigated.

For all other technical areas, impacts due to construction activities for the No Action Alternative, similar to construction activities for the Proposed Project, would not result in significant adverse impacts.

C. NO SIGNIFICANT ADVERSE SHADOWS IMPACTS ALTERNATIVE

CEQR requires that alternatives be considered that would avoid or reduce the potential significant adverse impacts. In this case avoiding the significant adverse shadows impact on St. Catherine's Park would require that a No Significant Adverse Shadows Impact Alternative that would be approximately half the height of the Proposed Project.

With 16-foot floor-to-floor heights on the partner floors, it would be necessary to remove eight of the nine partner floors, plus one of the two mechanical floors. It is the Applicant's position that the reduction in height to achieve this alternative would effectively eliminate both the feasibility of the project and its contribution to the development of NYC's life sciences economy. Alternatively, removing any of the currently configured Applicant floors, instead of partner floors, would not satisfy the programmatic needs of the Applicant.

With this alternative, in the spring, summer, and fall, incremental shadow would enter the western half of the park, containing the paved ball courts and workout station, about 20 to 30 minutes later compared to the Proposed Project, and would enter the eastern half containing the landscaping, benches, and playgrounds an hour to an hour and 15 minutes later, depending on the season, compared to the Proposed Project. The No Significant Adverse Shadow Impact Alternative would still result in incremental shadow on the Park. However, the size of the incremental shadow would be smaller throughout most of the affected period compared to the Proposed Project as shown in **Figures 18-2 through 18-8**. On the March 21/September 21 analysis day incremental shadow would enter the western side of the park, where the ball courts are located, at approximately 2:05 PM (3:05 PM Eastern Daylight Time [EDT]). An hour later at 3:00 PM (4:00 PM EDT), incremental shadow would still cover less than half the western half of the park (see **Figure 18-2**). At 3:30 PM (4:30 PM EDT), incremental shadow would cover most but not all of the western half of the park, as shown in **Figure 18-3**. The incremental shadow would enter the eastern half of the park, where seating and playgrounds are located, at approximately 3:40 PM (4:40 PM EDT). At 4:00 PM (5:00 PM EDT), 29 minutes before the end of the analysis period, incremental shadow would cover a large area in the middle of the overall park, eliminating sun on the western half, but a large area of sun would remain on the eastern half of the park (see **Figure 18-4**). The remaining sunlight would be eliminated by incremental shadow at 4:25 PM (5:25 PM EDT) and the analysis period ends 4 minutes later after that.

On the May 6/August 6 analysis day, incremental shadow would enter the southwest corner of the park at approximately 1:45 PM (2:45 PM EDT). At 3:00 PM (4:00 PM EDT), the incremental shadow would still be limited to the southwestern part of the paved ball courts/workout station half of the park, while the eastern half of the park would continue to be fully in sun (see **Figure 18-5**). The incremental shadow would continue moving east and enter the eastern half of the park at 3:45 PM (4:45 PM EDT), but only in the southern part, leaving nearly all the eastern half and a portion of the western half in sun at this time (see **Figure 18-6**). At 4:30 PM (5:30 PM EDT), 48 minutes before the end of the analysis day, incremental shadow would fall on portions of the southern half of the park but a large area on the eastern side and small area on the western side would remain in sun (see **Figure 18-7**). Incremental shadow would eliminate the remaining patch of sun for the last eight minutes of the analysis day. By comparison, with the Proposed Project, the eastern half of the park containing benches and playgrounds would be entirely in shadow, most of it incremental, from 3:30 PM (4:30 PM EDT) until the end of the analysis day.

On the June 21 analysis day, similar to May 6/August 6, incremental shadow would enter the southwest corner of the park at approximately 1:45 PM (2:45 PM EDT). On this analysis day,

shadows are shorter and fall further south than at other times of year. The incremental shadow would be limited to the southern parts of the park, and substantial areas of sun would remain throughout its duration (see **Figures 18-8 and 18-9**). The incremental shadow would enter the eastern half of the park at 4:00 PM (5:00 PM EDT), but only near the southern edge, while virtually all the eastern half would be in sun at this time. By comparison, with the Proposed Project, most of it would be in incremental shadow. As with the Proposed Project, the incremental shadow with the No Significant Adverse Shadows Impact Alternative would exit in the southeast corner at 5:20 PM.

The No Significant Adverse Shadows Impact Alternative would not eliminate the significant adverse noise impact during construction. Effects on other analysis areas would be reduced; however, none are considered significant adverse impacts. ✶