

# **Kingsbridge Armory National Ice Center**

## **Draft Scope of Work for an Environmental Impact Statement**

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### **A. PROJECT DESCRIPTION**

#### **PROPOSED PROJECT**

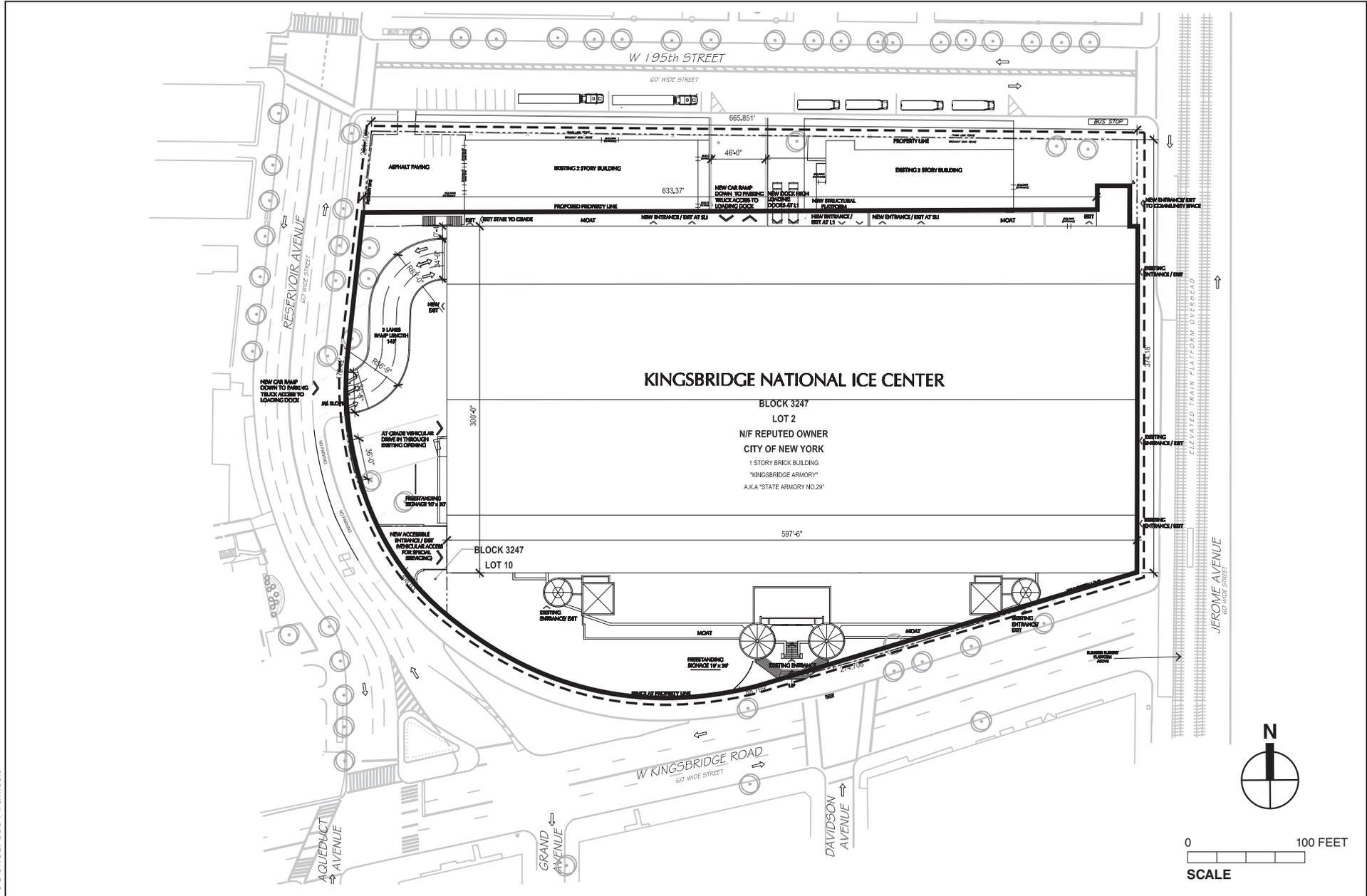
The Kingsbridge Armory National Ice Center (KNIC) project is a proposed redevelopment of the Kingsbridge Armory building (the “Armory”)—a historic landmark that is substantially vacant—with approximately 763,000 gross square feet (gsf) of new uses, including approximately 480 parking spaces.

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 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 east, 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 763,000 gross square feet of new development, including 9 ice rinks; approximately 63,000 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, and meeting rooms for local community use (see **Table 1-1** below and **Figures 2** through **7**). 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 skating, speed skating, and other ice events. The central, main rink would have a capacity of approximately 5,000 seats; the other rinks would have minimal, temporary bleacher seating (approximate 100 seat-capacity per rink).

Approximately 480 public parking spaces (approximately 193,000 gsf) would be provided in the Armory’s 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.

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 required mechanical systems. These are anticipated to include several new pedestrian entrances and exits on the north side of the building, a new accessible entrance at the southwest corner of the building, a new vehicular



SOURCE: BBB Architects

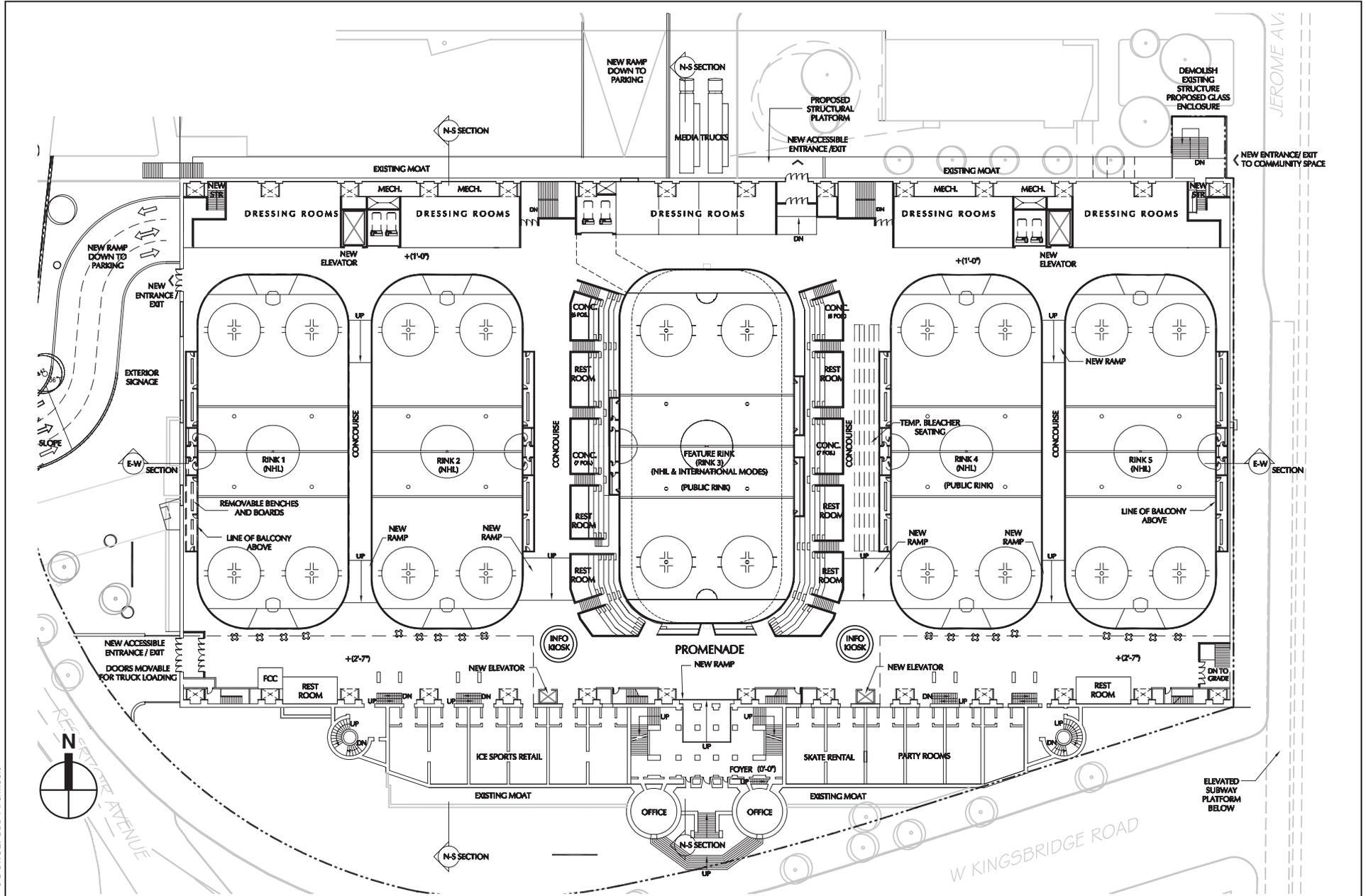
Project Site Boundary
  State/National Register, New York City Landmark Boundary

NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

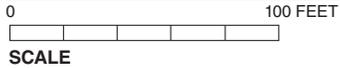
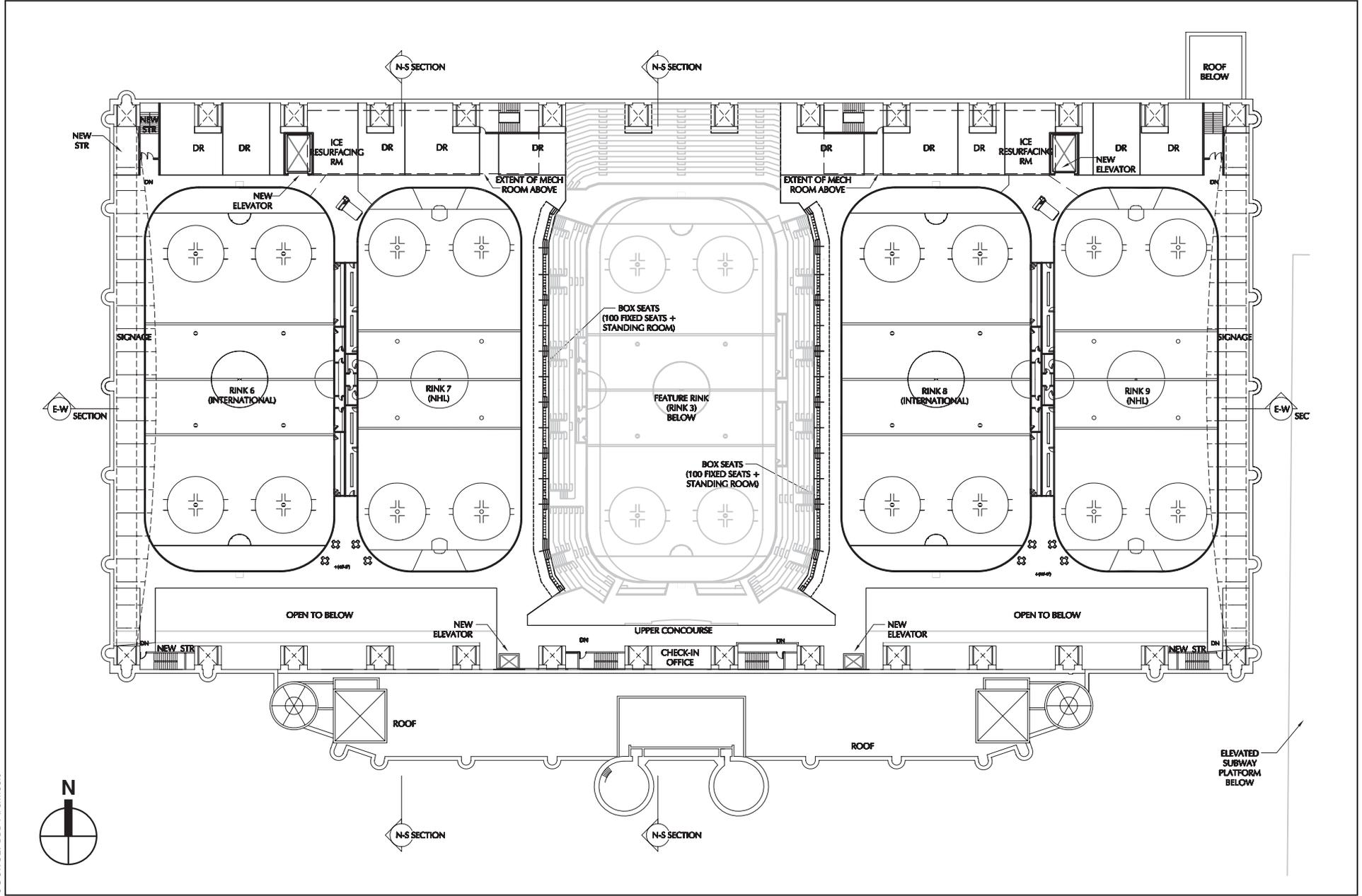


NOTES: FOR ILLUSTRATIVE PURPOSES ONLY  
THIS ILLUSTRATIVE VIEW DOES NOT SHOW THE PROPOSED ROOFTOP SOLAR PANELS.

SOURCE: BBB Architects



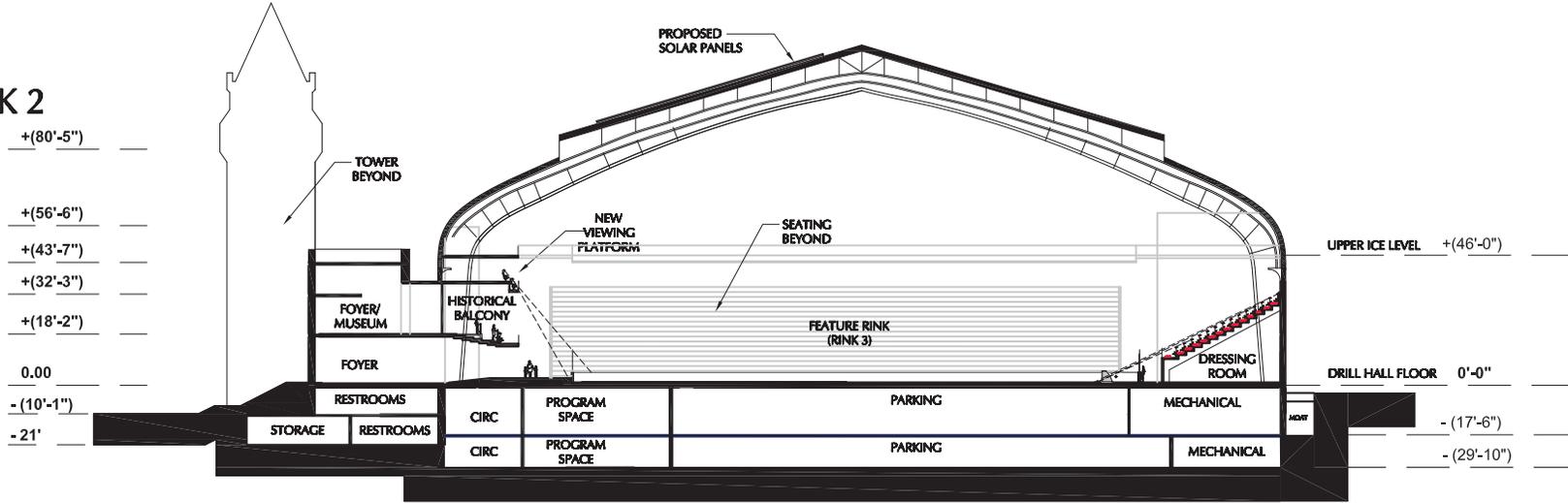
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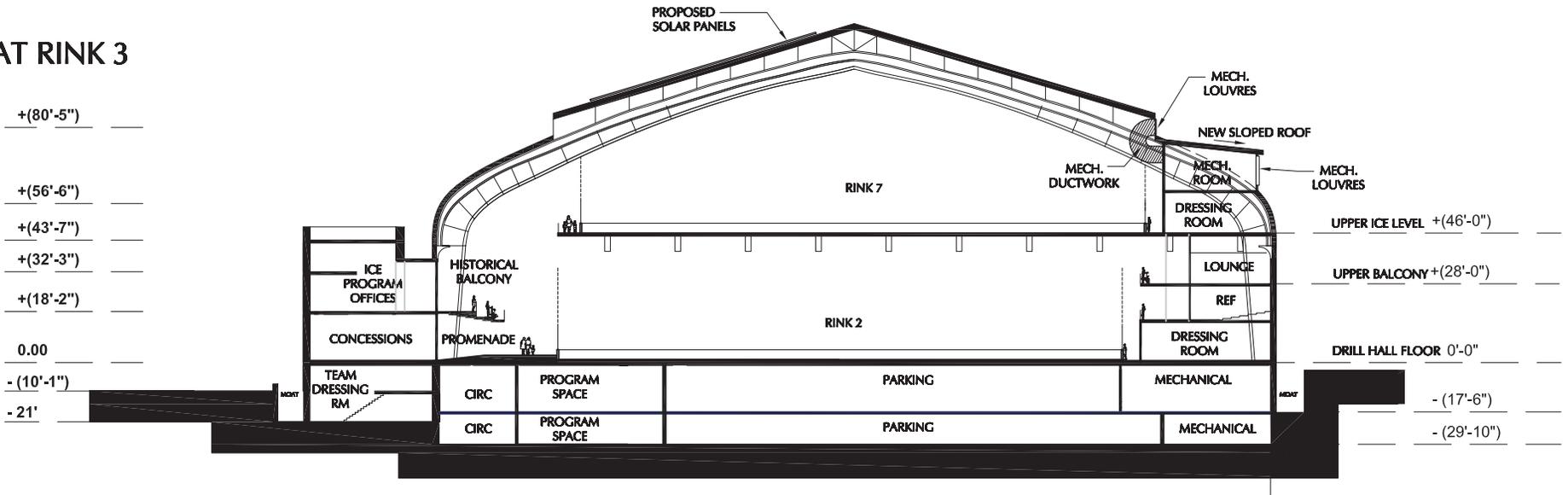
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### AT RINK 2



### AT RINK 3

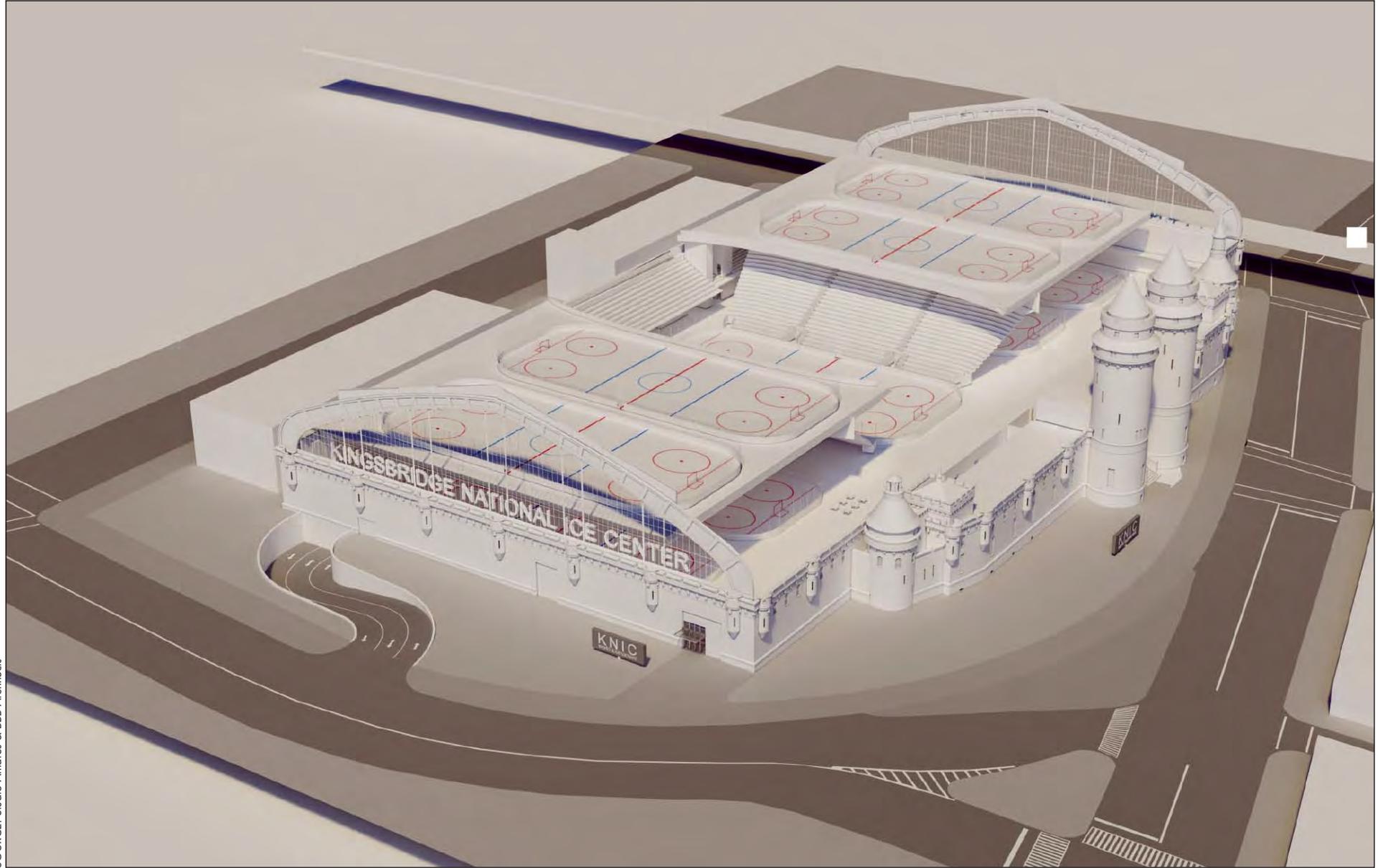


SOURCE: BBB Architects



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North-South Sections at Rink 2 and Rink 3  
Figure 6



SOURCE: Studio Antares & BBB Architects

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**Kingsbridge Armory National Ice Center**

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 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 8 and 9** provide illustrative elevations of the proposed project.

For the purpose of analyzing the potential environmental impacts of the proposed actions described below, this Draft Scope of Work for the Draft Environmental Impact Statement (DEIS) considers the proposed project to be the reasonable worst-case development scenario.

**Table 1-1  
Program Summary\***

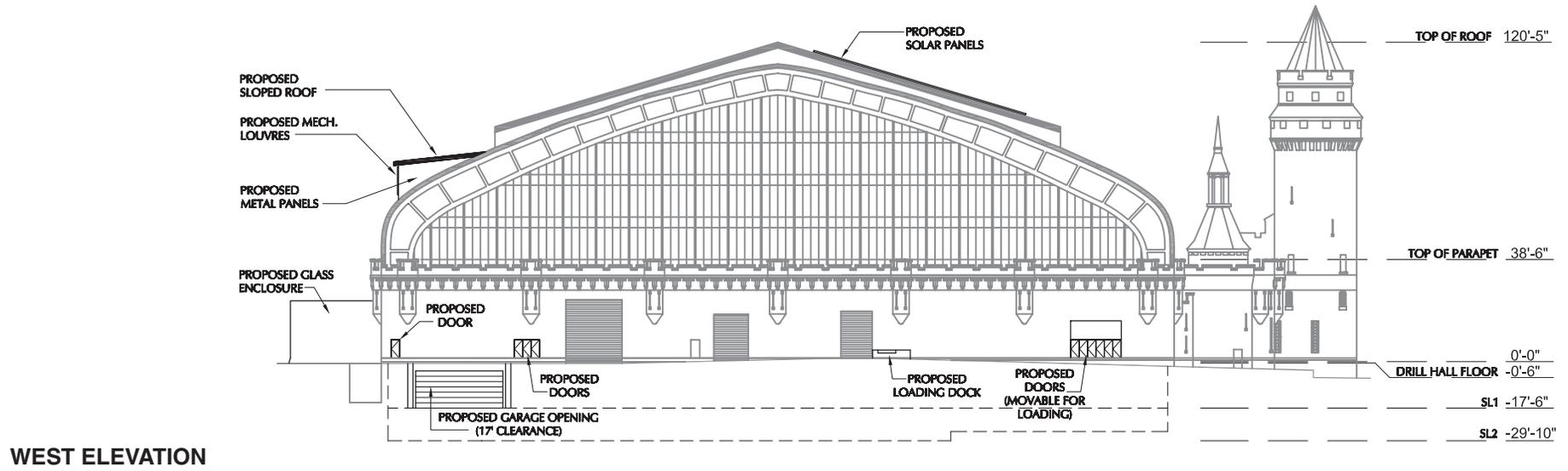
<b>Use</b>	<b>Gross Square Footage</b>	<b>Spaces / Seats</b>	<b>Other Description</b>
Ice Rinks and Accessory Spaces	±251,000	±5,000 (main rink) ±100 (secondary rinks)	9 rinks total, main rink with capacity of approximately 5,000 seats
Related Program Space	±63,000	--	Wellness/off-ice training center, curling rinks, lockers/equipment storage
Community Facility	±50,000	--	Fitness and recreation facilities, multipurpose rooms, child care, meeting rooms
Food and Beverage/Concessions/Retail <sup>†</sup>	±58,000	--	--
<b>Subtotal</b>	<b>±422,000</b>		--
Parking	±193,000	Approx. 480 spaces	Parking located in cellar and subcellar levels
Mechanical/Circulation/Ice Plant	±148,000	--	--
<b>TOTAL</b>	<b>±763,000</b>		--

\*All square footages are approximated.  
<sup>†</sup>Includes some circulation area.

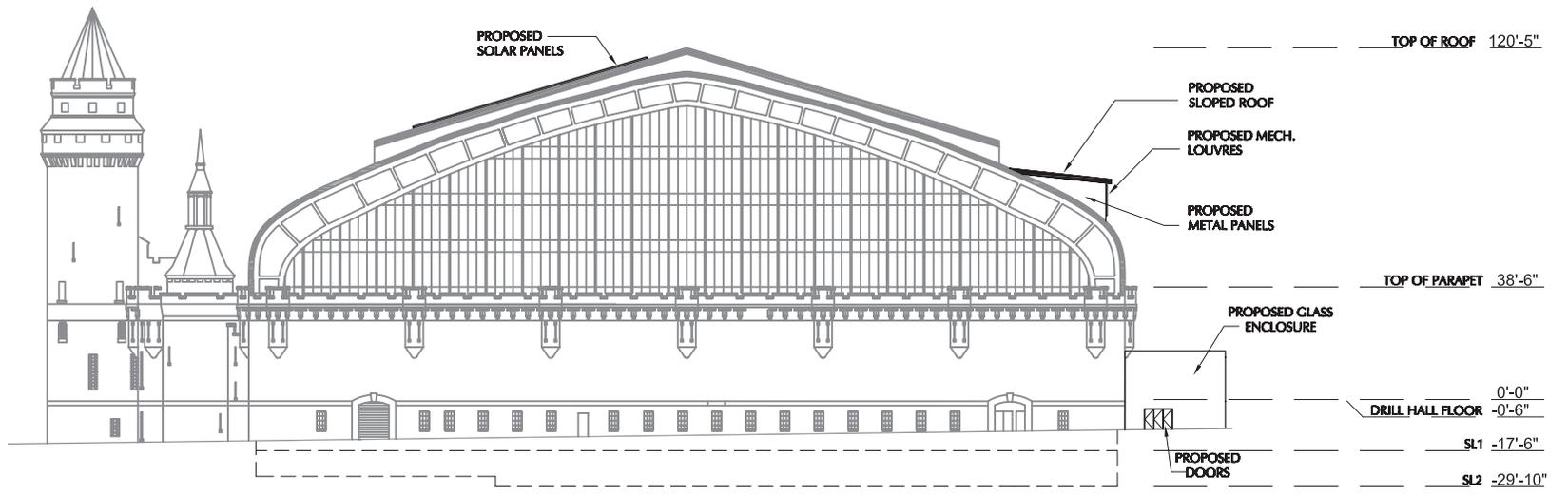
The proposed project would involve in-ground construction related to excavation below the Armory building for select drilled foundations. If the proposed project is approved, it is anticipated that site preparation and construction for the project would commence in late 2014 and the first full year of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

**B. PROJECT PURPOSE AND NEED**

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.



WEST ELEVATION

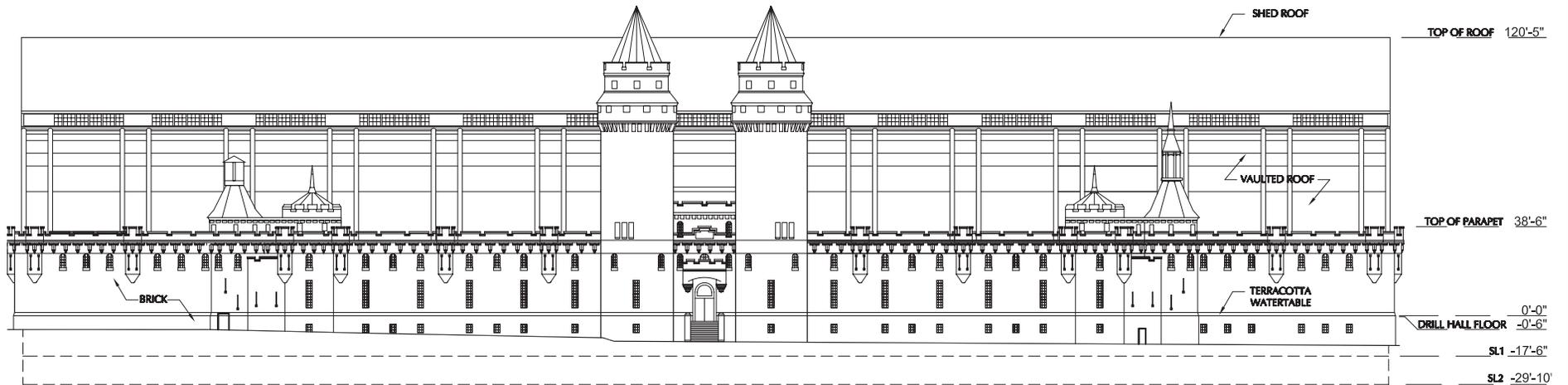


EAST ELEVATION

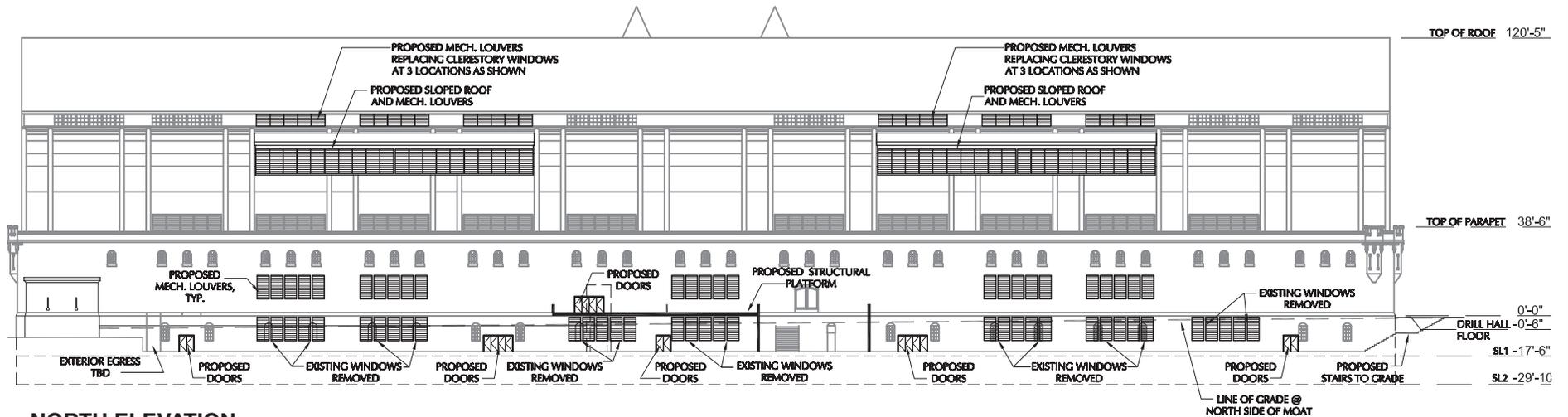
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SOURCE: BBB Architects

Proposed East and West Elevations  
Figure 8



**SOUTH ELEVATION**



**NORTH ELEVATION**

SOURCE: BBB Architects

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## **C. PROPOSED ACTIONS**

The proposed project involves the disposition of City-owned property to a private developer. Disposition would require approval through the Uniform Land Use Review Procedure (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 allow for an arena (the main ice rink) in an historic building located within 200 feet of a residential zoning district, within Bronx Community District 7;
- A zoning map amendment to rezone the project block from R6 to C4-5;
- A special permit pursuant to New York City Zoning Resolution Section 74-41 to allow the development of an arena (the main ice rink) of more than 2,500 seats;
- A special permit pursuant to ZR Section 74-52 to allow public parking of up to 480 spaces within the Armory;
- 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, anticipated to be from the New York State Office of General Services, 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, the proposed changes to the building will require a Certificate of Appropriateness (CofA) from LPC pursuant to the New York City Landmarks Law.

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

## **D. CITY ENVIRONMENTAL QUALITY REVIEW**

Because the proposed project requires discretionary approvals from the Office of the Deputy Mayor for Economic Development (ODMED), New York City Department of City Planning (DCP), the BSA, the Bronx Borough Board, and the New York State Office of General Services, it is subject to CEQR. ODMED is the CEQR lead agency for the proposed project. The DEIS will follow the guidance of the 2012 *CEQR Technical Manual* with respect to environmental analyses and impact criteria.

Scoping is the first step in EIS preparation and provides an early opportunity for the public and other agencies to be involved in the EIS process. Scoping is intended to determine the range of issues and considerations to be evaluated in the EIS. The goals of scoping are to focus the EIS on potentially significant impacts and to eliminate from consideration issues that are irrelevant or insignificant. This Draft Scope of Work for the EIS has been prepared to describe the proposed project and development program, present the proposed content of the EIS, and discuss the analytical procedures to be followed.

A public scoping meeting will be held on Thursday, May 23, 2013 beginning at 5:30 PM at the Bronx Library Center, 310 East Kingsbridge Road, Bronx, New York. The period for submitting written comments will remain open until 5:00 PM Monday, June 3, 2013. The Final Scope of Work for the EIS will incorporate all relevant comments made on the draft scope and will revise the extent or methodologies of the studies, as appropriate, in response to comments made during

the scoping process and to include any other necessary changes to the scope of work for the EIS. The DEIS will be prepared in accordance with the Final Scope of Work.

## **E. PROPOSED SCOPE OF THE ENVIRONMENTAL IMPACT STATEMENT**

The EIS will be prepared in conformance with all applicable laws and regulations, including SEQRA (Article 8 of the New York State Environmental Conservation Law) and its implementing regulations found at 6 NYCRR Part 617, New York City Executive Order No. 91 of 1977, as amended, and the Rules of Procedure for City Environmental Quality Review (CEQR), found at Title 62, Chapter 5 of the Rules of the City of New York. The EIS will follow the guidance of the 2012 *CEQR Technical Manual*.

The EIS will contain:

- A description of the proposed project and its environmental setting;
- A statement of the environmental impacts of the proposed project, including its short- and long-term effects and typical associated environmental effects;
- An identification of any adverse environmental effects that cannot be avoided if the project is implemented;
- A discussion of reasonable alternatives to the proposed project, including a No Build alternative;
- An identification of irreversible and irretrievable commitments of resources that would be involved in the proposed project should it be implemented; and
- A description of mitigation proposed to minimize to the greatest extent practical any significant adverse environmental impacts.

The EIS will describe the existing conditions of the project site and the surrounding area and will predict the conditions of the project site and surrounding area in 2018, the year in which the project is expected to be complete and operational. The EIS will also consider other future development projects and changes to the surrounding area that are anticipated to occur in the future without the proposed project (referred to as the No Build scenario). The potential impacts of the proposed project on the project site and the surrounding area will be determined through a comparison of predicted conditions in the future without the proposed project to conditions in the future with the proposed project.

Because the proposed project would not generate a new residential population, or a new worker population of sufficient size—i.e., 500 or more employees, as discussed in the Environmental Assessment Statement—this scope of work does not include an assessment of potential impacts on community facilities or open space resources. Similarly, this scope does not include a natural resources assessment, since the project site is substantially devoid of natural resources, and does not contain any built resources that are known to contain or that may be used as a habitat by a protected species. Since the proposed redevelopment of the Armory would not increase the height of the existing Amory building and would not create any new structures outside the building, this scope also does not include a shadows analysis. Since the proposed project would not have the potential to result in significant adverse impacts related to socioeconomic conditions or urban design and visual resources—as detailed in the Environmental Assessment Statement for the proposed project—this scope does not include assessments of those technical areas.

## **TASK 1: PROJECT DESCRIPTION**

The first chapter of the EIS introduces the reader to the project and sets the context in which to assess impacts. The chapter will contain a project description (including a brief description of the history of the Kingsbridge Armory, and the components of the proposed development); a statement of purpose and need for the proposed actions; a detailed description of the proposed actions necessary to achieve the project; a description of the development program and project design; and a discussion of approvals required, procedures to be followed, and the role of the EIS in the process. A description of the No Build scenario will also be provided. This chapter is the key to understanding the proposed action and its impacts, and gives the public and decision-makers a base from which to evaluate the project against both the Build and the No Build options.

The project description will consist of a discussion of key project elements, such as land use plans, site plans and elevations, access and circulation to the public parking garage, and any project commitments. The section on required approvals will describe all public actions required to develop the project.

The role of public agencies in the approval process will also be described. The role of the EIS as a full disclosure document to aid in decision-making will be identified and its relationship to any other approval procedures will be described.

## **TASK 2: LAND USE, ZONING, AND PUBLIC POLICY**

The project site is predominantly occupied by the ±588,765-gross-square-foot Armory building that is substantially vacant. In addition to the Armory building, the project site includes small landscaped areas east, south, and west of the Armory building.

According to the *City Environmental Quality Review (CEQR) Technical Manual*, a detailed assessment of land use, zoning, and public policy is appropriate if an action would be expected to result in a significant change in land use. The proposed project would require several discretionary actions, including the disposition of the project site; rezoning the site from R6 to C4-5; a zoning text amendment to allow for an arena in an historic building located within 200 feet of a residence district, within Bronx Community District 7; a special permit to allow the development of an arena of more than 2,500 seats; and a special permit to allow public parking of approximately 480 spaces within the Armory. The proposed project would redevelop the Kingsbridge Armory with approximately 763,000 gross square feet of new uses, including approximately 480 parking spaces. These actions and the anticipated development would result in a major change in land use and zoning on the project site, and therefore warrant a detailed assessment. The EIS will:

- A. Provide a brief development history of the project site and surrounding area, including a discussion of the history of the Kingsbridge Armory. Describe conditions on the project site, including existing conditions and the underlying zoning.
- B. For the purpose of environmental analysis, the land use study area will extend approximately ¼-mile from the borders of the project site.
- C. Describe predominant land use patterns, including a description of recent development trends. Existing land use patterns will be highlighted.
- D. Describe the existing zoning and recent zoning actions in the study area.

- E. Describe other public policies that apply to the project site and the study area, including specific development projects and plans for public improvements.
- F. Prepare a list of future projects in the study area and describe how these projects might affect land use patterns and development trends in the study area in the future without the project. Also, identify pending zoning actions (including those associated with proposed No Build projects) or other public policy actions that could affect land use patterns and trends in the study area as they relate to the proposed project.
- G. Assess impacts of the proposed project on land use and land use trends, zoning, and public policy. Discuss potential changes associated with the addition of the proposed project to the study area. The impact assessment will be based on a comparison with the No Build scenario described above.

### **TASK 3: HISTORIC AND CULTURAL RESOURCES**

The project site is occupied by the Kingsbridge Armory—also known as the Eighth Regiment Armory—which is a New York City Landmark (NYCL) and is also listed on the State and National Registers of Historic Places (S/NR). Since the Armory is a NYCL, the proposed changes to the building would require a Certificate of Appropriateness (CofA) from the New York City Landmarks Preservation Commission (LPC). Therefore, an analysis will be undertaken to examine the effect of the proposed project on architectural resources.

As part of the 2009 *Shops at the Armory Final Environmental Impact Statement* (FEIS), the project site was reviewed for its potential archaeological sensitivity by the LPC. LPC determined that the project site is not sensitive for archaeological resources. The project site boundaries have not expanded from those evaluated in 2009. Thus, this analysis will focus on standing structures only.

The following tasks will be undertaken as part of the historic resources analysis:

- A. Identify and describe any designated architectural resources, including historic districts, within the project’s study area for architectural resources. The architectural study area will be defined for this analysis as the project site and the area within approximately 400 feet of the project site. Historic resources include New York City Landmarks and Historic Districts, properties pending New York City Landmark designation, sites listed on or determined eligible for inclusion on the State and/or National Register of Historic Places, and National Historic Landmarks.
- B. Based on visits to the architectural resources study area by an architectural historian, survey standing structures in the study area to identify any properties that appear to meet eligibility criteria for New York City Landmark designation or listing on the State and/or National Registers. Prepare Historic Resource Inventory Forms (“blue forms”) for properties that appear to meet S/NR and/or NYCL eligibility criteria for submission to LPC for determinations of eligibility.
- C. Add any properties determined by LPC to be eligible for NYCL designation or S/NR listing to the list of architectural resources to be assessed for potential project impacts. Prepare a map indicating the location of all designated and potential architectural resources within the study area.
- D. Assess the effects of planned development projects expected to be built by the project’s build year in the future without the proposed project.

- E. Assess the project's impacts on any designated or potential architectural resources, including visual and contextual impacts as well as any direct physical impacts. The analysis of the proposed changes to the Armory building will draw from LPC's CofA statement, as available, as well as any reports or other correspondence from LPC or OPRHP.
- F. Where appropriate, develop mitigation measures to avoid and/or reduce any adverse effects on architectural resources in consultation with LPC.

#### **TASK 4: HAZARDOUS MATERIALS**

This chapter will analyze the potential for significant hazardous materials impacts from the proposed project. The hazardous materials chapter for the EIS will include a detailed site history and discussion of current environmental conditions. A 2006 Phase I Environmental Site Assessment (ESA) and three Phase II Site Investigation Reports (2007, 2008 and 2009) were previously prepared for the project site, and identified environmental conditions included petroleum storage, vehicle maintenance, and firing ranges at the site.

Additional subsurface testing (the scope of which will be approved by NYCDEP) will be conducted focused on areas that would be disturbed by the proposed project. The chapter will include a description of any further testing, remediation or other measures that would be necessary to avoid impacts.

#### **TASK 5: WATER AND SEWER INFRASTRUCTURE**

##### *WATER SUPPLY*

According to the *CEQR Technical Manual*, an analysis of an action's impact on the water supply system should be conducted only for actions that would have exceptionally large demand for water, such as power plants, very large cooling systems, or large developments (e.g., those that use more than 1 million gallons per day). In addition, actions located at the extremities of the water distribution system should be analyzed. The proposed project does not meet any of these criteria, and therefore an analysis of water supply is not warranted. However, because the proposed ice rinks may have the potential to be a water intensive use, the EIS will include a screening for potential impacts to the New York City water supply system from the proposed project. The EIS will describe the existing water supply system and any planned changes to the system; project average and peak water demand for the project; and assess the effects of the incremental demand from the project on the water supply system to determine if there is sufficient capacity to maintain adequate supply and pressure.

##### *WASTEWATER AND STORMWATER CONVEYANCE AND TREATMENT*

According to the guidelines of the *CEQR Technical Manual*, a preliminary analysis of wastewater and stormwater conveyance and treatment is warranted if a project: (i) is located in a combined sewer area and would have an incremental increase above the No Build condition of 400 residential units or 150,000 square feet of commercial, public facility and institution and/or community facility space in the Bronx; (ii) is located in a separately sewered area and would exceed certain incremental development thresholds; (iii) is located in an area that is partially sewered or currently unsewered; (iv) involves development on a site five acres or larger where the amount of impervious surface would increase; (v) would involve development on a site one acre or larger where the amount of impervious surface would increase and other criteria are met; or (vi) would involve construction of a new stormwater outfall that requires federal and/or state permits. Since the proposed project will include over 150,000 square feet of program space, an

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analysis of wastewater and stormwater conveyance and treatment will be performed and will include the following tasks.

To describe existing conditions and conditions in the future without the project:

- The existing stormwater drainage system and surfaces (pervious or impervious) on the project site will be described. The amount of stormwater currently draining from the site will be estimated for each drainage area using DEP's volume calculation worksheet.
- The existing sewer system serving the project site will be described using sewer network maps, drainage plans, capacity information for sewer infrastructure components, and other information (such as sewer backup complaint and repair history data), as warranted. The existing flows to the wastewater treatment plant (WWTP) that serves the project site will be obtained for the latest 12-month period, and the average dry weather monthly flow will be presented. Existing capacity information for pump stations, regulators, etc. within the affected drainage area will be presented, if available.
- Any changes to the site's stormwater drainage system and surface area expected in the future without the proposed project will be described.
- Any changes to the sewer system expected to occur in the future without the proposed project will be described based on information provided by DEP.

The analysis of project impacts will identify and assess the effects of the incremental sanitary and stormwater flows on the capacity of the sewer infrastructure, as follows:

- Future stormwater generation from the proposed project will be estimated. Any changes to the site's proposed surface area (pervious or impervious) will be described, and runoff coefficients and runoff volumes for each surface type/area will be presented. Volume and peak discharge rates of stormwater from the site will be determined based on the DEP volume calculation worksheet.
- Sanitary sewage generation for the project will be estimated. The effects of the incremental demand on the system will be assessed to determine the impact on operations of the WWTP that serves the project site.
- Based on the analyses of future stormwater and wastewater generation, the change in flows and volumes to the sewer system and/or waterbodies due to the proposed project will be determined, and any improvements necessary to support the proposed action will be disclosed.
- The assessment will discuss any planned sustainability elements that are intended to reduce storm water runoff and/or to reduce water consumption and sanitary sewage generation.

If warranted, a detailed infrastructure analysis will be prepared following the guidelines of the *CEQR Technical Manual*.

### **TASK 6: SOLID WASTE AND SANITATION SERVICES**

The EIS will determine whether the proposed project, in comparison to the No Build scenario, would result in any significant adverse impacts to solid waste and sanitation services. For any areas of analysis resulting in significant adverse impacts, the analysis will identify practicable mitigation measures.

- A. Existing and future New York City solid waste disposal practices will be described, including the collection system and status of landfilling, recycling, and other disposal methods.

- B. The incremental impacts of the development's solid waste generation on the City's collection needs and disposal capacity will be assessed.

**TASK 7: ENERGY**

The EIS will determine whether the proposed project, in comparison with the No Build scenario, would result in any significant adverse impacts to energy. For any areas of analysis resulting in significant adverse impacts, the analysis will identify practicable mitigation measures.

- A. The energy systems that would supply the proposed development with electricity and/or natural gas will be described.
- B. The energy usage for the proposed development will be estimated. The effect of this new demand on the energy supply systems will be assessed.

**TASK 8: TRANSPORTATION**

The *CEQR Technical Manual* states that quantified transportation analyses may be warranted if a proposed action results in more than 50 vehicle-trips and/or 200 transit/pedestrian trips during a given peak hour. The proposed project's trip generation is expected to exceed these thresholds for four critical time periods (i.e., weekday midday and PM, and Saturday midday and PM). Therefore, quantified analyses will be required to assess the potential impacts that project-generated trips may have on key traffic intersections, pedestrian locations, nearby transit services, and the area's parking resources. As part of the operational analyses, an assessment of vehicular and pedestrian safety based on recent accident data will also be prepared. The transportation analysis will include the tasks outlined below.

*TRAVEL DEMAND AND SCREENING ASSESSMENT*

Prepare travel demand estimates and transportation analysis screening. The transportation analysis for the EIS will account for approximately 763,000 gross square feet of new development, including the 50,000 gross square feet of community facility space, as described above. In addition, the main rink would host a number of events with a maximum capacity of approximately 5,000 seats. For travel demand screening purposes, the proposed facility will be assumed to be operating at full capacity with a 5,000 spectator event underway on the main rink during the weekday evening and Saturday midday and evening hours, simultaneously with typical daily activities taking place at the other 8 ice rinks. In addition, during the weekday midday peak hour, trips will be generated by the day-to-day activities at the regular rinks as well as the main center rink. Therefore, for the purposes of transportation assessment, the weekday and Saturday midday and evening peak hours will be selected for detailed analysis. These hours will capture the activities generated by both typical day-to-day activities as well as the pre-and post-event conditions.

Detailed trip estimates will be prepared using information provided by the applicant and observations conducted at other comparable facilities in an urban setting with similar travel characteristics (e.g., access to subway and multiple bus lines). If necessary, standard sources, including the *CEQR Technical Manual*, U.S. census data, approved studies, and other references would be used to supplement the travel demand characteristics. The trip estimates (Level-1 screening assessment) will be summarized by peak hour, mode of travel, and person vs. vehicle trips. The trip estimates will also identify the number of peak hour person trips made by transit and the numbers of pedestrian trips traversing the area's sidewalks, corner reservoirs, and crosswalks. The results of these estimates will be summarized in a Travel Demand Factors memorandum for review and concurrence by the lead agency and New York City Department of

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Transportation (DOT). In addition to trip estimates, detailed vehicle, pedestrian and transit trip assignments (Level-2 screening assessment) will be prepared to validate the intersections and pedestrian/transit elements selected for undertaking quantified analyses.

### *TRAFFIC*

- Define traffic study area. The traffic study area will include the intersections surrounding the proposed project site that are most likely to be affected by the project-generated traffic. In total, the following 16 intersections will be selected for detailed analysis during the weekday midday and PM, and Saturday midday and PM peak hours:
  - Sedgwick Avenue and West Fordham Road;
  - Dr. MLK Jr. Boulevard/University Avenue and West Fordham Road;
  - Jerome Avenue and West Fordham Road;
  - Bailey Avenue and West Kingsbridge Road;
  - Sedgwick Avenue and West Kingsbridge Road;
  - University Avenue and West Kingsbridge Road;
  - Aqueduct/Grand Avenue and West Kingsbridge Road/Reservoir Avenue;
  - Davidson Avenue and West Kingsbridge Road;
  - Jerome Avenue and West Kingsbridge Road;
  - Grand Concourse and West Kingsbridge Road;
  - Jerome Avenue and West 195th Street;
  - Jerome Avenue and West 196th Street;
  - Reservoir Avenue and West 195th Street;
  - West Fordham Road and Major Deegan Expressway (I-87) northbound ramp;
  - West Fordham Road and Major Deegan Expressway (I-87) southbound ramp; and
  - West Fordham Road and East Kingsbridge Road.
- Baseline traffic data. Traffic volumes and relevant data—including vehicle classification counts and travel time (speed run) data—at the study area intersections collected in May 2012 via a combination of manual and machine counts will be used to establish the baseline traffic volumes at the study area intersections for the weekday midday and PM, and Saturday midday peak hours. In addition, traffic count surveys will be conducted (pursuant to 2012 CEQR methodologies) to obtain baseline traffic levels at the study area intersections for the Saturday PM period. Information pertaining to street widths, traffic flow directions, lane markings, parking regulations, and bus stop locations at study area intersections will be inventoried. Traffic control devices (including signal timings) in the study area will be recorded and verified with official signal timing data from NYCDOT.
- Conduct baseline conditions analysis. Balanced peak hour traffic volumes will be prepared for the capacity analysis of study area intersections. This analysis will be conducted using the *2000 Highway Capacity Manual (HCM)* methodology with the latest approved *Highway Capacity Software (HCS)*. The existing volume-to-capacity (v/c) ratios, delays, and levels of service (LOS) for the weekday midday and PM, and Saturday midday and PM peak hours will be determined, as appropriate.
- Develop the future No Build condition. Future No Build traffic volumes will be estimated by adding background growth, in accordance with *CEQR* guidelines, to existing traffic volumes,

and incorporating incremental changes in traffic resulting from other projects in the area. Trip estimates generated for future projects and the modes of transportation for these trips will be determined for the peak analysis hours using the approved set of travel demand factors and other appropriate references. Physical and operational changes that are expected to be implemented independent of the proposed project, if any, would also be incorporated into the future traffic analysis network. The No Build v/c ratios, delays, and LOS at the study area intersections will be determined.

- Perform traffic impact assessment for the proposed project. Project-generated vehicle trips will be overlaid onto the future No Build traffic network. Physical and operational changes, including those related to site access, will be incorporated into the analyses. The potential impact on v/c ratios, delays, and LOS will then be evaluated in accordance with *CEQR Technical Manual* criteria. Where significant adverse impacts are identified, feasible mitigation measures, such as signal retiming, phasing modifications, roadway restriping, addition of turn lanes, revision of curbside regulations, turn prohibitions, and street direction changes, etc. will be explored to mitigate the traffic impacts.

#### *PARKING*

- Analyze current and future parking conditions. A parking survey will be performed to gather curbside regulations and record off-street parking supply and utilization within ¼ mile of the project site. Future parking demand projections will be compared to the available supply to determine whether project-generated demand could be accommodated in the proposed on-site garage and if there is a potential for a parking shortfall. Where proposed improvements and/or traffic mitigation measures are expected to displace on-street parking spaces, they will also be addressed.

#### *TRANSIT*

- Conduct transit analyses. The project site is located adjacent to the Kingsbridge Road station that provides service to the No. 4 subway line operating between Woodlawn-Jerome Avenue, Bronx and New Lots Avenue, Brooklyn. Based on CEQR guidelines, a more detailed subway analysis is required if more than 200 additional trips per subway line are expected as a result of a proposed action. The Kingsbridge Road station (No. 4 subway line) would experience more than 200 additional trips as a result of the proposed project. Therefore, a detailed analysis of the nearest stairways and control elements at this station will be conducted for the weekday and Saturday PM peak hours. In addition, the No. 4 subway line could experience more than 200 additional trips as a result of a proposed project. Therefore, a detailed analysis of subway line-haul conditions for the No. 4 subway line will be conducted for the weekday PM peak hour.

The Kingsbridge Road subway station providing service to the B and D subway lines is also located in the vicinity of the project site near Grand Concourse. While this station would experience more than 200 additional trips during the weekday and Saturday evening (6-7 PM) and Saturday midday peak event conditions, it is not located in a Central Business District (CBD) area. In addition, peak subway demand generated by the proposed project would occur outside the typical peak travel periods. Therefore, a quantified analysis of control elements at this station is not required.

- There are several local bus routes (Bx1, Bx2, Bx9, Bx22, Bx28, and Bx32) and two express bus routes (BxM-3 and BxM-4) that operate in the vicinity of the project site. Based on the availability of these multiple routes, it is anticipated that no individual bus route would

experience 50 or more peak hour bus trips in one direction—the CEQR recommended threshold for undertaking quantified bus analysis. Therefore, a detailed bus analysis is not warranted for the proposed project.

#### *PEDESTRIANS*

- Conduct pedestrian analyses. Project-generated pedestrian trips would concentrate along likely routes between the project site, the connecting transit service and the adjacent neighborhoods. A quantified pedestrian analysis is expected to be conducted for 6 locations for the weekday midday and PM, and Saturday midday and PM peak periods. Pedestrian counts conducted in May 2012 at selected locations in the study area for the weekday midday and PM, and Saturday midday periods will be used to establish the baseline conditions. In addition, pedestrian counts will be conducted (pursuant to 2012 CEQR methodologies) to obtain baseline pedestrian levels at the selected locations for the Saturday PM period. The pedestrian analysis will include quantitative assessment of the existing and No Build conditions, as well as the conditions with the proposed project per CEQR guidelines. Where appropriate, feasible mitigation measures will be explored to alleviate any potentially significant adverse pedestrian impacts. If required, additional pedestrian elements will be incorporated in the pedestrian analysis.

#### *VEHICULAR AND PEDESTRIAN SAFETY*

- Examine vehicular and pedestrian safety issues. Accident data for the study area intersections and other nearby sensitive locations from the most recent three-year period will be obtained from the New York State Department of Transportation (NYSDOT). These data will be analyzed to determine if any of the studied locations may be classified (using CEQR criteria) as high vehicle crash or high pedestrian/bike accident locations and whether trips and changes resulting from the proposed project would adversely affect vehicular and pedestrian safety in the area. If any high accident locations are identified, feasible improvement measures will be explored to alleviate potential safety issues.

### **TASK 9: AIR QUALITY**

The air quality analysis will address the following issues with respect to the potential for air quality impacts: impacts from vehicular traffic and the proposed parking facilities (“mobile sources”), and the effects of the project’s heating, ventilation, and air conditioning (HVAC) system on buildings in the surrounding area (“stationary sources”).

The number of project-generated trips will likely exceed the *CEQR Technical Manual* carbon monoxide (CO) analysis screening threshold of 170 vehicles in the peak hour at a number of locations within the study area. In addition, the projected number of vehicles or equivalent heavy-duty trucks is expected to exceed the applicable fine particulate matter (PM<sub>2.5</sub>) screening thresholds in the *CEQR Technical Manual*. Therefore, a microscale analysis of PM<sub>2.5</sub> mobile source emissions at affected intersections is necessary. In addition, the proposed project would provide new parking facilities; therefore, the mobile source analysis must account for the additional impacts from these sources.

#### *MOBILE SOURCE ANALYSES*

- A. Gather existing air quality data. Collect and summarize existing ambient air quality data for the study area. Specifically, ambient air quality monitoring data published by the

New York State Department of Environmental Conservation (DEC) will be compiled for the analysis of existing conditions.

- B. Determine receptor locations for microscale analysis. Select critical intersection locations in the study area, based on data obtained from the project's traffic analysis as well as the traffic planners and engineers for the project. At each intersection, analyze multiple receptor sites in accordance with *CEQR Technical Manual* guidelines.
- C. Select dispersion model. The United States Environmental Protection Agency (EPA)'s CAL3QHC screening model will be used for the CO microscale analysis. EPA's CAL3QHCR refined intersection model will be used to predict the maximum changes in PM<sub>2.5</sub> concentrations.
- D. Select emission calculation methodology and "worst-case" meteorological conditions. Vehicular cruise and idle emissions for the dispersion modeling will be computed using EPA's MOVES model. For the "worst-case" analysis (at screening locations), conservative meteorological conditions to be assumed in the dispersion modeling are a 1 meter per second wind speed, Class D stability, and a 0.70 persistence factor. For the CAL3QHCR analysis, five years of meteorological data from LaGuardia Airport and concurrent upper air data from Brookhaven, New York, will be used.
- E. At each mobile source microscale receptor site, calculate maximum 1- and 8-hour CO concentrations for existing conditions, the future conditions without the project, and the future conditions with the project. 24-Hour and annual average PM<sub>2.5</sub> concentrations will be determined for the future conditions without the proposed project and the future conditions with the proposed project. Concentrations will be determined for up to two peak periods. No field monitoring will be included as part of these analyses.
- F. Assess the potential CO impacts associated with the proposed underground parking facility. Information on the design of the parking garage will be employed to determine potential off-site impacts from these vented emissions. A temperature of 43°F will be assumed in the analysis, and a point source screening analysis will be used. Cumulative impacts from on-street sources and emissions from the parking facility will be calculated where appropriate. Future CO pollutant levels will be compared with standards and applicable *de minimis* criteria, to determine potential significant adverse project impacts.
- G. Compare existing and future levels with standards. Future pollutant levels with and without the proposed project will be compared with the CO National Ambient Air Quality Standards (NAAQS), the City's CO *de minimis* criteria and PM<sub>2.5</sub> interim guidance criteria to determine the impacts of the proposed project.
- H. Examine mitigation measures. Analyses will be performed to examine and quantify ameliorative measures to minimize any significant adverse impacts of the proposed project.
- I. Determine the consistency of the proposed project with the strategies contained in the State Implementation Plan for the area. At any receptor sites where violations of standards occur, analyses will be performed to determine what mitigation measures would be required to attain standards.

#### *STATIONARY SOURCE ANALYSES*

- J. A stationary source screening analysis will be performed to determine the potential for significant pollutant concentrations from fossil fuel-fired HVAC systems. The screening analysis will use the procedures outlined in the *CEQR Technical Manual*.

- K. An additional screening analysis will be performed to determine whether there are any potentially significant adverse impacts with respect to the 1-hour nitrogen dioxide (NO<sub>2</sub>) and (if fuel oil is proposed) the 1-hour sulfur dioxide (SO<sub>2</sub>) ambient air quality standards, and the City's PM<sub>2.5</sub> interim guidance criteria. Maximum concentrations will be determined using the EPA AERSCREEN model. In the event that potential significant impacts are identified, a refined air quality analysis using the EPA AERMOD will be performed for the pollutant(s) of concern.

**TASK 10: GREENHOUSE GAS EMISSIONS**

In accordance with *CEQR Technical Manual* guidelines, GHG emissions generated by the proposed project will be quantified, and an assessment of consistency with the City's established GHG reduction goal will be performed. Emissions will be estimated for the 2018 analysis year and reported as carbon dioxide equivalent (CO<sub>2</sub>e) metric tons per year. GHG emissions other than carbon dioxide (CO<sub>2</sub>) will be included if they would account for a substantial portion of overall emissions, adjusted to account for the global warming potential (GWP). Construction-related emissions will be discussed qualitatively. Relevant measures to reduce energy consumption and GHG emissions, including construction and materials related emissions and operational emissions, will be discussed and included in the emissions estimates to the extent practicable.

**TASK 11: NOISE**

According to *CEQR Technical Manual* guidelines, a detailed noise analysis is recommended if a proposed action would be within 1,500 feet of existing rail activity and would have a direct line of sight to that rail facility; or would cause a stationary source to be operating within 1,500 feet of a receptor (such as a park), with a direct line of sight to that receptor. The project site is located near an elevated rail line. The proposed project would substantially increase the volume of vehicular traffic in the area and would be located next to a public open space. Therefore, a detailed noise analysis will be provided.

The noise study will examine impacts on sensitive land uses (including nearby residences, parks, and schools) that would be affected by changes in traffic resulting from the proposed project. The proposed scope of work includes the selection of receptor sites, measurement of existing noise levels, prediction of future noise levels both with and without the proposed project, impact evaluation, specifying building attenuation needed to satisfy CEQR building attenuation requirements, and the examination of noise abatement measures (where necessary). The methodologies used for this analysis will be consistent with the methodologies contained in the *CEQR Technical Manual*. The traffic noise model (TNM) will be utilized where appropriate.

- A. Appropriate noise descriptors to describe the noise environment and the impact of the proposed project will be selected. Current city criteria regarding noise descriptors will be followed. Consequently, the 1-hour equivalent (L<sub>eq(1)</sub>), and where appropriate, the L<sub>10</sub> noise levels will be examined.
- B. Selection of receptor locations for detailed analysis. Receptor sites analyzed will include locations where the proposed project would have the greatest potential to affect ambient noise levels as well as appropriate sites to characterize existing ambient noise levels, including noise from the adjacent elevated rail line.
- C. Existing noise levels will be determined primarily based on noise monitoring. Measurements will be made during the following time periods: weekday midday and

PM, and weekend midday. Hourly  $L_{eq}$ ,  $L_1$ ,  $L_{10}$ ,  $L_{50}$ , and  $L_{90}$  values will be recorded. Existing noise levels would include noise from the adjacent elevated rail line.

- D. At each receptor location identified above, noise levels without the proposed project will be determined using existing noise levels, acoustical fundamentals, and mathematical models. The methodology used will allow for variations in vehicle/truck mixes.
- E. At each receptor location identified above, noise levels with the proposed project will be determined using existing noise levels, acoustical fundamentals, and mathematical models. The methodology used will allow for variations in vehicle/truck mixes.
- F. Existing noise levels and future noise levels, both with and without the proposed project, will be compared with various noise standards, guidelines, and other noise criteria. In addition, future noise levels with the proposed project will be compared with future noise levels without the proposed project to determine project impacts (i.e., based on the criteria contained in the *CEQR Technical Manual*, a change of 3-5 dBA or more would be considered a significant impact).
- G. When and if necessary, recommendation of measures to attain acceptable interior noise levels and to reduce noise impacts to acceptable levels will be made.
- H. Determine the level of building attenuation needed to achieve CEQR interior noise standards, and where necessary, recommend measures that could be implemented to attain these interior noise levels at the project site. The building attenuation analysis will include the addition of the noise level increments from the mobile source noise analysis.

#### **TASK 12: PUBLIC HEALTH**

According to the *CEQR Technical Manual*, a public health analysis is not necessary for most projects. Where no significant unmitigated adverse impact is found in other CEQR analysis areas, such as air quality, water quality, hazardous materials, or noise, no public health analysis is warranted. If an unmitigated significant adverse impact is identified in one of these CEQR analysis areas, the lead agency may determine that a public health assessment is warranted for that specific technical area. Thus, if any unmitigated significant adverse impacts to air quality, water quality, hazardous materials, or noise are identified in this EIS, a public health analysis will be prepared.

#### **TASK 13: NEIGHBORHOOD CHARACTER**

According to the *CEQR Technical Manual*, an assessment of neighborhood character is generally needed when a proposed project has the potential to result in significant adverse impacts in land use, socioeconomic conditions, open space, urban design and visual resources, historic and cultural resources, shadows, transportation, and/or noise, or when the project may have moderate effects on several of the elements that define a neighborhood's character. A preliminary assessment will first be prepared, to identify the defining features of the neighborhood and determine whether the proposed project would have the potential to affect these defining features, either through the potential for a significant adverse impact or a combination of moderate effects in relevant technical areas. If the project has the potential to affect the defining features of the neighborhood, a detailed assessment of neighborhood character will be prepared consistent with the methodologies of the *CEQR Technical Manual*.

#### **TASK 14: CONSTRUCTION**

The EIS will assess the project's potential construction-related impacts. The likely construction schedule for development at the site and an estimate of activity on-site will be described. Construction impacts will be evaluated according to the *CEQR Technical Manual* guidelines. The construction assessment for the proposed project will generally be qualitative, focusing on areas where construction activities may pose specific environmental problems. Suggestions on how to mitigate potential impacts will also be included. Technical areas to be analyzed include:

- A. *Historic Resources*. Any potential construction-period impacts on historic resources, particularly the Armory building, will be considered.
- B. *Transportation Systems*. This assessment will consider potential losses in lanes, sidewalks, and other transportation services during the various phases of construction, identify the peak construction time period, and quantify the volume of construction trucks and construction workers expected to travel to and from the project site by auto or taxi. The amount of parking needed by construction workers will be estimated and an evaluation of the ability of area streets and off-street parking facilities to accommodate this demand will be made qualitatively, as will the remainder of the construction-period transportation systems analysis.
- C. *Air Quality*. The construction air quality impact section will contain a qualitative discussion of both mobile air source emissions from construction equipment and worker and delivery vehicles, and fugitive dust emissions. It will discuss measures to reduce impacts.
- D. *Noise*. The construction noise impact section will contain a qualitative discussion of noise from each phase of construction activity and potential effects on adjacent land uses. Measures to minimize construction noise impacts will be presented, as necessary.
- E. *Hazardous Materials*. Construction of the proposed project would involve a variety of earth-moving and excavating activities, and construction activities in these areas could encounter contaminated soil or groundwater. The range of remedial and health and safety measures that would be employed prior to and/or during construction will be discussed.
- F. *Other Technical Areas*. As appropriate, other areas of environmental assessment will be discussed for potential construction-related impacts.

#### **TASK 15: MITIGATION**

Where significant project impacts have been identified in the analyses discussed above, measures will be assessed to mitigate those impacts. This task summarizes the findings and prepares the mitigation chapter for the EIS. Where impacts cannot be mitigated, they will be described as unavoidable adverse impacts.

#### **TASK 16: ALTERNATIVES**

The specific alternatives to be analyzed are typically finalized with the lead agency as project impacts become clarified. However, they will at least include the No Build Alternative, which describes the conditions that would exist if the proposed project was not implemented, and a No Unmitigated Impacts Alternative, which assesses a change in density or program design in order to avoid the potential for any unmitigated significant adverse impacts that may be associated with the proposed project. The alternatives analysis will be qualitative or quantitative as

appropriate. However, at locations where project-related significant impacts are identified, a quantitative assessment will be conducted. The level of analysis depends on an assessment of project impacts determined by the analysis connected with the appropriate tasks.

**TASK 17: GROWTH-INDUCING ASPECTS OF THE PROPOSED PROJECT**

From the analyses contained in the EIS, this chapter will identify the growth-inducing aspects of the proposed project.

**TASK 18: IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF ENVIRONMENTAL RESOURCES**

From the analyses contained in the EIS, this chapter will identify the irreversible and irretrievable commitments of environmental resources.

**TASK 19: UNAVOIDABLE ADVERSE IMPACTS**

From the analyses contained in the EIS, this chapter will identify all unavoidable and unmitigable significant adverse impacts.

**TASK 20: EXECUTIVE SUMMARY**

Once the EIS technical sections have been prepared, a concise executive summary will be drafted. The executive summary will use relevant material from the body of the EIS to describe the proposed project, its environmental impacts, measures to mitigate those impacts, and alternatives to the proposed project. \*