

A. INTRODUCTION

The Empire State Development Corporation (ESDC) and the City of New York (the City), in cooperation with affiliates of the Forest City Ratner Companies, including Atlantic Yards Development Company, LLC and Brooklyn Arena, LLC (the project sponsors), and the Metropolitan Transportation Authority (MTA), propose a master plan to develop a major transit-oriented development in the Atlantic Terminal area of Brooklyn.

The overarching goal of the proposed project is to transform a blighted area into a vibrant mixed-use community, incorporating principles of environmental sustainability. The proposed project aims to provide a state-of-the-art arena, affordable and market-rate housing, first-class office space, publicly accessible open space, local retail and community services, a hotel (under one variation of the project program), a new subway entrance, and an improved Long Island Rail Road rail yard. The proposed project's buildings would contribute to the Brooklyn skyline and the open space would connect the surrounding neighborhoods, which are currently separated by the open rail yard and a major avenue (Atlantic Avenue).

The proposed project has been designed to achieve significant near- and long-term benefits to the State and City. However, these social, economic, and environmental benefits cannot be achieved without some adverse environmental impacts. There would be significant adverse impacts as a result of the operations of the proposed project in areas such as schools, cultural resources, shadows, traffic, transit and pedestrians, and noise, as well as construction impacts. While the proposed project has incorporated numerous measures to avoid or mitigate adverse impacts, there would remain some unmitigated impacts. Notwithstanding these impacts, the proposed project is expected to achieve the long-term State and City goals of 1) enhancing the vitality of the Atlantic Terminal area; 2) providing substantial new housing, including much needed affordable housing; and 3) improving railroad facilities and pedestrian access to Brooklyn's largest transit hub.

B. PROJECT DESCRIPTION

IDENTIFICATION OF THE PROPOSED PROJECT

The proposed project would occupy an approximately 22-acre area, roughly bounded by Flatbush and 4th Avenues to the west, Vanderbilt Avenue to the east, Atlantic Avenue to the north, and Dean and Pacific Streets to the south (see Figure S-1). The proposed project would introduce a mix of uses arranged to concentrate the greatest activity closest to Brooklyn's major transportation hub, which is adjacent to the western end of the site. This end of the project site would contain a new arena for the New Jersey Nets National Basketball Association Team (the Nets), along with commercial office and retail, hotel, and residential uses. Farther east, the proposed project would be primarily residential and provide eight acres of publicly accessible open space along with a number of local retail and community services. The project would also expand, platform over, and improve the MTA/Long Island Rail Road (MTA/LIRR) Vanderbilt

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Yard, which, together with a New York City Transit (NYCT) yard for retired buses, occupy approximately nine acres of the project site in an open cut (rail yard). As part of this improvement, the project would rebuild the Carlton and 6th Avenue Bridges between Atlantic and Pacific Streets.

The arena would host a variety of events. The arena would seat 18,000 persons for basketball games. While there is the potential for additional seating capacity for non-game events (to 19,925 seats if wheelchair seating is replaced by regular seating), Americans with Disabilities Act (ADA) accessibility, production equipment, and line of sight, operational and staging requirements would in almost all instances limit attendance at non-basketball events to well under 18,000. Non-game events are expected to attract fewer spectators than basketball events, with attendance generally ranging from 5,000 persons to 15,000 persons. Overall, the arena is expected to host approximately 225 events per year. As contemplated, the Nets would relocate from its current home in New Jersey to Brooklyn, New York. At full build-out, the proposed project would comprise, in addition to the 150-foot-tall arena, 16 buildings with maximum heights ranging from approximately 184 feet to approximately 620 feet. Two variations of the project program are under consideration to allow for flexibility in the program of three of the proposed project's 17 buildings: (1) a residential mixed-use variation containing approximately 336,000 gross square feet (gsf) of commercial office space, 165,000 gsf of hotel use (approximately 180 rooms), 247,000 gsf of retail space, and up to 6.4 million gsf of residential use (approximately 6,430 residential units); and (2) a commercial mixed-use variation, which would permit more commercial office use in three buildings closest to Downtown Brooklyn and would contain approximately 1.6 million gsf of commercial office space, 247,000 gsf of retail space, and up to approximately 5.3 million gsf of residential use (approximately 5,325 units). Both variations would provide eight acres of publicly accessible open space, with up to one additional acre of private open space on the roof of the arena. Both variations would also provide community facility uses occupying portions of the retail and residential space. Both the residential mixed-use and commercial mixed-use variations would include approximately 3,670 parking spaces (see Table S-1 and Figures S-2 and S-3). Both variations would also open a new subway entrance at the corner of Atlantic and Flatbush Avenues, which would provide direct pedestrian access at the western end of the project site between the proposed project and the Atlantic Avenue/Pacific Street subway complex.

The site is occupied by generally low-rise buildings, between one and six stories, along with vacant land and the rail yard. Many of the buildings are partially or completely vacant. MTA owns the rail yard; the remaining properties are owned by the City of New York and by private entities, including the project sponsors. The new development would require the demolition of all site structures with the exception of the rail yard, and it would close 5th Avenue between Atlantic and Flatbush Avenues, Pacific Street from Flatbush to 6th Avenues, and Pacific Street from Carlton to Vanderbilt Avenues, to create development areas suitable for the proposed project.

If approved, construction of the proposed project would begin on the western end of the project site and move generally eastward over time. The arena and subway entrance would open for the 2009 basketball season. However, the several buildings surrounding the arena would not be completed until 2010, so the EIS considers for analytical purposes a first phase in 2010 containing the entire program slated for the project site west of 6th Avenue. The buildings at the eastern end of the project site are anticipated to be developed and occupied by 2016, which is the second analysis year in this EIS.

**Table S-1
Comparison of Residential and Commercial
Mixed-Use Variation Programs for 2010 and 2016**

Proposed Uses	Residential Mixed-Use Variation	Commercial Mixed-Use Variation
Analysis Year: 2010 (Phase I: Development of Arena Block and Site 5)		
Residential	2,085,000 gsf (2,110 units)	994,000 gsf (1,005 units)
Hotel (180 rooms)	165,000 gsf	0 gsf
Retail	91,000 gsf	91,000 gsf
Commercial	336,000 gsf	1,606,000 gsf
Arena	850,000 gsf	850,000 gsf
Parking (spaces)	2,346 spaces	2,346 spaces
Private Open Space	±1 acres	±1 acres
Publicly Accessible Open Space	0 acres	0 acres
Analysis Year: 2016 (Phase I and Phase II: Full Build-Out)		
Residential ¹	6,363,000 gsf (6,430 units)	5,272,000 gsf (5,325 units)
Hotel (180 rooms)	165,000 gsf	0 gsf
Retail ¹	247,000 gsf	247,000 gsf
Commercial	336,000 gsf	1,606,000 gsf
Arena	850,000 gsf	850,000 gsf
Parking (spaces)	3,670 spaces	3,670 spaces
Private Open Space	±1 acres	±1 acres
Publicly Accessible Open Space	8 acres	8 acres
Note: ¹ A portion of the retail and residential space is expected to house community facilities.		

All Phase I (2010) development—including the arena, Buildings 1 through 4, the building on Site 5, and the subway facility improvements—except the rail yard and any interim parking would be on the western end of the project site on Blocks 927 (Site 5), 1118, 1119, and 1127. Rail yard improvements/construction staging and interim parking would be on the eastern portion of the site in Phase I. The rail yard would be covered by a platform and the remaining 11 buildings would be built on the eastern portion of the project site (Blocks 1120, 1121, 1128, and 1129) during Phase II (2016).

The proposed project is subject to environmental review under the State Environmental Quality Review Act (SEQRA) and the City Environmental Quality Review (CEQR). ESDC is the lead agency for this proposal. The proposed project would be implemented pursuant to a General Project Plan (GPP) adopted by the New York State Urban Development Corporation (UDC), a public benefit corporation of New York State, doing business as the Empire State Development Corporation (ESDC). In accordance with the GPP, ESDC would, as necessary, acquire portions of the project site through condemnation (a substantial portion of the project site is already controlled by the project sponsors), dispose of the assembled parcels, and override certain local laws and regulations, including aspects of the City's *Zoning Resolution*, and certain zoning-related portions of the Atlantic Terminal Urban Renewal Area (ATURA) Plan. ESDC would also acquire portions of the City streets to be closed and City-owned properties through exercise of eminent domain and, with the consent of the City, would override the City Map to permit development on these streets. The proposed project is both a land use improvement and civic project as defined by the UDC Act. The project site is located in significant part on property owned by the MTA, a public benefit corporation of New York State. Accordingly, ESDC has determined that the project approvals will follow the procedures set forth in the UDC Act, rather than the City's Uniform Land Use Review Procedure (ULURP), for consideration and approval of a UDC project.

MTA/LIRR, MTA/NYCT and the City—through the Mayor’s Office of Economic Development and Rebuilding—are involved agencies in a coordinated SEQRA review. In addition, MTA must approve the relocation and upgrading of the rail yard and other property dispositions. The City must approve funding for the project and may approve the disposition of City property.

PROJECT PURPOSE AND NEED

The overarching goal of the proposed project is to transform a blighted area into a vibrant mixed-use community. The proposed project aims to provide a state-of-the-art arena, affordable and market-rate housing, first-class office space, publicly accessible open space, local retail and community services, a hotel (under one variation of the project program), a new subway entrance, and an improved rail yard. The proposed project’s buildings would contribute to the Brooklyn skyline, and the open space would connect the surrounding neighborhoods, which are currently separated by the open rail yard and a major avenue (Atlantic Avenue). More specifically, the proposed project is intended to:

1. **Enhance the vitality of the Atlantic Terminal area** by providing new residential, retail, office, and hotel space that will capitalize on the project’s proximity to one of the major subway hubs in New York City; removing the physical and visual barrier created by the existing below-grade rail yard that separates the neighborhoods of Boerum Hill, Downtown Brooklyn, Fort Greene, Clinton Hill, Prospect Heights, and Park Slope; eliminating blighted conditions on the project site, including dilapidated and structurally unsound buildings, debris-filled vacant lots, and underutilized properties; remediating environmental conditions; contributing to the Brooklyn skyline and streetscape with distinctive buildings and a cohesively designed open space; fostering and supporting growth through job creation and economic activity during construction and operation of this mixed-use development.
2. **Provide for new development to support the current and future residents of the Atlantic Terminal area and the borough** as a whole by contributing to the City’s effort to meet the demand for affordable and market-rate housing by providing approximately 6,430 housing units, including 4,500 rental units, 50 percent of such rentals being affordable to low-, moderate- and middle-income families; creating a first-class arena for a professional sports team and an entertainment venue to meet the needs and demands of the New York City area—primarily Brooklyn; creating publicly accessible active and passive open space with amenities encouraging year-round use; providing community facility spaces, including a health care center and an intergenerational facility, offering child care, youth, and senior center services.
3. **Improve railroad and subway facilities** by expanding rail yard capacity, providing direct rail access to the rail yard from Atlantic Terminal through a new West Portal, building a new drill track to allow for the switching of 10-car trains, installing new toilet manifolds for unrestricted servicing, and adding signal, interlocking, and switching systems; platforming over the new rail yard to increase pedestrian connections between neighborhoods; and improving subway access and pedestrian safety by opening a subway station entrance on the south side of Atlantic Avenue at Flatbush Avenue.

PROPOSED PROJECT COMPONENTS

RESIDENTIAL USES

The proposed residential uses would help meet the expected housing demand for Brooklyn and the city as a whole, and the density of the proposed project would allow for a substantial number of affordable units to be included as part of the development program. Residential use is planned for each building in the residential mixed-use variation, totaling an estimated 4,500 rent-stabilized rental units and 1,930 condominium units. The project sponsors have committed that 50 percent of the rental units would be administered under an affordable housing program and that 30 percent of the units built on the arena block during Phase I would be affordable. Based upon the square footage of the residential rental program, it is estimated that there would be a total of approximately 4,500 rental units, of which 2,250 would be affordable units. Affordable units would be reserved for households making between 30 percent and 160 percent of citywide AMI (area median income) and 50 percent of these units (on a square foot basis) would be two- and three-bedroom units. Rent for the units administered under this affordable housing program would be targeted at 30 percent of household income. Income band levels are based on AMI, which is set annually for metropolitan areas and non-metropolitan counties by the U.S. Department of Housing and Urban Development (HUD). As of April 7, 2006, the AMI for New York City was \$70,900 for a family of four. Ten (10) percent (450) of the total rental units would be reserved for senior residents. The affordable program would be subject to adjustment to accommodate the requirements of any city, state, or federal affordable housing program utilized for this housing. Notwithstanding such adjustments, income bands and distribution of units across income bands would be subject to approval by the City, the number of affordable units would not be less than 2,250, and the affordable units would be constructed in accordance with the phasing described above.

The commercial mixed-use variation would have the same number of rental and affordable units; the total number of condominiums would be 825 units. Under this variation, there would be no residential uses in Buildings 1 or 2 or on Site 5.

A small portion of the residential space (both variations) would house community facilities.

Hotel Use

The residential mixed-use variation would include a full-service 180-room hotel (approximately 165,000 gsf) in Building 1. The commercial mixed-use variation would not include a hotel.

Commercial (Office and Retail) Uses

The residential mixed-use variation would include approximately 336,000 gsf of Class A commercial office space in Building 1. The commercial mixed-use variation would include approximately 1.6 million gsf of commercial office space in Buildings 1 and 2 and on Site 5. Both variations would include an approximately 247,000-gsf retail component consisting of retail and eating establishments primarily serving the local population and tenants on the project site. A component of this retail space would also be for use as a community facility. These retail uses, which are expected to be the same for both variations, would be located on the ground floor, possibly extending to the second floor, in a number of the proposed buildings. The retail spaces would not house “big box” retail.

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Nets Arena and the Urban Room

The approximately 850,000-sf arena would be approximately 150 feet tall and include approximately one acre of private open space on its roof. The roof would also contain approximately three acres of landscaped green space, a sustainable design feature that reduces stormwater runoff but would not be accessible. The arena is expected to be open in time for the 2009 NBA season.

The arena would be located on the block bounded by Dean Street and Atlantic, Flatbush, and 6th Avenues. The Urban Room, a publicly accessible atrium is a glass-enclosed space that is expected to serve as an entrance to the office space and hotel in Building 1, the restaurant and cafe, the arena (its ticket booths would be located here), and a new access point to the subway via an underground connection. There would be approximately 10,000 square feet of space that would be available for the public. The Urban Room would serve as its own destination when programmed with small concerts, cultural events, art shows, and readings that would be open to the public. Within the Urban Room, a café would be centrally located on the street level for ease of access for pedestrians going to and from the subway and the street during both event and non-event periods. The second level mezzanine of the Urban Room would be accessed externally by a grand stoop at the corner of Atlantic and Flatbush Avenues or internally by a stair and an elevator (see Figure S-4). The arena's loading functions would be entered from Dean Street, with all security screening, loading dock activities, truck maneuvering, and vehicle queuing taking place internally within this enclosed, below-grade area. No arena functions other than parking are planned east of 6th Avenue.

Open Space and Community Facilities

Eight acres of publicly accessible open space would be provided on the project site (see Figure S-5). On Block 1120, the space between Pacific Street and the project's buildings would have active uses, water features, walking paths, seating areas, and extensive landscaping. Designed to promote public access to and use of the open space, it would continue along Pacific Street eastward on Blocks 1121 and 1129 with a walking path, preserving this corridor as a pedestrian thoroughfare east of the arena block. In the north-south direction, the open space would extend to Atlantic Avenue across from the terminus of existing streets, linking the site to neighborhood streets to the north with landscaped corridors and walking paths into the project's open space.

A southbound bicycle path would enter the project site along Atlantic Avenue at Cumberland Street and continue between Buildings 6 and 7. The path would eventually connect with the larger city bicycle network at Vanderbilt Avenue. In addition, the proposed project would include a 4,000-sf bicycle station in the base of Building 3 on the arena block (see "Proposed Design" below for details).

An intergenerational community center would be in the base of one of the buildings on Block 1120. The facility would include a child care center offering space for at least 100 children, and youth and senior centers. The proposed project would also include an up to 20,000-sf health care facility, which would occupy a portion of the residential space and would be built during Phase I.

Parking

By the end of Phase I, about 2,346 parking spaces would be provided, including 750 permanent and 1,596 interim spaces. By completion of Phase II, the proposed project would provide up to 3,670 below-grade attended parking spaces on the project site.

LIRR Rail Yard Improvements

To allow at-grade development on the project site, the proposed project would include a relocated and covered modernized rail yard, improving train movement between the rail yard and the LIRR Atlantic Terminal and adding to the rail yard's capacity. A reconfigured and upgraded rail yard would be built below street grade on the eastern end of the existing rail yard to allow for both the continuance of LIRR rail yard operations and the operation of the arena. Parking for 30 cars and 5 trucks would be provided and would be located within Block 1120 or another location satisfactory to the LIRR and usable storage would be provided on Blocks 1120 and 1121, consistent with the needs of the LIRR. The west end of the improved rail yard would provide a direct route to and from the terminal to the storage yard and an emergency detour route for passenger trains leaving the terminal (the West Portal). The project sponsors would be responsible for the entire cost of the upgraded rail yard, although a portion of the state and City contributions to the project could be used for this purpose.

Access and Circulation Reconfigurations

The proposed project would include several roadway and pedestrian circulation changes near the project site: (1) Pacific Street between Flatbush Avenue and 6th Avenue and 5th Avenue between Flatbush and Atlantic Avenues would be closed to vehicular traffic to accommodate the arena, the Urban Room, and a direct below-grade connection from the arena block to the Atlantic Avenue/Pacific Street subway complex; (2) Pacific Street between Vanderbilt and Carlton Avenues would be closed to vehicular traffic to create the project's publicly accessible open space and water features that are major sustainable design elements; (3) sidewalks along Flatbush Avenue between Atlantic Avenue and Dean Street would be set back to provide a lay-by lane to decrease the intersection's congestion; (4) sidewalks along Atlantic Avenue between Flatbush Avenue and 6th Avenue would be set back to provide an additional eastbound travel lane and a lay-by lane; (5) 6th Avenue between Atlantic Avenue and Flatbush Avenue would be converted to two-way, the segment between Pacific Street and Flatbush Avenue would be widened, and a lay-by lane between Atlantic Avenue and Dean Street would be provided; (6) Pacific Street between 6th Avenue and Carlton Avenue would be widened; and (7) wide sidewalks would be provided along the south side of Atlantic Avenue from Flatbush Avenue to Vanderbilt Avenue and the east side of Flatbush Avenue between Atlantic Avenue and Dean Street by setting the proposed buildings back from the street line.

The proposed project would also improve subway station access and circulation with new entrances and connections from the south side of Atlantic Avenue. At the southeast corner of the intersection of Atlantic Avenue and Flatbush Avenue, the Urban Room would serve as the main subway entrance from the arena block development. The proposed project would also include the renovation and re-opening of an existing, but currently closed, emergency transit egress stairs located on the sidewalk in front of Site 5.

PROPOSED DESIGN

The creation of the arena block on the western portion of the project site by joining Blocks 1118, 1119, and 1127 and closing portions of Pacific Street and 5th Avenue would allow for the footprint space needed to house the arena and the Urban Room. The closure of these streets would also allow the higher-density commercial and residential uses of the proposed project to surround the arena with a buffer of active street uses and to facilitate the concentration of development adjacent to Brooklyn's largest transit hub. This portion of the project site is characterized by blocks of irregular shapes and sizes (see Figure S-6). On the eastern end of the

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project site, Blocks 1121 and 1129 would be combined by closing Pacific Street between Carlton and Vanderbilt Avenues to vehicular traffic. This larger block allows for greater flexibility in the placement of buildings on the project site and a greater amount of usable open space than would otherwise be possible. It would also accommodate water features that serve as detention and retention basins, which are part of the project's comprehensive stormwater management system. The proposed design would also promote pedestrian connections, as discussed below.

Design Guideline Elements

To establish an overall framework for the design and development of the project site, the proposed project would follow urban design goals and principals set forth in a set of Design Guidelines, developed in close consultation with ESDC and DCP staff.¹ These design goals and principles are grouped into:

- Building Organization, which addresses the placement of the buildings on the project site by concentrating density near the Atlantic/Flatbush subway hub; creating an undulating skyline along Atlantic Avenue; stepping down in scale as the project meets Dean Street; and creating a visual relationship between Building 1, the Site 5 Building and the Williamsburgh Savings Bank Building.
- Building Articulation, which addresses the building form by creating development envelopes that establish a street wall presence and physical separation between the buildings; breaking down the building scale through the introduction of required setbacks and horizontal and vertical architectural breaks; achieving additional articulation through variation in materials and window detailing; and giving identified buildings within the master plan particular prominence through requirements for distinctive design.
- Open Space, which addresses the open space planning by creating a cohesive, continuous and inviting open space with a range of uses and activities throughout; using the open space to connect the surrounding neighborhoods from north to south by continuing the existing street grid system into the open space as pedestrian corridors; and balancing the desire to create an open space protected from Atlantic Avenue with promoting access and use by the neighborhood's residents and workers.
- Streetscape, which addresses the design elements along the project's street frontages by creating an active, transparent streetscape through the introduction of local retail and significant glazing requirements throughout the project, with a focus on the Atlantic Avenue corridor; and enlivening the Atlantic Avenue and Flatbush Avenue intersection with public amenities and a comprehensive graphic and signage scheme.

In a letter dated September 27, 2006, the New York City Planning Commission (CPC) stated that it believes that the proposed project builds on the City's ongoing efforts to continue the growth of Downtown Brooklyn by utilizing the area's excellent transportation infrastructure to provide new entertainment, commercial, and residential uses. The letter acknowledged that ESDC and the project sponsors have consulted with the New York City Department of City Planning (DCP) during the course of the design of the proposed project, which resulted in several major urban design and amenity improvements. CPC made a number of recommendations with respect to the modification of the project program that was the subject of

¹ The Design Guidelines are attached as an Exhibit to the GPP.

the DEIS. The project program has been modified to reflect those recommendations, as described below.

Arena Block and Site 5

The taller, denser, and more intense uses would be concentrated on the arena block and Site 5 (see Figures S-7 and S-8 for elevations of the residential mixed-use variation and the commercial mixed-use variation, respectively). Buildings 1 through 4 would surround the arena. Building 1, with the Urban Room in its base, would be the tallest building in Brooklyn at 620 feet tall and designed to be a focal point. The other three buildings on the arena block would have heights of 219 feet (Building 3 at Dean Street and 6th Avenue), 322 feet (Building 2 at Flatbush Avenue and Dean Street), and 511 feet (Building 4 at Atlantic and 6th Avenues). Building 3 has been reduced in height (from 428 to 219 feet) and size from that analyzed in the DEIS. The building on Site 5, facing Building 1 and the Willamsburgh Savings Bank Building from across Flatbush Avenue, would be 250 feet tall. As with Building 3, the Site 5 building has been reduced in height (from 350 to 247 feet) and size from that analyzed in the DEIS. The proposed building heights are the same for the residential mixed-use and commercial mixed-use variations. However, Buildings 1 and 2 and the building on Site 5 of the commercial mixed-use variation would contain larger floor plates typical of office development.

The western end of the arena block would form the gateway to the project site at the intersection of Flatbush and Atlantic Avenues. The streetscape here would include widened sidewalks, decorative paving, and landscaping. The ground floors of the buildings are required to have a high percentage of transparent materials and to be lined with local retail. This could include potential restaurant uses that would continue the strong Atlantic Avenue and Flatbush Avenue retail corridors to the west and south, respectively, of the project site. The arena is designed to allow passersby to see into the bowl to the scoreboard from the Urban Room and Flatbush Avenue. The arena's signage and lighting would be concentrated at the Urban Room and along Atlantic and Flatbush Avenues, across the street from existing commercial uses, enlivening the streets along the project site blocks. Most of the project lighting would be in keeping with lighting in recently developed areas of Brooklyn and would be consistent with the active uses and sports events that would take place in the arena. Signage would be visible to the east and west on Atlantic Avenue, to the north and south on Flatbush Avenue, and on small portions of Pacific and Dean Streets south of Flatbush Avenue. Other residential areas would not have direct views of the signage. While the signage would be illuminated and highly visible at certain times, most residential areas other than those along Pacific Street and 5th Avenue would not have direct views of the signage.

Residential Community (Project Site East of 6th Avenue)

The Atlantic Avenue corridor would be significantly changed. The existing low-rise buildings and open rail yard on the south side of Atlantic Avenue would be replaced by undulating towers ranging in height from 219 feet (Building 6) to 460 feet (Building 7) (see Figure S-6). Building 6 has been reduced from 334 feet in the DEIS. Higher buildings would generally be toward the west and lower buildings to the east. The tallest portion of the buildings on Block 1120 would be located along Atlantic Avenue. The main footprint of these buildings would be within the northern half of the block more than 100 feet from Pacific Street, and no portion of the buildings would be closer than 25 feet to Pacific Street, except for Building 5, which could be closer. The four residential buildings (Buildings 11 to 14) fronting on Dean Street between Carlton and Vanderbilt Avenues would be designed at a lower scale than those along Atlantic Avenue, and

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are intended to acknowledge the existing townhouses along Dean Street. The buildings would range in height from 184 feet (Building 14) to 287 feet (Building 12) and meet the Dean Street frontage at heights ranging from 30 to 105 feet. Similarly, the height of Building 15 would decrease from Pacific Street to Dean Street.

Publicly Accessible Open Space. The proposed project's eight acres of publicly accessible open space would be added incrementally between 2010 and 2016 as buildings east of 6th Avenue are constructed and may include plazas with planting beds, seating, a children's playground, a lawn area, and a half basketball court, or other recreational amenities. The open space would be located on Blocks 1120, 1121, and 1129. On Block 1120, much of the open space would be adjacent to and along Pacific Street, with wide landscaped openings/passageways between Buildings 5, 6, and 7. The north side of Pacific Street on this block would be designed with border plantings or other landscaping features that would maintain the wide views into and out of the publicly accessible open space. Blocks 1121 and 1129 would be combined to create a unified publicly accessible open space.

The project's dedicated southbound bicycle path would be part of the City's Bicycle Network Development Program, the larger citywide network of bicycle lanes and paths. The bike path would enter the project site along Atlantic Avenue at Cumberland Street, continue southbound between Buildings 6 and 7, and turn east along Pacific Street. The path would then reenter the project site at a pedestrian pathway at Carlton Avenue and continue southeast around Building 14 to Dean Street. The bike path would then continue eastward along Dean Street toward Vanderbilt Avenue, where it would connect with the larger network.

Streetscape. Despite closing certain streets (including Pacific Street) to vehicular traffic, the proposed project would increase connections between the neighborhoods surrounding the project site by creating inviting open space, walkways, and a bike path connection. The proposed project would increase street-level activity on the project site by creating the open space (see discussion above) and providing complementary active uses (including local retail and community facility uses) on the ground floors of most of the residential buildings. The street-level uses of the buildings lining Atlantic, Vanderbilt, and 6th Avenues would be predominantly local retail to strengthen and continue the Atlantic Avenue retail corridor to the west and promote street-level activity. These retail spaces are expected to contain restaurants, delis, boutiques, and local services. As described above, the lower-scale residential buildings fronting on Dean Street between Carlton and Vanderbilt Avenues would be designed to complement the existing townhouses along Dean Street.

Public Safety

The proposed project would implement its own site security plan, which includes measures such as the deployment of security staff and monitoring and screening procedures. Private security staff and security systems would be provided for the project: additional security personnel at arena events, screening of office tenants and visitors, and private security for the residential and open space components of the proposed project. The project sponsors have consulted with the FDNY regarding access needs of emergency vehicles and other safety considerations, such as evacuation plans for places of public gathering and fire protection and security measures. The project sponsors also met with NYPD to review the overall project and public safety and security measures

Sustainable Design Measures

The proposed project would incorporate a number of sustainable design measures to reduce energy demand and consumption, make efficient use of building materials, conserve water use, manage storm water runoff, and cut air emissions from the project's heating systems and vehicles, among other features. The proposed project would incorporate measures to achieve Leadership in Energy and Environmental Design (LEED) certification—at a minimum—for the arena and all 16 buildings on the project site, with a goal of a higher LEED Silver certification where feasible and practicable. The project sponsors also intend to participate as a pilot project in a LEED for Neighborhood Development (LEED-ND) program, which is currently being developed.

It is anticipated that, as part of the LEED certification, the proposed project would achieve a minimum 10 percent project-wide energy savings beyond the requirements of the New York State Energy Conservation and Construction Code as of September 2006. In addition, the proposed project would use high-efficiency water fixtures, employ green landscape design elements, install heating systems that burn natural gas exclusively and burners that reduce nitrogen oxide emissions, and make use of recycled content in construction materials that would also be low Volatile Organic Compound (VOC)-emitting materials.

PROPOSED PROJECT'S BENEFITS AND IMPACTS

The proposed project has been designed to achieve significant benefits to the State and City. Among these many benefits would be: (1) the removal of blighted conditions on the project site with the development of a state-of-the-art arena to accommodate the return of a professional sports franchise to Brooklyn that would also provide a venue for local academic institutions, which currently lack adequate athletic facilities, and a new venue for a variety of musical, entertainment, educational, social and civic events; (2) creation of thousands of critically needed rental housing units for low-, moderate-, and middle-income New Yorkers, as well as market-rate rental and condominium units; (3) construction of first-class office space and sustainable, transit-oriented development; (4) eight acres of well-designed publicly accessible street-level open space that connects the surrounding neighborhoods; (5) introduction of new ground-level retail spaces to activate the project site's existing desolate street frontages; (6) creation of community facility spaces including a health care center and an intergenerational facility, offering child care as well as youth and senior center services; (7) reconfiguration and improvement to the LIRR's Vanderbilt Yard rail storage, cleaning, repair and inspection facility; (8) a direct subway connection on the south side of Atlantic Avenue at the intersection of Atlantic and Flatbush Avenues, with sufficient capacity to accommodate arena patrons, that would eliminate the need for pedestrians approaching the subway from the south to cross Atlantic Avenue to enter the subway, enhancing pedestrian safety; (9) the incorporation into a large-scale development of sustainability and green designs through the application of comprehensive sustainable design measures that make efficient use of energy, building materials and water; and (10) environmental remediation of the project site. The State and City would realize significant employment and fiscal benefits during the construction and operation of the proposed project, well in excess of the project's total public contributions.

These social, economic, and environmental benefits cannot be achieved without some adverse environmental impacts. There would be significant adverse impacts as a result of the operations of the proposed project in areas such as schools, cultural resources, shadows, traffic, transit and pedestrians, and noise, as well as construction impacts. While the proposed project has

incorporated numerous measures to avoid or mitigate adverse impacts, there would remain some unmitigated impacts. Notwithstanding these impacts, the proposed project is expected to achieve the long-term State and City goals of enhancing the vitality of the Atlantic Terminal area; providing substantial new housing, including much needed affordable housing; and improving railroad and transit facilities, and pedestrian access to Brooklyn's largest transit hub.

CONSTRUCTION SCHEDULE

If approved, the proposed arena and new subway entrance are expected to be completed by fall 2009 for opening day of the Nets 2009 season. Construction of the other buildings on the arena block and Site 5, as well as the improved rail yard, is expected to be completed by 2010. The entire proposed development is expected to be completed by 2016. The proposed project's likely construction activities and schedule are described below in Section R, "Construction Impacts."

ALTERNATIVES ANALYSIS

The EIS examines a range of alternatives to the proposed project, including a No Action Alternative, a No Unmitigated Impact Alternative, an As-of-Right Alternative, and three alternatives derived from proposals received from community and business groups—two with lower densities than the proposed project and no arena, and one alternative with reduced density and an arena. While the No Action Alternative, the As-of-Right Alternative, and the Unmitigated Impact Alternative would avoid some of the adverse environmental impacts of the proposed project, these alternatives would not realize the substantial economic and civic benefits resulting from new jobs, new infrastructure, new arena and other mixed-use development on a site located over a major transit hub that is well-suited for high-density transit oriented development. The Reduced Density—No Arena Alternative would be developed only on the footprint of the LIRR rail yard and would not result in the displacement of existing residents or businesses. However, it would not eradicate the blighted conditions of the project area and would realize substantially reduced economic benefits. Moreover, this alternative would restrict rather than enhance the operational efficiency of the LIRR rail yard. The Reduced Density—Arena Alternative would have mixed uses comparable to the proposed project but with substantially less housing and publicly usable open space. This alternative would have nearly the same significant adverse impacts as the proposed project but would have substantially fewer benefits in terms of affordable housing, and publicly accessible open space, and would not provide a drill track for the LIRR rail yard improvement. None of these alternatives would fully realize the benefits of the proposed project, including the major public amenities of a new subway entrance, a cohesively designed at-grade publicly accessible open space, pedestrian connections through and among the surrounding neighborhoods, much needed affordable housing, sustainability, improved LIRR rail yard operations, and remediation of environmental conditions.

C. PROCEDURAL AND ANALYTICAL FRAMEWORK

REQUIRED APPROVALS

The proposed project would require a number of City and State approvals, including several discretionary actions requiring review under SEQRA:

1. Affirmation of a GPP by the UDC, doing business as the ESDC, and the making of related findings under the UDC Act, SEQRA, and the Eminent Domain Procedure Law (EDPL) to

the extent condemnation is necessary to effectuate any portion of the proposed project. As part of the GPP, ESDC would override certain aspects of the *New York City Zoning Resolution*, including, but not limited to, use (including uses within the beds of City streets) and bulk (including height and setback, and floor area), signage, and parking requirements and allowances; the land use regulations of the Atlantic Terminal Urban Renewal Area (ATURA) Plan, as they relate to Site 5 and Site 6A to the extent the ATURA Plan requires compliance with zoning; and the City Map as it relates to the closure of portions of City streets with the consent of the City.

Since the project is being implemented pursuant to a GPP, ESDC has determined that the project approvals will follow the procedures set forth in the UDC Act, rather than the City's Uniform Land Use Review Procedure (ULURP), for consideration and approval of a UDC project.

2. Condemnation by ESDC of the City's interest in City-owned properties within the project site, including portions of the City streets to be closed.
3. Acquisition by ESDC of private property located within the project site through negotiation or condemnation.
4. Disposition by ESDC of the project site properties to the project sponsors.
5. Disposition by MTA or LIRR of a property interest in the Vanderbilt Yard to ESDC or the project sponsors.
6. Approval by MTA, LIRR, and/or NYCT of the relocated and upgraded rail yard and other transit improvements, and any related real property acquisitions by MTA LIRR, and/or NYCT.
7. Approval by the Public Authorities Control Board of the proposed project.
8. State and City funding of certain infrastructure improvements and land acquisition costs.
9. Provision of State and City funding for affordable housing bond financing.

In addition, the proposed project would also require approvals from (but not limited to) the New York City Department of Transportation (DOT), the New York City Department of Environmental Protection (DEP), the New York City Department of Buildings (DOB), and the Art Commission of the City of New York. Air permits from the New York State Department of Environmental Conservation (NYSDEC) may also be required.

As part of the project's environmental review, a number of State and City agencies were consulted, including New York State Office of Parks, Recreation and Historic Preservation (OPRHP), the New York City Landmarks Preservation Commission (LPC), New York City Department of City Planning (DCP), DOT, DEP, New York City Department of Parks and Recreation (DPR), the Fire Department (FDNY), the Police Department (NYPD), the School Construction Authority (SCA), and the Department of Education (DOE).

ENVIRONMENTAL REVIEW PROCESS

This EIS has been prepared in accordance with SEQRA and the New York City *Environmental Quality Review (CEQR) Technical Manual*, where applicable. The review process allows decision-makers to evaluate the proposed project's environmental effects, evaluate reasonable alternatives, and identify measures to mitigate significant adverse effects. The process also facilitates public involvement by providing the opportunity to comment on the draft EIS.

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Two key public processes are required to implement the proposed project: (1) GPP review and approval, and (2) property acquisition under the EDPL. The GPP approval process is generally as follows: ESDC adopts a GPP and makes it available for public review and comment, including a public hearing. After the hearing, and after making findings under SEQRA, the ESDC Board may affirm, reject, or modify the GPP. As part of the GPP, ESDC is expected to acquire property through the use of eminent domain. As set forth in the EDPL and pursuant to its authorization under the UDC Act, property can be acquired by ESDC for an ESDC project. As part of this EDPL process, a public hearing must be held on the proposed condemnation. Following this hearing, ESDC must publish findings related to its determination to pursue condemnation.

FRAMEWORK FOR ENVIRONMENTAL ANALYSIS

ANALYSIS SCOPE, ANALYSIS YEARS, AND STUDY AREAS

An EIS analyzes the effects of a proposed project on its environmental setting. For each technical chapter, a description of existing conditions, an assessment of conditions in the future without the proposed project for the year that the project would be completed, and an assessment of conditions for the same year with the completion of the proposed project are included. The prediction of a proposed project's effects is made for the "analysis year" or the "Build year," which is the year when the project would be substantially operational. Since the proposed project has several elements that would be developed or implemented over time, two analysis years, 2010 and 2016, are analyzed in this EIS. That is, conditions in the future without the proposed project are evaluated against conditions in the future with the proposed project for each analysis year.

For the purposes of this EIS, the proposed project is analyzed in two phases: (1) Phase I completion by 2010 of the renovated rail yard, and development west of 6th Avenue, including the arena and Site 5, and sewer and utility work, and (2) Phase II completion by 2016 of the project site's eastern portions. In addition, reasonable worst-case impacts from construction were determined for each of the technical areas to ensure that the most conservative analysis was used in the EIS. Where appropriate, the potential combined impact of Phase I operation and the construction of Phase II in later years is specifically addressed as part of the construction analysis.

For each technical analysis, primary and secondary study areas were delineated to define the locations most likely to be potentially affected, either directly or indirectly, by the proposed project.

DEFINING BASELINE CONDITIONS AND PROJECT FOR ENVIRONMENTAL ANALYSIS

This EIS describes "existing conditions" for 2006 and assessments of future conditions without the proposed project ("future without the proposed project") and with the proposed project ("probable impacts of the proposed project") in 2010 and 2016. The existing conditions assessment establishes a baseline to predict future conditions. The future without the proposed project condition uses existing conditions as a baseline and adds changes expected at various times in the future. For many technical areas, the future without the proposed project condition incorporates known development projects that are likely to be built by the two analysis years independent of the proposed project. For some technical areas, a background growth factor is added to reflect a general increase in activity unrelated to known projects in addition to anticipated future projects. Other future changes that will affect the environmental setting are considered as well. In examining the project's potential environmental impacts, the EIS analyzes the program as summarized above in "Project Description."

ANALYSIS FRAMEWORK FOR THE ENVIRONMENTAL REVIEW

Each section of the EIS presents a full analysis of the program variation (residential mixed-use or commercial mixed-use) with the greater potential to cause significant adverse environmental impacts for that particular technical area (i.e., the Reasonable Worst-Case Scenario) and a less-detailed analysis for the other program variation, when relevant. Each EIS section also describes relevant differences between the impacts expected for the respective development variations, and describes how the effects of the two differ. This conservative methodology fully discloses any impacts associated with either variation. For certain technical areas (i.e., hazardous materials, cultural resources, urban design and visual resources, and construction impacts), the potential effects are the same under both program variations.

Since the issuance of the DEIS, the proposed project has been modified to reduce the size of its program and the scale of three of its buildings. The FEIS has been updated to include these modifications as well as others in response to comments made on the DEIS. The FEIS analyses indicate that no significant adverse impacts would result from these revisions that were not previously disclosed in the DEIS.

D. LAND USE, ZONING, AND PUBLIC POLICY

LAND USE

The proposed project would result in land uses currently not present on the project site at an overall density comparable only to the Special Downtown Brooklyn District, which is adjacent and north of the project site. The proposed project would have no significant adverse land use impacts, as discussed below.

Although the project site sits at a major crossroads, adjacent to a major transportation hub, close to Downtown Brooklyn, and at the junction of several thriving neighborhoods, it contains virtually none of the land use patterns or vitality of its neighbors. Its depressed rail yard and dilapidated, vacant, and underutilized properties have perpetuated the current visual and physical barrier between the redeveloped areas to the north of Atlantic Avenue and the neighborhoods to the south. That barrier would be removed with the proposed project. Components of the resulting development would be built above the relocated rail yard, which would be reconstructed at the eastern end of the existing below-grade portion on the project site. This would introduce a mix of uses, including a new arena bordered by retail, hotel, office, and residential development (including new underground access to 10 subway lines), plus a residential community offering substantial open space, a health center, an intergenerational center, and new pedestrian and bicycle access through the site. The rehabilitation of the rail yard would facilitate the modernization of LIRR operations, and the new subway entrance would improve access to and flow within the station. Except for the arena, which is a singular use, the predominantly residential, commercial, and open space land uses associated with the proposed project would be similar to, and compatible with, those in the surrounding primary and secondary study areas.

The location of the project site, with a new connection to Brooklyn's largest transportation hub, makes it suitable for high-density development. This transit-oriented development is a distinctly beneficial aspect of the proposed project, in that the project site would be able to accommodate the region's anticipated growth efficiently. The presence of dense development on the project site would help to meet the demand of economic and population growth expected over the next two decades. The arena would be a new use, but arenas are typically compatible with

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commercial, retail, entertainment, and cultural event-oriented uses, and, therefore, this use would be compatible with its surroundings, particularly with Downtown Brooklyn and the Brooklyn Academy of Music (BAM) Cultural District to the north. The siting of an arena at this location also takes advantage of the excellent mass transit services provided by the adjacent Atlantic Terminal transportation hub.

The *New York City Zoning Resolution* prohibits arenas within 200 feet of residential districts as some of the operations could be incompatible with districts limited primarily to residential use. (Arenas are permitted in most commercial districts allowing for residential use.) The arena block is adjacent to a residential district to the south, and accordingly, the arena has been designed to minimize its presence and effect on the residential uses on these blocks. Primary entrances and signage would be oriented toward the crossroads of two major commercial thoroughfares and away from these residences. Two primarily residential buildings (Buildings 2 and 3) on the arena block would occupy most of the Dean Street frontage, serving as a buffer between uses. However, the preferred seating entry and entry to the loading area would be located on Dean Street and, while security screening and loading functions would take place entirely within the building, the residences along this street would experience some localized adverse impacts. The Dean Street corridor between Flatbush and Vanderbilt Avenues is lined with and zoned for both residential and industrial uses. The Dean Street corridor has also historically functioned as a transition between the more commercial and industrial uses to the north and the residential uses to the south. The localized adverse land use impacts attributable to the arena activities interspersed with new, compatible residential uses would not be considered a significant adverse impact on land use.

ZONING AND PUBLIC POLICY

The proposed project would introduce land uses at a density substantially greater than nearly all of the surrounding area. However, land use patterns in these areas are expected to remain relatively stable due to existing zoning regulations (including recent rezoning actions) and historic district designations throughout the study area. The presence of greater density on the project site is not expected to spur changes in density elsewhere in the study area. The density of the proposed commercial office and residential buildings would generally be compatible with the buildings to the north of the project site in Downtown Brooklyn, while the scale of the street-level retail proposed throughout the project site would be consistent with that of the ground-floor retail throughout the study area. The project's overall density would be more concentrated on the western end of the project site (the arena block and Site 5), where the overall density would equate to a floor area ratio (FAR) of just under 10 (slightly less than 12 FAR not including the area of the former streetbeds); the FAR on the project site east of 6th Avenue and would be 7.4 (8.2 without the former streetbeds). The total FAR of the proposed project would be 7.8 (9.0 without the former streetbeds).

The development on the project site would be subject to the provisions of the GPP, which would serve in lieu of zoning (current manufacturing zoning on the project site does not permit residential use and the *New York City Zoning Resolution* prohibits arenas within 200 feet of residential districts). Thus, the policy permitting the development would be focused on the project site only—there would be no precedents set by a rezoning. The proposed project would also require an override of ATURA as it relates to zoning conformance. However, the proposed project would promote a number of ATURA objectives, including—but not limited to—the removal of structurally substandard buildings and the elimination of negative environmental conditions. This change, too, would apply only to the project site and would not affect any other

area. In addition, the project would complement the goals of the Special Downtown Brooklyn District, first approved in 2001, to encourage medium- to high-density commercial development and strengthen the business core of Downtown Brooklyn, north of and including portions of the project site. The City has been involved in the planning/site design process of this proposed project. Since issuance of the DEIS, the program has been modified to incorporate recommendations made by CPC.

While the zoning overrides would permit uses and densities that do not comply with underlying zoning, this non-conformance is not considered a significant adverse impact because these uses relate rationally to uses and densities allowed under the existing zoning in the area. In fact, the proposed project would support the City policies for housing and commercial development in Brooklyn by supplying substantial new commercial space and both affordable and market-rate housing and by not conflicting with the City's industrial retention policy. The proposed project would also support City policy to promote transit-oriented development by locating high-density commercial, residential, entertainment, and cultural uses adjacent to the Atlantic Terminal transportation hub. Therefore, the proposed project would not result in any significant adverse impacts on zoning or public policy.

E. SOCIOECONOMIC CONDITIONS

The proposed project would generate substantial economic benefits for New York City and State and would not cause any significant adverse impacts related to direct residential displacement, direct business displacement, indirect residential displacement, indirect business displacement, or effects on specific industries. The results of the proposed project's socioeconomic analysis are summarized below.

DIRECT RESIDENTIAL DISPLACEMENT

The proposed project would directly displace 171 residential units of housing with an estimated 410 residents, all during Phase I. Although the *CEQR Technical Manual* defines direct residential displacement as the *involuntary* displacement of residents, the project's analysis considers direct displacement to include owner-occupied units sold to the project sponsors, rental units for which the renters voluntarily agreed to vacate their apartments, and housing units that were vacant upon acquisition by the project sponsors. Based on the *CEQR Technical Manual*, the direct displacement of these residents would not result in a significant adverse impact because they do not represent a significant proportion of the study area population and they are not likely to have socioeconomic characteristics that differ markedly from the study area population as a whole.

DIRECT BUSINESS AND INSTITUTIONAL DISPLACEMENT

During Phase I, the proposed project would directly displace 27 businesses involved in a variety of industries and two institutions, a privately operated facility that provides temporary housing for homeless families and an FDNY Special Operations Facility used for equipment cleaning and storage. The proposed project would not cause a significant adverse direct business and institutional displacement impact because the displaced businesses and institutions do not have substantial economic value to the City or region; are not subject to publicly adopted plans to preserve, enhance, or protect them; do not individually or collectively contribute substantially to neighborhood character; and can be relocated elsewhere in the city, since their operation is not tied to their current location.

INDIRECT RESIDENTIAL DISPLACEMENT

At-risk households in the study area have been decreasing and will probably continue to do so without the proposed project. By 2010 and 2016, the proposed project's analysis concludes that the at-risk population in the study area would likely be much smaller than in 2000. In addition, the proposed project would not substantially affect residential property values in areas with at-risk population for several reasons. First, similarities between the proposed project housing mix and the housing mix currently present in the 3/4-mile study area indicate that the proposed project would not substantially change the socioeconomic profile of the study area. Second, the substantial number of housing units to be added could alleviate upward pressure on rental rates. Third, most at-risk households identified are more than 1/2 mile from the project site, and there are intervening established residential communities with upward trends in property values and incomes and active commercial corridors separating the project site from the areas with at-risk population.

INDIRECT BUSINESS AND INSTITUTIONAL DISPLACEMENT

Existing businesses would generally benefit from the larger customer base that would be created by the proposed project's residents, workers, and visitors because increases in sales from the new population would allow them to afford any potential increases in rental rates. In addition, rents in some of the study area's commercial corridors have already substantially increased in recent years, and so businesses or institutions vulnerable to indirect displacement pressures will have already relocated by 2010 and 2016 in the future without the proposed project. Further, most of the institutional uses in the study area are owner-occupied or government-owned and therefore would not be vulnerable to indirect displacement pressures.

The potential for indirect displacement would be limited to a small number of businesses and institutions mainly along Vanderbilt Avenue, Flatbush Avenue, and 4th Avenue, within 1/4 mile of the project site. These businesses and institutions are not unique to the study area, do not have substantial economic value to the City, and do not have locational needs that would preclude them from relocating elsewhere in the study area or city. Their displacement would not substantially affect neighborhood character and would not represent a significant adverse impact.

ADVERSE EFFECTS ON A SPECIFIC INDUSTRY

The proposed project would not directly affect business conditions in any industry or category of business within or outside of the study area, nor would it indirectly substantially reduce employment or impair the economic viability of any industry or category of business.

ECONOMIC BENEFITS OF AND PUBLIC FINANCING FOR PROPOSED PROJECT

The construction and operation of the proposed project would generate substantial economic benefits for New York City and State. The construction cost of either the residential mixed-use variation or the commercial mixed-use variation would entail the investment of approximately \$3.4 billion (all dollar amounts in 2006 dollars). Overall, economic and fiscal benefits from construction would be greater during Phase I, while benefits from annual operation would be greater after the completion of the Phase II.

Benefits from construction of Phase I would be similar for both variations. Phase I construction would create between 13,300 and 13,800 direct and indirect person-years of employment in New

York City and between 16,400 and 17,100 direct and indirect person-years of employment overall in New York State, with the residential mixed-use variation generating the higher number of jobs. (A person-year is the equivalent of one person working full-time for a year.) Taxes paid during construction of either variation would also be similar, i.e., between \$128 million and \$131 million, including about \$41 to \$42 million for New York City.

Economic and fiscal benefits associated with the annual operation of the Phase I development would be different for the two variations. In general, the commercial mixed-use variation would generate more than twice the number of jobs and taxes as the residential mixed-use variation. For example, Phase I of the commercial mixed-use variation would support approximately 15,400 direct and indirect full-time equivalent (FTE) jobs in New York City, compared with about 5,300 FTE jobs with the residential mixed-use variation. In addition to property taxes, non-property related tax revenues generated during the operation of the Phase I development would amount to approximately \$131 million annually for the commercial mixed-use variation, compared with about \$61 million annually under the residential mixed-use variation.

Phase II economic and fiscal benefits would be similar under either variation. Construction of Phase II would generate approximately 11,900 direct and indirect person-years of employment in New York City and a total of approximately 14,800 person-years of employment in New York State. Tax revenues generated during the Phase II construction period would be approximately \$111 million, with approximately \$36 million going to New York City. The annual operation of the incremental Phase II development program would support more than 1,000 direct and indirect FTE jobs in New York State, of which approximately 900 would be in New York City. In addition to property taxes, non-property tax revenues from the operation of the Phase II development would add about \$9 million annually to those from the Phase I development.

The cumulative effect from constructing the entire development program (Phase I and II) of either variation would be substantial. Construction would create between 25,200 and 25,700 direct and indirect person-years of employment in New York City and between 31,200 and 31,900 direct and indirect person-years of employment overall in New York State, with the residential mixed-use variation generating the higher number. Direct and indirect wages and salaries from constructing the proposed project would total approximately \$1.6 billion in New York City and approximately \$1.9 billion in New York State (with, again, the residential mixed-use variation creating a marginally higher number). The total effect on the local economy, measured as economy output or demand, is projected at approximately \$4.9 billion in New York City and between \$6.3 and \$6.4 billion overall in New York State. Including the projected mortgage recording fees from the condominium owners, total public sector revenues for New York City, MTA, and New York State from constructing the project would equal \$247 million for the commercial mixed-use variation and \$261 million for the residential mixed-use variation.

Once constructed, the annual operation of the completed project would support approximately 6,200 to 16,300 direct and indirect FTE jobs in New York City, and approximately 7,500 to 19,800 direct and indirect FTE jobs overall in New York State—with the first number in each case being that of the residential mixed-use variation and the second the commercial mixed-use variation. Direct and indirect wages and salaries are projected at \$338 to \$862 million annually in New York City and \$387 to \$985 million annually in New York State. The overall effect on the local economy from operating the completed development is projected at \$0.9 to \$2.6 billion annually in New York City and \$1.1 to \$3.0 billion annually in New York State. In addition to annual property taxes, public sector revenues for New York City, MTA, and New York State are

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projected at approximately \$70 million annually from the residential mixed-use variation and \$140 million annually from the commercial mixed-use variation.

The City and the State have indicated that they would provide direct funding to the proposed project. State funding would be used for infrastructure improvements necessary to construct the arena and for the redevelopment of the rail yard. City funding would also be used for necessary infrastructure and rail yard improvements. The City's contribution could also be used for acquisition costs related to the arena site (other than for the acquisition of properties owned by the MTA/LIRR).

In addition to the public capital investment, the arena would receive an exemption from sales taxes on materials used in the initial construction and fit-out and on capital repairs and replacements. It is expected that the project sponsors would also receive exemptions from State and City mortgage recording taxes, as is customary for affordable housing developments.

The costs of constructing and fitting-out the arena and its ancillary facilities would be financed through one or more series of tax-exempt and taxable bonds issued by a local development corporation. ESDC would retain ownership of the arena and the land under the arena for the term of the bonds. As a result, the arena and the land under the arena would be exempt from real estate taxes. The repayment of the tax exempt bonds would be accomplished through a payment in lieu of tax (PILOT) that would be the sole responsibility of the arena's lessee. The State and the City would have no liability for repaying the bonds or for the PILOT. The issuance of tax-exempt bonds would be of no cost to the State or City since the repayment would be solely the responsibility of the arena's lessee.

As noted above, the public benefits generated by the operation of the proposed project would be substantial, including thousands of direct and indirect jobs as well as substantial tax revenues over and above real estate tax revenues. The proposed project would generate substantial revenues for the City and State exceeding their combined \$200 million capital investment after the second year of operations.

F. COMMUNITY FACILITIES

This section summarizes the potential effects of the proposed project's demand in 2010 and 2016 on police and fire protection, public schools, libraries, hospitals and healthcare facilities, and day care centers in the study area.

POLICE PROTECTION

The assessments for both 2010 and 2016 conclude that there would be no significant adverse impacts on police protection or emergency service in the study area as a result of the proposed project. The New York Police Department (NYPD) would continue to evaluate its staffing needs and assign personnel based on population growth, area coverage, crime levels, and other local factors. The proposed project, including potential effects to police response times, would be taken into consideration during such routine evaluations of service adjustments to continue to provide adequate police coverage. Police response times are not expected to be significantly affected by the closing of local streets or increased traffic on the surrounding street network as the project site is accessible by three of the borough's major thoroughfares and service to surrounding areas is from precincts that have a broad geographic distribution and are not clustered around the project site. NYPD vehicles responding to emergencies are not bound to

standard traffic controls and are therefore less affected by traffic congestion. NYPD response times (to crime-in-progress calls) have declined citywide and boroughwide from 2005 to 2006.

NYPD has protocols to successfully police large venues, such as Madison Square Garden and Yankee Stadium, which have similar events to those that would take place at the proposed arena. Additionally, the proposed project would implement its own site security plan, which includes measures such as the deployment of security personnel and monitoring and screening procedures.

While there would be no direct displacement of existing NYPD facilities, the reconfiguration of 6th Avenue between Atlantic and Flatbush Avenue would result in the loss of angled police parking in front of the 78th Precinct House. The project sponsors would provide off-street parking within the project site at a proximate and convenient location for the up to 24 police vehicles that would be displaced.

FIRE PROTECTION AND EMERGENCY SERVICES

Significant adverse impacts on fire protection services are not expected as a result of the proposed project for either the 2010 or 2016 analysis year. There would be no significant adverse impacts from the relocation of the New York City Fire Department (FDNY) Special Operations Facility currently located on the project site. The loss of this facility would not impact essential fire protection services to the surrounding community. FDNY would continue to monitor its ability to provide fire and medical protection and would continue to provide these services per established standard FDNY operating procedures.

Similar to NYPD operations, FDNY response times are not expected to be significantly affected by the closing of local streets or increased traffic as the project site is accessible by three of the borough's major thoroughfares and service to surrounding areas is from FDNY facilities that have a broad geographic distribution, including seven firehouses, a special operations facilities (one squad company), and one emergency response unit. The nearest Emergency Medical Service (EMS) unit is located at 39 Auburn Place north of the project site. FDNY and emergency service vehicles would be able to access the project site and would maneuver around and through congested areas and are not bound by standard traffic controls. Similar to other emergency responders, ambulances would adjust to any congestion encountered en route to their destination, and all ambulances in the 911 system are dispatched by FDNY under the same 911 system, regardless of hospital affiliation. Average FDNY response times to all emergencies decreased citywide and boroughwide from 2005 to 2006. EMS response times to medical emergencies have also decreased citywide and boroughwide during this same period. In addition, the City is implementing an automatic vehicle location (AVL) system in all ambulances and FDNY apparatus, which is expected to further reduce emergency response times. Given this trend and the anticipated enhancements to the FDNY and emergency vehicle dispatch system, the proposed project is not expected to significantly affect the provision of services by fire and emergency vehicles.

PUBLIC SCHOOLS

The project site is located in both Community School Districts (CSDs) 13 and 15. The EIS assessed the effects on school capacity within ½ mile of the project; on schools within CSD 13—where most of the project site is located; on schools within CSD 15; and on all schools within CSDs 13/15 combined. The elementary and intermediate school-aged children that would be introduced as a result of the proposed project in 2010 could be accommodated in the schools

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located within ½ mile of the project site. Therefore, no significant adverse impacts on school capacity are expected in 2010.

The proposed project would result in a significant adverse impact to both elementary and intermediate schools within the ½-mile study area when enrollment at these schools exceeds their program capacities, which could be as early as 2013. While there would be projected shortfalls in elementary and intermediate school seats for schools located within ½ mile of the project site, there would remain available capacity in both the larger CSD 13 and CSD 15 (and thus CSDs 13/15 combined). Although the methodology outlined in the *CEQR Technical Manual* calls for the assessment of school capacity within the larger CSD, the elementary and intermediate school shortfalls within the ½-mile study area would be substantial enough to create a significant adverse impact to elementary and intermediate schools in the vicinity of the project site. To mitigate this shortfall, either one or a combination of the following measures would need to be undertaken: shifting the boundaries of school catchment areas within the CSDs to move students to schools with available capacity; creating new satellite facilities in less crowded schools; leasing school space to be constructed on the project site; and building new school facilities off-site.

Since the issuance of the DEIS, the project sponsors have reached an agreement with the New York City Department of Education (DOE) that upon DOE's request, the project sponsors would provide adequate space for the construction and operation of an approximately 100,000-square-foot elementary and intermediate school in the base of one of the Phase II residential buildings. At this time, the lower floors of Building 5, located on the east side of 6th Avenue between Atlantic Avenue and Pacific Street, have been identified as a possible site. This school space would be made available at a time that would allow the school to be constructed and open at the beginning of the school year in which the significant adverse impact would be projected to occur, i.e., when the projected enrollment in either the elementary or intermediate schools within ½ mile of the project site would exceed their program capacities. This could occur as early as 2013.

The new school would be designed in accordance with DOE's specifications for new P.S./I.S. construction, and would include standard school facilities such as classroom, administration, and assembly space, gymnasium, cafeteria, library, and outdoor play areas. The school would have a separate entrance from the other uses within the building.

The floor area provided for the school would be in addition to the floor area assumed to be developed under either reasonable worst-case scenario for the Residential Mixed-Use Variation or Commercial Mixed-Use Variation described in Chapter 2, "Procedural and Analytical Framework." Thus, the provision of a school as part of the proposed project would result in additional floor area to be developed at one or more Phase II development sites. If located in Building 5, the additional floor area is expected to be able to fit within the development envelopes established in the Design Guidelines and in any event would not change the overall height of any building. This additional 100,000 square feet of school space would represent approximately a 1.25 percent increase to the reduced FEIS program; this total program size, however, would still be less than the program analyzed in the DEIS.

The environmental consequences of the addition of this school use to the project program are analyzed in the FEIS. It was determined that the addition of the school to the proposed project would not result in any significant adverse impacts, with the exception of noise impacts. The playground noise could increase the ambient noise levels at the proposed project's open space in the vicinity of the school to a level that is above that desirable for an open space amenity;

however, these levels would be comparable to noise levels found in parks containing playgrounds in the City's urban environment. The noise generated by the school's playground would qualify as a significant adverse impact to project buildings; however, the project buildings would include both double-glazed windows and central air-conditioning or alternative ventilation, which would provide appropriate attenuation to satisfy applicable interior noise criteria. Depending on the location of the school within the project site, it is possible that there could be significant adverse noise impacts on nearby residential buildings; however, the noise mitigation proposed for the project's operational impacts would also mitigate this impact.

LIBRARIES

No significant adverse impacts to libraries in the study area would result with the proposed project.

HOSPITALS AND HEALTH CARE FACILITIES

No significant adverse impacts to hospitals or health care facilities would result with the proposed project. The new residential population introduced by the proposed project would not overtax the existing hospital or health care resources in the surrounding area. The proposed project would also include a 20,000-square-foot health care facility that would provide a broad range of health care services to the community. This health center would be constructed during Phase I. There are service providers located at a number of different locations throughout the study area, and provisions for emergency vehicle access have been incorporated into the site design.

DAY CARE CENTERS

Child care facilities in the area surrounding the project site would be able to accommodate the increased population of children 12 years old or younger introduced by the proposed project in 2010. Although the number of eligible children that would be introduced to the study area by the 2016 analysis year would exceed the existing capacity of the area's child care facilities, the proposed project includes the development of an intergenerational facility that would have capacity for at least 100 children with publicly-funded vouchers for income-eligible households. The future demand for day care services would not exceed this future capacity. In addition, day care facilities may also be opened within the study area by 2016 as the population within this area (unrelated to the proposed project) increases. No significant adverse impacts to day care center services are anticipated in the study area in either the 2010 or 2016 analysis year as a result of the proposed project.

G. OPEN SPACE AND RECREATIONAL FACILITIES

A key component of the proposed project is the provision of eight acres of publicly accessible open space, which would be developed incrementally during Phase II as buildings during this phase are completed. The new open space would provide passive and active recreational opportunities and new pedestrian and bicycle path connections between the adjacent neighborhoods. Plazas, boardwalks, water features, lawns, and active play areas, and other features would be included in the open space. In addition, private open space on the arena's roof and publicly accessible amenities, such as the Urban Room and plazas around the outside of the arena, would be provided during Phase I. In sum, because the proposed project would provide more open space to users than is currently available, no significant adverse impact on open space and recreational resources would result.

However, because the publicly accessible open space would not be provided until Phase II, the passive open space ratio in the non-residential (¼ mile) study area would be substantially lower than DCP's recommendations after completion of Phase I in 2010. While the private open space on the arena's roof, the Urban Room, the plaza areas, and the availability of large open spaces nearby (Prospect Park and Fort Greene Park) would help address this deficiency, there would be a temporary significant adverse open space impact. The project sponsors have committed to working with DPR to provide a comfort station at the Dean Playground for park patrons. This commitment would partially mitigate the temporary significant impact on open space in 2010 availability that would occur between completion of Phase I of the project in 2010 and the creation of the project's open space during Phase II. By 2016, with the provision of the proposed project's eight acres of publicly accessible open space, the passive open space ratio in the non-residential study area would improve and there would no longer be any significant adverse impacts.

H. CULTURAL RESOURCES

The following summarizes the analysis that was conducted to determine the proposed project's potential effects on archaeological and historic cultural resources on the project site and in the study area, including the Prospect Heights, Fort Greene, Boerum Hill, and Clinton Hill neighborhoods, where numerous architectural resources are located.

PROJECT SITE

Development of the proposed project could impact the one potentially sensitive area identified on Block 1119 and the four potentially sensitive areas identified on Block 1127. To avoid significant adverse impacts on these potential archaeological resources, consultation would be undertaken with the New York City Landmarks Preservation Commission (LPC) and the New York State Office of Parks, Recreation and Historic Preservation (OPRHP). Therefore, a Stage 1B testing protocol was prepared by a professional archaeologist and was submitted to LPC and OPRHP for review. The protocol describes the procedures by which additional research would be undertaken to determine the presence and extent of any potential archaeological resources prior to undertaking field testing on Block 1119. Additional research as recommended in the archaeology study for the project site may eliminate one or more areas from consideration on Block 1119. This research includes determining the locations and previous subsurface impacts of gasoline tanks in the sensitive area on Block 1119, and comparing these to the area of potential archaeological sensitivity. If the sensitive area has not been fully disturbed by gasoline tank installation, then additional archival records would be pursued (that were not available at the time of the preparation of the Stage 1A Documentary Study) which could provide information on the historic occupants of the potentially sensitive site. The Stage 1B testing protocol describes the proposed testing measures and research issues for the testing to be undertaken to determine whether archaeological resources may be present in all the sensitive areas. The testing would be implemented in consultation with LPC and OPRHP. The testing protocol was accepted by OPRHP in a letter dated October 30, 2006, and by LPC in comments dated November 2, 2006.

If testing confirms the presence of significant archaeological resources (i.e., resources that are eligible for the State/National Register [S/NR]), mitigation measures would be developed in consultation with OPRHP and LPC, such as data recovery, which would be undertaken prior to any project construction. A report describing the results of the testing would be provided to LPC and OPRHP for their review. Any mitigation measures would be determined based on the

characteristics and significance of the resource. The consultation process respecting archaeological resources would occur in accordance with the Letter of Resolution (LOR) among ESDC, OPRHP, and the project sponsors, dated November 9, 2006.

Demolition of the former LIRR Stables at 700 Atlantic Avenue and the former Ward Bread Bakery complex at 800 Pacific Street would be significant adverse impacts. The potential reuse of these properties as part of the proposed project has been studied, but it was concluded that there is no feasible or prudent alternative to demolishing them. Measures to partially mitigate the resources' demolition, which would include a Historic American Buildings Survey (HABS) archival documentation of the buildings and additional measures that would document the history of the buildings have been developed in consultation with OPRHP and are stipulated in a LOR among ESDC, OPRHP, and the project sponsors. In addition, the proposed subway improvements would affect portions of the Atlantic Avenue Subway Station. However, such distinguishing elements as the station's decorative tiles, marble, platform plaques, the old LIRR spur, and the subway entrance in the Williamsburgh Savings Bank Building would not be altered. Therefore, the proposed project would not adversely impact the Atlantic Avenue Subway Station.

To avoid adverse impacts to the Atlantic Avenue Station with respect to the proposed modifications, the project sponsors would prepare a Construction Protection Plan (CPP) for the station. The project sponsors would also consult with New York City Transit (NYCT) and OPRHP regarding the proposed finishes in the station where new construction would connect to the historic tiled platform walls, and to evaluate the potential salvage and reuse potential of materials to be removed in the non-public areas as part of the proposed modifications.

STUDY AREA

As described below in "Urban Design and Visual Resources," the proposed project would obscure views of the Williamsburgh Savings Bank Building from certain vantage points south of the project site along the Flatbush Avenue corridor and from certain other vantage points, which would be a significant adverse historic resources impact. Views of this resource would be preserved from other principal view corridors, including 4th Avenue, Atlantic Avenue (from the east and the west), and Flatbush Avenue from the north. In addition, as discussed in more detail below in "Shadows," a proposed project building would adversely affect the Church of the Redeemer by casting new morning shadows on its stained glass windows. The proposed project would not cause any other significant adverse contextual impacts to study area historic resources.

Overall, regarding the proposed project's relationship to historic resources, the scale of the proposed project's buildings would be larger than most resources in the study area. The new buildings would also transform an area that is mainly characterized by transportation and industrial uses and that has historically separated residential areas north and south of the project site. The setbacks of the proposed buildings closest to the Prospect Heights historic district would be clad principally in masonry, and would create streetwalls that would not be incompatible with the scale and design of the historic district, which is located across the streets from, and extends south of, the project site.

With respect to contextual impacts, the buildings would be taller and have larger footprints than those located in the historic districts. However, the proposed development would not isolate any historic district from its setting or streetscape. The proposed project's residential buildings and open spaces would not constitute incompatible visual, audible, or atmospheric elements that

would diminish the significant characteristics of the buildings in the historic districts in the study area.

During the proposed project's construction, inadvertent adverse impacts could result to nearby historic resources, consisting of portions of the Atlantic Avenue Subway Station, and 15 nearby buildings. These include 10 buildings in the Prospect Heights historic district, four in the State and National Register (S/NR)-eligible area around the Swedish Baptist Church (The Temple of Restoration), and the Pacific Branch of the Brooklyn Public Library. To prevent any impacts to these resources, a construction protection plan would be prepared in consultation with OPRHP.

PROTECTIVE AND MITIGATION MEASURES

All protective and mitigation measures, including (1) undertaking additional research and procedures for archaeological testing to identify the presence/lack of presence of archaeological resources on the project site, (2) measures to mitigate significant adverse impacts to significant archaeological resources on the project site if necessary, (3) measures to mitigate the demolition of the former Ward Bread Bakery complex and former LIRR Stables, and (4) preparation of a CPP, would be undertaken in accordance with the Letter of Resolution among the ESDC, OPRHP, and the project sponsors.

I. URBAN DESIGN AND VISUAL RESOURCES

URBAN DESIGN

As part of the development of the proposed project, the project sponsors worked closely with City Planning and ESDC staff to develop Design Guidelines that establish a framework for the design of the project. The purpose of this effort and the Design Guidelines was to identify the important elements of the project master plan developed by Gehry Partners and Olin Partnership and require that these elements be incorporated into the project, while at the same time providing enough flexibility to allow for the final design of the individual buildings to evolve as the project is built out. The Design Guidelines are appended to the GPP and will govern the ongoing development of the project site.

The proposed project is designed as a comprehensive plan that establishes a hierarchy of buildings with a mix of architecturally distinctive and more subdued buildings. The proposed buildings would have varying heights, unique shapes, and an architectural style that would differ substantially from the buildings in the surrounding neighborhoods. The proposed project would consist of structures that are both more traditionally massed and are clad in masonry, mixed with more asymmetrical forms clad in metal and glass.

The proposed project would transform an underutilized 22-acre site and establish physical and visual connections between several vibrant Brooklyn neighborhoods. It would add to the site a major mixed-use development at the southern gateway to Downtown Brooklyn. Development of the project site's western end, adjacent to the transit hub, would be of a scale similar to the buildings in Downtown Brooklyn. Development at the eastern end of the project site would serve as a transition and connection to the surrounding residential neighborhoods. The project site east of 6th Avenue would include eight acres of publicly accessible open space that would physically and visually connect the neighborhoods surrounding the project site. The proposed project's modern buildings would attract people to live, work, and enjoy sports and

entertainment events in an area that is situated at a major transportation crossroad and that is currently in a blighted and underdeveloped condition.

In general, the proposed project is expected to alter the built form of the project site and study area through the addition of an arena and 16 additional buildings, ranging in height at their highest roofs from approximately 184 feet to approximately 620 feet. Most of these buildings would be considerably taller and of a larger scale than the buildings in the surrounding area. Streets would be closed and blocks would be joined to create the arena block (the three blocks bounded by Dean Street and Flatbush, Atlantic, 5th, and 6th Avenues) and the large residential block (the two blocks bounded by Dean Street and Atlantic, Carlton, and Vanderbilt Avenues). The arena block would provide a sufficient footprint for a functioning arena with highly transparent façades along Flatbush and Atlantic Avenues. The creation of the arena block would include a new subway entrance, facilitating pedestrian access from south of Atlantic Avenue to the subway. The four buildings surrounding the arena would incorporate a variety of uses, including ground-floor retail and landscaping amenities, that would promote street-level activity.

The creation of the large residential block between Carlton and Vanderbilt Avenues would allow the development of eight acres of new publicly accessible open spaces that would enliven the project site and the surrounding study area. This block would also accommodate water features that serve as stormwater detention basins, a major sustainable design element, as well as a new visual resource for the area. Wide openings into the open space and the provision of a pedestrian path along the right-of-way of Pacific Street would enhance pedestrian activity and create physical and visual links to the residential neighborhoods to the north, south, east, and west of the project site.

The larger buildings and the most active uses would surround the transit hub at the crossroads of Flatbush and Atlantic Avenues. Further, the proposed project would greatly alter the Brooklyn skyline with the addition of 17 uniquely shaped buildings that would be markedly different in height, form, and massing from most buildings in the study area. As such, it would be dramatically different than anything in the neighborhood today. The proposed buildings, many with ground-floor retail, and the eight acres of publicly accessible open space would enhance the vitality of the project site and study area.

VISUAL RESOURCES

The proposed project would redevelop a largely abandoned-looking area of Brooklyn—three blocks occupied by the underdeveloped below-grade rail yard, and five additional blocks occupied by a miscellaneous collection of warehouses, and residential and commercial structures, some of which are vacant and/or in a dilapidated state. The proposed project is designed as a comprehensive plan with buildings of varying heights, unique shapes, and a style of architecture that would differ substantially from the buildings in the surrounding neighborhoods.

The proposed project would have no direct impacts to the Williamsburgh Savings Bank Building. However, with the proposed project, views of the Williamsburgh Savings Bank Building, a visual resource in the Brooklyn skyline, would be obstructed along the Flatbush Avenue view corridor from south of the project site except from vantage points on Flatbush Avenue immediately adjacent to the project site. Other views south and southeast of the Bank Building that would be obstructed by the proposed project are those along Pacific Street between 4th and Flatbush Avenues and points along 5th Avenue, and those from Bergen Street between

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6th and Carlton Avenues, the Dean Playground, and Vanderbilt Avenue east of the project site. The loss of these views would constitute an unavoidable significant adverse impact.

It should be noted, however, that a tall building could be constructed as-of-right and independent of the proposed project on Block 1118 which would also obstruct views of the Bank Building along the Flatbush Avenue view corridor south of the project site. Similarly, as-of-right development on other portions of the project site could obstruct views of the Williamsburgh Savings Bank Building from other existing vantage points south and southeast of the project site.

Views of the Williamsburgh Savings Bank Building would be unobstructed from the areas to the north, east, west, and from the south along the 4th Avenue view corridor. Views of the Bank Building from some elevated transportation corridors would remain from some vantage points but would be obstructed from other locations. The bulk and height of Building 1 have been developed in consultation with the CPC. Building 1, designed in large part to relate to the Williamsburgh Savings Bank Building in form, would alter views of the Bank Building on the Brooklyn skyline. The relationship between the Williamsburgh Savings Bank Building and Building 1 would change with one or the other building being more prominent depending on the particular vantage point.

Reducing the height of Building 1 so that the Williamsburgh Savings Bank Building would be visible would require a substantial reduction in this and other building heights on the project site. It would not be appropriate to locate Building 1 elsewhere on the project site since other locations on the project site do not provide a location at a major commercial and transit crossroads. The proposed project would have no direct impacts to the Bank Building. Furthermore, since the DEIS, and in further discussions with CPC, the middle and upper portions of Building 1's design have been narrowed. This results in a more obvious tower form that is more responsive to the distinct form of the Williamsburgh Savings Bank Building. However, the proposed project would result in an unmitigated adverse impact due to the loss of views of the Williamsburgh Savings Bank Building.

For visual resources other than the Williamsburgh Savings Bank Building, changes to visual resources and view corridors in the study area would not be considered adverse. The Atlantic Avenue Control House would remain visible from the east and west along Atlantic Avenue and from the south along 4th and Flatbush Avenues. Similarly, visual resources north of the project site—the bell towers of the Church of St. Luke and St. Matthew and the Verizon building—would remain visible from areas within the northern and eastern sections of the study area. Views of the bell tower of St. Joseph's Roman Catholic Church at 856 Pacific Street would remain visible from the study area east and south of the project site. Therefore, it is anticipated that there would be no adverse impacts to these visual resources.

Most views along the east-west tree-lined residential streets would not be affected by the proposed project as most views along these view corridors would not include views of the project site. Due to the height of the proposed new buildings, views along some of these low-rise, residential street view corridors would include views of the proposed buildings from some vantage points. Typically, the density of the row houses along these streets, which create solid streetwalls on narrow streets, would obscure street-level views to the project site. The tops of the proposed buildings would be visible from some areas located farther east and west of the project site. However, the blocks and buildings that intervene between the proposed buildings and the low-rise buildings along these view corridors would create a buffer that would limit the visibility and presence of the proposed buildings on these view corridors.

Completion of the proposed project would create new visual resources. Views east and west along the Atlantic Avenue corridor would be transformed by the arena and nine tall buildings fronting on this portion of the Atlantic Avenue view corridor between 4th and Vanderbilt Avenues. This transformation would not be considered adverse, however, in light of the absence of significant visual resources at the project site or in this view corridor. Views southeast along the Flatbush Avenue view corridor, from northwest of the project site would include views of the Williamsburgh Savings Bank, Building 1, and the arena. Site 5 would be visible along this view corridor from locations close to the project site. These changes would be significant but not adverse. Views northwest along the Flatbush Avenue view corridor would include views of Site 5 and Buildings 1, 2, and 4. From some vantage points along the west side of Flatbush Avenue south of the project site, other buildings on the project site would be visible along this view corridor. Overall, the proposed project would alter the context of the Williamsburgh Savings Bank Building that serves as a wayfinder for this area of Brooklyn. The proposed project would create new wayfinders for this area and frame the Williamsburgh Savings Bank Building on the skyline.

NIGHTTIME LIGHTING AND SIGNAGE

Signage on most of the project site would be typical for local retail and commercial areas throughout New York City with the exception of certain portions of the Atlantic and Flatbush Avenue frontages of the arena block. Signage controls for the retail establishments occupying street-level space in the Phase II developments, the Pacific Street frontage of Site 5, and portions of the arena block would be consistent with the strictest signage controls used in New York City for local retail. Signage along the Atlantic, Flatbush, and 4th Avenue frontages of the Site 5 building would be allowed to a height of 40 (rather than 25) feet due to Site 5's prominent location at the intersection of these avenues. Site 5's lighting and signage would be allowed in most commercial districts (including the C6-2 zone covering Site 5) other than commercial overlay zones. Special signage controls would apply to the Urban Room, Building 1, and the arena façades along Atlantic and Flatbush Avenues. With the exception of limited signage for ground-floor uses, illuminated and non-illuminated opaque signs would be limited to the westernmost 75 feet of the arena block and to the Building 1 façades along Atlantic and Flatbush Avenues and would be limited in terms of overall surface area and height. Additional signage and lighting would also be allowed on the Urban Room (80 to 150 feet height), on Building 1 (to a height of 60 feet), and on the arena façade (to a height of 40 feet); however, this additional permitted signage would have to be sufficiently transparent to make activity within the building and the interior architecture visible to passersby, and to allow people within the building to see outside. This signage would concentrate lighting and signage at the intersection of Flatbush and Atlantic Avenues and away from residential neighborhoods to the south.

Since most of the project lighting would be in keeping with commercial areas throughout Brooklyn, the project lighting would not represent a significant impact. Area signage would be visible to the east and west on Atlantic Avenue, to the north and south on Flatbush Avenue, and on a small portion of Pacific and Dean Streets south of Flatbush Avenue. Other residential areas would not have direct views of the signage. Since the signage would be visible principally along the commercial corridors of Atlantic and Flatbush Avenues, it would not have a significant adverse impact. The effect of the signage on the relatively small residential area on Pacific and Dean Streets south of Flatbush Avenue, from which it would be visible, would also not be considered significant.

J. SHADOWS

The proposed project's buildings would cast very long shadows due to their height and adversely affect public sun-sensitive resources in the area. Of the 15 public open spaces that fall within the proposed project's shadow sweep, the shadows cast by the proposed project's buildings would result in a significant adverse impact on the open space resource of the Atlantic Terminal Houses, a New York City Housing Authority (NYCHA) development, located at the northeast corner of Atlantic and Carlton Avenues. Of the 14 designated and eligible historic resources that fall within the proposed project's shadow sweep, the shadows cast by the proposed buildings would result in a significant adverse impact on one historic resource—the stained glass windows of Church of the Redeemer.

OPEN SPACES

The open space at the Atlantic Terminal Houses, divided into two separate areas by a one-story building, contains both passive and active use areas. With full development (2016), there would be additional shadow cast on this open space. The project's incremental shadows would have a significant adverse impact on this open space when the weather is cooler and shadows are longer, in the spring, fall, and winter as they would diminish the attractiveness of this open space. Since issuance of the DEIS, the project sponsors and NYCHA have developed measures to improve the Atlantic Terminal Houses open space, which would include a combination of some of the following: new landscaping and shade-tolerant plantings, upgrading of existing play areas and additional play equipment, and replacement of benches and other fixtures. The cost of these mitigation measures would be borne by the project sponsors.

HISTORIC RESOURCES

The proposed Phase I building on Site 5 would cast shadow to the west on the Church of the Redeemer (an S/NR-eligible historic resource) at 24-32 4th Avenue, in the morning during all seasons. In the late spring, summer, and late summer, the durations would be the longest, lasting approximately three hours. These incremental shadows would have a significant adverse impact because they would reduce light to the stained glass windows on the church's east façade in the morning when church services are typically held. As a result of the post-DEIS program modification, the building on Site 5 has been reduced in height and its incremental shadows would move off the church earlier in the late spring and summer.

Since issuance of the DEIS, the project sponsors and the church have developed measures to offset the potential effect of the project's shadows on the stained glass windows. These measures, which would be implemented by the project sponsors prior to the time when the proposed project would cast shadows on the stained-glass windows of the church, would include removing the existing protective coverings from all of the stained glass windows, including any patching and repair associated with the removal; cleaning the interior and exterior of the windows; and installation of new transparent protective coverings of similar or greater durability as the existing coverings.

K. HAZARDOUS MATERIALS

The project site has a long history of railroad, industrial, storage, manufacturing, and commercial uses. Contaminants on the project site are known to include asbestos and lead-based

paint in buildings, and subsurface contamination (fill, soil, soil gas, and/or groundwater). Migration of contaminants from outside the project site is also possible.

Development of the proposed project would involve the demolition of the existing structures on the project site and excavation, disturbance, and removal of much of the existing fill and soil. Hazardous materials only pose a threat to human health or the environment if exposure to them can occur, such as by breathing volatile and semi-volatile compounds or particulate-laden air released during demolition, excavation, and construction. Following construction of the project's buildings, the principal potential pathway of concern would be the intrusion of vapors into the buildings from subsurface contamination.

To better understand conditions on the project site, Phase 1 and Phase 2 Environmental Site Assessments (ESAs) identified the potential for contamination and then confirmed and characterized the contamination through sampling. The ESAs discovered that contamination on the project site is in both the subsurface (mainly from local current or former gas stations and historic fill) and inside current buildings (mainly from asbestos and lead-based paint).

To make certain that there would be no potential threats to residents, construction workers, and the surrounding environment from hazardous materials, the proposed project would closely follow site remediation protocols and procedures in accordance with all applicable city, state, and federal regulations. The proposed project's remediation measures, including a construction health and safety plan, would ensure that all hazardous materials encountered on the project site are properly handled, removed, and disposed of.

Following construction, as discussed in the FEIS, the designs of the proposed buildings would incorporate elements that provide safeguards against potential migration of volatile organic materials (VOCs) from the groundwater (or remaining soils at the site), through the subsurface, into the proposed buildings. The residential and community facility uses, including the school, would be located either above ventilated underground facilities or above the platform over the ventilated rail yard, which act as barriers from potential VOC migration. Therefore, no significant adverse impacts would be expected.

With the implementation of the remediation measures, no significant adverse hazardous materials impacts would occur as a result of the proposed project's construction. Following construction, there would be no further potential for significant adverse impacts.

L. INFRASTRUCTURE

Although the proposed project would generate new demands on infrastructure in the 2010 and 2016 analysis years, the municipal systems serving the project site have adequate capacity to meet the needs of the proposed project, and therefore no significant adverse impacts would result. In addition, local improvements in sewers and water mains and on-site stormwater management techniques are proposed to address the project's infrastructure needs.

WATER SUPPLY

The increase in demand on the City's water supply system from the proposed project would not be significant. As part of the proposed project, local water distribution mains would be replaced and upgraded, and no impacts on local water pressure are expected. The proposed project would also include voluntary water conservation measures as well as those required by the City. Therefore, no significant adverse impacts on water supply would result.

SANITARY WASTEWATER TREATMENT

The Red Hook Water Pollution Control Plant would have sufficient capacity to handle the sanitary sewage volumes that would be generated by the proposed project. The proposed project would also provide new and larger sewers near the project site consistent with an amended drainage plan for the project and nearby blocks. Therefore, no significant adverse impacts on sanitary wastewater treatment would result.

STORMWATER RUNOFF AND COMBINED SEWER OVERFLOWS (CSOs)

The proposed project has the potential to create new runoff to the City's sewer system (which is a combined system in this area and, therefore, conveys both sanitary sewage and stormwater runoff). However, the proposed project also includes a number of site-specific stormwater management approaches that would result in a net reduction to stormwater discharges (over the No Build Condition), thus minimizing the potential for any adverse water quality impacts on the Gowanus Canal or the East River would be avoided (see the discussion below). These measures include: water conservation to reduce sanitary wastewater flows; on-site detention and retention tanks for stormwater with multi-level discharge points to optimize storage; and re-use of captured stormwater within the project site. Therefore, no significant adverse impacts on stormwater and CSOs would result.

GOWANUS CANAL/EAST RIVER WATER QUALITY

The frequency of CSO discharges to the East River and from the Gowanus Pumping Station to the Gowanus Canal would not significantly increase and the aggregate volume would decrease with the proposed project. Therefore, no significant adverse impacts on Gowanus Canal/East River water quality would result.

SOLID WASTE MANAGEMENT

The proposed project would increase the volumes of solid waste and recyclables, but it would not affect the delivery of these services or place a significant burden on the solid waste management services (both public and private). In addition, the proposed project would not conflict with, or require amendments to, the City's Solid Waste Management Plan. Therefore, no significant adverse impacts on solid waste management would result.

ENERGY

The proposed project's increased demands on electricity and gas would be insignificant, relative to the capacity of these systems and the current levels of service in New York City, and no significant impacts on energy systems would result. In addition, local distribution grid improvements proposed by Con Edison would improve service to the project site and Downtown Brooklyn as a whole. New electrical and gas lines are also proposed within the beds of streets that would be reconstructed as part of the proposed project. Therefore, no significant adverse impacts on energy would result.

M. TRAFFIC AND PARKING

VEHICULAR TRAFFIC

The proposed project's potential impacts on traffic conditions in 2010 and 2016 were examined at 93 study area intersections (87 signalized and six unsignalized) during five weekday peak hours (8-9 AM, noon-1 PM, 5-6 PM, 7-8 PM pre-game, and 10-11 PM post-game) and two Saturday peak hours (1-2 PM pre-game and 4-5 PM post-game).

With completion of Phase I in 2010, of the 93 intersections analyzed, a total of 58 would have significant adverse impacts in one or more peak hours. The Saturday 4-5 PM post-game peak hour would have the highest number of impacted intersections with 46, followed by the weekday 7-8 PM pre-game and Saturday 1-2 PM pre-game peak hours with 34 impacted intersections each. There would be 28 impacted intersections in the weekday AM peak hour, 15 in the midday and 32 in the weekday PM peak hour. The weekday 10-11 PM peak hour would have the lowest number of impacted intersections under 2010 Build conditions with 13.

With completion of the proposed project in 2016, a total of 68 intersections would be significantly adversely impacted. A total of 46 intersections would have significant adverse impacts in the weekday AM peak hour in 2016, 27 in the midday, 44 in the PM, 39 in the 7-8 PM pre-game peak hour, and 17 in the 10-11 PM post-game peak hour. On Saturdays, 41 intersections would have significant impacts in the 1-2 PM pre-game peak hour and 49 in the 4-5 PM post-game peak hour in 2016.

This EIS has identified a full array of traffic mitigation measures to address these impacts, including the following:

PHYSICAL ROADWAY IMPROVEMENTS

- Reconfiguration of the Atlantic Avenue/Flatbush Avenue/4th Avenue intersection
- Operational modifications to Pacific Street
- Construction of an expanded Times Plaza at the intersection of 4th, Flatbush, and Atlantic Avenues
- Geometric and operational modifications to the Atlantic Avenue/Vanderbilt Avenue intersection.

DEMAND MANAGEMENT

- Remote parking with price incentives and free shuttle service for arena patrons
- Free charter bus service from Staten Island park and ride lots for arena patrons
- On-site high-occupancy-vehicle parking requirements
- Transit price incentives for arena patrons
- Cross-marketing of area businesses to reduce peak surges
- On-site bicycle parking

TRANSIT SERVICE RECOMMENDATIONS

- Subject to review and approval by NYCT, increased weekday evening and weekend service to the Atlantic Avenue/Pacific Street subway station complex

TRAFFIC OPERATIONAL IMPROVEMENTS

- PM parking regulation extension to 8 PM
- Other parking regulation adjustments
- Signal timing and phasing adjustments
- Signal installations and upgrades

With these mitigation measures, significant traffic impacts in 2010 would be fully mitigated at 33 out of 58 intersections; some but not all significant impacts would be mitigated at a further 24 intersections, and no significant impacts would be mitigated at a total of one intersection. There would be four intersections with unmitigated significant adverse impacts in the weekday 8-9 AM peak hour in 2010, none in the midday, six in the 5-6 PM, five in the 7-8 PM pre-game and one in the 10-11 PM post-game peak hours. On Saturdays, the number of intersections with unmitigated significant adverse impacts would total 10 during the 1-2 PM pre-game peak hour and 13 during the 4-5 PM post-game peak hour.

In 2016, with mitigation, all significant impacts would be fully mitigated at 33 out of 68 intersections; some but not all significant impacts would be mitigated at a further 33 intersections, and no significant impacts would be mitigated at a total of two intersections. There would be 11 intersections with unmitigated significant adverse impacts in the weekday 8-9 AM peak hour, none in the midday, 15 in the 5-6 PM, six in the 7-8 PM pre-game, and none in the 10-11 PM post-game peak hours. On Saturdays, the number of intersections with unmitigated impacts would total 15 during the 1-2 PM pre-game peak hour and 28 during the 4-5 PM post-game peak hour.

BICYCLES

The proposed project would likely generate new commuter bicycle trips, as well as recreational and discretionary trips. Although the proposed project would generate new vehicular traffic on roadways used by bicyclists, there would be no project-related permanent street closures or changes in street directions along any street segment with an existing or planned on-street bike lane or along a bicycle route recommended by the City's Bicycle Network Development Program. The proposed project would include construction (by 2016) of new off-street bike route segments through the project site that would more safely connect existing and planned on-street bike routes. The proposed project includes a parking station for up to 400 bicycles in a secure indoor facility on the arena block.

ACCIDENTS

In 2016, peak hour project-generated vehicular traffic through the Atlantic and Flatbush Avenue intersection would increase by 4 to 15 percent, and crosswalks would have up to 2,700 new peak hour pedestrian trips. New pedestrian trips and vehicular traffic at this intersection (as well as at Atlantic and Vanderbilt Avenues and other intersections near the project site) may increase the potential for vehicle-vehicle and vehicle-pedestrian conflicts or accidents, especially during the

weekday and Saturday pre-game and post-game peak hours when the greatest increases would occur. To enhance overall safety, the proposed project would eliminate several roadway segments through the project site, build a major new on-site entrance to the Atlantic Avenue/Pacific Street subway station to eliminate the need for subway riders en route to and from the south to cross Atlantic Avenue, provide high-visibility crosswalks and lighting at key intersections near the project site, and build new off-street bike route segments through the project site that would more safely connect existing and planned on-street bike routes. In addition, as an element of the proposed project's traffic mitigation, the intersection of Atlantic and Vanderbilt Avenues would be reconfigured to eliminate one turning movement and provide a wider pedestrian refuge on Atlantic Avenue, enhancing pedestrian safety.

Along with these physical improvements, police or traffic control officers are expected to be deployed at the Atlantic and Flatbush Avenue intersection and other locations to minimize conflicts between vehicles and pedestrians during the pre-game and post-game periods when a basketball game or other major event is scheduled. The project sponsor would work with NYCDOT and NYPD to ensure that needed resources are available for this purpose.

PARKING

Street closures and operational changes with the proposed project would result in a loss of about 180 on-street spaces, as well as 24 spaces for police vehicles along 6th Avenue. Mitigation-related parking restrictions would result in the further loss of approximately 70 to 90 curbside parking spaces. This loss of on-street spaces would not result in a deficit of on-street parking capacity, and sufficient off-street parking capacity would be available both on-site and at existing public facilities within ½ mile of the arena to fully meet the proposed project's demands in all peak periods in 2010 and 2016. Therefore, the proposed project would not cause any significant adverse impacts on parking conditions. However, as some drivers en route to the project site would choose to park on-street if spaces were available, it is likely that much of the on-street parking capacity available near the arena would be used by project-generated demand during a Nets basketball game or other major arena event.

N. TRANSIT AND PEDESTRIANS

SUBWAY SERVICE

The majority of new subway trips would occur at the three stations that make up the Atlantic Avenue/Pacific Street subway station complex, which would be immediately adjacent to the project site and accessible via a new on-site entrance. In addition, the Bergen Street IRT, Fulton Street IND, and Lafayette Avenue IND subway stations would all attract 200 or more project-generated trips in at least one peak hour.

Overall, the new on-site entrance and internal circulation improvements proposed at the Atlantic Avenue/Pacific Street subway station complex would be adequate in accommodating new project-generated demand at acceptable levels of service during the analyzed 8-9 AM, 5-6 PM, and 7-8 PM peak hours in 2010 and 2016, as would existing analyzed stairways and fare arrays at the station. All analyzed stairways and fare arrays at the Bergen Street IRT, Fulton Street IND, and Lafayette Avenue IND subway stations would also continue to operate at acceptable levels of service during these periods in 2010 and 2016. The proposed project would therefore not result in significant adverse impacts to subway station stairways, escalators, passageways, and fare arrays. However, crowding on the platforms at the Atlantic Avenue/Pacific Street

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subway station complex could occur after major arena events. Such crowding, if it were to occur, would be a significant adverse impact that would be addressed by providing additional subway service (i.e., more trains) after major arena events.

All subway routes serving the project site are expected to continue to operate below their practical capacity in the peak direction in the 8-9 AM and 5-6 PM commuter peak periods with the proposed project in 2010 and 2016. The proposed project would therefore not result in significant adverse impacts on subway line haul conditions.

BUS SERVICE

With the proposed project, new bus trips would be added to the 11 NYCT local bus routes serving the project site during the analyzed weekday 8-9 AM and 5-6 PM commuter peak hours. With this added demand, all 11 routes would continue to operate with available capacity at their maximum load points in the peak direction in each of these peak hours in 2010, and no significant adverse impacts to local bus service would occur with Phase I development. In 2016, project-generated demand in the 8-9 AM peak hour would cause a significant adverse impact on westbound B38 buses. As standard practice, NYCT routinely conducts ridership counts and adjusts bus service frequency to meet its service criteria, within fiscal and operating constraints. Therefore, no mitigation is proposed for the potential impact on westbound B38 service.

PEDESTRIANS

The proposed project would include improved pedestrian elements at the project site, such as wider sidewalks (20-foot-wide sidewalks along Atlantic and Flatbush Avenues, for example), high-visibility crosswalks, and improved lighting at key intersections. However, 6th Avenue south of Pacific Street would be reconstructed with 15-foot-wide sidewalks, compared with the existing 18-foot-wide sidewalks to accommodate two-way traffic between Atlantic and Flatbush Avenues.

Development of the proposed project would also add new pedestrian demand to sidewalks, corner areas, and crosswalks. In general, the highest numbers of new pedestrian trips in both 2010 and 2016 would typically occur during the weekday 7-8 PM and Saturday 1-2 PM pre-game periods. The analysis of pedestrian conditions therefore focuses on these peak hours as well as the weekday 8-9 AM and 5-6 PM commuter peak hours.

With full development of the proposed project in 2016, the north crosswalk on Carlton Avenue at Dean Street would have a significant adverse impact in the weekday and Saturday pre-game peak hours. The proposed project would also cause a significant adverse impact on the north crosswalk on 6th Avenue at Dean Street in 2016 during the Saturday pre-game peak hour. Much of the project-generated demand on these crosswalks in the pre-game periods would be en route to the arena from the proposed 1,970-space parking garage that would be located on Block 1129. Since many of these pedestrians would use these crosswalks to walk back to the parking garage at the end of a game, these two crosswalks may have similar significant adverse impacts in the weekday and Saturday post-game periods.

To mitigate these impacts, the north crosswalk on Carlton Avenue at Dean Street would be widened to 20 feet (from 16 feet) and the north crosswalk on 6th Avenue at Dean Street would be widened to 17 feet (also from 16 feet). All other analyzed crosswalks, sidewalks, and corner areas would continue to operate at acceptable levels of service in all analyzed peak hours in both 2010 and 2016.

O. AIR QUALITY

The proposed project would not result in any significant adverse air quality impacts from either mobile or stationary sources.

Vehicular traffic generated by the proposed project would not result in any violations of the National Ambient Air Quality Standard (NAAQS) or any significant adverse air quality impacts. It was also determined that carbon monoxide (CO) impacts would not exceed CEQR *de minimis* criteria, while increments of particulate matter less than 2.5 microgram in size (PM_{2.5}) would not exceed the City's interim guidance criteria.

The proposed project would likely be required to obtain a state facility permit from NYSDEC and permits to construct from DEP for the proposed project's stationary sources of emissions. Analyses of the emissions and dispersion of nitrogen dioxide (NO₂), CO, particulate matter less than 10 microgram in size (PM₁₀), and sulfur dioxide (SO₂) from the proposed project's stationary sources indicate that such emissions would not result in the violations of NAAQS or in significant adverse air quality impacts. Because of the proposed project's low particulate matter emissions, the impacts of its PM_{2.5} emissions would be insignificant under the NYSDEC policy guidance on PM_{2.5}. Nevertheless, a PM_{2.5} analysis was conducted. The analysis identified a limited number of receptors on upper floors of project buildings that would exceed the NYSDEC annual PM_{2.5} threshold for determining potential significance. In the 2016 Build year, however, these exceedances would not result in significant adverse impacts. The maximum annual emissions of PM₁₀ would be below the NYSDEC applicability threshold of 15 tons per year for assessing impacts of PM_{2.5} from stationary sources. The potential exposure to PM_{2.5} at these locations would be limited since occupants would not be expected to have their windows open continuously throughout the year and no exceedances were found at the locations of air intake manifolds on the proposed project's buildings. In addition, the maximum predicted PM_{2.5} concentration levels are comparable to ambient levels of PM_{2.5} measured at various locations in New York City over the past several years. On a neighborhood scale, PM_{2.5} annual average impacts were below the City's interim guidance criterion. No off-site impacts were projected to exceed the NYSDEC criteria for potentially significant PM_{2.5} impacts. The analysis also indicates that there would be no exceedance of the interim criterion for 24-hour PM_{2.5} increments. Therefore, no significant adverse air quality impacts are anticipated from the proposed project's stationary sources.

The results of the industrial source analysis demonstrate that there would be no significant adverse air quality impacts on the proposed project from nearby industrial sources.

Since the issuance of the DEIS, the U.S. Environmental Protection Agency made revisions to the NAAQS for particulate matter, which included a more stringent limit for 24-hour PM_{2.5} levels. The revision to the NAAQS does not change the conclusions reached in the DEIS that the proposed project would not result in any significant adverse impacts on air quality.

P. NOISE

The proposed project would result in significant adverse noise impacts at four locations around the project site, including residential locations adjacent to the project site during one or more peak hours in both 2010 and 2016. These locations are 1) Flatbush Avenue in the area near Dean Street; 2) Dean Street from approximately Flatbush to Vanderbilt Avenues (including the Dean Playground); 3) 6th from approximately Dean Street to Atlantic Avenue; and 4) Carlton Avenue from approximately Dean Street to Atlantic Avenue. The impacts would be localized and occur

on street segments immediately adjacent to the project site (Flatbush Avenue, Dean Street, and 6th and Carlton Avenues). In each of these locations, noise levels would in the “marginally unacceptable” range, which is not unusual for New York City residential areas.

In 2016 with traffic mitigation, the significant adverse impact at Flatbush Avenue would not occur; noise impacts at the other locations would continue to occur at somewhat reduced levels from the projected levels in 2016 without mitigation. The Dean Street Playground would experience a noise impact from increased traffic on Dean Street in 2016. The project sponsors have committed to working with DPR to supplement DPR’s planned improvements to the Dean Playground with a comfort station that would make the playground attractive to a wider spectrum of users and more enjoyable to the general public. This commitment would partially mitigate the noise impact that would result from increased traffic on Dean Street in 2016. Similar to the mitigation proposed for residences on Dean Street that would be significantly impacted by the proposed project, the project sponsors would make available to The Temple of Restoration storm windows for the second floor of the building (above The Temple of Restoration sign)—for the windows facing Dean Street and which do not currently have either double-glazed windows or storm windows. With this measure, maximum interior noise level within the building would be in the range of 40-50 dBA L₁₀, which would satisfy CEQR interior noise level requirements for this use.

To address the significant adverse impact on residences in these areas, the project sponsors would make double-glazed windows and alternate means of ventilation (air conditioning) available at no cost to the owners where such measures do not already exist. With these measures, significant noise impacts to residences would be fully mitigated.

Noise levels within the new open space areas created on-site as part of the proposed project would be above the 55 dBA L₁₀₍₁₎ noise level for outdoor areas requiring serenity and quiet contained in the *CEQR Technical Manual* noise exposure guidelines. Noise levels at open space areas located on the rooftop of the proposed arena, adjacent to Atlantic and Flatbush Avenues, would be in the high 50 dBA to low-60 dBA range. These predicted noise levels would result principally from the noise generated by traffic on Atlantic and Flatbush Avenues. The open space, except for the portion immediately adjacent to Atlantic Avenue, would be in the “marginally acceptable” range for residential areas and would experience noise levels similar to those experienced throughout the surrounding residential neighborhoods under Existing, No Build, and Build conditions. While these noise levels would be above the 55 dBA L₁₀₍₁₎ guideline noise level, they would be comparable to noise levels in a number of open space areas and parks in New York City, including Hudson River Park, Riverside Park, Bryant Park, Fort Greene Park, and other urban open space areas.

Q. NEIGHBORHOOD CHARACTER

The proposed project would significantly change the character of the project site. The project site, as it now stands, does not contain any of the community character that defines the surrounding neighborhoods. Although the project site sits at a major crossroads and across the street from a major transportation hub, it contains virtually none of the neighborhood characteristics or vitality of Boerum Hill, Fort Greene, Clinton Hill, Prospect Heights, and Park Slope, and in fact creates a barrier between these neighborhoods. The project site’s character stands in stark contrast to the character of much of the surrounding area, which includes uses more typical of viable urban neighborhoods, including medium- to high-density residential and commercial development to the north.

The change in character on the project site would not alter the basic character of the surrounding neighborhoods, whose defining elements are located at some distance from the project site and are protected by zoning and historic district designations. However, the proposed project would affect the character of areas immediately surrounding the site and would result in localized adverse neighborhood character effects in a few of those areas. The greatest change would occur on Dean Street between Flatbush and Vanderbilt Avenues, which forms the southern border of the project site and is at the northern edge of Prospect Heights. The character of Dean Street would change from a nondescript, but quiet, mixed-use former industrial street to an active street with a mix of uses. The proposed project would also affect the character of a few residential rowhouses facing Site 5 (within sight of the arena's brightly lit signs) and the rowhouses across from the arena loading docks on Dean Street. Project-generated traffic would result in a deterioration of traffic flow on Bergen Street in Prospect Heights. These affected locations would be clustered adjacent to the project site, in areas which are located along the perimeters of and not in the cores of their respective neighborhoods. Thus, even when considered together, the changes to neighborhood character in these transition areas would not be significantly adverse.

The project would be visible in the skyline from portions of several of the adjacent residential neighborhoods. However, this would be perceived as middle-distance or background conditions, and would not affect the character of the neighborhoods' cores, all of which would also be protected from changes in land use and density by underlying zoning and the regulations of their historic districts. The dense mix of commercial, entertainment, residential, and open space uses proposed for the project site would advance the goals of the Special Downtown Brooklyn District.

The overarching goal of the proposed project is to transform the character of the project site from an underutilized and blighted area into a vibrant mixed-use community that would include a state-of-the-art arena, affordable and market-rate housing, first-class office space, publicly accessible open space, local retail and community services, a possible hotel, and an improved rail yard. The proposed project would meet this goal as follows:

- Significantly change the project site from a blighted area into a high-density neighborhood with a mix of residential, commercial, entertainment, cultural, and open space uses, served by Brooklyn's largest transportation hub;
- Develop a destination use (the arena) thereby creating a center of pedestrian activity desirable in higher-density commercial areas;
- Reconfigure, renovate, and platform over the existing rail yard, which has long been a blighting influence in the immediate area, thereby eliminating the physical and visual barrier that separates the neighborhoods of Boerum Hill, Fort Greene, Prospect Heights, and Park Slope;
- Create a new Brooklyn skyline with architecturally distinctive buildings;
- Create an active streetscape where none currently exists;
- Provide a substantial cohesively designed open space to serve and connect the surrounding neighborhoods; and
- Change the land use patterns on the project site to permit commercial and residential uses consistent with the surrounding neighborhoods, with higher-density uses to the north and west closer to Downtown Brooklyn, stepping down to a lower density adjacent to the residential areas to the south.

R. CONSTRUCTION IMPACTS

CONSTRUCTION ACTIVITIES

All construction is expected to be completed over a 10-year period; the number of construction activities would vary over time, and are divided, for purposes of the analysis, into two phases. Phase I would begin with the demolition of existing structures on the site, reconstruction of the rail yard and the construction of the arena block and Site 5 buildings on Blocks 927, 1118, 1119, and 1127. Environmental remediation and demolition of all existing buildings would be the first tasks. Demolition on all blocks would occur in Phase I. The arena for the Nets basketball team and the subway entrance are expected to be open in October 2009, and the rest of the Phase I development would be completed by the 4th quarter of 2010.

Also included in Phase I are construction of the West Portal between the rail yard and Atlantic Terminal; NYCT connections; installation of major new sewer and water lines; and other utility lines, such as telecommunication facilities with capacity for the complete project. During Phase I, the period with the greatest number of buildings simultaneously under construction would be in late 2008 to early 2009 when the arena, the LIRR improvements, and five buildings would be in various stages of construction. The levels of construction activities before and after the Phase I peak would be of lesser intensity.

In Phase II, the construction activity would be less intense than during Phase I. From 2010 to 2014, the activity would be centered on Block 1120 with a peak at the end of 2011 and the beginning of 2012. In 2014, the work would shift to Blocks 1121 and 1129 with a secondary peak in 2016.

It is anticipated that construction activities for the buildings and the arena would generally take place Monday through Friday with exceptions that are discussed separately below. Over the course of construction, it is expected that evening and night work would be required. For example, some of the rail yard reconstruction work would be scheduled to start after the rail yard has been vacated to meet the evening rush hour and be completed before trains return from the morning rush hour. When work is required outside of normal construction hours, the proper approvals would be obtained from the appropriate agencies.

During the construction of various components of the proposed project (buildings, infrastructure replacement and upgrades, transportation improvements), traffic lanes and sidewalks would have to be closed or protected for varying lengths of time, bus stops would have to be temporarily relocated, and crosswalks redirected. This work would be coordinated with and approved by the appropriate governmental agencies.

The project sponsors have committed to implementing a state-of-the-art emissions and noise reduction program, consisting of the following components.

AIR QUALITY

1. *Diesel equipment reduction.* The construction of the proposed project would minimize the use of diesel engines, and use electric engines operating on grid power in lieu of diesel engines, to the extent practicable. To that end, the project sponsors have met with Con Edison to ensure the early connection of grid power to the site by commissioning permanent service for Buildings 2 and 3 for use during construction. This would ensure that grid power would be available on site by the third quarter of 2007, prior to the peak construction period.

Construction contracts would specify the use of electric engines where practicable, and ensure the distribution of power connections throughout the site as needed. Equipment that would use grid power in lieu of diesel engines would include, but may not be limited to, welders, rebar benders, scissor lifts, and hydraulic articulating boom lifts. This would also eliminate generators that would normally be needed for construction equipment.

2. *Clean fuel.* Ultra-low sulfur diesel (ULSD) fuel would be used exclusively for all diesel engines throughout the site. This would enable the use of tailpipe reduction technologies (see below), and would directly reduce DPM emissions. The exclusive use of this fuel for all diesel engines would also reduce the emission of sulfur oxides to a negligible level.
3. *Best available tailpipe reduction technologies.* Non-road diesel engines with a power rating of 50 horsepower (hp) or greater, and controlled truck fleets (i.e., truck fleets under long-term contract with the proposed project, such as concrete trucks), would utilize the best available tailpipe technology for reducing DPM emissions. The project sponsors have identified diesel particle filters (DPFs) as being the tailpipe technology currently available that is verified to have the highest reduction capability. Construction contracts would specify that all diesel non-road engines rated at 50 hp or greater would utilize DPFs or other tailpipe reduction technology, either original equipment manufacturer (OEM) or retrofit technology with add-on controls verified to reduce DPM emissions by at least 85 percent. Controls may include active DPFs, if necessary. Exceptions would be made only in cases where DPFs cannot be used for safety reasons, or where it is proven that a certain engine is necessary for the task where a DPF would not function properly; in those cases, the use of diesel oxidation catalyst (DOC) or other tailpipe reduction technology verified to reduce DPM by at least 25 percent would be required.

This program to reduce air pollutant emissions from construction exceeds that of any large-scale private construction project in New York City to date.

NOISE

To reduce noise levels at the source or during most sensitive time periods (“source controls”), six types of measures were examined and would be implemented:

1. The project sponsors have committed to utilizing equipment that meets the sound level standards for equipment (specified in Subchapter 5 of the new New York City Noise Control Code) from the start of construction activities and using a wide range of equipment, including construction trucks, that produces lower noise levels than typical construction equipment;
2. Where feasible, the project sponsors would use quiet construction procedures, and equipment (such as generators, hydraulic lift vehicles, trucks, and tractor trailers) quieter than that required by the New York City Noise Control Code;
3. Generally, the project sponsors would schedule and perform the most noisy work during weekday daytime hours (and not during weekday nighttime or weekend hours);
4. Generally, the project sponsors would schedule equipment and material deliveries during weekday daytime hours, and not during weekday nighttime or weekend hours;
5. As early in the construction period as practicable, diesel-powered equipment would be replaced with electrical-powered equipment, such as electric scissor lifts and electric articulating boom lifts (i.e., early electrification); and

6. The project sponsors would require all contractors and subcontractors to properly maintain their equipment and have quality mufflers installed.

Three types of measures related to the placement of equipment and implementation of barriers between equipment and sensitive receptors were examined and would be implemented to the extent feasible:

1. Noisy equipment, such as generators, cranes, tractor trailers, concrete pumps, concrete trucks and dump trucks, would be located at locations which are away from sensitive receptor locations and are shielded from sensitive receptor locations (For example, during the early construction phase of work delivery trucks and dump trucks would be located approximately 20 feet below grade to take advantage of shielding benefits. Once building foundations are completed, delivery trucks would be located adjacent to noisy streets—Atlantic Avenue, Flatbush Avenue, 6th Avenue, etc.—rather than at quieter streets—such as Dean Street and Pacific Street—where there are residences. In addition, delivery trucks would operate behind noise barriers);
2. Noise barriers would be utilized to provide shielding (i.e., the construction sites would have a minimum 8-foot barrier, with a 16-foot barrier adjacent to sensitive locations—on locations along Pacific Street, Dean Street, and Flatbush Avenue opposite residences and the Brooklyn Bear’s Pacific Street Community Garden—and truck deliveries would take place behind these barriers once building foundations are completed); and
3. Noise curtains and equipment enclosures would be utilized to provide shielding to sensitive receptor locations.

The project sponsors have committed to working with DPR to supplement DPR’s planned improvements to the Dean Playground with a comfort station that would make the playground attractive to a wider spectrum of users and more enjoyable to the general public. This commitment would partially mitigate the temporary noise impact on the playground due to construction activities.

POTENTIAL CONSTRUCTION IMPACTS

Notwithstanding the measures described above, the 10-year construction period would be disruptive to the local area, and significant adverse impacts from construction activities would occur from construction-related traffic on the local street network, from construction-related noise, and from the demolition of two historic buildings. Mitigation has been developed to address these impacts where practicable. The proposed project would not result in significant adverse impacts on the following areas: land use; socioeconomic conditions; community facilities; hazardous materials; infrastructure; parking; transit and pedestrians; or air quality.

TRAFFIC DURING CONSTRUCTION

The detailed construction traffic analysis shows that significant adverse traffic impacts would occur at numerous locations throughout the construction period. However, these impacts would be attributable primarily to factors other than the added traffic from construction trucks and worker vehicles. The permanent closure of several streets within the project site, the lane disruptions during utility installation and rail yard improvements, and the reconstruction of two bridges over the rail yard were determined to be the main reasons for changes in area travel patterns and traffic diversions. These traffic diversions, when combined with construction-generated traffic, would concentrate traffic at specific intersections near the project site and result in the projected significant adverse traffic impacts for 12 intersections in proximity to the

project site and seven outlying intersections. All significant adverse traffic impacts identified at the outlying intersections would be mitigated by the early implementation of proposed operational traffic mitigation measures. However, certain significant adverse traffic impacts identified at 10 intersections adjacent to the project site would remain unmitigated.

NOISE AND VIBRATION DURING CONSTRUCTION

Three open space resources would experience significant adverse noise impacts during some portion of the construction period: Brooklyn Bear's Community Garden, the Dean Playground, and South Oxford Park. Because of safety and aesthetic concerns, there is no feasible and practicable mitigation for these impacts; however, with respect to the Dean Playground, the impact would be partially mitigated by the provision of a comfort station to the park users. The analysis also shows the potential for significant adverse noise impacts at the Pacific Branch of the Brooklyn Public Library. Measurements show that the library's window/walls provide approximately 20 dBA [of] attenuation. In addition, the library is air conditioned. During the first three years of construction—2007, 2008, and 2009—interior L₁₀ noise levels within the library during periods of peak construction would be in the range of approximately 50 to mid-50 dBA. This would be above the 45-50 dBA L₁₀ noise level range that would be desirable for this type of land use. Consequently, as was noted in the DEIS, construction of the proposed project would result in a significant adverse impact, of limited duration and magnitude, at this library. Since the issuance of the DEIS, noise mitigation measures were identified that would include additional acoustic treatment for the library windows on the Pacific Street side. With these measures, the significant adverse construction noise impacts on the Pacific Branch of the Brooklyn Public Library would be mitigated. Similar to the mitigation proposed for residences on Dean Street that would be significantly impacted by the proposed project, the project sponsors would make available to the Temple of Restoration storm windows for the second floor of the building (above the Temple of Restoration sign)—for the windows facing Dean Street and which do not currently have either double-glazed windows or storm windows. With this measure, maximum interior noise level within the building would be in the range of 40-50 dBA L₁₀, which would satisfy CEQR interior noise level requirements for this use.

Significant noise impacts were also predicted to occur at a number of residential locations during some portion of the construction periods. At locations where significant adverse noise impacts are predicted to occur, and where the residences do not contain both double-glazed or storm-windows and/or alternative ventilation (thus maintaining acceptable interior noise levels), these mitigation measures would be available at no cost for purchase and installation to owners of residences. However, residents within the identified zone who do not have double-glazed or storm-windows and/or alternative ventilation and choose not to accept the mitigation measures made available would still be predicted to experience significant adverse impacts from construction noise at these locations.

The construction is not expected to result in any significant adverse vibration impacts.

EFFECTS OF CONSTRUCTION ON CULTURAL RESOURCES

Project construction would involve the demolition of these two historic resources on the project site, the former Ward Bread Bakery complex at 800 Pacific Street and the former LIRR Stables at 700 Atlantic Avenue. Measures to partially mitigate the impact of the demolitions of these buildings, which include Historic American Buildings Survey (HABS) archival documentation of the buildings and additional measures that would document the history of the buildings, have

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been developed in consultation with OPRHP and are stipulated in the LOR. The LOR outlines protective and mitigation measures related to cultural resources. To avoid construction-related impacts on historic resources within 90 feet of project construction, historic buildings within 90 feet of project construction would be protected by a Construction Protection Plan (CPP), which would be developed in consultation with OPRHP and would comply with the procedures set forth in TPPN #10/88 and other New York City Building Code regulations.

The buildings of most concern with regard to the potential for structural or architectural damage due to vibration are the Swedish Baptist Church (Temple of the Restoration) and nearby row houses along Dean Street, which are immediately adjacent to the site of Building 15. A monitoring program would be implemented to ensure that no architectural or structural damage will occur.

To avoid adverse impacts to the Atlantic Avenue Station with respect to the proposed modifications, the project sponsors would prepare a Construction Protection Plan (CPP) for the station. The project sponsors would also consult with NYCT and OPRHP regarding the proposed finishes in the station where new construction would connect to the historic tiled platform walls, and to evaluate the potential salvage and reuse potential of materials to be removed in the non-public areas as part of the proposed modifications.

EFFECTS OF CONSTRUCTION ON NEIGHBORHOOD CHARACTER

Construction activity associated with the proposed project would have significant adverse localized neighborhood character impacts in the immediate vicinity of the project site during construction. The project site and the immediately surrounding area would be subject to added traffic from construction trucks and worker vehicles, partial and complete street closures, and the reconstruction of two bridges over the rail yard, resulting in changes in area travel patterns and the resultant significant adverse traffic impacts. Construction traffic and noise would change the quiet character of Dean Street and Pacific Street in the immediate vicinity of the project site. A number of specific measures to minimize noise, vibration, dust, and other construction-related nuisances would be employed where practicable. The impacts would be localized and would not alter the character of the larger neighborhoods surrounding the project site.

INFRASTRUCTURE

Construction of the proposed project would not cause any significant impacts on infrastructure systems or their users. Several water and sewer lines (as well as smaller utility lines) would have to be relocated and connected to the proposed new buildings. All infrastructure relocation or replacement would be approved by DEP and meet its standards. Construction-generated solid waste would be disposed by private carters at off-site landfills. Energy for the construction activities would be provided through grid power and on-site generators. Relative to the capacity of the City's electric system, the increase in demand would be insignificant.

RODENT CONTROL

Construction contracts would include provisions for a mouse and rat control program (including baiting and ensuring regular trash pickup) coordinated by appropriate public agencies. No hazards to people, domestic animals, and other wildlife are expected.

S. PUBLIC HEALTH

No significant adverse impacts to public health are anticipated as a result of the operation or construction of the proposed project.

T. ALTERNATIVES

The No Action Alternative, the As-of-Right Alternative, and the No Unmitigated Impact Alternative would avoid some of the adverse environmental impacts of the proposed project. However, these alternatives would neither allow for transit-oriented development that would accommodate anticipated growth efficiently nor provide for the substantial economic and civic benefits resulting from new jobs, new infrastructure, and a major new sports and entertainment venue. Moreover, these alternatives would not address the blighted conditions on the project site. These alternatives would substantially fail to meet the project's goals.

The Reduced Density—No Arena Alternative would not require the displacement of existing residents or businesses nor would it require the demolition of existing structures on the project site because development would take place solely over the rail yard. However, by failing to redevelop portions of Blocks 1119, 1120, and 1121 and the remainder of the project site, this alternative would allow the blighted conditions to remain on the project site that currently separate the neighborhoods of Fort Greene, Prospect Heights, and Boerum Hill. The buildings above the rail yard would create a physical and visual barrier between these neighborhoods since their 22-foot elevation above the rail yard would create a wall along Atlantic Avenue and would not provide for new north-south pathways through the project site. This alternative would provide for much less affordable and market-rate housing on the project site and would generate far fewer jobs than the proposed project; therefore, its economic benefits for the City and State would be substantially reduced. Not only would this alternative result in less development on a site that supports high-density, transit-oriented uses, but it would also reduce the capacity of the LIRR rail yard. The Reduced Density—No Arena Alternative would not provide the economic, entertainment, and cultural benefits of an arena. The Reduced Density—No Arena Alternative would, therefore, fail to meet many of the project's goals.

The Reduced Density—Arena Alternative would result in a mix of uses on the project site that are comparable to the proposed project, but it would provide for about half of the affordable and market-rate housing units and less than a third of the open space. In order to maintain existing streets, this alternative would forgo infrastructure and transit improvements that would be realized with the proposed project. Not only would this alternative fail to provide for the same level of benefits as the proposed project, but it would result in very similar significant adverse environmental impacts. Therefore, it would not meet the project's goals as effectively as the proposed project. *