A. PROJECT IDENTIFICATION

Toll Brothers, Inc., ("the applicant"), is seeking discretionary City and State actions in connection with the redevelopment of two blocks located along the west waterfront of the Gowanus Canal in the Gowanus neighborhood of Brooklyn Community District 6. The proposed actions would facilitate a proposal by the applicant to redevelop the parcels with a mix of residential (market rate and affordable), commercial, community facility, and open space uses.

The proposed actions include a zoning text amendment (to Zoning Resolution (ZR) sections 123-63 and 123-90) and a related zoning map amendment to change an existing M2-1 zoning district to a Special Mixed Use District: M1-4/R7-2 (MX). The rezoning would affect two blocks along the west waterfront of the Gowanus Canal. The area of the proposed rezoning is bounded by the midpoints of Carroll Street to the north, Bond Street to the west, 2nd Street to the south, and the channel of the Gowanus Canal to the east (see Figure S-1). If the proposed rezoning is approved it would allow redevelopment of the project site which encompasses Brooklyn Tax Block 452 (Lots 1 and 15) and Tax Block 458 (Lot 1). Two City-owned parcels on Block 452 (lots 5 and 19), one of which is occupied by an Emergency Medical Services (EMS) facility and the other of which is infrastructure associated with the historic Carroll Street Bridge, are not part of the project site (the area the applicant seeks to redevelop), but are included in the area to be rezoned. Although the text amendment would apply to the entire rezoning area, no new development is expected to occur on these City-owned properties as a result of the proposed actions.

In addition, as part of the proposed actions, sections 23-144, 23-922 and 23-942 would be amended to apply the Inclusionary Housing Program and related floor area regulations to R7-2 zoning districts within the proposed special mixed use district, and to provide for a base FAR of 2.7 and a maximum FAR of 3.6 within the special district. These amendments would add R7-2 districts within Community District 6 in Brooklyn to the list of residential districts in which the Inclusionary Housing Program would be applicable within certain designated areas, and would add the proposed Special Mixed-Use District (specified geographically), as one of the Inclusionary Housing designated districts.

Finally, the applicant is seeking a special permit pursuant to ZR section 74-743 to modify the following requirements within a General Large-Scale Development: (i) height and setback regulations for all buildings in special mixed use districts pursuant to ZR section 123-662; (ii) inner courtyard recess regulations pursuant to ZR section 23-852; and (iii) required rear yards in residential and mixed use districts pursuant to ZR sections 23-45 and 123-651.

Discretionary approvals from State and federal agencies, including the New York State Department of Environmental Conservation (DEC), and U.S. Army Corps of Engineers (ACOE) will also be required, since the project proposes new stormwater outfalls to the Gowanus Canal,

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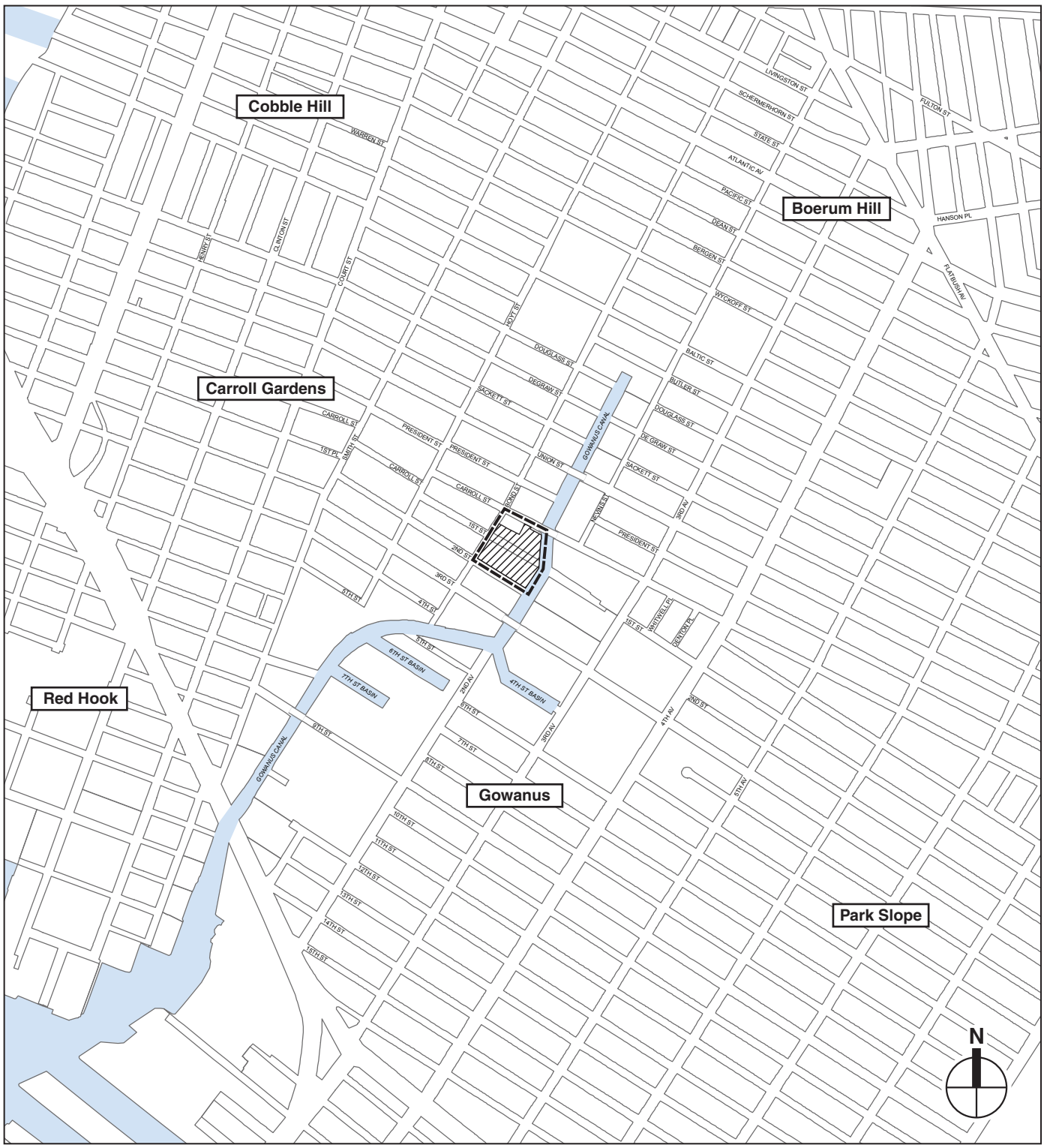

Project Site

Rezoning Area

363-365 BOND STREET

Site Location
Figure S-1

the installation of a new sheet-pile bulkhead along the canal, and possible dewatering during construction.

The applicant shall record a Restrictive Declaration that will limit development of the project site in a manner which is substantially in accordance with the plans which are to be voted on by the City Planning Commission pursuant to the Uniform Land Use Review Procedure (ULURP) including the provision of a public waterfront open space. The Restrictive Declaration will also provide for the implementation of specific conditions with respect to historic resources, the provision of new storm sewer outfalls at the end of 1st and 2nd Streets at the Gowanus Canal, re-grading of the project site, including 1st Street, to be above the 100-year base flood elevation, and the implementation of the requisite mitigation measures. In addition, measures related to the remediation of hazardous materials on the site would be implemented in accordance with a New York City Department of Environmental Protection (DEP)-approved Restrictive Declaration for the project site. With these measures in place, significant adverse impacts related to hazardous materials would be avoided during and post construction.

The project site (the area the applicant seeks to redevelop), which totals about three acres (excluding streets), is currently occupied by warehouses, open vehicle storage, and vacant land and buildings. The applicant would redevelop this waterfront property with a predominantly residential development that would include market-rate and affordable housing with community facility and commercial space and accessory parking. In addition, the proposed project would provide approximately 0.7 acres of publicly-accessible waterfront open space on the Gowanus Canal along the entire project waterfront from 2nd Street on the south to Carroll Street on the north.

Under the proposed Special Mixed-Use District, the rezoning area would have a maximum floor area ratio (FAR) of 3.6 (with the provision of inclusion of 20 percent of the residential floor area as affordable housing for low-income households). This would allow a development program on the project site that would contain approximately 447 dwelling units (approximately 130 affordable), approximately 2,000 gross square feet (gsf) of community facility space, approximately 2,000 gsf of commercial space (providing commercial goods and services demands), and approximately 268 accessory parking spaces. The total size of the proposed project would be approximately 525,309 zoning square feet (zsf).

If the proposed actions are approved, it is expected that the proposed project would be completed in 2011.

B. DEVELOPMENT GOALS AND OBJECTIVES

The applicant is applying to CPC for discretionary actions that would allow for the redevelopment of a former waterfront industrial site along the Gowanus Canal with residential and other uses and a publicly-accessible waterfront open space. The proposed project would be a privately sponsored redevelopment project on the Gowanus Canal waterfront.

The project site, which is currently zoned for manufacturing use, comprises about three acres of mostly vacant or underutilized land that does not provide public access to the waterfront. The proposed project would redevelop this underutilized land with productive residential, community facility and commercial uses compatible with the surrounding area, including substantial publicly-accessible waterfront open space between Carroll and 2nd Streets. The site layout and building configuration would be controlled through the proposed General Large Scale Development (GLSD) permit (see the discussion below). In addition, the mix of housing types

would allow market-rate development while providing on-site affordable housing. The mix of uses would include on-site commercial (providing convenient goods and services within a short walking distance for local residents), and on-site community facility space (which the applicant expects will be occupied by the Gowanus Dredgers for equipment storage and community education). These uses would support the site's waterfront location, attract local residents to the site's proposed 0.7 acres of publicly-accessible waterfront open space and provide a recreational and aesthetic benefit for future project residents.

C. DESCRIPTION OF THE PROPOSED REZONING AREA AND PROJECT SITE

The area of the proposed rezoning is bounded by the midpoints of Carroll Street to the north, Bond Street to the west, 2nd Street to the south, and the Gowanus Canal to the east. The proposed rezoning area includes the project site (the area to be redeveloped) and the two City-owned outparcels. The outparcels contain a City EMS facility and infrastructure (the Operator's House) associated with the Carroll Street Bridge.

The project site encompasses Brooklyn Tax Block 452 (Lots 1 and 15) and Tax Block 458 (Lot 1). The two blocks of the project site have a combined lot area of approximately 146,000 square feet and approximately 280 linear feet of frontage along Bond Street (excluding the bed of 1st Street), 48 linear feet of frontage along Carroll Street, 430 linear feet of frontage along 2nd Street, and 460 linear feet of frontage along the Gowanus Canal.

The two project blocks are currently zoned M2-1. The existing M2-1 zoning district is a medium-density manufacturing district. It allows industrial uses at a maximum FAR of 2.0 and includes performance standards; it does not allow residential use.

As shown in Table S-1, current uses on the project site include warehousing, open vehicle storage, vacant buildings. Existing buildings in the rezoning area and on the project site are primarily one- and two-story warehousing/industrial structures. The residential neighborhood of Carroll Gardens is directly to the west of the project site (across Bond Street). To the north and south, and along the east side of the Gowanus Canal, land uses are similar to those on the project site, with active and vacant industrial and mixed non-residential uses.

Table S-1
Project Site Current Uses

Block	Zoning Lot (square feet)	Current Built square footage (gsf)	Stories	Current Uses	Estimated No. Employees
458	89,600	43,000 gsf (one building)	1	Storage/warehousing, truck parking/storage, surface parking	10
452	56,400	46,000 (seven buildings)	1-3	Garment warehouse/distribution,	10

Source: AKRF field survey, January 2008.

D. PROPOSED ACTIONS

NEW YORK CITY PLANNING COMMISSION APPROVALS

In order for the proposed project to be developed, New York City Planning Commission (CPC) approval of the following discretionary actions is required:

- Zoning text amendment to:
  - Sections 123-63 and 123-90 to establish a Special Mixed-Use (MX) District in Gowanus;
  - Sections 23-144, 23-922, and 23-942 to apply the Inclusionary Housing Program to specified R7-2 districts;
  - Section 23-942 to apply standard height and setback regulations of MX districts to developments utilizing the Inclusionary Housing Program in certain non-contextual MX districts;
- Amendment to the zoning map changing from an M2-1 district to an M1-4/R7-2 Special Mixed-Use District;
- Special permit pursuant to Section 74-743 to modify bulk regulations for height and setback (Section 123-662), inner court recesses (Section 23-852), and yards (Sections 23-45 and 123-651) in a general large-scale development.

To facilitate the redevelopment of the project site as proposed, the applicant is seeking zoning text amendments to Sections 123-63 and 123-90 of the Zoning Resolution. These text amendments (and related zoning map amendments) would establish a new mixed-use district that would appropriately reflect the uses proposed for the project, and reflect the mixed-use character of the surrounding neighborhood. As described above, the two project blocks are currently zoned M2-1. The proposed zoning district, Special Mixed-Use District M1-4/R7-2 (MX), would be mapped over the two-block area and allow a maximum floor-area ratio (FAR) of 3.6. R7-2 districts allow residential use at a maximum FAR of 3.4 and community facility uses at a maximum FAR of 6.5. The proposed M1-4 district is a manufacturing district that allows light industrial and certain commercial uses at a maximum FAR of 2.0.

As mentioned above, the two blocks of the project site have a combined lot area of approximately 146,000 square feet. The allowable zoning floor area (zfa) for the project site under the proposed rezoning would be approximately 525,309 zsf. This allowable floor area would be split between the two project blocks, with approximately 202,744 zsf on Block 452 (the northern block, proposed as 363 Bond Street) and approximately 322,565 zsf on Block 458 (the southern block, proposed as 365 Bond Street). The proposed zoning would allow the EMS facility and the Operator's House (located within the area to be rezoned, but not within the area to be redeveloped) to remain within the rezoning area as conforming uses.

To facilitate the development of affordable housing on the site, the applicant is proposing amendments to sections 23-144, 23-922 and 23-942 of the Zoning Resolution to apply the Inclusionary Housing program and related floor area regulations to R7-2 zoning districts within the proposed special mixed use district. These amendments would add R7-2 districts within Community District 6 in Brooklyn to the list of residential districts in which the Inclusionary Housing Program would be applicable within certain designated areas, and would add the proposed Special Mixed-Use District (specified geographically), as one of the Inclusionary Housing designated districts. This would provide for a base FAR of 2.7 and a maximum FAR of

3.6 within the special mixed use district. Utilizing the bonus in FAR from 2.7 to 3.6, the proposed project would create approximately 447 new dwelling units, up to 130 of which would be permanently affordable for low-income households. Under the proposed project, consistent with City requirements, affordable housing for low-income households is defined as up to 80 percent of U.S. Department of Housing and Urban Development (HUD) income limits.

Since the proposed project seeks to participate in the Inclusionary Housing Program within special mixed use districts, the height and setback requirements of section 23-942 (b) (2) would apply to the development. The applicant proposes text amendments that would allow the development of the proposed market rate buildings to comply with the usual MX height and setback regulations within Section 123-662 for R7-2 districts mapped within special mixed-use districts. These would include a maximum base height of 60 feet, setbacks of 10 feet on a wide street and 15 feet on a narrow street, and a maximum building height of 125 feet.

A special permit to facilitate construction of the proposed buildings that do not strictly comply with the height and setback regulations contained within Sections 123-662, 23-852, 23-45 and 123-651 of the Zoning Resolution, will also be required, as follows:

- Section 123-662 ZR sets a maximum base height of 60 feet and maximum building height of 135 feet in R7-2 districts mapped within special mixed use districts. The buildings on the eastern portion of the site are proposed to have a maximum building height of 125 feet, 10 feet below the maximum permitted building height. However, the proposed base heights on the eastern street frontages of both Block 452 and Block 458 fronting on First Street and on Second Street are proposed to be 65 feet above the modified base plane, exceeding by 5 feet the maximum permitted base height within and R7-2 district (Section 123-662 ZR). The portions of the street walls for which a waiver is requested are 148.5 feet in length on Block 452 and 147.5 feet on the First Street frontage and 145 feet on the on the Second Street frontage of Block 458. The proposed maximum base height within these portions is 65 feet above the base plane.
- Inner court recesses must provide a minimum width to depth ratio of 2:1, pursuant to Section 23-852. However, in order to maximize the area of landscaped passive recreation area within each courtyard, one inner court recess with a width to depth ratio of 1:1 in each court is proposed. The proposed waiver will help to provide a superior residential amenity for the residents of the project.
- Sections 23-45 and 123-651 require a minimum 30-foot deep rear yard for residential buildings unless they are corner lots or if the zoning lot comprises the entire block. Through lots are permitted to provide rear yard equivalents. Thus, there is no rear yard requirement for the proposed buildings on Block 458, as it comprises an entire City block. However, the development site on Block 452 is comprised of a corner lot, through lot and two interior lots. One of the interior lots (the eastern-most lot on this block) would not provide the required 30 foot rear yard due to the unusual block configuration caused by the city-owned parcel containing the bridge operator's house and yard for the Carroll Street Bridge. Instead, a minimum 40-foot yard would be provided along the entire canal side.

OTHER CITY, STATE, AND FEDERAL APPROVALS

In addition to discretionary approvals from CPC, design approvals would be required from other City agencies, including DEP and the New York City Department of Transportation (NYCDOT). The New York City Department of Parks and Recreation (DPR) will also review and approve the open space design, layout, and furnishings.

Discretionary approvals from State and federal agencies, including DEC, and ACOE will also be required, since the project proposes the installation of a new sheet-pile bulkhead. The design, location and elevation of the proposed bulkhead are subject to the approval of DEC and ACOE. In addition, since the project proposes new outfalls to the Gowanus Canal (from 1st and 2nd Streets), and possible dewatering during construction, permits at the state level are expected to include tidal wetlands (if any bulkhead work is in water shallower than six feet), protection of waters, Long Island well permit (dewatering only), and a Stormwater Pollutant Discharge Elimination System (SPDES) permit for dewatering, construction (i.e., a stormwater pollution prevention plan [SWPPP] during construction and a stormwater outfall discharge from 1st and 2nd Streets).

When permits and approvals are required from State and federal agencies, these agencies are defined as involved agencies under City Environmental Quality Review (CEQR)/the State Environmental Quality Review Act (SEQRA). Therefore, as the lead agency, the New York City Department of City Planning (DCP) will provide a coordinated review of this EIS with the other involved agencies for the purposes of documenting consistent findings among the decision-making agencies.

E. PROPOSED DEVELOPMENT PROGRAM

PROPOSED USES AND BUILDING CONFIGURATIONS

The proposed actions would facilitate a proposal by the applicant to redevelop the entire site as proposed, with the new buildings and open space. The development program would result in a total of 602,603 gross square feet (gsf) including residential uses, community facility space, commercial space, and accessory parking (as required under zoning).

The proposed project would include three new building types on each block (see Figures S-2 and S-3). The range of building heights would be from 4 to 12 stories (up to approximately 125 feet) with three principal design elements: (1) low-rise building components of approximately 60 feet (6 stories) fronting on Bond Street; (2) low-rise "townhouse" components of approximately 43 feet (4 stories) along the midblocks of 1st and 2nd Streets; and (3) low to mid-rise building components of 5 to 12 stories (up to 125 feet maximum) facing the waterfront open space. Each block would have an enclosed accessory parking garage for the use of its residents that would be located on the ground floor of the buildings. Table S-2 presents the approximate land coverage that would result on the project site with the proposed development.

Table S-2
Proposed Development Approximate Land Coverage (Excluding Streets)

Project Element	Lot Coverage (square feet)	Percent of Project Site
Publicly-Accessible Open Space	23,165	16
Private Open Space	30,660	21
Pedestrian Access Easements	2, 559	2
4 story Building Elements (Townhouse-style buildings)	14, 715	10
5-6 story Building Elements	44,900	31
7-8 story Building Elements	16,265	11
11-12 story Building Elements	13,685	9
Total	145,949	100%

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NOTE: For Illustrative Purposes Only

363-365 BOND STREET

Aerial View
Figure S-2

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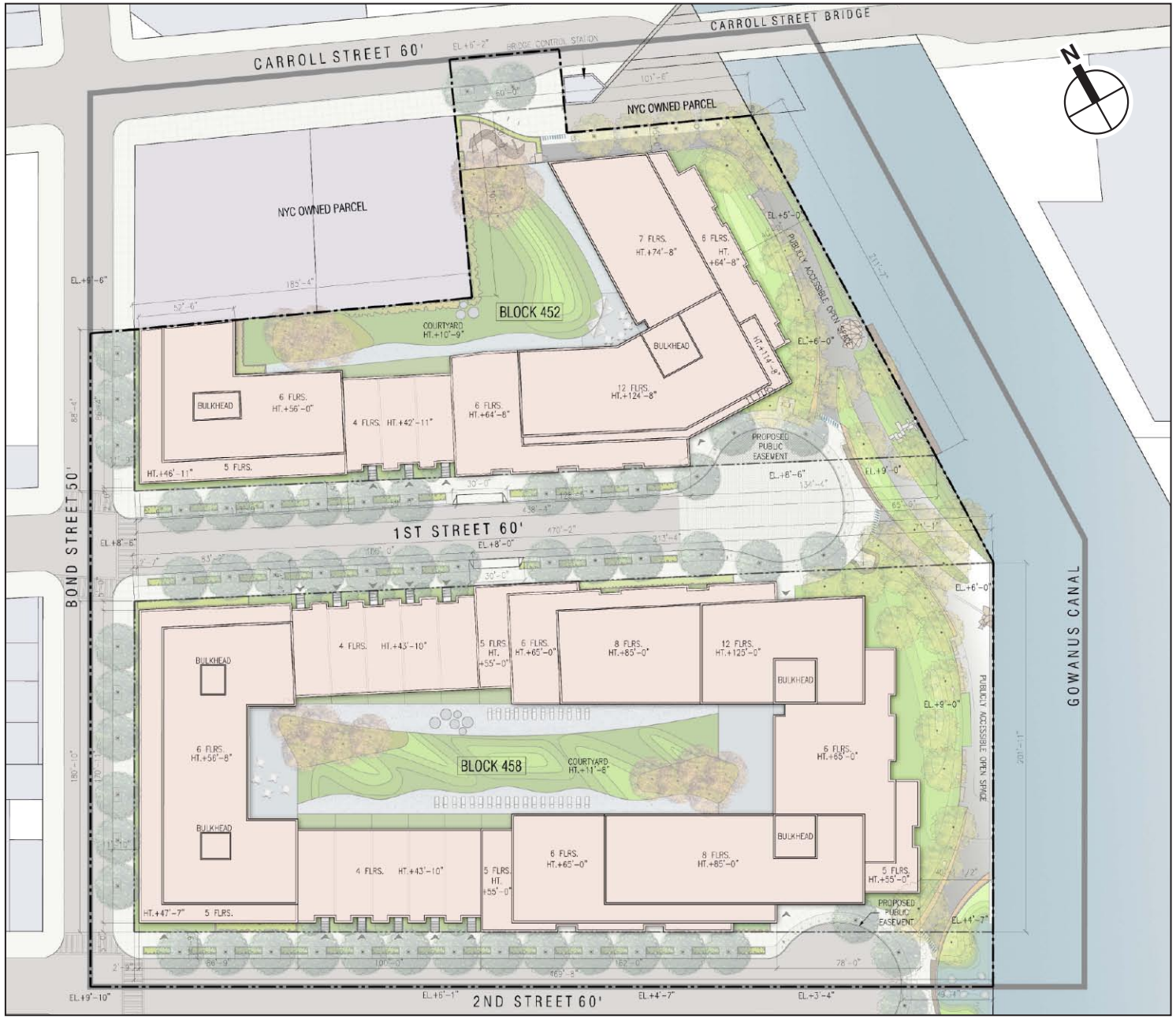

Rezoning Area Boundary

Project Site Boundary (Coterminous with GLSD Boundary)

NOTES:

- Courtyard landscape shown for illustrative purposes only.

- Shoreline condition and bulkhead location may vary as required by N.Y.S. Department of Environmental Conservation and the U.S. Army Corps. of Engineers.

363-365 BOND STREET

Proposed Site Plan

Figure S-3

The residential component of the project would provide a total of 447 dwelling units, approximately 130 of which would be reserved for low-income residents. Approximately 268 accessory parking spaces would be provided in two garages located on the ground floor of each block. As shown on the ground floor plan (Figure S-4), the commercial space, totaling about 2,000 square feet, would be located along the south side of 1st Street, approximately 50 feet from the waterfront publicly accessible open space. The proposed commercial space would be easily accessible to pedestrians both on the street and on the waterfront open space. The applicant intends to locate a commercial use, such as a local deli or other such business providing local goods and services, in this space. The community facility space, also totaling about 2,000 square feet, would be located along the north side of 2nd Street. The applicant intends to provide this space to the Gowanus Dredgers (a local canoe and kayaking club), for equipment storage and community education. Under the proposed project, the access point to the canal (at the end of 2nd Street) that is currently used by the Gowanus Dredgers would remain, and would be incorporated into the new landscaped open space proposed for the end of 2nd Street.

In addition to the proposed new buildings, as shown on the open space plan in Figure S-5, the proposed project would include a continuous, privately owned, publicly-accessible open space of approximately 23,165 square feet (about 0.5 acres) along the Gowanus Canal. In addition, approximately 7,656 square feet of landscaped open space at the street ends of 1st and 2nd Street would be provided, for a total of 30,821 (about 0.7 acres) of publicly accessible open space extending from Carroll Street on the north to 2nd Street on the south (as described below). Three pedestrian access easement areas totaling 2,559 square feet will also be provided on the project site along the cul-de-sacs at the street ends.

Principal pedestrian access to the proposed residential units would be from 1st Street and the corner of Bond and 1st Streets for both buildings. Vehicular access to the proposed accessory parking garages would be from 1st Street for both blocks.

The majority of the project site is mapped within a 100-year flood hazard zone. All buildings on the project site would comply with both Federal Emergency Management Agency (FEMA) and New York City Building Code requirements regulating construction within flood hazard areas. The applicant proposes to raise the elevations of portions of the project site to reduce the potential for flood damage or impacts on the proposed residential units. The lowest occupied floor elevation would be constructed approximately one foot above the 100-year base flood elevation. The site grade would then slope to match existing street grades along Carroll, Bond, and 2nd Streets. Street ends would also be designed in accordance with all City regulations, including those of the New York City Fire Department (FDNY) (see also the discussion under "Proposed Site and Infrastructure Improvements").

PROPOSED OPEN SPACES

PUBLICLY-ACCESSIBLE OPEN SPACE

The proposed project would landscape and improve the entire waterfront along the eastern project site boundary for the purposes of providing public access from the south end of 2nd Street north to a connection with Carroll Street. Thus, the proposed project would improve and link the street ends of 1st and 2nd Streets with publicly-accessible waterfront open space at the two project blocks, approximately 600 linear feet long and a minimum of 40 feet wide.

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- *Rezoning Area Boundary*
- *Project Site Boundary (Coterminous with GLSD Boundary)*
- *Residential*
- *Community Facility*
- *Parking*
- *Commercial*
- *Open Space*

NOTE:
- Interior partition walls shown for illustrative purposes only.

- Shoreline condition and bulkhead location may vary as required by N.Y.S. Department of Environmental Conservation and the U.S. Army Corps. of Engineers.

0 40 80 FEET
SCALE

Proposed Ground Floor Plan
Figure S-4

363-365 BOND STREET

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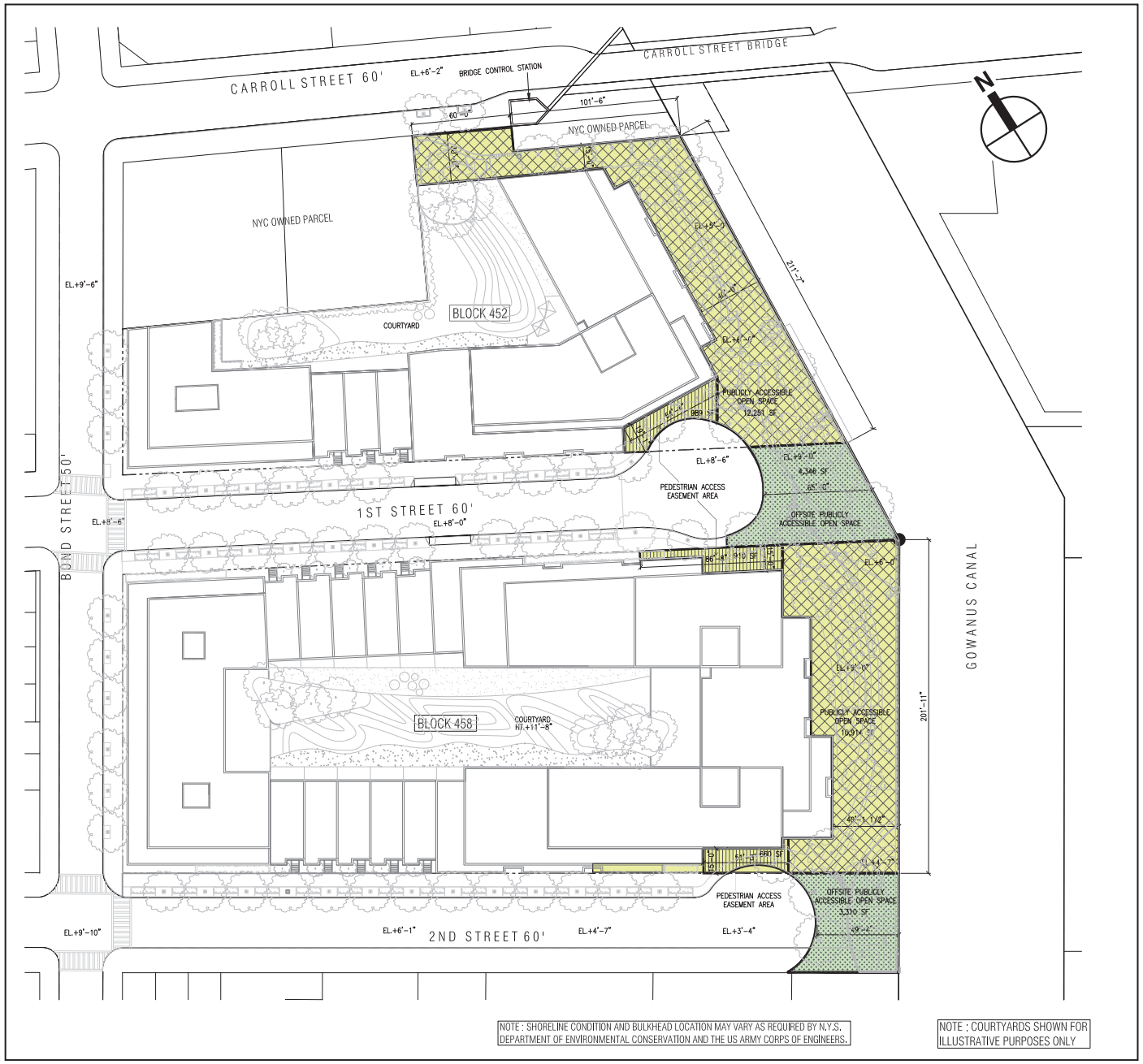

On-Site Publicly-Accessible Open Space

Off-Site Publicly-Accessible Open Space

Source: Greenberg Farrow; Lee Weintraub Landscape Architecture, LLC

363-365 BOND STREET

Proposed Open Space Plan

Figure S-5

In area, the proposed project would provide approximately 30,821 square feet (about 0.7 acres) of publicly-accessible open space along the Gowanus Canal waterfront (approximately 23,165 square feet of privately owned, publicly-accessible open space along the eastern border of the project site, connected seamlessly to approximately 7,656 square feet of public open space at the street ends of 1st and 2nd Streets). This open space would provide views along the waterfront as well as opening up new views of the historic Carroll Street Bridge, and would be landscaped with benches and other amenities for the purpose of providing publicly-accessible open space along this stretch of the Gowanus Canal waterfront. The proposed publicly-accessible open space would include planting areas, shade-providing trees, seating, lighting, pedestrian paths (which would be available for jogging and inline skating), a dog run, and other architectural features yet to be designed. A tidal wetland area would be created in the vicinity of the end of Second Street. As mentioned above, DPR will also review and approve the open space design, layout, and furnishings. Development on the site will be controlled pursuant to the special permit to substantially comply with the approved plans which will include the publicly accessible open space. The privately owned, publicly-accessible open space will be constructed, landscaped and maintained pursuant to a Restrictive Declaration that will be recorded for the project site, according to the approved plans. The open space would be managed and maintained by the proposed buildings' homeowner's associations. The hours of access are anticipated to be similar to those of City parks. Entrances to the open space would be at three locations, one at the north end (Carroll Street), one at the south end, (2nd Street) and another at the end of 1st Street.

As part of the design of the waterfront open space, the applicant intends to include industrial materials that are evocative of a particular place and time in the history of the development of the canal. This would also include a narrative ribbon that would thread through the handrails, telling the story of the Gowanus Canal, industrial Brooklyn and the legacy of environmental changes.

While the proposed paving materials are not subject to CPC approval, if possible, the applicant has stated that it would seek to either reuse the Belgian block from the pavement on the south sidewalk at the end of 1st Street and on the sidewalks and street at the end of Second Street (which is owned by the City of New York) on the project site's streetscape or would encourage its salvage and reuse in another location.

In addition, the proposed project would landscape the end of 2nd Street and as part of that design would incorporate the existing access point to the water that is currently used by the Gowanus Dredgers. As described above, the proposed project would include community facility space that would be made available to the Gowanus Dredgers for equipment storage and community education.

PRIVATE OPEN SPACES

In accordance with the City's Quality Housing provisions, the proposed project would also provide private courtyards within each building. Therefore, an approximately 11,600-square-foot courtyard would be provided in the 363 Bond Street building, and an approximately 19,000-square-foot courtyard would be provided in the 365 Bond Street building. Both open spaces, currently un-designed, would provide outdoor recreational space for project residents.

PROPOSED SITE AND INFRASTRUCTURE IMPROVEMENTS

As stated above, in order to ensure that the proposed buildings would be above the 100-year floodplain, the project site would be graded to raise the base elevation above the local

floodplain. All parking and occupiable space would then be constructed one foot above this base grade elevation.

In addition, with respect to site drainage and infrastructure, currently, all of the project site's sanitary flow and a portion of the site's stormwater flow from rooftops is conveyed to the Red Hook Water Pollution Control Plant (WPCP) via the combined sewer in Bond Street. The proposed project would eliminate site-generated stormwater flow from discharging to the combined sewer by installing new separate storm sewers in both 1st and 2nd Streets, with new stormwater outfalls to the Gowanus Canal. These new storm sewers would be designed in accordance with DEP standards. This separation of stormwater would remove the project site's stormwater from the local combined sewer system. The proposed project would also install new catch basins on the west side of the intersection of Bond and 1st Streets, thereby improving local drainage conditions. Stormwater from the project blocks would also be treated through the use of hydrodynamic separators that would remove grease, solid and floatables prior to discharge into the canal. The proposed project would also detain stormwater in the planted interior courtyards, supporting the proposed vegetation. There would also be open tree pits along the streets and planted strips along the waterfront where rainwater would infiltrate to the ground below. Lastly, the street drainage to the canal, in accordance with DEP design, would be provided with DEP standard Type II catch basins with a sump and hood that would prevent solids and floatables from being discharged into the canal.

All sanitary flow from the proposed project would be separately conveyed to the Red Hook WPCP for treatment via the existing combined sewer in Bond Street.

PROPOSED WATERFRONT OPEN SPACE AND BULKHEAD IMPROVEMENTS

Currently, the bulkhead along the project site is a timber crib design that, though currently functioning, could not be utilized or repaired for the purposes of meeting the proposed waterfront access goals of both the project and the City. Therefore, in order to improve the water's edge to provide waterfront open space, the proposed project would modify the existing infrastructure by installing a new steel sheet pile bulkhead for the entire length of the waterfront. The design, location and elevation of the proposed bulkhead are subject to the approval of DEC and ACOE. Where portions of the existing bulkhead are currently overtopped during high tide events, the existing elevation of the bulkhead may be maintained and an intertidal area may be created landward of the new bulkhead, if required by DEC and/or ACOE. The new bulkhead would either be placed in the same footprint as the existing bulkhead or would be placed against the face of the existing timber crib bulkhead, subject to the approval of DEC and/or ACOE. The preferred design is to place the sheet steel against the face of the existing timber crib bulkhead as it would:

- Avoid the release of upland contaminants into the canal during construction,
- Avoid the release of sediments into the canal,
- Minimize the disturbance to the waterfront and canal to the greatest extent possible,
- Facilitate the most efficient installation of the new bulkhead,
- Preserve to the greatest extent possible the State/National Register of Historic Places (S/NR)-eligible timber bulkhead and crib system, and
- Shorten the duration of construction along the shoreline edge, thereby minimizing potential impacts.

The preferred design would require the removal of existing whalers and piles from the existing timber crib bulkhead. In addition, for any new installation an anchoring system consisting of "deadmen" and steel "tie rods" would be installed upland below-grade, and inland of the existing crib (or approximately 40 feet upland). The tie rods would run from the new sheeting to the deadmen approximately every eight feet for the length of the bulkhead. The installation of the tie rods would require four to five foot deep trenches. The installation of the tie rods could potentially require removal of portions of the crib sufficient to allow the steel tie rods to pass through the area. The proposed bulkhead would have a boat fender system on its seaward face. This would be constructed of wood to mimic existing conditions along the canal.

These proposed waterfront infrastructure improvements would impact an historic resource, the Gowanus Canal bulkhead, which the State Historic Preservation Office (SHPO) has determined eligible for listing on the State/National Register of Historic Places as both an archaeological and architectural resource. In order to mitigate impacts to the bulkhead, the reconstructed bulkhead would be faced in wood to match the existing face. In addition, a mitigation plan has been developed to document and recover archaeological information relative to the bulkhead within the area to be disturbed during construction (see "Mitigation," below).

F. FRAMEWORK FOR ANALYSIS

The environmental review presented in this DEIS examines impacts of a site-specific rezoning and development proposal. It includes the rezoning of the site from M2-1 to M1-4/R7-2 (MX) thereby allowing the development of the proposed project with approximately 447 dwelling units (of which up to 130 would be affordable housing units), commercial space (approximately 2,000 square feet), community facility (approximately 2,000 square feet), and 268 accessory parking spaces.

If approved, the proposed project would also be developed under a GLSD. As a result, the design of the buildings and the open space must be developed in accordance with the special permit that is necessary for the proposed project to move forward. Thus, unlike a proposal that contains only a zoning action, the site-specific development of the proposed project is examined within this DEIS. In addition, as stated above, Restrictive Declarations would be used to implement measures such as hazardous materials cleanup. Thus, in addition to being a zoning action, the proposed project is a site-specific development proposal which significantly defines the project for analysis within this DEIS. Additionally, the project requires State and Federal approvals for improvements along the water's edge and new outfalls that will be subject to future site-specific engineering designs. These designs are conceptually presented in this DEIS.

The project build year is 2011, which is the year in which it is expected that the proposed project would be occupied.

CEQR requires a comprehensive analysis of proposed actions or projects in the context of other proposals. Thus, the impacts of this project are not measured against currently existing conditions, but are assessed based on the impacts of the project at the time of occupancy and the completion of construction. To assess conditions in the future without the proposed project ("No Build" conditions), the DEIS typically includes known or approved development proposals and other actions that may also be pending (and under environmental review) where the development is expected to occur on or before the occupancy of the proposed project (or 2011 in this case). The conditions in that 2011 No Build analysis year are then projected based on changes in housing and population (for example), and also take into account growth factors (such as traffic)

and projections from other City agencies (e.g., projected changes in student enrollment). In addition, given that DEP has a major capital improvement proposed at the head of the canal (i.e., the upgrade of the Gowanus pump station and Flushing Tunnel), infrastructure and natural resources conditions have also been assessed in this DEIS for the year 2013, which is after the project's build year. This analysis was also performed in response to comments and for the purposes of analyzing environmental conditions, with the proposed project in place as well as these major capital improvements.

The projection of conditions through 2011 is also based on a study area that has been identified for each technical analysis. In many cases, these study areas have been expanded in response to public comments received through the scoping process for the EIS.

Impacts of the proposed project in the analysis year ("Build" conditions) are then measured against the "No Build" conditions in order to determine the incremental impacts of the proposed project and the levels of impact significance based on the guidelines of the *CEQR Technical Manual*.

Currently, the New York City Department of City Planning Commission is considering an areawide rezoning for the Gowanus Canal area. This draft rezoning proposal was presented to the public at a public meeting of the Community Board 6 Land Use Committee on May 29th, 2008 (this proposal was previously presented as a Gowanus Canal Corridor Framework by DCP). In the forthcoming months, the draft rezoning proposal will be refined and is expected to be released formally in a Draft Scope of Work for the purposes of preparing a Draft Environmental Impact Statement (EIS) on the proposed areawide rezoning in February 2009. That Scope of Work will include a Reasonable Worst Case Development Scenario that will identify projected and potential sites that could be developed under the DCP area-wide rezoning proposal.

G. PROBABLE IMPACTS OF THE PROPOSED PROJECT

LAND USE, ZONING, AND PUBLIC POLICY

The proposed project would allow the project site to be redeveloped with a predominantly residential development that would include market-rate and affordable housing with community facility and commercial space and accessory parking. In addition, the proposed project would also provide approximately 0.7 acres of publicly-accessible waterfront open space on the Gowanus Canal along the entire project waterfront from 2nd Street on the south to Carroll Street on the north. The City-owned parcels in the rezoning area would not be redeveloped as a result of the proposed projects. As described below, this analysis concludes that the proposed project would be consistent with surrounding uses and existing neighborhood trends, and as such would have no significant adverse impacts on land use, zoning, or public policy in the study area. In addition, the proposed project would promote the objectives of and be consistent with the goals of public policy initiatives that affect the project site. Specifically, the proposed project would be consistent with the applicable initiatives and goals described in PlaNYC.

SOCIOECONOMIC CONDITIONS

The socioeconomic analysis concludes that the proposed project would not have a significant adverse impact on socioeconomic conditions in the study area. The introduction of residential units, community facility and commercial uses, and accessory parking as planned under the

proposed project would have no significant direct or indirect adverse impacts on population, housing stock, or economic activities in the local study area, nor would it adversely affect regional economic conditions of a specific industry.

COMMUNITY FACILITIES

Overall, the proposed project would not have significant adverse impacts on community facilities. This accounts for updated generation rates for day care and schools published since the date of the DEIS. The proposed project would not generate a population large enough to impact libraries or health facilities; nor would it directly or indirectly impact police services or fire services or facilities. The schools analysis concludes that even with the student-age population generated by the proposed project, there would be sufficient capacity in the local public schools to accommodate this added demand. The day care analysis estimates that the proposed project would generate approximately 69 children under the age of 6 who would be eligible for publicly funded day care programs, and approximately 25 children between the age of 6 and 12 who would be eligible for publicly funded after school day care programs. Even with these additional eligible children, day care facilities within 1 mile of the project would remain below capacity with available slots. Therefore, the proposed project would not result in significant adverse community facility impacts on schools or day care facilities.

OPEN SPACE

The proposed project would not result in any significant adverse open space impacts. The proposed project would introduce new residents, but would also create approximately 0.7 acres of new waterfront open space along the canal. As a result, passive open space ratios would increase slightly in the future with the proposed project, and the total residential open space ratio would remain the same. The active open space ratio would decrease by 3 percent. However, because the study area has a low active open space ratio, other factors must be considered to demonstrate that even this small decrease in the active open space ratio does not result in a significant adverse impact.

In this instance, a number of factors demonstrate that although the study area has a low active open space ratio and this ratio would decrease with the proposed project, this decrease would not constitute a significant adverse impact. First, it is recognized that the DCP guidelines for active open spaces are not attainable in many areas of the city, and are not considered impact thresholds. Moreover, the quantitative effects of the proposed project on the active open space ratio would be very limited; the ratio would decrease by only 0.01 acres per 1,000 people with the proposed project.

Finally, the quantitative analysis does not account for the approximately 66.77 acres of mostly active open space in Red Hook Park and the Red Hook Recreation Area, which are located just outside of the study area. It is likely that residents of the proposed project would make use of this significant recreational space (which includes athletic facilities such as soccer and softball fields), thus allaying the shortage of active open space predicted by the quantitative analysis. In addition, the proposed 0.7-acre publicly-accessible open space along the canal was considered entirely passive in the quantitative portion of this analysis, but active recreation such as jogging or cycling would be allowed within the publicly accessible open space, and would be expected to occur, especially if similar amenities are built along other portions of the canal beyond the proposed project's 2011 Build year. The proposed project would also include private residential amenity space such as an accessory gym and private open spaces in building courtyards for its

residents. These private amenities would likely serve to reduce the impact of the project's residents on active open spaces in the study area. Therefore, the proposed project would not result in a significant adverse impact on active or passive open space in the study area.

SHADOWS

The proposed project would not result in significant adverse shadow impacts on any existing publicly-accessible open spaces, sun-sensitive features of nearby historic resources or important natural features.

HISTORIC RESOURCES

ARCHAEOLOGICAL RESOURCES

The proposed project would construct a new steel sheet pile bulkhead along the length of the eastern boundary of the project site either in place of or outside of the existing, archaeologically sensitive bulkhead to make possible the construction of the proposed waterfront open space along the canal. The installation of the new bulkhead could require removal of portions of the existing one. In addition, two new stormwater outfalls would be constructed through the existing bulkhead—one at the end of 1st Street and the other at the end of 2nd Street. LPC has determined that the bulkhead rehabilitation work and storm water outfall installation would adversely impact portions of the bulkhead at the project site. Therefore, an archaeological field investigation would be undertaken in coordination with LPC that would document the extent and significant characteristics of the Gowanus Canal bulkhead. This archaeological documentation would serve as mitigation of the adverse impact to the bulkhead under CEQR. This field investigation would occur either in advance of or in concert with the bulkhead reconstruction and storm water outfall installation. An Archaeological Testing Protocol in compliance with the LPC Guidelines for Archaeological Work in New York City would be prepared and implemented in coordination with LPC. In addition, as requested by SHPO, an Unanticipated Discovery Plan for both human and non-human remains would be prepared in consultation with SHPO and implemented during project-related construction at the site.

ARCHITECTURAL RESOURCES

Project Site

All of the buildings on the project site would be demolished under the proposed project. None of the buildings that would be demolished are considered contributing elements within the S/NR-eligible Gowanus Canal Historic District. As noted above, the proposed project would rehabilitate the Gowanus Canal bulkhead. It is anticipated that the reconstructed bulkhead would be faced in wood to match the existing bulkhead. To avoid adverse effects on the historic character of the bulkhead, the project sponsors would consult with SHPO on the designs of the new bulkhead, including submitting plans for the rehabilitation to SHPO at the preliminary and pre-final design stages.

Primary Study Area

The Carroll Street Bridge and Operator's House (S/NR-eligible; NYCL) is an architectural resource located within 90 feet of projected construction activities. To avoid any construction-related impacts to this resource, a Construction Protection Plan (CPP) would be developed and implemented in consultation with LPC, SHPO, and NYCDOT prior to project demolition and

construction activities. No other architectural resources are located close enough to the project site to experience potential construction-period impacts.

The proposed project would somewhat alter the context of the Carroll Street Bridge in that it would involve the demolition of industrial buildings adjacent to the resource and the construction of a taller residential complex on the site. However, the Carroll Street Bridge is significant primarily for its unique engineering, which significance would not be affected by the proposed project. Therefore, the proposed project would not impact the qualities that qualify it for NYCL status or S/NR eligibility. An engineering study has determined that no cumulative adverse impacts on the bridge would result from projected traffic increases associated with the proposed project. In addition, the proposed project would create new public access to and along the Gowanus Canal including an esplanade and plaza area adjacent to the Carroll Street Bridge. This amenity would be expected to improve access to, and the visibility of, the Carroll Street Bridge. Therefore, the proposed project is not expected to have an adverse impact on the Carroll Street Bridge.

Two features that contribute to the S/NR-eligible Gowanus Canal Historic District are located within the project's 400-foot study area: the Former BRT Power House (located across the canal, roughly 300 feet east of the project site), and the Gowanus Canal Waterway (which runs immediately adjacent to the project site). While the context of the Power House and the Waterway would change somewhat with the construction of the project, this change would not constitute a significant adverse impact. Furthermore, the proposed masonry and glass buildings have been designed to complement the character of the nearby district. The SHPO has determined that the proposed project would have no adverse effect on the S/NR-eligible Gowanus Canal Historic District provided that proposed landscape plans for the portion of the project site along the canal are submitted to SHPO for review and comment at preliminary and pre-final design stages.

With the proposed project, the context of the 59-97 Second Street rowhouse block, determined National Register-eligible as part of this project and located roughly 150 feet west of the project site, would also be somewhat altered by the addition of a modern residential complex nearby. However, views from the potential historic rowblock to the project site are limited, because views from the rowhouse block are generally oriented south, while the project site is located to the northeast. Furthermore, the portions of the proposed project located closest to the potential historic resource would be low-rise, while the taller, mid-rise components would be located farther away. Therefore, no significant adverse contextual impacts to the potential historic resource would occur.

Secondary Study Area

The Carroll Gardens Historic District is located in the secondary study, roughly 500 feet west of the project site. Views to the project site from the Carroll Gardens Historic District are extremely limited due to the relatively long distance to the project site, the presence of intervening buildings and trees, and the street orientation. Furthermore, the project buildings have been designed with low-rise elements in the western portion of the project site (the portion closest to the Carroll Gardens Historic District) and the medium-rise elements further east, thus further minimizing any views of the project buildings that may be available from the Carroll Gardens Historic District. Therefore, the proposed project would not substantially alter the context or visual character of the Carroll Gardens Historic District, and would have no adverse impact on this resource.

Other known and potential architectural resources are located in the secondary study area. These are situated relatively far (between roughly 450 feet and ½ mile) from the project site and therefore would not be directly impacted by the proposed project. In terms of potential indirect impacts, current views to the project site from the architectural resources in the secondary study area are either limited or nonexistent. No important views to or from the architectural resources in the secondary study area would be blocked as a result of the proposed project. Therefore, no adverse impacts to architectural resources in the secondary study area would result from the proposed project.

URBAN DESIGN AND VISUAL RESOURCES

This analysis concludes that the proposed project would not have a significant adverse impact on urban design and visual resources. Although changes would occur, the proposed project would substantially improve the condition of the project site and create new waterfront access for the neighborhood. The proposed residential buildings would be taller and have a greater footprint than the existing buildings on the site. However, these changes would not have a significant adverse impact on urban design or on the overall visibility of visual resources from public spaces within the study areas. The proposed project has been designed to maintain as much as possible the low-rise character of the nearby blocks and to blend with the streetscapes of surrounding neighborhood. The proposed project is expected to enhance the overall vitality of the surrounding streets by introducing residential uses and a waterfront esplanade from which the public would be afforded an improved view of many visual resources, including the canal itself. Therefore, the proposed project would reflect a reasonable balance between existing and proposed building heights and bulk, and new open space, without causing any significant adverse impacts.

NEIGHBORHOOD CHARACTER

The analysis concludes that the proposed project would not have a significant change in neighborhood character with respect to land use, urban design and visual resources, historic resources, socioeconomic conditions, traffic and pedestrians and noise. Therefore, the proposed project would not have a significant adverse impact on neighborhood character. The proposed project would contain new market rate and affordable housing with supporting commercial and community facility uses and publicly-accessible open space, extending the residential character of nearby residential neighborhoods eastward onto the two project blocks. The proposed project has been designed to maintain as much as possible, the low-rise character of the project blocks, and to blend with the streetscapes of surrounding neighborhood. The existing one- to two-story buildings on the project site would be replaced with six-story building components along Bond Street, four-story townhouse components in the mid-block sections, and medium-rise components located further east on the project site. By distributing the respective building heights in this manner, Bond Street's low-rise character would be maintained. The proposed buildings would be subject to the quality design requirements of a general large-scale development plan to ensure that the design of the proposed structures would not conflict with the neighborhood. It would also meet the Quality Housing Provision of the City. The proposed project would provide much needed local housing, both market rate and affordable, meeting the City's objectives of maintaining a mix of housing types in the local community. Community facility space and amenities would also be provided for the local neighborhood. In addition, the proposed project would introduce a new publicly-accessible landscaped waterfront esplanade (approximately 0.7 acres) from which the public would be afforded an improved view of many

visual and historic resources, including the historic Carroll Street Bridge, the Former Brooklyn Transit Power House, the canal itself and its bulkheads. This would be the first such open space along this stretch of the canal. While there would be increased pedestrian and vehicular activity on local streets, these increases would not be expected to significantly affect any of the neighborhoods in the study area. Any projected traffic impacts would be mitigated. In addition, any impacts to the on-site bulkheads would be mitigated through an archaeological investigation that would have the potential to yield knowledge as to the historical methods used in developing the canal. It is anticipated that the reconstructed bulkhead would be faced in wood to match the existing, and the project sponsors would coordinate the design with SHPO to ensure that the bulkhead design is in keeping with the historic character. The redevelopment of the two blocks would also provide for the environmental cleanup of the site.

NATURAL RESOURCES

GROUNDWATER

The proposed project would not result in any significant adverse impacts on groundwater including groundwater conditions, flow or quality. Rather, "Hazardous Materials," as part of the remediation of the project site prior to construction, the proposed project would remove on-site sources of groundwater contamination, thus providing a benefit with respect to local groundwater quality. In addition, the proposed bulkhead would have more than enough capacity to accommodate the projected flow of groundwater from stormwater recharge on the project site. Therefore, it can be concluded that the proposed project would not adversely impact groundwater conditions along the canal or in the surrounding area.

WETLANDS

The proposed project would install approximately 555 linear feet of steel sheet pile bulkhead either in place of or against the existing timber sheathing along the Gowanus Canal. An intertidal area in the vicinity of the end of 2nd Street where the canal overtops the bulkhead would, subject to DEC and ACOE approval, be maintained and upgraded. Installation of the new sheet pile bulkhead may result in minimal loss (i.e., approximately 300 square feet) of DEC littoral zone tidal wetlands that may be located within the footprint of the new bulkhead. Therefore, a *de minimis* impact on littoral zone wetlands would occur as a result of bulkhead installation. This impact would be minimized to the extent possible through the implementation of measures identified during the permitting process for these shoreline improvements by federal and state agencies. This *de minimis* impact would not be considered a significant impact on tidal wetlands that would require mitigation. In addition, any *de minimis* filling would be offset by the creation of a tidal wetland area of the same square footage and transitional plantings in the vicinity of the end of 2nd Street.

TERRESTRIAL RESOURCES

No significant adverse impacts would occur with respect to terrestrial resources. Currently, the project site is 95 percent impervious surface cover with scattered invasive plants indicative of disturbed conditions. The construction of the proposed project would create approximately 0.7 acres of waterfront open space that would be planted with a variety of native and ornamental trees, shrubs, grasses, and herbaceous perennials. More than 30 trees would be planted including American redbud (*Cercis Canadensis*), oaks (*Quercus* spp.), and beech (*Fagus* spp.*)* (the applicant will consult with the New York City Department of Parks and Recreation (DPR) to

ensure that all street tree and publicly-accessible open space tree species planted on-site are appropriate for the project area and are not known Asian Longhorn Beetle (ALB) host species). This habitat enhancement along the water's edge would provide potential habitat for common songbirds, small mammals, and pollen-dependent species (e.g., honeybee and butterfly species).

AQUATIC RESOURCES

Water Quality

Currently, approximately one-third of the project site's stormwater runoff is untreated and discharged to the combined sewer in Bond Street. Under the proposed project, no stormwater from the project site would be discharged to this combined sewer and all stormwater from the two project blocks would be collected, treated, and discharged to new storm sewers to be constructed beneath 1st and 2nd Streets, which would then outlet into the Gowanus Canal. Stormwater pollutant loads from the project site would be reduced in the proposed project condition due to the conversion of industrial uses and existing paved surfaces to residential uses and proposed landscaped areas, the latter of which would also reduce the amount of total runoff from the project site. With the proposed project relative to site-generated runoff, there would be a reduction in existing pollutant loads to the canal of approximately 21 percent of biochemical oxygen demand (BOD), 44 percent of the total phosphorus, 47 percent of the total nitrogen, and 38 percent of total suspended solids (TSS). Stormwater would be treated through the use of best management practices (BMPs). Therefore, the proposed project is expected to improve water quality conditions near the project site with the resulting benefits for aquatic biota. In addition, the proposed project would not result in significant adverse impacts on CSO flow, and the number of CSO events in the downstream combined sewer system, and therefore would not adversely impact the water quality of the canal. Water quality modeling results show the proposed project would not result in any water quality impacts on the Gowanus Canal for principal water quality parameters such as dissolved oxygen and pathogens.

Aquatic Biota

The installation of the steel sheet pile bulkhead either in place of or against the existing timber sheathing has the potential to result in short-term construction related impacts to water quality and aquatic biota that would not be significant. These impacts may include localized increases in suspended sediment and re-suspension of contaminated sediments, temporary loss of fish habitat, and a *de minimis* disturbance to benthic communities during the installation of the existing shoreline stabilization features. Because the increase in suspended sediment would be localized and temporary, no significant adverse impacts would occur to aquatic biota. The loss of some benthic habitat and some macroinvertebrates during the removal of portions of the existing timber bulkhead and installation of the new bulkhead would not result in significant adverse impacts to populations of macroinvertebrates, as limited populations have been observed using this portion of the Gowanus Canal, nor would it significantly impact the food supply for fish foraging in the area. Encrusting organisms and benthic macroinvertebrates would be expected to recolonize the new bulkhead shortly after construction is completed. In addition, based on water quality modeling results, no significant adverse impacts to water quality are expected, and therefore no residual or secondary impacts on aquatic resources would occur. It should be noted however, that although not significant, the impacts associated with an in-place replacement of the bulkhead would be greater than with the preferred design (new sheet pile placed against the existing timber sheathing).

ENDANGERED, THREATENED, AND SPECIAL CONCERN SPECIES

No threatened, endangered, or special concern species have been identified on or in the immediate vicinity of the project site. Therefore, no significant adverse impacts to threatened or endangered species or special concern species would occur as a result of the proposed project.

ESSENTIAL FISH HABITAT

No significant adverse impacts on fish listed by the National Marine Fisheries Service (NMFS) as having essential fish habitat (EFH) for this area would result from the proposed project.

HAZARDOUS MATERIALS

Construction at the project site would entail demolition of the existing buildings on the project site, raising the existing elevation by approximately 0 to 6 feet depending on site topography, and subsequent construction of new foundations. Prior to or as part of any new construction at the project site, the project sponsor would undertake the following actions:

- Any drums, chemicals, and remaining equipment would be removed and disposed of off-site in accordance with all applicable regulations.
- Demolition of the existing structures would be in accordance with applicable federal, state, and City requirements relating to asbestos, lead paint and disposal of solid waste.
- Any found Underground Storage Tanks (USTs) and existing Aboveground Storage Tanks (ASTs) would be registered with DEC, then removed in accordance with DEC requirements.
- Any excavated soils and fill materials would be removed from the site and properly disposed of in accordance with all applicable DEC regulations and at an appropriate disposal facility.

All subsurface soil disturbance would be performed in accordance with a RAP/CHASP. The RAP would provide for the appropriate handling, stockpiling, testing, transportation and disposal of these materials in accordance with all applicable federal, state and local regulations. The CHASP would ensure that all such work is done in a manner protective of both human health and the environment. The RAP/CHASP was approved by the New York City Department of Environmental Protection (DEP) on January 29, 2009. These measures will be implemented in accordance with a DEP-approved Restrictive Declaration for the project site. Further, with respect to active spill numbers, the remediation would also be undertaken in consultation with DEC.

With these measures in place, significant adverse impacts related to hazardous materials would be avoided during and post construction.

WATERFRONT REVITALIZATION PROGRAM

Because the proposed project is located within the City's Coastal Zone, it is subject to the policies of the *New York City Waterfront Revitalization Program* (WRP), which establishes the City's policies for development and use of the waterfront and provides a framework for evaluating activities proposed in the Coastal Zone. The proposed project would be consistent with the City's 10 WRP policies and standards. It would encourage greater public use of the coastal zone and improve water quality through the elimination of currently uncontrolled pollutant flows into the Gowanus Canal.

INFRASTRUCTURE

The proposed project would not result in any significant adverse impacts related to infrastructure.

WATER SUPPLY

Water demands of the proposed project would not overburden the City's water supply system. Based on the *CEQR Technical Manual*, the incremental 114,032 gallons per day (gpd) of water supply demand from the proposed project would not adversely affect the capacity of the City's water supply system in providing water to the proposed project site nor would it impact water pressure for local users. Moreover, project-specific calculations developed by the applicant have disclosed that with the use of low flow fixtures the actual water demand rate would be much less than that projected under the *CEQR Technical Manual*, or 56,200 gpd, about half of the CEQR rates.

SANITARY SEWAGE

The Red Hook WPCP currently handles approximately 33 million gallons per day (mgd) of sewage flow and is designed to treat a dry weather flow of 60 mgd. Based on the *CEQR Technical Manual*, the added sanitary sewage discharge of approximately 114,032 gallons per day (gpd) resulting from the proposed project represents approximately 0.4 percent of the current 33 mgd of flow handled by the Red Hook WPCP. Thus, the projected increase in sanitary sewage resulting from the proposed project would not cause the Red Hook WPCP to exceed its operational capacity or the New York State Pollution Discharge Elimination System (SPDES) permitted capacity of 60 mgd. In addition, as stated above, project-specific calculations developed by the applicant have disclosed that with the use of low flow fixtures the actual water demand rate would be much less than that projected under the *CEQR Technical Manual*, or 56,200 gpd, about half of the sanitary wastewater rates used in this conservative impact analysis using CEQR rates.

STORMWATER

Currently, approximately one-third of the project site's stormwater runoff is discharged to the combined sewer in Bond Street. Under the proposed project, two new stormwater sewers would be installed (one at 1st Street and one at 2nd Street) that would convey all site-generated stormwater to the Gowanus Canal via two new storm sewer outfalls also to be constructed as part of the proposed project. Both of these new outfalls would require a SPDES permit from the DEC. In addition, to meet DEC requirements, the proposed project would provide pre-treatment for all stormwater collected from the two project blocks, prior to discharge to the storm sewers. This aspect of the project would eliminate any storm flows from the project site reaching the Bond Street combined sewer. Thus, with the proposed project, the project site would not contribute any stormwater flows to the combined sewer or to combined sewer overflow (CSO) discharges to the canal (see the discussion below). In addition to removing stormwater from the project site, the project also proposes to redirect stormwater runoff from the street in the area around Bond Street at 1st Street away from the combined sewers by providing drainage inlets at this location and connecting these inlets to the proposed new storm sewer to be built in 1st Street. The redirection of this additional stormwater runoff would improve conditions relative to local street flooding at this location.

COMBINED SEWER OVERFLOW (CSO) AND WATER QUALITY

An engineering modeling analysis was undertaken of the potential for the proposed project to affect CSO conditions along the Gowanus Canal. The nearest downstream combined sewer overflow location (CSO) from the project site is identified as RH-035 and is located at 4th and Bond Streets. As stated above, based on the *CEQR Technical Manual*, sanitary sewage generated by the project site would increase by approximately 114,032 gpd or 0.18 cubic feet per second (cfs) with the proposed project. This flow would be directed to the Bond Street combined sewer. However, as described above, the proposed project would also modify current stormwater flow patterns at the site by installing new storm sewers and creating new buildings and open spaces. As a result, with the proposed project, stormwater runoff from the project site would be conveyed through two new storm sewers that would outlet to the Gowanus Canal. In addition, with the treatment of the separated project stormwater runoff, a reduction in pollutant loadings from the project site to the Gowanus Canal would occur, providing a benefit for the water quality of the canal.

Based on infrastructure and water quality modeling using both *CEQR Technical Manual* sanitary flow rate calculations (approximately 114,032 gpd) and actual project-specific sanitary flow rates (56,200 gpd, about half of the CEQR-calculated rates), the following conclusions can be made:

- The proposed project would not result in any increase in the number of annual CSO events that are projected to occur in the canal in 2011 (73 total events).
- In 2011, assuming the *CEQR Technical Manual* sanitary flow rate calculations for the proposed project, there would be a very limited projected increase in CSO volume to the canal (over the 2011 No Build condition) of approximately 0.8 MG/yr (or 0.2 percent of the total CSO discharge to the canal).
- In 2011, assuming the project-specific sanitary flow rates (which incorporates actual design features such as low-flow fixtures), there is a limited projected decrease in CSO volume to the canal over the course of the year, of approximately 100,000 gallons annually.
- In no scenario would the proposed project result in any water quality impacts on the Gowanus Canal for principal water quality parameters such as dissolved oxygen and pathogens.

In 2013, proposed DEP improvements at the Gowanus Pump Station and the Gowanus Flushing Tunnel are scheduled to be completed. Once in place, these upgrades would significantly improve the water quality of the canal and also reduce the impact of the proposed project on CSO volumes. The improvements at the pump station would reroute flow directly to the Columbia Street Interceptor via a new force main, thereby relieving the Bond Street sewer, thus reducing the CSO discharges to the canal by eliminating the use of Bond Street combined sewer as a bypass. These actions would reduce the impact of the incremental sanitary flow contribution from the proposed project resulting in an overall reduction in the CSO volume. In addition, the upgrade and restoration of the Gowanus Flushing Tunnel would improve circulation through the canal. Both of these DEP capital improvement projects would improve the water quality of the Gowanus Canal and the proposed project would not adversely affect the water quality benefits that are projected with these system upgrades. Additional modeling results show that:

- The proposed project would not result in any increase in the number of CSO events that are projected to occur in the canal in 2013 with the proposed Gowanus Pump Station improvements in place (33 total events).

- In 2013 (with the Gowanus Pump Station and Gowanus Flushing Tunnel upgrades in place), assuming the *CEQR Technical Manual* sanitary flow rate calculations for the proposed project, the proposed project would result a projected decrease in CSO volumes of 0.1 MG discharged to the canal over the course of the year.
- In 2013 (with the Gowanus Pump Station and Gowanus Flushing Tunnel upgrades in place), assuming the project-specific sanitary flow rates, there would be a reduction in CSO volumes of 0.1 MG discharged to the canal over the course of the year. See Appendix C, Table 1.

SOLID WASTE AND SANITATION SERVICES

The proposed project would result in a net increase over existing conditions of approximately 1.12 tons of solid waste per day in 2011. Although the proposed project would create new demand for the disposal of solid waste, municipal and private solid waste services would have adequate capacity to meet these increases in demand. Therefore, the proposed project would not result in any significant adverse impacts on solid waste and sanitation services.

ENERGY

The proposed project would result in added energy demand of approximately 78,480 million British Thermal Units (BTUs), which would constitute less than 0.02 percent of the total peak energy demand for New York City in 2011, and is not considered to be significant. Therefore, the energy demand from the proposed project would be met and the proposed project would not result in any significant adverse impacts on energy systems.

TRAFFIC AND PARKING

TRAFFIC

For the streets around the site, future intersection volumes would generally represent an increase over the existing traffic volumes, and the street capacities at majority of the locations would be sufficient to accommodate these increases.

Based on the CEQR standards, the proposed project could result in significant impacts at the following two signalized intersection approaches:

- The eastbound approach of Carroll Street at 3rd Avenue during the AM and PM peak hours; and
- The eastbound approach of Carroll Street at 4th Avenue during the AM and PM peak hours.

The eastbound approach of Carroll Street at 3rd and 4th Avenues operates at congested levels (Level of Service [LOS] F) during both the AM and PM peak hours in the No Build conditions. With the proposed project in place, the moderate increase in traffic levels (up to 38 vehicles during any given peak hour) at the eastbound Carroll Street approach at 3rd Avenue and 4th Avenue would result in significant traffic impacts.

While the delay at the eastbound approach of 1st Street at Bond Street would also increase significantly during the AM peak hour (from 18.7 seconds in the No Build conditions to 48.8 seconds in Build conditions), this increase in delay would not be considered a significant impact based on the *CEQR* guidelines, since fewer than 90 passenger-car-equivalents (PCEs) were identified at this approach during the AM peak hour in the 2011 Build conditions.

PARKING

The proposed project would provide approximately 268 accessory spaces, which would accommodate the majority of the project's residential parking demand. The remaining parking demand would be accommodated by the on-street parking available in the study area. Therefore, the proposed project would not significantly impact the supply of parking in the study area.

TRANSIT AND PEDESTRIANS

SUBWAYS

The area is served by multiple subway lines, including the F and G along Smith Street (with two entrances), and the M and R subway lines along 4th Avenue at Union Street. Therefore, it is not expected that any single subway element (e.g., entrances or stairs) would experience trips in excess of the *CEQR Technical Manual* guideline threshold of 200. Therefore, the proposed project is not expected to result in significant adverse impacts to subway conditions.

BUSES

The number of bus trips generated by proposed project would be significantly below the CEQR threshold; therefore, a detailed analysis of bus service conditions is not warranted and no significant adverse impacts would occur.

PEDESTRIANS

The proposed project is not expected to result in significant adverse impacts to pedestrian circulation in the area; on the contrary, it would provide multiple pedestrian entrances/exits to the residential buildings and to the proposed commercial and community facility spaces. It would improve sidewalks along the project streets, provide new public pedestrian connections to the new public open space along the Gowanus Canal and open new means of local pedestrian circulation. Therefore, no detailed analyses of pedestrian conditions are warranted.

AIR QUALITY

Air quality analyses for an EIS typically consider four potential sources of pollutants and areas of air quality impacts: 1) the potential for pollutants from mobile sources (such as cars and trucks) to impact the ambient environment; 2) the potential for pollutants from the proposed heating systems to impact the surrounding environment and nearby residential buildings; 3) the potential for future residents of a residential building to be impacted by emissions from nearby industrial or commercial uses; and 4) the potential for pollutants from garages to impact ambient air quality. With respect to mobile source analyses, the proposed project would not generate enough vehicular traffic to result in an air quality impact from mobile sources. To ensure that the development would not result in any significant air quality impacts from HVAC emissions, an (E) designation would be provided as part of the proposed zoning. The text of the (E) designation would be as follows:

> Tax Block 452, Tax Lots 1, 15: Any new development must use natural gas as the type of fuel for HVAC systems. Boiler exhaust stack(s) for all development shall be located on the highest tier of each building.

Tax Block 458, Lot 1: Any new development must use natural gas as the type of fuel for HVAC systems. Boiler exhaust stack(s) for all development shall be located on the highest tier of each building.

With these restrictions in place, no significant adverse air quality impacts would result from the proposed project's HVAC systems.

With respect to local industrial sources, it was determined based on air permits for nearby industrial operations (e.g., concrete batching plants) and air quality modeling of these facilities that future project residents would not experience significant adverse air quality impacts from nearby industrial sources. The garage analysis found that neither future project residents nor the surrounding neighborhood would be impacted by the proposed on-site parking garages.

In addition, to these four analyses, an analysis was performed to determine if local odor conditions near the project site could impact the proposed project. Based on real-time sampling of odors at the project site, it was determined that during periods with weather conditions conducive to high concentrations of hydrogen sulfide (H_2S)—an indicator of potential odors—near the Gowanus Canal, the hourly average concentration of H_2S could exceed the nuisance-based standard for this pollutant, resulting in a significant adverse odor impact.

NOISE

The proposed project would not result in any significant adverse stationary or mobile source noise impacts. In addition, noise levels in the proposed project's new publicly-accessible open space areas, principally from vehicular traffic on the adjacent streets, would not result in a significant noise impact.

CONSTRUCTION

Construction of the proposed project is expected to last approximately 24 months, beginning in April 2009 and ending in 2011.

Environmental remediation would be performed to address any hazardous materials currently existing on the site and demolition of the existing buildings.

Construction of the proposed project would involve several stages, some which would overlap: demolition of the existing buildings and environmental remediation; excavation/grading, foundation; building structure construction; and interior construction and finishing. Construction would generally proceed simultaneously on both blocks comprising the project site. Activities would begin with demolition of the existing buildings, and any required remediation of the site. Milling and crushing of any demolished materials approved for reuse, if any, would also be done during this stage of construction. Concurrently, the site would be graded, and the driving of piles for support of the building foundations and new sewer lines, as well as the driving of sheet piles for the restoration of the canal bulkhead would also be performed. Foundations work would then begin, followed by superstructure and building envelope activities focusing on the east side of the site to allow for an early start to construction of the canal esplanade. Mechanical, electrical, and interior finish work will follow the superstructure activities; a final site finish stage will complete construction activities prior to occupancy.

PROPOSED INFRASTRUCTURE IMPROVEMENTS

In addition to the building construction on site, there would also be improvements to the infrastructure. The proposed project would separate the stormwater flow from the sanitary flow by installing new separate stormwater sewers in 1st and 2nd Streets, with new stormwater outfalls to the Gowanus Canal. These new stormwater sewers would be designed and constructed in accordance with DEP standards and approval.

PROPOSED WATERFRONT OPEN SPACE AND BULKHEAD IMPROVEMENTS

The proposed project would modify the existing infrastructure by installing a new steel sheet pile bulkhead for the entire length of the waterfront. To minimize extending the marine infrastructure into the water, the proposed new sheeting would be installed either in place or against the face of the existing timber sheathing. An archaeological field investigation would occur either in advance of or in concert with the bulkhead reconstruction and storm water outfall installation (in coordination with LPC), and would serve as mitigation for the significant adverse impact to the bulkhead. An Archaeological Testing Protocol in compliance with the LPC Guidelines for Archaeological Work in New York City guidelines would be prepared and implemented in coordination with LPC. In addition, as requested by SHPO, an Unanticipated Discovery Plan for both human and non-human remains would be prepared in consultation with SHPO and implemented during project-related construction at the site.

TYPICAL CONSTRUCTION PRACTICES

The proposed project will employ typical construction practices that have proven successful and have been found to be necessary to complete projects of this magnitude in a confined urban area. All deliveries, material removals, and hoist uses have to be tightly scheduled to maintain an orderly work area and to keep the construction on schedule and within budget. The applicant would designate a contact person for community relations throughout the construction period. This person would serve as the contact for the community to voice concerns about construction activities, and would be available to meet with the community to resolve concerns or problems.

Typical construction practices include:

- Remedial Action Plan(RAP)/Construction Health and Safety Plan (CHASP). To minimize the potential for impacts to the community and construction workers, all demolition, excavation, and construction work involving soil disturbance would be performed in accordance with a RAP/CHASP approved by DEP.
- Construction Equipment. Typical equipment used for demolition, excavation, and foundation work would include excavators, bulldozers, portable crushing equipment, backhoes, compaction equipment, tractors, jackhammers, and concrete pumping trucks. Other equipment that would be used include pile drivers, dump trucks and loaders, concrete trucks, and back hoes. Trucks would deliver concrete and other building materials, and remove excavated material as well as demolition and construction debris. The construction equipment likely to be used during erection of the superstructure would include compressors, cranes, concrete pumps, hoists, bending jigs, and welding machines.
- Deliveries and Access. Access to the construction sites would be controlled. Work areas would be fenced off to provide security protection, and limited access points for workers and trucks would be provided. Security guards and flaggers would be posted, and all persons and trucks would have to pass through security points. After work hours, the gates would be

closed and locked. Material deliveries to the site would be controlled and scheduled. Unscheduled or haphazard deliveries would be minimized.

- Hours of Work. Construction activities for the proposed buildings would take place in accordance with New York City laws and regulations, which allow construction activities to take place between 7:00 AM and 6:00 PM. Typically, work would end at 3:30 PM, but could be extended until 6:00 PM. Extended workday activities would not include all construction workers on site, but only those involved in the specific task. Extended workdays would occur during foundation and superstructure tasks, and limited extended workdays could occur during other tasks over the course of construction. It is possible that weekend work would be required; it would require a permit from the New York City Department of Buildings (DOB) and, in certain instances, approval of a noise mitigation plan from DEP under the City's Noise Code.
- Sidewalk and Lane Closures. Depending on the location and stage of construction at a particular time on the project site, construction activities would require temporary sidewalk and lane closures along Bond Street, Carroll Street, 1st Street or 2nd Street. Sidewalk and lane closures require NYCDOT permitting and compliance with measures to safeguard the public.
- Staging and Laydown Areas. During the early stages of construction, the laydown and staging areas would be accommodated on the unconstructed parcels. During construction of the proposed buildings' superstructure, laydown areas would likely be on the curb lane of Bond Street, Carroll Street, 1st Street or 2nd Street.
- Rodent Control. Construction contracts would include provisions for a rodent control program in coordination with appropriate public agencies.

In sum, construction may at times be disruptive to nearby residential buildings during the construction period. However, since the proposed project will conform to all appropriate local and state regulations, there would be no significant adverse impacts from construction of the proposed project.

PUBLIC HEALTH

As per CEQR guidelines, a screening-level assessment was conducted to determine whether a public health analysis is warranted. The assessment determined that the proposed project would not results in significant adverse impacts related to air quality, hazardous materials, groundwater, solid waste management practices that could attract vermin, and noise. In addition, based on the technical analyses presented in earlier chapters of this EIS, the proposed project would not result in an exceedance of accepted federal, State, or local standards. The proposed project is not proposing any other actions that would result in significant public health concerns. Therefore, no further public health analysis is warranted and the proposed project would not result in significant adverse public health impacts.

MITIGATION

The proposed project may result in significant adverse impacts in the areas of historic resources, air quality, and traffic. Possible mitigation for these impacts is discussed below.

HISTORIC RESOURCES

The proposed project includes the construction of a new steel sheet pile bulkhead along the eastern boundary of the project site. An anchoring system consisting of "deadmen" and steel tie rods would be installed, and would extend up to 40 feet landward of the bulkhead. The tie rods would run from the new sheeting to the deadmen approximately every eight feet for the length of the bulkhead. The installation of the tie rods would require that trenches between the bulkhead and the deadmen be excavated. The installation of the tie rods could require removal of portions of the existing cribwork sufficient to allow the steel tie rods to pass through the area. The proposed bulkhead rehabilitation design described above may require modification based on the requirements of DEC and/or ACOE.

Two new storm water outfalls would also be constructed through the existing bulkhead, one at the end of 1st Street and the other at the end of 2nd Street. The proposed bulkhead work and storm water outfall installation described above would adversely impact portions of the existing bulkhead at the project site.

To mitigate the significant adverse impact on the existing bulkhead under CEQR, an archaeological field investigation would be undertaken in coordination with the LPC that would document the extent and significant characteristics of the portion of the Gowanus Canal bulkhead on the project site. The goals of the investigation would be to determine the length and width of a single crib, document and/or sample fill contained within the timber cribwork, and to evaluate and document the bulkhead's construction, including the joinery between adjacent cribs. This field investigation would occur either in advance of or in concert with the bulkhead reconstruction and storm water outfall installation. An Archaeological Testing Protocol in compliance with the *LPC's Guidelines for Archaeological Work in New York City* (2002) would be prepared and implemented in coordination with LPC.

AIR QUALITY

An analysis was performed to determine if local odor conditions near the project site could impact the proposed project. Based on real-time sampling of odors at the project site, it was determined that at times, the concentration of hydrogen sulfide (H_2S)—an indicator of potential odors—was above the 10 ppb nuisance-based threshold. In accordance with the *CEQR Technical Manual,* these levels would constitute a potential significant odor impact that could occur with respect to both future open space users and residents at the project site.

Given that local waterway and infrastructure is assumed to be the greatest contributor of H_2S, to the ambient condition, this impact could potentially be reduced through the implementation of the City-proposed infrastructure projects for the area by 2013 (described above) which include:

- *Rehabilitation of the Gowanus Canal Flushing Tunnel*—This rehabilitation will increase the capacity for water intake from the East River to the canal from 154 mgd to 215 mgd. This would improve water quality and dissolved oxygen levels, enhance flow through and circulation, and reduce stagnation and organic matter concentrations in the canal waters which is one potential source of H_2S.
- *Reconstruction of the Gowanus Pump Station*—This reconstruction would result in the expansion of the capacity of the Gowanus Pump Station through the installation of four new pumps and the redirection of sewage to a force main that currently runs along the inside of the Flushing Tunnel. Because the current force main is not operational, that flow is diverted to the Bond Street sewer, which could be another source of H_2S through manholes and vents.

Moreover, relieving the capacity of the Bond Street combined sewer reduced the potential for CSO discharges into the canal (the reconstruction of the Pump Station and replacement of the force main is projected to reduce the annual volume of CSO discharges to the canal by 34 percent) which in-turn reduces another potential source of H_2S.

- *Dredging*—Dredging the upper 750 feet of the Gowanus Canal will eliminate exposed sediment mounds which has previously been identified as another potential source of H_2S in the area.

As a result of the above-described proposed infrastructure improvements, it is possible that the identified odor impacts could potentially be reduced by 2013 (or upon completion of dredging). Since it is anticipated that these improvements would be implemented after the proposed project's build year, the odor impacts would be considered unmitigated unavoidable adverse impacts until the completion of the improvements. To the extent that none of these measures are implemented or in the event that such measures are ineffective, H_2S levels at the site could remain above 10ppb for an hourly average, thereby constituting an unmitigated unavoidable adverse impact of the proposed project.

TRAFFIC

Two of the intersections in the study area would experience significant adverse traffic impacts as a result of the proposed project. The sections below identify the mitigation needed at each location.

Proposed Mitigation Measures

Measures proposed to mitigate the project-related traffic impacts would primarily involve retiming signal controls to increase green time for impacted movements and prohibition of curbside parking at one of the intersection approaches to provide an additional travel lane. The proposed mitigation measures are summarized in Table S-3 and are discussed below.

Table S-3
Proposed Mitigation Measures

Intersections	AM Peak Hour	PM Peak Hour
3rd Avenue and Carroll Street	Prohibit parking on the south curb of eastbound Carroll Street approach for approximately 150 feet to provide an additional moving lane of traffic.	Shift 3 seconds of green time from the northbound/southbound phase to the eastbound phase.
4th Avenue and Carroll Street	Shift 4 seconds of green time from the northbound/southbound phase to the eastbound phase.	Shift 2 seconds of green time from the northbound/southbound phase to the eastbound phase.

3RD AVENUE AND CARROLL STREET

The impact at the eastbound approach of Carroll Street at 3rd Avenue during the weekday AM peak hour could be mitigated by prohibiting the curbside parking along the south side of the eastbound approach for approximately 150 feet during the AM peak hour. Currently, the curbside parking on the south side of Carroll Street is regulated by alternate side parking (street cleaning) regulations. With the proposed mitigation measure in place, no vehicular parking/standing would be allowed during the weekday AM peak hour (displacing approximately 7 parking spaces at the intersection approach) to provide an additional travel lane. The displaced parking spaces would increase the on-street parking utilization in the study area to approximately 98 percent during the early morning hours.

The impact at the eastbound approach of Carroll Street at 3rd Avenue during the weekday PM peak hour could be mitigated by shifting 3 seconds of green time from the northbound/southbound phase to the eastbound phase.

4TH AVENUE AND CARROLL STREET

The impact at the eastbound approach of Carroll Street at 4th Avenue during the weekday AM peak hour could be mitigated by shifting 4 seconds of green time from the northbound/ southbound phase to the eastbound phase.

The impact at the eastbound approach of Carroll Street at 4th Avenue during the weekday PM peak hour could be mitigated by shifting 2 seconds of green time from the northbound/ southbound phase to the eastbound phase.

It should be noted that all of the mitigation measures discussed above are subject to review and approval by NYCDOT.

ALTERNATIVES

Alternatives to the proposed project that were analyzed include the No Action Alternative, which assumes the project site would remain in its current condition and no zoning actions are approved; the As-of-Right Alternative, which assumes the project site is developed as-of-right with uses under the current M2-1 zoning district; and a Lesser Density Alternative, which considers the development of the project site at 2.7 FAR with market rate housing and without the inclusion of any affordable housing.

NO ACTION ALTERNATIVE

The No Action Alternative provides a baseline against which impacts of the proposed action may be compared. Under the No Action Alternative it is assumed that no discretionary actions would be necessary and that there would not be any changes to the project site.

Similar to the proposed project, the No Action Alternative would not result in any significant adverse impacts on: land use, zoning, and public policy; socioeconomics; community facilities; open space; shadows; urban design and visual resources; neighborhood character; hazardous materials; infrastructure; solid waste; energy; transit and pedestrians; noise; and public health. Unlike the proposed project, the No Action Alternative would not result in significant adverse impacts on historic resources, air quality, or traffic.

The No Action alternative would not result in some of the beneficial aspects of the proposed project. For example, it would fail to implement waterfront redevelopment, open space, and inclusionary housing objectives for the Gowanus Canal. It would not extend by two blocks the residential character of the adjacent Carroll Gardens neighborhood, provide the community facility space proposed by the project, provide new public views of the Carroll Street Bridge and Operator's House, redevelop and stabilize the timber crib bulkhead; improve the quality of local groundwater and surface waters, or remediate the site for contaminated materials.

AS-OF-RIGHT ALTERNATIVE

Under this alternative, it is assumed that the existing uses on the project sites would be replaced with an As-of-Right Alternative warehouse/storage use (two buildings) covering the site and

totaling about 295,000 zoning square feet. It would be up to 60 feet high and provide on-site parking.

Similar to the proposed project, the As-of-Right Alternative would not result in any significant adverse impacts on: land use, zoning, and public policy; socioeconomics; community facilities; open space; shadows; historic resources; urban design and visual resources; neighborhood character; natural resources; infrastructure; solid waste; energy; transit and pedestrians; noise; construction; and public health. The As-of-Right Alternative would generate approximately 43 and 13 more vehicle trips during the midday and PM peak hours than would the proposed project; however, it is anticipated that the mitigation measures proposed to address the impacts of the proposed project could similarly address any potential impacts of the As-of-Right Alternative. However, under the As-of-Right Alternative no such mitigation measures would be proposed since no CEQR review would be performed.

Under the As-of-Right Alternative, the project's purpose and need and its objectives—including redevelopment of the waterfront with a new mix of housing and residential uses (including affordable housing) and open space—would not be achieved. Nor would the warehouse uses reinforce the existing patterns of residential development in the area or provide waterfront access for the community. It would not extend by two blocks the residential character of the adjacent neighborhood, provide the community facility space proposed by the project, open up new waterfront views of these historic resources, or improve the quality of local groundwater and surface waters. The remedial action plan and construction health and safety plan required under the proposed project would not necessarily occur under this alternative.

LESSER DENSITY ALTERNATIVE

Under this alternative, it is assumed that the existing uses on the project site would be replaced with a market rate residential project that would provide approximately 320 housing units; no affordable housing would be provided. It is also assumed that a waterfront open space would be provided, as well as commercial and community facility uses similar to the proposed project.

Similar to the proposed project, the Lesser Density Alternative would not result in any significant adverse impacts on: land use, zoning, and public policy; socioeconomics; community facilities; open space; shadows; urban design and visual resources; neighborhood character; hazardous materials; natural resources; infrastructure; solid waste; energy; transit and pedestrians; noise; construction, and public health. With this alternative, there could be an adverse historic resources impact with respect to the historic Gowanus Canal bulkhead, but this alternative would also require a review by LPC under CEQR; therefore, mitigation would be required that would likely be similar to the proposed project. It is expected that the Lesser Density Alternative would result in significant adverse traffic impacts at the same locations as with the proposed project, and that mitigation measures similar to those recommended for the proposed project would be required to mitigate such impacts. Also, similar to the proposed project, the unmitigated, unavoidable adverse impact with respect to odors would occur under this alternative.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

An analysis was performed to determine if local odor conditions near the project site could impact the proposed project. Based on real-time sampling of odors at the project site, it was determined that at times, the concentration of H_2S—an indicator of potential odors—was above the 10 ppb nuisance-based threshold. In accordance with the *CEQR Technical Manual*, these

levels would constitute a potential significant odor impact that could occur with respect to both future open space users and residents at the project site.

Given that local waterway and infrastructure is assumed to be the greatest contributor of H_2S, to the ambient condition, this impact could potentially be reduced through the implementation of the City-proposed infrastructure projects for the area by 2013 which include:

- *Rehabilitation of the Gowanus Canal Flushing Tunnel*—This rehabilitation will increase the capacity for water intake from the East River to the canal from 154 mgd to 215 mgd. This would improve water quality and dissolved oxygen levels, enhance flow through, circulation and reduce stagnation and organic matter concentrations in the canal waters which is one potential source of H_2S.
- *Reconstruction of the Gowanus Pump Station*—This reconstruction would result in the expansion of the capacity of the Gowanus Pump Station through the installation of four new pumps and the redirection of sewage to a force main that currently runs along the inside of the Flushing Tunnel. Because the current force main is not operational, that flow is diverted to the Bond Street sewer, which could be another source of H_2S through manholes and vents. Moreover, relieving the capacity of the Bond Street combined sewer reduced the potential for CSO discharges into the canal (the reconstruction of the Pump Station and replacement of the force main is projected to reduce the annual volume of CSO discharges to the canal by 34 percent) which in-turn reduces another potential source of H_2S.
- *Dredging*—Dredging the upper 750 feet of the Gowanus Canal will eliminate exposed sediment mounds which has previously been identified as another potential source of H_2S in the area.

As a result of the above-described proposed infrastructure improvements, it is possible that the identified odor impacts could potentially be reduced by 2013 (or upon completion of dredging). Since it is anticipated that these improvements would be implemented after the proposed project's build year, the odor impacts would be considered unmitigated unavoidable adverse impacts until the completion of the improvements. To the extent that none of these measures are implemented or in the event that such measures are ineffective, H2S levels at the site could remain above 10ppb for an hourly average, thereby constituting an unmitigated unavoidable adverse impact of the proposed project.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Under the proposed project, both natural and man-made resources would be expended in the construction and implementation of the proposed project. These resources include the building materials used during construction; energy in the form of gas and electricity consumed during construction; and the human effort (time and labor) required to develop, construct, and operate various elements of the proposed project. These are considered irretrievably committed because their reuse for some purpose other than the proposed project would be highly unlikely. Although the proposed project would result in a net overall increase in open spaces and a wider variety of land uses, the land use changes associated with the development of the proposed project may also be considered a resource loss.

These commitments of land resources and materials are weighed against the public purpose and benefits of the proposed development: to facilitate the development of underutilized parcels on a former waterfront industrial site along the Gowanus Canal with residential (including affordable

housing), community facility and commercial uses, and to provide a publicly-accessible waterfront open space for the community.

GROWTH-INDUCING ASPECTS OF THE PROJECT

The goal of the proposed project and actions are to allow for the redevelopment of a former waterfront industrial site along the Gowanus Canal with residential and other uses including a publicly-accessible waterfront open space. While this development would support the City and State economies, it would not be expected to induce additional growth outside the project site. Much of the area surrounding the project site, including west of Bond Street and east of 4th Avenue has been fully developed with residential development and commercial uses since the late 19th century (e.g., the Carroll Gardens and Park Slope neighborhoods). The intervening blocks between these long established residential neighborhoods along the Gowanus Canal have historically been developed with industrial uses and the level and type of development in this area is controlled by zoning which consists primarily of M2 and M1 zoning districts. The proposed project and related actions are specific to the two project blocks only. The remaining Gowanus area is also subject to the planning framework now being developed by the New York City Department of City Planning, which is a separate action examining future land use proposals for the area that would allow residential, commercial, the continuation of manufacturing, and open space uses along the canal. Also, given the increasing attraction of the area for new uses (including commercial, residential and hotel), there are a number of No Build projects that will add these new uses to the area through the year 2011.

The proposed project and actions would not significantly affect socioeconomic conditions in the study area. It would not add a residential population that would significantly increase the local population. In addition, given the trends that have been occurring in the area over the past two decades, the new residents would be similar in demographic composition to the current population and the added housing, in particular the affordable housing, would serve the current housing needs and demands in the area. With the proposed project, the added employment would be associated with the proposed residential and commercial uses, but would not significantly alter the local employment conditions. In addition, the proposed project can use existing infrastructure and proposes only infrastructure improvements that are site specific (e.g., new storm outfalls, bulkheads) and necessary for site development.

For all the reasons cited above, it is concluded that the proposed actions would not result in any growth-inducing impacts. ✷