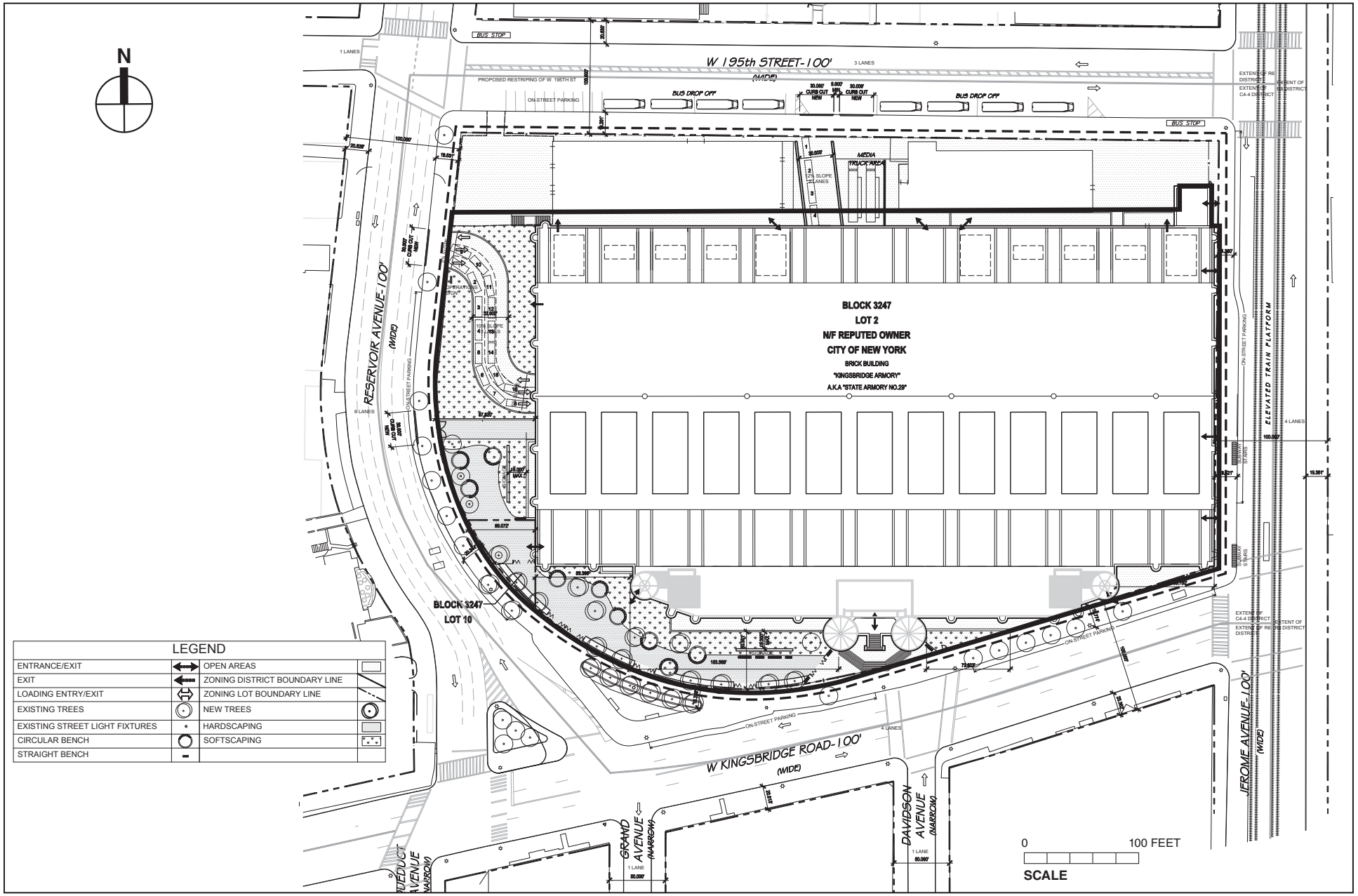
A. PROJECT DESCRIPTION

The Kingsbridge Armory National Ice Center (KNIC) project is a proposed redevelopment of the Armory building (the "Armory")—a historic landmark that is substantially vacant—with approximately 795,000 gross square feet (gsf) of new uses, including approximately 457 parking spaces (the proposed project).

The proposed project would be located in the Kingsbridge Heights neighborhood of the Bronx on Block 3247, Lot 10 and a portion of Lot 2. The project site occupies most of the block bounded by West 195th Street, Reservoir Avenue, West Kingsbridge Road, and Jerome Avenue (see **Figure S-1**). The site is largely occupied by the Armory building, which is substantially vacant, apart from the storage of graffiti removal trucks by the Mayor's Office's "Graffiti Free NYC" program. In addition to the Armory building, the project site includes small, landscaped areas to the south and west of the Armory building. The Armory is a New York City Landmark (NYCL) and is listed on the New York State and National Registers of Historic Places (S/NR).

The proposed project would redevelop the Armory with approximately 795,000 gsf of new development, including 9 ice rinks; approximately 64,000 gsf of related program space, including a wellness/off-ice training center, curling rinks, and lockers/equipment storage; approximately 58,000 gsf of related food and beverage, concession, and retail space; and approximately 50,000 gsf of community facility space, which is assumed to include fitness and recreation facilities, multipurpose rooms, child care, business incubator space, and meeting rooms for local community use (see **Table S-1** and **Figures S-2 through S-5**). The proposed ice rinks are intended for use by neighborhood students and residents, high school and college leagues, open skating times, instructional training, adult professional (minor league) and non-professional hockey games, figure and speed skating, and other ice events. The central, main rink would have a capacity of approximately 5,000 seats; the other rinks would have limited, temporary bleacher seating (approximately 100 seat-capacity per rink). The main pedestrian entrance to the facility would be at the Armory's headhouse on West Kingsbridge Road; alternate pedestrian entrances would be from Reservoir Avenue, Jerome Avenue, and West 195th Street.

Approximately 457 accessory parking spaces would be provided in the Armory's basement and cellar levels. Entry to the parking garage and loading dock areas would be from Reservoir Avenue and West 195th Street, at the west and north sides of the project block; new curb cuts would be created at these locations. In addition, the south side of West 195th Street is anticipated to be utilized for school and event bus drop-off and pickup, as well as temporary parking for other vehicles during special events, subject to DOT approval. This Environmental Impact Statement (EIS) assumes that school and event buses—as well as overflow vehicles from the project's accessory parking garage, as necessary—would park at the Lehman College lot, north of the project site.



LEGEND			
ENTRANCE/EXIT	⟷	OPEN AREAS	
EXIT	⟵	ZONING DISTRICT BOUNDARY LINE	
LOADING ENTRY/EXIT	⇦	ZONING LOT BOUNDARY LINE	
EXISTING TREES		NEW TREES	
EXISTING STREET LIGHT FIXTURES	•	HARDSCAPING	
CIRCULAR BENCH		SOFTSCAPING	
STRAIGHT BENCH	▬		

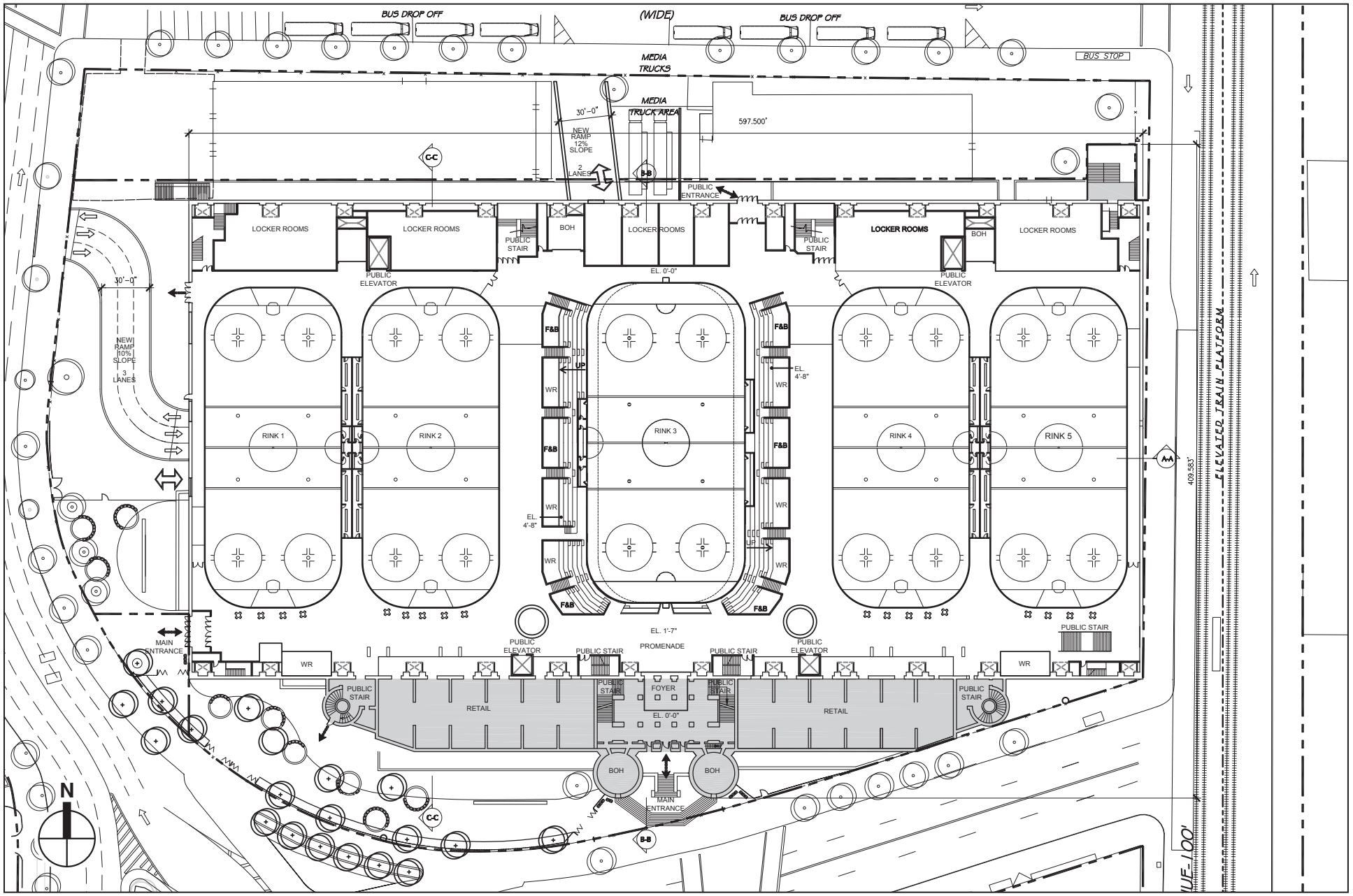
SOURCE: BBB Architects

Project Site Boundary — — — *State/National Register, New York City Landmark Boundary* *Open Areas*

NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

Site Plan
Figure S-1

7.12.13



SOURCE: BBB Architects

0 100 FEET

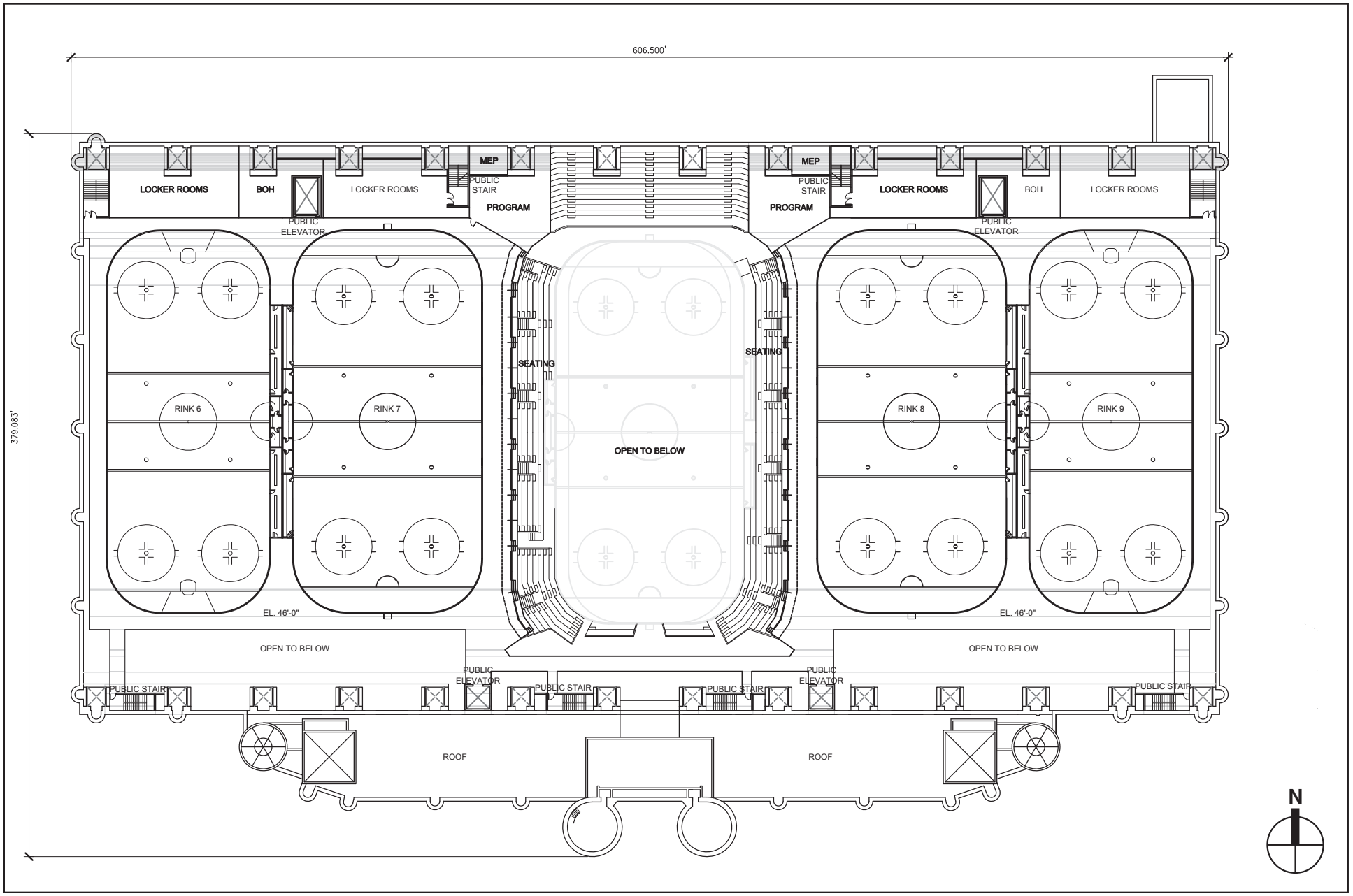
SCALE

NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

Main Ice Level

Figure S-2

7.12.13



SOURCE: BBB Architects

0 100 FEET

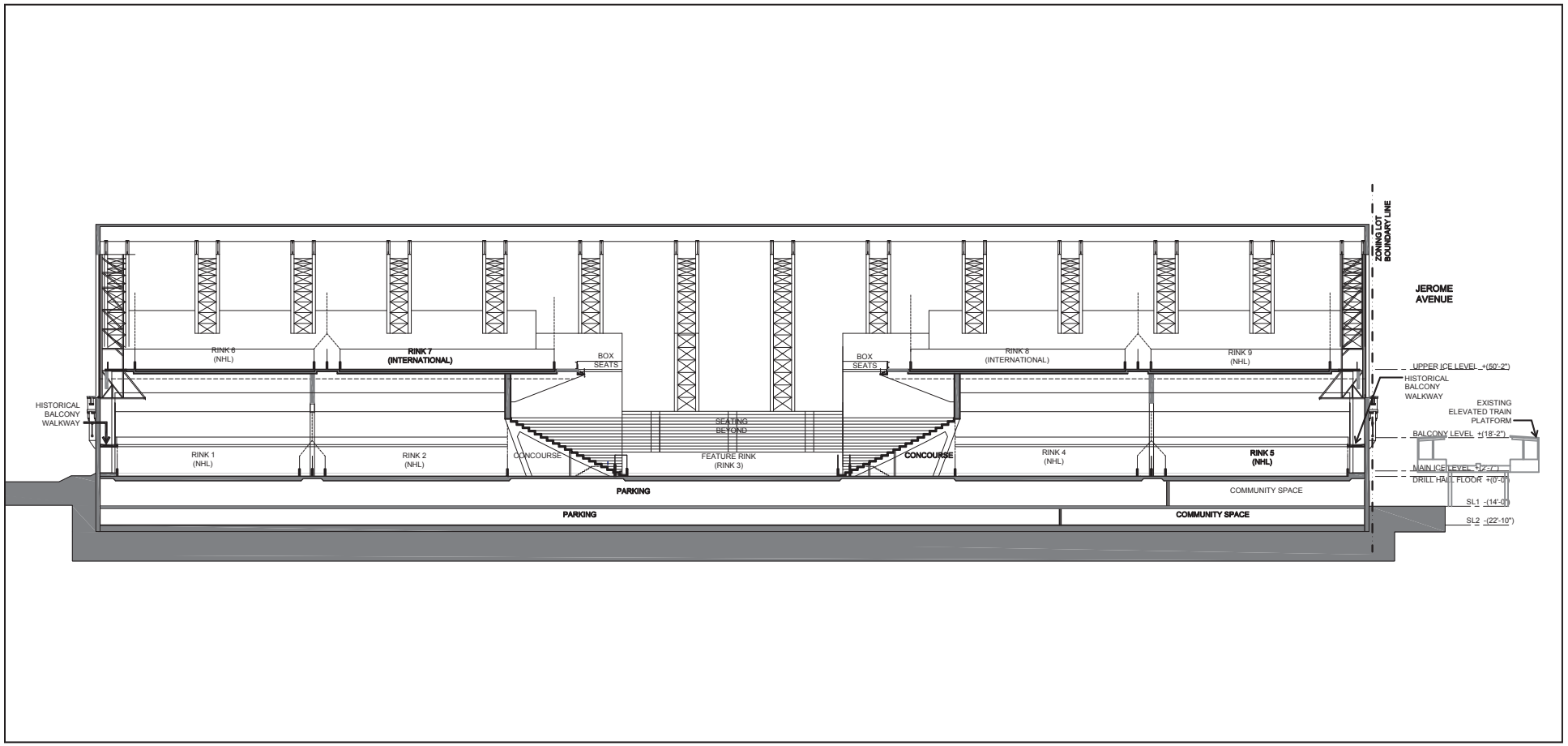
SCALE

NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

Kingsbridge Armory National Ice Center

Upper Ice Level

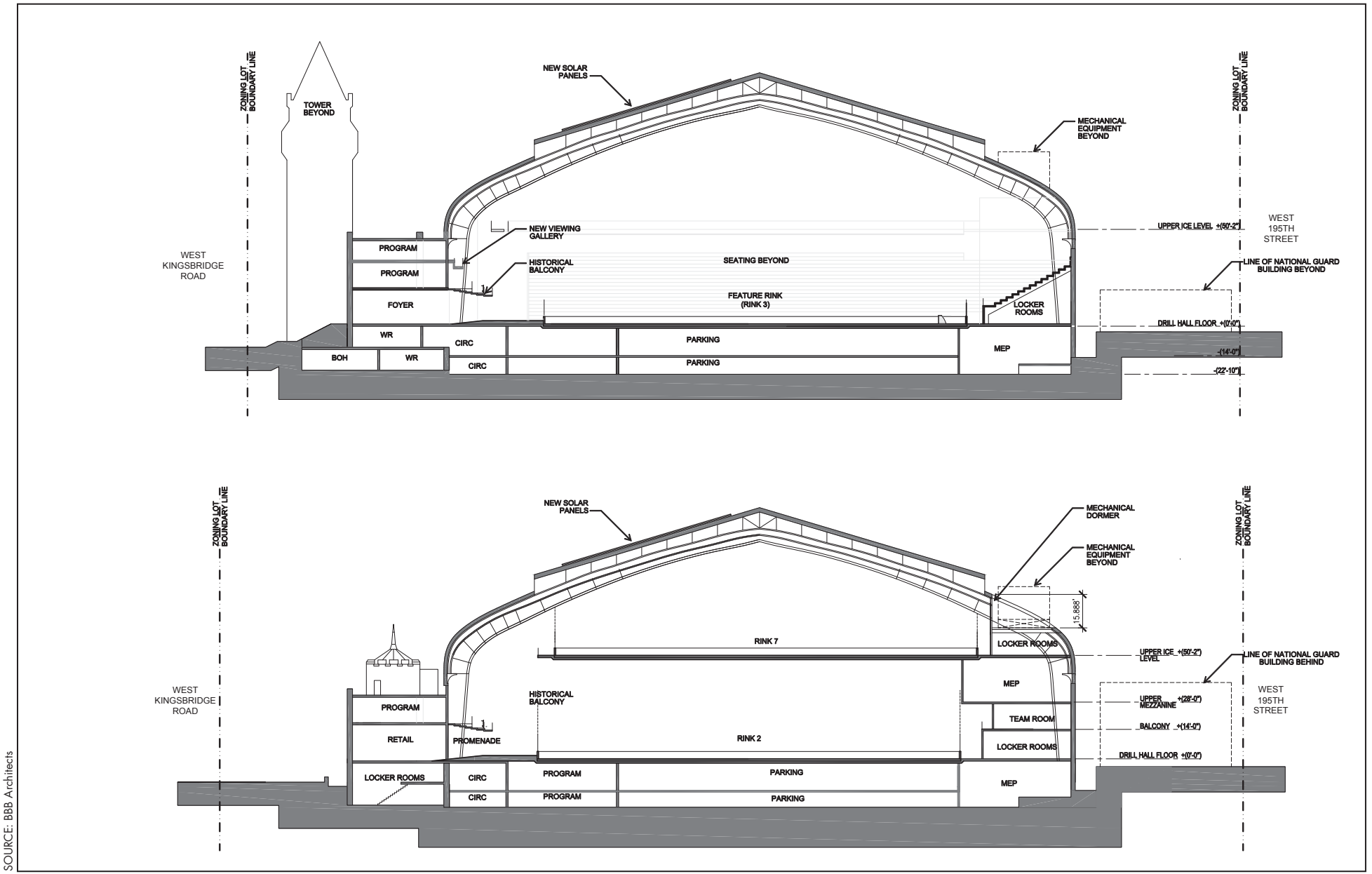
Figure S-3



SOURCE: BBB Architects

NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

East-West Section
Figure S-4



SOURCE: BBB Architects

NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

North-South Sections at Rink 2 and Rink 3

Figure S-5

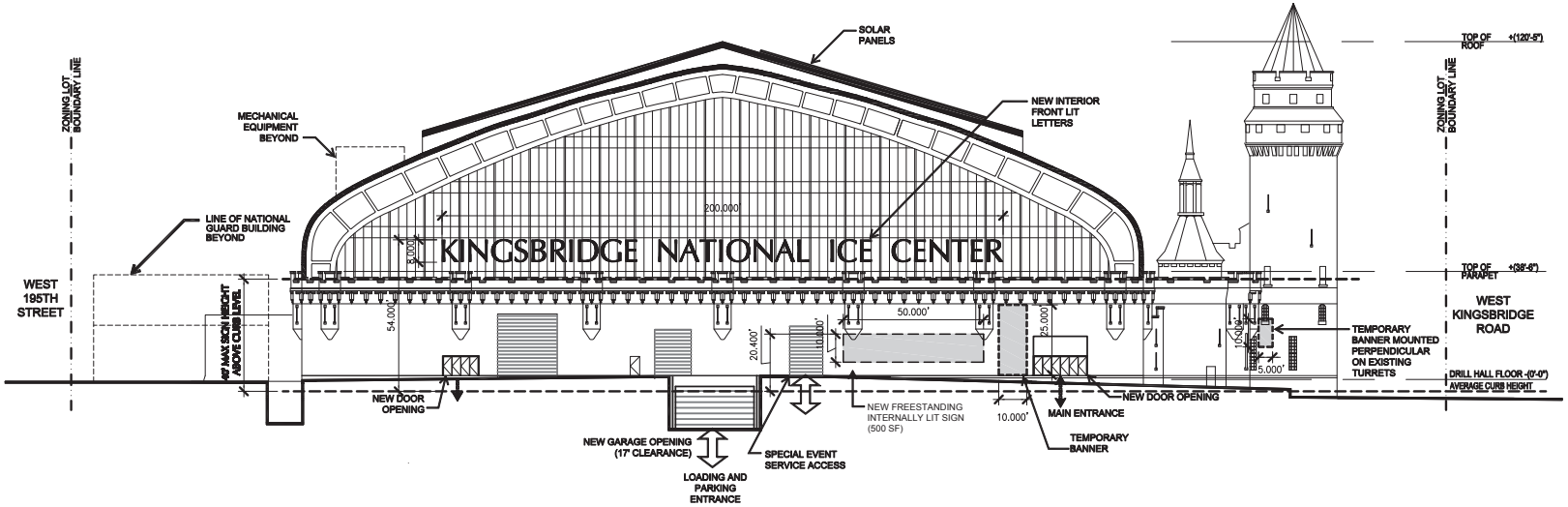
Table S-1
Program Summary*

Use	Gross Square Footage	Spaces / Seats	Other Description
Ice Rinks and Accessory Spaces	±274,400	--	9 rinks total, main rink with capacity of approximately 5,000 seats
Related Program Space	±64,300	--	Wellness/off-ice training center, curling rinks, lockers/equipment storage
Related Food and Beverage/Concessions/ Retail†	±58,100	--	
Community Facility	±50,000	--	Fitness and recreation facilities, multipurpose rooms, child care, business incubator space, meeting rooms
Subtotal	**±446,800**	--	
Parking	±153,300	Approx. 457 spaces	Parking located in basement and cellar ~~and subcellar~~ levels
Mechanical/Circulation/Ice Plant	±194,800	--	--
TOTAL	**±794,900**	--	

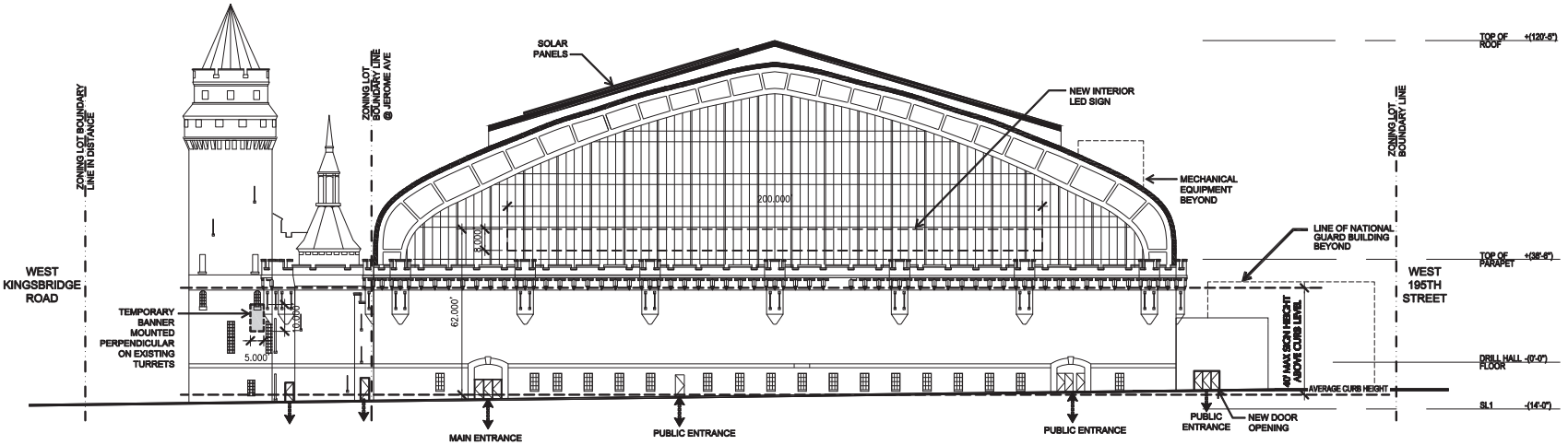
*****All square footages are approximated.
†Includes some circulation area.

The proposed project would involve some changes to the exterior of the historic Armory structure, to provide additional pedestrian and vehicular access, to comply with the Americans with Disabilities Act (ADA), and to accommodate mechanical systems. These are anticipated to include new pedestrian entrances and exits on the north side of the building, a new ADA-compliant entrance at the southwest corner of the building's west facade, a new vehicular entrance and loading dock on the north side of the building, and a new truck entrance on the west side of the building. In addition, there would be several screened openings at the building's roof for the heating, ventilation, and air conditioning (HVAC) system, which could be visible from some nearby vantage points, and signage within and adjacent to the Armory structure. Solar panels are proposed to be installed on the upper (flat) portion of the roof on the south side of the building. Alterations to the historic structure would be designed in consultation with and subject to approval by the New York City Landmarks Preservation Commission (LPC) (and, as required, the New York State Office of Parks, Recreation and Historic Preservation [OPRHP]). **Figures S-6 and S-7** provide illustrative elevations of the proposed project.

The proposed project also would introduce new signage to the interior of the Armory that would be visible from nearby vantage points. Illuminated signs would be added within the Armory at the east and west interior facades of the drill hall (facing Jerome Avenue and Reservoir Avenue, respectively). The signs would be set back from the interior facades by at least 18 inches, as required by LPC. The signs would be approximately 8 feet tall and 200 feet wide. The eastern side, facing Jerome Avenue, would comprise an LED display sign; the sign on the western façade would be comprised of individually cut letters that read "Kingsbridge National Ice Center" and would be indirectly lit from the front. Additionally, two free-standing signs, approximately 10 feet tall and 50 feet wide, are proposed at the ground level outside of the Armory structure, one facing West Kingsbridge Road and the other facing Reservoir Avenue. These signs would have a total sign area of approximately 500 square feet (sf) each and would be illuminated from within. Finally, banners identifying the Armory Building as an ice center are proposed on the south facade of the Armory Building at the existing historic turrets. The banners would be illuminated through lighting sources mounted at ground level.



WEST ELEVATION - RESERVOIR AVENUE



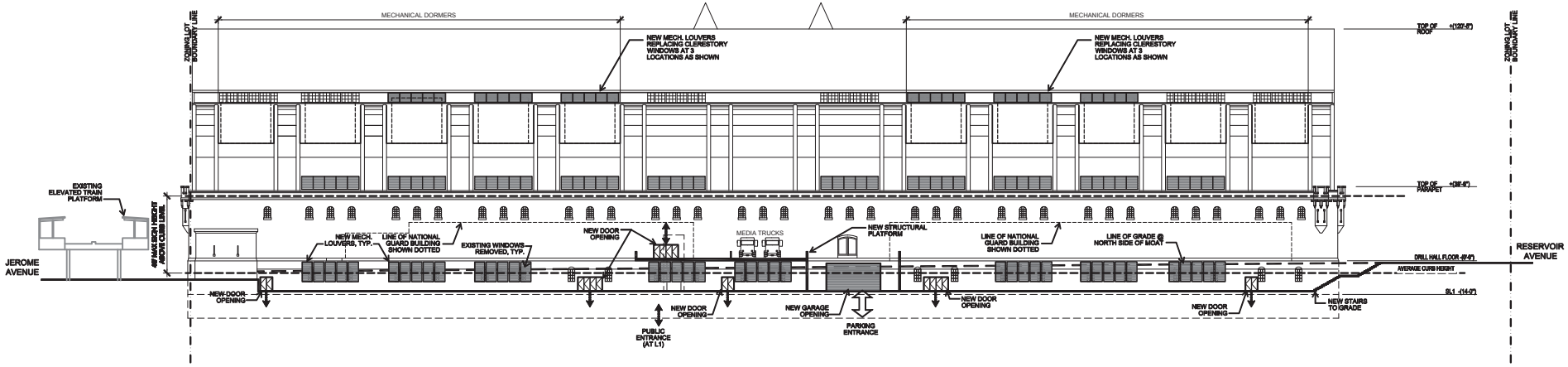
EAST ELEVATION - JEROME AVENUE

SOURCE: BBB Architects

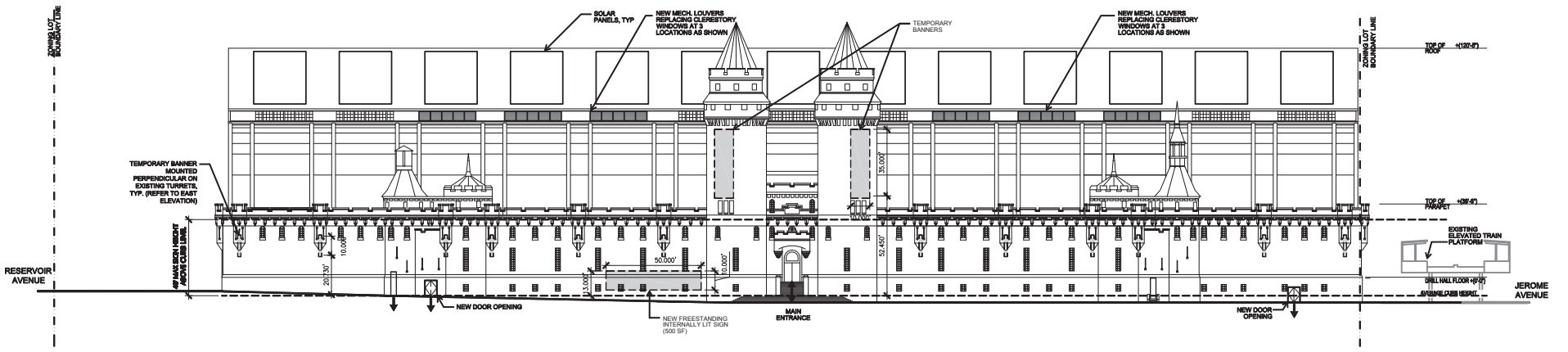
NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

Proposed East and West Elevations

Figure S-6



NORTH ELEVATION - 195TH STREET



SOUTH ELEVATION - WEST KINGSBRIDGE ROAD

SOURCE: BBB Architects

NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

Proposed North and South Elevations

Figure S-7

For the purpose of analyzing the potential environmental impacts of the proposed actions, this ~~Draft~~ Final Environmental Impact Statement (~~D~~ FEIS) considers the proposed project to be the reasonable worst-case development scenario.

The proposed project would involve in-ground construction related to excavation below the Armory building for select foundation work. If the proposed project is approved, it is anticipated that site preparation and construction for the project would commence in late 2014, and the first full year of operation is expected to be 2018.

B. SITE CONDITIONS

As described above, the project site is largely occupied by the Kingsbridge Armory. The Armory, which is also known as the Eighth Regiment Armory, is approximately 588,765 gsf[1] in size, 130 feet tall, 300 feet wide, and 600 feet long. It is substantially vacant apart from the storage of graffiti removal trucks by the Mayor's Office "Graffiti Free NYC" program. In addition to the Armory, the project site includes small landscaped areas south and west of the Armory building. The two buildings adjacent to the Armory's north façade are excluded from the project site and are not part of the proposed project; however, they are within the proposed rezoning area.[2] These two buildings are modern additions to the Armory property that are currently being used by the National Guard for military recruiting and a garage. The Kingsbridge Road station on the No. 4 train line is located directly east of the project site at Jerome Avenue, and the No. 4 train's viaduct extends north-south above Jerome Avenue. The proposed rezoning area is currently zoned R6.

C. BACKGROUND HISTORY[3]

The Kingsbridge Armory, officially the former home of the 258th Field Artillery (Eighth Regiment), is a noted example of military architecture. Reputedly the largest (former) armory in the world, it gives the appearance of a medieval Romanesque-style fortress with its massive towers and crenellated parapets. It is one of the few remaining armories in New York City.

The Armory was built on the site of the proposed eastern basin of the Jerome Park Reservoir. Excavation had begun for the eastern basin in the early 1900s, but the New York State legislature authorized the site for a National Guard armory in 1911. A number of military relics were dug up during the excavation, as the armory site was near two Revolutionary War fort sites. When the Armory was built, the military organization using the building was known as the Eighth Coast Artillery, which traces its history back to 1786 with the establishment of the peace-time militia in New York City. Because the regiment formed part of the honor guard at the presidential inauguration of George Washington, it later adopted the nickname of the "Washington Greys." Before the present Armory was built, the organization occupied the armory at Park Avenue and East 94th Street.

Over the course of the 20th century the Armory's drill hall hosted numerous public events, particularly in the early 1950s before the completion of the Coliseum at Columbus Circle. These

---

[1] Including basement, cellar, and mezzanine levels.

[2] The Armory's National Register nomination form identifies these as non-contributing structures.

[3] Portions of this section have been excerpted from the Armory's "New York City Landmark Designation Report" (1974).

events included radio broadcasts, bicycle races, track and tennis events, auto, boat, flower and dog shows, and stockholder meetings. In the early 1980s, the Armory was also used as a shelter for the homeless. As part of a nationwide program of military cutbacks, the Eighth Regiment departed the Armory in 1994, and the City of New York took control of the Armory on April 11, 1996. During the 1990s, a plan was developed to utilize the building as a retail and sports complex, but this plan never moved past the planning stage. Other proposed uses for the structure have included a public school and a retail complex, for which an ~~Environmental Impact Statement (~~EIS~~)~~ was prepared in 2009.

PREVIOUS ENVIRONMENTAL REVIEW

In 2007, the New York City Economic Development Corporation (EDC) issued a Request for Proposals (RFP) for the sale and redevelopment of the landmark Armory. In the spring of 2008, Related Retail Armory, LLC was selected by EDC as the designated developer for the then-proposed project. The then-proposed project contemplated the renovation and redevelopment of the Armory with approximately 605,000 sf of retail, cinema, fitness club, restaurant, and community facility uses and approximately 400 parking spaces. A Draft EIS (DEIS) for the previous project was issued in May 2009, and a ~~Final EIS (~~FEIS~~)~~ was issued in October 2009. The then-proposed project was reviewed pursuant to the city's Uniform Land Use Review Procedure (ULURP) and was not approved by the City Council in December 2009.

PROPOSED PROJECT

In January 2012, the EDC again issued a RFP for the sale and redevelopment of the landmark Armory. KNIC Partners, LLC responded to the RFP with a proposal to redevelop the Armory as a national ice center, as described above. The KNIC proposal is intended to help address New York City's shortage of ice surfaces, as well as to foster community development and engage youth in active lifestyles. KNIC Partners also reached an agreement with a coalition of community groups to provide a significant community benefits package as part of the proposed project. KNIC Partners was selected as the City's designated developer of the Armory on April 23, 2013.

D. PURPOSE AND NEED FOR THE PROPOSED PROJECT

The proposed project would support the economic revitalization of the Kingsbridge Heights neighborhood of the Bronx by converting the large, substantially vacant Armory building into productive use. The KNIC project would create new employment, learning, and recreational opportunities for local residents, and would create economic and fiscal benefits to the City in the form of economic revitalization, increased employment opportunities, and tax revenue. By creating the largest indoor skating facility in the world, the project also would provide a new, unique destination in the Bronx.

E. PROPOSED ACTIONS

The proposed project involves the disposition of City-owned property to a private developer. Disposition would require approval through ULURP pursuant to New York City Charter Section 197-c and separate Mayoral and Borough Board approval pursuant to City Charter Section 384(b)(4). In addition, the following discretionary actions would be required to facilitate the project:

- A zoning text amendment to Section 74-41 of the New York City Zoning Resolution (ZR), to create a new subsection 74-41(b), which would allow by special permit an indoor arena

with a rated capacity in excess of 2,500 persons, but not greater than 6,000 persons, to be located within 200 feet of a residential district in Bronx Community Board 7, and to allow modifications of certain signage and loading berth requirements;

- A zoning map amendment to rezone the project block from R6 to C4-4;
- A special permit pursuant to proposed subsection 74-41(b) of the ZR to permit (a) an arena with a maximum capacity of 6,000 seats at the development site and (b) the modification of signage and loading berth requirements for the proposed project;
- A special permit pursuant to ZR Section 73-36 from the New York City Board of Standards and Appeals (BSA) for the proposed wellness center; and
- An easement from the New York State Division of Military and Naval Affairs, for the planned use of the property between West 195th Street and the north façade of the Armory, for reconfigured and expanded access driveways, as well as for ingress/egress.

Since the Armory is a NYCL and is currently City-owned, the proposed changes to the building would require a ~~Certificate of Appropriateness (CofA)~~ Binding Report from LPC pursuant to New York City Landmarks Law.

The project sponsor also will seek federal historic preservation tax credits for the proposed renovation of the building.

F. ANALYSIS FRAMEWORK

The lead agency and involved agencies are required to take a hard look at the environmental effects of a proposed action and, to the maximum extent practicable, avoid or mitigate significant adverse impacts on the environment consistent with social, economic, and other essential considerations. The EIS identifies and analyzes the significant adverse environmental impacts of a proposed action and how those impacts could be avoided or minimized, providing a means for agencies to consider environmental factors and choose among alternatives in their decision-making processes.

The 2012 *City Environmental Quality Review (CEQR) Technical Manual* will serve as the general guide on the methodologies and impact criteria for evaluating the proposed project's potential effects on the various environmental areas of analysis. In disclosing impacts, the EIS considers the proposed action's adverse impacts on the environmental setting. Because the proposed project is anticipated to be fully operational in 2018, its environmental setting is not the current environment, but the future environment. Therefore, the technical analyses and consideration of alternatives assess current conditions and forecasts these conditions to 2018 (the analysis year that was determined appropriate for this project) for the purposes of determining potential impacts. The EIS provides a description of "Existing Conditions" for the year 2013 and forecasts these conditions to the future 2018 analysis year without and with the proposed project ("No Build" and "Build" conditions, respectively). To forecast the No Build condition, information on known land-use proposals and, as appropriate, changes in anticipated overall growth, are incorporated. The differences between No Build and Build conditions are assessed for whether such differences are adverse and/or significant; any significant adverse environmental impacts are disclosed. The EIS also identifies and analyzes appropriate mitigation for any identified significant adverse environmental impacts.

Overall, the proposed project is considered to be the reasonable worst-case development scenario for the purpose of analyzing the potential environmental impacts of the proposed project. To establish a conservative framework for assessing potential impacts in the future

analysis year, the EIS assumes a baseline condition in which, absent the proposed development, the Armory would remain in its current substantially vacant condition.

G. PROBABLE IMPACTS OF THE PROPOSED PROJECT

LAND USE, ZONING, AND PUBLIC POLICY

This analysis finds that the proposed project would be compatible with, and supportive of, land use, zoning, and public policy initiatives in the area. The proposed project would convert the Kingsbridge Armory, a large, substantially vacant historic structure, into a public recreational amenity featuring ice rinks for recreational and competitive use; related program space; food and beverage, concession, and retail space; and public fitness and recreation facilities. The proposed project would also include community facility space that may be used as multipurpose event spaces, child care facilities, meeting rooms, business incubator space, or additional fitness and recreation facilities; the proposed project would also enhance the surrounding Kingsbridge Heights neighborhood by providing local residents with a new recreational resource, as well as new retail and employment opportunities and additional space for community facility uses. In addition, the proposed project would introduce a new public attraction that would attract visitors, providing increased foot traffic to support local businesses. Absent the proposed actions, the Armory would likely remain substantially vacant. The proposed project presents an opportunity to further City-wide planning goals, as expressed in PlaNYC, of promoting new development in areas that are well-served by public transportation and repurposing underutilized sites for public enjoyment with commercial and recreational uses. The proposed project would not result in significant adverse impacts related to land use, zoning, and public policy.

HISTORIC AND CULTURAL RESOURCES

The proposed renovation and reuse of the Kingsbridge Armory would improve the appearance and condition of this architectural resource. The proposed project would reuse the Kingsbridge Armory, returning this long underutilized facility to productive use. These changes to the Kingsbridge Armory would enliven both the project site and adjacent areas, including other nearby architectural resources. As the proposed project cannot proceed without LPC's issuance of a ~~CofA~~ Binding Report, compliance with the Secretary of the Interior's Standards in order to receive federal historic tax credits, and the implementation of protective construction measures established in the Construction Protection Plan (CPP), the proposed project would not result in adverse impacts to the Kingsbridge Armory or architectural resources in the study area. Therefore, the proposed project would not result in adverse impacts to architectural resources.

HAZARDOUS MATERIALS

There is a potential for adverse impacts associated with excavation for new construction (e.g., for footings below the existing ~~basement~~ cellar, for the new garage entrance ramp west of the building and for modifications to the entrance on the north side of the building) resulting from the known and potential presence of subsurface contamination, and with demolition/renovation, related to materials within the structures. Although these activities could increase pathways for human exposure, significant adverse impacts would be avoided by performing construction activities in accordance with the measures identified below.

A Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) would be prepared and submitted to New York City Department of Environmental Protection (DEP) for review and approved. The RAP would include procedures to identify and manage both known contamination (e.g., petroleum storage tanks and lead-contaminated soil in the firing ranges) and

unexpectedly encountered contamination. All activities involving disturbance of existing soil would be conducted in accordance with the CHASP which details measures to reduce the potential for exposure (e.g., dust control) as well as measures (such as air testing) to ensure that exposure to construction workers and the surrounding community would not occur.

During or prior to renovation, the following measures would be undertaken:

- All underground storage tanks (USTs) and aboveground storage tanks (ASTs) would be properly registered, if required, with New York State Department of Environmental Conservation (NYSDEC) and the Fire Department City of New York (FDNY), and closed and removed in accordance with applicable regulatory requirements.
- All material that needs to be disposed of (e.g., both contaminated soil and excess fill, including demolition/renovation debris) would be properly handled and disposed of off-site in accordance with applicable regulatory requirements. Should contaminated soil and/or petroleum tanks be encountered, applicable regulatory requirements (e.g., those relating to spill reporting) would be followed to address removal of the tanks and any associated soil or groundwater contamination.
- Any remaining chemicals, including petroleum products, would be properly disposed of in accordance with applicable regulatory requirements.
- Unless there is labeling or test data which indicates that fluorescent lights are not mercury- and/or polychlorinated biphenyl (PCB)-containing, disposal would be performed in accordance with applicable regulatory requirements.
- Unless the areas to be disturbed are known not to contain asbestos, they would be surveyed for asbestos, and all asbestos-containing materials (ACMs) would be removed and disposed of in accordance with applicable regulatory requirements.
- Lead-based paint (LBP) would be managed in accordance with applicable regulatory requirements.
- All demolition/renovation debris would be properly handled and disposed of in accordance with all applicable federal, state and local regulations.
- Should dewatering be required during subsurface work, water would be discharged in accordance with the DEP Sewer Use Regulations, if necessary, following pretreatment prior to discharge.

With the implementation of these measures, no significant adverse impacts related to hazardous materials would result from construction activities. Following construction, the proposed project would not be expected to have the potential to have significant adverse impacts.

WATER AND SEWER INFRASTRUCTURE

The proposed uses and associated project-generated visitors and employees would increase the project site's water consumption and sewage generation, as compared to conditions in the future without the proposed project. Storm water runoff is expected to increase slightly due to an increase in paved areas around the site. However, the analysis finds that the proposed project would not result in any significant adverse impacts on the City's water supply, wastewater, or storm water conveyance and treatment infrastructure.

SOLID WASTE AND SANITATION SERVICES

The proposed project is estimated to generate approximately 101,837 pounds (approximately 50.9 tons) per week of solid waste. Though this would be an increase compared with conditions in the future without the proposed project, it would be a negligible increase relative to the 13,000 tons of waste handled by commercial carters every day. The proposed project would not result in an increase in solid waste that would overburden available waste management capacity. It also would not conflict with, or require any amendments to, the City's solid waste management objectives as stated in the Solid Waste Management Plan (SWMP). Therefore, the proposed project would not result in a significant adverse impact on solid waste and sanitation services.

ENERGY

The proposed project is projected to generate demand for 87,200 million British Thermal Units (BTUs) of energy per year. Because the existing Armory structure would remain substantially vacant in the future without the proposed project, and thus would generate negligible demand for energy, this energy demand represents the total incremental increase in energy consumption that would be generated by the proposed project. As explained in the *CEQR Technical Manual*, the incremental demand produced by most individual projects would not create a significant impact on energy capacity, and detailed assessments are only recommended for projects that may significantly affect the transmission or generation of energy. The proposed project would generate an incremental increase in energy demand that would be negligible when compared to the overall demand within Consolidated Edison's (Con Edison) New York City and Westchester County service area. Therefore, the proposed project would not result in a significant adverse impact on energy.

TRANSPORTATION

TRAFFIC

In accordance with the *CEQR Technical Manual* guidelines, peak hour vehicular and pedestrian volumes expected as a result of the proposed project were estimated for the critical peak hours. In the weekday midday peak hour, the proposed project would generate 253 vehicle trips arriving at the project site and 39 vehicle trips leaving the project site, for a total of 292 vehicle trips. In the weekday PM peak hour, it would generate 600 inbound vehicle trips plus 161 outbound vehicle trips for a total of 761 vehicle trips. In the Saturday midday peak hour, it would generate 748 inbound vehicle trips plus 17 outbound vehicle trips for a total of 765 vehicle trips. In the Saturday PM peak hour, it would generate 252 vehicle trips arriving and 610 vehicle trips leaving, for a total of 862 vehicle trips.

Of the ~~17~~ 20 study area intersections analyzed, the proposed project would cause significant traffic impacts at ~~five~~ six intersections in the weekday midday peak hour, ~~nine~~ twelve in the weekday PM peak hour, ~~seven~~ nine in the Saturday midday peak hour, and ~~nine~~ twelve in the Saturday PM peak hour.

TRANSIT

Subway Station Operation

The proposed project is expected to result in 2,499 (2,313 in and 186 out) and 2,940 (752 in and 2,186 out) projected-generated subway trips during the weekday PM and Saturday PM peak hours, respectively. These trips were distributed to the two nearby subway stations serving the

study area. The following stations and station elements were assessed for the weekday PM and Saturday PM peak period subway station operation analyses:

- Kingsbridge Road Station (No.4 line) stairways and control areas, including the Manhattan bound platform stairways (P1/P3 and P5/P7), Woodlawn bound platform stairways (P2/P4 and P6/P8), street-level stairways (S1 and S3), and the control area (R290) with five two-way turnstiles; and
- Kingsbridge Road Station (B/D lines) stairways and control areas, including the Manhattan bound platform stairways (M6/M7, M10/M11, and M14/M15), Bronx bound platform stairways (M8/M9, M12/M13, and M16/M17), street-level stairways (S7), and the control area (N220) with five two-way turnstiles and two High Exit-only Turnstiles (HXT).

Based on the impact analyses, the proposed project is not expected to result in any significant adverse subway station impacts.

Subway Line-Haul

It was estimated that the proposed project would add more than 200 riders per line per direction during the weekday PM and Saturday midday and PM peak hours. In order to assess the worst-case condition, weekday PM and Saturday PM peak hours for the No. 4, B, and D lines were selected for the line-haul analyses. The line-haul analyses concluded that the projected increase in the ridership with the proposed project would not result in an exceedance of the maximum peak-period loading guideline capacity on the subway lines analyzed. Therefore, the proposed project would not result in any significant adverse subway line-haul impacts.

New York City Transit (NYCT) Bus

NYCT bus trips anticipated to be generated by the proposed project were distributed to local bus routes serving the study area. No individual bus route would experience 50 or more peak hour bus trips in one direction—the CEQR recommended threshold for undertaking a quantified bus analysis. Therefore, a detailed bus line-haul analysis was not required and the proposed project is not expected to result in any significant adverse bus impacts.

PEDESTRIANS

Weekday and Saturday midday and PM peak period pedestrian conditions were evaluated at key sidewalk, corner reservoir, and crosswalk elements at four area intersections in the vicinity of the project site. With the proposed project, potential significant adverse pedestrian impacts are anticipated for seven pedestrian analysis locations at three intersections:

Goulden Avenue and West 197th Street

- The west sidewalk north of West 197th Street during the weekday PM, Saturday midday, and Saturday PM peak periods;
- The north crosswalk during the weekday PM, Saturday midday, and Saturday PM peak periods; and
- The south crosswalk during the weekday PM, Saturday midday, and Saturday PM peak periods.

Reservoir Avenue and West 195th Street

- The south sidewalk east of Reservoir Avenue during the weekday PM, Saturday midday, and Saturday PM peak periods; and

- The east crosswalk during the Saturday midday and Saturday PM peak periods.

Jerome Avenue and West Kingsbridge Road

- The north sidewalk west of Jerome Avenue during the Saturday PM peak period; and
- The north crosswalk during the weekday PM, Saturday midday, and Saturday PM peak periods.

VEHICULAR AND PEDESTRIAN SAFETY

Based on accident data for the study area intersections obtained from the New York State Department of Transportation (NYSDOT) for the time period between May 31, 2009 and May 31, 2012, four study area intersections have been defined as high pedestrian accident locations. These intersections are West Kingsbridge Road and Jerome Avenue, West Fordham Road and University Avenue, West Fordham Road and Jerome Avenue, and East Fordham Road and East Kingsbridge Road/Elm Place/Bainbridge Avenue.

For the high pedestrian accident locations, measures to improve vehicular and pedestrian safety include installation of crosswalk countdown timers, restriping faded crosswalks, and installation of warning signs to alert drivers about the high pedestrian activities at the intersections.

PARKING

The proposed project would provide approximately 457 accessory parking spaces in the Armory's basement and cellar levels. The maximum project-generated demand of 1,055 spaces and 1,018 spaces would be reached during 8-9 PM and 2-3 PM on a weekday and Saturday, respectively, with a peak event underway. Parking demands generated by the proposed project during peak demand periods would not be fully accommodated by the on-site garage. However, this parking shortfall could be accommodated by spaces at the Lehman College parking lot located in the close vicinity of the project site, near the intersection of Goulden Avenue and West 197th Street. Since the excess demand could be accommodated within a reasonable walking distance of the project site, the proposed project would not result in a parking shortfall.

AIR QUALITY

The maximum predicted pollutant concentrations and concentration increments from mobile sources with the proposed project would be below the corresponding guidance thresholds and ambient air quality standards. The project's parking facility would also not result in any significant adverse air quality impacts. Therefore, the proposed project would not have significant adverse impacts from mobile source emissions.

Based on the stationary source analyses, there would be no potential significant adverse stationary source air quality impacts from pollutant emissions from fossil fuel-fired combustion systems.

GREENHOUSE GAS EMISSIONS

The building energy use and vehicle use associated with the proposed project are estimated to result in approximately 20,821 metric tons of carbon dioxide equivalent (CO_2e) emissions per year. Measures for reducing greenhouse gas (GHG) emissions that would be considered in achieving the LEED® rating have been identified. Overall, the project site's location, the reuse of an existing building, the project's commitments to achieve energy efficiency, and other measures incorporated in the proposed project would result in lower GHG emissions than would

typically be generated by a similar facility, and the proposed project would be consistent with the GHG reduction goal.

NOISE

The level of interior noise within the commercial portion of the proposed project along the south façade of the Armory building resulting from exterior sources may be greater than the 50 dBA $L_{10(1)}$ level for commercial uses as prescribed by *City Environmental Quality Review (CEQR)* interior noise level criteria. Between the ~~Draft Environmental Impact Statement (~~DEIS~~)~~ and ~~Final Environmental Impact Statement (~~FEIS~~)~~, noise levels ~~will be~~ were measured inside the Armory building along the south façade in order to determine whether interior $L_{10(1)}$ noise levels resulting from exterior noise sources do actually exceed 50 dBA. ~~If t~~The interior $L_{10(1)}$ noise levels resulting from exterior noise sources do not exceed 50 dBA, and thus do not ~~this would~~ constitute a significant adverse impact based on *CEQR* interior noise level criteria.

The analysis finds that the proposed project could result in a significant adverse noise impact at residences along the west side of Reservoir Avenue between West 195th Street and West Kingsbridge Road. Existing and No Build noise levels at this location are relatively low and project-generated traffic would cause significant increases in noise levels on this street. However, the noise levels in the future with the proposed project would be considered "marginally unacceptable" according to CEQR criteria, which is not unusual for residential areas in New York City. Furthermore, these noise level increases are expected to be during limited hours of the day, would not occur during the nighttime periods, and are only expected to occur in the hour before and after high attendance events at the Armory.

NEIGHBORHOOD CHARACTER

The analysis concludes that overall, the proposed project would not substantially change the character of the neighborhood. As a result of the proposed project, changes to the project site's land use would occur, as well as increases to traffic, transit, and pedestrian activity. The proposed project would return the long-vacant Kingsbridge Armory—a historic landmark—to productive use. With the exception of transportation and noise, the proposed project would not result in any significant adverse impacts on any of the technical areas that could impact neighborhood character. Overall, the proposed changes would be beneficial to the surrounding area.

CONSTRUCTION

Throughout certain stages, construction of the proposed project would result in temporary significant adverse impacts with respect to vehicular traffic. During peak construction, the project-generated trips would be less than what would be realized upon the full build-out of the proposed project in 2018; therefore, the potential traffic impacts during peak construction would be within the envelope of impacts identified for the Build condition. In addition, measures to mitigate the operational traffic impacts were recommended for implementation. These measures would entail primarily signal timing adjustments and other operational measures, all of which could be implemented when appropriate at the discretion of DOT to address conditions experienced during the construction phase of the proposed project.

As described below, construction of the proposed project would not result in significant adverse impacts in any other technical area. Most of the construction activities would occur inside the Armory, where the walls of the building would act as a barrier to the transport of air pollutants, and would provide acoustical shielding for nearby noise sensitive receptors. A CPP would be

prepared to avoid inadvertent construction-related impacts on the Armory. Since the project site is in proximity of the No. 4 train subway platform and viaduct, a reconnaissance survey of the subway structures and vibration monitoring within an "area of influence," as per NYCT regulations, would be undertaken during construction. In regard to hazardous materials, a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) would be prepared and submitted to DEP for review and approval.

MITIGATION

Potential significant adverse environmental impacts were identified in the areas of traffic, pedestrians, and noise. Measures have been examined to minimize or eliminate these anticipated impacts.

TRAFFIC

The proposed project would result in significant adverse traffic impacts at ~~5~~ six intersections in the weekday midday (MD) peak hour, ~~9~~ twelve in the weekday PM peak hour, ~~7~~ nine in the Saturday MD peak hour, and ~~9~~ twelve in the Saturday PM peak hour. With mitigation measures in place, the majority of the significant adverse traffic impacts could be fully mitigated. The majority of the mitigation measures proposed include standard traffic capacity improvements, such as signal phasing and timing changes, lane restriping, and parking prohibitions. In cases where standard traffic mitigation measures alone would not be sufficient to improve traffic or pedestrian operating conditions, non-standard traffic capacity improvements would be undertaken as part of an overall Traffic Management Plan (TMP) that would be in-effect during the pre- and post-peak event conditions (e.g., when the site generated traffic is diverted to Lehman College and/or creates vehicular and pedestrian congestions) ~~peak event conditions.~~ However, some significant adverse traffic impacts would not be fully mitigated.

Peak Event Traffic Management Plan

Where standard traffic mitigation measures alone would not be sufficient to improve the traffic and pedestrian operating conditions, mitigation measures including the use of traffic cones or other similar physical means to delineate traffic lanes and the use of Traffic Enforcement Agents (TEAs) to regulate traffic and pedestrian circulation would be provided during the pre- and post-peak event conditions (e.g., when the site generated traffic is diverted to Lehman College and/or creates vehicular and pedestrian congestions) ~~peak event conditions (5,000 attendees)~~ as an overall peak event TMP. During peak event conditions, TEAs will manage traffic operations at the intersection of West Kingsbridge Road and Reservoir Avenue / Aqueduct Avenue and pedestrian operations at two key locations on Goulden Avenue north of West 197th Street near the Lehman College parking lot entrances and exits, and at crosswalks at the intersections of West 195th Street and Reservoir Avenue and West Kingsbridge Road and Jerome Avenue. Based on the proposed mitigation measures requiring the use of TEAs to regulate the traffic and pedestrian flows, approximately seven TEAs are expected to be needed during the peak event conditions. ~~(5,000 attendees).~~ The peak event TMP would ~~also~~ include additional traffic operations, such as the use of Variable Message Signs (VMS) ~~installed~~ at critical locations to guide patrons to the appropriate parking destination.

The measures to be enforced as part of the peak event TMP—such as the deployment of TEAs, and the deployment of temporary lane delineators ~~would fall within the purview of~~ have been discussed with the New York Police Department (NYPD). Based on the discussions, NYPD has agreed to provide necessary assistance in implementing the TMP during these events. The applicant will coordinate with NYPD (~~on an~~ as needed ~~basis~~) to ensure the enforcement of TMP

measures during the peak event conditions. The applicant will be responsible for costs associated with the deployment of TEAs by the NYPD for regulating traffic and pedestrian flows. ~~Furthermore,~~ The specifics of the TMP will be refined over time based on actual operation conditions once the facility has opened.

West Fordham Road and Major Deegan Expressway Southbound Off-Ramp

The significant adverse impact at the westbound left-turn of this intersection during the Saturday PM peak hour could be fully mitigated by shifting two seconds of green time from the eastbound/westbound phase to the exclusive westbound phase.

West Fordham Road and Major Deegan Expressway Northbound On-Ramp

The significant adverse impacts at the northbound right-turn of this intersection during the weekday PM, Saturday MD, and Saturday PM peak hours, as well as the eastbound left-turn of this intersection during the weekday PM and Saturday PM peak hours, could not be fully mitigated.

West Fordham Road and Sedgwick Avenue

The significant adverse impacts at the eastbound left-turn of this intersection during the weekday MD and PM, and Saturday MD and PM peak hours could not be fully mitigated.

West Fordham Road and University Avenue

The significant adverse impacts at the southbound left-turn of this intersection during the weekday MD and PM, and Saturday MD peak hours could be fully mitigated by shifting two seconds of green time from the westbound lead phase to the northbound/southbound phase.

The significant adverse impact at the northbound left-turn of this intersection during the Saturday PM peak hour could be fully mitigated by shifting one second of green time from the eastbound/westbound phase to the northbound/southbound phase, and by prohibiting parking (installing a No Standing 5 PM-8 PM Saturday sign) on the south side of West Fordham Road on the eastbound approach for approximately 250 feet from the intersection.

West Fordham Road and Jerome Avenue

The significant adverse impacts at the northbound and southbound approaches during the weekday midday and PM peak hours could be fully mitigated by restriping the eastbound approach to provide two 10.5 foot travel lanes and one 10 foot bus lane to improve service conditions at the eastbound/westbound approach. This restriping would allow shifting one second of green time during the weekday midday peak hour and two seconds of green time during the weekday PM peak hour from the eastbound/westbound phase to the northbound/southbound phase without resulting in additional significant adverse traffic impacts.

The significant adverse impact at the southbound approach during the Saturday midday peak hour could be fully mitigated by restriping the eastbound approach to provide two 10.5 travel lanes and one 10 foot bus lane, and shifting one second of green time from the eastbound/westbound phase to the northbound/southbound phase.

The significant adverse impacts at the northbound and southbound approaches during the Saturday PM peak hour could not be fully mitigated.

West Kingsbridge Road and Sedgwick Avenue

The significant adverse impact at the westbound left-turn of this intersection during the Saturday PM peak hour could be fully mitigated by shifting 18 seconds of green time from the eastbound/westbound phase to create an exclusive westbound phase, which would be installed for all time periods; the significant adverse impact at the westbound left-turn of this intersection during the weekday PM peak hour, however, could not be fully mitigated.

West Kingsbridge Road and University Avenue

The significant adverse impacts at the westbound left-turn of this intersection during the weekday PM and Saturday MD peak hours, as well as the eastbound approach during the Saturday MD peak hour and the westbound approach during the Saturday PM peak hour, could not be fully mitigated.

West Kingsbridge Road and Reservoir Avenue / Aqueduct Avenue

The significant adverse impact at the southbound right-turn of this intersection during the Saturday PM peak hour could be fully mitigated by temporarily delineating the southbound approach to provide one exclusive left-turn lane and two exclusive right-turn lanes by deploying TEAs and using traffic cones and other similar physical means to delineate traffic lanes. Additionally, TEAs will manage traffic conditions, including bus turning movements of the BX32 and BX22, during all post peak events ~~with 5,000 attendees~~ at this intersection.

Parking prohibiting would also be required on the north side of West Kingsbridge Road from Reservoir Avenue extending approximately 100 feet west, and by shifting two seconds of green time from the eastbound/westbound phase to the northbound/southbound phase. The prohibition of on-street parking would result in a displacement of approximately 5 on-street metered parking spaces in the Saturday PM peak hour during the peak event conditions. Given the availability of on-street parking within the ¼-mile study area during the Saturday PM peak hour, the displaced parking would be accommodated within the study area. Therefore, the displacement of 5 on-street metered parking spaces resulting from the proposed mitigation measure would not adversely affect the on-street parking supply and utilization in the study area.

East Kingsbridge Road and Grand Concourse (Main Line)

The significant adverse impact at the northbound left-turn from the mainline of Grand Concourse during the weekday MD and PM peak hours could be fully mitigated by shifting four seconds of green time during the weekday MD peak hour and one second of green time during the weekday PM peak hour from the eastbound/westbound phase to the northbound/southbound phase.

West 195th Street and Reservoir Avenue

The significant adverse impacts at the westbound approach and at the southbound left-turn of this intersection during the weekday PM peak hour could be fully mitigated by restriping the southbound approach to provide one 11 foot left-turn/through lane and one 9 foot through/right-turn lane, and updating the mechanical signal to a computerized signal with an At All Times (AAT) signal plan of 31 seconds of green time, 3 seconds of amber time, and 2 seconds of red time for the eastbound/westbound phase, and 49 seconds of green time, 3 seconds of amber time, and 2 seconds of red time for the northbound/southbound phase.

West Kingsbridge Road and Reservoir Avenue / Grand Avenue

The significant adverse impact at the eastbound approach of this intersection during the weekday MD and PM, and Saturday MD and PM peak hours, as well as the westbound approach during the weekday PM peak hour, could not be fully mitigated with standard traffic engineering measures. ~~Additional feasible mitigation measures, such as an installation of a new traffic signal to better regulate the eastbound and westbound traffic flows, will be explored in coordination with NYCDOT between the Draft and Final EIS DEIS and FEIS. In case, the additional mitigation measures are not deemed feasible by NYCDOT, the impacts at the eastbound and westbound approaches of West Kingsbridge Road would remain unmitigated.~~

West 230th Street and Major Deegan Expressway Southbound Ramps

The significant adverse impact at the southbound approach of this intersection during the Saturday PM peak hour could be fully mitigated by shifting two seconds of green time from the eastbound/westbound phase to the southbound phase.

The significant adverse impact at the southbound approach of this intersection during the weekday PM and Saturday midday peak hours could not be fully mitigated.

The westbound approach of this intersection is not impacted during all analyzed peak hours. However, in order to accommodate the proposed mitigation measures at the intersection of West 230th Street and Major Deegan Expressway northbound ramps which shifts the centerline 3 feet to the north as described below, geometric changes to the westbound approach (consisting of restriping to provide two 13 foot travel lanes) were incorporated under the mitigation conditions.

West 230th Street and Major Deegan Expressway Northbound Ramps

The significant adverse impact at the eastbound approach of this intersection during the weekday PM and Saturday midday and PM peak hours could be fully mitigated by shifting the center line 3 feet to the north and restriping the eastbound approach to provide one 11 foot left-turn/ through travel lane and two 11 foot through travel lanes.

West 230th Street and Bailey Avenue

The significant adverse impact at the northbound left-turn of this intersection during the Weekday midday and PM peak hours could be fully mitigated by shifting one second of green time from the eastbound phase (Phase C of the NYCDOT's official signal timing plan) to the northbound/southbound phase.

The significant adverse impact at the northbound left-turn of this intersection during the Saturday PM peak hour could not be fully mitigated.

The eastbound approach of this intersection is not impacted during all analyzed peak hours. However, in order to accommodate the proposed mitigation measures at the intersection of West 230th Street and Major Deegan Expressway northbound ramps as described above, geometric changes to the eastbound approach (consisting of restriping to provide three 12 foot travel lanes) were incorporated under the mitigation conditions.

PEDESTRIANS

Subject to approvals from relevant agencies, including NYCDOT, the following measures have been defined to mitigate these significant adverse pedestrian impacts:

Crosswalk Locations

GOULDEN AVENUE AND WEST 197TH STREET—NORTH CROSSWALK

- Deploying TEAs north of 197th Street at two key locations near the Lehman College parking lot entrances/exits to control pedestrian flow would be required to fully mitigate the projected significant adverse crosswalk impacts during the Weekday PM, Saturday MD, and Saturday PM peak periods.

GOULDEN AVENUE AND WEST 197TH STREET—SOUTH CROSSWALK

- Deploying TEAs north of 197th Street at two key locations near the Lehman College parking lot entrances/exits to control pedestrian flow would be required to fully mitigate the projected significant adverse crosswalk impacts during the Weekday PM, Saturday MD, and Saturday PM peak periods.

WEST 195TH STREET AND RESERVOIR AVENUE—EAST CROSSWALK

- Deploying TEAs at this location near the Lehman College parking lot entrances/exits to control pedestrian flow and to ensure that pedestrians have adequate crosswalk space available would be required to fully mitigate the projected significant adverse crosswalk impacts during the Weekday PM, Saturday MD, and Saturday PM peak periods.

WEST KINGSBRIDGE ROAD AND JEROME AVENUE—NORTH CROSSWALK

- Restriping the width of this crosswalk from 13 feet to 19 feet, shifting one second of flashing don't walk time to walk time for the north crosswalk, and four seconds of green time from the west and east crosswalks to the north and south crosswalks are proposed as mitigation measures; however, these measures would not fully mitigate the projected significant adverse crosswalk impacts, which would remain unmitigated for the weekday PM, Saturday MD, and Saturday PM peak periods during event conditions. However, the event organizers could deploy TEAs at the north crosswalk of Jerome Avenue to better control the pedestrian surge during both the pre-and post-event conditions. This type of arrangement is not unusual during the peak pedestrian surge conditions.

Sidewalk Locations

GOULDEN AVENUE NORTH OF WEST 197TH STREET—WEST SIDEWALK

- Deploying TEAs north of 197th Street at two key locations near the Lehman College parking lot entrances/exits to control pedestrian flow would be required to fully mitigate the projected significant adverse sidewalk impacts during the Weekday PM, Saturday MD, and Saturday PM peak periods.

WEST 195TH STREET BETWEEN RESERVOIR AVENUE AND JEROME AVENUE—SOUTH SIDEWALK

- The pedestrian analysis used the narrowest pedestrian walking paths throughout the entire length of this sidewalk segment following the 2010 Highway Capacity Manual guidelines, reducing the effective sidewalk width to approximately 50 percent of the overall width. The combination of all these factors resulted in the potential for a significant adverse sidewalk impact at this location in the future 2018 Build condition, which could not be fully mitigated by removing portable street furniture (e.g., sign posts, etc.) on this sidewalk. Thus, the potential significant adverse sidewalk impact would be unmitigated.

WEST KINGSBRIDGE ROAD BETWEEN DAVIDSON AVENUE AND JEROME AVENUE—NORTH SIDEWALK

- No sidewalk obstructions can be removed to fully mitigate the projected significant adverse sidewalk impacts; therefore, this impact would remain unmitigated.

Although significant adverse pedestrian impacts have not been identified on the east sidewalk of Goulden Avenue south of West 197th Street, pedestrian conditions at this sidewalk would be revisited once the facility is operational. At that time, a survey of patrons attending major events would be conducted as part of the Traffic Monitoring Plan discussed in Chapter 14, "Mitigation" and below. Based on the monitoring plan results, if necessary, additional pedestrian improvement measures would be considered at this location in coordination with New York City Department of Transportation (NYCDOT).

TRAFFIC MONITORING PLAN

In order to verify the need and effectiveness of the proposed mitigation measures identified above, the applicant would develop and conduct a detailed traffic monitoring plan once the proposed project is fully operational. The applicant would inform DOT of the status of the plan's development and will submit for DOT's review and approval a detailed scope of work that would include critical locations where significant traffic impacts have been identified. Data collection to be conducted for the monitoring plan would include nine days of 24-hour Automatic Traffic Recorder (ATR) machine counts, along with one typical day of manual turning movement counts, vehicle classification counts, pedestrian counts (two days needed), intersection geometry and field information, signal timing and signal progression and any relevant information necessary for conducting the traffic monitoring plan. The traffic monitoring program would also include field observations of intersection operations and queue lengths, intersection capacity, and level of service analyses using the Highway Capacity Software (HCS) and Synchro/SimTraffic to determine whether actual future Build conditions have, in fact, resulted in significant traffic and pedestrian impacts and verify the need for mitigation measures identified in the ~~D~~ FEIS or similar measures identified through the traffic monitoring plan. In addition, the TMP will include recommendations to improve intersection operations, if necessary. The applicant would be responsible for any cost associated with the monitoring effort warranted due to project-generated traffic.

NOISE

In 2018, noise levels in the future with the proposed project would be considered "marginally unacceptable" according to CEQR criteria, which is not unusual for residential areas in New York City. Noise level increases would occur only during limited hours of the day, not during the nighttime periods. At all other times, noise levels along this roadway would be expected to be similar to conditions predicted in the future without the proposed project.

Predicted noise levels are based on conservative assumptions regarding traffic generation and mode of transportation for users of the proposed project. Noise levels would be lower if the traffic generation is less than forecast in this assessment. Therefore, since significant noise level increases are expected to occur during only limited times of day and only in the hour before and after high attendance events at the Armory, a post-construction noise monitoring program would be enacted to determine whether the proposed project would result in a significant increase in noise levels. The applicant would prepare a monitoring protocol for review and approval by DEP, would perform post-construction noise monitoring as approved by DEP, and would submit the results for DEP consideration. If, based on the post-construction noise monitoring program,

the predicted increase in noise levels materializes, measures to mitigate the significant adverse noise impact would be made available.

To partially mitigate project impacts for residential uses, any impacted locations that do not have double-glazed windows and a form of alternative ventilation (i.e., air conditioning) would be updated accordingly at no cost for purchase and installation to owners of residences. At locations where owners elect not to take advantage of these mitigation measures, the noise level increases resulting from the proposed project would constitute unmitigated significant adverse impacts.

~~The level of interior noise within the commercial portion of the proposed project along the south façade of the Armory building resulting from exterior sources may be greater than the 50 dBA $L_{10(1)}$ level considered acceptable for commercial use according to *CEQR* interior noise level guidelines.~~ Between the ~~Draft Environmental Impact Statement (~~DEIS~~)~~ and ~~Final Environmental Impact Statement (~~FEIS~~)~~, noise levels ~~will be~~ were measured inside the Armory building along the south façade in order to determine whether interior $L_{10(1)}$ noise levels resulting from exterior noise sources do actually exceed 50 dBA. ~~If t~~The interior $L_{10(1)}$ noise levels resulting from exterior noise sources do not exceed 50 dBA, and thus do not ~~this would~~ constitute a significant adverse impact based on *CEQR* interior noise level criteria.

ALTERNATIVES

The conclusion of the alternatives analysis is that the No Action Alternative and the No Unmitigated Significant Impacts Alternative would not substantively meet the goals and objectives of the proposed project. Each of the alternatives is summarized briefly below.

NO ACTION ALTERNATIVE

The No Action Alternative assumes that the Armory would not be redeveloped, but rather would remain in its current substantially vacant condition. This alternative would avoid the proposed project's significant adverse impacts relating to transportation (traffic, pedestrians, and noise). However, under this alternative, the Kingsbridge Armory could deteriorate and its condition could worsen. The Armory would not be cleaned, repaired, or renovated for productive use in this alternative, and the appearance and condition of the building as an architectural resource would not be improved. The No Action Alternative would not create new employment, learning, and recreational opportunities for local residents, nor would it support the economic revitalization goals of the proposed project. Overall, the No Action Alternative would fail to meet the goals and objectives of the proposed project

NO UNMITIGATED SIGNIFICANT IMPACTS ALTERNATIVE

The No Unmitigated Significant Impacts Alternative explores modifications to the proposed project that would avoid the unmitigated significant impacts related to traffic, pedestrians, and noise. These modifications include not redeveloping the project site or eliminating events from the proposed project's program, or reducing the maximum capacity of events. To eliminate all unmitigated significant adverse impacts, the proposed project would in some cases have to be modified to a point that its principal goals and objectives would not be realized, and in other cases the modifications would result in an alternative that would be less successful than the proposed project at achieving the principal goals and objectives.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

TRAFFIC

With the proposed mitigation measures in place all significant adverse traffic impacts could be fully mitigated except at two intersections during the weekday midday peak hour, ~~five~~ six intersections during the weekday PM peak hour, ~~four~~ five intersections during the Saturday midday peak hour, and ~~five~~ six intersections during the Saturday PM peak hour. Specifically, West Fordham Road and Sedgwick Avenue and West Kingsbridge Road and Reservoir Avenue/ Grand Avenue would have unmitigated significant adverse impacts during the weekday midday peak hour. West Fordham Road at Major Deegan Expressway northbound on-ramp, and Sedgwick Avenue, ~~and~~ West Kingsbridge Road at Sedgwick, University, and Reservoir/Grand Avenues, and West 230th Street and Major Deegan southbound ramps would have unmitigated significant adverse impacts during the weekday PM peak hour. West Fordham Road at Major Deegan Expressway northbound on-ramp, and Sedgwick Avenue, ~~and~~ West Kingsbridge Road at University and Reservoir/Grand Avenues, and West 230th Street and Major Deegan southbound ramps would have unmitigated significant adverse impacts during the Saturday midday peak hour. West Fordham Road at Major Deegan Expressway northbound on-ramp, and Sedgwick Avenue, ~~and~~ West Kingsbridge Road at Jerome, University, and Reservoir/Grand Avenues, and West 230th Street and Bailey Avenue would have unmitigated significant adverse impacts during the Saturday PM peak hour.

~~Additional feasible mitigation measures that may fully or partially mitigate these significant impacts, such as the installation of a traffic signal at West Kingsbridge Road and Reservoir/Grand Avenue, will be explored in coordination with NYCDOT for the Final Environmental Impact Statement (FEIS).~~

PEDESTRIAN

With the proposed mitigation measures in place all significant adverse pedestrian impacts could be fully mitigated except for the following locations:

- The south sidewalk of West 195th Street between Reservoir Avenue and Jerome Avenue;
- The north sidewalk of West Kingsbridge Road between Davidson Avenue and Jerome Avenue; and
- The north crosswalk at Jerome Avenue and Kingsbridge Road.

In the absence of sidewalk obstructions that could be removed to fully mitigate the projected significant adverse sidewalk impacts at the south sidewalk of West 195th Street (between Reservoir Avenue and Jerome Avenue) and at the north sidewalk of West Kingsbridge Road (between Davidson Avenue and Jerome Avenue), these locations would remain unmitigated with the proposed project.

For the north crosswalk at Jerome Avenue and Kingsbridge Road, a combination of crosswalk widening and signal timing shifts could not fully mitigate the projected significant adverse crosswalk impacts. Strategies implemented as part of the TMP, such as deploying TEAs to the north crosswalk at this intersection to control pedestrian flows, could minimize the significant adverse pedestrian impacts at this crosswalk during peak events.

NOISE

As discussed in Chapter 11, "Noise," in 2018, when the proposed project would be complete and operational, $L_{eq(1)}$ noise levels from project-generated traffic would exceed the 2012 *City*

Environmental Quality Review (CEQR) Technical Manual impact criteria during the weekday PM, weekend midday, and weekend PM time periods and result in significant adverse noise impacts during those time periods at residences and the church along the west side of Reservoir Avenue between West 195th Street and West Kingsbridge Road, the principal feeder street to and from the parking facility for the proposed project. Noise levels at this location in the future with the proposed project would be considered "marginally unacceptable" according to CEQR criteria, which is not unusual for residential areas in New York City. Furthermore, these noise level increases are expected to occur only during the hour preceding and following high attendance events at the proposed project, when most of the participants and spectators would be arriving and departing.

A post-construction noise monitoring program would be enacted to determine whether the proposed project would result in a significant increase in noise levels. The applicant would prepare a monitoring protocol for review and approval by the New York City Department of Environmental Protection (DEP). The applicant would perform post-construction noise monitoring as approved by DEP and submit the results for DEP consideration. If, based on the post-construction noise monitoring program, the predicted increase in noise levels materializes, measures to mitigate the significant adverse noise impact would be made available.

At any impacted locations that do not already have double-glazed windows and a form of alternative ventilation (i.e., air conditioning), the project sponsors would make these measures available at no cost for purchase and installation to owners of residences. These measures would partially mitigate project impacts for residential uses. If, based on the post-construction noise monitoring program, the mitigation measures described above are determined to be necessary, at locations where owners elect not to take advantage of these mitigation measures, the noise level increases resulting from the proposed project would constitute unmitigated significant adverse impacts.

The level of interior noise within the commercial portion of the proposed project along the south façade of the Armory building resulting from exterior sources is not ~~may be~~ greater than the 50 dBA $L_{10(1)}$ level for commercial uses as prescribed by *City Environmental Quality Review (CEQR)* interior noise level criteria. ~~Typically, a project involving the reuse of an existing structure would meet the attenuation requirements by replacing existing windows with well-sealed double-glazed windows and alternate means of ventilation. However, the Kingsbridge Armory is listed on the State/National Registers of Historic Places (S/NR), and the windows on the façade along West Kingsbridge Road are a significant element of the structure's design.~~ Between the DEIS and FEIS, noise levels were ~~will be~~ measured inside the Armory building along the south façade in order to determine whether interior $L_{10(1)}$ noise levels resulting from exterior noise sources would actually exceed 50 dBA. ~~If t~~The interior $L_{10(1)}$ noise levels resulting from exterior noise sources do not exceed 50 dBA, and thus do not ~~this would~~ constitute a significant adverse impact based on *CEQR* interior noise level criteria.

GROWTH-INDUCING ASPECTS OF THE PROPOSED PROJECT

The proposed project would convert the large, substantially vacant Armory building into productive use and create new employment, learning, and recreational opportunities for local residents. The proposed project would introduce a variety of uses, including ice rinks and related program space (including a wellness/off-ice training center, curling rinks, and lockers/equipment storage); related food and beverage, concession, and retail space; community facility space; and accessory parking.

While the new uses proposed for the existing Kingsbridge Armory building would contribute to growth in the local Bronx, City, and State economies, they would not be expected to induce notable growth outside of the project site. It is unlikely that the proposed project would alter land use patterns in surrounding neighborhoods. Overall, the ability of the proposed project to alter land use and economic patterns or induce substantial growth in the study area would be minimal.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The proposed project constitutes a commitment of the existing Kingsbridge Armory as a built resource, thereby rendering its use for other purposes infeasible. However, the conversion of the large, substantially vacant Armory into productive use and the creation of new employment, learning, and recreational opportunities for local residents would be an improvement to the Kingsbridge Heights neighborhood of the Bronx. ✷