Columbia Heights Rezoning
Draft Scope of Work for a Draft Environmental Impact Statement

CEQR No. 26DCP094K

ULURP Nos. 260139ZMK, N260140ZRK

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A. INTRODUCTION

This Draft Scope of Work has been prepared in accordance with the State Environmental Quality Review Act (SEQRA), City Environmental Quality Review (CEQR) procedures, and the 2025 *CEQR Technical Manual*. It outlines the technical areas to be analyzed in the preparation of an Environmental Impact Statement (EIS) for the proposed Columbia Heights Rezoning project (the "Proposed Project").

The Applicant, 25-30 Columbia Heights (Brooklyn), LLC is seeking a zoning map amendment to rezone an existing M2-1 district to M1-5A/R10A and M1-5A/R8A districts, and a zoning text amendment to establish a Special Mixed-Use (MX) District and amend Appendix F of the Zoning Resolution to establish a Mandatory Inclusionary Housing (MIH) area (the "Proposed Actions"). The Proposed Actions would facilitate a proposal by the Applicant to enlarge and partially convert existing buildings to residential use (the "Proposed Development" or the "Proposed Project") at 25 Columbia Heights (Block 204, Lot 1, "Projected Development Site 1") and 30-58 Columbia Heights (Block 208, Lots 1, 2, and 12, "Projected Development Site 2") (together, the "Project Area") in Community District 2 of Brooklyn (see **Figures 1 and 2**).

The Proposed Development is comprised of a total of approximately 925,000 gross square feet (gsf) of development, with approximately 678,000 gsf dedicated to residential use (consisting of 661 total dwelling units, including approximately 133 to 199 affordable units depending on the MIH option selected), 186,000 gsf for commercial and/or community facility use, and 61,000 gsf for accessory residential parking (188 spaces). 25 Columbia Heights would be enlarged to approximately 17 stories, while 30 Columbia Heights would reach approximately 14 stories. Three smaller commercial buildings (4 to 5 stories) associated on Projected Development Site 2 would remain unchanged in both bulk and use.

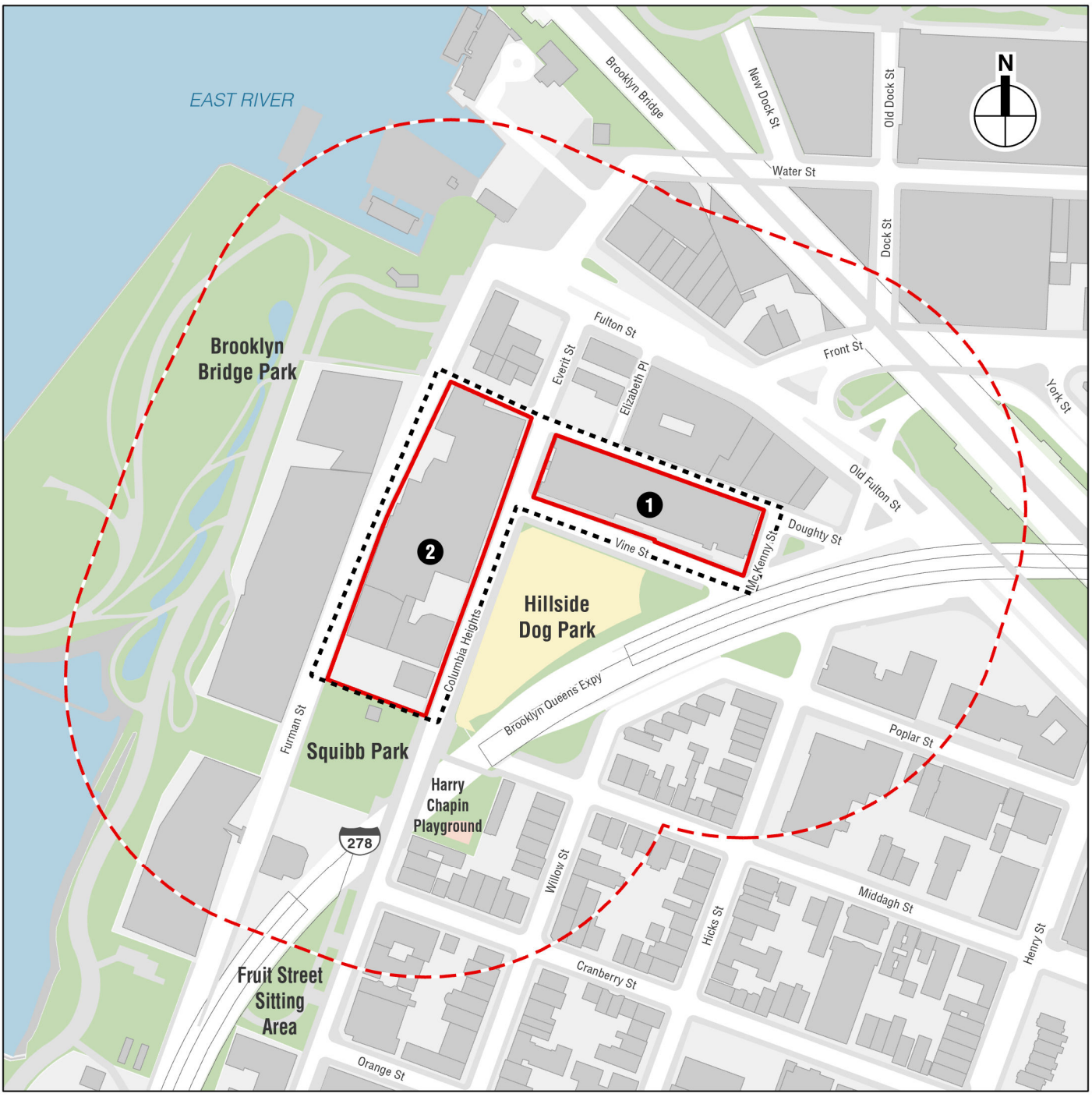
B. PROJECT DESCRIPTION

BACKGROUND

The Project Area consists of 25 Columbia Heights (Block 204, Lot 1) and 30-58 Columbia Heights (Block 208, Lots 1, 2, and 12) and is generally bounded by Doughty, Furman, Columbia and Vine Streets. The buildings were first developed as a factory plant in the 1920's by E.R. Squibb & Sons Pharmaceutical. In 1969, the buildings were sold to the Watchtower Bible & Tract Society ("Watchtower") and used as offices, storage, a trade school, and a transient hotel. In 1978, 25 Columbia Heights was expanded to provide more office space for Watchtower. In 2016, the Watchtower sold the buildings for commercial use; the buildings are currently vacant.

Other than a private rezoning application approved in 2020, the Project Area and surrounding blocks have been zoned M2-1 since the adoption of the Zoning Resolution (ZR) in 1961. The 2020 rezoning changed the M2-1 designation to an M1-5 district on Block 202, which is immediately northeast of the Project Area. That rezoning was proposed to facilitate a 5-story building with approximately 33,000 sf of retail and office space at 50 Old Fulton Street (CEQR no. 19DCP009K). In the City Planning Commission's (CPC) lead report (ULURP no. C 190011 ZMK),

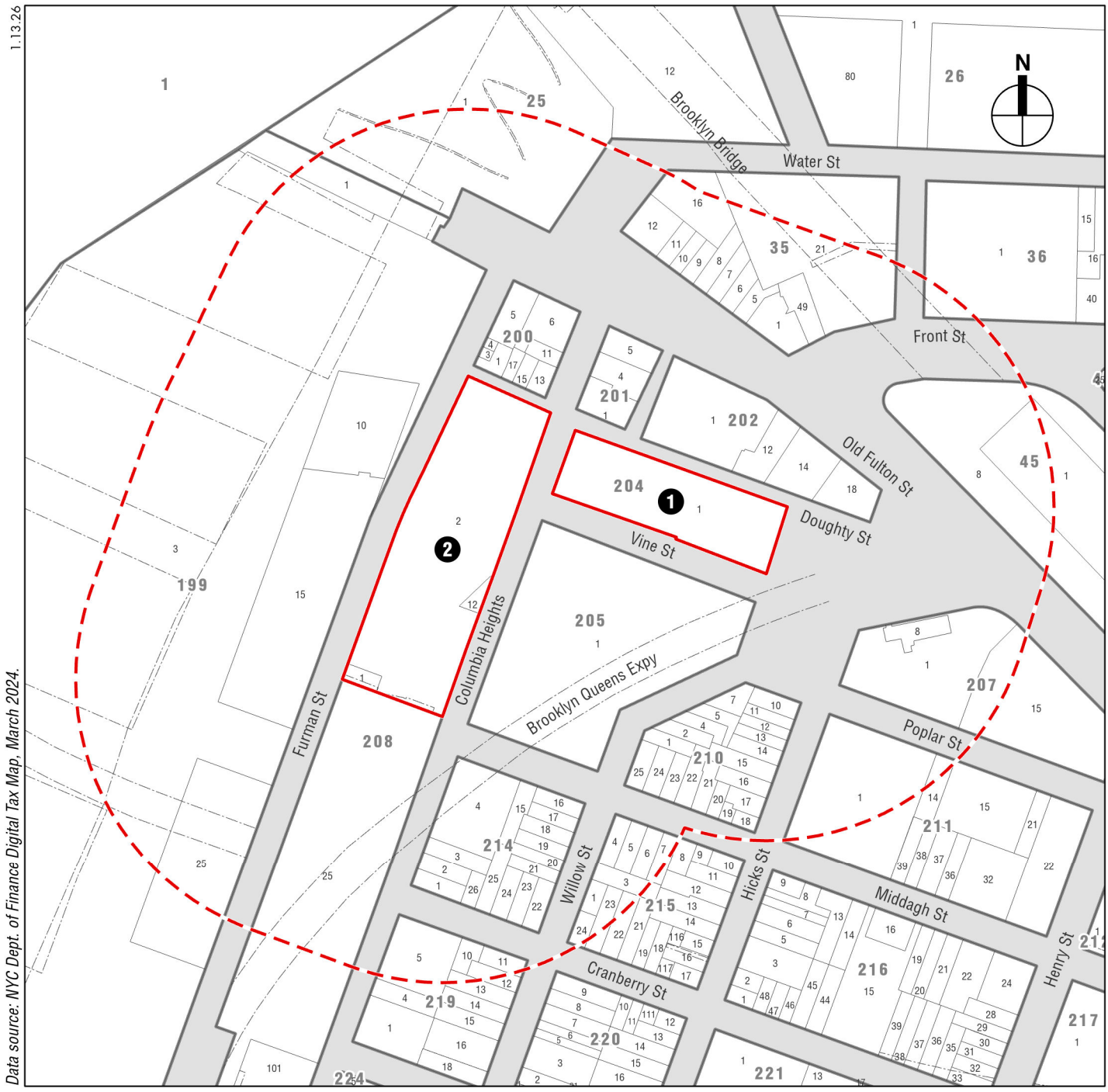
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Project Location

COLUMBIA HEIGHTS REZONING

Figure 1



Project Area

1 *Projected Development Site*

Study Area (400-foot perimeter)

1 *Tax Lot Boundary*

Tax Block Boundary

Other Boundary

Tax Map

COLUMBIA HEIGHTS REZONING

Figure 2

the Commission stated that “the density, use, and parking constraints of the project area’s current M2-1 zoning discourage development consistent with the commercial and retail land use trends in the surrounding area.” The Commission went on to say that “the proposed M1-5 zoning district is appropriate and would facilitate development consistent with surrounding zoning, land uses and built forms.” M1-5 districts allow manufacturing and commercial uses at a maximum Floor Area Ratio (FAR) of 5.0 and community facility uses at 6.5 FAR. M1-5 districts do not have a maximum building height, instead building heights and setbacks are governed by a sky exposure plane, which begins 85 feet above the street line in M1-5 districts, or by tower regulations, which allow buildings to penetrate the sky exposure plane subject to limitations on tower coverage. No parking is required in M1-5 districts.

The Project Area is adjacent to the Ferry Fulton Historic District, which traces its origins to the 17th century Dutch community that settled the area. The District’s development was closely tied to a critical ferry service connecting Brooklyn and Manhattan. The initial residential settlement evolved into an area that was home to a variety of commercial establishments, including taverns, hotels, banks, and law firms. As the Industrial Revolution gained steam, the area saw the rise of industries, particularly related to shipbuilding and warehousing, with notable buildings such as the Empire Stores, built to accommodate Brooklyn’s growing trade. The construction and opening of the Brooklyn Bridge in 1883 ended the ferry service. The area remains integral to Brooklyn's broader development, particularly as its historic buildings are now being redeveloped or adaptively reused for new uses. The district is not only a historical site but also a cultural and commercial asset for the city, with ongoing efforts to revitalize its waterfront and connect it more closely with Brooklyn Heights.[1]

EXISTING CONDITIONS

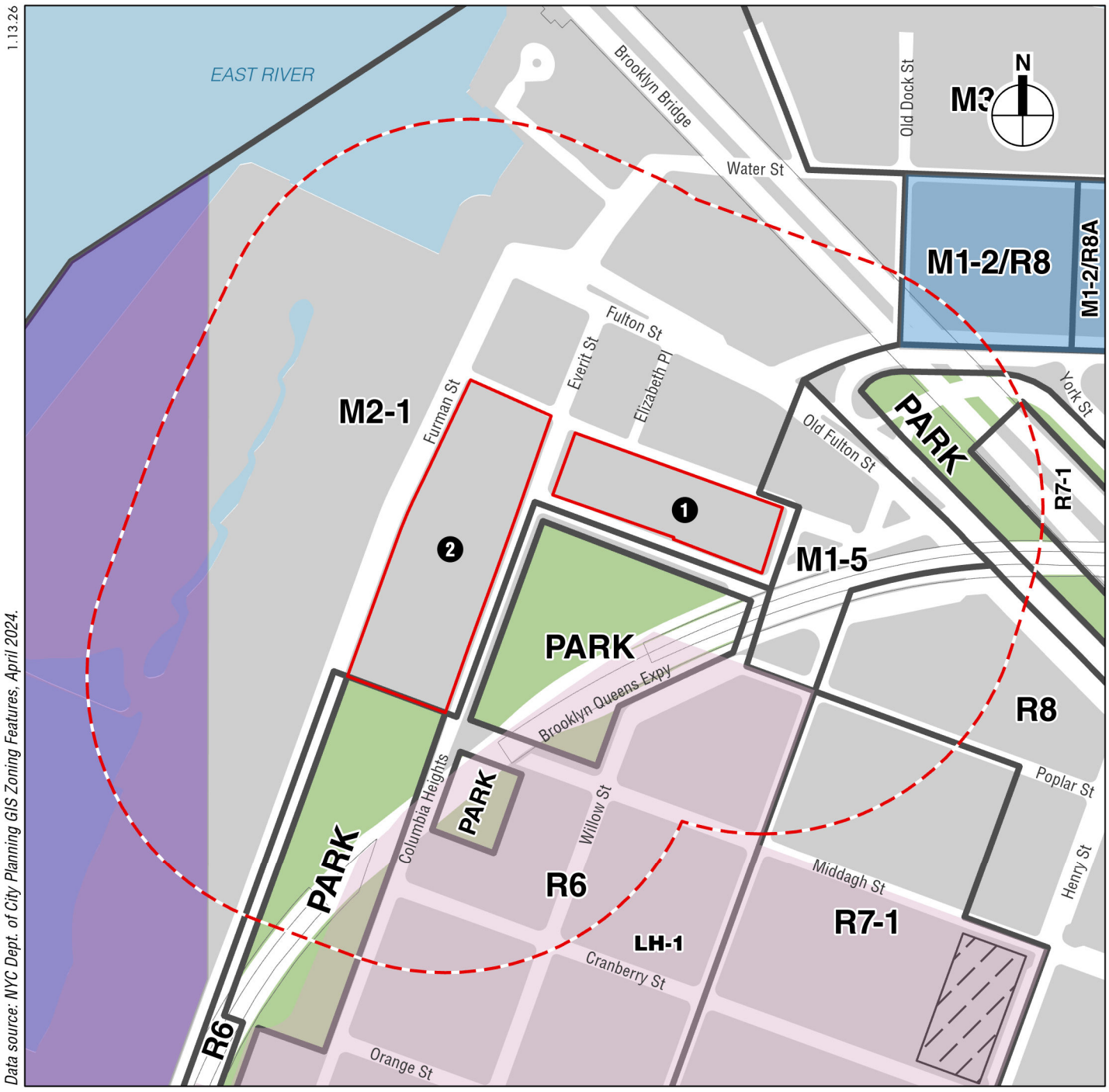
The Project Area has an approximate total lot area of 101,720 square feet (sf). Projected Development Site 1 is improved with an existing 12-story (including basement), 131-foot, 295,980 gsf commercial building with 125 parking spaces. Projected Development Site 2 is improved with four existing, abutting commercial buildings totaling 399,020 gsf, the largest of which is a 13-story (141-foot) building occupying the northern portion of the site.[2]

As noted above, the Project Area is within an M2-1 zoning district. M2-1 districts allow manufacturing and commercial uses at a maximum FAR of 2.0, and do not allow community facility uses other than specified museums. M2-1 districts are subject to high parking requirements that vary based on the type and size of the use. Building heights are regulated by a sky exposure plane beginning at 60 feet (or four stories) above the street line (see **Figure 3a**).

The Project Area is surrounded primarily by open spaces and transportation infrastructure with significant grade changes. Adjacent open spaces include Hillside Dog Park (1.37 acres) to the southeast, Squibb Park (0.63 acres) with a playground directly south of Projected Development Site 2, Harry Chapin Playground (0.30 acres) east of Squibb Park, and Brooklyn Bridge Park spanning 1.3 miles of waterfront to the west across Furman Street. Major transportation infrastructure includes the Brooklyn Queens Expressway running along the southern boundaries

[1] Landmarks Preservation Commission, "Fulton Ferry Historic District Designation Report," June 28, 1977

[2] To facilitate comparison between the existing and proposed conditions on the Development Site, all existing and proposed heights for the 25 Columbia Heights Building and the Northern 30 Columbia Heights Building are based on the applicable base plane under the proposed district regulations.



Existing Zoning

COLUMBIA HEIGHTS REZONING

Figure 3a

of Hillside Dog Park and Squibb Park before passing beneath the Brooklyn Heights Promenade, and the Brooklyn Bridge approximately 1-2 blocks northeast of the Project Area (see **Figure 3b**).

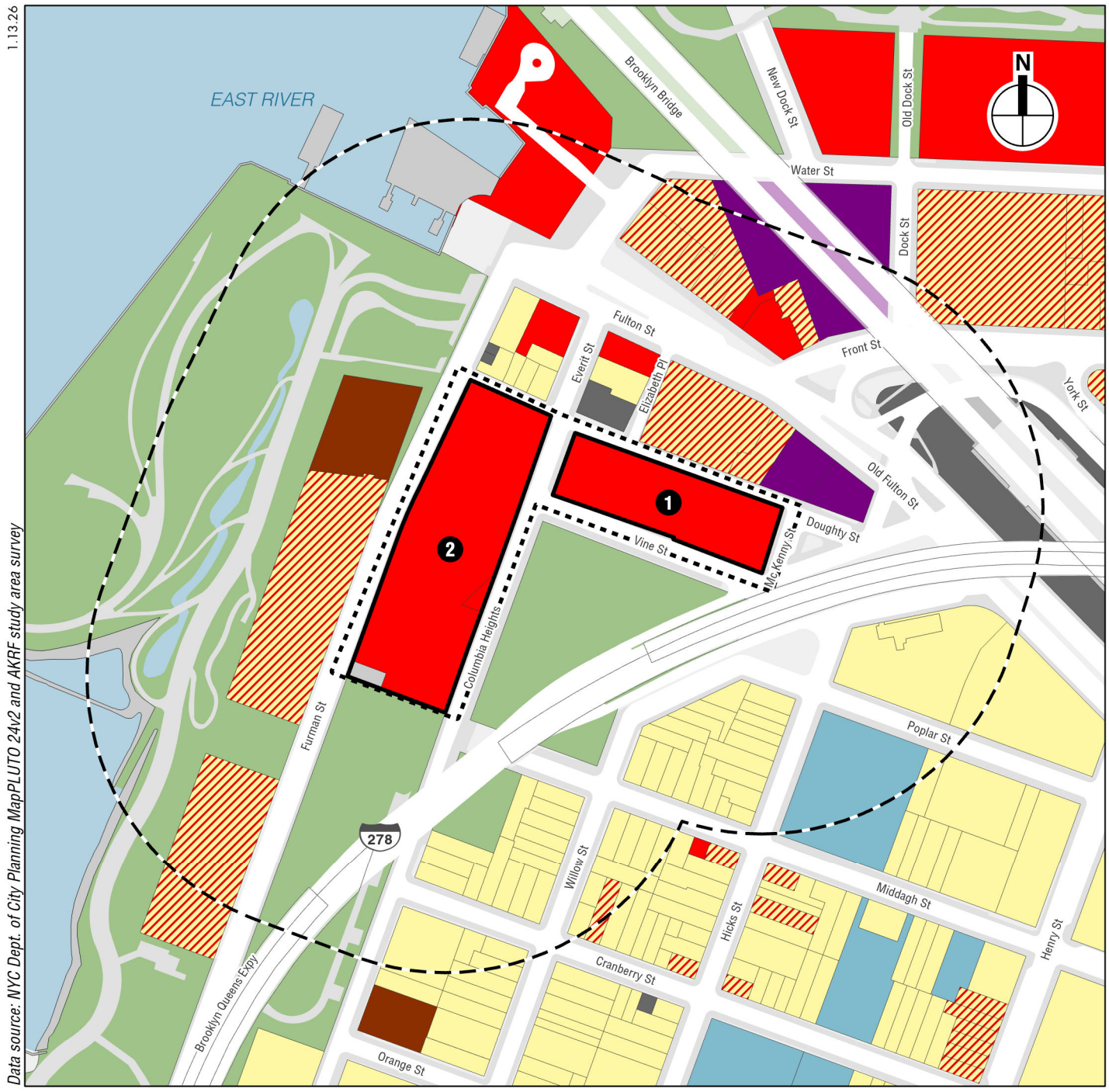
Columbia Heights rises in elevation southward from Doughty Street along 30 Columbia Heights and Squibb Park where it meets the higher Brooklyn Heights neighborhood. This creates an approximately two-story grade difference between the northern buildings' ground floors and the southern end of the Project Area. This elevation change creates a significant differential between Columbia Heights and Furman Street/Brooklyn Bridge Park, which pedestrians navigate via the Squibb Park Bridge that connects to the Brooklyn Bridge Park Greenway.

Beyond the immediately adjacent blocks, land uses to the north include mixed-use residential and commercial buildings ranging from one to nine stories. The majority of this area is mapped within the New York City-designated Fulton Ferry Historic District. The area farther northeast, on the opposite side of the Brooklyn Bridge, encompasses a portion of Brooklyn's DUMBO neighborhood, which is similarly mixed-use in character. South of the Project Area, beyond Squibb Park, is predominately residential in character. Building heights generally range from 2 to 5 stories on the blocks bounded by Poplar Street and Cranberry Street. Farther south along Columbia Heights, taller residential buildings include a 12-story building at the northeast corner of Columbia Heights and Orange Street, an 11-story building at the southeast corner of Columbia Heights and Orange Street, and a 10-story building across the street at 128 Columbia Heights.

DESCRIPTION OF THE PROPOSED DEVELOPMENT

As described above, the Proposed Development is comprised of a total of approximately 925,000 gross square feet (gsf) of development, with approximately 678,000 gsf dedicated to residential use (consisting of 661 total dwelling units), 186,000 gsf for commercial and/or community facility use, and 61,000 gsf for accessory residential parking (188 spaces). Projected Development Site 1 would be enlarged to approximately 17 stories. For Projected Development Site 2, the 30 Columbia Heights Building would reach approximately 14 stories and the three smaller commercial buildings (4 to 5 stories) would remain unchanged in both bulk and use.

The Applicant intends for Projected Development Site 1 to be partially converted to residential use and enlarged to a maximum height of approximately 17 stories (approximately 210 feet). The converted and enlarged building would contain approximately 460,570 gsf (12.0 FAR), of which approximately 399,710 gsf would be residential use (approximately 392 units), with 79 to 118 affordable units depending on the MIH option selected, 14,850 gsf would be commercial and/or community facility use, and 46,010 gsf would be accessory residential parking (see **Figures 4a and 4b**). Based on potential layout, unit mix and configuration of the residential units, average size of the loft-style units would be approximately 1,020 GSF. The proposed development would include 165 parking spaces, which would be designated as accessory to the proposed residential use. It is the Applicant's intention that approximately 25 percent of the residential floor area in the building would comprise affordable units (approximately 98 units at an average of 60 percent of Area Median Income (AMI) or lower), in accordance with the applicant's preferred Option 1 of the Mandatory Inclusionary Housing (MIH) Program, which would apply to the Project Area pursuant to the Applicant's proposed text amendment to Appendix F. Option 2 would require 30 percent of the floor area (approximately 118 units) for affordable housing at an average of 80 percent of AMI or lower; Option 3 would require 20 percent of the floor area (approximately 79 units) for affordable housing at an average of 40 percent of AMI or lower; and Option 4 requires 30 percent of the floor area (approximately 118 units) for affordable housing at an average of 115 percent of AMI.



Existing Land Use

COLUMBIA HEIGHTS REZONING

Figure 3b

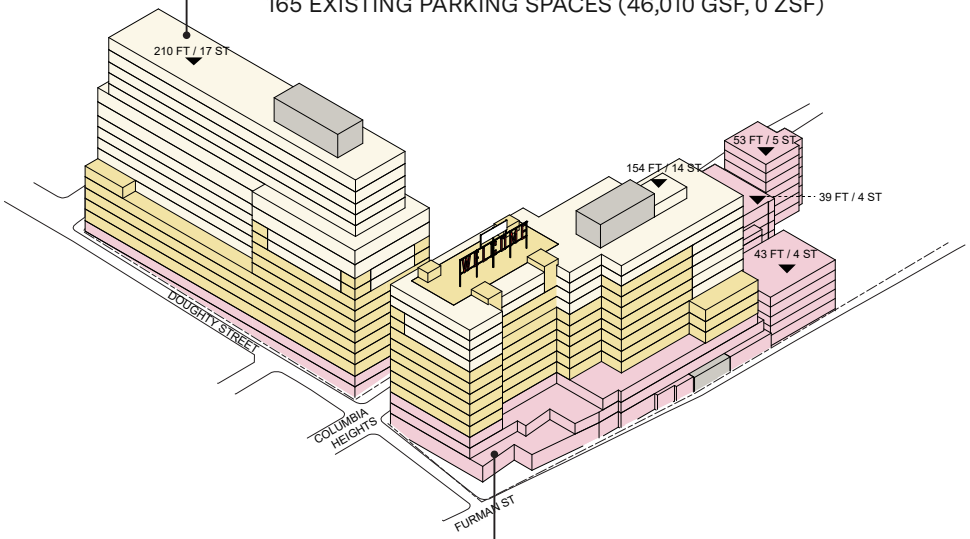
25 Columbia Heights

12.00 FAR - PROPOSED

460,570 GSF (379,510 ZSF)

14,850 GSF (12,240 ZSF) COMMERCIAL
399,710 GSF (367,270 ZSF) RESIDENTIAL

165 EXISTING PARKING SPACES (46,010 GSF, 0 ZSF)



Current Proposed
M1-5A/R10A (25 CH)
M1-5A/R8A (30 CH)

30 Columbia Heights

6.11 FAR - PROPOSED

464,710 GSF (428,060 ZSF)

171,320 GSF (167,570 ZSF) COMMERCIAL
278,390 GSF (260,490 ZSF) RESIDENTIAL

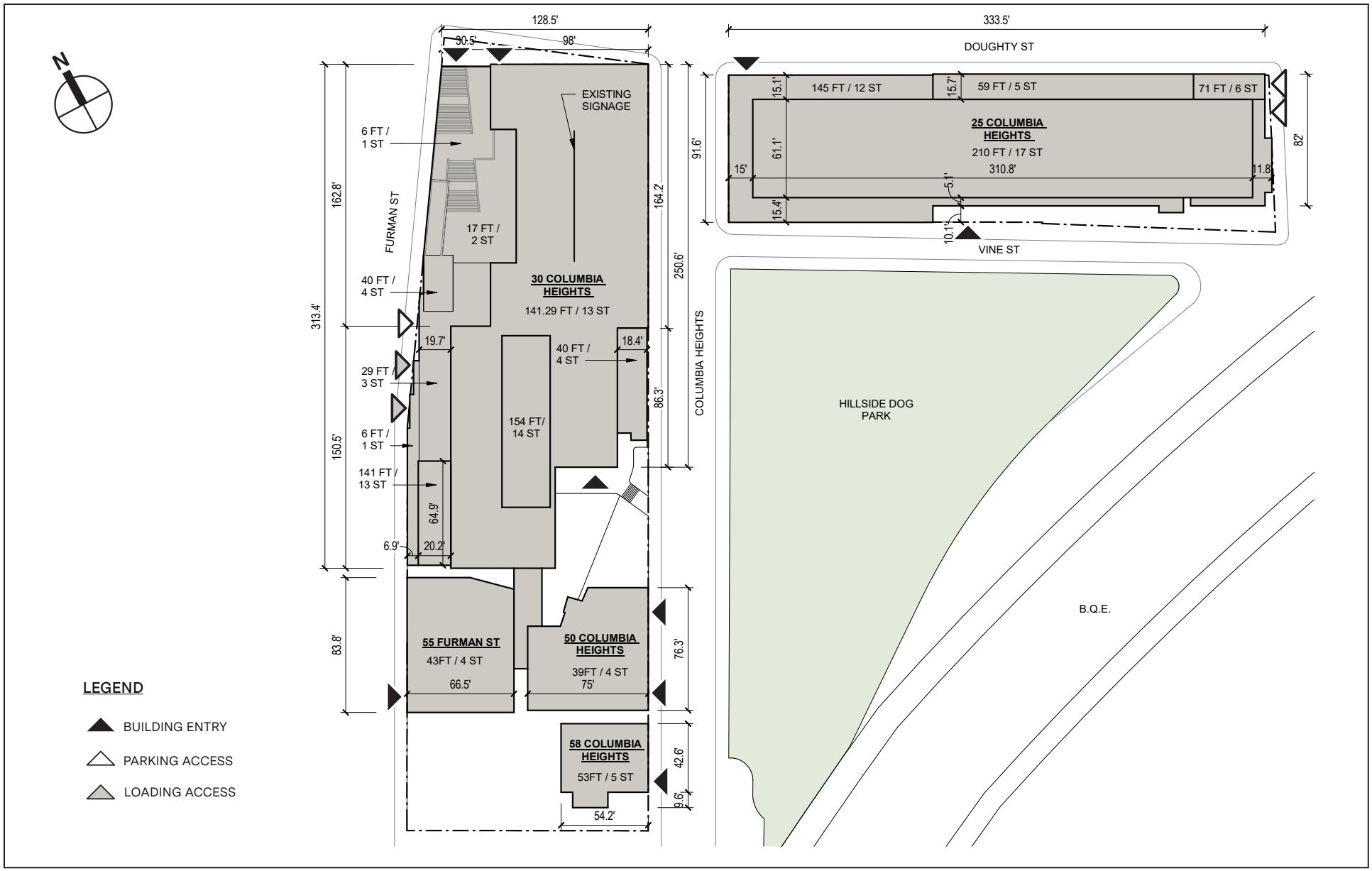
23 PARKING SPACES PROVIDED (15,000 GSF, 0 ZSF)

LEGEND

- RESIDENTIAL CONVERSION
- RESIDENTIAL ENLARGEMENT
- COMMERCIAL / COMMUNITY FACILITY
- MECH/BOH

Source: Morris Adjmi Architects

Proposed Massing



Source: Morris Adjmi Architects

Proposed Site Plan

Figure 4b

The Applicant also intends that the northern 30 Columbia Heights Building (Projected Development Site 2) be converted partially to residential use, with part of the building enlarged to a maximum height of approximately 14 stories (approximately 154 feet, which is the height of the 14th-story vestibule and support space that would be provided for common roof access) and other portions of the building enlarged to a maximum height of 13 stories (approximately 141 feet) (see **Figures 4a and 4b**). The three smaller buildings (commercial buildings of 4 to 5 stories and 39 to 53 feet) would not have any change in bulk or use[3]. Following the proposed conversion and enlargement, Projected Development Site 2 would contain approximately 464,710 gsf (6.11 FAR), of which approximately 278,390 gsf would be residential use (approximately 269 units), with 54 to 81 affordable units depending on the MIH option selected, 171,320 gsf would be commercial and/or community facility use, and 15,000 gsf would be accessory residential parking. Based on potential layout, unit mix and configuration of the residential units, average size of the loft-style units would be approximately 1,035 GSF. The proposed development would include 23 parking spaces, accessory to the residential use.

The Applicant intends for approximately 25 percent of the residential floor area in the building to be comprised of affordable units (approximately 67 units) at an average of 60 percent of Area Median Income (AMI) or lower),, in accordance with the Applicant's preferred Option 1 of the MIH Program, which would apply to the Development Site pursuant to the Applicant's proposed text amendment to Appendix F. Option 2 would require 30 percent of the floor area (approximately 81 units) for affordable housing at an average of 80 percent of AMI or lower; Option 3 would require 20 percent of the floor area (approximately 54 units) for affordable housing at an average of 40 percent of AMI or lower; and Option 4 requires 30 percent of the floor area (approximately 81 units) for affordable housing at an average of 115 percent of AMI. The three smaller buildings (commercial buildings of 4 to 5 stories and 39 to 53 feet) would not have any change in bulk or use.

The Proposed Actions would affect only the Applicant-controlled sites that comprise the Project Area, such that no development on other sites would be projected under the With-Action scenario. To ensure a conservative analysis of environmental effects, a Reasonable Worst Case Development Scenario for the proposed actions will be assessed, as described below.

C. REQUIRED APPROVALS

To facilitate the Proposed Development, the Applicant is proposing the following land use actions:

- A zoning map amendment to change the existing M2-1 district to M1-5A/R10A and M1-5A/R8A districts within a newly established Special Mixed Use District. The existing M2-1 zoning district is a manufacturing district which allows industrial and commercial use at a maximum FAR of 2.0, and does not allow residential use or most community facility uses. The proposed M1-5A/R10A and M1-5A/R8A districts would allow residential use and a range of appropriate light-industrial, commercial and community facility uses, subject to total maximum FARs of 12.0 and 7.2, respectively. The areas affected by the zoning map amendment are controlled by the Applicant.

[3] In June 2025, the Applicant entered into a lease agreement for 45,000 square feet to be occupied by a family-centric private membership club with vibrant spaces, programming, and amenities for parents and children in the 50 Columbia Heights building on Projected Development Site 2 (https://www.cimgroup.com/press-releases/cim-group-leases-45-000-square-feet-at-panorama-brooklyn-to-the-beginning-clubhouse-a-family-focused-membership-club). The club is anticipated to open in summer 2026.

- A zoning text amendment to establish a Special Mixed-Use District (MX) and to amend Appendix F of the Zoning Resolution (ZR) to establish the Project Area as an MIH area. Special Mixed-Use Districts are mapped in conjunction with paired M/R districts (like the ones that would be established by the proposed zoning map amendment) and are intended to encourage investment in mixed-residential and industrial neighborhoods by permitting the expansion and new development of an array of complementary residential and non-residential uses while protecting the public's health, safety and general welfare. MIH areas require a portion of new residential development to be permanently income-restricted to low- and/or moderate-income New Yorkers. The specific apportionment is determined based on which MIH Option is proposed and ultimately selected; the Applicant is proposing MIH Option 1, which would require approximately 25 percent of the residential floor area be permanently affordable.

Under the Proposed Actions, Projected Development Site 1 would be rezoned from the existing M2-1 district to a paired M1-5A/R10A zoning district, and Projected Development Site 2 would be rezoned from the existing M2-1 district to a paired M1-5A/R8A zoning district. The entire Project Area would be mapped within a Special Mixed Use District (MX) (see **Figure 5**).

In addition, pursuant to the proposed zoning text amendment, the Project Area would be designated as a MIH area and made subject to Option 1 of the MIH Program. Under Option 1, approximately 25 percent of the residential floor area in the Proposed Development would be affordable at a weighted average of 60 percent of AMI, as more particularly set forth in ZR Section 27-131(a)(3)(i).

BUILD YEAR

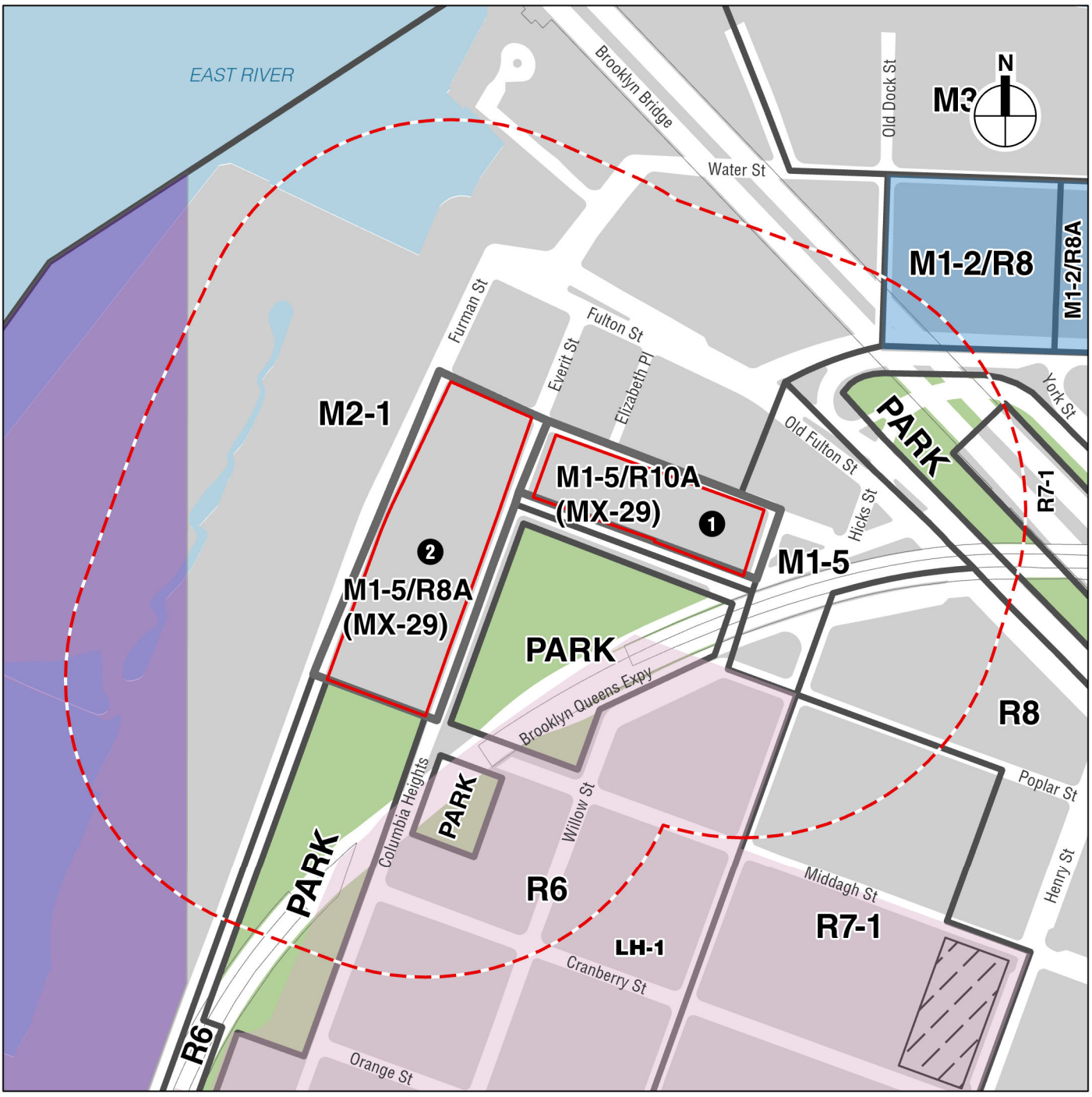
The analysis year assumes construction of the Proposed Development would commence in early 2027. It is estimated that construction of the Proposed Development would last approximately 31 months and would be completed in 2029. Accordingly, the EIS uses a build year of 2029.

D. PURPOSE AND NEED OF THE PROPOSED ACTIONS

The Applicant is proposing to reactivate two vacant and underutilized former industrial buildings with a mix of new market rate and affordable housing and local retail and office space adjacent to amenity rich neighborhoods and mass transit. The Development Site is improved with large, old, former industrial buildings that require substantial work and investment to bring them up to code and reactivate them. The Proposed Development would leverage market pressures for residential space to support these critical investments. However, it is not possible to develop the Proposed Development under current conditions given that the existing zoning precludes residential use.

The Proposed Actions would help facilitate critical investments that would support the reactivation of the Project Area. The Development Site buildings were first developed as a factory plant in the 1920's by E.R. Squibb & Sons Pharmaceutical before being adaptively reused by the Watchtower as offices, storage, a trade school, and a transient hotel. Old industrial buildings, such as these, were built and renovated over the years under outdated or non-existent building codes. These buildings were originally designed for commercial or industrial use, meaning they often lack the modern-day infrastructure such as updated plumbing, electrical systems, and insulation. Additionally, many of these structures feature outdated or non-compliant structural elements, such as inadequate fireproofing, limited accessibility, or insufficient ventilation. Compliance with current building codes for safety, energy efficiency, and accessibility can lead to substantial renovations

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Project Area
Projected Development Site
Study Area (400-foot perimeter)
Zoning District Boundary
C1-5
Limited Height District
Special Mixed Use District (MX-2)
Special Scenic View District
Park Boundary

0 400 FEET

Proposed Zoning

COLUMBIA HEIGHTS REZONING

Figure 5

at significant costs. The former Watchtower use vacated the Project Area in 2017, and between 2018 and 2020, the Applicant completed upgrades and repairs to elevators, façades, retail space, stairs, and mechanical systems that were designed and built to allow future tenants to customize their space and tie-in to the base building systems. Lease negotiations for office and retail space in the existing buildings were adversely affected by the COVID pandemic in 2020; in 2021, leasing activities on Projected Development Sites 1 and 2 were put on hold due to low demand and increasing availability at similar rates in more transit-friendly locations in Manhattan. The Applicant relaunched leasing efforts in early 2022, but as of 2024, the Brooklyn office market had not fully rebounded due to a large amount of low-priced, well-located space in Manhattan. Due to the expense of the 2018 to 2020 construction upgrades and carrying costs (e.g., interest and real estate taxes), the Applicant could not lease to many tenants at below market rates without adverse financial implications. A key success factor in NYC's revitalization of former industrial buildings has been their conversion to residential use. However, the current zoning does not allow residential use.

The Project Area has been zoned in the existing M2-1 district since the adoption of the Zoning Resolution in 1961. M2-1 districts generally allow commercial uses in Use Groups IV and VI through IX and manufacturing uses in Use Group X at a maximum FAR of 2.0. The standard height and setback regulations establish a maximum front wall height of 60 feet or 4 stories, whichever is less, with an initial setback distance of 20 feet and sky exposure plane of 2.7 to 1 on narrow streets and an initial setback distance of 15 feet and sky exposure plane of 5.6 to 1 on wide streets. The existing M2-1 district regulations do not allow residential uses, including affordable housing, which would constitute the primary use in the Proposed Development. In addition, the applicable floor area and height and setback regulations preclude an enlargement of the existing non-complying buildings and the physical alterations that would be needed to accommodate the proposed residential density on the Development Site.

As New York City’s economy and population continues to change, the City is challenged with addressing a shortage of all types of housing, especially apartments affordable to low- and moderate-income New Yorkers. Reinforced by a low rate of residential construction city-wide, there is a critical lack of housing that is affordable for lower- and moderate-income households. In recent decades, surrounding neighborhoods, like Brooklyn Heights, Cobble Hill, the Columbia Street Waterfront District, Carroll Gardens, and Boerum Hill, were contextually rezoned to limit development in keeping with the existing prevailing built form. At the same time, these neighborhoods experienced an increase in the number and size of designated historic landmarks and districts, which has increased the neighborhoods’ desirability and value, while further curtailing redevelopment opportunities. This in turn placed mounting pressure for new residential development in the relatively small areas where residential space exists and is allowed.

The Proposed Actions would promote the development of new housing alongside appropriate non-residential uses and facilitate mixed-income communities by requiring permanently affordable housing units be included in any new residential development. The proposed M1-5A/R10A(MX) district for 25 Columbia Heights would allow maximum FARs of 12.0 for residential use and 6.5 for commercial use, with a maximum base height of 155 feet and a maximum building height of 293 feet (increased from the standard maximum building height of 235 feet, since the zoning lot has a lot area of more than 20,000 sf)[4]. The proposed M1-5A/R8A(MX) district for 30

[4] Pursuant to the New York City Zoning Resolution Section 123-652, for zoning lots with a lot area greater than or equal to 20,000 square feet, a building may exceed the maximum building heights by 25 percent.

Columbia Heights would allow maximum FARs of 7.2 for residential use and 6.5 for commercial use, with a maximum base height of 155 feet and a maximum building height of 256 feet (increased from the standard maximum building height of 205 feet, since the zoning lot has a lot area of more than 20,000 sf). The proposed Special Mixed-Use District would allow an appropriate mix of light-industrial, commercial and residential use, and the establishment of an MIH area conterminous with the Project Area would ensure development of permanently income-restricted units. The proposed zoning would allow sufficient density and an overall building envelope for the former industrial buildings to be partially converted and enlarged with new market rate and affordable residential space.

Overall, the Proposed Actions are needed to facilitate the Proposed Development, which would advance the City's planning policies by introducing a substantial amount of new housing, including affordable housing, and neighborhood-enhancing commercial uses to the Project Area. The Proposed Development would bring new residents and workers to the Project Area, which would create a more active, safe, and inviting streetscape while also increasing the City's tax base.

E. ANALYSIS FRAMEWORK

Under CEQR, the lead agency is required to take a "hard look" at the environmental impacts of proposed actions and, to the maximum extent practicable, avoid or mitigate potentially significant adverse impacts on the environment, consistent with social, economic, and other essential considerations. An EIS is a comprehensive document used to systematically consider environmental effects, evaluate reasonable alternatives, and identify and mitigate, to the maximum extent practicable, any potentially significant adverse environmental impacts. The EIS provides a means for the lead and involved agencies to consider environmental factors and choose among alternatives in their decision-making processes related to a proposed action.

This section outlines the conditions to be examined in the EIS.

REASONABLE WORST CASE DEVELOPMENT SCENARIO (RWCDS)

In order to assess the possible effects of the Proposed Actions, a Reasonable Worst-Case Development Scenario (RWCDS) was developed to account for existing conditions, the Future without the Proposed Actions (the No Action condition), and the Future with the Proposed Actions (the With Action condition). The incremental difference between the future No Action and future With Action conditions serves as the basis for identifying potential environmental impacts, as described below.

NO ACTION CONDITION

Absent the proposed actions, the development area would be retenanted with complying commercial uses in the existing buildings. These uses are permitted under existing zoning and no discretionary actions would be required. Absent the opportunity for residential use that would be allowed by the proposed actions, the Applicant would lease space in the buildings for conforming commercial uses, consistent with market conditions.

WITH ACTION CONDITION

The Applicant's Proposed Development, as noted above, includes the partial conversion and enlargement of the former industrial buildings on Projected Development Sites 1 and 2. However, the Proposed Development would not utilize all floor area permitted under the proposed rezoning

on Projected Development Site 2. Therefore, to present a conservative analysis, a RWCDS was developed assuming full utilization of allowable FAR under the proposed zoning districts (see **Table 1 and Figures 6a and 6b**). The building bulk assumed for the RWCDS reflects the achievement of full FAR utilization with efficient and practicable floorplates that could reasonably be built.

The RWCDS on Projected Development Site 1 is the same as the Applicant's Proposed Development described above: it consists of the existing 295,980 gsf, 12-story commercial building being enlarged by approximately 162,590 gsf (6 stories) to a 17-story (210 feet), approximately 460,570 gsf building. The building would be renovated to include approximately 399,710 gsf residential use (392 dwelling units, including 79 to 118 affordable units depending on the MIH option selected, approximately 14,850 sf of commercial use and 46,010 gsf of parking (165 spaces), accessory to the residential use. Approximately 25 percent of the residential floor area in the building would comprise 98 affordable units, in accordance with the Applicant's preferred Option 1 of the MIH Program[5], which would apply to the Project Area pursuant to the Applicant's proposed text amendment to Appendix F. The building would be built to the maximum 12.0 FAR allowed under the proposed zoning and to a height of 210 feet.

The RWCDS for Projected Development Site 2 consists of the existing 13-story commercial building being renovated and enlarged by approximately 145,890 gsf and from 13 stories (141 feet) to 19 stories (205 feet). The zoning lot would include approximately 544,910 gsf, with approximately 358,590 gsf of residential use (324 dwelling units, including 65 to 98 affordable units depending on the MIH option selected), approximately 171,320 sf of commercial use, and 15,000 gsf of parking (23 spaces) accessory to the residential use. The three smaller buildings would not have any change in bulk or use (commercial buildings of 4 to 5 stories and 39 to 53 feet). Approximately 25 percent of the residential floor area in the building would comprise 81 affordable units, in accordance with the Applicant's preferred Option 1 of the MIH Program[6], which would apply to the Project Area pursuant to the Applicant's proposed text amendment to Appendix F. The zoning lot would be built to the maximum FAR of 7.2 allowed under the proposed zoning and to a building height of 205 feet.

Overall, the RWCDS for the EAS includes approximately 1,005,480 gsf of total development, consisting of approximately 758,300 gsf of new residential space (approximately 716 total dwelling units, of which approximately 144 to 216 would be permanently affordable units depending on the MIH option selected), approximately 186,170 gsf of local retail and office space, and 188 parking spaces. Three smaller commercial buildings (4 to 5 stories) on Projected Development Site 2 would remain unchanged in both bulk and use. Based on potential layout and

[5] Other options under MIH include: Option 2 which would require 30 percent of the floor area (approximately 118 units) for affordable housing at an average of 80 percent of AMI or lower; Option 3 which would require 20 percent of the floor area (approximately 79 units) for affordable housing at an average of 40 percent of AMI or lower; and Option 4 which would require 30 percent of the floor area (approximately 118 units) for affordable housing at an average of 115 percent of AMI.

[6] Other options under MIH include: Option 2 which would require 30 percent of the floor area (approximately 98 units) for affordable housing at an average of 80 percent of AMI or lower; Option 3 which would require 20 percent of the floor area (approximately 65 units) for affordable housing at an average of 40 percent of AMI or lower; and Option 4 which would require 30 percent of the floor area (approximately 98 units) for affordable housing at an average of 115 percent of AMI.

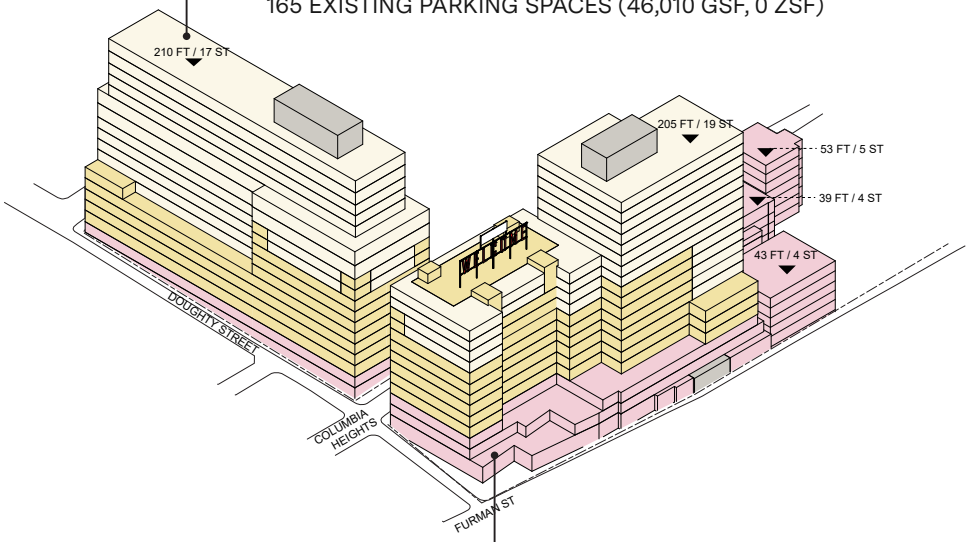
25 Columbia Heights

12.00 FAR - PROPOSED

460,570 GSF (379,510 ZSF)

14,850 GSF (12,240 ZSF) COMMERCIAL
399,710 GSF (367,270 ZSF) RESIDENTIAL

165 EXISTING PARKING SPACES (46,010 GSF, 0 ZSF)



Current Proposed
M1-5A/R10A (25 CH)
M1-5A/R8A (30 CH)

30 Columbia Heights

7.2 FAR - RWCDS

544,910 GSF (504,450 ZSF)

171,320 GSF (167,570 ZSF) COMMERCIAL
358,590 GSF (336,890 ZSF) RESIDENTIAL

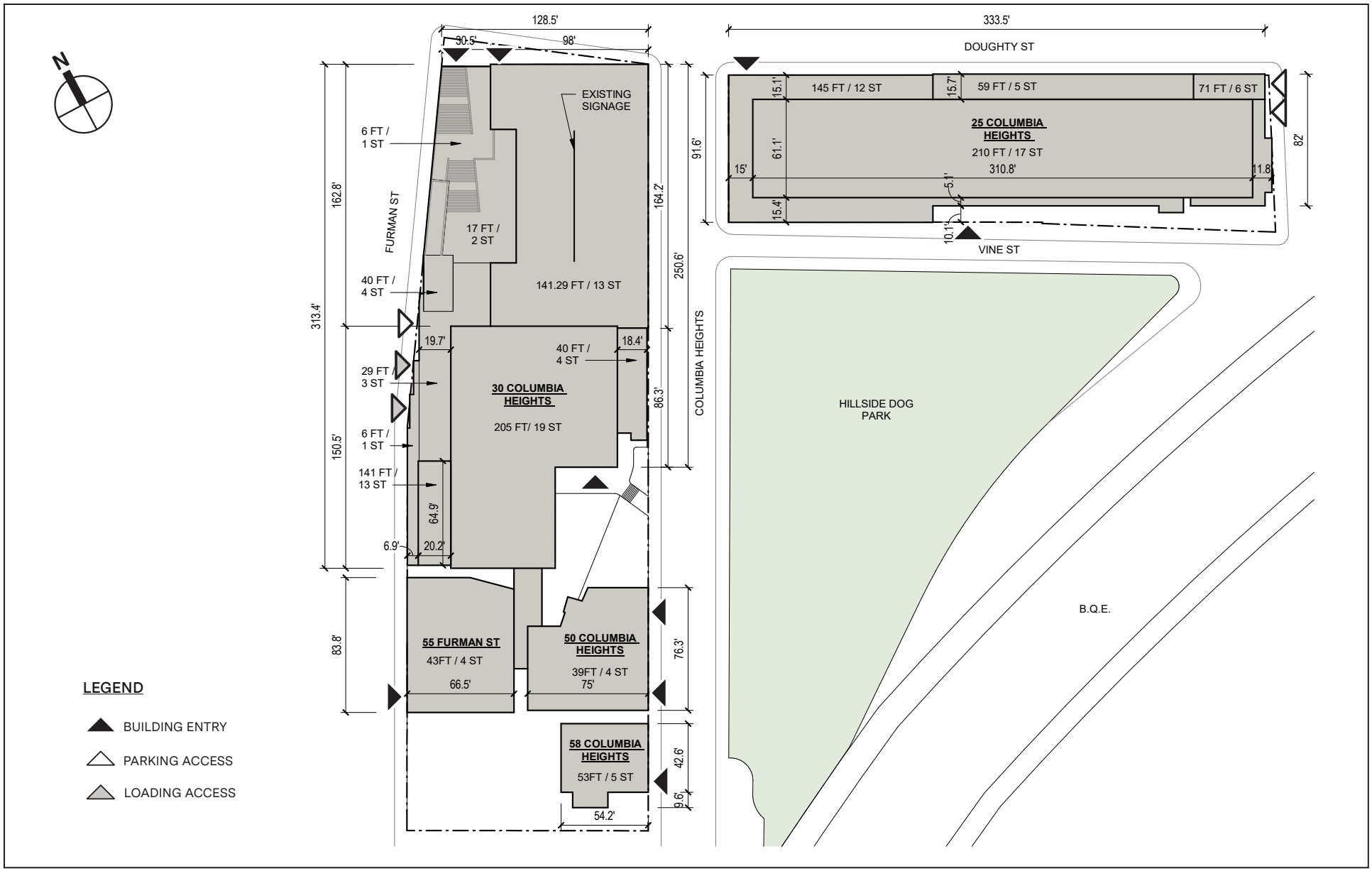
23 PARKING SPACES PROVIDED (15,000 GSF. 0 ZSF)

LEGEND

- RESIDENTIAL CONVERSION
- RESIDENTIAL ENLARGEMENT
- COMMERCIAL / COMMUNITY FACILITY
- MECH/BOH

Source: Morris Adjmi Architects

RWCDS Massing



Source: Morris Adjmi Architects

RWCDS Site Plan

Figure 6b

unit mix, the average unit size would be approximately 1,020 gsf and 1,100 gsf for Projected Development Sites 1 and 2, respectively.

Table 1
Reasonable Worst Case Develoment Scenario

	No-Action Condition			With-Action Condition			
Use	**Projected Development Site 1 (25 Columbia Heights)**	**Projected Development Site 2 (30 Columbia Heights)**	**Total**	**Projected Development Site 1 (25 Columbia Heights)**	**Projected Development Site 2 (30 Columbia Heights)**	**Total**	**Increment**
Residential GSF	-	-	0	399,710	358,590	758,300	758,300
Residential DUs	-	-	0	392	324	716*	716
Affordable DUs**	-	-	0	98 (Option 1) 79 to 118	81 (Option 1) 65 to 98	179 (Option 1) 144 to 216	179 (Option 1) 144 to 216
Commercial GSF	295,980	399,020	695,000	14,850	171,320	186,170	-508,830
Parking GSF	46,010	-	46,010	46,010	15,000	61,010	15,000
Parking Spaces	125	-	125	165	23	188	63
Total GSF	341,990	399,020	741,010	460,570	544,910	1,005,480	264,470
Population							
Residents			0			1,446	1,446
Works			2,596			745	-1,752

Notes:
* Based on potential layout, unit mix and configuration of the residential units, the average size of the loft-style units would be approximately 1,020 gsf on Projected Development Site 1and 1,100 gsf on Projected Development Site 2.
** The Applicant's preferred Option 1 of the MIH program would result in 179 affordable units; other options would result in 144 to 216 affordable units, depending on the option selected.
GSF = Gross Square Feet
DU = Dwelling
Sources: 25-30 Columbia Heights (Brooklyn), LLC

F. CITY ENVIRONMENTAL QUALITY REVIEW AND SCOPING

The New York City Department of City Planning (DCP), acting on behalf of the New York City Planning Commission (CPC), will be the lead agency for environmental review. Based on the Environmental Assessment Statement that has been prepared, the lead agency has determined that the Proposed Actions have the potential to result in significant adverse impacts, requiring that an EIS be prepared. Scoping is the first step in the preparation of the EIS and provides an early opportunity for the public and other agencies to be involved in the EIS process. It is intended to determine the range of issues and considerations to be evaluated in the EIS. The CEQR Technical Manual will serve as a general guide on the methodologies and impact criteria for evaluating the Proposed Actions' effects on the various areas of environmental analysis.

An EAS was completed on February 10, 2026. The EAS analyzes the Proposed Actions' potential to generate significant adverse environmental impacts. A Positive Declaration, issued on February 10, 2026 established that the Proposed Actions may have a significant adverse impact on the environment, thus warranting the preparation of an EIS.

The CEQR scoping process is intended to focus the EIS on those issues that are most pertinent to the Proposed Actions. The process allows other agencies and the public a voice in framing the scope of the EIS. The scoping document sets forth the analyses and methodologies that will be

utilized to prepare the EIS. During the period for scoping, those interested in reviewing the Draft Scope may do so and give their comments to the lead agency. The public, interested agencies, Brooklyn Community Board 2, and elected officials are invited to comment on the Draft Scope, either in writing or orally, at a public scoping meeting to be held on March 12, 2026. Comments received during the Draft Scope's public meeting and written comments received by 5:00 pm on March 23, 2026 will be considered and incorporated as appropriate into the Final Scope of Work (the Final Scope). The lead agency will oversee the preparation of the Final Scope, which will incorporate all relevant comments on the Draft Scope and revise the extent of methodologies of the studies, as appropriate, in response to comments made during scoping. The DEIS will be prepared in accordance with the Final Scope and in conformance with all applicable laws and regulations, including SEQRA (Article 8 of the New York State Environmental Conservation Law) and its implementing regulations found at 6 NYCRR Part 617, New York City Executive Order No. 91 of 1977, as amended, and the Rules of Procedure for CEQR, found at Title 62, Chapter 5, of the Rules of the City of New York.

Once the lead agency is satisfied that the DEIS is complete, the document will be made available for public review and comment. A public hearing will be held on the DEIS in conjunction with the CPC hearing on the land use applications to afford all interested parties the opportunity to submit oral and written comments. The record will remain open for 10 days after the public hearing to allow additional written comments on the DEIS. A Final EIS (FEIS) will be prepared that will respond to all substantive comments on the DEIS, along with any revisions to the technical analyses necessary to respond to those comments. The FEIS will then be used by decision makers to evaluate CEQR findings, which will address project impacts and proposed mitigation measures in deciding whether to approve the requested discretionary actions with or without modifications.

G. SCOPE OF WORK FOR THE EIS

As described above, the environmental review provides a means for decision-makers to systematically consider environmental effects along with other aspects of project planning and design, to evaluate reasonable alternatives, and to identify, and mitigate, where practicable, any significant adverse environmental impacts.

The EIS will contain the following:

- A description of the Proposed Actions and their environmental setting;
- A statement of the environmental impacts of the Proposed Actions, including short-and long-term effects and typical associated environmental effects;
- An identification of any adverse environmental effects that cannot be avoided if the Proposed Actions are implemented;
- A discussion of reasonable alternatives to the Proposed Actions;
- An identification of irreversible and irretrievable commitments of resources that would be involved if the Proposed Actions are implemented; and
- A description of measures proposed to minimize or fully mitigate any significant adverse environmental impacts.

The first step in preparing the EIS document is the public scoping process. Scoping is the process of focusing the environmental impact analysis on the key issues that are to be studied in the EIS. The proposed scope of work for each technical area to be analyzed in the EIS follows.

The EAS prepared for the Proposed Actions identified several technical areas in which the Proposed Actions would not have the potential to result in significant adverse impacts. Based on the EAS, the Proposed Actions do not meet the criteria warranting analysis of natural resources, solid waste and sanitation services, and energy, and no significant adverse impacts to these technical areas would occur with the Proposed Actions. As outlined below, analyses have been prepared for the EAS:

- EAS Attachment A—Project Description and Additional Information
- EAS Attachment B—Land Use, Zoning, and Public Policy;
- EAS Attachment C—Socioeconomic Conditions;
- EAS Attachment D—Community Facilities and Services
- EAS Attachment E—Open Space;
- EAS Attachment F—Shadows;
- EAS Attachment G—Historic and Cultural Resources;
- EAS Attachment H—Urban Design and Visual Resources;
- EAS Attachment I—Hazardous Materials; and
- EAS Attachment J—Water and Sewer Infrastructure.

As detailed in the EAS attachments, no significant adverse impacts were identified for socioeconomic conditions, community facilities and services, open space, shadows, historic and cultural resources, urban design and visual resources, natural resources, water and sewer infrastructure, solid waste and sanitation, and energy; therefore, no further analysis in these technical areas is warranted.

The EIS will include detailed analysis in the technical areas where the Proposed Actions would potentially result in significant adverse impacts, based on the findings of the EAS. DCP determined that the Proposed Actions could have the potential for significant adverse environmental impacts in the areas listed below. Therefore, a detailed assessment of likely effects in those areas will be prepared and disclosed in the EIS. The scope of work and the proposed impact assessment criteria below are based on the methodologies and guidance set forth in the *CEQR Technical Manual*.

PROJECT DESCRIPTION

The Project Description will identify and explain the Proposed Actions and the purpose and need for the Proposed Actions. It will also describe the Proposed Development. It will contain a brief discussion of current conditions in the Project Area and in the surrounding area; the No Action Condition; the Proposed Development, including a description of the proposed site plan and the height and bulk of the proposed buildings; and figures to depict the Proposed Development. It will also include description of the approvals required and the approvals process. The RWCDS and analytical framework will also be included in this chapter. The figures will present key project elements, such as a site/ground floor plan, elevations, and views of the project in its neighborhood context.

The Project Description will include appropriate materials from the Uniform Land Use Review Procedure (ULURP) application. It will describe the role of the lead agency for CEQR as well as the environmental review and ULURP processes.

LAND USE, ZONING, AND PUBLIC POLICY

The Proposed Actions include a zoning map amendment and zoning text amendment. As described in the EAS, the Proposed Actions would not result in any significant adverse impacts to land use and zoning. However, in accordance with *CEQR Technical Manual* guidance, the EIS will provide a brief description of land use, zoning, and public policy for the Project Site and a 400-foot study area for existing, No Action, and With Action conditions to inform the remainder of the environmental review. The Project Area is located within the New York City Coastal Zone (see **Figure 7**); therefore, a Waterfront Revitalization Program (WRP) analysis will be provided in the EIS.

HAZARDOUS MATERIALS

This chapter will address the potential presence of hazardous materials, petroleum products, and/or other environmental concerns on the property, as well as necessary measures that would be required, either prior to or during construction and/or operation of the Proposed Development, to avoid significant adverse effects.

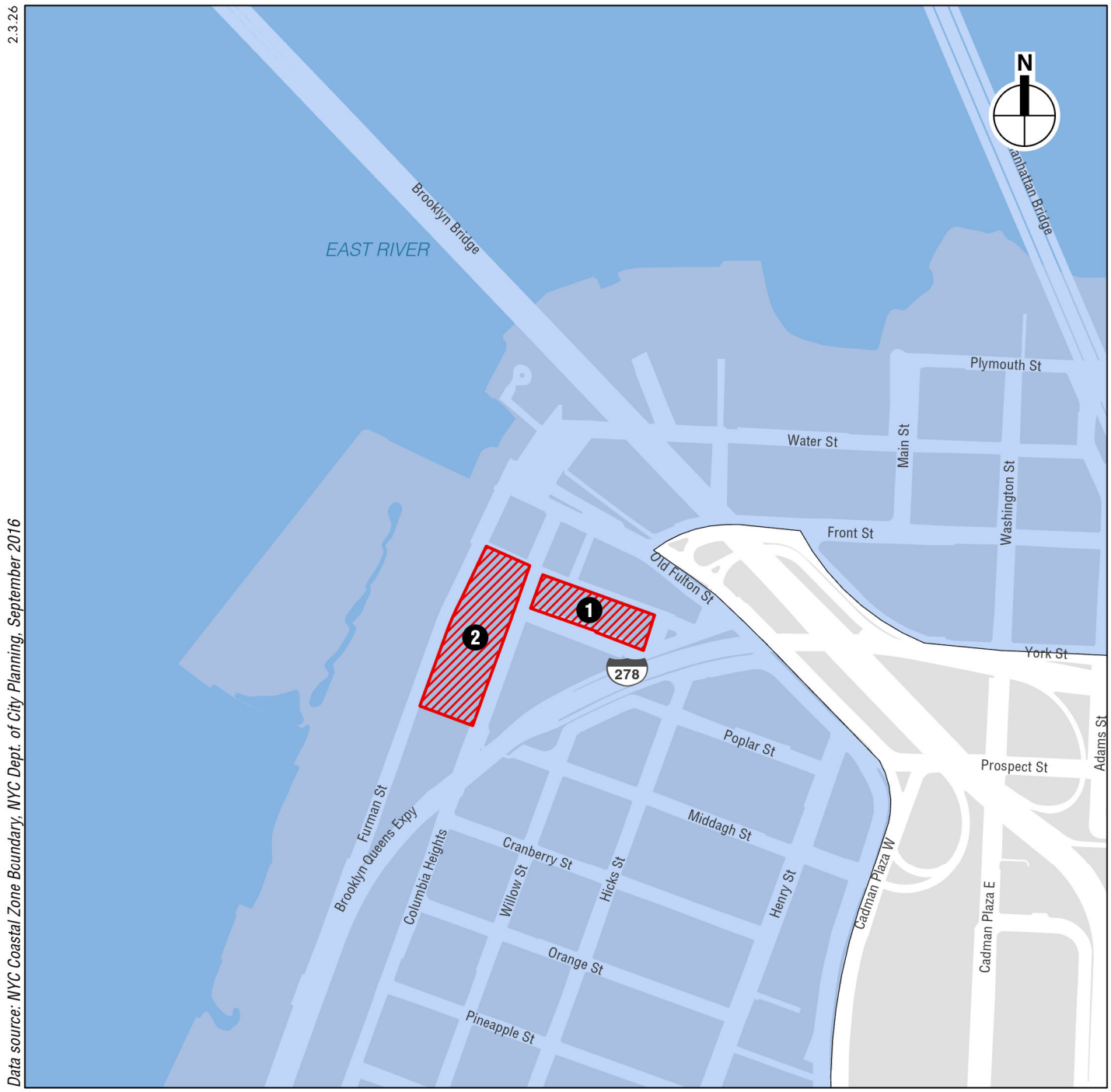
In accordance with guidance presented in the *CEQR Technical Manual*, a Phase I Environmental Site Assessment (ESA) has been prepared and is summarized in EAS Attachment I, “Hazardous Materials.” In a letter to DCP dated October 28, 2025, DEP requested that a Subsurface (Phase II) Investigation be performed based on the Phase I ESA findings and in accordance with a DEP-approved sampling protocol (see DSOW Appendix 1, "Agency Correspondence.")Based on the results of the Phase I ESA, the lead agency, and the New York City Department of Environmental Protection (DEP) may require implementation of a Phase II Subsurface Investigation (laboratory analysis of soil, groundwater, and soil vapor samples) during the CEQR process. In advance of conducting the testing, a Work Plan for the investigation will need to be submitted to the agencies for approval. Following completion of the Phase II investigation, an E-Designation for hazardous materials, in accordance with the *CEQR Technical Manual*, Section 11-15 (Environmental Requirements) of the Zoning Resolution of the City of New York and Chapter 24, Title 15, of the Rules of the City of New York governing the placement of (E) Designations, would be placed on the Project Area tax lots to ensure that the applicant completes the remediation in accordance with the requirements of the New York City Mayor’s Office of Environmental Remediation (OER).

TRANSPORTATION

Based on the *CEQR Technical Manual*, further transportation analyses may be warranted if a proposed action is anticipated to result in an incremental increase of 50 or more vehicle trips, 50 or more Citywide Ferry Service trips, and/or 200 or more transit/pedestrian trips during a given peak hour. A detailed transportation screening assessment and any required analysis will be provided in the Transportation chapter of the EIS and will be subject to review and approval by the lead agency and, potentially, involved expert agencies, such as DOT or MTA. The specific transportation analysis tasks to be undertaken as part of this environmental review are outlined below.

TRAVEL DEMAND PROJECTIONS AND SCREENING ASSESSMENTS

The transportation analyses for the EIS will be included in the Transportation chapter of the EIS and will assess potential impacts associated with trip increments that could occur as a result of the Proposed Project. Travel demand projections will be prepared for the Proposed Project based on the RWCDS shown in Table 1 above using standard sources, such as the *CEQR Technical Manual*, U.S. census data, approved studies, and other references. The estimates will be used to prepare the Level 1 (Trip Generation) and Level 2 (Trip Assignment) transportation screening



NYC Coastal Zone Boundary

COLUMBIA HEIGHTS REZONING

Figure 7

assessments as warranted, as prescribed in the *CEQR Technical Manual*. If the Level 2 assessment is found to be warranted, an inventory of the area's existing parking supply and utilization (within ¼-mile from the Proposed Project) will be undertaken to determine likely locations where project-generated auto trips would be accommodated. The projected trips (by auto/taxi, transit, or walk/bike, and deliveries, etc.) would be assigned to the area's transportation network to identify any specific transportation elements that would be subject to further detailed analyses, pursuant to the screening thresholds described below. The Applicant will prepare a Draft Travel Demand Factors (TDF) memorandum preliminarily assessing the above thresholds. The findings of these assessments, along with relevant documentation and graphics, will then be summarized in the Transportation chapter of the EIS for review and concurrence by the lead agency and, potentially, involved expert agencies, such as DOT or MTA.

Traffic

Per the *CEQR Technical Manual*, detailed traffic analyses may be warranted if the Proposed RWCDS is anticipated to surpass Level 1 and Level 2 screening thresholds resulting in an incremental increase of 50 or more peak hour vehicle trips at any intersection during any analysis peak hour. Further traffic analyses will be conducted for any such intersections in the Transportation chapter of the EIS to identify the potential for any intersections to have significant adverse impacts resulting from the RWCDS. If significant impacts are identified in the Transportation chapter, the Mitigation chapter of the EIS will identify transportation improvement measures to mitigate the significant impacts, to the extent feasible, pursuant to the guidelines presented in the *CEQR Technical Manual*.

Transit and Citywide Ferry Service

According to the *CEQR Technical Manual*, further evaluation of subways/rail may be warranted if the RWCDS would surpass Level 1 screening and generate 200 or more passengers at a subway/rail station or on a subway/rail line during any analysis peak hour, the Level 2 transportation screening assessment threshold. Further evaluation of buses may be warranted if the RWCDS would surpass Level 1 screening and generate 50 or more bus trips in a single direction on a single route during any analysis peak hour, the Level 2 transportation screening assessment threshold. Further evaluation of Citywide Ferry Service may be warranted if the RWCDS would surpass Level 1 and Level 2 screening and generate 25 or more passenger ferry trips in a single direction on a single route and/or 50 or more passengers at a ferry landing during any analysis peak hour. Further transit and Citywide Ferry Service analyses will be conducted in the Transportation chapter of the EIS to identify the potential for any transit elements, i.e., subway station elements, subway lines, or bus/Citywide Ferry Service routes, to have significant adverse impacts resulting from the Proposed Project. If significant impacts are identified in the Transportation chapter, the Mitigation chapter of the EIS will identify transportation improvement measures to mitigate the significant impacts, to the extent feasible, pursuant to the guidelines presented in the *CEQR Technical Manual*.

Pedestrians

Consistent with the *CEQR Technical Manual*, further pedestrian analyses may be warranted if the RWCDS is anticipated to result in an incremental increase of 200 or more peak hour pedestrian trips on any pedestrian elements, i.e., sidewalks, corner reservoir areas, or crosswalks, during any analysis peak hour, the Level 2 transportation screening assessment threshold. For any locations exceeding the screening thresholds, further pedestrian analyses will be conducted in

the Transportation chapter of the EIS to identify the potential for any pedestrian elements to have significant adverse impacts resulting from the RWCDS. If significant impacts are identified in the Transportation chapter, the Mitigation chapter of the EIS will identify transportation improvement measures to mitigate the significant impacts, to the extent feasible, pursuant to the guidelines presented in the *CEQR Technical Manual*.

Street User Safety Assessment

Per the *CEQR Technical Manual*, a pedestrian, bicycle, and vehicular safety assessment is warranted at any intersection that also undergoes detailed traffic or pedestrian analysis, as well as any nearby Vision Zero intersections or corridors identified by DOT. The safety assessments will include an analysis of historic crash data for pedestrian, bicycle, and vehicle crashes, identification of any high pedestrian/bicycle crash locations, as prescribed by the *CEQR Technical Manual,* and include an inventory of existing safety treatments and identification of safety countermeasures at high crash locations.

Parking

Based on the *CEQR Technical Manual*, a parking study is warranted if detailed traffic analyses are conducted. The parking study will assess the parking demand of the Proposed Action, compare it to on-site and off-site parking resources within ¼-mile of the Proposed Project, and identify and quantify any expected parking shortfalls. Since the Proposed Project is located in Brooklyn in an area called Downtown Brooklyn Parking Zone 2 according to the *CEQR Technical Manual*, the inability of the on-site and off-site parking resources in the surrounding area to accommodate the Proposed Project's future parking demands is considered a parking shortfall but is generally not considered a significant adverse parking shortfall due to the magnitude of available alternative modes of transportation.

AIR QUALITY

See also DSOW Appendix 1, "Methodology Memoranda."

MOBILE SOURCE ANALYSIS

The number of RWCDS-generated vehicle trips is not anticipated to exceed the *CEQR Technical Manual* carbon monoxide (CO) or fine particulate matter ($PM_{2.5}$) analysis screening thresholds referenced in the *CEQR Technical Manual*. Therefore, a microscale analysis of CO and PM mobile source emissions is not anticipated to be required.

Compared with the No Action condition, the Proposed Actions would result in an increase of 40 parking spaces for Projected Development Site 1 and 23 spaces for Projected Development Site 2. The increase in the number of parking spaces would not exceed the 85-space threshold for conducting a quantified analysis, either for the individual parking facilities or the total parking capacity. Therefore, an analysis of CO and PM emissions from the proposed parking facilities is not required.

The Development Site lies within 200 feet of the Brooklyn-Queens Expressway (BQE). Therefore, the effect of this existing roadway on the Proposed Development will be analyzed. Vehicular emissions for the dispersion modeling will be computed using EPA's MOVES5 model. Re-suspended road dust emission factors will be computed based on CEQR guidance and the EPA procedure defined in AP–42. The refined U.S. Environmental Protection Agency (EPA) AERMOD model will be used to predict the maximum CO and $PM_{2.5}$ concentrations, consistent with current

EPA modeling guidance. Future pollutant levels will be compared with the CO and $PM_{2.5}$ NAAQS to determine the impacts on the Proposed Project.

STATIONARY SOURCE ANALYSIS

Heating and Hot Water Systems

In 2021, the New York City Council passed a bill, Local Law 154, that effectively bans the installation of most new natural gas and other fossil fuel-fired systems in buildings in New York City. In addition, the design of the proposed buildings must meet the applicable provisions of the New York City Energy Conservation Code and demonstrate consistency with the City's carbon intensity limits established pursuant to Local Law 97 of 2019. It is anticipated that the project buildings would utilize electric heating and hot water systems. Therefore, no analysis of the Proposed Project's heating and hot water systems is required. An Air Quality (E) Designation would be proposed for each site, describing the required use of electric-powered equipment for heating and hot water systems.

Industrial Source Emissions

An analysis of uses surrounding the Project Area will be conducted to determine the potential for impacts from existing or proposed industrial emissions. A field survey will be performed to determine if there are any manufacturing or processing facilities within 400 feet of potential new sensitive receptors within the Project Area. In addition, a search of federal and state air permits, and the DEP's Bureau of Environmental Compliance (BEC) files will be performed to determine if there are permits for any sources of toxic air compounds from industrial processes. If manufacturing or processing facilities are identified within 400 feet of the Project Area, an industrial stationary source air quality analysis, as detailed in the CEQR Technical Manual, will be performed. EPA's AERMOD refined dispersion model will be used to estimate the short-term and annual concentrations of critical pollutants at sensitive receptor locations. Predicted values for non-criteria pollutants will be compared with the short-term guideline concentrations (SGC) and annual guideline concentrations (AGC) reported in NYSDEC's DAR-1 AGC/SGC Tables guidance document while criteria pollutants will be compared to NAAQS to determine the potential for significant impacts.

Large or Major Sources Assessment

A review was performed to identify any federal or state-permitted facilities within 1,000 feet of potential new sensitive receptors within the Project Area (large and major sources of emissions, as described in the *CEQR Technical Manual*). No facilities with a State Facility, Title V, or PSD Permit within the 1,000-foot study area around the Development Site were identified. Therefore, no analysis of the potential impacts of large or major sources of emissions on the Proposed Project is required.

GREENHOUSE GASES AND CLIMATE CHANGE

According to the *CEQR Technical Manual*, a greenhouse gas (GHG) emissions assessment is typically conducted for larger projects (350,000 sf or greater) subject to an EIS. Relevant GHG emissions standards include those set forth in Local Law 97 of 2019, which sets emission caps for most buildings larger than 25,000 sf beginning in 2024, New York City's commitment to achieve carbon neutrality by 2050 (as described OneNYC 2050), and the Climate Leadership and Community Protection Act (CLCPA), which requires New York State to reduce economy-wide greenhouse gas emissions 40 percent by 2030 and no less than 85 percent by 2050 from 1990

levels. A detailed analysis of greenhouse gas emissions from the Proposed Project will be conducted to confirm that the Proposed Project would be consistent with guidelines provided in the *CEQR Technical Manual*, Local Law 97, and the CLCPA, as well as with New York City's GHG reduction goals established under PlaNYC and OneNYC 2050. Features of the Proposed Project that demonstrate consistency with the GHG reduction goals will be described. Relevant measures to reduce energy consumption and GHG emissions that could be incorporated into the Proposed Project will be discussed, and the potential for those measures to reduce GHG emissions will be assessed to the extent practicable, and measures that would be considered as part of the Proposed Project to make it more resilient to the potential effects climate change will be disclosed.

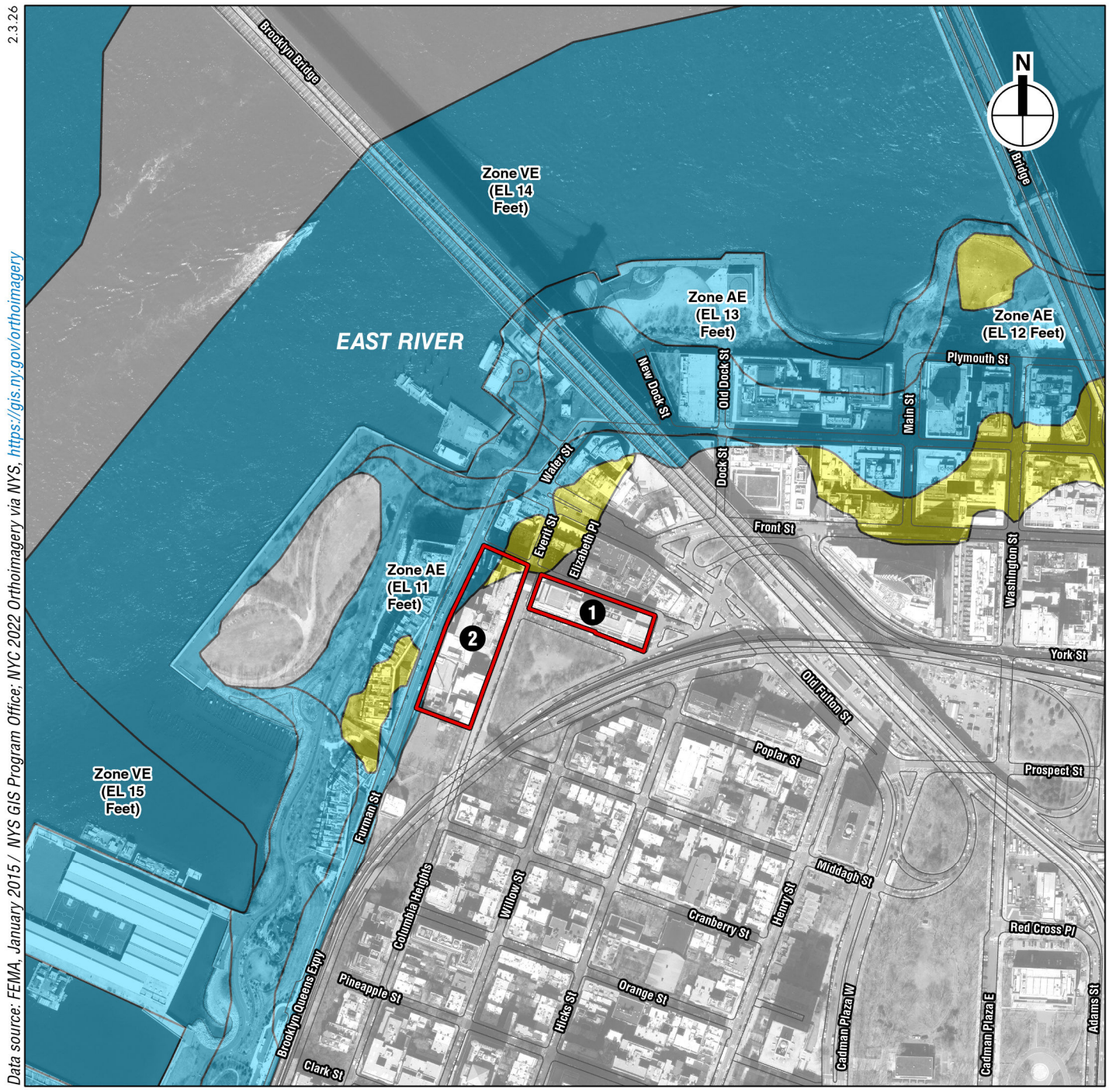
GHG emissions generated by the Proposed Project will be quantified during both the construction and operational phases. Operational phase emissions will be estimated for the analysis year and reported as carbon dioxide equivalent (CO_2e) metric tons per year. GHG emissions other than carbon dioxide (CO_2) will be included if they would account for a substantial portion of overall emissions, adjusted to account for the global warming potential. In addition, estimates of upstream emissions (associated with the extraction and transport of fuel that would be directly consumed at the project and transport of materials to the Project Area) will be included, where appropriate.

As a portion of the Project Area is located in a flood hazard zone (see **Figure 8**), the potential effects of climate change on the Proposed Project will be evaluated. The discussion will focus on the current and projected conditions of sea level rise, changes in storm frequency and intensity projected to result from global climate change, increased precipitation, and change in heat impacts. The potential future impacts of those changes on the Proposed Project's infrastructure and uses will also be discussed.

NOISE

The noise analysis will examine impacts of existing noise sources (e.g., vehicular traffic from adjacent roadways and nearby playgrounds) on the proposed noise-sensitive uses and the impacts of project-generated traffic on nearby noise-sensitive land uses. This will include noise monitoring to determine existing ambient noise levels. For CEQR purposes, it is assumed that a detailed analysis of the proposed development's mechanical equipment will not be required, because any heating, ventilation, and air conditioning (HVAC) equipment would be designed to meet applicable regulations. Consequently, the noise analysis will examine existing noise levels in the project area and the window/wall attenuation that would be required to provide acceptable interior noise levels at the Proposed Development. The subtasks are as follows:

- *Select appropriate noise descriptors.* Based upon CEQR criteria, the noise analysis will examine the 1-hour equivalent (L_{eq}) and the L_{10} noise levels.
- *Screening Analysis.* Perform a screening analysis to determine whether there are any locations where there is the potential for the Proposed Actions to result in significant noise impacts (e.g., doubling of Noise Passenger Car Equivalents) due to project-generated traffic. If the results of the traffic study indicate that a doubling of traffic would occur, a mobile source noise analysis would be performed.
- *Select receptor locations.* Receptor sites analyzed will include locations where high existing ambient noise levels could adversely affect new residential and other sensitive uses associated with the Proposed Project.



FEMA Preliminary FIRM 2015

COLUMBIA HEIGHTS REZONING

Figure 8

- *Determine existing noise levels.* At two elevated receptor locations, 24-hour continuous noise level measurements during the weekday will be conducted, while 20-minute measurements will be performed during typical weekday AM, midday, and PM peak periods at the remaining receptor locations, as detailed in DSOW Appendix 1, "Noise Methodology Memorandum." Hourly L_{eq}, L_1, L_{10}, L_{50}, and L_{90} values will be recorded. The specific methodology and technical approach for the establishment of existing condition noise levels are described in a memorandum to be submitted to the lead agency for comment and approval.
- *Determine future noise levels without the Proposed Actions*. At each of the receptor locations identified above, determine noise levels without the Proposed Actions using existing noise levels, acoustical fundamentals, and mathematical models.
- *Determine future noise levels with the Proposed Actions.* At all of the receptor locations identified above, determine noise levels with the Proposed Actions, including contribution from mobile noise sources (i.e., nearby traffic) and stationary sources (i.e., newly introduced playgrounds) using existing noise levels, acoustical fundamentals, and mathematical models.
- *Determine amount of building attenuation required.* The level of building attenuation necessary to satisfy CEQR requirements is a function of the exterior noise levels, and will be determined. Projected future noise levels will be compared to appropriate standards and guideline levels. As necessary, general noise attenuation measures needed for the project building to achieve compliance with standards and guideline levels will be recommended. As the entire Project Area would be mapped within a Special Mixed Use District under the Proposed Actions to which ZR Section 123-32 would apply, residential dwelling units would be required to provide a minimum of 35 dBA window/wall attenuation and alternate means of ventilation such that interior noise levels would be no greater than 45 dBA. If required, an enforceable legal mechanism will be proposed to memorialize building attenuation requirements, such as (E) designations placed where applicable, pursuant to ZR Section 123-32.

PUBLIC HEALTH

According to the *CEQR Technical Manual*, a public health analysis is warranted if a project would result in a significant unmitigated adverse impact in other CEQR analysis areas, such as air quality, water quality, hazardous materials, or noise. If unmitigated significant adverse impacts are identified in any of these technical areas, and the lead agency determines that a public health assessment is warranted, an analysis will be provided for the specific technical area or areas, in accordance with *CEQR Technical Manual* guidelines.

NEIGHBORHOOD CHARACTER

Neighborhood character is determined by a number of factors, such as 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 a preliminary assessment of neighborhood character. This assessment would include:

- Based on other technical analyses, describe the predominant factors that contribute to defining the character of the neighborhood surrounding the Project Area.
- 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 Actions.

- Evaluate whether the Proposed Actions have the potential to affect these defining features. Either through the potential for a significant adverse impact or a combination of moderate effects in the relevant technical areas.

If required based on the preliminary assessment, a detailed assessment of the Proposed Actions' effects on neighborhood character will be prepared.

CONSTRUCTION

Construction impacts, though temporary, can have a disruptive and noticeable effect on the adjacent community, as well as people passing through the area. The construction impact assessment will evaluate the duration and severity of the disruption and inconvenience to nearby areas. The construction assessment will focus on areas where construction activities may pose specific environmental problems. This assessment will describe the anticipated construction schedule and logistics, discuss on-site activities, and provide estimates of construction workers and truck deliveries.

Because the construction duration of the proposed project is anticipated to be long-term (i.e., greater than two years, in accordance with the *CEQR Technical Manual*), would involve the construction activities at multiple buildings, and the construction activities would occur in proximity to sensitive receptors (i.e., residences), the Proposed Project could have substantial and extended construction effects. Large-scale developments near sensitive receptor locations with a construction duration longer than two years typically require a quantitative assessment of the potential impacts of construction activities on air quality and noise. See also DSOW Appendix 1, "Methodology Memoranda."

Technical areas to be assessed include the following:

Transportation Systems. This assessment will consider closures or reduced widths in travel lanes, parking lanes, and sidewalks, losses in off-street parking supply and construction worker parking demand, and effects on other transportation services (i.e., transit and pedestrian circulation) during the construction period and identify the increases in person trips and vehicle trips from construction workers and trucks. Issues concerning construction truck staging and construction worker site access points will also be addressed. Based on the trip projections of activities associated with peak construction for the Proposed Project, an assessment of potential transportation impacts during construction will be provided. Following the Travel Demand Projections and Screening Assessment methodology detailed above under "Transportation," the assessment will include Level 1 (Trip Generation) and Level 2 (Trip Assignment) analyses to determine if the *CEQR Technical Manual* quantified transportation analyses thresholds (50 or more vehicle trips, 50 or more Citywide Ferry Service trips, and/or 200 or more transit/pedestrian trips during a given peak hour) are exceeded. A separate detailed analysis will be undertaken if this effort identifies such a need or if the project's construction activities would require closing, narrowing, or otherwise impeding moving lanes, roadways, key pedestrian facilities (e.g., sidewalks, crosswalks, corners/corner reservoirs), parking lanes and/or parking spaces in on-site or nearby parking lots and garages, bicycle routes and facilities, bus lanes or routes, or access points to transit in such a manner that determines that detailed analyses are needed, pursuant with the guidelines presented in the *CEQR Technical Manual*. The findings of these assessments, along with relevant documentation and graphics, will then be summarized in the Construction chapter of the EIS. If detailed transportation analyses are conducted and significant impacts are identified in the Construction chapter, the Mitigation chapter of the EIS will identify construction

period transportation improvement measures to mitigate the significant impacts, to the extent feasible, pursuant to the guidelines presented in the *CEQR Technical Manual*.

- ***Air Quality.*** A detailed dispersion analysis of construction sources will be performed to determine the potential for air quality impacts on sensitive receptor locations. Air pollutant sources would include combustion exhaust associated with non-road construction engines (e.g., cranes, excavators) and trucks operating on-site, construction-generated traffic on local roadways, as well as onsite activities (e.g., excavation, demolition) that generate dust. The pollutants of concern include CO, PM, and NO_2. The potential for significant impacts will be determined by a comparison of the model predicted concentrations to the National Ambient Air Quality Standards (NAAQS), or by comparison of the predicted increase in concentrations to applicable New York City *de minimis* criteria. The air quality analysis will also include a discussion of the strategies to reduce project-related air pollutant emissions associated with construction activities.
- ***Noise and Vibration.*** This section will contain a quantitative (modeling) analysis of noise from the Proposed Project's construction activity. Appropriate recommendations will be made to comply with DEP Rules for Citywide Construction Noise Mitigation and the New York City Noise Control Code. The detailed analysis will estimate construction noise levels based on projected activity and equipment usage for various stages of construction on the project sites. The projected construction noise levels will be compared to existing condition noise levels as determined by the operational noise analysis. The noise analysis will identify potential construction noise impacts based on the intensity, duration, and location of emissions relative to nearby sensitive locations. As necessary, feasible and practicable project-specific control measures to further reduce construction noise disruption to the surrounding community will be considered.

Construction activities have the potential to result in vibration levels that may result in structural or architectural damage, and/or annoyance or interference with vibration-sensitive activities. A construction vibration assessment will be performed. This assessment will determine critical distances at which various pieces of equipment may cause damage or annoyance to nearby buildings based on the type of equipment, the building construction, and applicable vibration level criteria. Should it be necessary for certain construction equipment to be located closer to a building than its critical distance, vibration mitigation options will be proposed.

- ***Other Technical Areas.*** As appropriate, discuss other areas of environmental assessment for potential construction-related impacts, including but not limited to: historic and cultural resources, hazardous materials, open space, socioeconomic conditions, community facilities, and land use and neighborhood character.

EFFECTS ON DISADVANTAGED COMMUNITIES

Section 8-0109(2)(k) of the New York State Environmental Conservation Law requires that an EIS include a statement of the effects of any proposed action on disadvantaged communities, including whether the action may cause or increase a disproportionate pollution burden on a disadvantaged community. An assessment will be prepared to comply with Section 8-0109(2)(k) in accordance with the *CEQR Technical Manual* and any relevant regulations or guidance from DEC in effect at the time of DEIS preparation. The assessment will address any potential adverse

impacts on disadvantaged communities[7] that could result from the Proposed Project. The assessment will establish the study area, identify potential adverse environmental impacts, and determine whether potential adverse environmental impacts are likely to result in a disproportionate pollution burden on a disadvantaged community, recognizing that different geographic areas experience different levels of existing social vulnerabilities and environmental burdens. The existing environmental burden on any disadvantaged communities within ½-mile of the Project Site will be described and the potential for any disproportionate pollution burden will be evaluated.

ALTERNATIVES

The purpose of an Alternatives analysis in an EIS is to examine reasonable and feasible options that avoid or reduce project-related significant adverse impacts, while achieving the goals and objectives of the Proposed Project. The alternatives are usually defined once the full extent of the Proposed Project's impacts have been identified. However, the alternatives analyzed must include a No Action Alternative, as required by CEQR. The chapter may also include an alternative(s) that reduces any significant adverse impacts identified in the EIS analyses. If the Proposed Project results in unmitigated significant adverse impacts, the EIS would also include a No Unmitigated Impacts Alternative. The alternatives analyses will be qualitative, except where significant adverse impacts of the Proposed Project have been identified, or if an alternative with fewer overall impacts would nevertheless have new significant adverse impacts.

MITIGATION

Where significant impacts have been identified in the analyses discussed above, measures will be described to mitigate those impacts. This chapter will describe the practicable measures that could mitigate those impacts. These measures will be developed and coordinated with the responsible City and/or State agencies, as necessary. Where impacts cannot be fully mitigated, they will be disclosed as unavoidable adverse impacts.

EIS SUMMARY CHAPTERS

In accordance with the *CEQR Technical Manual*, the EIS would include the following summary chapters, where appropriate to the Proposed Actions:

- Unavoidable Adverse Impacts: which summarizes any significant adverse impacts that are unavoidable if a proposed action is implemented regardless of the mitigation employed (or if mitigation is impossible).
- Growth-Inducing Aspects of the Proposed Actions: which generally refer to "secondary" impacts of a proposed action that trigger further development.
- Irreversible and Irretrievable Commitments of Resources: which summarizes a proposed action and its impacts in terms of the loss of environmental resources (loss of vegetation, use of fossil fuels and materials for construction, etc.) both in the immediate future and long term.

[7] ECL § 75-0101(5) defines disadvantaged communities as communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socio-economic criteria, or comprise high-concentrations of low- and moderate- income households.

- Executive Summary: which will summarize relevant material from the body of the EIS to describe the Proposed Actions, their environmental impacts, measures to mitigate those impacts, and alternatives to the Proposed Actions. ✷

Appendix 1
Agency Correspondence

Environmental Protection

Rohit T. Aggarwala
Commissioner

Angela Licata
Deputy Commissioner
Sustainability

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Flushing, NY 11373

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October 28, 2025

Stacey Barron
Associate Project Manager
Environmental Assessment and Review Division
New York City Department of City Planning
120 Broadway, 31st Floor
New York, NY 10271

Re: Columbia Heights Rezoning
25 and 30 Columbia Heights
Block 204, Lot 1 and Block 208, Lots 1, 2, and 12
CEQR # 78DCP163K

Dear Ms. Barron:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the September 2025 Environmental Assessment Statement (EAS) hazardous materials section and the September 2025 Phase I Environmental Site Assessment (Phase I), prepared by AKRF, Inc., on behalf of 25-30 Columbia Heights (Brooklyn), LLC (applicant), for the above referenced project. It is our understanding that the applicant is seeking a zoning map amendment and zoning text amendment from the New York City Department of City Planning (DCP) to facilitate a mixed-use development consisting of a partial residential conversion and enlargement of two existing, underutilized commercial buildings (Proposed Development) located on two adjacent blocks (Development Site or Project Area) in Brooklyn Community District 2. The Project Area consists of (i) a parcel located at 25 Columbia Heights (Block 204, Lot 1), comprising the block bounded by Columbia Heights, Vine Street, McKenny street, and Doughty Street (25 Columbia Heights), and (ii) parcels located at 30-58 Columbia Heights (Block 208, Lots 1, 2, and 12), comprising the block bounded by Columbia Heights, Doughty Street, Furman Street, and Squibb Park (collectively, 30 Columbia Heights). Under the Reasonable Worst Case Development Scenario (RWCDS), the Proposed Development on 25 Columbia Heights consists of the existing 295,980 gsf, 12-story commercial building being enlarged by approximately 162,590 gsf (6 stories) to a 17-story, approximately 460,570 gsf building. The building would be renovated to include approximately 399,710 gsf residential use (392 dwelling units), approximately 14,850 sf of commercial use and 46,010 gsf of parking (165 spaces), accessory to the residential use. Approximately 25 percent of the residential floor area in the building would comprise affordable units, in accordance with Option 1 of the Mandatory Inclusionary Housing (MIH) Program, which would apply to the Development Site pursuant to the applicant's proposed text amendment to Appendix F. The RWCDS for 30 Columbia Heights consists of the existing 13-story commercial building being renovated and enlarged by approximately 145,890 gsf and from

13 stories (141 feet) to 19 stories. The zoning lot would include approximately 544,910 gsf, with approximately 358,590 gsf of residential use (324 dwelling units), approximately 171,320 sf of commercial use, and 15,000 gsf of parking (23 spaces) accessory to the residential use. The three smaller buildings would not have any change in bulk or use (commercial buildings of 4-5 stories and 39-53 feet). Approximately 25 percent of the residential floor area in the building would comprise affordable units, in accordance with Option 1 of the MIH Program, which would apply to the Development Site pursuant to the applicant's proposed text amendment to Appendix F.

The September 2025 Phase I report revealed that historical on-site and surrounding area land uses consisted of a variety of residential, commercial, and industrial uses including a pharmaceutical factory, a flour mill, a watch case factory, coal storage, a foundry, a machine shop, carpenters, iron works, a tinware factory, coffee polishing, a cigar factory, a shoe factory, a plumbing supplies factory, a lead pipe factory, a brass foundry, a cracker bakery, an electrical appliance factory, a bakery, a cigar box factory, a milling company, drug grinding, a coal yard, printing, a coffee company, a candy factory, sheet metal works, a cold storage company, a filling station, auto repair, a water pollution control facility, etc. Regulatory databases identified 7 underground storage tank sites and 14 aboveground storage tank sites within 1/8 mile; 31 leaking storage tank sites, 7 voluntary cleanup program sites, 2 brownfields sites, and 276 spills within 1/2 mile; and 6 manufactured gas plant sites and 5 historical auto sites within 1 mile of the subject property.

Based upon our review of the submitted documentation, we have the following comments and recommendations to DCP:

- DCP should inform the applicant that based on the historical on-site and/or surrounding area land uses, a Phase II Environmental Site Assessment (Phase II) is necessary to adequately identify/characterize the surface and subsurface soils, groundwater, soil vapor/sub-slab soil vapor, indoor air, and outdoor air of the subject property, and to inform and disclose the measures necessary to avoid impacts from hazardous materials. A Phase II Investigation Work Plan summarizing the proposed drilling, soil, groundwater, soil vapor/sub-slab soil vapor, indoor air, and outdoor air sampling activities should be developed in accordance with the City Environmental Quality Review Technical Manual and submitted for DEP review and approval. The Phase II Investigation Work Plan should include blueprints and/or site plans displaying the current surface grade and sub-grade elevations and a site map depicting the proposed soil, groundwater, soil vapor/sub-slab soil vapor, indoor air, and outdoor air sampling locations. Soil and groundwater samples should be collected and analyzed by a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory for the presence of volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260, semi-volatile organic compounds by EPA Method 8270, pesticides by EPA Method 8081, polychlorinated biphenyls by EPA Method 8082, and Target Analyte List metals (filtered and unfiltered for groundwater samples). The soil vapor/sub-slab soil vapor, indoor air, and outdoor air sampling should be conducted in accordance with the NYSDOH October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York. The soil vapor/sub-slab soil vapor, indoor air, and outdoor air samples should be collected and analyzed by a NYSDOH ELAP

certified laboratory for the presence of VOCs by EPA Method TO-15. An Investigation Health and Safety Plan (HASP) should also be submitted to DEP for review and approval. The Phase II Work Plan should also describe and include site development plans indicating maximum soil excavation depths/elevations for building slabs, footings, subsurface utilities, elevator pits, etc., as well as any proposed grade-level yard, courtyard, parking, or grass/landscaped areas. Description of the proposed uses in sub-grade, first floor, and outdoor areas of the proposed development should also be included.

- DCP should also instruct the applicant that the Phase II Work Plan and HASP should be submitted for DEP review and approval prior to the start of any fieldwork.

- DCP should inform the applicant that the EAS should be revised/updated as appropriate as the hazardous materials assessment progresses.

Future correspondence and submittals related to this project should include the following CEQR # **78DCP163K**. If DCP has any questions, you may contact me at weiy@dep.nyc.gov.

Sincerely,

Wei Yu
Deputy Director, Hazardous Materials

c: R. Weissbard
T. Estesen
M. Wimbish
S. Shellooe – DCP
E. Ulker-Kacar – DCP

Appendix 2
Methodology Memoranda

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Air Quality Methodology Memorandum

To:	New York City Department of City Planning
From:	AKRF, Inc.
Date:	May 5, 2025 (Revised October 14, 2025)
Re:	Columbia Heights Rezoning (CEQR No. 26DCP094K)
cc:	Project File

The purpose of this memorandum is to describe the air quality analysis approach for the Columbia Heights Rezoning project (the Proposed Project). The project site is comprised of 25 and 30 Columbia Heights; 25 Columbia Heights is bounded by Columbia Heights to the west, McKenny Street to the east, Doughty Street to the north, and Vine Street to the south, and 30 Columbia Heights is bounded by Furman Street to the west, Columbia Heights to the east, Doughty Street to the north, and Middagh Street to the south in the DUMBO neighborhood of Brooklyn, New York (Block 204, Lot 1 and Block 208, Lot 2, respectively). The Proposed Actions would facilitate the construction of new additions to the existing buildings. Construction under the Proposed Actions is anticipated to take approximately 31 months to complete (including inspections and sign-offs), from 2026 to 2029.

In addition, there are existing emission sources in the area that are assumed to be active and may need to be analyzed for their potential impacts to future residents of the Proposed Project.

This memorandum presents a summary of the methodology and assumptions to be used for both the mobile and stationary source air quality analyses of the Proposed Project.

MOBILE SOURCE ANALYSIS

INTERSECTION ANALYSIS

Based on the preliminary traffic projections, the traffic generated by the Proposed Project is not projected to exceed the screening thresholds outlined in the *CEQR Technical Manual* for conducting a detailed analysis of carbon monoxide (CO) or fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). Therefore, a microscale analysis is not anticipated to be required.

PARKING FACILITIES

The Proposed Project would include a total of 188 accessory parking spaces. The parking facilities would consist of the following:

- 25 Columbia Heights—165 spaces; and
- 30 Columbia Heights—23 spaces.

Under the No Action condition, a total of 125 spaces would be provided for 25 Columbia Heights, and no spaces would be provided for 30 Columbia Heights. This represents an increase of 40 parking spaces for 25 Columbia Heights and 23 spaces for 30 Columbia Heights. The increase in the number of parking spaces would not exceed the 85-space threshold for conducting a quantified analysis, either for the individual parking facilities or the total parking capacity. Therefore, an analysis of CO and PM emissions from the proposed parking facilities is not required.

ANALYSIS OF ATYPICAL ROADWAYS

The *CEQR Technical Manual* recommends analysis of projects that would result in placement of operable windows or air intakes generally within 200 feet of an "atypical" source of vehicle emissions, including not at-grade sources such as multi-lane highways, or bridges. The Development Site lies within 200 feet of the Brooklyn-Queens Expressway (BQE). Therefore, the effect of this existing roadway on the Proposed Development will be analyzed.

Emission factors for CO and PM will be determined using the EPA MOVES5 model, using estimated speeds and volumes from information developed for the traffic analysis for the Proposed Actions or from available data sources (e.g., NYCDOT, Replica). Receptors will be placed at various locations and elevations to predict concentrations from vehicles on each of the project buildings. Receptors will also be placed at pedestrian levels at any new open spaces that would be located within the 200-foot study area of the BQE.

The analysis will be performed for the With Action condition. Predicted values will be compared with NAAQS.

STATIONARY SOURCES

HEATING AND HOT WATER SYSTEMS

In 2021, the New York City Council passed a bill, Local Law 154, that effectively bans the installation of most new natural gas and other fossil fuel-fired systems in buildings in New York City. In addition, the design of the proposed buildings must meet the applicable provisions of the New York City Energy Conservation Code and demonstrate consistency with the City's carbon intensity limits established pursuant to Local Law 97 of 2019. It is anticipated that the project buildings would utilize electric heating and hot water systems. Therefore, no analysis of the Proposed Project's heating and hot water systems is required.

A proposed Air Quality (E) Designation will be included in the EIS for the project site that specifies the required use of electric-powered equipment for heating and hot water systems.

INDUSTRIAL SOURCE ANALYSIS

An initial review of air permit information will be performed to identify potential process and manufacturing sources located within and around the Development Site. A search of air permits within the study area will be conducted using the DEP Clean Air Tracking System (CATS) database to identify any DEP-permitted industrial uses in the study area.[1] Federal and state-permitted and registered facilities will be searched using the New York State Department of Environmental Conservation DECinfo Locator.[2] AKRF will review the data to determine which industrial sources are within 400 feet of the Development Site. The facilities will be geo-referenced to identify those permits within a radius of 400 feet of the Development Site. Any industrial sources beyond 400 feet of the Development Site will be excluded from analysis, as well as any DEP permitted facility with a cancelled permit (facilities with an expired permit will be assumed to be still in operation, unless verified as shutdown based on an industrial source site survey).

Once the industrial source permits and registrations are received, they will be reviewed to determine if any should be excluded from the analysis based on the type of operation. For example, emergency generators are not considered industrial sources of emissions; therefore, these sources would not be analyzed. A subsequent field survey will be performed to confirm the operational status of the sites identified in the permit searches, and to identify any sites that have sources of emissions that would warrant an analysis. If any such sources are identified; further consultation will be made with DCP to determine procedures for estimating emissions from these sources.

Analysis of the Proposed Development

A refined analysis of the verified industrial sources would be performed using the AERMOD model. Potential impacts from the Proposed Project mobile sources will be predicted using the American Meteorological

[1] DEP. *NYC DEP CATS Information.* https://a826-web01.nyc.gov/dep.boilerinformationext. New York City Open Data https://data.cityofnewyork.us/Environment/CATS-Permits/f4rp-2kvy.

[2] NYSDEC. DECinfo Locator. https://gisservices.dec.ny.gov/gis/dil/

Society/EPA Regulated Model (AERMOD) Version 24142. AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain, including updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and includes handling of terrain interactions. AERMOD is a recommended model for transportation air quality analyses, and EPA mandated its use for transportation conformity purposes after a three-year transition period.

For this analysis, five years of meteorological data (2017-2021) from the JFK Airport NWS and concurrent upper air data would be utilized for the simulation program. The AERMOD analysis would be performed assuming stack tip downwash, urban dispersion and surface roughness length, and elimination of calms. The analysis will be performed both with and without building downwash, consistent with the recommendations in the *CEQR Technical Manual*.

Receptors

Receptors would be placed at elevated locations on all facades and at multiple elevations on each applicable proposed building. Generally, receptors would be spaced at a three-meter interval vertically to represent each individual floor of a building, while horizontally, receptor spacing would be a minimum of three meters and a maximum of 10 meters.

Emission Estimates and Stack Parameters

Emission rates and stack parameters would be obtained from the DEP permit and NYSDEC registrations. If unpermitted sources are identified, AKRF would consult with DCP on developing an appropriate emissions profile.

For industrial sources where stack parameters are not available, conservation assumptions for stack exhaust diameter, exhaust velocity and temperature would be used, based on guidance in the *CEQR Technical Manual*.

Determining the Significance of Air Quality Impacts

A cumulative impact analysis will be performed for sources that emit the same air contaminant. Predicted concentrations of these compounds would be compared to NYSDEC DAR-1 guideline values for short-term (SGC) and annual (AGC) averaging periods.[3] For any criteria pollutants, maximum modeled concentrations would be compared with NAAQS. In the event that violations of standards are predicted, measures to reduce pollutant levels to within standards will be examined.

LARGE OR MAJOR SOURCES

The *CEQR Technical Manual* requires an analysis of projects that may result in a significant adverse impact due to certain types of new uses located near a “large” or “major” emissions source. Major sources are defined as those located at facilities that have a Title V or Prevention of Significant Deterioration air permit, while large sources are defined as those located at facilities that require a State Facility Permit. To assess the potential effects of these existing sources on the Development Site, a review of NYSDEC Title V and State Facility Air permits was performed to identify any federal or state-permitted facilities. Existing large and major sources of emissions (i.e., sources having a Title V or State Facility Air Permit) within 1,000 feet of the Development Site were surveyed.

No facilities with a State Facility, Title V, or PSD Permit within the 1,000-foot study area around the Development Site were identified. Therefore, no analysis of the potential impacts of large or major sources of emissions on the Proposed Project is required.

[3] NYSDEC. DAR-1: Guidelines for the Evaluation and Control of Ambient Air Contaminants Under Part 212. February 2021.

akrf

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Noise Methodology Memorandum

To:	New York City Department of City Planning
From:	AKRF, Inc.
Date:	January 13, 2026
Re:	Columbia Heights Rezoning (CEQR No. 26DCP094K)
cc:	Project File

The purpose of this memorandum is to describe the noise analysis approach for the Columbia Heights Rezoning project (the Proposed Project). The project site is comprised of 25 and 30 Columbia Heights; 25 Columbia Heights is bounded by Columbia Heights to the west, McKenny Street to the east, Doughty Street to the north, and Vine Street to the south, and 30 Columbia Heights is bounded by Furman Street to the west, Columbia Heights to the east, Doughty Street to the north, and Middagh Street to the south in the DUMBO neighborhood of Brooklyn, New York (Block 204, Lot 1 and Block 208, Lot 2, respectively). The Proposed Actions would facilitate the construction of new additions to the existing. The entire Project Area would be mapped within a Special Mixed-Use District (MX) to which Zoning Resolution (ZR) Section 123-32 would apply. Construction under the Proposed Actions is anticipated to take approximately 31 months to complete (including inspections and sign-offs), from 2026 to 2029. In accordance with *CEQR Technical Manual* guidance, the EIS will analyze both 25 & 30 Columbia Heights for site-specific effects, including operational noise.

GENERAL NOISE ANALYSIS METHODOLOGY

This memorandum presents a summary of the proposed approach to the noise analysis for the Proposed Actions. Since the transportation screening analysis is expected to demonstrate that quantified analysis of potential traffic impacts would not be warranted, it is not expected that project-generated traffic would result in a doubling of Noise PCEs, and a detailed analysis of noise level increases from vehicular traffic would not be warranted. The proposed methodology for this noise analysis includes the following:

- Selection of noise receptor locations;
- Measurement of existing ambient noise levels (with simultaneous counts of traffic volumes and vehicle classifications);
- Determination of noise levels in the future with the Proposed Actions based on expected future background growth in vehicular traffic volumes using the proportionality equation shown in section 332.1 of the 2021 *CEQR Technical Manual*; and
- Determination of minimum necessary levels of building attenuation to provide acceptable interior noise levels at the development sites under guidelines contained in the 2021 *CEQR Technical Manual* as well as ZR Section 123-32.

SELECTION OF NOISE RECEPTOR LOCATIONS

Vehicular traffic, including elevated roadways such as the Brooklyn Queens Expressway and the Brooklyn Bridge, appears to be the dominant noise source throughout the project area, although stationary sources (e.g., building HVAC equipment) may also contribute to existing noise levels. A total of seven receptor locations were selected for the noise analysis. The proposed noise receptor locations were selected based on the location of the Development Sites and existing neighborhood characteristics (e.g., along major road corridors, etc.).

NOISE MEASUREMENTS

AKRF plans to conduct a noise survey to measure existing noise levels at seven locations. Traffic counts will be conducted for the roadway immediately adjacent to each receptor location during each at-grade noise level measurement. The noise receptor locations are shown in **Figure 1** and described in **Table 1**.

Table 1
Proposed Noise Measurement Locations

Receptor	Location
1	Furman Street, immediately west of 30 Columbia Heights
2	Doughty Street between Furman Street and Columbia Heights, immediately north of 30 Columbia Heights
3	Intersection of Doughty Street and Columbia Heights at the northeast corner of 25 Columbia Heights
4	Intersection of McKenny Street and Vine Street at the southeast corner of 25 Columbia Heights
5	Midblock of 30 Columbia Heights (Block 208) along Columbia Heights
6	Rooftop of 25 Columbia Heights above Doughty Street between Elizabeth Place and McKenny Street
7	Southwest corner of the 25 Columbia Heights rooftop facing the Brooklyn Queens Expressway

At receptor locations 1 through 5, 20-minute spot measurements will be conducted during the typical AM (7:00 AM—9:00 AM), midday (12:00 PM—2:00 PM), and PM (4:00 PM—6:00 PM) peak periods to document at-grade noise levels due to vehicular traffic on adjacent roadways approximately 5 feet above grade. At receptor locations 6 and 7, 24-hour continuous noise level measurements during the weekday will be conducted on the rooftop of 25 Columbia Heights to document above-grade noise levels. Measurements will be performed according to noise measurement guidance contained in the *CEQR Technical Manual*. Weekday noise level measurements will only be collected between Tuesday and Thursday.

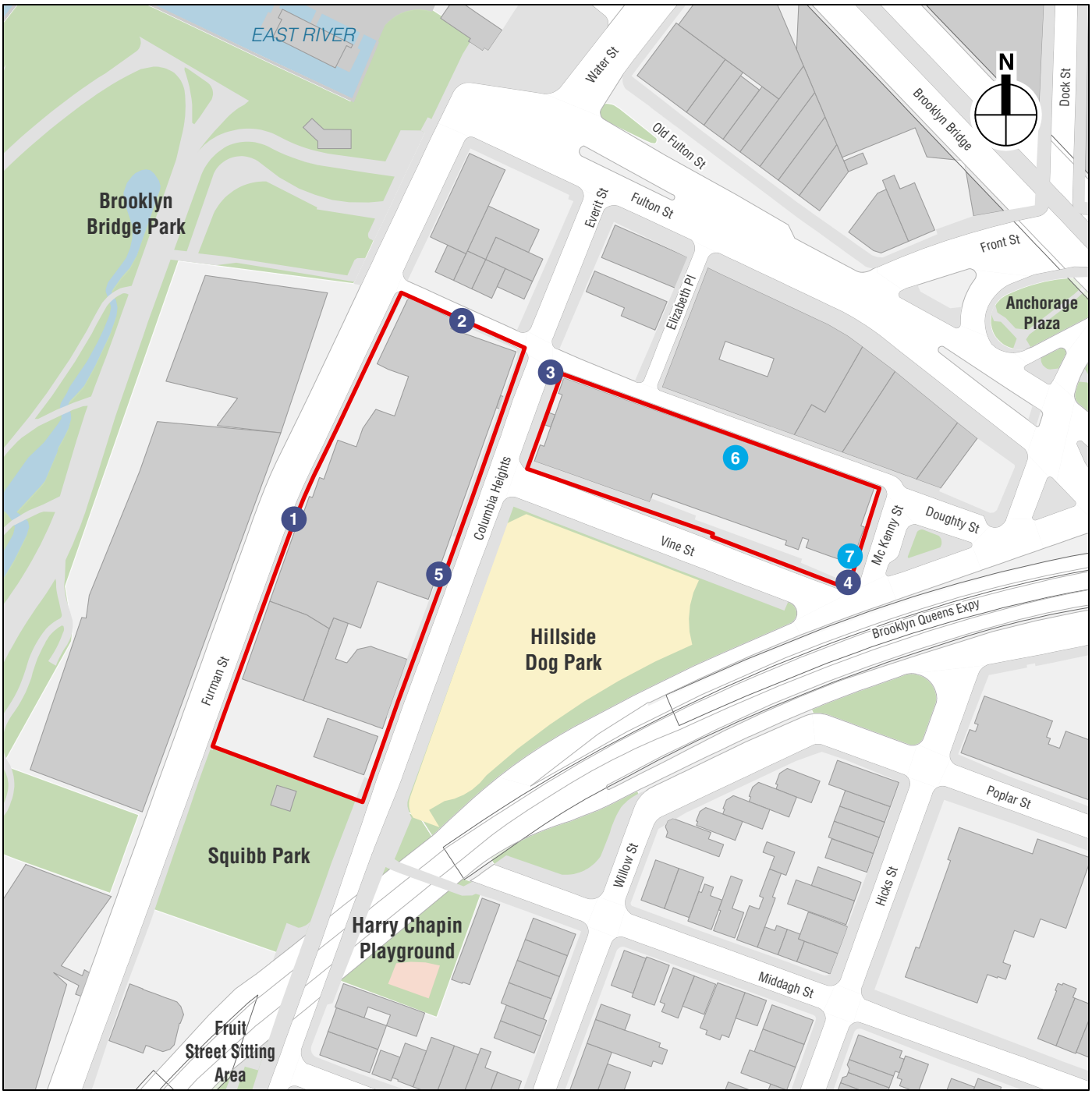
Measurements will be performed using Class 1 Sound Level Meter (SLM) instruments according to ANSI Standard S1.4-2014. The SLMs will have laboratory calibration dates within one year of the date of the measurements. All measurement procedures will be based on the guidelines outlined in ANSI Standard S1.13-2005.

As the project site is not within an existing 65 dBA DNL contour of an airport, it is not expected that aircraft noise will contribute substantially to the existing noise levels, and no adjustments to measured noise levels will be made to account for aircraft contributions.

FAÇADE NOISE ATTENUATION REQUIREMENTS

As shown in **Table 2**, the *CEQR Technical Manual* has set noise attenuation quantities for buildings based on exterior $L_{10(1)}$, L_{dn}, and DNL noise levels to maintain acceptable interior noise levels. Additionally, ZR Section 123-32 would require 35 dBA window/wall attenuation for all residential dwelling units in the Project Area. Since vehicular traffic is the dominant source of noise at the project site, the acceptable interior noise level thresholds for the EIS noise analysis will be $L_{10(1)}$ of 45 dBA or lower for residential or community facility areas, and 50 dBA for commercial office uses.

6.17.25



0 200 FEET



Development Site

At-Grade Noise Measurement Location

Elevated Noise Measurement Location

Noise Measurement Locations

25 AND 30 COLUMBIA HEIGHTS

Figure 1

Table 2
Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Vehicular Traffic	$70 < L_{10} \leq 73$	$73 < L_{10} \leq 76$	$76 < L_{10} \leq 78$	$78 < L_{10} \leq 80$	$80 < L_{10}$
Aircraft[A]	$65 < DNL \leq 68$	$68 < DNL \leq 71$	$71 < DNL \leq 73$	$73 < DNL \leq 75$	$75 < DNL$
Train	$65 < L_{dn} \leq 68$	$68 < L_{dn} \leq 71$	$71 < L_{dn} \leq 73$	$73 < L_{dn} \leq 75$	$75 < L_{dn}$
Attenuation[B]	(I) 28 dBA	(II) 31 dBA	(III) 33 dBA	(IV) 35 dBA	See note [C]

Notes:
[A] DNL descriptor based on average values of L_{dn} over a year period.
[B] The above composite window-wall attenuation values are for residential dwellings and community facility development. Commercial office spaces and meeting rooms would be 5 dBA less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.
[C] The required attenuation value is the difference between L_{build} and $L_{interior}$, using the appropriate noise descriptor
Where:
L_{build} is the projected noise level under the build condition rounded up to the whole number
$L_{interior}$ is the designed interior noise level (45 dBA for vehicular noise, 40 dBA for aircraft and train noise)
Source: New York City Department of Environmental Protection.

Minimum façade noise attenuation ratings required to maintain acceptable interior noise levels will be established based on projected noise levels in the future with the proposed project as described above and shown in **Table 2**. Specifically, the future $L_{10(1)}$ noise levels will be used to determine minimum building façade attenuation required to maintain interior noise levels of 45 dBA or lower for residential or community facility areas and 50 dBA for commercial office uses at 25 & 30 Columbia Heights; all new dwelling units would be required to provide a minimum of 35 dBA window/wall attenuation per ZR 123-32. ✷

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Construction Air Quality Methodology Memorandum

To:	New York City Department of City Planning
From:	AKRF, Inc.
Date:	May 5, 2025 (Revised October 10, 2025)
Re:	Columbia Heights Rezoning (CEQR No. 26DCP094K)
cc:	Project File

INTRODUCTION

The purpose of this memorandum is to describe the construction air quality analysis approach to be used for the Columbia Heights Rezoning project (the Proposed Project). The project site is comprised of 25 and 30 Columbia Heights; 25 Columbia Heights is bounded by Columbia Heights to the west, McKenny Street to the east, Doughty Street to the north, and Vine Street to the south, and 30 Columbia Heights is bounded by Furman Street to the west, Columbia Heights to the east, Doughty Street to the north, and Middagh Street to the south in the DUMBO neighborhood of Brooklyn, New York (Block 204, Lot 1 and Block 208, Lot 2, respectively). The Proposed Actions would facilitate the construction of new additions to the existing buildings. Construction under the Proposed Actions is anticipated to take approximately 31 months to complete (including inspections and sign-offs), from 2026 to 2029. No changes to 50, 55, and 58 Columbia Heights are currently anticipated as part of the Proposed Project.

CONSTRUCTION AIR QUALITY ANALYSIS METHODOLOGY

Emissions from on-site construction equipment and on-road construction vehicles, as well as dust-generating construction activities, all have the potential to affect air quality. The analysis of potential construction air quality impacts will include an analysis of both on-site and on-road sources of air emissions, and the combined impact of both sources, where applicable.

In general, much of the heavy equipment used in construction is powered by diesel engines that have the potential to produce relatively high levels of nitrogen oxides (NO_x) and particulate matter (PM) emissions. Fugitive dust generated by construction activities is also a source of PM. Gasoline engines produce relatively high levels of carbon monoxide (CO). Since the United States Environmental Protection Agency (EPA) mandates the use of ultra-low sulfur diesel (ULSD) fuel for all highway and non-road diesel engines, sulfur oxides (SO_x) emitted from the Proposed Project's construction activities would be negligible. Therefore, the pollutants to be analyzed for the construction period are nitrogen dioxide (NO_2)—which is a component of NO_x that is a regulated pollutant, particles with an aerodynamic diameter of less than or equal to 10 micrometers (PM_{10}), particles with an aerodynamic diameter of less than or equal to 2.5 micrometers ($PM_{2.5}$), and carbon monoxide (CO). **Table 1** shows the pollutants to be analyzed in the construction air quality analysis and the corresponding averaging periods.

Table 1
Pollutants for Analysis and Averaging Periods

Pollutant	Averaging Period
$PM_{2.5}$	24-hour
	Annual Local
	Annual Neighborhood
PM_{10}	24-hour
NO_2	Annual
CO	1-hour
	8-hour

Concentrations will be predicted using dispersion models to determine the potential for air quality impacts during on-site construction activities and due to construction-generated traffic on local roadways. Concentrations for each pollutant of concern due to construction activities at each sensitive receptor will be predicted during the most representative worst-case time period.

The potential for significant adverse impacts will be determined by comparing modeled PM_{10}, NO_2 and CO concentrations to National Ambient Air Quality Standards (NAAQS), and modeled $PM_{2.5}$ and CO increments to applicable *de minimis* thresholds. If the analysis concludes that there is a potential for significant adverse impacts, specific control measures required to reduce the effects of construction and to eliminate any significant adverse air quality impacts will be identified.

The detailed approach for assessing the effect of construction activities resulting from the Proposed Actions on air quality is discussed further below.

DATA SOURCES

The construction air quality analysis will be based on the preliminary construction phasing schedule for each building (25 Columbia Heights and 30 Columbia Heights) provided by the project team, as well as projections of the construction workforce, truck, and equipment projections.

ON-SITE CONSTRUCTION ACTIVITY ASSESSMENT

To determine which construction periods constitute the worst-case for the pollutants of concern (PM, CO, NO_2), construction-related emissions will be calculated for each calendar year throughout the duration of construction on a rolling annual and peak day basis for $PM_{2.5}$. $PM_{2.5}$ is selected for determining the worst-case periods for all pollutants analyzed, because the ratio of predicted $PM_{2.5}$ incremental concentrations to impact criteria is anticipated to be higher than for other pollutants. Therefore, initial estimates of $PM_{2.5}$ emissions throughout the construction years will be used for determining the worst-case periods for analysis of all pollutants. Generally, emission patterns of PM_{10} and NO_2 would follow $PM_{2.5}$ emissions, since they are related to diesel engines by horsepower. CO emissions may have a somewhat different pattern but would also be anticipated to be highest during periods when the most activity would occur.

Based on the emission profiles, the proximity of construction activities to sensitive receptors, the representative worst-case annual and short-term (i.e., 24-hour, 8-hour, and 1-hour) averaging periods identified in **Table 1** will be selected for analysis. Dispersion of the relevant air pollutants from the construction site during these periods will then be analyzed. Broader conclusions regarding potential concentrations during non-peak periods, which will not be modeled, will be presented as well, based on the multi-year emissions profiles and the reasonable worst-case period results.

Engine Emissions

The sizes, types, and number of units of construction equipment will be estimated based on the construction activity schedule developed. Emission rates for NO_X, CO, PM_{10}, and $PM_{2.5}$ from truck engines will be developed using the EPA Motor Vehicle Emission Simulator (MOVES4[1]) emission model. Emission factors for NO_x, CO,

[1] EPA, Motor Vehicle Emission Simulator (MOVES), User Guide for MOVES2014a, November 2015. Overview of EPA's Motor Vehicle Emission Simulator (MOVES4). EPA-420-R-23-019. August 2023. There is no stand-alone user's guide for MOVES4 as information is incorporated into the interface.

PM_{10}, and $PM_{2.5}$ from on-site construction engines will be developed using the NONROAD emission module included in the MOVES emission model. The emission factor calculations will take into account any emissions reduction measures (i.e., the application of diesel particulate filters, etc.) that is required on site.

On-Site Fugitive Dust

In addition to engine emissions, fugitive dust emissions from operations (e.g., excavation and transferring of excavated materials into dump trucks) will be calculated based on EPA procedures delineated in AP-42 Table 13.2.3-1. Since construction is required to follow the New York City Air Pollution Control Code regarding construction-related dust emissions, a 50 percent reduction in particulate emissions from fugitive dust will be conservatively assumed in the calculation (dust control methods such as wet suppression would often provide at least a 50 percent reduction in particulate emissions).

Analysis Periods

As discussed above, the construction periods with activities closest to sensitive receptors and with the most intense activities and highest emissions will be selected as the worst-case periods for analysis. The dispersion analysis will include modeling the worst-case annual and short-term (i.e., 24-hour, 8-hour, and 1-hour) averaging periods identified in **Table 1**. The worst-case short-term and annual periods will be selected once the estimated construction activities have been developed. These periods will be selected based on the maximum construction intensity predicted and their proximity to nearby sensitive receptors.

Dispersion Modeling

Potential impacts from the worst-case construction sources will be evaluated using a refined dispersion model, the EPA/AMS AERMOD dispersion model. AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain and includes updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and handling of terrain interactions.

Source Simulation

For short-term model scenarios (predicting concentration averages for periods of 24 hours or less), all stationary sources, such as compressors, cranes, or concrete trucks, which idle in a single location while unloading, will be simulated as point sources. Other engines, which would move around the site on any given day, will be simulated as area sources. For periods of 8 hours or less (less than the length of a shift), it will be assumed that all engines would be active simultaneously. All sources, with the exception of tower cranes, would move around the site throughout the year and will therefore be simulated as area sources in the annual analyses.

Meteorological Data

The meteorological data set will consist of five consecutive years of latest available meteorological data: surface data collected at the nearest representative National Weather Service Station (LaGuardia Airport) from 2017 to 2021 and concurrent upper air data collected at Brookhaven, New York. The meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevation over the five-year period. These data will be processed using the EPA AERMET program to develop data in a format which can be readily processed by the AERMOD model.

Background Concentrations

To estimate the maximum expected total pollutant concentrations, the calculated impacts from the emission sources must be added to a background value that accounts for existing pollutant concentrations from other sources. The background levels are based on concentrations monitored at the nearest New York State Department of Environmental Conservation (NYSDEC) ambient air monitoring stations, as shown in **Table 2**. Data from 2017 to 2019 is proposed for use due to uncertainties in the representativeness of background concentrations in 2020 and 2021 due to the effects of COVID-19.

Table 2
Maximum Background Pollutant Concentrations

Pollutant	Average Period	Location	Concentration	NAAQS
$PM_{2.5}$	24-hour	JHS 126	18.3 µg/m^3	35 µg/m^3
	Annual	JHS 126	7.6 µg/m^3	9 µg/m^3
PM_{10}	24-hour	IS 52	36 µg/m^3	150 µg/m^3
NO_2	Annual	IS 52	32.8 µg/m^3	100 µg/m^3
CO	1-hour	CCNY	2.5 ppm	35 ppm
	8-hour	CCNY	1.2 ppm	9 ppm
Source: New York State Air Quality Report Ambient Air Monitoring System, NYSDEC, 2017–2019.				

Receptor Locations

Receptors will be placed at locations that would be publicly accessible, at residences, schools, and other sensitive uses at both ground-level and elevated locations (e.g., residential windows) of existing buildings, at adjacent sidewalk locations, at publicly accessible open spaces (i.e., Brooklyn Bridge Park, Hillside Dog Park, etc). In addition, since 50, 55, and 58 Columbia Heights may be occupied during construction of the Proposed Project, receptors will be placed at these locations. A ground-level receptor grid will also be placed to enable extrapolation of concentrations throughout the study area at locations more distant from construction activities.

On-Road Sources

The construction worker commuting trips and construction truck deliveries would generally occur during off-peak hours. Furthermore, the construction trip increments would not be concentrated at any single location. Therefore, a standalone mobile-source analysis will not be required. Nevertheless, since emissions from on-site construction equipment and on-road construction-related vehicles may contribute to concentration increments concurrently, on-road emissions adjacent to the construction site will be included with the on-site dispersion analysis (in addition to on-site truck and non-road engine activity) to address all local project-related emissions cumulatively.

On-Road Vehicle Emissions

Vehicular engine emission factors will be computed using the EPA mobile source emissions model, MOVES5[2]. This emissions model is capable of calculating engine emission factors for various vehicle types, based on the fuel type (gasoline, diesel, or natural gas), meteorological conditions, vehicle speeds, vehicle age, roadway type and grade, number of starts per day, engine soak time, and various other factors that influence emissions, such as inspection maintenance programs. The inputs and use of MOVES incorporate the most current guidance available from NYSDEC.

On-Road Dust Emissions

$PM_{2.5}$ emission rates will be determined with road dust to account for their impacts. However, fugitive road dust will not be included in the annual average $PM_{2.5}$ microscale analyses, as per current *CEQR Technical Manual* guidance used for mobile source analysis. Road dust emission factors will be calculated according to the latest procedure delineated by EPA[3].

Traffic Data

Traffic data for the air quality analysis will be derived from existing traffic counts, projected future growth in traffic, and other information developed as part of the construction traffic analysis for the Proposed Actions.

[2] EPA, Motor Vehicle Emission Simulator (MOVES), User Guide for MOVES2014a, November 2015. Overview of EPA's Motor Vehicle Emission Simulator (MOVES5). EPA-420-B-24-043. November 2024. There is no stand-alone user's guide for MOVES5 as information is incorporated into the interface.

[3] EPA, Compilations of Air Pollutant Emission Factors AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources, Ch. 13.2.1, NC, http://www.epa.gov/ttn/chief/ap42, January 2011.

Impact Criteria

The 2021 *CEQR Technical Manual* states that the significance of a predicted consequence of a project (i.e., whether it is material, substantial, large or important) should be assessed in connection with its setting (e.g., urban or rural), its probability of occurrence, its duration, its irreversibility, its geographic scope, its magnitude, and the number of people affected.[4] In terms of the magnitude of air quality impacts, any action predicted to increase the concentration of a criteria air pollutant to a level that would exceed the concentrations defined by the NAAQS would be deemed to have a potential significant adverse impact. In addition, to maintain concentrations lower than the NAAQS in attainment areas, or to ensure that concentrations will not be significantly increased in non-attainment areas, *CEQR de minimis* threshold levels have been defined for certain pollutants; any action predicted to increase the concentrations of these pollutants above these thresholds would be deemed to have a potential significant adverse impact, even in cases where violations of the NAAQS are not predicted.

Emissions Reduction Measures

The analysis will assume all emissions reduction measures as required by law. These measures include dust control measures, idling restrictions, and the use of ultra-low sulfur diesel fuel. If the analysis concludes that there is a potential for significant adverse impacts, specific control measures required to reduce the effects of construction and to eliminate any significant adverse air quality impacts will be identified. These measures may include diesel equipment reduction, best available tailpipe reduction technologies, utilization of equipment that meets specified emission standards, and location of equipment away from sensitive uses. Any emission control measures proposed to be used during the construction will be documented in the EIS and related Project Component Related to the Environment (PCRE).

[4] New York City. *CEQR Technical Manual*. Chapter 1, section 222. December 2021; and New York State Environmental Quality Review Regulations, 6 NYCRR § 617.7

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Construction Noise Methodology Memorandum

To:	New York City Department of City Planning
From:	AKRF, Inc.
Date:	June 18, 2025
Re:	Columbia Heights Rezoning (CEQR No. 26DCP094K)
cc:	Project File

INTRODUCTION

The purpose of this memorandum is to describe the construction noise analysis approach for the Columbia Heights Rezoning project (the Proposed Project). The project site is comprised of 25 and 30 Columbia Heights; 25 Columbia Heights is bounded by Columbia Heights to the west, McKenny Street to the east, Doughty Street to the north, and Vine Street to the south, and 30 Columbia Heights is bounded by Furman Street to the west, Columbia Heights to the east, Doughty Street to the north, and Middagh Street to the south in the DUMBO neighborhood of Brooklyn, New York (Block 204, Lot 1 and Block 208, Lot 2, respectively). The Proposed Actions would facilitate the construction of new additions to the existing buildings. Construction under the Proposed Actions is anticipated to take approximately 31 months to complete (including inspections and sign-offs), from 2026 to 2029.

CONSTRUCTION NOISE ANALYSIS METHODOLOGY

A detailed modeling analysis will be conducted to quantify potential construction noise effects at existing noise receptors (e.g., residences, schools, etc.) near the Development Sites.

The construction noise methodology will involve the following process:

1. *Select analysis hours for construction mobile source noise analysis.* The 6:00 AM to 7:00 AM hour is selected as the analysis hour because this would be the hour when the highest number of construction worker auto and construction trips to and from the construction site would simultaneously occur.
2. *Conduct construction mobile source noise analysis.* At each of the roadway segments analyzed for construction traffic, the construction worker vehicle and construction truck trips during the analysis hour will be converted to Noise Passenger Car Equivalents (PCEs) and compared to the existing level of Noise PCEs to determine the potential increase in noise levels due to construction-generated trips.
3. *Select analysis hours for cumulative on-site equipment and construction truck noise analysis.* The 7:00 AM to 8:00 AM hour is selected as the analysis hour because this would be the hour when the highest number of truck trips to and from the construction site would overlap with on-site equipment operation.
4. *Select receptor locations for cumulative on-site equipment and construction truck noise analysis.* Selected receptors will represent open space, residential, hospital, or other noise-sensitive uses potentially affected by the construction associated with the proposed project during operation of on-site construction equipment and/or along routes taken to and from the Development Sites by construction trucks.
5. *Establish existing noise levels at selected receptors.* Existing noise levels from the operational noise analysis will be relied upon for the construction noise analysis as well. A CadnaA model representing the existing conditions (including existing building geometry and existing condition

traffic levels) will be validated or calibrated based on the measured existing noise levels and used to calculate baseline noise levels at the other noise receptor locations included in the analysis.

6. *Establish worst-case noise analysis periods under the anticipated construction schedule.* The worst-case noise analysis periods are the periods during the construction schedule that are expected to have the greatest potential to result in construction noise effect. The selected time periods are described below in the "Analysis Periods" section.
7. *Calculate construction noise levels for each analysis period at each receptor location.* Given the on-site equipment and construction truck trips expected during each of the analysis periods, and the location of the equipment, which is based on construction logistics diagrams and construction truck and worker vehicle trip assignments, a CadnaA file modeling each analysis period will be created. All models will include each of the construction noise sources during the analysis period and hour, calculation points representing multiple locations on various facades and floors of the associated receptors previously identified, as well as the noise control measures that would be used on the construction sites.
8. *Determine total noise levels and noise level increments during construction.* For each analysis period and each noise receptor, the calculated level of construction noise will be logarithmically added to the existing noise level to determine the cumulative total noise level. The existing noise level at each receptor will then be arithmetically subtracted from the cumulative noise level in each analysis period to determine the noise level increments.
9. *Compare construction noise increments to impact criteria.* For each analysis period and each noise receptor, the predicted noise increments due to construction will be compared to CEQR noise impact thresholds and additional incremental noise impact criteria as described below.
10. *Estimate interior noise levels.* At receptors representing interior locations where noise increments due to construction are predicted to exceed incremental construction noise impact thresholds, window/wall attenuation will be estimated based on field observations. Maximum predicted construction noise levels and estimated window/wall attenuation will be used to estimate interior noise levels.
11. *Establish construction noise duration.* For each existing and future receptor, the noise level increments and estimated interior noise levels in each analysis period will be evaluated to determine the duration during construction that the receptor would experience exceedances of impact criteria.
12. *Identify potential construction noise impacts.* At each existing receptor where exceedances of construction noise impact criteria are predicted, a determination will be made as to whether the proposed actions would have the potential to result in significant adverse construction noise impacts.

NOISE RECEPTOR SITES

A noise-sensitive receptor is defined in Chapter 19, "Noise," Section 114 of the 2021 *CEQR Technical Manual* and includes indoor receptors such as residences, hotels, health care facilities, nursing homes, schools, commercial offices, houses of worship, court houses, public meeting facilities, museums, libraries, and theaters. Outdoor sensitive receptors include parks, outdoor theaters, golf courses, zoos, campgrounds, and beaches.

Within the study area, multiple receptor locations close to the construction areas will be selected for the construction noise analysis to represent buildings or noise-sensitive open space locations that have the potential to experience elevated noise as a result of construction. These receptors will be located adjacent to planned areas of activity or streets where construction trucks would pass. At some buildings, multiple facades will be analyzed as receptors. At high-rise buildings, noise receptors at multiple elevations will be analyzed. Receptors at street level will be used to represent open space locations. The receptor sites selected for detailed analysis will represent locations where maximum project effects due to construction noise would be expected.

CONSTRUCTION MOBILE SOURCE ANALYSIS

A Noise PCE screening will be conducted for noise levels from construction mobile sources. At each of the roadway segments analyzed for construction traffic, the construction worker vehicle and construction truck trips during the analysis hour will be converted to Noise PCEs and compared to the existing level of Noise

PCEs to determine the potential increase in noise from construction worker vehicle and construction truck trips. The 6:00 AM to 7:00 AM hour is selected as the analysis hour because this would be the hour when the highest number of worker vehicle and construction truck trips to and from the construction site would occur. The projected noise level increment from construction worker vehicle and construction truck trips construction will be compared to CEQR noise impact thresholds and additional incremental noise impact criteria as described below.

Construction truck trips that would occur during the construction workday (i.e., after 7:00 AM) will be included in the modeling of construction noise as discussed below.

CONSTRUCTION NOISE MODELING

Noise effects from construction activities will be evaluated using the CadnaA model, a computerized model developed by DataKustik for noise prediction and assessment. The model can be used for the analysis of a wide variety of noise sources, including stationary sources (e.g., construction equipment, industrial equipment, power generation equipment), transportation sources (e.g., roads, highways, railroad lines, busways, airports), and other specialized sources (e.g., sporting facilities). The model takes into account the reference sound pressure levels of the noise sources at 50 feet, attenuation with distance, ground contours, reflections from barriers and structures, attenuation due to shielding, etc. The CadnaA model is based on the acoustic propagation standards promulgated in International Standard ISO 9613-2. This standard is currently under review for adoption by the American National Standards Institute (ANSI) as an American Standard. The CadnaA model is a state-of-the-art tool for noise analysis and is approved for construction noise level prediction by the *CEQR Technical Manual*.

Geographic input data used with the CadnaA model will include CAD drawings that define site work areas, adjacent building footprints and heights, locations of streets, and locations of sensitive receptors. For each analysis period, the geographic location and operational characteristics—including equipment usage rates (percentage of time operating at full power) for each piece of construction equipment operating at the Project Site, as well as noise control measures—will be input to the model.

Construction equipment source strength will be determined by the L_{max} levels presented in Table 22-1 of the 2021 *CEQR Technical Manual.* For construction equipment not included in this table, manufacturer specifications or field measured noise levels will be used. Where applicable, project-specific noise emission level commitments will be applied for select equipment types.

In addition, reflections and shielding by barriers erected on the construction site and shielding from adjacent buildings will be accounted for in the model. In addition, construction-related vehicles will be assigned to the adjacent roadways. The model will produce A-weighted $L_{eq(1)}$ noise levels at each receptor location for each analysis period, as well as the contribution from each noise source. The $L_{10(1)}$ noise levels will be conservatively estimated by adding 3 dBA to the $L_{eq(1)}$ noise levels, as is standard practice.[1]

DETERMINATION OF NON-CONSTRUCTION NOISE LEVELS

Noise generated by construction activities (calculated using the CadnaA model as described above) will be added to baseline (i.e., non-construction) noise levels, including noise generated by non-construction traffic on adjacent roadways, to determine the total noise levels at each receptor location. Baseline noise levels will be calculated using the CadnaA model using existing condition traffic data. The existing condition CadnaA model will include receptors representing the noise measurement locations from the operational noise analysis to be used for the purpose of validating or calibrating the existing condition results. If the existing condition CadnaA model results at the measurement locations differ from estimated existing levels by more than 3 dBA (e.g., because of contribution from noise sources not included in the model, such as aircraft overflights), an adjustment factor will be added to analysis receptors most representative of the measurement location.

[1] Federal Highway Administration Roadway Construction Noise Model User's Guide, Page 15. http://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf

ANALYSIS TIME PERIOD SELECTION

The construction noise analysis will estimate construction noise levels based on projected activity and equipment usage as well as the level of construction traffic for various stages of construction of the proposed project. Based on the anticipated construction schedule and preliminary construction estimates developed for the proposed project, specific time periods during construction will be selected for detailed analysis. The periods selected will capture each major construction stage (e.g., demolition, excavation/foundation work, superstructure work, interior fit-out work), including major overlaps of construction stages between individual sites. These will be the time periods with the potential to result in the maximum incremental construction noise at nearby receptors. Additionally, analysis time periods will be selected to represent periods when less noise-intensive construction activity would occur. Each analysis time period will conservatively represent 1 to 4 months of time, i.e., the shortest to the longest analysis periods as shown in **Table 1**, based on the duration of activities that would be underway during the time period.

The selected analysis periods are shown in **Table 1**. The selected analysis periods are subject to change pending receipt of additional information on the construction program.

Table 1
Summary of Construction Noise Analysis Periods

Analysis Period	Construction Activities
Months 1 and 2	25 Columbia Heights: Demolition, Interiors & GCs 30 Columbia Heights: Demolition, Superstructure
Month 3	25 Columbia Heights: Demolition, Interiors & GCs 30 Columbia Heights: Superstructure, Interiors & GCs
Month 4	25 Columbia Heights: Demolition, Interiors & GCs 30 Columbia Heights: Excavation & Foundation, Superstructure, Interiors & GC's
Month 5	25 Columbia Heights: Demolition, Excavation & Foundation, Interiors & GCs 30 Columbia Heights: Superstructure, Interiors & GCs
Month 6	25 Columbia Heights: Demolition, Excavation & Foundation, Superstructure, Interiors & GCs 30 Columbia Heights: Demolition, Superstructure, Interiors & GCs
Months 7 and 8	25 Columbia Heights: Superstructure, Interiors & GCs 30 Columbia Heights: Demolition, Superstructure, Exteriors, Interiors & GCs
Months 9 through 11	25 Columbia Heights: Superstructure, Exteriors, Interiors & GCs 30 Columbia Heights: Superstructure, Exteriors, Interiors & GCs
Months 12 through 15	25 Columbia Heights: Exteriors, Interiors & GCs 30 Columbia Heights: Exteriors, Interiors & GCs
Months 16 through 18	25 Columbia Heights: Exteriors, Interiors & GCs 30 Columbia Heights: Interiors & GCs
Months 19 through 22	25 Columbia Heights: Interiors & GCs 30 Columbia Heights: Interiors & GCs
Months 23 through 25	25 Columbia Heights: Interiors & GCs
Note: Activities which would be enclosed by the completed building façade are excluded from the analysis.	

CONSTRUCTION NOISE IMPACT CRITERIA

Chapter 22 of the *CEQR Technical Manual* breaks construction duration into "short-term" and "long-term" and states that construction noise is not likely to require analysis unless it "affects a sensitive receptor over a long period of time." Consequently, the construction noise analysis considers the potential for construction of a project to create high noise levels (the "intensity"), whether construction noise would occur for an extended period of time (the "duration"), and the locations where construction has the potential to produce noise ("receptors") in evaluating potential construction noise effects.

The noise impact criteria described in Chapter 19, Section 410 of the *CEQR Technical Manual* serve as a screening-level threshold for potential construction noise impacts. If construction of the proposed project would not result in any exceedances of these criteria at a given receptor, then that receptor would not have the potential to experience a construction noise impact.

If noise levels during construction would exceed the screening thresholds at a given receptor, the specific intensity and duration of construction noise level increases would be considered further to determine the potential for significant adverse impacts. Noise level increases that would be considered objectionable (i.e., equal to or greater than 15 dBA) lasting 12 consecutive months or more and noise level increases considered very objectionable (i.e., equal to or greater than 20 dBA)[2] lasting three consecutive months or more would be considered significant impacts.

For receptors representing interior spaces (i.e., not open space) where construction of the Proposed Project is predicted to result in objectionable noise level increments lasting 12 consecutive months or more or very objectionable noise level increments lasting three consecutive months or more, and where the façade attenuation can be determined based on readily available information, interior noise levels may also be considered in the determination of impact significance. Portions of the construction period during which predicted interior noise levels would be in the acceptable range (i.e., not greater than 45 dBA for residential and community facility uses or not greater than 50 dBA for commercial office uses), would not be counted toward the consecutive duration of construction noise impact as described above.

EVALUATION OF CONSTRUCTION NOISE LEVELS

The predicted exterior noise level increments during construction of the Proposed Project at the analyzed receptor sites will be compared to the construction noise impact thresholds described above. At the noise-sensitive receptors that experience exceedances of these thresholds during the analysis periods as determined above, the duration of exceedance of each impact threshold will be determined. Additionally, where applicable, interior noise levels will be estimated. The significance of the exceedances will be determined based on the predicted magnitude and duration of the construction noise, as well as interior noise levels if applicable, at these locations according to the criteria described above. Based on the incremental noise level increase, overall exterior noise levels for each analysis period will also be determined.

[2] Definition of “objectionable” and “very objectionable” noise level increases based on Table B from New York State Department of Environmental Conservation Assessing and Mitigating Noise Impacts policy manual, revised February 2001.