Gowanus Green
Draft Scope of Work for an Environmental Impact Statement

A. PROJECT DESCRIPTION

INTRODUCTION

The New York City Department of Housing Preservation and Development (HPD), on behalf of the project sponsor, Gowanus Green Partners, LLC, is seeking several discretionary actions (collectively, the "Proposed Action") in connection with the redevelopment of waterfront parcels of land on the Gowanus Canal in the Gowanus neighborhood of Brooklyn Community District 6 (see **Figure 1**). The Proposed Action would facilitate a proposal by HPD and the sponsor (the "Applicant") to redevelop the Project Site with a mixture of residential (market rate and affordable), neighborhood retail space, parking, community facility space, and waterfront parkland (the "Proposed Project").

The Project Site comprises Block 471, Lots 1 and 100. The Project Site is bounded by 5th Street to the north, Smith Street to the west, a privately-owned parcel (Block 471 Lot 200) to the south, and the Gowanus Canal to the east. Lot 1 is currently vacant and Lot 100 is occupied by a concrete batching plant. The Project Site totals approximately 5.8 acres. The Proposed Action would redevelop the Project Site with a residential development that would include market-rate and affordable housing, community facility space, parking, and commercial space. In addition, the Proposed Project would provide approximately 1.2 acres of publicly-accessible open space along the Gowanus Canal.

The Proposed Action includes an amendment to the zoning map to change the existing M3-1 zoning district to a R7-2 district with a C2-4 commercial overlay (see **Figure 2 and Figure 3**), City Map amendments, several special permits and authorizations to facilitate the redevelopment of the approximately 5.8-acre site. The actions are described in detail below under "Proposed Discretionary Actions."

If the Proposed Action is approved, it is expected that the Proposed Project would be completed in 2017.

PURPOSE AND NEED

The applicant is applying to the New York City Planning Commission (CPC) for discretionary actions that would allow for the redevelopment of the Project Site along the Gowanus Canal with residential and other uses and publicly-accessible open space.

The Project Site, which is currently zoned for manufacturing use, contains a concrete batching plant and vacant land. The Proposed Project would redevelop these parcels with residential, community facility, and commercial uses that would be compatible with the surrounding area, including substantial publicly-accessible waterfront open space along the Gowanus Canal. The site layout and building configuration would be controlled through the proposed General Large

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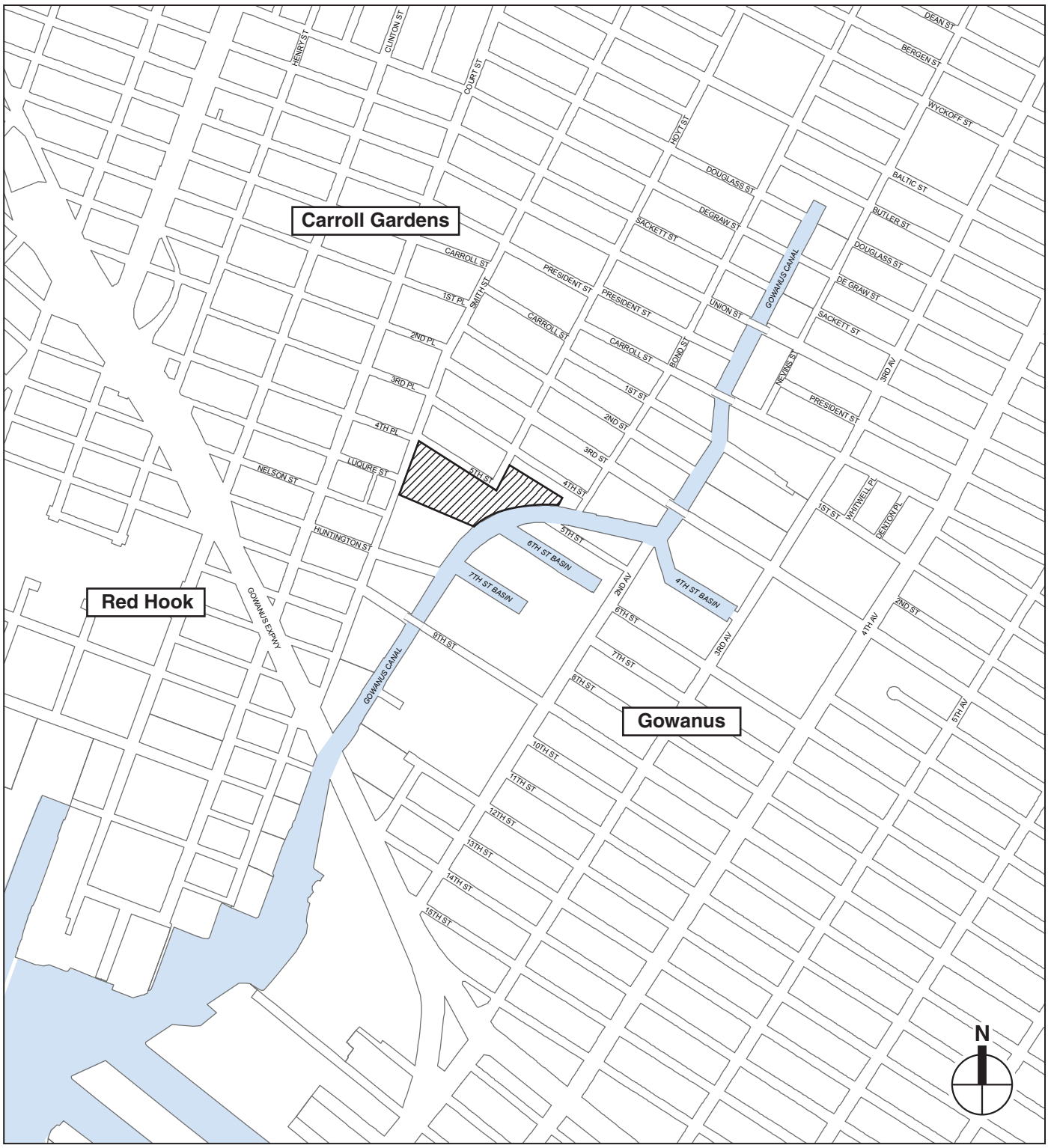

Project Site

0 1000 FEET
SCALE

GOWANUS GREEN

Project Location
Figure 1

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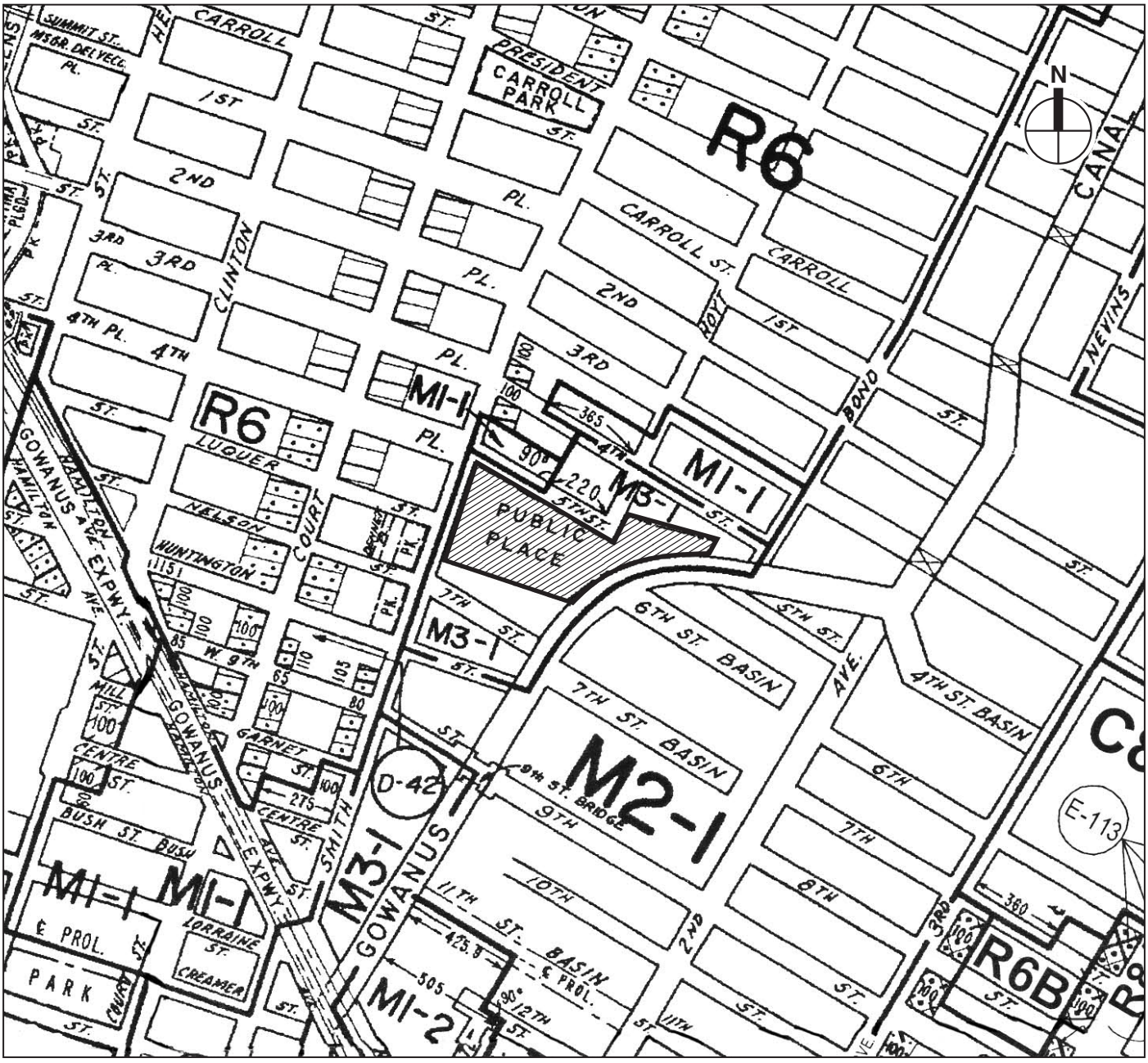

Project Site Boundary

Zoning Lot Boundary

C1-1 Overlay

C2-1 Overlay

C2-3 Overlay

C2-4 Overlay

Existing Zoning

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Figure 2

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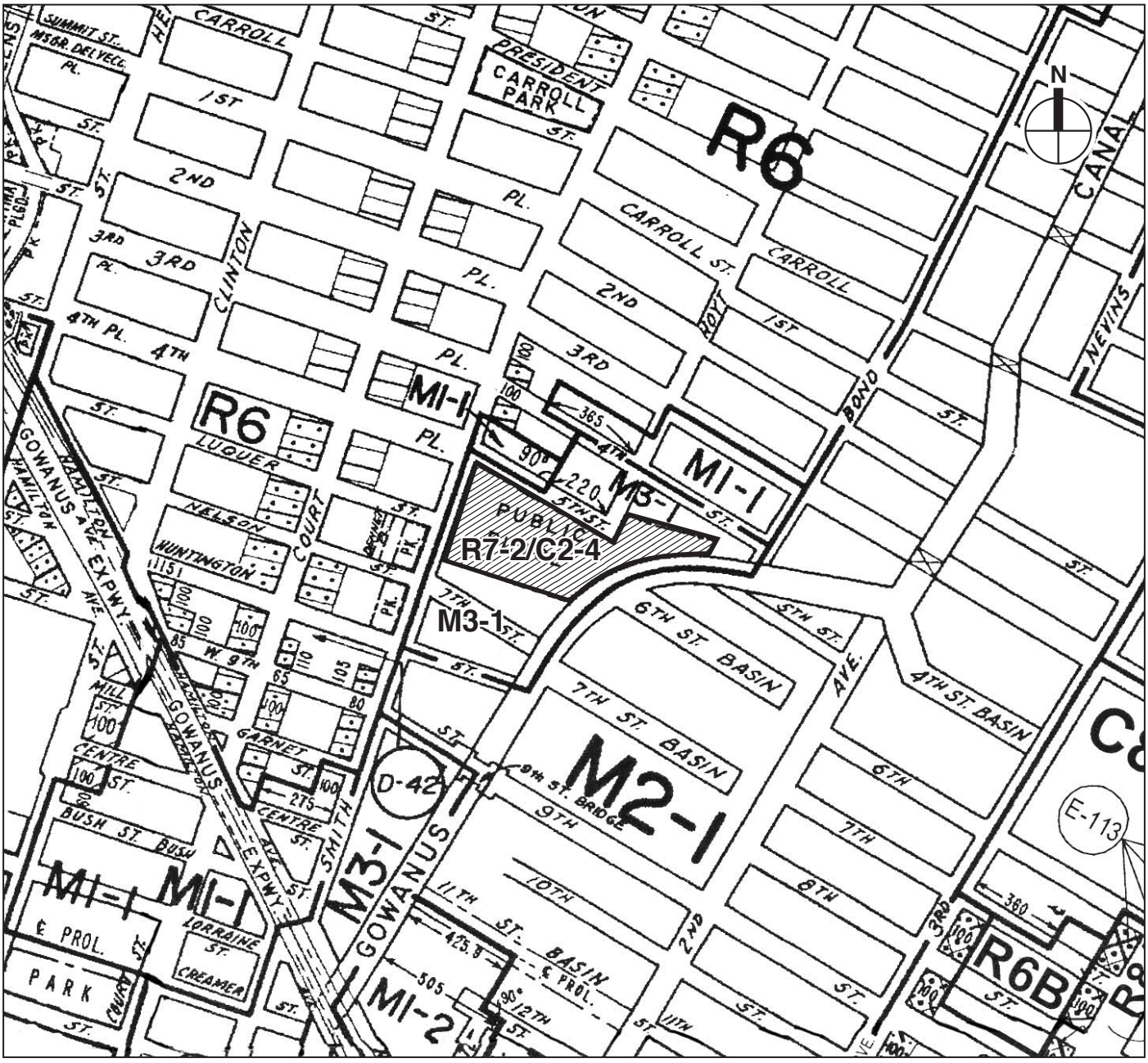

Project Site Boundary

Zoning Lot Boundary

C1-1 Overlay

C2-1 Overlay

C2-3 Overlay

C2-4 Overlay

Proposed Zoning

GOWANUS GREEN

Figure 3

Scale Development (GLSD) permit (see the discussion below). In addition, the mix of housing types would allow market-rate residential development while providing on-site affordable housing. The mix of uses would include commercial space (providing convenient goods and services within a short walking distance for local residents), and community facility space (which the applicant expects will be occupied by a community center). In addition, to the proposed neighborhood retail and community facility uses, the proposed 1.2-acres of publicly-accessible waterfront open space is expected to attract local residents and provide a recreational and aesthetic benefit for the surrounding community.

PROPOSED PROJECT

The Proposed Project is the winning response to the Public Place Request for Proposal competition issued on July 12, 2007 by New York City through HPD. The proposal was submitted by partnership of four local development entities including the Hudson Companies, Jonathan Rose Companies, the Bluestone Organization, and the Fifth Avenue Committee. These entities were awarded the project on May 7, 2008 by HPD. The competition's criteria were developed through input from the Public Place Task Force, the Gowanus Canal Corridor Framework, and a larger community process. The criteria included:

1. Mixed-uses including affordable housing, open space, retail/commercial space, and community facilities;
2. A range of housing including homeownership, rental and senior housing;
3. A significant commitment to public space; and
4. A sustainable building design.

PROPOSED DEVELOPMENT PROGRAM

Under the Proposed Action, the Project Site would have a maximum residential FAR of 3.50. This would allow a development program on the Project Site that would contain 774 dwelling units (up to 70 percent of which would be affordable housing), 40,352 gross square feet (gsf) of commercial space (providing local goods and services), 18,818 gsf of community facility space, and approximately 225 parking spaces.

PROPOSED USES AND BUILDING CONFIGURATIONS

The Proposed Action would facilitate a proposal by the applicant to redevelop the entire Project Site as proposed, with nine new buildings and open space. The development program would include residential uses, community facility space, commercial space, open space, and parking (see **Figures 4** and **5**). The Proposed Project would incorporate aspects of sustainable construction, including green roofs, the use of recycled and natural materials, natural ventilation, an innovative stormwater management system, and high standards for indoor air quality and energy efficiency. The Proposed Project would strive to comply with the requirements for the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) standards for new construction (LEED-NC) and neighborhood development (LEED-ND).

The Proposed Project would include three new buildings on the block between Smith Street, 5th Street, Canal Street, and Luquer Street. Canal Street would be a newly mapped street to the south of 5th Street. An extension to Luquer Street would be mapped to the east of Smith Street. Building A, Building C, and Building E would be between eight and 12-stories in height. Building A would

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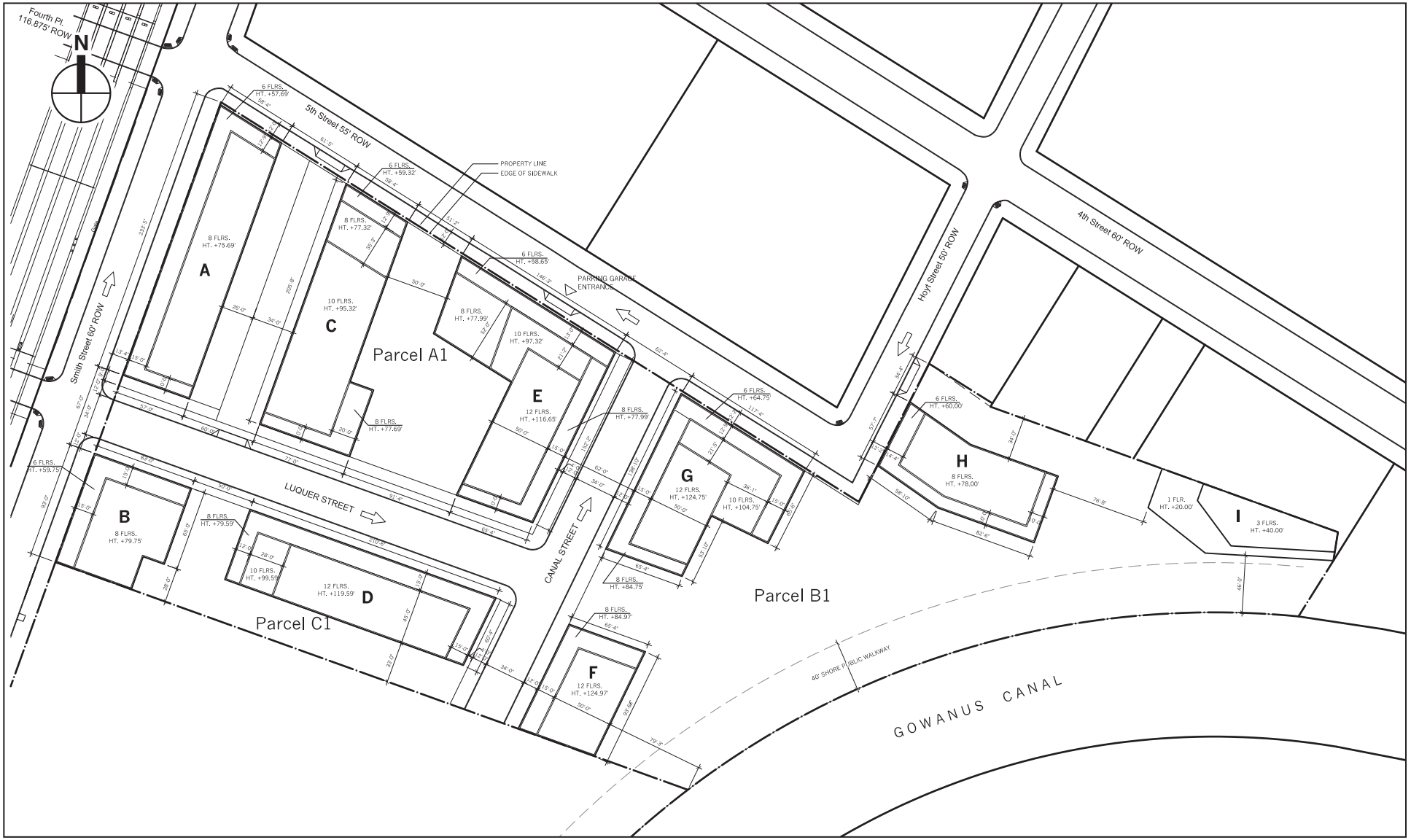

Proposed Site Plan

Figure 4

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Illustrative Project Site Rendering

occupy the entire blockface of Smith Street between 5th Street and Luquer Street. This building would include ground-floor commercial uses with residential uses above. A residential entrance would be located on Smith Street. This building would rise to approximately 60 feet (six stories) and the remaining two stories would be set back. Building C would be situated perpendicular to 5th and Luquer Streets. This building would include only residential uses and would be approximately 95 feet high (10 stories). Along 5th Street, the building would initially rise to approximately 60 feet (six stories), the following two stories would be set back approximately 15 feet, and the remaining two stories would be set back approximately 35 more feet. Along Luquer Street, Building C would rise to a height of approximately 78 feet (eight stories) before setting back approximately 10 feet. Building E would have frontages along 5th Street, Canal Street, and Luquer Street. The residential entrance would be located on Canal Street. Additionally, the entrance to the subsurface garage would be located along the 5th Street side of Building E. Along 5th Street, Building E would rise to approximately 60 feet (six stories) before setting back approximately 15 feet and rising to approximately 78 feet (eight stories) and to approximately 96 feet (10 stories). Along Canal Street, the building would rise to approximately 78 feet (eight stories) before setting back approximately 15 feet and rising to approximately116 feet (12 stories).

Buildings B and D would be located on the block bounded by Smith Street, Luquer Street, and Canal Street. Building B would have frontages along Smith Street and Luquer Street. A ground-floor commercial use would be located along Smith Street. Residential units would be located above this commercial use and these would be accessed through an entrance on Luquer Street. The building would rise to approximately 60 feet (six stories) before setting back approximately 15 feet and rising to approximately 78 feet (eight stories).

Building D would have frontages along Luquer and Canal Streets. This building would contain only residential uses. The building would rise to approximately 78 feet (eight stories) before setting back approximately 15 feet. The building would then rise to a height of approximately 96 feet (10 stories) followed by another step back, and ultimately rising to approximately 119 feet (12 stories).

Building F, Building G, Building H, and Building I would be located between Canal Street, Hoyt Street, and the Gowanus Canal. Building F would be on Canal Street and would feature only residential uses. The building would rise to approximately 78 feet (eight stories), then would set back approximately 15 feet, and would then rise to approximately 114 feet (12 stories).

Building G would have frontages on Canal and 5th Streets. This building would feature ground-floor commercial space along Canal and 5th Streets as well as residential uses above. The building would be approximately 78 feet (eight stories) along Canal Street and approximately 60 feet (six stories) along 5th Street. Following this initial height, the building would be set back approximately 15 feet and would rise to approximately 96 feet (10 stories) along 5th Street and approximately 114 feet (12 stories) along Canal Street.

Building H would have ground-floor commercial space and residential uses above. The building would be approximately 78 feet (eight stories) and would include an approximately 15-foot setback at the sixth floor (approximately 60 feet).

Finally, Building I would feature only community facility uses. This 3-story building would not be located directly on Hoyt Street. This building would be located between Hoyt Street and the Gowanus Canal.

The residential component of the project would provide a total of 774 dwelling units, up to 70 percent of which would be affordable units. Approximately 225 parking spaces would be provided in a subsurface garage that would have an entrance on 5th Street. The commercial

space, totaling approximately 40,352 gsf, would be located in the ground-floor of five of the buildings, and would be concentrated along Smith Street, 5th Street, and Canal Street. The applicant intends to locate commercial uses providing local goods and services in these retail spaces. The community facility space, totaling approximately 18,818 gsf, would be located in Building I (see Figure 4). This building would be set back from Hoyt Street.

In addition to the proposed new buildings, the Proposed Project would add a total of 1.2 acres of publicly-accessible waterfront open space along the Gowanus Canal. Additional open spaces would be located between the buildings throughout the Project Site, and would include a rain garden and the Carroll Mews garden. Each open space is described in detail below.

Since 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 above the 100-year base flood elevation. (see also the discussion under "Proposed Site and Infrastructure Improvements").

PROPOSED OPEN SPACES

Publicly-Accessible Open Spaces

The Proposed Action would result in the creation of a new waterfront park (see **Figure 5** for illustrative rendering), a rain garden, and the Carroll Mews. The new waterfront park would landscape and improve the entire waterfront along the eastern Project Site boundary for the purposes of providing public access to the waterfront. A connection to the open space would be available on Canal Street between Buildings G and F as well as at the intersection of 5th Street and Hoyt Street between Buildings G and H. Thus, the Proposed Project would improve and link the publicly-accessible waterfront open space with the surrounding neighborhood streets. The Rain Garden would be a publicly-accessible private open space located between Buildings C and E. The Rain Garden would feature innovative open water channels and vegetation that highlights the Project Site's stormwater management system. In addition, the Rain Garden would feature a landscaped children's play area, chess tables, and garden settings. The Carroll Mews would be private, one-way street that would feature gardens at the ground-floor fronting the street. The street, in addition to easing circulation around the Project Site, would also provide a location for neighborhood activities, such as farmer's markets.

PROPOSED 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 occupied space would be constructed approximately two feet 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 are conveyed to the Red Hook Water Pollution Control Plant (WPCP) via the combined Bond-Lorraine combined sewer. The Proposed Project would eliminate site-generated stormwater flow from discharging to the combined sewer by installing new separate storm sewers on Luquer Street and between Buildings H and I to two 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 include the installation of new catch basins, thereby improving local drainage conditions. Stormwater from the Project Site would also be collected and treated on-site. 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.

PROPOSED DISCRETIONARY ACTIONS

The Proposed Project requires CPC approval of the following discretionary actions:

ZONING MAP AMENDMENT

The Proposed Action includes an amendment to the zoning map rezoning the Project Site from an M3-1 district to an R7-2 district with a C2-4 commercial overlay. The Project Site is currently zoned as an M3-1 manufacturing district. As stated above and shown in **Figure 3**, the Project Site would be rezoned from M3-1 to R7-2 with a C2-4 commercial overlay.

M3 manufacturing districts are intended to provide suitable areas for heavy industries, particularly uses that generate noise, traffic, or pollution. Representative uses include power plants, solid waste transfer facilities, and fuel supply depots. Typically, M3 districts are mapped near waterfront areas and are buffered from residential districts by other manufacturing districts. Manufacturing uses within M3 district must adhere to minimal performance standards. M3-1 districts permit manufacturing and commercial development to a maximum Floor Area Ratio (FAR) of 2.0; parking is not required. No new residences or community facilities are permitted in M3 districts.

R7 districts are medium-density apartment districts. The height factor regulations encourage low buildings on smaller zoning lots and taller buildings with low lot coverage on larger zoning lots. In R7-2 districts, the FAR ranges from 0.87 to a maximum of 3.44. The open space ratio ranges from 15.5 to 25.5. The maximum FAR is achievable only where the zoning lot is large enough to accommodate a practical building footprint as well as the required amount of open space. C2-4 districts are mapped as commercial overlays within residential districts. Typically, these overlay districts are mapped along streets that serve the local needs of the surrounding residential neighborhood. Representative retail uses include grocery stores, restaurants, beauty parlors, and other small-scale uses. Overlay districts differ from other commercial districts in that the residential bulk is governed by the residence district within which the overlay is mapped. When mapped in R7 districts, C2-4 districts permit commercial development to 2.0 FAR.

CITY MAP AMENDMENT

The Proposed Action includes map amendments to the city map to: (i) remove the Public Place designation on Lots 1 and 100, and (ii) to map two new streets, which are the extension of Luquer Street east of Smith Street and the creation of Canal Street south of 5th Street.

DISPOSITION OF CITY-OWNED PROPERTY PURSUANT TO REQUIREMENTS OF THE URBAN DEVELOPMENT ACTION AREA PROGRAM

The Project Site is currently under City ownership and under HPD jurisdiction. The applicant seeks approval of an Urban Development Action Area Program (UDAAP) designation, project approval, and disposition of a city-owned parcel to facilitate the development of the Proposed Project.

SPECIAL PERMIT PURSUANT TO SECTION 74-743 TO MODIFY BULK REGULATIONS IN GENERAL LARGE SCALE DEVELOPMENTS

The Proposed Action includes a special permit pursuant to Zoning Resolution (ZR) Section 74-743 to modify bulk regulations for height and setback and distribution of total floor area (Section 123-662) in a GLSD. This special permit would allow the massing of the buildings to better relate to the Project Site's context along the Gowanus Canal and the adjacent neighborhood, and would increase the amount of open space.

Specifically, the Proposed Action would require waivers of the following:

- ZR Section 62-341 (c) (4) stipulates each residential story of a building located entirely above the maximum base height shall not exceed a gross area of 8,100 square feet. Buildings A, C, D, E, and G would exceed this maximum.
- ZR Section 62-341 (c) (6) establishes the maximum length of walls facing the shoreline. The section stipulates that the maximum length of any story of a building that faces the shoreline and is entirely above the maximum base height shall not exceed 100 feet. Buildings A, C, E, G, and H would exceed this height.
- ZR Section 62-341sets a maximum base height of 60 feet in R7-2 districts. Buildings C, D, E, F, and G on the Project Site are proposed to have a base height of 85 feet, which would exceed the maximum permitted base height within a R7-2 district by 25 feet.

AUTHORIZATION PURSUANT TO 62-722 FOR MODIFICATION OF WATERFRONT PUBLIC ACCESS AND VISUAL CORRIDOR REQUIREMENTS

An authorization pursuant to ZR Section 62-722 is required for modification of waterfront public access and visual corridor requirements. This authorization is necessary to address the constraints in the configuration of the Project Site created by waterfront zoning setback requirements and the existing off-set intersection of 5th and Hoyt Streets. Due to the narrowing of the parcel at the Hoyt and 5th Street intersection, preservation of the prolongation of 5th Street is not workable.

CERTIFICATION PURSUANT TO SECTION 62-711 TO ENSURE THAT THE DEVELOPMENT COMPLIES WITH THE REQUIREMENTS FOR WATERFRONT PUBLIC ACCESS PER SECTIONS 62-40 AND 62-60

The Proposed Project also requires a certification pursuant to ZR Section 62-711 to ensure that the Proposed Project complies with the requirements for waterfront public access of ZR Sections 62-40 and 62-60.

ZONING TEXT AMENDMENT

The Proposed Project may also require a text amendment to make waterfront zoning applicable to the Gowanus Canal and portions thereof.

OTHER CITY, STATE, AND FEDERAL APPROVALS

The Proposed Project would require additional city, state, and federal approvals. Specifically, the New York City Department of Parks and Recreation (DPR) will review and approve the proposed open space designs, layout, and furnishings. Discretionary approvals from the New York State Department of Environmental Conservation (NYSDEC) will be required for shorefront protection, new stormwater outfalls to the Gowanus Canal, and stormwater discharges. Federal approvals from the U.S. Army Corps of Engineers (USACOE) will also be required for shorefront protection and new stormwater outfalls to the Gowanus Canal. Finally, HPD anticipates the use of federal funding from the U.S. Department of Housing and Urban Development United States Department of Housing and Development (HUD) including HUD HOME Investment Partnerships Program to facilitate the construction of affordable housing. It is expected that HOME funding may be utilized at a later date to facilitate the construction of affordable housing on the Project Site. Because HPD anticipates the use of federal funding, the Draft Environmental Impact Statement (DEIS) will also include the analyses required under the National Environmental Policy Act (NEPA). Under Code of Federal Regulations (CFR) Part 58, HPD has assumed the responsibilities for environmental review, decision-making and action that would otherwise apply to HUD under NEPA.

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, HPD will coordinate the environmental review of the Proposed Project with other involved agencies.

B. CITY ENVIRONMENTAL QUALITY REVIEW

HPD, as lead agency, has determined that the above described proposed action has the potential to result in significant environmental impacts. Therefore, pursuant to CEQR and SEQRA procedures, a Positive Declaration requiring that an EIS be prepared has been issued.

SCOPING

The CEQR scoping process is intended to focus the EIS on those environmental and planning issues that are most pertinent to the proposed action. At the same time, the process allows other agencies and the public a role in framing the scope of the EIS. During the period for scoping, those interested in reviewing the draft EIS scope may do so and provide their comments to the lead agency either in writing or at the public scoping meeting to be held on this Draft Scope of Work. At the public meeting, spoken and written comments will be accepted on the Draft Scope of Work. The period for submitting written comments will remain open until the end of the day 10 days after the close of the scoping meeting.

HPD will review all timely comments submitted on the Draft Scope of Work before issuing a Final Scope of Work. As lead agency, HPD will oversee preparation of the Final Scope of Work, which will incorporate all relevant comments made on this Draft Scope of Work. In addition, technical revisions to this draft scope will be made, as appropriate, in response to scoping comments. The DEIS will then be prepared in accordance with the Final Scope of Work.

C. ANALYSIS FRAMEWORK

The DEIS will provide a description of “Existing Conditions”, assess future conditions without the Proposed Project (the baseline condition or “Future Without the Proposed Project”) and with

the Proposed Project ("Future With the Proposed Project"). It is anticipated that the Proposed Project would be completed in 2017. Thus, conditions in the year 2017 both with and without the Proposed Project in place will be analyzed for the purposes of determining project-related impacts. Impacts will be determined based on the net change between conditions without the Proposed Project and conditions with the Proposed Project in the 2017 analysis year.

The DEIS will also analyze the cumulative impacts of other projects that would affect conditions in 2017 for the relevant study areas of analysis. The future conditions in all technical chapters—the future without the Proposed Project—will assume that none of the discretionary approvals proposed as part of the Proposed Project are adopted. Development in the future without the Proposed Project will therefore be limited to those projects that are assumed to be completed and occupied independently of the Proposed Project. However, as these and other projects that will be completed after the Proposed Action's analysis year move independently through the environmental review process, they will be required to account for the impacts of the Proposed Project in their cumulative impacts analyses.

The list of developments assumed in the future without the Proposed Project is presented in Table 1. Other residential developments may occur in the vicinity in areas where residential development is permitted as-of-right; as more information becomes available, this list will be updated. In addition to these projects, the DEIS will also consider ongoing projects and studies such as DEP's Gowanus Long Term Waterbody/Watershed Facility Plan and the United States Army Corps of Engineers (ACOE) Gowanus Canal and Bay Restoration Study.

Table 1
Developments Proposed for the Project Study Area by 2017

Map No.*	Name/ Location	Use	Units/ Square Footage
1	Remediation of Public Place by National Grid	N/A	N/A
2	363-365 Bond Street	Residential, retail, community facility	447 dwelling units, 2,000 sf of retail, 2,000 sf of community facility, 0.6-acres of open space
3	103–113 3rd Street	Residential	45 dwelling units
4	360 Smith Street/131 Second Place	Residential	44 dwelling units
5	Whole Foods Market/220 Third Street (at 3rd Avenue)	Commercial retail (supermarket)	52,000 sq. ft.
6	Con Edison/ block bounded by First and Third Streets, Third and Fourth Avenues	Office	49,552 sq. ft.
7	265 3rd Avenue	Hotel	57 rooms
8	306 Bond Street	Residential	11 dwelling units
9	340–346 Bond Street (at Carroll Street)	Residential	24 dwelling units
10	361 Carroll Street	Residential	15 dwelling units
11	410 4th Avenue/251 Seventh Street	Residential	59 dwelling units
12	202 8th Street	Residential	43 dwelling units
13	26 4th Street	Residential	11 dwelling units
14	245 Hamilton Avenue	Residential	20 dwelling units
15	671 Henry Street	Residential	5 dwelling units
16	151 Carroll Street	Residential	8 dwelling units
17	290 Sackett Street	Residential, retail, community facility	32 dwelling units
18	517 Court Street	Residential/Community Facility	6 dwelling units, ground-floor retail, and diagnostic & treatment facility
19	181 3rd Avenue	Hotel	65,785 sf
20	611 Degraw Street	Hotel	10,000 sf
21	399 3rd Avenue	Office	78,251 sf
22	186 8th Street	Residential	8 dwelling units
23	462 Baltic Street	Office	35,551 sf
24	92 3rd Street	Hotel/Office	33,000 sf
25	150 4th Avenue	Residential	95 dwelling units
26	500 4th Avenue	Residential	132 dwelling units

Note: * See **Figure 6** for development site locations.
Source: New York City Department of City Planning, October 2008; AKRF, Inc., September 2008.

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Development Projects Proposed
for the Study Area by 2017

GOWANUS GREEN

Figure 6

Due to its historical uses, the Project Site requires site remediation, which will be undertaken by National Grid, the successor organization to the former site owners. It is anticipated that the remediation of the project will occur under the direction of NYSDEC and the State Department of Health.

There are a number of projects currently under consideration along the Gowanus Canal as well as in the larger land use study area. Currently proposed development projects for the study area that would be included in this analysis are listed above and shown in **Figure 6**. In addition, there are a number of large underutilized sites along the Canal. While these sites may also be redeveloped in the future, they are not expected to be redeveloped in the same time frame as the Proposed Project (i.e., 2017). HPD, in consultation with the New York City Department of City Planning (DCP), will review development proposals in the study area and, based on application data and other sources, determine which of the developments will be included in the DEIS analysis. In addition to development projects, the DEIS will address the current visions and policies of DCP as the City continues its work on the Gowanus Canal Corridor Framework study.

D. ENVIRONMENTAL IMPACT STATEMENT SCOPE OF WORK

The EIS will be prepared in conformance with all applicable laws and regulations, including SEQRA (Article 8 of the New York State Environmental Conservation Law (ECL)) and its implementing regulations found at 6 NYCRR Part 617, New York City Executive Order No. 91 of 1977, as amended, and the Rules of Procedure for CEQR, found at Title 62, Chapter 5 of the Rules of the City of New York. The EIS will follow the guidance of the *CEQR Technical Manual*, dated October 2001.

The EIS will contain:

- A description of the Proposed Project and its environmental setting;
- A statement of the environmental impacts of the Proposed Project, including its short- and long-term effects and typical associated environmental effects;
- An identification of any adverse environmental effects that cannot be avoided if the project is implemented;
- A discussion of reasonable alternatives to the Proposed Project;
- An identification of irreversible and irretrievable commitments of resources that would be involved in the Proposed Project should it be implemented; and
- A description of mitigation proposed to minimize any significant adverse environmental impacts.

The analyses will be performed for the expected year of occupancy of the Proposed Project (2017) and, as described above, will include the cumulative impacts of other projects in the study area that will affect future land use and environmental conditions (see the discussion above).

The specific analysis areas to be included in the EIS, as well as their respective tasks and methodologies, are described below.

TASK 1: PROJECT DESCRIPTION

This first chapter of the EIS introduces the reader to the Proposed Project and sets the context in which to assess impacts. The chapter will contain a project identification; the background and purpose and need for the Proposed Project and any related actions, the goals and objectives of

the project sponsor, a detailed description of the proposed actions, the proposed development program, the approvals required, procedures to be followed, and projected development under the proposed rezoning; and a discussion of the role of the EIS in the project review process. The chapter is the key to understanding the Proposed Project and its impacts, and gives the public and decision-makers a base from which to evaluate the project against both the Build and the No Build options.

The project description will provide a discussion of key project elements, such as site plans, elevations, access and circulation, and other project components, including the proposed housing program, publicly-accessible and private open spaces, and infrastructure and waterfront improvements. The section on required approvals will describe all public actions required to develop the project, which will include City, State, and federal actions.

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

In addition, this chapter will include a description of HUD HOME Investment Partnerships Program ("HOME") and a description of its applicability to the Proposed Project, including statements regarding the purpose and need for the funding. The HOME Investment Partnership Act (The HOME Act, Title II of the Cranston-Gonzalez National Affordable Housing Act) was signed into law on November 28, 1990, and created the HOME Investment Partnership Program to expand the supply of decent, affordable housing for low and very low-income families. Since enactment, the original statute has been amended three times and a final rule was issued on September 16, 1996. In general, HPD utilizes federal HOME fund to finance the construction of new and rehabilitation of existing housing including vacant and occupied single room occupancy buildings (SRO), small homes (buildings with fewer than 12 units) and multi-family buildings.

Because HPD anticipates the future utilization of HUD funding during the Proposed Project, the EIS will include the appropriate analyses required by NEPA. Under federal regulations contained in CFR Part 58, HPD is a Responsible Entity (RE), defined as a unit of general local government with land use and building permit jurisdiction for affected sites. Federal law allows the assumption of environmental reviews by recipients of HUD assistance and other responsible entities in applicable HUD programs in accordance with NEPA, the NEPA implementing regulations of the Council on Environmental Quality, and other NEPA related Federal laws. HPD has assumed HUD processing responsibility for compliance with NEPA; therefore, this EIS will be prepared in accordance with federal environmental regulations, orders, and statutes.

The EIS will contain determinations of compliance for federal statutes, executive orders or regulations as required, including the following:

- Historic Preservation [36 CFR 800]; Section 106 of the National Historic Preservation Act
- Floodplain Management [25 CFR 55, Executive Order 11988];
- Wetlands Protection [Executive Order 11990];
- Coastal Zone Management Act [Sections 307(c),(d)];
- Sole Source Aquifers [40 CFR 149]
- Endangered Species Act [50 CFR 402]
- Wild and Scenic Rivers Act [Sections 7(b),(c)];
- Air Quality [Clean Air Act (CAA), Sections 176(c) and (d), and 40 CFR 6, 51, 93];

- Farmland Protection Policy Act [7 CFR 658]
- Environmental Justice [Executive Order 12898]
- Noise Abatement and Control [24 CFR 51 B];
- Toxic or Hazardous Substances and Radioactive Materials [HUD Notice 79-33];
- Siting of HUD-Assisted Projects near Hazardous Operations [24 CFR 51 C]; and
- Airport Clear Zones and Accident Potential Zones [24 CFR 51 D]

In addition, the EIS will evaluate the significance of the effects of the Proposed Project on the character, features, and resources of the Project Site and surrounding areas, as appropriate. Areas evaluated in the EIS include:

- Land Development – Conformance with Comprehensive Plans and Zoning; Compatibility and Urban Impact; Slope; Erosion; Soil Suitability; Hazards and Nuisances, including Site Safety; Energy Consumption; Noise; Air Quality; and Environmental Design.
- Socioeconomic Considerations – Demographic Character Changes; Displacement; and Employment and Income Patterns.
- Community Facilities and Services – Educational Facilities; Commercial Facilities; Health Care; Social Services; Solid Waste; Waste Water; Storm Water; Water Supply; Public Safety (police, fire, and emergency medical services); Open Space and Recreation; and Transportation.
- Natural Features – Water Resources; Unique Natural Features and Agricultural Lands; and Vegetation and Wildlife.

HUD Environmental Assessment areas were used to assess the project for NEPA purposes and these areas are reflected in this scoping document. As shown in Table 2, "CEQR and NEPA Environmental Assessment", most areas of analysis subject to environmental review under Part 58 and NEPA will be incorporated into various chapters of the EIS and the remaining areas will be provided in separate chapters.

TASK 2: LAND USE, ZONING, AND PUBLIC POLICY

The land use, zoning, and public policy analysis will assess the impacts of the expected changes in land uses resulting from the Proposed Project. The analysis will evaluate impacts within the land use study area surrounding the Project Site. The land use assessment will include a description of existing (2009) conditions and evaluations of the future without the Proposed Project and the future with the Proposed Project in 2017.

Tasks include:

1. Provide a brief development history of the Project Site and study area. Due to the location of the Project Site and to account for distinct land use patterns in the study area, the boundaries of the study area will be defined as the area bounded by Wyckoff Street to the north, 4th Avenue to the east, Hamilton Avenue and Lorraine Street to the south, and Henry Street to the west (see **Figure 7**);
2. Describe conditions on the Project Site and in the study area, including existing uses and the current zoning;
3. Describe predominant land use patterns in the study area, including a description of recent development trends;

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Project Site

Land Use Study Area Boundary

0 1000 FEET

SCALE

GOWANUS GREEN

Land Use Study Area

Figure 7

Table 2
CEQR and NEPA Environmental Assessment

CEQR EIS Chapter	HUD Environmental Assessment Categories
Chapter 1 Project Description	
Chapter 2 Land Use, Zoning & Public Policy	Airport Clear Zones and Accidents Potential Zones; Conformance with Comprehensive Plans and Zoning; Slope; Erosion; Soil Stability; Farmland Protection.
Chapter 3 Socioeconomics	Demographic and Character Changes; Employment and Income Patterns; Displacement
Chapter 4 Community Facilities and Services	Educational Facilities; Police; Fire; Health Care and Social Services
Chapter 5 Open Space	Open Space and Recreation
Chapter 6 Shadows	
Chapter 7 Historic Resources	Historic Preservation; Section 106 of the NHPA
Chapter 8 Urban Design & Visual Resources	Environmental Design; Visual Quality- Coherence, Diversity, Compatible Use and Scale; Compatibility and Urban Impact
Chapter 9 Neighborhood Character	
Chapter 10 Natural Resources	Wetlands Protection; Sole Source Aquifers; Endangered Species Act; Wild and Scenic Rivers Act; Water Resources; Surface Water; Unique Natural Features and Agricultural Lands; Vegetation and Wildlife
Chapter 11 Hazardous Materials	Toxic or Hazardous Substance and Radioactive Materials; Siting of HUD-Assisted Projects near Hazardous Operations
Chapter 12 Flood Plain*	Flood Plain
Chapter 13 Waterfront Revitalization Program	Coastal Zone Management Act
Chapter 14 Infrastructure	Community Facilities - Water Supply, Waste Water, and Storm Water
Chapter 15 Solid Waste and Sanitation Services	Solid Waste
Chapter 16 Energy	Energy Consumption
Chapter 17 Traffic and Parking	Community Facilities - Transportation
Chapter 18 Transit and Pedestrians	Community Facilities - Transportation
Chapter 19 Air Quality	Effects of Ambient Air Quality on Project and Contribution to Community Pollution Levels
Chapter 20 Noise	Noise Abatement and Control; Contribution to Community Noise
Chapter 21 Construction Impacts	Hazards and Nuisances, including Site Safety
Chapter 22 Public Health	Hazards and Nuisances, including Site Safety
Chapter 23 Environmental Justice**	Environmental Justice
Chapter 24 Alternatives	
Chapter 25 Mitigation	
Chapter 26 EIS Summary Chapters	
Chapter 27 Executive Summary	

Notes:
* "Flood Plains" is typically discussed as part of the Natural Resources chapter but will be presented as a separate chapter.
** An "Environmental Justice" assessment will be contained in the EIS, consistent with NEPA.
Sources: HUD Environmental Assessment Checklist

4. Provide a zoning map and discuss existing zoning and recent zoning actions in the study area;

5. Describe public policies that may apply to the Project Site and study area. These may include the waterfront plans of the City of New York, and Empire Zone, Industrial Business Zone, or Industrial Ombudsman Area designations;

6. Prepare a list of other projects expected to be built in the study area by 2017, the Proposed Project's Build year. Describe the effects of these projects on land use patterns and development trends in the absence of the Proposed Project ("No Build" condition). Also, describe pending zoning actions or other public policy actions, such as the Gowanus Canal Corridor Framework, that could affect land use patterns and trends in the study area by 2017, including plans for public improvements. This would include a discussion of DEP's

proposed upgrade of the Gowanus Canal Pumping Station. The analysis will include the pumping station if it is completed and operational by 2017. Otherwise, the analysis will not examine the proposed upgrade;

7. Describe the impacts of the Proposed Project comparing No Build Conditions with conditions under the proposed actions. This assessment will focus on the Project Site and the proposed development program. It will also provide an assessment of the impacts of the proposed rezoning on land use and land use trends, zoning, and public policy; present a map of the proposed zoning changes; and consider the effects related to issues of compatibility with surrounding land use, consistency with zoning and other public policy initiatives, and the effects of the Proposed Project on development trends and conditions in the area. Policies regarding the waterfront redevelopment program, coastal zone management, and historic resources will be discussed in their relevant sections; and
8. Mitigation measures will be proposed for any significant adverse land use, zoning, and public policy impacts which may result from the Proposed Project.

NEPA

As discussed above, and in accordance with 24 CFR 58.40(a), this chapter will contain a description of the Existing Conditions and Trends on the Project Site and the surrounding neighborhood. In addition to the above stated analysis, the following will be evaluated for compliance with existing regulations or potential effects, including:

- Airport Clear Zones and Accidents Potential Zones;
- Conformance with Comprehensive Plans, including the Urban Renewal Plan, and Zoning;
- Slope;
- Erosion;
- Slope Stability; and
- Farmland Protection.

TASK 3: SOCIOECONOMIC CONDITIONS

This chapter will examine the effects of the Proposed Project on socioeconomic conditions in the study area, including changes in population characteristics, economic activity, and the potential displacement of businesses and employment from the Proposed Project area. The analysis will evaluate the potential for significant adverse impacts resulting from: direct displacement of businesses, or employees; new development that is markedly different from existing uses and activities within the neighborhood; any adverse effects on conditions in the real estate market in the area; or an adverse effect on socioeconomic conditions in a specific industry.

As a first step, a preliminary assessment will be conducted pursuant to the *CEQR Technical Manual* methodology. The preliminary assessment will present sufficient information regarding the effects of the Proposed Project in order to make a determination as to whether there is a potential for significant socioeconomic impacts, or if a more detailed analysis is required in order to make a determination as to impacts. The preliminary assessment will examine five areas of concern including: (1) direct residential displacement (there are no residential uses on the Project Site); (2) direct business and institutional displacement; (3) indirect residential displacement; (4) indirect business and institutional displacement; and (5) adverse effects on specific industries. For each area of concern, if it is determined that a socioeconomic impact is

likely or cannot be ruled out based on the preliminary assessment, then a detailed analysis will be conducted. Detailed analyses, if determined to be necessary, will be framed in the context of existing conditions and evaluations of the future without the Proposed Project and the future with the Proposed Project in 2017 following the guidelines of the *CEQR Technical Manual*. Mitigation measures will be proposed for any significant adverse socioeconomic impacts which may result from the Proposed Project.

The socioeconomic conditions study area is shown in **Figure 8**. The *CEQR Technical Manual* recommends that up to a ½-mile radius be used for a socioeconomic study area boundary. The study areas will be adjusted to reflect boundaries of census tracts or data for labor and industry. Subtasks for analyses will include:

POPULATION CHARACTERISTICS

1. Based on the U.S. Census of Population and Housing and New York City Department of Finance Real Property Assessment Data (RPAD) information, describe population trends since 1990 and estimate 2008 population in the study area; and
2. Estimate population growth associated with the Proposed Project and assess impacts on population, if any.

HOUSING CHARACTERISTICS

1. Using 2000 Census data and other information, such as reports on housing value and median rents, describe the housing characteristics of the study area including the presence of public housing and other rent-regulated housing;
2. Assemble and discuss information on housing market conditions, including identification of presence of any unique or predominant population groups or presence of populations particularly vulnerable to economic changes, using Census data and other sources; and
3. Estimate housing changes associated with the Proposed Project and assess impacts on housing, if any, and housing trends in the No Build condition.

ECONOMIC CHARACTERISTICS

1. Describe existing economic activity in the study area (using most recently available data), including the number and types of businesses and employment by key sectors;
2. Estimate any direct displacement of businesses and employment resulting from the Proposed Project; and
3. Assess the impact of displacement, identifying likely relocation opportunities in the area.

NEPA

As discussed above, this chapter will assess the potential for the Proposed Project to result in direct residential displacement. In addition, the above described analysis will be used to evaluate potential effects on:

1. Demographic and Character Changes; and
2. Employment and Income Patterns.

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Project Site

Socioeconomic Study Area Boundary (1/2-Mile Perimeter)

Census Tract Boundary

18 *Census Tract Number*

GOWANUS GREEN

Socioeconomic Study Area

Figure 8

TASK 4: COMMUNITY FACILITIES AND SERVICES

The demand for community facilities and services is directly related to the type and size of the new population generated by development resulting from a proposed action. This chapter of the DEIS will evaluate the effects on community services resulting from development of the Proposed Project, including effects on police and fire protection, public schools, outpatient and emergency health care facilities, libraries, and publicly funded day care facilities. The community facilities and services assessment will include a description of existing conditions, and evaluations of future conditions in 2017 with and without the Proposed Project.

According to the *CEQR Technical Manual*, preliminary thresholds indicating the need for detailed analyses are as follows:

- Public Schools: More than 50 new elementary/middle school or 150 high school students.
- Libraries: A greater than 5 percent increase in ratio of residential units to libraries in the borough. For Brooklyn, this is equivalent to a residential population increase of 734 residential units.
- Health Care Facilities (outpatient): More than 600 low- to moderate-income residential units.
- Day Care Centers (publicly funded): More than 50 eligible children based on the number of new low/moderate-income residential units by borough. For Brooklyn, this is equivalent to an increase of 135 low-income or 147 low/moderate-income residential units.
- Fire Protection: The ability of the fire department to provide fire protective services for a new project usually does not warrant a detailed assessment under CEQR.
- Police Protection: The ability of the police department to provide public safety for a new project usually does not warrant a detailed assessment under CEQR.

Based on these thresholds, detailed analyses will be conducted for public schools, libraries, outpatient health care facilities, and day care centers. The Proposed Project would not directly cause the displacement of a police or fire facility; therefore a detailed assessment is not required. Instead, the fire and police facilities that serve the Project Site will be identified in the DEIS for informational purposes.

Tasks for the public schools analysis include:

1. Identify the public elementary and middle schools serving the Project Site;
2. Assess conditions within the schools study areas in terms of enrollment and utilization during the current school year, noting any specific shortages of school capacity. The analysis will assesses the potential effects of the Proposed Project on schools located within or near a ½-mile study area around the Project Site. The analysis will also examine the effects on the entire Community School District 15 (CSD 15);
3. Identify conditions that will exist in the future without the Proposed Project, taking into account any projected changes in future enrollment and plans to alter school capacity through either the construction of new school space or through administrative actions on the part of the New York City Department of Education (DOE);
4. Analyze future conditions with the Proposed Project by adding the number of new students generated by the Proposed Project to the projections for the future without the Proposed Project; and

5. Assess impacts based on the difference between conditions in the future without the Proposed Project and the future with the Proposed Project.
6. Mitigation measures will be proposed for any significant adverse community facilities impacts which may result from the Proposed Project.

NEPA

The CEQR analysis described above will be relied upon to evaluate the potential effects of the Proposed Project on Educational Facilities and Public Safety (police, fire, and emergency medical services). In addition, the effects of the Proposed Project on Health Care and Social Services will be evaluated in this chapter.

TASK 5: OPEN SPACE

Based on the *CEQR Technical Manual*, an open space assessment should be conducted if the proposed action would directly affect an open space by causing the physical loss of public open space, changing the use of an open space so that it no longer serves the same user population, limiting public access to an open space, or causing increased noise or air pollutant emissions, odors, or shadows that would affect its usefulness, whether on a permanent or temporary basis. An open space analysis should also be conducted if the action would indirectly affect existing open space facilities. The CEQR threshold for conducting an assessment of an action's indirect effects is if the project would increase the population by more than 200 residents or 500 workers.

The Project Site does not currently contain any public open space. Therefore, the Proposed Project is not expected to have a direct effect on open space or recreational facilities. However, the Proposed Project would generate more than 200 residents. As a result, the Proposed Project could have an indirect effect on the utilization of open space and recreational facilities in the surrounding area, and on the new publicly accessible open space to be created. Therefore, a detailed assessment of the Proposed Project's effect on open space will be provided. This analysis will determine whether the Proposed Project will affect the quantitative and qualitative measures of open space adequacy within the ½-mile study area recommended by the *CEQR Technical Manual* for residential projects (see **Figure 9**).

Tasks include:

1. Establish open space study area boundaries. The study area for the residential populations corresponds to the ½ mile radius around the Project Site. All Census tracts with at least 50 percent of their area falling within this radius will be included in the open space study area;
2. Inventory existing open space and recreational facilities, including community gardens, within the open space study area. Tally open space acreage for passive and active, publicly accessible open space. Include a discussion of the relationship between the Proposed Project and the proposed Brooklyn Greenway, to the extent it is relevant to the Proposed Project;
3. Determine population in the open space study area based on the 2000 Census of Population and Housing. Estimate employment in the open space study area using reverse journey-to-work data. Use 2000 Census data to identify the age breakdown of the study area population;
4. In conformance with *CEQR Technical Manual* methodologies, assess the adequacy of existing publicly accessible open space facilities. The assessment of adequacy is based on a comparison of the ratio of total, active, and passive space per 1,000 residents or nonresidents (i.e., employees) to City guidelines;

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0 400 1000 FEET

SCALE

Project Site

Residential Open Space Study Area

1/2-mile Perimeter

Census Tract Boundary

18 *Census Tract Number*

GOWANUS GREEN

Open Space Study Area

Figure 9

5. Assess expected changes in future levels of open space supply and demand in the future without the Proposed Project based on other planned development projects within the study area. Develop open space ratios for future conditions and compare them with existing ratios to determine changes in future levels of adequacy; and
6. Based on the project's projected residential and nonresidential populations and future open space programming, assess the project's effects on open space supply and demand. This assessment will be based on a comparison of open space ratios with the project and open space ratios in the future without the project. Address the compatibility of the proposed open space with the surrounding industrial uses on the canal.
7. Mitigation measures will be proposed for any significant adverse open space impacts which may result from the Proposed Project.

NEPA

The above-described CEQR analysis will be relied upon to evaluate potential effects of Open Space and Recreation.

TASK 6: SHADOWS

A screening analysis will be performed in accordance with the methodology recommended in the *CEQR Technical Manual*, focusing on the relation between the Proposed Project's incremental shadow (in comparison with the no action scenario) and any publicly accessible open spaces, sun-sensitive features of historic resources, or important natural features located in the vicinity. The potential for significant adverse shadow impacts will be assessed for any buildings or structures greater than 50 in height. In addition, shadow analyses will be performed for buildings or structures less than 50 feet in height, if there is the potential to effect sunlight-sensitive resources, including natural resources.

1. If it is found that the shadows from the proposed structures could potentially cause significant impacts on any publicly accessible open spaces or sun-sensitive features of nearby historic resources, a detailed assessment of shadows will be prepared. The hours that project-generated shadows will fall on sun-sensitive resources will be calculated for March 21, May 6, June 21, and December 21. The duration of the shadow increment on the identified open space or historic resources with sun-sensitive features will be calculated, shadow diagrams for each analysis period will be prepared, and the effects of the incremental shadows will be assessed. Mitigation measures will be proposed for any significant adverse shadow impacts which may result from the Proposed Project.

NEPA

NEPA does not include impacts from shadows as an analysis category. However, to the extent that shadows could result in impacts on resources considered under NEPA, the above-described analysis will be used to evaluate potential effects on open space and cultural and historic resources.

TASK 7: HISTORIC RESOURCES

The Project Site is located along the Gowanus Canal, and therefore a portion of the Gowanus Canal bulkhead is located on the Project Site. The Gowanus Canal bulkhead has previously been

identified as a contributing element within the State and National Registers of Historic Places (S/NR)-eligible Gowanus Canal Historic District.

Given the presence of a contributing element to the S/NR eligible Gowanus Canal Historic District, the analysis of historic resources is an important consideration for the EIS. The historic resources analysis will therefore be undertaken in consultation with the New York State Office of Parks, Recreation, and Historic Preservation New York State Office of Parks, Recreation and Historic Preservation (OPRHP) and the New York City Landmarks Preservation Commission (LPC) and will be prepared in accordance with the methodologies presented in the *CEQR Technical Manual*. The analysis will identify any architectural resources on and within the study area, including known architectural resources (New York City Landmark (NYCL), NYCL-eligible, S/NR, and S/NR-eligible properties), and properties that appear to meet criteria for NYCL designation and/or S/NR listing (see **Figure 10**). Any potential project impacts on historic resources will be assessed, and mitigation measures developed (as appropriate) in consultation with LPC and OPRHP. In addition, any impacts to historic resources related to the future utilization of HUD funding for City- and privately-owned sites within the Project Site will be analyzed in compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA).

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

Tasks include:

ARCHITECTURAL RESOURCES

1. Following CEQR guidelines, prepare an evaluation of the potential for the site to have architectural and historical significance based on documentary research. This material will be submitted to LPC and OPRHP for a review and evaluation of the site conditions. As described above, the Gowanus Canal bulkhead has already been determined significant;
2. Determine a study area and map and briefly describe known architectural resources within it. The primary study area for the historic resources analysis will be defined by a 400-foot radius around the Project Site. In addition, a secondary study area will extend approximately ½-mile around the Project Site. Known architectural resources include National Historic Landmarks (NHLs), S/NR properties and those determined to eligible for S/NR listing, NYCL and Historic Districts, and properties pending NYCL and Historic District designation, as well as properties determined eligible for NYCL designation;
3. Conduct a field survey of the primary and secondary study area to determine whether there are any potential architectural resources that could be impacted by the Proposed Project. Potential architectural resources comprise properties that may be eligible for listing on the S/NR and/or designation as a NYCL. Map and briefly describe any identified potential architectural resources. In consultation with LPC and OPRHP, seek determinations of eligibility for any potential resources in the study areas that would be affected by the Proposed Project;
4. Based on planned development projects, qualitatively discuss any impacts on archaeological and architectural resources that are expected in the future without the Proposed Project;
5. Assess any direct physical impacts of the Proposed Project on archaeological and architectural resources. This includes modifications to the S/NR-eligible Gowanus Canal bulkhead on the Project Site. In conjunction with the urban design task, assess the Proposed

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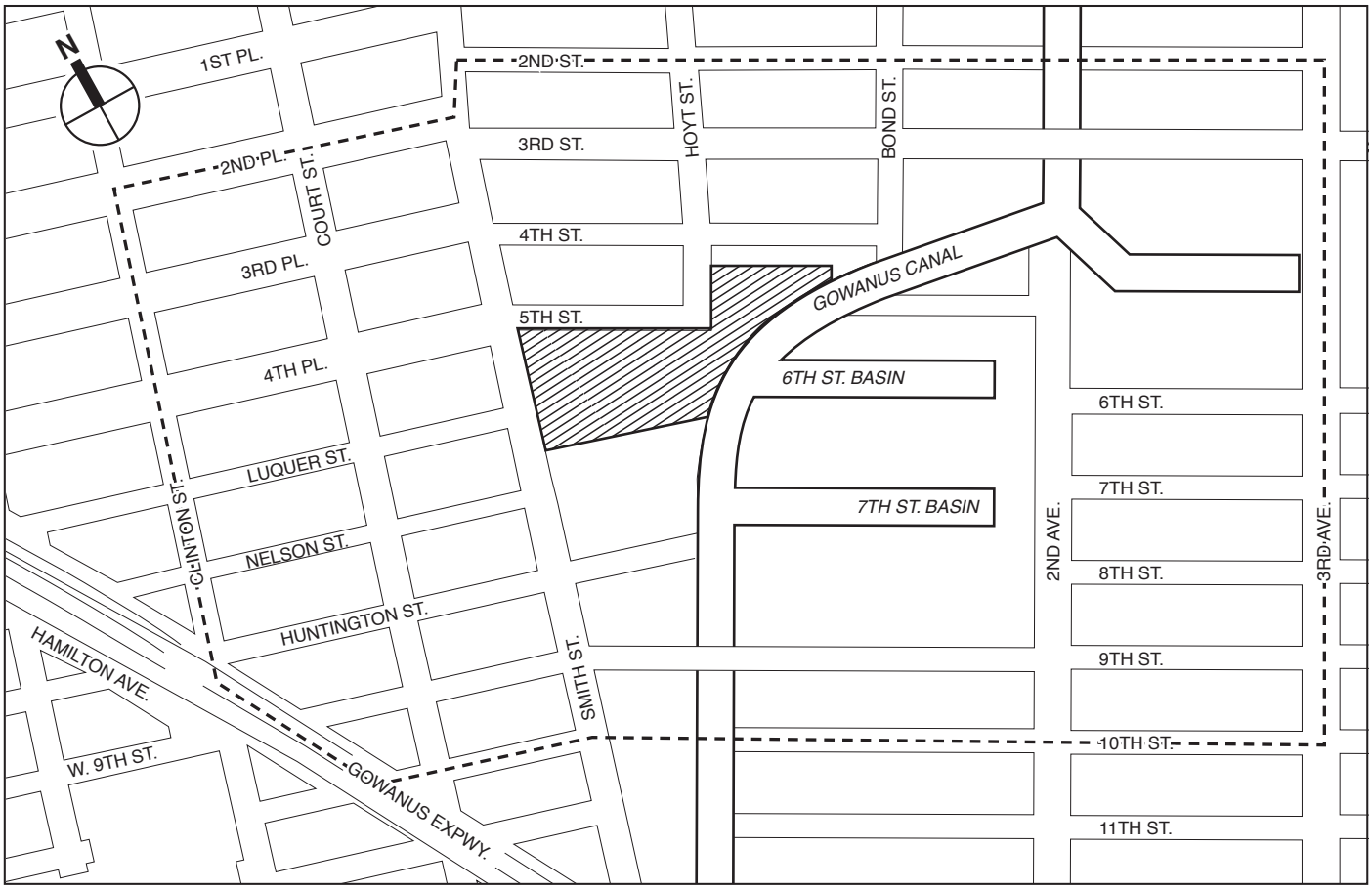


Historic Resources Study Areas

GOWANUS GREEN

Figure 10

Project's potential to result in any visual and contextual impacts on architectural resources, including the Gowanus Canal Historic District;

6. If applicable, develop mitigation measures to avoid and/or minimize any adverse effects on architectural and/or archaeological resources in consultation with LPC and OPRHP;
7. If required, prepare Historic Resource Inventory Form(s) for any properties that appear to meet eligibility criteria for S/NR listing. These forms would be submitted to OPRHP for their determination of S/NR eligibility;
8. Evaluate potential impacts to historic resources per Section 14.09 of the New York State Historic Preservation Act; and
9. Mitigation measures will be proposed for any significant adverse architectural impacts which may result from the Proposed Project.

ARCHAEOLOGICAL RESOURCES

10. Submit the Proposed Project to LPC and OPRHP for review and a determination regarding archaeological sensitivity;
11. Research and describe history of land use and potentially archaeologically-sensitive locations in the project area as identified by LPC and OPRHP;
12. Based on City and State files, identify and map inventoried archaeological resources and/or sensitive locations;
13. Identify any other areas thought to be archaeologically sensitive within the study area; and
14. Mitigation measures will be proposed for any significant adverse archaeological impacts which may result from the Proposed Project.

NEPA

The above-described CEQR analysis will be relied upon to evaluate potential for significant impacts on historic architectural and archaeological resources. Furthermore, the analysis will be conducted in accordance with NEPA and Section 106 of the National Historic Preservation Act (16 USC § 470 et seq.) and its implementing regulations (36 CFR Part 800).

TASK 8: URBAN DESIGN AND VISUAL RESOURCES

According to the *CEQR Technical Manual*, a detailed assessment of urban design and visual resources is undertaken when a proposed action would result in a building or structure substantially different in height, bulk, form, setbacks, size, scale, use, or arrangement than exists; when an action would change block form, demap an active street, map a new street, or would affect the street hierarchy, streetwall, curb cuts, pedestrian activity, or other streetscape elements; or when an action would result in above-ground development or would change the bulk of new above-ground development and is proposed in an area that includes significant visual resources. As described above, the Project Site is located adjacent to the S/NR-eligible Gowanus Canal. The Proposed Project would also result in significant development on the Project Site and would change the existing street patterns by mapping an extension to Luquer Streets and a new street (Canal Street). The project applicant intends for the proposed buildings' design to be consistent with the defining elements of the surrounding historic districts. This analysis will be coordinated with the Historic Resources task and will focus on the visual and

contextual relationship of the Proposed Project to these features that contribute significantly to the urban design characteristics of the surrounding area.

The tasks for the analysis of urban design include:

1. The primary study area for the urban design will be defined by a 400-foot radius around the Project Site. In addition, a secondary study area will be consistent with the land use study area. Based on field visits, the EIS will identify and document the elements of urban design within the study area that are relevant to the Proposed Project, using photographs and text as appropriate. The information gathered in the field will be supplemented with data on such features as: building bulk, heights, setbacks, density, arrangement, and use; block form and street pattern; streetscape elements; and street hierarchy;
2. Based on planned development projects, describe the changes expected in the urban design and visual character of the study area that are expected in the future without the Proposed Project;
3. Assess the changes in urban design characteristics that are expected to result from the project in both the project area and 400-foot study area, focusing on how the Proposed Project would fit within the urban design of the area and the relationship of the new development to key urban design elements in the surrounding area. Evaluate the significance of the changes. The discussion of the visual and contextual relationship of the Proposed Project to nearby historic resources will be coordinated with Task 7; and
4. Mitigation measures will be proposed for any significant adverse urban impacts which may result from the Proposed Project.

The tasks for the analysis of visual resources include:

1. The primary study area for visual resources will be the same as the study area for the urban analysis, which is defined by a 400-foot radius around the Project Site. In addition, a secondary study area will be consistent with the land use study area.
2. Based on field visits, the assessment will identify and document important visual resources, such as views from the study area, as well as distinctive resources—including natural features—within the study area that may be observed from outside the area, using photographs, maps, and text as appropriate. Only views from the public and publicly accessible locations will be included in the analysis. The information gathered in the field will be supplemented with documentary research on the area or feature in question, such as the history of an important natural resource or unusual building;
3. Using the data obtained from the urban design and visual resources field visits and data research, and utilizing photographs and illustrations where appropriate, the EIS will describe the visual character of the study area, focusing on key components of the visual character as relevant to the Proposed Action, as well as those features that define the area's visual character;
4. Based on planned development projects, assess whether visual resources in the study area would change in the future without the Proposed Project;
5. Assess the changes in visual resources that are expected to result from the Proposed Project, focusing on those visual resources that may be affected by the Proposed Action. Describe the Proposed Project as it relates to such resources, and assess the change to the resources attributable to the action. Evaluate the significance of any changes; and

6. Mitigation measures will be proposed for any significant adverse visual resources impacts which may result from the Proposed Project.

NEPA

The above-described CEQR analysis will be relied upon to evaluate potential effects to Environmental Design (visual quality – coherence, diversity, compatible use and scale) and Compatibility and Urban Impact.

TASK 9: NEIGHBORHOOD CHARACTER

Neighborhood character is shaped by a number of factors, including land use, urban design, visual resources, historic resources, socioeconomic conditions, traffic, and noise. Methodologies outlined in the *CEQR Technical Manual* will be used to provide an assessment of neighborhood character.

Tasks include:

1. Based on other EIS sections, describe the predominant factors that contribute to defining the character of the neighborhood surrounding the Project Site, notably the Gowanus Canal and its industrial uses, the residential Carroll Gardens neighborhood, the commercial corridors of Smith and Court Streets, the elevated Smith and 9th Street Station, and the elevated Gowanus Expressway;
2. Based on planned development projects, public policy initiatives, and planned public improvements, summarize changes that can be expected in the character of the area in the future without the proposed action;
3. Assess and summarize the Proposed Project's impacts on neighborhood character using the analysis of impacts as presented in other pertinent EIS sections (particularly urban design, historic resources, socioeconomic conditions, noise, and traffic); and
4. Mitigation measures will be proposed for any significant adverse neighborhood character impacts which may result from the Proposed Project.

TASK 10: NATURAL RESOURCES

This task will assess the Proposed Project's potential impacts on natural resources in conformance with *CEQR Technical Manual* guidelines. The EIS chapter will include floodplain graphics and descriptions of existing water quality, aquatic resources, and waterfront conditions (e.g., bulkhead). Because the Proposed Project would raise street and property grades out of the floodplain and would install two new storm sewer outfalls, an assessment of impacts on water quality and natural resources will be presented in this chapter. This task will include the following:

1. Describe the natural resources and water quality conditions along the Gowanus Canal, with site specific data as may be available through a literature review. The documents that will be reviewed will include the DEP Harbor Survey and the DEP Gowanus Long Term Waterbody/Watershed Facility Plan; and ACOE Gowanus Canal and Bay Restoration Study (e.g., the DEP Harbor Survey, ACOE data). This section will also describe the Gowanus Canal's general characteristics, including its water quality classification, and pollutant sources and chemical and biological conditions based on currently available data;

2. Review currently available information on aquatic habitats in the study area. This will also rely on published literature, including the identification of any essential fish habitats. The presence of tidal wetlands will be based on existing DEC tidal wetlands maps, U. S. Fish and Wildlife Service National Wetlands Inventory maps and field investigations;
3. Although the site is a concrete batching plant and a disturbed urban vacant/industrial site, this task will include a characterization of the upland portions of the site based on a field survey;
4. The New York State Natural Heritage Program, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service will be contacted to obtain data as to the potential presence of any rare or endangered plant or animal species in the area and essential fish habitats, along the Gowanus Canal;
5. A projection will be made of natural resources conditions through the 2017 build year based on expected future conditions without the Proposed Project;
6. An assessment of potential impacts from the Proposed Project will be presented analyzing any changes in water edge conditions, groundwater conditions, sediment disturbance, stormwater discharges, combined sewer overflow (CSO) discharges, aquatic habitats, and terrestrial resources. Impact issues could include additional flow from outfalls (see also Task 14, "Infrastructure," below), improvements to the bulkhead, and any cumulative impacts of the Proposed Project with respect to other Gowanus Canal private and public projects through 2017. The need for any State or federal approvals will also be described; and
7. Mitigation measures will be proposed for any significant adverse natural resource impacts which may result from the Proposed Project.

In addition, an assessment of potential impacts during construction will be presented in Task 21, "Construction Impacts."

NEPA

The above-described analysis will be used to evaluate conformance with the following:

1. Wetlands Protection [Executive Order 11990];
2. Sole Source Aquifers [40 CFR 149];
3. Endangered Species Act [50 CFR 402];
4. Wild and Scenic Rivers Act [Sections 7 (b), (c)];

In addition, the chapter will evaluate potential effects to the following:

1. Water Resources;
2. Surface Water;
3. Unique or Natural Features and Agricultural Lands; and
4. Vegetation and Wildlife.

TASK 11: HAZARDOUS MATERIALS

The remediation of the Project Site is to be undertaken by National Grid independent of the Proposed Project. It is currently anticipated that the remediation of the Project Site will occur under the direction of NYSDEC. The New York City Department of Environmental Protection

(NYCDEP) will require a Restrictive Declaration to assure that the redevelopment is completed in accordance with NYSDEC and NYSDOH requirements.

The hazardous materials analysis in the EIS will address the hazardous and contaminated materials existing at the Project Site, determine how these would be managed when they would be disturbed during construction, and what would be required to protect human health and the environment after development (avoiding any threat to workers, visitors, neighbors, and residents at the development site). The results of existing reports related to hazardous materials studies—the Project Site is a former Manufactured Gas Plant (MGP) site that is being addressed with NYSDEC—will be summarized in this chapter and used to assess the potential for significant impacts during or after project construction. In addition, an updated Phase I Environmental Site Assessment (ESA) will be conducted, which will be consistent with current regulatory standards, including American Society for Testing and Materials (ASTM) E1527-05. ASTM E1527-05 is based upon the EPA's new All Appropriate Inquiry (AAI) rule. Tasks will include the following:

1. The land use history of the Project Site will be described based on historic maps, atlases, and other historical records;
2. Records of other areas of environmental concern—including hazardous waste disposal sites, hazardous waste generators or treatment facilities, and hazardous substance releases—will be obtained through a computer database for surrounding locations;
3. Available information on subsurface conditions (geology and hydrogeology), including any borings performed on or near the Project Site, will be presented, as will available reports of soil or groundwater testing on the Project Site or adjacent properties;
4. The site and to the extent access is possible, the adjacent properties will be inspected for any evidence of contamination, including the presence of drums or tanks, stained soil, stressed vegetation, and illegally dumped or stored material;
5. The potential for contamination of soil and groundwater on the Project Site, and the need for any site testing, will be assessed based on land use history, examination of regulatory agency records, and current site conditions;
6. The results of the assessment will be summarized for inclusion in the EIS; and
7. Mitigation measures will be proposed for any significant adverse hazardous materials impacts which may result from the Proposed Project.

NEPA

The above-described analysis will be relied upon to evaluate conformance with HUD Notice 79-33, Toxic or Hazardous Substances and Radioactive Materials, and 24 CFR 51 C, Siting of HUD-Assisted Projects near Hazardous Operations.

TASK 12: FLOOD PLAINS

Following the guidance in the *CEQR Technical Manual*, the flood plain is typically discussed as part of the Natural Resources task (see Task 10). However, as this resource is listed separately by HUD Environmental Assessment Checklist, it is discussed in the EIS in its own chapter. The floodplain has been defined by regulation and includes the areas that flood during storms of a statistical frequency occurrence of once in 100 years (the 100-year storm) and once in 500 years.

These are referred to as zones A and B, respectively, in federal legislation. The City's administrative code (27-316) restricts uses in the 100-year floodplain (Zone A). ECL Article 36; 6 NYCRR Part 500 requires a permit for any development within the federally designated flood hazard areas. The National Flood Insurance Act of 1968 (42 USC 4001) and the Flood Disaster Protection Act of 1973 (Public Law 93-234). These acts designate coastal high hazard areas and floodways and make federal flood insurance available to buildings and structures within those areas that are constructed so as to minimize danger to human lives, in accordance with federal guidelines. A discussion will be provided in the EIS of the potential for the Proposed Project to result in development within the above referenced zones. In addition, the EIS analysis will include a description of the relevant regulatory process associated with any development that would occur within a flood plain.

NEPA ANALYSIS AND CONSIDERATION:

The information described above will be used to assess the Proposed Project's compliance with Executive Order 11988-Floodplain Management and 24 CFR Part 55. Executive Order 11988 requires that federal agencies (or Responsible Entities under CFR Part 58) avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains. Executive Order 11988 also requires federal agencies are to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. HUD regulations provided in 24 CFR Part 55 provide a consistent means for implementing the agency's interpretation of the executive order in the project approval decision making process. The analysis will include: relevant maps defining floodplain/floodway boundaries within the project area; reports and studies documenting the scope of the project and surrounding areas as it relates to direct, indirect, and cumulative impacts; and documentation of all programs and plans, and coordination with other agencies.

TASK 13: WATERFRONT REVITALIZATION PROGRAM

As shown in **Figure 11**, the Project Site lies within New York City's Coastal Zone Boundary. Adopted under the federal Coastal Zone Management Act of 1972, the City's Local Waterfront Revitalization Program (LWRP) is administered by CPC acting as the City Coastal Commission, and consists of 10 policies that address such issues as water dependency, flooding, erosion, natural resources, and water quality. This task will assess the Proposed Project's consistency with the City's LWRP. Mitigation measures will be proposed for any significant adverse impacts which may result from the Proposed Project.

NEPA

The above-described CEQR analysis will be relied upon to evaluate compliance with the Coastal Zone Management Act and the Wild and Scenic Rivers Act.

TASK 14: INFRASTRUCTURE

This chapter will describe the current adequacy of the infrastructure for the area and examine the potential impacts of the Proposed Project, including any proposed infrastructure improvements. This analysis will examine any effects on the Gowanus Canal Pumping Station and water quality conditions with and without the Proposed Project in place, depending on the completion of the upgrade project.

GOWANUS GREEN

Waterfront Revitalization Program
Figure 11

Specifically, this task will analyze the Proposed Project's demand for potable water, the generation sanitary waste, and the management of stormwater runoff. The analysis will contain three components, as presented in detail below:

WATER SUPPLY:

1. Describe the water supply system for the area based on information obtained from entities such as the DEP Bureau of Water Supply and Wastewater Collection;
2. The current water usage in the area will be examined as needed to satisfy CEQR Technical Manual requirements;
3. Estimate water demand for the No Build condition;
4. Estimate water demands for the Proposed Project based on *CEQR Technical Manual* methodologies;
5. Assess the effects of the incremental demand on the City's water supply system and the local conveyance system in order to determine if there would be impacts to water supply or pressure; and
6. Mitigation measures will be proposed for any significant adverse water supply impacts which may result from the Proposed Project.

WASTEWATER TREATMENT

1. Estimate current wastewater flows at the Project Site and describe the existing combined sewer wastewater collection system for the Project Site and area using information obtained from DEP. Information on existing sewer infrastructure in the area, including sanitary, combined sewer mains, regulators, interceptor sewers, outfalls, and other principal components of the local system will be provided based on available records. Present the average annual monthly flow rates for the Red Hook Water Pollution Control Plant (WPCP) for the latest 12-month period;
2. Describe any proposed improvements through the 2017 build year; this would include a description of any currently proposed or contemplated capital projects for the Proposed Project's immediate drainage area that are being considered by the City. (e.g., the Gowanus Pumping Station; see the discussion under "Land Use, Zoning, and Public Policy");
3. Assess the effects of the added demand for sewage services generated by the Proposed Project in order to determine if there will be any impact on operations of the WPCP or the local conveyance system, including the Gowanus Canal Pumping Station; and
4. Mitigation measures will be proposed for any significant adverse wastewater treatment impacts which may result from the Proposed Project.

STORMWATER MANAGEMENT

1. Describe the existing storm water drainage patterns on the Project Site and volume of stormwater currently generated. Describe the Proposed Project's stormwater management plan, including the method of discharge, and any amendments to the local drainage infrastructure that may be necessary. Describe proposed stormwater infrastructure improvements (i.e. proposal to construct new storm sewers), stormwater pollution

prevention programs (SWPPPs), and assess future stormwater generation from the Proposed Project and assess its potential for any stormwater impacts;

2. Describe any changes in drainage conditions expected to occur in the No Build condition, both on the Project Site, and in the surrounding area;
3. Assess the pollutant loads from the current and future uses of the Project Site and determine the potential effects on the water quality of the Gowanus Canal. This would include a comparison of runoff characteristics from the No Build land cover condition as compared with the proposed land cover of residential/open space uses under the Proposed Project. The assessment will also take into consideration any SWPPPs with the Proposed Project. The analysis will make a comparison of the net incremental change from the current to proposed conditions and assess any negative or beneficial impacts that may occur with respect to water quality conditions in Gowanus Canal and Gowanus Bay;
4. As described above, the Proposed Project would provide separate sewers for sanitary and stormwater flows (currently, flows from the site are combined). The EIS will assess the potential impacts of the Proposed Project with respect to impact on the local sewer network and its capacity to handle the added sanitary flows of the project. Using hydraulic and water quality models, this assessment will consider increases in flow in local combined sewers due to the added residential population and the offsets of storm flow reductions based on the separation of current storm flow from the Project Site to the sewer system. The impact analysis will consider this net change and any resulting impacts in the response of the sewer system including an assessment of any localized impacts with respect to combined sewer overflows. This assessment would include hydraulic calculations to determine infrastructure responses to project-generated sanitary flow and the potential for additional combined sewer overflow events;
5. Assess the potential impacts from the Proposed Project related to flooding and future drainage conditions; and
6. Mitigation measures will be proposed for any significant adverse natural resource impacts which may result from the Proposed Project.

NEPA

The above-described CEQR analysis will be relied upon to evaluate potential effects to waste water, storm water, and water supply management systems.

In addition, and although not required by CEQR or NEPA, the EIS will include a detailed modeling analysis in order to provide information regarding sewer capacity, combined sewer overflow events, and receiving water quality.

TASK 15: SOLID WASTE AND SANITATION SERVICES

This task will provide an analysis of potential project impacts on solid waste and sanitation services. This analysis will describe existing and future New York City solid waste disposal practices, including collection systems and disposal methods. It will disclose the volume of solid waste and recycling materials the Proposed Project would be expected to generate, and assess the impacts that waste on the City's collection solid waste and disposal services. Mitigation measures will be proposed for any significant adverse solid waste impacts may which result from the Proposed Project.

NEPA

The above-described CEQR analysis will be relied upon to evaluate potential effects to solid waste services.

TASK 16: ENERGY

This chapter will characterize the energy demanded by the future residents of the project, and the ability of the city's power grid to provide for this demand. Tasks include:

1. Describe the energy systems that would supply the projected development with electricity and/or natural gas. This will include descriptions of the capacity and existing demand of the entire systems and of the distribution networks in the study area;
2. Describe the various energy saving and efficiency components that would be utilized as part of the Proposed Project; and
3. Mitigation measures will be proposed for any significant adverse natural resource impacts which may result from the Proposed Project.

NEPA

The above-described CEQR analysis will be relied upon to evaluate potential effects to Energy Consumption.

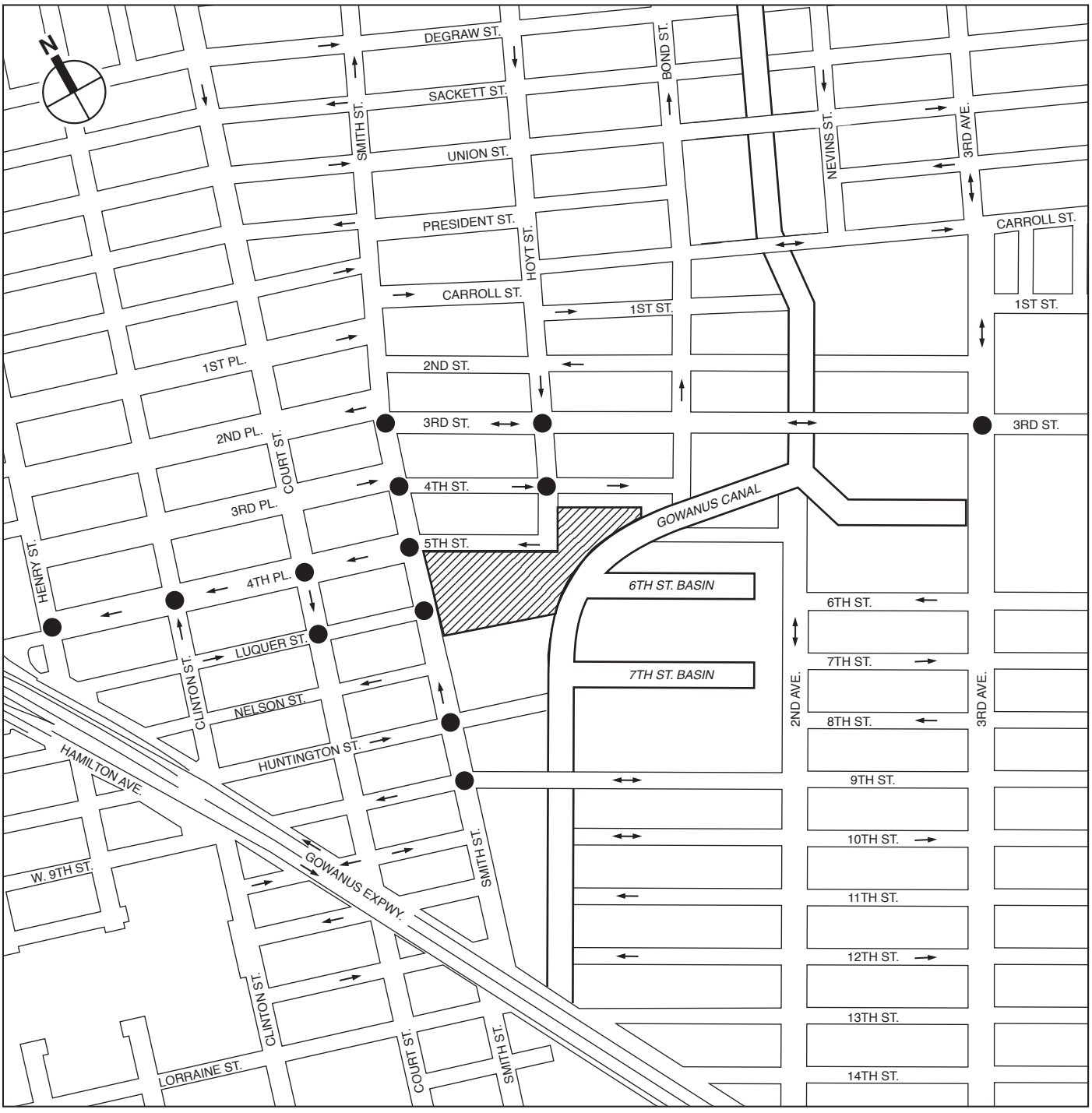
TASK 17: TRAFFIC AND PARKING

The street network and its ability to absorb traffic from the new development is a key part of the environmental review for the Proposed Project. The Proposed Project would include 774 residential units, approximately 59,000 gsf of local community facility and retail space, and 225 off-street parking spaces. As per the criteria established in the *CEQR Technical Manual*, a quantified transportation analysis is warranted if a proposed action would result in more than 50 vehicle-trips and/or 200 transit/pedestrian trips during a given peak hour. Preliminary estimates indicate that the Proposed Project would likely yield sufficient trips to warrant detailed operational analyses of traffic conditions for the weekday AM, midday, and PM peak periods.

The traffic/parking analyses would include the following tasks:

1. Define the study area. The traffic study area will include the intersections bordering the project block, as well as the intersections that are most likely to be affected by the project-generated traffic (see **Figure 12**). In total, up to 13 intersections have been selected for analysis, including the following
    - 4th Place and Henry Street;
    - 4th Place and Clinton Street;
    - 4th Place and Court Street;
    - 3rd Street and Smith Street;
    - 4th Street and Smith Street;
    - 4th Place/5th Street and Smith Street;
    - Luquer Street and Smith Street;

11.5.08



Project Site

Intersection Selected for Analysis

Traffic Flow Direction

Traffic Study Area
Figure 12

- Luquer Street and Court Street;
- Huntington Street and Smith Street;
- 9th Street and Smith Street;
- 3rd Street and Hoyt Street;
- 4th Street and Hoyt Street; and
- 3rd Street and 3rd Avenue;

2. Perform traffic data collection. Traffic volumes and relevant data will be collected as per *CEQR Technical Manual* guidelines via a combination of manual and machine counts. Information pertaining to street widths, traffic flow directions, lane markings, parking regulations, and bus stop locations at study area intersections will be inventoried. Traffic control devices (including signal timings) in the study area will be recorded and verified with official signal timing data from New York City Department of Transportation (NYCDOT). Travel time and delay runs will be conducted to support air quality and noise mobile source analyses;
3. Conduct existing conditions analysis. Balanced peak hour traffic networks will be prepared for the capacity analysis of study area intersections. This analysis will be conducted using the 2000 Highway Capacity Manual (HCM) methodology with the latest approved Highway Capacity Software (HCS) version. The existing volume-to-capacity (v/c) ratios, delays, and levels of service (LOS) for the weekday AM, midday, and PM peak hours will be determined;
4. Develop the future No Build condition. Future No Build traffic volumes will be estimated using existing volume information and by incorporating background growth and incremental increases in traffic from an as-of-right development on the Project Site and other projects in the area. Trip estimates generated for future projects and the modes of transportation for these trips will be determined for the three peak analysis hours using standard sources, census data, and information from other environmental studies, where available. The No Build v/c ratios, delays, and LOS at the study area intersections will be determined;
5. Perform traffic impact assessment for the Proposed Project. Daily and peak hour trip estimates for the proposed development program will be prepared. Project-generated trips will then be assigned to the traffic network and the potential impacts on service conditions will be evaluated in accordance with *CEQR Technical Manual* criteria. Where significant impacts are identified, potential measures, including signal retiming, phasing modifications, roadway restriping, addition of turn lanes, and revision of curbside regulations, etc., will be explored to mitigate these impacts;
6. Analyze current and future parking conditions. A parking survey will be performed to gather curbside regulations and record off-street parking supply and utilization within ¼-mile of the Project Site. Future parking demand projections will be compared to the available supply—including proposed on-site parking—to determine whether project-generated demand could be readily accommodated and if there is a potential for a parking shortfall;
7. Examine pedestrian safety issues. Accident data from the most recent three-year period will be obtained from the New York State Department of Transportation (NYSDOT). Based on the detailed review of the accident data, high pedestrian accident locations will be identified and, where feasible, safety improvement measures will be recommended;

8. Prepare input data for air quality and noise analyses. Detailed peak hour traffic volume, vehicle composition, and speed data will be summarized for air quality and noise analyses; and
9. Mitigation measures will be proposed for any significant adverse traffic and parking impacts which may result from the Proposed Project.

NEPA

The above-described CEQR analysis will be relied upon to evaluate potential effects associated with transportation, including traffic and parking.

TASK 18: TRANSIT AND PEDESTRIANS

The public transportation system and the pedestrian facilities in the area surrounding the Project Site and their ability to absorb the new trips from the Proposed Project are an important issue. Based on the preliminary trip generation estimates, it is anticipated that the Proposed Project would not generate sufficient transit trips to warrant detailed line-haul analysis of potential transit impacts. However, a quantitative assessment of subway stairways will be conducted for the weekday AM and PM peak hours at the Carroll Street/Smith Street and Smith Street/9th Street (F/G Subway Lines) Stations—the closest stations to the Project Site that provides rapid transit service. Since, the study area is well served by various buses—including the B71, B75, and B77 bus routes—a detailed assessment of peak bus loading conditions will not be warranted. However, the transit analysis will include a qualitative description of the area bus routes.

In terms of pedestrian analyses, pedestrian elements—including sidewalks, corners, and crosswalks—for up to four intersections will be analyzed. This will include field surveys to inventory sidewalk, corner, and crosswalk widths, pedestrian sidewalk obstacles, and crosswalk timings, as well as other items required for pedestrian analyses. Using this data, pedestrian service conditions in the study area will be established for the Existing, No Build, and Build conditions. The impact criteria established in the *CEQR Technical Manual* will be used to identify significantly impacted locations and improvement measures will be recommended to mitigate such impacts. An assessment of traffic/pedestrian safety conditions will also be provided due to the introduction of sensitive land uses, including housing for elderly persons and open space. Accident data for the most recent three-year period will be obtained from NYSDOT. Mitigation measures will be proposed for any significant adverse transit and pedestrian impacts which may result from the Proposed Project.

NEPA

The above-described CEQR analysis will be relied upon to evaluate potential effects associated with transportation, including transit and pedestrians.

TASK 19: AIR QUALITY

The potential for the Proposed Project to result in significant adverse air quality impacts from mobile sources will be evaluated using an analysis based on procedures contained in the *CEQR Technical Manual*. A mobile source air quality analysis is required when the proposed action is expected to result in 100 or more new vehicle trips through an intersection in the study area (the *CEQR Technical Manual* screening threshold). If the Proposed Project would generate approximately 100 or more vehicle trips at an intersection in any peak hour, a mobile source air

quality analysis will be conducted. If required, the analysis will be conducted at the intersection where the greatest number of project-generated trips are anticipated. The air quality analysis will be performed to determine (using computerized dispersion modeling techniques) the effects of both project- and non-project-generated traffic on carbon monoxide (CO) and particulate matter ($PM_{2.5}$) levels within the study area, and, where significant project impacts are predicted to occur, feasible traffic mitigation measures to alleviate those impacts will be developed. It is anticipated that the U.S. Environmental Protection Agency (EPA)'s conservative first-level mobile source dispersion model, CAL3QHC, will be used for the CO microscale analysis and vehicular emissions will be computed with EPA's emissions model, MOBILE6.2. EPA's CAL3QHCR model will be used for the $PM_{2.5}$ analysis. Future CO and $PM_{2.5}$ pollutant levels will be compared with the appropriate thresholds, standards and the City's *de minimis* criteria, and with one another to determine trends and potential project impacts.

For stationary sources of emissions from heating, ventilation and air conditioning (HVAC) equipment, a screening analysis will be performed to determine whether emissions from any on-site fuel-fired HVAC equipment (for example, boilers or hot water heaters) from the Proposed Project are significant. The screening analysis will use the procedures outlined in the *CEQR Technical Manual*. The procedure involves determining the distance (from the exhaust point) within which potential significant impacts may occur, on elevated receptors (such as open windows, air intake vents, etc.) that are of an equal or greater height when compared to the height of the Proposed Projects' HVAC exhausts. The distance within which a significant impact may occur is dependent on a number of factors, including the height of the discharges, type(s) of fuel burned and development size.

In addition, air quality impacts on the Proposed Project's future residents are an issue of concern since the Proposed Project would be located adjacent to manufacturing uses. To address this issue, an analysis will be undertaken to determine the potential for impacts from industrial emissions from uses surrounding the Project Site, including the concrete batching facility located south of the Project Site. A field survey will be performed to determine if there are any manufacturing or processing facilities within 400 feet of the Project Site, or large sources within 1,000 feet. In addition, a search of federal and state air permits, and the DEP's Bureau of Environmental Compliance (BEC) files will be examined to determine if there are permits for any sources of toxic air compounds from industrial processes. Based upon this information a determination will be made of whether detailed analysis of industrial stationary source air quality issues is necessary. If information on any emissions from processing or manufacturing facilities within 400 feet of the Project Site is on file with DEP or DEC, an industrial source analysis will be performed.

The tasks involved in the air quality analysis are as follows:

MOBILE SOURCE ANALYSIS

1. Gather existing air quality data. Collect and summarize existing ambient air quality data for the study area. Specifically, ambient air quality monitoring data published by DEC will be compiled for the analysis of existing conditions;
2. If required, perform a microscale screening mobile source analysis for carbon monoxide (CO) and $PM_{2.5}$ at a single intersection using EPA's CAL3QHC and/or CAL3QHCR model. The peak period with the greatest number of project-generated traffic will be analyzed, unless additional peak periods exceed the City's threshold for conducting an analysis;
3. Select emission calculation methodology and "worst-case" meteorological conditions. Vehicular cruise and idle emissions for the dispersion modeling will be computed using

EPA's MOBILE6.2 model. For the "worst-case" analysis location, conservative meteorological conditions to be assumed in the dispersion modeling are a 1 meter per second wind speed, Class D stability, and a 0.70 persistence factor;

4. Calculate maximum 1- and 8-hour CO concentrations for existing conditions, CO and $PM_{2.5}$ concentrations for the future conditions without the project, and the future conditions with the project. No field monitoring will be included as part of this analysis;
5. Determine the consistency of the Proposed Project with the strategies contained in the State Implementation Plan (SIP) for the area. If violations of standards occur, analyses would be performed to determine what mitigation measures would be required to attain standards; and
6. Mitigation measures will be proposed for any significant adverse impacts which may result from the Proposed Project.

PARKING GARAGE ANALYSIS

7. Assess the potential impacts associated with proposed parking garage. Information on the potential design of the garage will be employed to determine potential off-site and on-site impacts from these vented emissions for the project's 2017 Build year. A temperature of 43°F will be assumed in the analysis, and a point source screening analysis will be used. Cumulative impacts from on-street sources and emissions from the parking garage will be calculated where appropriate. Compare future CO pollutant levels with standards and applicable *de minimis* criteria, to determine potential significant adverse project impacts; and
8. Mitigation measures will be proposed for any significant adverse impacts which may result from the Proposed Project.

STATIONARY SOURCE ANALYSES

9. Assess the potential impacts associated with the emissions from the Proposed Project's buildings on nearby existing buildings and nearby elements of project buildings. Given the size of the Proposed Project, it is expected that a screening analysis can be performed in accordance with the *CEQR Technical Manual*;
10. If the project's HVAC systems fail the screening analyses, detailed stationary source analysis will be performed using the AERMOD dispersion model. Five years of the most recent available meteorological data (2001-2005) with surface data from either JFK or LaGuardia Airport and concurrent upper air data from Brookhaven, New York, will be used for the simulation modeling. Concentrations of nitrogen dioxide, sulfur dioxide, and particulate matter will be determined and the predicted values will be compared with national and state ambient air quality standards and other relevant criteria. In the event that a violation of the standards is predicted, design measures will be examined to reduce potential concentrations of applicable pollutants to acceptable levels; and
11. Mitigation measures will be proposed for any significant adverse impacts which may result from the Proposed Project.

INDUSTRIAL SOURCE ANALYSES

12. A field survey will be performed to determine if there are any manufacturing or processing facilities within 400 feet or any large sources within 1,000 feet of the Proposed Project. If such potential sources are identified, DEP-BEC will be contacted to determine if there are permits for any industrial facilities within these areas. In the event that no permits are available from DEP's Bureau of Environmental Compliance for a given location, but emissions are apparent, an analysis will be conducted following the guidelines outlined in the *CEQR Technical Manual;*

13. If industrial permits are identified for the area, the AERMOD dispersion model screening database will be used to estimate the short-term and annual concentrations of critical pollutants at the potential receptor sites. Predicted worst-case impacts on the project will be compared with the short-term guideline concentrations (SGC) and annual guideline concentrations (AGC) reported in DEC's DAR-1 AGC/SGC Tables (September 2007) to determine the potential for significant impacts. In the event that violations of standards are predicted, measures to reduce pollutant levels to within standards will be examined; and
14. Mitigation measures will be proposed for any significant adverse impacts which result from the Proposed Project.

ODOR ANALYSIS

Assess the potential for significant adverse impacts from odors on sensitive receptors by the Proposed Project. Mitigation measures will be proposed for any significant adverse impacts which may result from the Proposed Project.

NEPA

The above-described CEQR analysis will be relied upon to evaluate the potential for significant impacts associated with Ambient Air Quality, the Proposed Project's Contribution to Community Pollution Levels and conformance with the following regulations:

- Air Quality [CAA, Sections 176 (c) and (d), and 40 CFR 6, 51, 93];

TASK 20: NOISE

To assess potential noise impacts from a project, both stationary and mobile noise sources need to be considered. Stationary sources include rooftop equipment such as HVAC and other mechanical equipment; mobile sources include traffic generated by the Proposed Project. With respect to stationary sources, the EIS will discuss the potential for noise impacts from the rooftop mechanical equipment for the Proposed Project, based on CEQR guidelines. The noise study will also consist of a screening analysis to determine whether the Proposed Project would generate enough vehicle trips to have the potential to cause a significant noise impact, and an analysis to determine the level of building attenuation required to satisfy CEQR interior noise guidelines. Typically, a significant noise impact occurs when a project results in an increase of 3 dBA or more. From a traffic perspective, such impacts may occur when there is a doubling of baseline traffic volumes (i.e., passenger car equivalents, which also accounts for the noise characteristics of trucks and buses) on any street (once adjustments are made to account for the noise characteristics of trucks and buses). A screening analysis will be performed to see if such conditions are likely to occur. In cases where the screening analysis indicates a doubling of passenger car equivalents, the Traffic Noise Model (TNM) will be used to assess impacts based on CEQR guidelines.

The *CEQR Technical Manual* provides recommended levels of building attenuation to achieve acceptable levels of interior noise (which are assumed to be 45 dBA and are based on the 1-hour L_{10} statistical descriptor). HUD guidelines state that acceptable levels of interior noise are less than or equal to 45 dBA L_{dn}. The level of building attenuation necessary to satisfy CEQR and HUD requirements is a function of the exterior noise levels, and will be determined. Because of relatively high noise levels adjacent to the Project Site, any development in the area would be expected to require double-glazed windows and air conditioning to achieve acceptable interior noise levels.

Specifically, the noise analysis will include the following tasks:

1. Select appropriate noise descriptors to describe the noise environment and the impact of, and on the Proposed Project, following both current City and HUD criteria regarding noise descriptors. When and where appropriate, examine the L_{10}, $L_{eq(1)}$, and the day-night L_{dn} noise levels;
2. Perform screening impact analysis. Using proportional modeling techniques, a screening analysis will be performed to determine if there are any locations where project-generated traffic would have the potential for causing a significant noise impact;
3. Select noise receptor locations for building attenuation and for future proposed outdoor sensitive uses;
4. Determine existing noise levels. Measurement will be made at each of the receptor sites to determine existing noise levels. To satisfy both City and HUD criteria, a combination of 20-minute measurement during a typical weekday AM, midday, and PM peak period and at one or two sites for 24-hour continuous measurements will be made. Hourly L_{eq}, L_1, L_{10}, L_{50}, and L_{90} values will be recorded;
5. Determine the level of building attenuation necessary to satisfy CEQR and HUD requirements; and
6. Mitigation measures will be proposed for any significant adverse noise impacts which may result from the Proposed Project.

NEPA

In addition to the above-described CEQR noise analysis, this chapter will contain an assessment of potential noise impacts following HUD Noise Assessment Guidelines (NAG) to determine ambient noise and project-generated noise levels. As a result of the assessment, appropriate mitigation measures will be developed and/or any deviation from HUD assessment standards will be justified.

TASK 21: CONSTRUCTION IMPACTS

Construction impacts, though temporary, can have a disruptive and noticeable effect on the adjacent community, as well as people passing through the area. The likely construction schedule for development at the Project Site and an estimate of activity on-site will be described. Construction impacts will be evaluated according to the *CEQR Technical Manual* guidelines. The construction assessment for the Proposed Project will focus on areas where construction activities may pose specific environmental problems. Technical areas to be analyzed include:

1. Transportation Systems. This assessment will consider the extent and duration of any street, roadway, or sidewalk closure; any impacts on the parking supply, and any loss in other transportation services during the various phases of construction. In addition, the assessment will identify the increase in vehicle trips from construction workers and equipment;
2. Air Quality. The construction air quality impact section will contain a qualitative discussion of both mobile source emissions from construction equipment and worker and delivery vehicles, and fugitive dust emissions. It will discuss measures to reduce impacts;
3. Noise. The construction noise impact section will contain a qualitative discussion of noise from each phase as well as concurrent phases of construction activity;

4. Hazardous Materials. In coordination with Task 11, determine whether the construction of the project has the potential to expose construction workers and/or community members to contaminants;
5. Historic Resources. The integrity of nearby historic resources within and adjacent to the Project Site could be adversely affected by construction vibrations; thus, the maintenance of the integrity of such resources will be assessed;
6. Other Technical Areas. As appropriate, discuss other areas of environmental assessment for potential construction-related impacts; and
7. Mitigation measures will be proposed for any significant adverse construction impacts which may result from the Proposed Project.

NEPA

The above-described CEQR analysis will be relied upon to evaluate the potential for significant impacts associated with Hazards and Nuisances, including Site Safety.

TASK 22: PUBLIC HEALTH

According to the *CEQR Technical Manual*, for a site-specific project, an assessment of public health should examine the potential for health impacts on a community or certain group of individuals. The public health chapter will examine the Proposed Project and provide a screening level of assessment in conformance with *CEQR Technical Manual* guidelines. Public health concerns for which a public health assessment may be warranted include: increased vehicular traffic or emissions from stationary sources resulting in significant adverse air quality impacts; increased exposure to heavy metals and other contaminants in soil/dust resulting in significant adverse hazardous materials or air quality impacts; the presence of contamination from historic spills or releases of substances that might have affected or might affect ground water to be used as a source of drinking water; solid waste management practices that could attract vermin and result in an increase in pest populations; potentially significant adverse impacts to sensitive receptors from noise and odors; vapor infiltration from contaminants within a building or underlying soil that may result in significant adverse hazardous materials or air quality impacts; and actions for which any potential impacts result in an exceedance of accepted federal, state, or local standards. Mitigation measures will be proposed for any significant adverse public health impacts which may result from the Proposed Project.

NEPA

The above-described CEQR analysis will be relied upon, in conjunction with the Construction assessment, to evaluate potential effects related to Hazards and Nuisances, including Site Safety.

TASK 23: ENVIRONMENTAL JUSTICE

Executive Order 12898 (1994) is designed to ensure that each Federal agency "shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." This EIS will include an assessment of environmental justice following the guidance of the Council on Environmental Quality, EPA, and HUD.

Actions requiring compliance with the Executive Order 12898 include those that are located in a predominantly minority or low income neighborhood; or those in which the Project Site or neighborhood suffers disproportionately from high adverse environmental impacts on low income and/or minority populations relative to the community at large. Furthermore if a proposal includes new housing construction or acquisition of housing for low income or minority residents; and is proposed in a neighborhood that is currently (or planned to be) primarily nonresidential, compliance with the Executive Order is warranted. Projects that are proximate to predominantly low income or minority neighborhoods to have a potentially adverse environmental effect on those groups should be evaluated on a case-by-case basis. Disproportionate adverse environmental impacts should be avoided or mitigated to the extent practicable.

The Executive Order calls on Federal agencies, and in the case of HPD, units of general purpose government acting under an assumption of HUD environmental review responsibility, to identify and address, to the extent practicable, disproportionately high adverse human health or environmental effects of their programs, policies and activities on minority and low income populations.

The analysis for Environmental Justice will involve identifying communities of concern that could be affected by the project, and then considering whether those communities might experience disproportionately high and adverse human health or environmental effects from the project. The analysis will incorporate the results of the analyses of other impact areas, including the Socioeconomic Conditions assessments related to direct and indirect residential displacement, and will specifically consider how any adverse environmental impacts might affect low-income and minority populations. Using information from the 2000 U.S. Census of Population and Housing, census block groups with low-income and minority populations will be identified and specific impacts on those populations assessed. This will involve compiling data on race, ethnicity, and income from the 2000 U.S. Census for the populations that could be affected by the Proposed Project to identify low-income and minority communities. The environmental impacts identified in other analysis areas will then be evaluated to determine whether any significant adverse impacts might disproportionately affect low-income and minority residents. If disproportionate impacts are identified, mitigation measures and enhancement measures, as appropriate, for the affected populations will be considered and described in the EIS.

TASK 24: ALTERNATIVES

The purpose of an alternatives analysis is to examine reasonable and practicable options that avoid or reduce project-related significant adverse impacts and achieve the goals and objectives of the project. The specific alternatives to be analyzed are typically finalized with the lead agency as project impacts become clarified. However, the alternatives analysis will include a No Action Alternative, which assumes that the proposed rezoning is not approved and the Proposed Project is not built, and the Project Site maintains its current uses and zoning. An As-of-Right Alternative would also be analyzed and would assume that the Project Site is redeveloped under current M3-1 zoning. Additional alternatives could include other design alternatives, such as building designs and site plans or an alternative parking program, or alternatives that reduce or minimize impacts disclosed as part of this analysis as determined by HPD. The description and evaluation of each alternative will be provided at a level of detail sufficient to allow a comparative assessment of each alternative to the impacts under the Proposed Project.

TASK 25: MITIGATION

Where significant impacts have been identified in the analyses discussed above, measures will be described to mitigate those impacts. This task summarizes the findings of the relevant analyses and discusses potential mitigation measures. Where impacts cannot be mitigated, they will be described as unavoidable adverse impacts.

TASK 26: EIS SUMMARY CHAPTERS

In accordance with CEQR guidelines, the EIS will include the following three summary chapters, where appropriate to the Proposed Project:

1. Unavoidable Adverse Impacts—Any significant impacts for which no mitigation can be put forth or implemented will be presented as unavoidable adverse impacts;
2. Growth-Inducing Aspects of the Proposed Actions—Any growth-inducing aspects of the proposed actions, focusing on whether they are expected to trigger further development, will be described; and
3. Irreversible and Irretrievable Commitments of Resources—This section summarizes the proposed actions and their impacts in terms of the loss of environmental resources, both in the immediate future and the long term.

TASK 27: EXECUTIVE SUMMARY

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