
EXECUTIVE SUMMARY

A. INTRODUCTION

The New York City Department of Housing Preservation and Development (HPD) is seeking several discretionary actions (collectively, the “Proposed Action”) in order to facilitate the redevelopment of a nine-block portion of the Broadway Triangle area in Williamsburg, Brooklyn, Community District 1 hereafter referred to as the “Project Area” (see Figure ES-1). The Proposed Action includes zoning map amendments to establish new residential and commercial zoning districts; zoning text amendments to establish Inclusionary Housing in the Project Area; the disposition of City-owned properties; Urban Development Action Area Project designation; and the modification of the Broadway Triangle Urban Renewal Plan (URP). The Proposed Action would encourage the development of affordable housing and the development of commercial and community facility space to serve the growing residential population in an area well-served by mass transit. The goal of the Proposed Action is to encourage housing production, including affordable housing at a density and scale consistent with the surrounding neighborhood, while permitting local commercial and community facility uses to support the growing residential community.

The Project Area is comprised of nine blocks totaling approximately 18 acres and is generally bounded by Flushing Avenue to the south, Throop Avenue to the east, Lynch Street to the north, and Union Avenue, Walton Street, and Harrison Avenue to the west. The area is accessible by mass transit and is served by four subway lines (the J, M, Z, and G subway lines) and three bus lines (the B43, B46, and B48).

The Proposed Action would result in a net increase of approximately 1,851 dwelling units, (of which ~~905~~ 844* units would be affordable), 103,286 square feet of retail space and 35,456 square feet of community facility space. The affordable units would be provided through both the Inclusionary Housing Program and the redevelopment of City-owned land.

The Environmental Impact Statement (EIS) has been prepared in conformance with applicable laws and regulations, including Executive Order No. 91, New York City Environmental Quality Review (CEQR) regulations, and follows the guidance of the *CEQR Technical Manual* (October, 2001) and the regulations of Article 8 of the State Environmental Conservation Law, State Environmental Quality Review Act (SEQRA), as found in 6 NYCRR Part 617. In addition, because HPD anticipates the use of federal funding from the U.S. Department of Housing and Urban Development (HUD) to facilitate the construction of affordable housing, the environmental review documentation will also include an Environmental Assessment (EA) conducted in accordance with the National Environmental Policy Act (NEPA). Under CFR Part 58, HPD has assumed the responsibilities for environmental review, decision-making and action that would otherwise apply to HUD under NEPA. The Proposed Action is also subject to the City’s Uniform Land Use Review Procedures (ULURP).

* While the Proposed Action would still result in a net increase of 1,851 dwelling units, approximately 844 of the units would be affordable (as compared to 905 affordable units in the DEIS). This is due to corrections made to four development sites in the Reasonable Worst-Case Development Scenario between DEIS and FEIS. As discussed in Chapter 1, “Project Description,” the corrections are consistent with the assumptions and methodologies used for the remaining projected development sites.

B. PROJECT DESCRIPTION

BACKGROUND

The Broadway Triangle is largely made up of the Broadway Triangle Urban Renewal Area (URA). The Broadway Triangle URA was created in March 1989 to promote new industrial and residential development in Brooklyn's Community Boards No. 1 (Greenpoint/Williamsburg) and 3 (Bedford-Stuyvesant). At the time the URA was established, the neighborhood had deteriorated, leaving behind numerous vacant lots, vacant stores and vacant residential buildings (about 35% of the area was comprised of vacant land mainly used for automobile and truck storage).

The Broadway Triangle Urban Renewal Plan (URP) established a development pattern that was compatible with the area's existing land uses. The URP called for residential use dominating the southern portion and industrial and manufacturing uses being concentrated in the northern section of the URA. While the northern portion lies mostly within M1-2 and M3-1 zoning districts, two sites zoned for residential use were developed pursuant to the plan in the 1990s. The sites were developed as affordable multi-family housing and generated 96 dwelling units. The Broadway Triangle URP called for residential development in the southern portion of the URA, which resulted in the construction of approximately 262 units of affordable housing. Sites in the northern portion were designated primarily for industrial development with the goal of generating 300 to 500 permanent jobs. Industrial development did not occur and the area remained largely vacant and underutilized.

By the late 1990s, housing demand in the neighborhood spurred residential construction in the northern portion of the URA through zoning variances approved by the New York City Board of Standards and Appeals (BSA). The City undertook several planning studies to analyze development potential in the area given the lack of industrial expansion and increase in housing demand.

EXISTING ZONING

The Broadway Triangle area has historically been a manufacturing area occupied primarily with industrial and commercial land uses. The 1961 zoning established C8-2, M1-2, and M3-1 zoning districts that encouraged the development of industrial uses while prohibiting residential development. C8 districts include heavy commercial services such as automotive uses that require large amounts of land. M1 zones are considered industrial buffer zones that are often used in areas where industrial uses are adjacent to residences and other sensitive uses. These zoning districts permit only light industrial and commercial uses as-of-right with varying degrees of density and use restrictions. M3 zones are for heavy industrial uses that typically generate noise, pollutants, and traffic. These districts are typically buffered from residential districts with M1 zoning districts. Occupied residential buildings that existed in the area at the time of the 1961 zoning were "grandfathered" in as legal nonconforming uses.

The existing C8-2 zoning district, mapped in the northern portion of the Project Area, permits commercial and light manufacturing uses at a floor area ratio (FAR) of 2.0. These districts are typically mapped along major traffic arteries and are used for automotive and other heavy commercial services that require large amounts of land. There are no overall height limits in C8-2 districts, and building heights and setbacks are governed by the sky exposure plane.

The existing M1-2 zoning, mapped throughout most of the Project Area, generally permits light industrial, commercial and limited community facility uses. Manufacturing and commercial uses have a maximum FAR of 2.0 and community facilities have a maximum FAR of 4.8. There are no height limits in M1-2 districts, and building heights and setbacks are governed by the sky exposure plane. The commercial, manufacturing, and community facility parking requirements vary with use. The existing

M3-1 zoning district, mapped in the northwest portion of the Project Area, within a small triangle surrounded by Union Avenue, Harrison Avenue, and Walton Street, permits heavy industrial uses at an FAR of 2.0 and a maximum base height of 60 feet before setback. Residential and community facility uses are not permitted in M3 districts.

DESCRIPTION OF THE PROPOSED ACTION

ZONING MAP AMENDMENTS

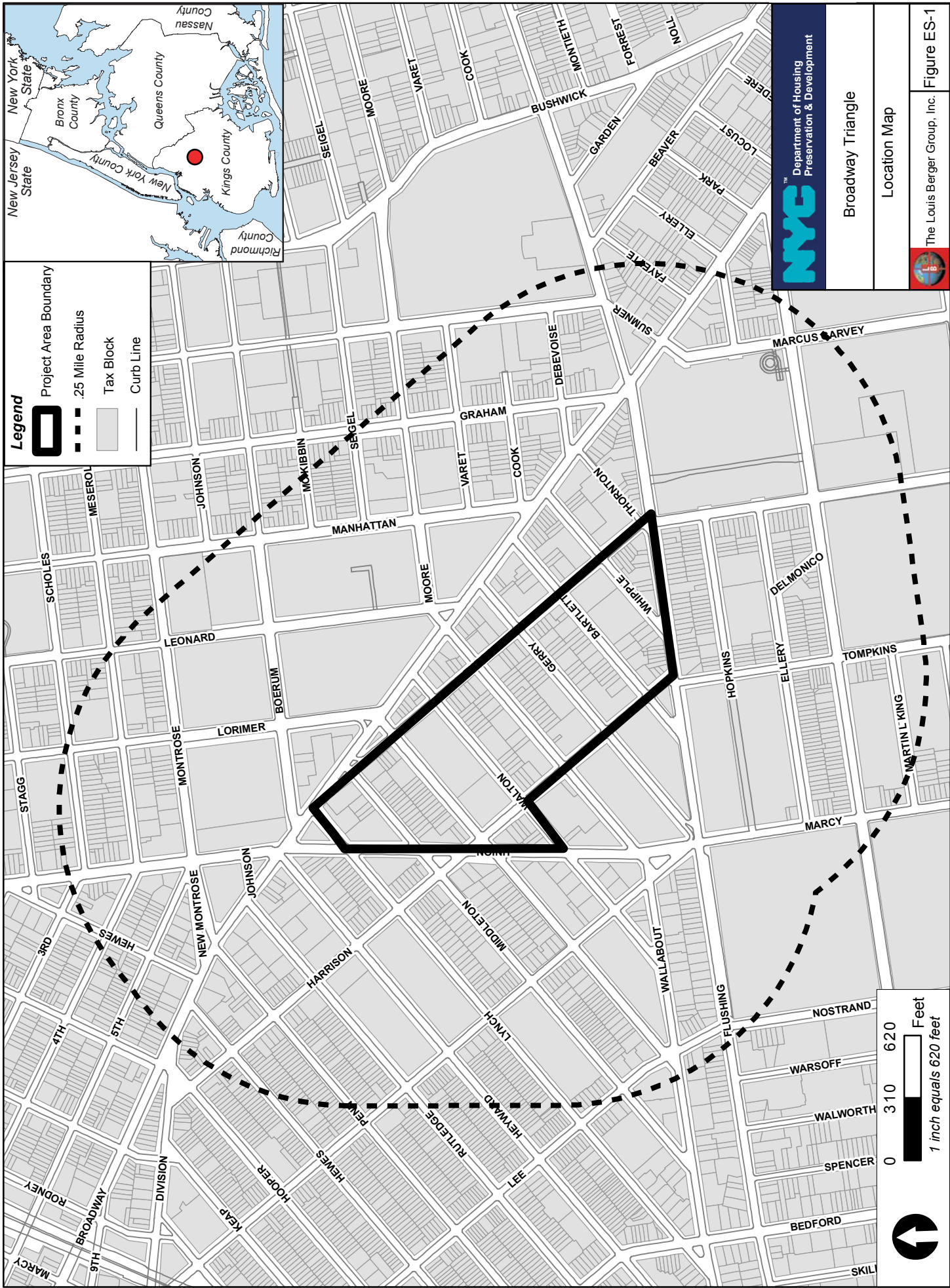
HPD is proposing zoning map amendments that affect nine blocks within the Broadway Triangle area of Williamsburg, Brooklyn Community District 1. The proposed zoning map amendments would create new residential and commercial districts and establish Inclusionary Housing provisions for the area.

As previously stated, the Project Area is generally bounded by Flushing Avenue to the south, Throop Avenue to the east, Lynch Street to the north, and Union Avenue, Walton Street, and Harrison Avenue to the west.

Under the Proposed Action, approximately 18 acres of land currently zoned C8-2, M1-2 and M3-1 would be rezoned to R6A, R6A/C2-4, R7A/C2-4 and C4-3 zoning districts. This would result in a net loss of parking and auto-related uses, vacant land, vacant (unoccupied) buildings and light manufacturing uses and a net increase in residential, commercial and community facility space (see Figure ES-2, Existing Zoning and Figure ES-3, Proposed Zoning). The proposed zoning changes would allow residential development on an as-of-right basis; provide incentives for the development of affordable housing; provide new opportunities for mixed-use development; and bring residential developments currently located within the Project Area into conformance with zoning. The zoning map amendments would include the following:

- The existing C8-2 district mapped between Lynch and Middleton Streets, and Union and Throop Avenues would be changed to R6A and R6A/C2-4 districts (with the C2-4 commercial overlay mapped to a depth of 100 feet from each avenue and along Lynch Street);
- The existing M3-1 district mapped between Middleton and Lorimer Streets and Union and Throop Avenues would be changed to R6A and R6A/C2-4 districts (with the C2-4 commercial overlay mapped to a depth of 100 feet from each avenue);
- The existing M1-2 district mapped between Lorimer and Walton Streets, and Union and Harrison Avenues would be changed to R6A and R6A/C2-4 districts (with the C2-4 commercial overlay mapped on the entire block);
- The existing M1-2 district mapped between Lorimer and Walton Streets and Harrison and Throop Avenues would be changed to an R6A district;
- The existing M1-2 district mapped between Walton and Whipple Streets, and Harrison and Throop Avenues would be changed to R7A and R7A/C2-4 (with the C2-4 commercial overlay mapped to a depth of 100 feet from each avenue with the exception of Throop Avenue between Bartlett Street and Whipple Streets);

The existing M1-2 district mapped on the block bounded by Whipple Street, Throop Avenue and Flushing Avenue would be changed to a C4-3 zoning district.



Legend

- Project Area Boundary
- .25 Mile Radius
- Tax Block
- Curb Line

NYC
 Department of Housing
 Preservation & Development

Broadway Triangle
 Location Map

The Louis Berger Group, Inc.

Figure ES-1

0 310 620 Feet
 1 inch equals 620 feet

Source: City of New York Department of City Planning; MapPLUTO Release 07C.1.

Legend

Project Area Boundary

ZONING MAP 13b

THE NEW YORK CITY PLANNING COMMISSION

Major Zoning Classifications:
 The number(s) and/or letter(s) that follows an R, C or M District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.

R – RESIDENTIAL DISTRICT
C – COMMERCIAL DISTRICT
M – MANUFACTURING DISTRICT

AREA(S) REZONED

EFFECTIVE DATE(S) OF REZONING:
 * 3-26-2008 C 090213 ZMK
 3-12-2008 C 060377 ZMK

SPECIAL PURPOSE DISTRICT areas designated for a special purpose district as described in the text of the Zoning Resolution.

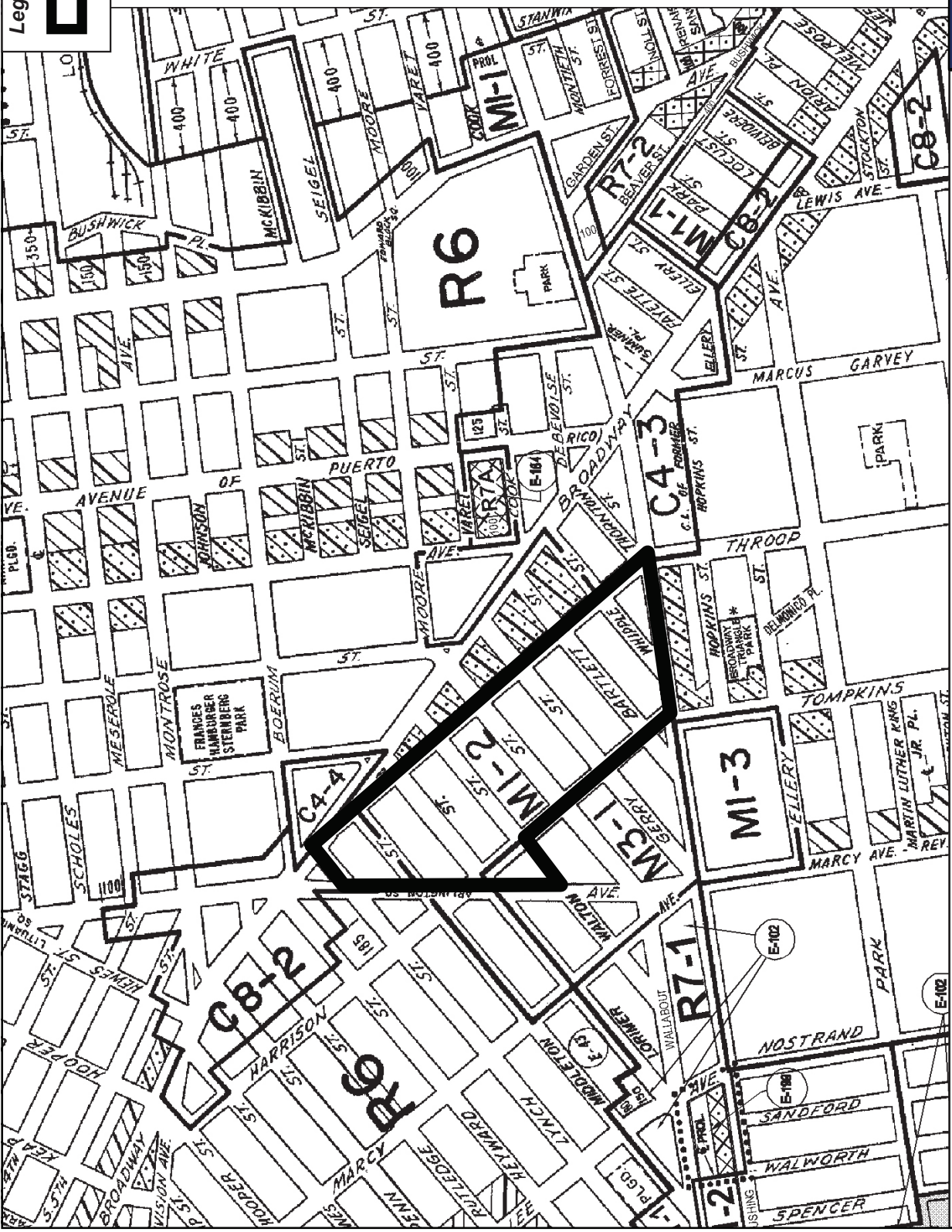
D – RESTRICTIVE DECLARATION
 E – CITY ENVIRONMENTAL QUALITY REVIEW DECLARATION
 (E) – REFERS TO BLOCKS WITH LOTS SUBJECT TO CDDP DESIGNATION E-138. SEE ZFA APPENDICES (CDDP DECLARATIONS) FOR LIST OF AFFECTED BLOCK AND LOTS.

MAP KEY

12c	13a	13c
12d	13b	13d
16c	17a	17c

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NOTE: Zoning information as shown on the map is subject to change. For the most up-to-date zoning information for this map, visit the Zoning section of the Department of City Planning website at www.dcp.nyc.gov/zoning or contact the Zoning Information Office at (212) 250-3591.



- C1-1
 - C1-2
 - C1-3
 - C1-4
 - C1-5
 - C2-1
 - C2-2
 - C2-3
 - C2-4
 - C2-5
- NOTE: Where no dimensions for zoning district boundaries appear on the zoning maps, such dimensions are determined in Article VII, Chapter 6 (Location of District Boundaries) of the Zoning Resolution.



NYC Department of Housing Preservation & Development

Broadway Triangle

Existing Zoning

The Louis Berger Group, Inc. Figure ES-2

As described above, under the Proposed Action, the M1-2 district would be changed to R6A, R6A/C2-4, R7A, R7A/C2-4, and C4-3 zoning districts. The proposed R6A district is a contextual district which allows residential and community facility uses up to 3.0 FAR, and with Inclusionary Housing Bonus a base FAR of 2.7 and a max FAR of 3.6 for developments that use it. The R6A requires buildings to be built at or near the street line with a maximum base height of 60 feet and a maximum building height of 70 feet. The proposed R7A district is a contextual zoning district which allows residential and community facility uses up to 4.0 FAR, and with Inclusionary Housing Bonus a base FAR of 3.45 and a maximum FAR of 4.6 for developments that use it. The R7A requires buildings to be built at or near the street line with maximum base height of 65 feet and a maximum building height of 80 feet. Parking is required for 50% of dwelling units under the R6A and R7A districts. The *Quality Housing* regulations, which are mandatory in R6A and R7A districts, set height limits and allow high lot coverage buildings that are set near or at the street line. The regulations also include amenities related to the planting of trees, landscaping and recreation space. A C2-4 commercial overlay would be mapped to a depth of 100 feet from the avenues, which allows neighborhood retail uses built up to 2.0 FAR when mapped in R6A and R7A districts. The proposed C4-3 district allows commercial uses up to 3.4 FAR, residential uses up to 2.43 FAR, and community facility uses up to 4.8 FAR. For both the C2-4 and C4-3 commercial districts, mixed use development (residential and commercial) that occurs in these districts would limit commercial development to the first floor and residential development above.

ZONING TEXT AMENDMENT

INCLUSIONARY HOUSING BONUS

The zoning text amendment would allow the new Inclusionary Housing bonus to be utilized throughout the Project Area (within the proposed R6A and R7A zoning districts) by modifying Zoning Resolution (ZR) Section 23-90. Since 1987, New York City zoning has contained the Inclusionary Housing Program (IHP), which promotes affordable housing development by providing the incentive of additional allowable floor area to developers willing to provide affordable units as part of their project. Until recently, this program was only applicable in the City's highest density districts. Today, the use of the IHP (also called Inclusionary Zoning) has been expanded and adapted to be used with both high- and medium-density residential districts. The revised IHP combines the incentive of additional floor area with a variety of housing subsidy programs to provide permanently affordable housing.

Under the Proposed Action, the IHP would be available in an additional portion of Brooklyn Community District 1. The proposed Inclusionary Housing text amendment includes the following components:

- The IHP would apply in the R6A and R7A districts proposed to be mapped on the blocks bounded by Throop Avenue, Whipple Street, Harrison Avenue, Walton Street, Union Avenue and Lynch Street;
- The proposed text would permit a maximum FAR of 3.6 for developments within the R6A district that provide affordable housing and a maximum FAR of 4.6 would be permitted for developments within the specified R7A district that provide affordable housing;
- Developments not participating in the IHP would be allowed a maximum FAR of 2.7 under the R6A district and 3.45 under the R7A district;
- Developments would qualify for the maximum FAR of 4.6 by providing 20% of residential floor area for low-income households; such households have incomes below 80% of the HUD-established income levels and;
- Affordable units would be developed and administered pursuant to a Lower Income Housing Plan with HPD and would remain affordable in perpetuity.

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URBAN RENEWAL PLAN AMENDMENT

Through its Urban Renewal Authority, HPD established the Broadway Triangle URA in 1989 pursuant to Uniform Land Use Review Procedure and the New York State General Municipal Law. The Urban Renewal Plan (URP) governs development on sites designated in the URA, bounded generally by Union Avenue, Harrison Avenue, Walton Street, Broadway, Whipple Street, Throop Avenue, Park Avenue, Marcy Avenue, and Flushing Avenue. The URA currently includes industrial, commercial and residential land uses. The URP was originally adopted by the Board of Estimate in June, 1989 and had an approved Minor Change in March, 1996. The Proposed Action seeks to modify the Plan in the following ways:

- The Plan would no longer include any industrial sites. The remaining industrial Sites 1A, 1B, 2 and 3 would be de-designated from the URP. These sites were not acquired pursuant to the URP;
- The land use designation of existing Sites 4A, 4B, 7A and 7B would be changed from industrial to residential;
- Block 2272, Lots 45, 46, and 147 would be added to existing Sites 7A and 7B, to form a new Site 4;
- The Plan would no longer include commercial or public/semi-public land uses. Existing residential, residential/commercial and public/semi-public sites would be designated for residential use. However, the residential use definition permits other uses allowed by zoning, including commercial and community facility uses;
- The sites would be renumbered to reflect de-designations and reconfigurations;
- The boundary of the Urban Renewal Area would be modified to reflect site de-designations; and
- The Plan's language would be updated to conform to current standards.

DISPOSITION APPROVAL AND UDAAP DESIGNATION

In conjunction with the disposition of City-owned property to facilitate the development of affordable housing, HPD is seeking project approval and designation of certain sites as Urban Development Action Area Projects (UDAAP). The sites for which HPD is seeking disposition authority and UDAAP designation include:

- Block 2269, Lots 14, 16-19, 23-25, 27-31, 33, 35, 36, 39-43, 45, 47-50, and 52
- Block 2272, Lots 11, 45, 46, 49, 51-53, 108, and 147

These approvals would facilitate the production of mixed-use developments that would include some combination of housing, including affordable housing, community facilities, and commercial uses in accordance with the uses described in the amended Broadway Triangle Urban Renewal Plan.

CITY ACQUISITION

The Proposed Action includes modification of the URP to create new Urban Renewal Sites. To facilitate implementation of the Proposed Action, the City, acting through HPD, may acquire property through a negotiated purchase or through eminent domain. There has been no determination at this time to acquire property by means of eminent domain. Any such acquisition of property would be done in compliance with the provisions of the New York State Eminent Domain Procedure Law and the New York City Administrative Code.

FUNDING

Implementation of the Proposed Action may include applications for financing from various agencies, including, but not limited to Low Income Housing Tax Credits (City/State), various New York City and

State subsidy programs (e.g. Housing Trust Fund, Affordable Housing Corporation, NYC Housing Development Corporation), HPD Loan Programs; and Federal, State, and/or City Brownfield Incentives and grants from the New York State Energy Research and Development Authority (NYSERDA). The applicant may also seek tax assistance from the City and State.

In addition, HPD intends to use federal funding from the U.S. Department of Housing and Urban Development (HUD) including, but not limited to, HUD's HOME Investment Partnerships Program. It is expected that HOME funding may be utilized at a later date to facilitate the construction of developments within the Project Area.

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

PURPOSE AND NEED

The Proposed Action would encourage housing production, including affordable housing, at a density, bulk and scale consistent with the surrounding neighborhood, while at the same time permitting local commercial and community facility development to support the growing residential community. In addition, the Proposed Action would bring residential uses currently located in manufacturing districts into conformance with zoning. Under the Proposed Action, the Project Area would be rezoned to allow as-of-right residential development, local retail and community facility development in an area proximate to transit.

As discussed above, when the URA was established in 1989, the neighborhood had deteriorated, leaving behind numerous vacant lots, vacant stores and vacant residential buildings. Although some residential development occurred within the URA, the current manufacturing zoning of the Project Area precluded residential development, and industrial development within the Project Area never occurred as initially envisioned under the URP. With the continued decline of industrial development, many sites within the Project Area remained vacant and underutilized.

By the late 1990s, housing demand in the neighborhood spurred residential construction in the northern portion of the Project Area through zoning variances approved by the BSA. The trend for residential development continues today, however, the Project Area's current zoning is the primary constraint to residential redevelopment. In addition, the southern blocks of the Project Area are occupied by a long-held City-owned property, which has generally lain vacant and underutilized for years. The Proposed Action seeks to allow new residential development within this portion of the URA and to redevelop the City-owned parcels to provide affordable housing. In addition, the Proposed Action would make the Inclusionary Housing Program applicable within the Project Area, which would provide incentives to encourage the private market to create affordable housing.

REASONABLE WORST-CASE DEVELOPMENT SCENARIO (RWCDS)

The Proposed Action is subject to CEQR and as such requires the analysis of both short-term and long-term impacts. For area-wide rezonings not associated with a specific development, a 10-year time horizon is utilized to assess the potential impacts of the full anticipated build out under the Proposed Action. This is assumed to be the period of time in which real estate developers would act on the change

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in zoning and the effects of the Proposed Action would be realized. Therefore, the future condition with the Proposed Action identifies the amount, type, and location of development that is expected to occur by 2018 as a result of the Proposed Action. The future condition without the Proposed Action identifies development projects anticipated by 2018 absent the development allowed by the Proposed Action. The incremental difference between the future condition without the Proposed Action and the future condition with the Proposed Action serves as the basis for the environmental impact analysis presented in this EIS.

To determine the RWCDS, standard methodologies have been used following *CEQR Technical Manual* guidelines and employing reasonable, worst-case assumptions. These methodologies have been used to identify the amount and location of future residential, commercial, and community facility growth in the Project Area. In projecting the amount and location of new residential development, several factors have been considered, including known development proposals, past development trends, and the New York City Department of City Planning's (DCP) standard "soft site" criteria, described below, for identifying likely development sites. In formulating the projections, HPD was aware that there is a large demand for new housing in the area, but that the demand has been constrained by zoning that does not permit such development as-of-right.

In identifying the RWCDS, a set of criteria was established and all sites that met the criteria were identified. Development sites were identified based on the following criteria:

- sites for which owners have expressed interest in redevelopment;
- pre-existing residential buildings with fewer than six units on lots of 2,500 sf or larger that are built to less than 50 percent of the proposed FAR;
- lots of 2,500 sf or larger developed with buildings used for industrial, manufacturing, storage, parking, or auto-related uses, including those that are built at greater than 50 percent of the proposed FAR.
- other uses on lots of 2,500 sf or larger that are built to less than 50 percent of the proposed FAR;
- sites that meet the criteria above when assembled with adjacent lots (up to three different owners); and
- Board of Standards and Appeals (BSA) applications granted in the Project Area. For analysis purposes, it is assumed that residential development of these sites would proceed as-of-right under the Proposed Action. It is also assumed that existing buildings on projected development sites would be demolished under the Proposed Action.

Lots meeting the above criteria are not considered soft if the following is true:

- there are known development plans for the site under the existing zoning or pending discretionary actions that would allow redevelopment, and the development allowed under the existing zoning or the pending discretionary action is greater than that which could be developed under the Proposed Action, and;
- the lot configuration is inefficient in terms of residential development complying with the proposed contextual zoning districts.

Over the past several years, the Project Area and the surrounding neighborhood, which is primarily mapped with C8, M1 and M3 zoning districts – districts which do not allow residential uses – has experienced significant levels of residential development, which was approved through variances granted by the BSA. Because of the strong trend for residential development in the area, nearly all of the soft sites identified within the Project Area are projected to be developed over the 10-year time frame. These sites are known as "projected development sites" and represent the sites most likely to experience redevelopment as a result of the Proposed Action. When assessing the effects of an area-wide rezoning, it is also common to identify "potential development sites," which include those sites considered less likely

to be developed over the 10-year analysis period. Potential development sites generally consist of smaller assemblages, and/or irregular-shaped parcels or they are sites which have recently experienced substantial reinvestment and are not likely to be redeveloped in the foreseeable future.

HPD has identified 34 projected development sites considered likely for redevelopment by 2018 as a result of the Proposed Action. In addition, there are three potential development sites which are considered to have less potential for residential redevelopment and are described in more detail below. The Proposed Action would result in a net increase of approximately 1,851 dwelling units, (of which ~~905~~ 844 would be affordable), 103,268 square feet of retail space and 35,456 square feet of community facility space. The affordable units would be provided through both the Inclusionary Housing Program and through the redevelopment of City-owned land.

THE FUTURE CONDITION WITHOUT THE PROPOSED ACTION

In the future without the Proposed Action (No-Build Condition), given the current zoning and existing land use trends, it is anticipated that new, as-of-right development would occur on a number of development sites in the Project Area. In addition to the known development projects noted immediately above, it is expected that 5 projected development sites would have new and/or expanded as-of-right development absent the Proposed Action. In addition, residential development approved by the BSA is expected to occur on one development site under the No Build Condition. In total, it is projected that 18 dwelling units, 134,260 square feet of commercial space, 83,944 square feet of retail space and 51,275 square feet of industrial floor space would be developed in the future condition without the Proposed Action.

THE FUTURE CONDITION WITH THE PROPOSED ACTION

In the future condition with the Proposed Action (Build Condition), an increase in residential development is expected to occur, with the introduction of approximately 1,869 dwelling units. Additionally, approximately 187,230 square feet of retail floor area and 35,456 square feet of community facility floor area are expected in the future with the Proposed Action. The incremental development (Build Condition minus No-Build Condition) or change in land use projected to occur as a result of the Proposed Action is an increase of 1,851 dwelling units, of which approximately ~~905~~ 844 units would be affordable units), 103,286 square feet of neighborhood retail space, 35,456 square feet of community facility space and ~~587-628~~ accessory parking spaces.

HPD has identified 34 projected development sites in the RWCDs that are considered most likely to be developed by 2018 as a result of the Proposed Action. In addition, there are three potential development sites considered less likely to be developed in the same 10-year analysis period.

C. PROBABLE IMPACTS OF THE PROPOSED ACTION

LAND USE, ZONING, AND PUBLIC POLICY

As described below, the Proposed Action would not result in significant adverse impacts to land use, zoning or public policy. The residential, commercial and community facility uses expected under the Proposed Action would be compatible with existing and future land uses within the Project Area and surrounding neighborhoods. The proposed contextual R6A and R7A zoning districts would be consistent with the existing R6 and R7 districts predominantly mapped in the surrounding areas. The C2-4 commercial overlays along Harrison Avenue, Throop Avenue, and Lynch Street would allow for mixed-

Broadway Triangle

use development with commercial uses on the ground floor and residential above. This mixed-use development would mirror that of existing mixed use development found on the north side of Throop and further strengthen the corridor. The proposed C4-3 district, in the southern most portion of the Project Area, would be consistent with zoning mapped along Flushing Avenue and development generated under the C4-3 would be in keeping with the commercial character of Flushing Avenue. The proposed C4-3 district would further strengthen the Flushing Avenue commercial corridor. The proposed zoning would also be consistent with anticipated zoning changes proposed in neighborhoods north of the Project Area. In the addition, the Proposed Action would further several stated public policies concerning affordable housing and sustainability. Overall, the Proposed Action would result in beneficial effects to land use, zoning, and public policy. The changes would have a positive impact on the Project Area and surrounding neighborhoods by allowing for new residential development opportunities and enlivening the Project Area with neighborhood retail space and community facility development. For these reasons, as discussed below, no significant adverse impacts on land use, zoning, or public policy would result from the Proposed Action.

Under the Proposed Action, the Project Area would be rezoned to encourage a mix of residential, community facility, and commercial uses and to promote affordable housing opportunities. The Proposed Action would make underutilized land available for residential development, including a substantial amount of new affordable housing. The redevelopment of the area with new residential and mixed-use residential buildings (including community facility and neighborhood retail space) would replace vacant, underutilized parcels of land with new predominantly residential development. The proposed contextual zoning districts would allow new development that would be compatible with neighboring developments in density, bulk, height and setback. The redevelopment of the Project Area would result in a net increase of 1,851 dwelling units, of which approximately ~~905~~ 844 would be affordable units provided through the proposed Inclusionary Housing Program (and the redevelopment of City-owned properties); 103,286 square feet of new retail space; 35,456 square feet of community facility, and ~~587~~ 628 additional accessory parking spaces.

LAND USE

Development resulting from the Proposed Action would result in a net increase of approximately 1,851 dwelling units, (of which ~~905~~ 844 would be affordable), 103,286 square feet of retail space and 35,456 square feet of community facility space, compared to the future without the Proposed Action. The affordable housing units would be provided through both the Inclusionary Housing Program and through the redevelopment of City-owned land. New development under the Proposed Action would be generally compatible with existing residential, commercial, community facility uses currently found within and outside the study area and at similar densities.

Although the Proposed Action would substantially alter the current manufacturing zoning designations within the Project Area resulting in new residential uses and mixed-use developments, this would not result in significant adverse impacts. Many of the parcels within the Project Area that are currently zoned for industrial and manufacturing uses are underutilized or vacant and have been so for many years. The Proposed Action represents an opportunity to return vacant, underutilized City- and privately-owned land to productive use by redeveloping the Project Area for housing, community facility and neighborhood retail space to support existing and future residents of the area. No significant adverse impacts associated with land use would result from the Proposed Action.

ZONING

The Proposed Action would change the zoning of nine blocks within the Project Area from M1-2, M3-1 and C8-2 districts to R6A, R6A/C2-4, R7A, R7A/C2-4, and C4-3 districts. The Inclusionary Housing

bonus would be permitted within the proposed R6A and R7A districts to allow for an increase in floor area for those developments providing affordable housing. The proposed zoning designations would encourage new residential and mixed-use development where few currently exist. The proposed rezoning would provide more flexibility, which will not only allow but also encourage new mixed-use development with an emphasis on needed housing and affordable housing.

The proposed contextual zoning districts would ensure that new development would be designed to be consistent with the prevailing built form found in residential areas surrounding the Project Area. The proposed contextual R6A and R7A zoning districts would be consistent with the existing R6 and R7-1 districts predominantly mapped in the surrounding areas. The C2-4 commercial overlays along Harrison Avenue, Throop Avenue, and Lynch Street, and the proposed C4-3 district, in the southern most portion of the Project Area, would be consistent with existing zoning mapped along these corridors and would be in keeping with the mixed-use and commercial character of the corridors. The proposed zoning would also be consistent with anticipated zoning changes proposed in neighborhoods north of the Project Area. Thus, there would not be a significant adverse impact on zoning. In those areas where industrial buildings are underutilized or vacant, there would be a significant benefit from the redevelopment.

PUBLIC POLICY

The Proposed Action would be compatible with adopted public policies concerning land use, affordable housing and sustainability. Key public policy documents considered in the analysis include the Broadway Triangle Urban Renewal Plan, HPD's New Housing Marketplace Plan, the Inclusionary Housing Program and PlaNYC.

The Proposed Action would be consistent with these policy documents by establishing new residential zoning districts in an area which currently permits light manufacturing and commercial uses. The Project Area is situated at the junction of three Brooklyn neighborhoods: Williamsburg, Bedford-Stuyvesant and Bushwick, and redevelopment with predominately residential and local retail and community facility uses at a density and scale consistent with these established areas would serve to unify the three neighborhoods. The Proposed Action would facilitate the provision of affordable housing by redeveloping several vacant parcels of long-held City-owned land with affordable, multi-family buildings. The Proposed Action would also expand the Inclusionary Housing Program to make a floor area bonus available within the R6A and R7A districts proposed in the Project Area, thereby facilitating the provision of affordable housing by making it more attractive for private developers to construct. Lastly, development projected to occur under the Proposed Action would be located in proximity to mass transit, resulting in less dependency on automobile use and maximizing the use of mass transit subway and bus service options.

SOCIOECONOMIC CONDITIONS

The Proposed Action could potentially result in significant adverse indirect residential displacement impacts. It would not result in significant adverse socioeconomic impacts related to direct residential displacement, direct or indirect business and institutional displacement, or effects to specific industries. Conclusions related to each of the five areas of potential socioeconomic impact, as outlined in the *CEQR Technical Manual*, are summarized below.

DIRECT RESIDENTIAL DISPLACEMENT

According to the *CEQR Technical Manual*, a direct displacement impact may be significant if the persons being displaced represent more than five percent of the study area population, and a population with a similar profile would not be able to relocate within the neighborhood. The 39 residents who would be

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displaced under the Proposed Action represent such a small fraction of the approximately 1,300 persons living in the Project Area and the 52,909 people living in the broader socioeconomic study area that no further analysis is necessary. Direct displacement due to the Proposed Action would not result in significant adverse impacts.

INDIRECT RESIDENTIAL DISPLACEMENT

According to the *CEQR Technical Manual*, indirect displacement of a residential population can occur when an action increases property values and thus rents throughout a study area, making it difficult for some current residents (or residents in the No-Action condition) to continue to afford to live in the community. The *CEQR Technical Manual* suggests that a population increase of 5 percent or more could be large enough to trigger a socioeconomic change that would negatively affect a population at risk of displacement.

The Proposed Action would introduce 5,516 residents to the area, which would represent a population increase of 9.9 percent over the future No-Action condition in the socioeconomic study area. This increase far exceeds the 5 percent threshold laid out in the *CEQR Technical Manual*. However, in recent years, the study area has experienced a substantial amount of new market rate residential development and an influx of residents with higher-incomes. As a whole, the socioeconomic characteristics of the population living in the study area is already changing and is likely to continue to change over the next several years under the future condition without the Proposed Action (No-Action conditions). Nonetheless, low- and moderate- income residents living in unprotected housing units in several census tracts within the study area constitute a “population at risk” that is potentially subject to indirect displacement under the Proposed Action.

Within the socioeconomic study area there are an estimated 3,543 residents living in 1,189 units that are currently vulnerable to indirect displacement due to increased rents. The Proposed Action could initiate a trend toward increased rents in the study area. Although there are ongoing trends of increased rent pressures in the study area and adjacent Williamsburg and Bushwick neighborhoods, the Proposed Action’s contributions to rent pressures in the study area could be significant. As discussed in Chapter 24, “Mitigation,” the provision of new housing, particularly ~~905~~ 844 new affordable housing units that would be rent protected, in addition to the 370 affordable units in the No-Action condition, for a total of 1,214 affordable units that would provide partial mitigation for these impacts.

DIRECT BUSINESS DISPLACEMENT

The *CEQR Technical Manual* defines direct business displacement as the involuntary displacement of businesses from the site of (or a site directly affected by) a proposed action. A preliminary assessment of direct business displacement looks at the employment and business value characteristics of the affected businesses to determine the significance of the potential impact. A significant direct displacement impact may exist if the businesses provide substantial economic value to the city or region, are the subject of regulations or publicly adopted plans to preserve, enhance or otherwise protect them, or substantially contribute to a defining element of the neighborhood. The impact assessment found that the direct business displacement under the Proposed Action would not conflict with any of these criteria and would not result in a significant impact.

Excluding those businesses that would be displaced in both the With-Action and No-Action scenarios, the Proposed Action would directly displace approximately 19 firms and 138 employees. If these sites are redeveloped as assumed under the RWCDS, it is possible that these existing firms could be displaced, subject to lease terms and agreements between private firms and property owners existing at the time of redevelopment. The businesses that could be displaced conduct a variety of business activities. Although

the potentially displaced firms each contribute to the city's economy and therefore have economic value, the products and services they provide are widely available in the area and the city and would still be available to consumers as many other existing businesses would remain and firms providing similar products and services would still be available in the surrounding area.

INDIRECT BUSINESS DISPLACEMENT

Indirect business displacement is the involuntary displacement of businesses that results from a change in socioeconomic conditions created by a proposed action. The issue of indirect business displacement arises when an action increases property values and rents, making it difficult for some categories of business to remain at their current locations. A preliminary assessment was performed for the study area, examining conditions and trends in employment; physical and economic conditions; trends in real estate values and rents; zoning and other regulatory controls; the presence of categories of vulnerable businesses/institutions or employment; and underlying trends in the city's economy. Based on the screening criteria outlined in the *CEQR Technical Manual*, the Proposed Action would not: 1) introduce enough of a new economic activity to alter existing economic patterns; 2) add to a particular sector of the local economy that significantly alters or accelerates trends; 3) displace uses that have a "blighting" effect on commercial property or values in the area; 4) directly displace uses that support businesses in the area, or bring people to the area and form a customer base for local businesses; 5) directly or indirectly displaces residents, workers, or visitors who form the existing customer base; or 6) alter land use patterns and trends or impede efforts to attract investment to the area, or create a climate for disinvestment that could lower property values. Thus, it is concluded that the Proposed Action is not expected to result in significant adverse impacts regarding indirect business displacement.

EFFECTS ON SPECIFIC INDUSTRIES

According to the *CEQR Technical Manual*, a significant adverse impact may occur if an action would measurably diminish the viability of a specific industry that has substantial economic value to the city's economy. Based on the screening criteria outlined in the *CEQR Technical Manual*, the Proposed Action does not have the potential to displace a substantial amount of employment from any one industry sector or category of businesses. Therefore, there would be no significant adverse impact on any specific industry or category of businesses.

ENVIRONMENTAL JUSTICE

In the future with the Proposed Action, there would be no disproportionate adverse impacts to low-income and minority populations. An evaluation of the potential for indirect displacement of residents and businesses in the study area found that no unmitigated significant adverse impacts would result from the Proposed Action. The Proposed Action would enhance neighborhood character and the new uses projected to occur with the Proposed Action would be consistent with and supportive of existing and future land uses and adopted public policies. Furthermore, measures related to hazardous materials, air quality and noise would be incorporated into the Proposed Action to preclude adverse effects on future occupants and workers (including construction workers). These measures would be included under the proposed zoning as (E) designations for privately-owned development sites or required through provisions in the Land Disposition Agreement (LDA) between HPD and a developer (for City-owned development sites).

In the future with the Proposed Action, approximately 13 housing units with an estimated 39 residents could be displaced. Given the relatively high concentration of low-income and minority residents in the Block Groups where projected development sites are located, it is possible that residents in these units may identify themselves as either low-income and/or minority. However, the directly displaced units

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would be replaced with new housing, and in the event federal funding is utilized for construction of these developments, displaced residents would be given preferential access to new units. In addition, residents would be displaced without prejudice based upon income or minority status as there is no alternative being considered that would cause the displacement area to shift. Therefore, no adverse effect with regard to direct displacement would occur.

Overall, benefits attributable to the Proposed Action and experienced by study area residents, including low-income and minority populations, would offset any adverse impacts experienced by potentially displaced residents. Residential and commercial occupants who are displaced by any federally-funded development will be afforded all rights and benefits available under the Uniform Relocation Act (URA) and all applicable law. Eligible residential or commercial occupants who are displaced by public improvements or from quasi-public sites or urban renewal sites which are not federally assisted will be afforded all rights and benefits made available by the City Relocation Rule, 28 RCNY §1804

COMMUNITY FACILITIES AND SERVICES

The Proposed Action would not result in significant adverse impacts related to community facilities and services. As there are no direct effects to existing community facilities resulting from the Proposed Action, the EIS analysis concentrates on the potential for indirect effects. The Proposed Action exceeds screening thresholds for public elementary, intermediate, and high schools; libraries, health care facilities; and publicly funded day care. For police and fire protection services, the *CEQR Technical Manual* suggests that a detailed assessment of service delivery be conducted if a proposed action would affect the physical operations of, or access to and from, a fire station or police precinct house. Accordingly, a detailed analysis of police and fire services is not provided in the EIS, but a summary of existing services in and around the Project Area is provided for informational purposes.

The Proposed Action is expected to result in a net increase of approximately 1,851 residential dwelling units on 34 projected development sites as compared to the No-Action condition by 2018. This new development is expected to introduce an estimated 5,516 residents over the No-Action condition. Approximately ~~905~~ 844 of the new units (~~49~~ 46 percent) would be affordable housing units provided through the Inclusionary Housing Program and the redevelopment of City-owned land.

PUBLIC SCHOOLS

Based on the fall 2008 update to *CEQR Technical Manual* Table 3C-2, which reflects new multipliers for determining the number of school-aged children expected to be generated by residential development, the estimated school age population generated by the RWCDS would include: 537 elementary school students, 222 intermediate school students, and 259 high school students by 2018.

Elementary Schools

With the 537 elementary school students generated by the Proposed Action, the utilization rate for elementary schools within the half-mile study area would increase from 65 percent in the future condition without the Proposed Action to 73 percent in the future condition with the Proposed Action, with ~~1,850~~ 1,836 available seats. The Proposed Action falls below the CEQR threshold for significance, as there would not be a deficiency and therefore, it would not cause a significant adverse impact on elementary schools within the half-mile study area. For CSD 14 as a whole, utilization of elementary school seats would increase from 61 percent to 65 percent from the future condition without the Proposed Action to the future condition with the Proposed Action, with ~~4,534~~ 4,520 available seats, and there would be no significant adverse impacts to elementary schools.

Intermediate Schools

The addition of 222 intermediate school students to the entire half-mile study area generated under the future condition with the Proposed Action for 2018 would not adversely affect the intermediate schools located within the study area. The utilization rate would increase from the future condition without the Proposed Action to the future condition with the Proposed Action, from 48 percent to 54 percent, with ~~1,718~~ 1,712 available seats. For CSD 14 as a whole, the utilization rate would increase from 49 percent under the future without the Proposed Action conditions to 52 percent under the future condition with the Proposed Action, with ~~2,985~~ 2,979 available seats. Therefore, the Proposed Action would not cause a significant adverse impact on intermediate schools within the half-mile study area, or within CSD 14 as a whole.

High Schools

The Proposed Action is expected to generate 259 high school students by 2018. In the future with the Proposed Action, utilization at study area high schools is expected to increase by 1 percent from 56 percent to 57 percent from the future condition without the Proposed Action to the future condition with the Proposed Action, with ~~12,795~~ 12,788 available seats. Brooklyn high schools are expected to remain operating at the same utilization percentage, 67 percent capacity with ~~30,936~~ 30,929 available seats. The Proposed Action would not cause a deficiency of available high school seats in the high school study area or Brooklyn as a whole and would not increase utilization by more than five percent. Therefore, no significant adverse impacts on high schools are anticipated as a result of the Proposed Action.

LIBRARIES

By 2018, a net increase of 5,516 new residents would be added to the Project Area as a result of the Proposed Action, bringing the total library study area population to ~~150,782~~ 150,925. With the population added to the study area with the Proposed Action, the volumes to resident ratio would decrease slightly from the future No-Build condition, from 0.92 to 1 per resident to 0.89 to 1 per resident. This slight decrease is not likely to affect service delivery. In addition, area residents have access to all Brooklyn Public Libraries and may also request materials from other branches. According to the *CEQR Technical Manual*, if service delivery would deteriorate to unacceptable levels as a result of a substantial increase in population (more than five percent), a significant adverse impact could result. The Proposed Action would increase the study area No-Build population by ~~3.7~~ 3.8 percent, less than the CEQR threshold of five percent, and the volumes-to-resident ratio would have a minimal decrease and is not likely to greatly affect service delivery. Therefore, the Proposed Action is not expected to have significant adverse impacts on library facilities.

HEALTH CARE FACILITIES

New residential development generated by the Proposed Action is anticipated to include ~~905~~ 844 low- to moderate-income dwelling units, which, based on the average household size of 2.98 for Brooklyn Community Districts 1, 3, and 4, would generate ~~2,697~~ 2,515 new health care facility users. These new users are anticipated to generate approximately ~~2,411~~ 2,248 emergency room visits per year, which would represent a ~~2.59~~ 2.41 percent increase in the 93,243 emergency room visits at Woodhull Hospital, the nearest hospital facility to the Project Area. This is below the CEQR guidelines threshold of a 5 percent increase in demand for services, and as such, no significant adverse affects on health care services are anticipated.

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PUBLICLY FUNDED DAY CARE

Based on the fall 2008 update of *CEQR Technical Manual* Table 3C-4, the ~~905~~ 844 affordable (low and low-moderate-income) housing units generated by the Proposed Action would generate ~~480~~ 447 children under the age of 6 eligible for publicly funded day care services. As a result of the Proposed Action, the collective utilization rate of the day care centers and Head Start programs would increase from 88 percent to ~~99.9~~ 99.7 percent and there would be ~~3~~ 11 available slots. As these children are expected to be attending school during most of the day, their need would be for after-school care and as such, are not included in the public day care analysis. As available capacity would remain in the future with the Proposed Action, there would not be any significant adverse impacts on publicly funded day care in the study area.

POLICE SERVICES AND FIRE PROTECTION

With continued adjustment of staffing and other resources to accommodate the Proposed Action, it is anticipated that there would be no significant adverse impacts on NYPD services.

As with the NYPD, the FDNY would continue to evaluate area operations on a semi-annual or annual basis and additional fire and EMS units would be considered as development progresses in the Proposed Action area. Therefore, no significant adverse impacts on FDNY services are anticipated as a result of the Proposed Action.

OPEN SPACE

The Proposed Action would result in a significant adverse quantitative open space impact, according to CEQR guidelines.

As the Proposed Action would not result in the direct displacement or alteration of existing open space resources in the study area, the open space analysis focuses on any potential indirect effects on open space that could occur as a result of new populations introduced into the study area by the Proposed Action. The Proposed Action would generate net increases of approximately 5,516 new residents and approximately 388 new retail employees to the study area. As the worker population generated by the Proposed Action falls below the screening threshold of 500 additional employees and the residential population exceeds the screening threshold of 200 additional residents, the analysis considers the needs of the additional residential population only.

With the Proposed Action, the population of the open space study area would increase by 5,516 residents, from ~~92,120~~ 92,263 to ~~97,636~~ 97,779. The amount of public open space would remain the same, with 34.74 total acres of public open space, consisting of 28.05 acres of active open space and 6.69 acres of passive open space. In the future with the Proposed Action, the total residential open space ratio in the study area would decrease slightly compared to No-Action Conditions, to ~~0.356~~ 0.355 acres per 1,000 residents (0.377 under No-Action Conditions). The active open space ratio would decrease slightly compared to No-Action conditions, to 0.287 per 1,000 residents (0.304 under No-Action Conditions). The passive open space ratio would decrease to ~~0.073~~ 0.068 acres per 1,000 residents (~~0.069~~ 0.073 under No-Action Conditions).

These changes in the open space ratio would represent decreases of approximately 5.6 percent as compared to the future without the Proposed Action. These open space ratios, under both No-Action and With-Action conditions, would be below both the city's planning guidelines of 2.5 acres per 1,000 residents and citywide median of 1.5 acres per 1,000 residents. The private recreational space created under the *Quality Housing Program* for all action-generated residential units in the future with the

Proposed Action would contribute to alleviating some of the shortage of open space in the study area. In addition, there are several large open space resources just outside the study area which would also partially alleviate the shortage of open space for new residents of the Proposed Action. However, the decrease in open space ratio would exceed the 5 percent threshold for possible impacts specified in the *CEQR Technical Manual*. In light of the very low open space ratios in the study area under No-Action conditions and worsening that would occur with the Proposed Action, there would be a significant adverse quantitative open space impact under CEQR. In addition, as discussed in Chapter 7, “Shadows,” the Proposed Action could result in significant adverse shadows impacts to two open space resources.

Mitigation for the significant adverse open space impact is discussed in Chapter 24 “Mitigation.” As discussed in Chapter 24, partial mitigation would be provided for the significant adverse impacts associated with passive open space.

As discussed in Chapter 26 “Unavoidable Adverse Impacts,” since only partial mitigation would be provided, the deficiency in passive and active open space would be unavoidable.

~~As discussed in Chapters 24, “Mitigation,” and 26, “Unavoidable Adverse Impacts,” potential measures to mitigate the significant adverse impact on open space resources due to the Proposed Action will be explored between the Draft and Final EIS. If feasible and practicable mitigation measures cannot be identified, this open space impact would be unmitigated.~~

SHADOWS

The Proposed Action would result in significant adverse impacts to two sunlight-sensitive resources. Under the future condition with the Proposed Action, three open space resources and one historical resource warrant analysis for potential shadow impacts from development occurring at development sites within the Project Area. These resources include the Bartlett Playground, the Eugenio De Hostos Playground, the “Project Roots” Community Garden and the All Saints Church Complex. The analysis determined that significant adverse shadow impacts would occur at the Bartlett Playground and the “Project Roots” Community Garden. There would be no significant adverse shadow impacts to the Eugenio De Hostos Playground and the All Saints Church Complex.

The significant adverse shadow impacts at the two open space resource sites are summarized as follows:

BARTLETT PLAYGROUND

Bartlett Playground, located along the south side of Bartlett Street, would receive significant incremental shadow coverage resulting from the future condition with the Proposed Action, specifically from future development at projected development sites 5 and 6. Sun sensitive resources located within the playground include deciduous trees, playground facilities, spray showers, benches and basketball courts. The duration of the shadow coverage over the four analysis periods (6 ¼ to 11 ¼ hours) would reduce the exposure of vegetation to sunlight to 3 hours on May 6th and 4 hours and 35 minutes on June 21st. While the reduction in sunlight exposure as a result of the Proposed Action would not significantly affect active recreation areas within the playground such as basketball courts, the lack of sunlight on the Bartlett Playground is a significant adverse impact during the May 6th analysis period because the resource would receive less than the minimum required amount of sunlight for its vegetative cover and trees during part of the growing season.

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“PROJECT ROOTS” COMMUNITY GARDEN

The “Project Roots” Community Garden is located along the south side of Walton Street. Incremental shadows, as a result of the Proposed Action, would primarily result from development on projected development site 24, where a distinctly taller building (80 feet in height) is projected. The duration of the shadow coverage over the four analysis periods (6 ¼ hours to 12 hours) would significantly reduce the exposure of vegetation (including the greenhouse) to less than the minimum required 4 hours and diminish the attractiveness of this open space and utility of the greenhouse.

The range of possible mitigation measures for shadows impacts on the Bartlett Playground and “Project Roots” Community Garden are included in Chapter 24, “Mitigation.” In the event that no mitigation measures are found to be feasible and practicable, the significant adverse impacts would remain unmitigated, as discussed in Chapter 26, “Unavoidable Impacts.”

HISTORIC RESOURCES

As described below, the Proposed Action would not result in significant impacts to archaeological resources but would result in construction-related impacts to two historic (architectural) resources.

ARCHAEOLOGICAL RESOURCES

Based upon the historic review of the Project Area, an analysis of historic maps and accounts, and on the modern development of the Project Area, the archaeological Area of Potential Effect (APE) is considered to have no potential for intact significant prehistoric deposits. Given the lack of evident historic development of the Project Area prior to the installation of municipal utilities and the lack of a significant industrial or commercial occupation within the archaeological APE, the Proposed Action is not considered sensitive for historic period archaeological resources.

The Proposed Action was reviewed by the New York City Landmarks Preservation Commission (LPC) and the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP). Of the total 114 tax lots comprising the projected and potential development sites, both LPC and NYSOPRHP found that none of the projected or potential development sites are sensitive for archaeological resources. As such, there are no further archaeological concerns with respect to the Proposed Action. Therefore, the Proposed Action will have no significant adverse impacts to archaeological resources.

ARCHITECTURAL RESOURCES

The identification of previously listed or eligible architectural resources was conducted in consultation with LPC and NYSOPRHP. A survey of historic architectural resources within the architectural APE identified 1 previously listed or eligible architectural resource: The Forty-Seventh Regiment (Marcy Avenue) Armory. In 1993, a National Register Multiple Property Documentation Form (MPDF) of Army National Guard Armories in New York State was completed and an Intensive Level Survey of New York’s Armories was undertaken. As a result of the survey, the NYSOPRHP determined the Forty-Seventh Regiment (Marcy Avenue) Armory eligible for listing on the National Register.

The survey also identified 11 properties that appeared to be 50 years in age or greater (30 years in age or greater for New York City Landmarks) and that had potential to meet the eligibility criteria for inclusion in the State and National Registers of Historic Places. Of those 11 properties identified and evaluated as part of this study, five were determined to be eligible for listing in the State and National Registers (S/NR).

Of the listed or eligible historic architectural resources, four individual structures are located on or in close enough proximity of the Proposed Action's development sites which could potentially lead to direct and/or indirect significant adverse historic resources impacts. Those structures are:

- Bartlett School/PS 168 (Talmudical Academy) (Block 2272, Lot 21);
- Lincoln Savings Bank at 541 Broadway (Block 3076, Lot 6);
- All Saints Church (Block 2275, Lots 1 and 21);
- Charles Pfizer & Co. Buildings (Block 2268, Lot 1; Block 1720, Lot 1).

Like the review completed for potential archeological impacts, LPC and OPRHP were consulted in connection with architectural resources. LPC found that there are no historic architectural concerns with respect to the Proposed Action. After review of all submitted documentation, NYSOPRHP completed their evaluation of the historic architectural APE and agreed with LPC and determined that there are no historic architectural concerns with respect to the Proposed Action.

However, inadvertent direct construction-related damage could potentially occur to two of the S/NR eligible resources (the Lincoln Savings Bank and the All Saints Church) as a result of development in the Project Area. Potential construction-related impacts to these resources are discussed in Chapter 22, "Construction Impacts."

URBAN DESIGN AND VISUAL RESOURCES

The Proposed Action would not result in any significant adverse impacts to the urban design and visual resources. The analysis below summarizes the urban design conditions and visual resources of both the Project Area and secondary study area by 2018 with the Proposed Action. As discussed below, potential changes in urban design would result from changes in building bulk, use and type, building arrangement and streetscape elements.

BUILDING BULK, USE AND TYPE

Regulations limiting building height, density, use and type would be established by the Proposed Action through the five new proposed zoning districts—R6A and R6A/C2-4 in the northern section of the Project Area; R7A and R7A/C2-4 throughout the central portion; and C4-3 at the southern extent of the Project Area. Existing M1-2, M3-1 and C8-2 zoning districts that restrict residential developments would be replaced with the aforementioned series of zoning districts that would allow a mix of residential, community facility, and local retail throughout the Project Area.

Approximately 18 acres of land within the Project Area would be rezoned, resulting in a net loss of parking and automobile-related uses, vacant land, vacant buildings and light manufacturing uses; and a net increase in residential, commercial and community facility space. The Proposed Action would allow residential development on an as-of-right basis; provide incentives for the development of affordable housing; provide new opportunities for mixed-use development; and bring residential uses currently located in manufacturing districts into conformance with zoning. The density, bulk, use, and type of the new buildings allowed under the Proposed Action would differ from the existing and no-action conditions of the Project Area described earlier; however, these changes would be beneficial to the Project Area as the new contextual zoning districts would allow residential and mixed use development consistent with the surrounding study area. The specific details of allowable building bulk, use and type under the Proposed Action are described for the Project Area below.

Under the Proposed Action, the zoning of Blocks 2238, 2242, 2245 and 2246 would change from M1-2

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and M3-1 districts to contextual R6A and R6A/C2-4 districts. The current restriction against residential uses would be lifted, and the related text amendment to apply the Inclusionary Housing Program would encourage the provision of affordable housing in conjunction with new developments. The proposed R6A and R6A/C2-4 districts would allow residential uses with a base FAR of 2.7 and a maximum FAR of 3.6 with the Inclusionary Housing bonus. Community facility uses would be allowed at a maximum FAR of 3.0. Building types would be mid-rise in character and would be required to be built at or near the street line with a maximum base height of 60 feet and a maximum building height of 70 feet.

South of Walton Street, the zoning of Blocks 2250, 2266, 2269 and 2272 would change from an M1-2 district to contextual R7A and R7A/C2-4 districts. Similar to the portion of the Project Area north of Walton Street, the current restriction against residential uses would be lifted, and the related text amendment to apply the Inclusionary Housing Program would encourage the provision of affordable housing in conjunction with new developments. The proposed R7A and R7A/C2-4 districts would allow residential uses with a base FAR of 3.45 and a maximum FAR of 4.6 with the Inclusionary Housing bonus. Community facility uses would be allowed at a maximum FAR of 4.0. Building types would be mid-rise in character and required to be built at or near the lot line with a maximum base height of 65 feet and a maximum building height of 80 feet.

Under the R6A district, buildings would rise to a base height of 40' to 60', setback 15' (10' feet along Union Street), and then rise to a maximum height of 70'. Setbacks under the R7A district would generally be the same, although base heights would range between 40' and 65' before setback and the maximum height rises to 80'.

The C2-4 commercial overlay districts to be mapped along the majority of Throop Avenue, Lynch Street, Union Avenue, and Harrison Avenue would allow commercial uses with a maximum FAR of 2.0, or one story within a mixed-use building. The C2-4 commercial overlay would be mapped to a depth of 100 feet along certain frontages in both the R6A and R7A portions of the Project Area, creating local retail corridors.

At the southern extent of the Project Area, the zoning of Block 2274 would change from an M1-2 district to a C4-3 district. The C4-3 district allows commercial uses up to 3.4 FAR; residential uses up to 2.43 FAR; and community facility uses up to 4.8 FAR. The maximum allowable building height in C4-3 districts is governed by the sky exposure plane. The change in zoning from a manufacturing district to a primarily commercial district (which allows residential uses) on this block would result in density, building bulk, use, and type consistent with existing development found along nearby sections of Flushing Avenue

In summary, the addition of zoning districts that allow residential (including affordable housing), community facility, and commercial uses, would result in a mixture of mid-rise buildings, with slightly higher height limits south of Walton Street (80 feet compared to 70 feet). The new buildings allowed under the Proposed Action would be in context with neighboring blocks in terms of building bulk, use and type. Specific characteristics of the proposed R6A, R6A/C2-4, R7A, and R7A/C2-4, and C4-3 zoning regulations are graphically illustrated in Figures 9-14, 9-15, and 9-16. No significant adverse urban design impacts related to building bulk, use, and type would result from the Proposed Action

BUILDING ARRANGEMENT

The Proposed Action would introduce a more consistent building arrangement over what currently exists in the Project Area. The Project Area currently contains a large number of vacant lots and vacant buildings located at varying setbacks from the street, and small out-buildings associated with industrial and manufacturing operations that have vacated the Project Area. Since the existing manufacturing

zoning districts do not allow residential uses, several residential buildings have been constructed in the Project Area through BSA variances in recent years. It is expected that by 2018, the building arrangement of new development introduced by the Proposed Action would eliminate the somewhat irregular arrangement that has resulted from the historic industrial development of the Project Area. Under the Proposed Action, building arrangement would be regular with respect to blocks and lots. Building frontages would parallel the avenues and streets found within and along the perimeter of the Project Area. No significant adverse urban design impacts related to building arrangement are expected to result from the Proposed Action.

BLOCK FORM AND STREET PATTERN

The existing block form and street pattern of the Project Area will not change under the Proposed Action. The study area street system consists of urban arterials connecting with an irregular grid network of local streets. The Project Area is located in an area known as the Broadway Triangle, generally characterized as a street grid interrupted by the presence of Broadway to the east, Flushing Avenue to the south, and Union Avenue to the west. The convergence of the neighborhoods of Williamsburg, Bushwick, and Bedford-Stuyvesant creates the street pattern present in the Project Area. In addition to avenues running in a generally north-south orientation, the Project Area is traversed by a series of east-west streets running perpendicular to Broadway. These block form and street pattern conditions are adequate for the type of projected development expected to result from the Proposed Action. Blocks similar in size and shape to those within the Project Area exist throughout the surrounding neighborhoods and currently accommodate development similar to what would be allowed under the Proposed Action. No significant adverse urban design impacts related to block form and street pattern are expected to result from the Proposed Action, as it would not alter this element of urban design.

STREETSCAPE ELEMENTS

Under the Proposed Action, vacant and underutilized lots would be redeveloped with mid-rise residential and mixed-use buildings that are subject to height and setback restrictions, resulting in more unified streetwalls throughout the Project Area. The uniform streetwall created by the Proposed Action would enliven the streetscape and be consistent with residential development in the surrounding neighborhood. Curb cuts would be provided for those developments providing accessory parking. No significant adverse urban design impacts related to streetscape elements are expected to result from the Proposed Action.

The *Quality Housing* regulations, mandatory in R6A and R7A districts, set height limits as well as require high lot coverage that is set near or at the lot line. These regulations also include amenities related to landscaping and street trees. The proposed contextual R6A and R7A districts would require the street wall of new buildings to be no closer to the street line (up to a depth of 15') than any building within 150' on the same block. The area between a building's street wall and the street line (property line) must be landscaped. These requirements would preserve the traditional street wall found in the northern portion of the Project Area. In addition, mandatory street tree requirements would provide for street trees throughout the Project Area where new residential buildings are developed, resulting in pleasant and attractive streetscapes.

STREET HIERARCHY

The Proposed Action would not affect street hierarchy, as it would not change roadway capacities or street configurations.

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NATURAL AND VISUAL FEATURES

The Proposed Action would not alter the topography and natural resources of the Project Area. As the Proposed Action would affect building characteristics, there is the potential, in specific instances, to affect visual features such as partial blocking of existing visual corridors.

Where visual resources do exist in and near the southern section of the Project Area, specifically the United Talmudical Academy and the All Saints Church Complex, immediate view corridors towards these resources are not unique or irreplaceable; and under the future condition with the Proposed Action views of the resources would be available from numerous alternative view corridors both within and immediately outside of the Project Area. No significant adverse urban design impacts related to natural and visual features are expected to result from the Proposed Action.

In summary, the Proposed Action would not result in significant adverse impacts to urban design and visual resources. On the contrary, it would result in substantial improvement to urban design conditions by replacing vacant lots and otherwise underutilized sites with new residential and mixed-use development with ground floor retail and community facility space. Under the proposed contextual zoning, street trees and landscaping would add needed greenery to the Project Area, enhancing the visual appearance of the streetscape.

Under the Proposed Action, new development would bridge these existing neighborhoods by establishing new, predominantly residential developments in the Project Area. Projected development would be consistent in density, height, bulk, and scale with buildings found in the surrounding older, more established neighborhoods in the secondary study area (as well as with existing residential development found within the Project Area). The proposed contextual zoning districts would limit building heights to 70 and 80 feet, and the street walls would range between 40 and 65 feet, in order to preserve the traditional streetscape found in the surrounding residential neighborhoods.

NEIGHBORHOOD CHARACTER

The Proposed Action would not result in significant adverse impacts to neighborhood character. On the contrary, it would result in substantial improvement to neighborhood character by replacing vacant lots and otherwise underutilized sites with new residential and mixed-use development with ground floor retail and community facility space. The Project Area is currently devoid of street trees. Under the proposed contextual zoning, street trees and landscaping would add needed greenery to the Project Area, enhancing the visual appearance of the streetscape. The new residential development would increase housing opportunities for New Yorkers by providing a net increase of 1,851 units of new housing. The commercial overlays mapped along Throop and Harrison Avenues would enliven these corridors with neighborhood retail space and pedestrian activity. The projected community facility space could provide a range of services for the new (and existing) populations in the area.

The Project Area is located at the nexus of Williamsburg, Bedford-Stuyvesant, and Bushwick. However, given its currently largely vacant and underutilized character, it serves to divide these three neighborhoods. Under the Proposed Action, new development would bridge these existing neighborhoods by establishing a predominately residential neighborhood in the Project Area. Projected development would be consistent in density, height, bulk, and scale with buildings found in the surrounding older, more established neighborhoods.

The proposed contextual zoning districts would limit building heights to 70 and 80 feet, and the streetwalls would range between 40 and 65 feet, in order to preserve the traditional streetscape found in

the surrounding area. For the same reason, the Proposed Action would not result in contextual effects to the S/NR eligible historic resources located within the study area.

As discussed in Chapter 3, “Socioeconomic Conditions,” projected development could potentially result in significant adverse impacts related to indirect residential displacement; however, the 905 ~~844~~ units of affordable housing would serve to mitigate the impacts. The residential populations most susceptible to increased rents presently occupy units that are not rent-protected. Furthermore, as discussed elsewhere, almost 50 percent of the housing generated under the Proposed Action would be affordable to a range of incomes, potentially alleviating pressure for upward residential rents.

Although the Proposed Action would introduce a residential population to an area with relatively high ambient noise, measures included under the Proposed Action would require noise attenuation. Projected noise levels in the future with the Proposed Action would be comparable to noise levels found in urban areas and throughout New York City. Measures associated with noise attenuation would be incorporated into new developments, ensuring that residents are not exposed to noise from traffic and/or business operations. Analogous to urban noise are somewhat increased levels of traffic which would occur as a result of new projected development; however, although impacts would occur at a maximum of 9 intersections (during the AM and PM peak hours), these impacts would be mitigated by standard measures such as changes to signal timing and curbside parking regulations, daylighting, and other measures commonly employed in New York City. ~~these impacts would be mitigated by standard measures such as signal timing, daylighting, and other measures commonly employed in New York City.~~

As discussed elsewhere in the EIS, new residential development is not expected to result in significant land use conflicts with existing commercial businesses which may continue to operate in the future. Although these businesses may generate traffic and noise, the Proposed Action will include measures to mitigate these effects. It is anticipated that routine activities required by these businesses to operate would not significantly conflict with new residential development. Solid waste disposal would occur in accordance with all applicable regulations and deliveries would be handled in accordance with local traffic regulations.

Overall, the Proposed Action would result in a new residential neighborhood populated by a range of mixed-income households, including substantial amounts of needed affordable housing. Urban design conditions would be dramatically improved, and the transformed Project Area would bridge three Brooklyn neighborhoods. For all of these reasons, the Proposed Action would not result in significant adverse neighborhood character impacts.

NATURAL RESOURCES

The Proposed Action would not result in significant adverse natural resources impacts. The Project Area is primarily a developed urban area and does not contain any surface waterbodies, floodplains, wetlands, rare, endangered or threatened species, or important wildlife habitat. In a letter dated December 23, 2008, from the New York State Department of Environmental Conservation (DEC), DEC noted that they have no records of known occurrences of rare or state-listed natural resources in the vicinity of the Project Area (refer to Appendix A). The Proposed Action would result in an insignificant change in subsurface and groundwater conditions in the localized area of the foundations of future buildings constructed as a result of the Proposed Action. These changes would not alter important landforms or the overall pattern of groundwater flow within the Project Area, or in the natural resources study area. Therefore, the Proposed Action would not have a significant adverse impact on natural resources.

Broadway Triangle

FLOODPLAIN

The Project Area is not located within a FEMA designated floodplain; therefore the Proposed Action would not adversely affect the floodplain's ability to contain flood waters or exacerbate flooding conditions within the Project Area or its immediate vicinity. A floodplain analysis is not required. No significant adverse impacts to floodplains will result from the Proposed Action.

HAZARDOUS MATERIALS

The Proposed Action would not result in significant adverse hazardous materials impacts.

As described in the *CEQR Technical Manual*, a hazardous material is defined as any substance that poses a threat to human health or to the environment. Such substances include, but are not limited to: metals, volatile organic compounds (VOCs), commonly found in petroleum products and solvents; semi-volatile organic compounds (SVOCs), typically associated with fuel oil, coal and ash; and polychlorinated biphenyls (PCBs), usually associated with transformers and utilities. Hazardous materials also include substances used in building materials and fixtures, such as asbestos-containing material (ACM), lead-based paint (LBP), and mercury.

The presence of hazardous materials does not necessarily indicate a threat to human health or the environment; a means of an exposure pathway, the presence of a receptor, and an unacceptable dose must also be present to cause a threat. During construction on development sites, hazardous materials could be disturbed through excavation of soil and bedrock, extraction of groundwater, or the demolition or renovation of existing structures. The most likely routes of human exposure from the hazardous materials evaluated are the inhalation of VOCs, the ingestion of particulate matter containing SVOCs or metals, or dermal (skin) contact with hazardous materials that can be released during soil-disturbing activities.

All projected and potential development sites could reasonably be expected to be affected by hazardous materials due to historical and/or current land use. For these sites, the predominant source of potential contamination stems from chemical manufacturing (associated with pharmaceutical products) and automobile repair facilities. Other potential sources of contamination include machine shops and metal fabrication shops, petroleum storage tanks, dry cleaning establishments and printing shops. Consequently, with the exception of City-owned sites, the Proposed Action would include (E) designations for projected and potential development sites. For city-owned development sites, (E) designations are not recommended. Since development of these sites would occur through disposition to a private entity, similar mechanisms would be required through the Land Disposition Agreement (LDA) between HPD and a private entity. The provisions would be similar to an (E) designation and would ensure that further investigative and/or remedial activities (as well as health and safety measures) prior to and/or during construction would be required under the City's contract of sale with the private entity selected to develop the site. Sites that would be mapped with (E) designations are included in Table ES-1.

The (E) designation would require that the fee owner of such a site conduct a Phase I Environmental Site Assessment (ESA) in accordance with the American Society of Testing Materials (ASTM) E1527-05, a subsurface testing and sampling protocol where appropriate, and remediation where appropriate, to the satisfaction of New York City Department of Environmental Protection (DEP). The (E) designation also includes a mandatory Construction Health and Safety Plan (CHASP) which must be approved by DEP prior to construction activities. Zoning Resolution § 11-15 indicates that the New York City Department of Buildings (DOB) may not issue a building permit for work on a tax lot labeled with an (E) designation due to potential hazardous materials contamination, if the building permit would allow: (1) a development; (2) an enlargement, extension or change of use involving a residential or community

facility use; or (3) an enlargement that disturbs the soil, unless the DOB is provided with a report from the DEP stating that the hazardous materials requirements for the lot have been satisfied. Both the mapping of (E) designations on the zoning map for privately owned sites, and implementation provisions required through the Land Disposition Agreement (LDA) between HPD and a private entity on city-owned sites would preclude the potential for significant adverse hazardous materials impacts that could result from the Proposed Action.

WATERFRONT REVITALIZATION PROGRAM

The Project Area is located outside of the City's Coastal Zone; therefore a Coastal Zone consistency assessment is not required. No significant adverse impacts to the waterfront revitalization program will result from the Proposed Action.

INFRASTRUCTURE

The Proposed Action would not adversely impact the city's infrastructure. Development on the 34 projected development sites, compared to No-Build conditions, would produce an additional 858,320 gpd demand on the city's water supply system, representing a 0.07 percent increase over existing conditions. Because this is less than one-tenth of one percent of the city's water supply, the Proposed Action would not result in a significant adverse impact to the city's water supply or water pressure. The Newtown Creek WPCP would receive approximately 543,786 gpd of additional wastewater compared to the No-Build condition as a result of the Proposed Action. This amount represents approximately 0.18 percent of the plant's treatment capacity and consequently, the Proposed Action would not result in a significant adverse impact to the city's wastewater treatment system.

In terms of stormwater, the net change in discharge from existing to build conditions is approximately 0.03 million gallons (MG) to 0.13 MG for the various rainfall intensity increments. The Proposed Action is expected to generate a net incremental flow of combined wastewater and stormwater discharge of 0.08 MG to 0.54 MG for the various rainfall intensity increments. While this combined wastewater generation and stormwater discharge is an increase from the existing condition, the Proposed Action would not result in significant adverse impacts to the combined sewer system, conveyance system (i.e. regulators, outfalls) or the City's wastewater treatment services.

SOLID WASTE

The Proposed Action would not result in significant adverse solid waste impacts. The Proposed Action is expected to result in a net increase of approximately 76,955 pounds per week (5.5 tons per day) of solid waste from residences and community facilities located in the Project Area. This figure amounts to approximately 0.05 percent of the solid waste collected by the New York City Department of Sanitation (DSNY) in the City each day. Based on the assumption that the average DSNY collection truck has a capacity of 12.5 tons, the Proposed Action would require an additional 3.1 trucks to service the Project Area each week. Solid waste generated by commercial and some community facility development would be hauled away by private carters. Therefore, given that the Solid Waste Management Plan (SWMP) assumes projected rates of growth in the generation of solid waste for housing developments, the Proposed Action would not result in a significant adverse impact on solid waste and sanitation services and would not conflict with the City's Solid Waste Management Plan.

Table ES-1: Hazardous Materials E-Designations

Site No.	Block	Lot	Address	Owner Name	General Land Use	Historic or Existing Land Use*	Adjacent To (Culpable Lot)
1	2274	16	134 Throop Ave.	134 Throop Ave. LLC	Transportation/Utility	Auto Repair	
2	2274	1	2 Whipple St	Arside Theoharakis	Vacant Building		Welding Operation (2274012)
	2274	5	16 Whipple St	683 Flushing Assoc	Parking Facilities		
	2274	6	Whipple St	Flushing 687 Realty LLC	Parking Facilities		
	2274	24	687 Flushing Ave.	Flushing 687 Realty L	Commercial (restaurant)		
3	2272	3	207 Harrison Ave.	Faye Industries Corp.	Parking Facilities		Dry Cleaners (2272002)
4	2272	6	24 Bartlett Street	Matish Vilgelm	Parking Facilities	Auto Repair	Auto Repair (2272009)
5	2272	9	30 Bartlett Street	Jose Julio	Industrial	Auto Repair (2272009); Registered UST	
6	2272	45	11 Whipple Street	11 Whipple Realty Co.	Parking Facilities		Auto Repair (2272009)
	2272	46	9 Whipple Street	11 Whipple Realty Co.	Parking Facilities		
	2272	147	5 Whipple Street	11 Whipple Realty Co.	Vacant Land		
7	2272	54	661 Flushing Avenue	University Studio, Inc	Vacant Land		Dry Cleaner (2272002)
	2272	55	659 Flushing Avenue	359 Flushing LLC	Mixed Residential/Commercial		
9	2269	1	58 Gerry Street	Pfizer Inc	Vacant Building	Pharmaceutical Printing (Arlington Press listed as RCRA-SQG site)	
10	2269	19	78 Gerry Street	Chung Hoi Wong	Industrial		
	2269	040	84 Gerry Street	Gelb. Getzel / Cust for	Industrial		
	2269	24	88 Gerry Street	Ellenbogen Janice	Industrial		
11	2269	25	90 Gerry Street	Golden Wan International Group Corp.	Vacant Land		Manufacturing (2269024)

Table ES-1: Hazardous Materials E-Designations

Site No.	Block	Lot	Address	Owner Name	General Land Use	E-Designated Historic or Existing Land Use*	Adjacent To (Culpable Lot)
12	2269	39	57 Bartlett Street	Lena Gleb	Residential	Manufacturing (2269040)	Manufacturing (2269019); Manufacturing (2269024)
	2269	p/o 40	55 Bartlett Street	Gelb, Getzel / Cust for	Industrial		
	2269	42	51 Bartlett Street	Josef Jacobowitz	Residential		
13	2269	43	49 Bartlett Street	Retek Judith	Mixed Residential/Commercial	Manufacturing (2269019)	Manufacturing (2269019)
	2269	43	47 Bartlett Street	Retek Judith	Mixed Residential/Commercial		
14	2266	1	Harrison Ave	Congregation YGS	Parking Facilities	Pharmaceutical Manufacturing (2266001); VCP Site (2266001)	
	2266	9	366 Wallabout Street	Three Six Six Inc	Commercial		
15	2266	14	376 Wallabout Street	Vinfield Realty Coprp	Parking Facilities	Auto Repair Shop (226025); Historical Pharmaceutical Products Manufacturing (2266046)	
	2266	15	378 Wallabout Street	Vinfield Realty Coprp	Parking Facilities		
	2266	16	380 Wallabout Street	Vinfield Realty Coprp	Parking Facilities		
	2266	17	382 Wallabout Street	Vinfield Realty Coprp	Vacant Land		
16	2266	19	386 Wallabout Street	Wallabout Throop Realty Partners	Vacant Land	Auto Repair Shop; Registered AST	
	2266	20	388 Wallabout Street	Wallabout Throop Realty Partners	Vacant Land		
	2266	21	390 Wallabout Street	Wallabout Throop Realty Partners	Vacant Land		
	2266	22	392 Wallabout Street	Wallabout Throop Realty Partners	Vacant Land		
	2266	23	394 Wallabout Street	Wallabout Throop Realty Partners	Parking Facilities		
	2266	24	396 Wallabout Street	Wallabout Throop Realty Partners	Parking Facilities		
	2266	24	396 Wallabout Street	Wallabout Throop Realty Partners	Parking Facilities		
	2266	25	398 Wallabout Street	Clark William	Parking Facilities		
17	2266	29	72 Throop Ave.	Kellel Remu	Vacant Land	Unknown Industrial (2266030)	
	2266	30	74 Throop Ave.	Lerner Inc.	Industrial		
18	2266	31	76 Throop Ave.	Goldie Weiss	Industrial	Unknown Industrial (2266031)	
	2266	32	78 Throop Ave.	Ramoce Inc	Vacant Land		
	2266	34	82 Throop Ave.	Stern Joseph	Vacant Land		
19	2266	37	97 Gerry Street	8 City Properties LLC	Parking Facilities	Historical Auto Repair (2266037)	
	2266	38	95 Gerry Street	Lieby Zipora	Industrial		
20	2266	39	93 Gerry Street	Vinfield realty Corp.	Vacant Land	Auto Repair Shop (2266025); Historical Auto Repair (2266037); Historical Pharmaceutical Products Manufacturing (2266046)	
	2266	40	91 Gerry Street	Vinfield realty Corp.	Vacant Land		
	2266	41	89 Gerry Street	Vinfield realty Corp.	Vacant Land		
21	2266	46	75 Gerry Street	Pfizer Inc.	Parking Facilities	Historical Pharmaceutical Products Manufacturing	Pharmaceutical Manufacturing (2266001); VCP Site (2266001)
22	2250	4	161 Harrison Ave.	United Talmudical Academy of Boro PA	Industrial	Unknown Manufacturing	

Table ES-1: Hazardous Materials E-Designations

Site No.	Block	Lot	Address	Owner Name	General Land Use	Historic or Existing Land Use*	Adjacent To (Culpable Lot)
23	2250	10	86 Wallabout Street	Harrison Walton Property Management	Vacant Land		
	2250	11	88 Wallabout Street	Harrison Walton Property Management	Vacant Land		Unknown Manufacturing (2250004)
	2250	12	90 Wallabout Street	Harrison Walton Property Management	Industrial		
24	2250	14	94 Wallabout Street	Hoo Corp	Industrial	Unknown Industrial; Registered UST	
	2250	46	291 Wallabout Street	Hoo Corp	Industrial		
	2250	48	289 Wallabout Street	Weisz Nechemiya	Residential		
26	2250	129	56 Throop Ave.	Throop Developments, Inc.	Parking Facilities		
	2250	32	62 Throop Ave.	Fox Joseph G	Industrial	Unknown Manufacturing	Surgical Supplies Manufacturing (2250037)
	2250	33	66 Throop Avenue	66 Throop Avenue Equities Co.	Industrial		
27	2250	36	313 Wallabout Street	John Vartoughian	Undefined	Surgical Supplies Manufacturing (RCRA-NonGen)	Unknown Manufacturing (2250032)
	2250	37	311 Wallabout Street	Var Tex Instrument Corp.	Residential		
29	2242	2	131 Harrison Ave	131 Harrison Ave LLC	Vacant Land	Registered UST (224203)	
	2242	3	100 Harrison Ave	Knights Collision Experts	Parking Facilities		
30	2242	53	153 Lorimer Street	Mario Laniado	Undefined	Unknown Manufacturing	
	2242	54	151 Lorimer Street	Mario Laniado	Undefined		
31	2242	45	165 Lorimer Street	Tat Lee Supplies Corp	Industrial	Auto Body Repair	Auto Repair (2242022)
	2242	46	167 Lorimer Street	Tat Lee Supplies Corp	Undefined		
	2242	47	165 Lorimer Street	169 Lorimer Corp	Undefined		
32	2242	22	196 Middleton Street	Farkas, Benyomin / TR	Parking Facilities	Auto Repair	Auto Body Repair (2242045)
33	2238	49	120 Union Avenue	Robles Realty LP	Transportation/Utility	Automobile Repair; Registered UST	
34	2238	27	240 Lynch Street	Lynch Project LLC	Residential		Historical Auto Repair (2238049)
35	2238	41	221 Middleton Street	IM-DL Realty Inc	Industrial	Unknown Industrial	
	2245	136	Harrison Ave	Willboro Properties LLC	Parking Facilities		
36	2245	35	Union Ave	Willboro Properties LLC	Parking Facilities		
	2245	40	148 Harrison Ave	Willboro Properties LLC	Parking Facilities		
	2245	42	152 Harrison Ave	Willboro Properties LLC	Parking Facilities		
	2245	43	154 Harrison Ave	Willboro Properties LLC	Parking Facilities		
	2245	44	Harrison Ave	Frank Cici	Parking Facilities		
	2245	47	79 Walton St	Frank Cici	Parking Facilities		
	2245	48	77 Walton St	Willboro Properties LLC	Parking Facilities		
						Auto Salvage (2245048); Registered UST (2245048); RCRA-LOG (2245048)	

Table ES-1: Hazardous Materials E-Designations

Potential Development Sites

Site No.	Block	Lot	Address	Owner Name	General Land Use	Historic or Existing Land Use*	Adjacent To (Culpable Lot)
25	2250	27	52 Throop Ave.	J Nathan Wiener Trust	Industrial		Surgical Supplies Manufacturing (2250037); Unknown Manufacturing (2250032)
	2250	28	56 Throop Ave.	Trust Natakhn Wiener	Industrial		
	2250	29	56 Throop Ave.	J Nathan Wiener Trust	Industrial		
	2250	25	116 Walton Steet	Koliel Reimu	Parking Facilities		
28	2250	38	307 Wallabout Street	A Holding	Industrial	Unknown Industrial; Registered UST	
	2250	40	305 Wallabout Street	A Holding	Industrial		
	2250	41	295 Wallabout Street	A Holding	Industrial		
37	2250	6	159 Harrison Ave	DMK Realty Holdings	Industrial		Unknown Manufacturing (2250004)
	2250	7	157 Harrison Ave	Moshe Kahan	Industrial		
	2250	8	155 Harrison Ave	Moshe Kahan	Industrial		

* Land uses listed in Chapter 24 of Title 15 of the Rules of the City of New York as triggers for E-Designation.

Broadway Triangle

ENERGY

The Proposed Action would not result in significant adverse energy impacts. The Proposed Action would result in an energy consumption of approximately 285,548 million BTUs on the projected development sites, or an increase of approximately 255,639 million BTUs over the future without the Proposed Action condition. This increment represents approximately 0.07 percent of the City's forecasted 2018 peak load of 13,085 MW, which is not considered to be a significant adverse impact.

TRAFFIC AND PARKING

The Proposed Action would result in significant adverse traffic impacts at a total of nine intersections and no significant adverse parking impacts under *CEQR Technical Manual* criteria.

TRAFFIC

Vehicle trips generated under the RWCDS would be most concentrated at intersections along the principal arterials providing access to, from and within the Project Area – primarily Broadway and Flushing, Union, Throop and Harrison avenues. A total of 20 intersections along these corridors (17 signalized and three unsignalized) have been selected for analysis based on the assignment of project-generated traffic. The traffic impact analysis examines conditions during three weekday peak hours (7:45-8:45 AM, 1-2 PM and 4:45-5:45 PM), and one Saturday peak hour (12:45-1:45 PM).

TRAVEL DEMAND

In the future with the Proposed Action, the Proposed Action would result in a net increase of 41 inbound vehicle trips and ~~474~~ 170 outbound vehicle trips in the weekday AM peak hour (auto, taxi and truck combined), 107 new inbound and 113 new outbound vehicle trips in the weekday midday, 165 new inbound and 87 new outbound vehicle trips in the weekday PM peak hour, and 81 new inbound and 78 new outbound vehicle trips in the Saturday midday peak hour.

IMPACT ANALYSIS

Based on the results of the traffic impact analysis, a total of nine signalized intersections would have significant adverse impacts as a result of project-generated traffic during one or more peak hours. The AM peak hour would have the highest number of impacted intersections with nine, followed by the PM with six, and the midday and Saturday midday peak hours with two impacted intersections each. Intersections with one or more significant adverse traffic impacts would include:

- Broadway at Union Avenue/Heyward Street (AM)
- Broadway at Gerry Street (AM)
- Broadway at Whipple Street (AM)
- Flushing Avenue at Throop Avenue/Thorton Street (AM, PM)
- Flushing Avenue at Harrison Avenue (AM, MD, PM, SAT)
- Flushing Avenue at Union Avenue/Marcy Avenue/Gerry Street (AM, PM)
- Flushing Avenue at Lee Avenue/Nostrand Avenue (AM, MD, PM, SAT)
- Harrison Avenue at Gerry Street (AM, PM)
- Harrison Avenue at Bartlett Street (AM, PM)

Measures to mitigate significant adverse traffic impacts are presented in Chapter 24, "Mitigation."

PARKING

Overall, it is anticipated that a total of approximately ~~587~~ 628 accessory parking spaces would be developed on projected development sites in the With-Action condition, while parking demand from the Proposed Action would total approximately 711 spaces in the weekday overnight period and 399 spaces in the weekday midday. (Project-generated demand would peak at 712 spaces at 9 PM on weeknights.) The total peak demand generated by the Proposed Action is therefore expected to exceed the supply of accessory parking developed under the RWCDs by approximately ~~124~~ 83 spaces in the weekday overnight period (~~125~~ 84 spaces at 9 PM). In the weekday midday, the ~~587~~ 628 spaces of accessory parking would be sufficient to fully accommodate the Proposed Action's peak demand of 399 spaces. Sufficient parking capacity would be available in both an off-street public facility and on-street to accommodate excess demand in the weekday overnight period. Therefore, the Proposed Action would not result in significant adverse parking impacts based on *CEQR Technical Manual* criteria.

TRANSIT AND PEDESTRIANS

The Proposed Action would not result in significant adverse subway or pedestrian impacts, however, one local bus route would be significantly adversely impacted in the PM peak hour under *CEQR Technical Manual* criteria.

SUBWAY SERVICE

The Proposed Action would generate a net total of 636 and 768 new subway trips (in and out combined) during the weekday AM and PM peak hours, respectively. Trips from projected development sites were assigned to individual subway stations based on proximity to station entrances and existing ridership patterns for the subway routes serving each station. The greatest incremental increase in subway trips as a result of the Proposed Action would occur at the Lorimer Street (J, M) station, which would experience approximately 347 new trips in the weekday AM peak hour and 419 in the PM peak hour. The subway station with the second greatest increase in trips as a result of the Proposed Action would be the Flushing Avenue (G) station, which would experience approximately 168 new trips in the AM peak hour and 199 in the PM. By contrast, the Broadway (G) station and the Flushing Avenue (J, M) station are each expected to receive 94 or fewer new trips in any peak hour as a result of the Proposed Action.

CEQR Technical Manual criteria typically require a detailed analysis of a subway station when the incremental increase in peak hour trips totals 200 persons per hour or more. New subway trips generated by the Proposed Action in 2018 would total 199 trips (one trip below this threshold) in the weekday PM peak hour at the Flushing Avenue (G) subway station, and would exceed the 200-trip threshold in both the AM and PM peak hours at the Lorimer Street (J, M) subway station. The analysis of 2018 future conditions with the Proposed Action at the Flushing Avenue (G) subway station indicates that fare arrays N414 and N414AK and the two entrance stairs at this station would all continue to operate below capacity at an acceptable LOS A in both the AM and PM peak hours. At the Lorimer Street (J, M) subway station, fare arrays J5 and J5-H2 and the four entrance stairs at this station would all continue to operate at an acceptable LOS C or better in all peak hours, while fare array J5-H1, a high entry/exit turnstile for the Manhattan-bound platform, would operate at a marginal LOS D. However, all of these facilities would continue to operate below capacity in all peak hours in the future condition with the Proposed Action. The Proposed Action would therefore not result in significant adverse impacts to subway transit elements at either the Flushing Avenue (G) subway station or the Lorimer Street (J, M) subway station in 2018 based on *CEQR Technical Manual* criteria.

Broadway Triangle

BUS SERVICE

The Proposed Action would generate a net total of 227 and 319 new local bus trips (in and out combined) in the AM and PM peak hours, respectively. These new bus trips would be distributed among the five NYC Transit local bus routes operating within one-quarter mile of the Project Area – the B43, B46, B48, B57 and B60. Trips from projected development sites were assigned to individual bus routes based on proximity and existing ridership patterns at the maximum load point for each route. With this added demand, there would be a capacity shortfall of approximately 32 spaces on southbound B46 buses in the PM peak hour. All other analyzed bus routes would continue to operate with available capacity at their maximum load points in the peak direction in each peak hour in the 2018 future with the Proposed Action. Measures to mitigate the significant adverse bus impact are described in Chapter 24, “Mitigation.”

PEDESTRIANS

The Proposed Action is expected to generate a net total of 729 walk-only trips in the weekday AM peak hour, 2,704 in the midday and 1,660 in the weekday PM peak hour. Trips en route to and from area subway stations and bus stops would account for an additional 863, 730 and 1,087 new pedestrian trips during the weekday AM, midday and PM peak hours, respectively. These new pedestrian trips are expected to be widely distributed throughout the Project Area due to the dispersed locations of the projected development sites, with the highest concentrations of new demand occurring along corridors connecting projected development sites to area subway stations. The analysis of pedestrian conditions therefore focuses on sidewalks, corner areas and crosswalks that provide the primary access between projected development sites and the entrances to the two subway stations that would be used by the majority of project-generated subway demand – the Lorimer Street (J, M) subway station on Broadway, and the Flushing Avenue (G) subway station at the intersection of Flushing, Union and Marcy Avenues. These include sidewalks, corner areas and crosswalks along the Gerry Street, Wallabout Street, Lorimer Street and Throop Avenue corridors, and at the Broadway/Wallabout Street and Flushing Avenue/Union Avenue/Marcy Avenue intersections adjacent to subway station entrances.

In the future with the Proposed Action, all analyzed sidewalks would continue to operate at an acceptable LOS A or B under platoon conditions in the weekday AM, midday and PM peak hours. As all analyzed sidewalks would continue to operate with flow rates of less than 13 persons/foot-width/minute in all analyzed peak hours, no significant adverse sidewalk impacts are anticipated to result from the Proposed Action under *CEQR Technical Manual* criteria. All analyzed corner areas and crosswalks would continue to operate at an acceptable LOS A or B in the weekday AM, midday and PM peak hours. As all analyzed corners and crosswalks would continue to operate with an average occupancy of more than 20 square feet per pedestrian in all analyzed peak hours, no significant adverse impacts to corner areas or crosswalks are anticipated under *CEQR Technical Manual* criteria.

AIR QUALITY

The Proposed Action would not result in significant adverse impacts to air quality.

The air quality analyses for the Proposed Action were prepared utilizing the general procedures recommended in the *CEQR Technical Manual*, and are described in detail within the methodology section of Chapter 20, “Air Quality.” The analyses were also conducted in accordance with federal and state rules and regulations including the National Environmental Policy Act (NEPA) and the New York State Environmental Quality Review Act (SEQRA).

The air quality impacts resulting from boilers, clusters and industrial facilities within the analysis area, parking facilities, and mobile sources were evaluated in accordance with U.S. EPA procedures and the *CEQR Technical Manual*. Conservative estimates were made by adding the highest modeling results to the background levels recommended by DEP, to obtain the predicted total ambient concentrations for CO, NO_x, PM, and SO₂ at analyzed receptor locations on development sites, intersections, and other areas of public concern. The total ambient air concentrations predicted at worst-case receptor locations for all analyzed pollutants would be within the NAAQS for criteria pollutants, and within New York State SGC and AGC guideline levels for all hazardous pollutants released within the analysis area. All predicted impacts are below the NYCDEP CEQR criteria or thresholds.

The mapping of (E) designations on the zoning map for certain sites would ensure that future development would not result in any significant air quality impacts from HVAC emissions. In making this determination all proposed development parameters (locations, size, and building heights) were examined. The size of each development anticipated from the Proposed Action, including permitted zoning square footage, and estimated height of exhaust release, were utilized in this screening analysis. Based on CEQR criteria, No. 4 fuel, No. 2 fuel, and natural gas were used for determining the maximum size of project development that would not result in significant HVAC and boiler air quality impacts on a typical nearby receiver or building. Where developments exceeded thresholds, (E) designations and restrictions for the development are listed in Table ES-2.

The hazard index or risk is well below the U.S. EPA threshold value. With respect to the State Implementation Plan (SIP), the Proposed Action would not cause or contribute to any new violation of the standard, would not increase the frequency or severity of any existing violation, and would not delay timely attainment of the standards. As such, the Proposed Action meets all requirements of federal conformity rules. The Proposed Action would not have a significant adverse impact on ambient air quality, and would meet the CAAA criteria and CEQR requirements.

NOISE

The Proposed Action would not result in significant adverse noise impacts.

The Proposed Action would alter vehicular traffic flow patterns and introduce noise sensitive receptors near stationary sources associated with existing manufacturing uses within the Project Area. As described in Chapter 1, "Project Description," the Project Area is located within 1,500 feet of the elevated New York City Transit (NYCT) J, M, and Z subway lines. As a result, it is anticipated that some future noise sensitive receptors would have a direct line-of-sight to the elevated NYCT tracks and therefore may also be potentially impacted by noise generated from the existing subway operations.

The noise analysis for the Proposed Action and future related actions consisted of the following:

- A screening analysis to determine locations where traffic generated by the Proposed Action and future related actions would have the potential to cause significant noise impacts;
- An analysis to determine if there will be significant mobile and stationary-source noise impacts at the projected and potential development sites within the Project Area;
- An examination of the predicted future noise levels in the Project Area to assess where window-wall attenuation would be required and the level of attenuation needed to ensure that interior noise levels within the Project Area satisfy applicable interior noise criteria.

Table ES-2
CEQR Preliminary Screening Results for Individual HVAC Source
(Comparison between Proposed RWCDS and Maximum Development Sizes without Causing Significant Impacts)

Project Development Sites			Proposed Floor Area (Sq. Ft) - Build Condition					Distance to Nearest Building (feet)	Fuel Type Passed	E- Requirements
Site No.	Projected Development Sites		Zoning	Retail	Conv/ Office	Res SF	CF	Total Area	Fuel Type	Requirement
	Block - Lot	Lot Area								
1	2274 - 16	7800	C-4-3 (R6)	6,240	0	17,160	23,400	119	Fuel #4	Fuel #4; no restriction
2	2274 - 1	4167	C-4-3 (R6)	3,334	10,834	0	0	177	Fuel #4	Fuel #4; no restriction
	2274 - 5	2125	C-4-3 (R6)	1,700	5,525	0	0			
	2274 - 6	713	C-4-3 (R6)	570	1,854	0	0			
	2274 - 24	6119	C-4-3 (R6)	4,895	15,909	0	0			
	13124	12019		10,489	34,122	0	44,621			
3	2272 - 3	5000	R7A/C2-4	4,000	0	19,000	23,000	34	Fuel #2	Fuel #2 at 34' from southern and eastern lot lines or natural gas with no restrictions
4	2272 - 6	6975	R7A	0	0	32,085	32,085	40	Fuel #2	Fuel #2 at 37' from southern, eastern and western lot lines or natural gas with no restrictions
5	2272 - 9	5000	R7A	0	0	19,000	4000	47	Natural Gas	Fuel #2 at 55' from southern and western lot lines or natural gas at 42' from southern and western lot lines
	2272 - 11	10000	R7A	0	0	38000	8000			
6	2272 - 45	2500	R7A	0	0	11,500	0	50	NONE	Natural gas at 60' from northern and western lot lines
	2272 - 46	3750	R7A	0	0	17,250	0			
	2272 - 147	3750	R7A	0	0	17,250	0			
	2272 - 49	3282	R7A	0	0	15,087	0			
	2272 - 51	2150	R7A	0	0	9,890	0			
	2272 - 52	2000	R7A/C2-4	1,600	0	7,600	0			
	2272 - 53	2000	R7A/C2-4	1,600	0	7,600	0			
	2272 - 108	520	R7A	0	0	2,392	0			
	19852	19852	R7A	3,200	0	88,579	0	91,779		
7	2272 - 54	2000	R7A	0	0	9,200	0	23	Distance <30ft	Natural gas; no restriction
	2272 - 55	2500	R7A	0	0	11,500	0			
	4500	4875		0	0	20,700	0	20,700		
8	2269 - 52	5000	R7A	0	0	23,000	23,000	25	Distance <30ft	Natural gas; no restriction
9	2269 - 1	40000	R7A/C2-4	32,000	0	152,000	184,000	25	Distance <30ft	Natural gas at 82' from southern and western lot lines
10	2269 - 14	3750	R7A	0	0	17,250	0	43	NONE	Natural gas at 60' from southern, western and eastern lot lines
	2269 - 16	3750	R7A	0	0	17,250	0			
	2269 - 17	2500	R7A	0	0	11,500	0			
	2269 - 18	2500	R7A	0	0	11,500	0			
	2269 - 19	7500	R7A	0	0	34,500	0			
	2269 - p/o 40	2500	R7A	0	0	11,500	0			
	2269 - 23	2500	R7A	0	0	11,500	0			
	2269 - 24	2500	R7A	0	0	11,500	0			
	27500	12500		0	0	126,500	0	126,500		
11	2269 - 25	5500	R7A/C2-4	0	0	10,583	0	55	Natural Gas	Fuel #2 at 70' from western lot line or Natural gas at 55' from western lot line
	2269 - 27	1750	R7A/C2-4	0	0	10,583	0			
	2269 - 28	1750	R7A/C2-4	0	0	10,583	0			
	2269 - 29	1750	R7A/C2-4	0	0	10,583	0			
	2269 - 30	1750	R7A/C2-4	0	0	10,583	0			
	2269 - 31	3975	R7A/C2-4	0	0	10,583	0			
	2269 - 33	3283	R7A/C2-4	0	0	10,583	0			
	2269 - 35	1350	R7A/C2-4	0	0	10,583	0			
	2269 - 36	7500	R7A/C2-4	0	0	10,583	0			
	28208	28208		0	0	95,247	0	95,247		
12	2269 - 39	2500	R7A	0	0	9,500	2000	48	Natural Gas	Fuel #2 at 55' from northern, western and eastern lot lines or Natural gas at 42' from northern, western and eastern lot lines
	2269 - p/o 40	2500	R7A	0	0	9,500	2000			
	2269 - 41	2500	R7A	0	0	9,500	2000			
	2269 - 42	2500	R7A	0	0	9,500	2000			
	10000	10000		0	0	38,000	8,000	46,000		

Table ES-2
 CEQR Preliminary Screening Results for Individual HVAC Source
 (Comparison between Proposed RWCDS and Maximum Development Sizes without Causing Significant Impacts)

Project Development Sites	Proposed Floor Area (Sq. Ft) - Build Condition	Distance to Nearest Building (feet)	Fuel Type Passed	E- Requirements
26	2250 - 129 3750 2250 - 32 2500 2250 - 33 5000 11250 7500	50	Natural Gas	Natural gas at 40' from northern and western lot lines
27	2250 - 36 2500 2250 - 37 2500 5000 2180	25	Distance <30ft	Natural gas at 30' from northern, western and eastern lot lines
29	2242 - 2 2255 2242 - 3 20357 22612 1950	94	Fuel #4	Natural gas at 60' from eastern lot line
30	2242 - 53 2500 2242 - 54 2500 5000 0	70	Fuel #4	Natural gas; no restriction
31	2242 - 45 2200 2242 - 46 2200 2242 - 47 2500 4700 0	55	Fuel #4	Natural gas at 35' from northern lot line
32	2242 - 22 2500	46	Fuel #4	Natural gas; no restriction
33	2238 - 49 57330 96728	89	Natural Gas	Natural gas at 80' from eastern lot line
34	2238 - 27 16550 0	45	Natural Gas	Natural gas at 40' from western and southern lot lines
35	2238 - 41 5000 4000	55	Fuel #4	Fuel #4; no restriction
36	2245 - 136 5228 2245 - 40 3500 2245 - 42 2500 2245 - 43 2000 2245 - 44 4000 2245 - 47 2470 2245 - 48 1955 2245 - 149 1813 2245 - 35 175 23641	204	Fuel #4	Fuel #4; no restriction
25	Potential Development Sites 2250 - 27 2500 2250 - 28 2500 2250 - 29 3750 2250 - 25 2500 11250 8750	41	Natural Gas	Natural Gas at 40' from southern lot line
28	2250 - 38 5000 2250 - 40 2500 2250 - 41 12500 20000	46	NONE	Natural gas at 50' from northern, western, and eastern lot lines
37	2250 - 6 2500 2250 - 7 2500 2250 - 8 2500 7500 15000	38	Fuel #2	Fuel #2 at 40' from southern and eastern lot lines or Natural gas with no restrictions

The Project Area currently experiences moderate to high ambient noise levels that are typical of an urban environment. The results of the noise monitoring conducted for the analysis show that the existing ambient noise levels in the Project Area ranged from a L_{eq} of 59.1 to 72.5 dBA during the daytime. The analysis concludes that ambient noise levels in the Project Area would not change significantly because the predicted noise contributions from project-generated mobile and stationary sources would be minimal when compared to the ambient noise levels for the existing conditions or in the future without the Proposed Action. However, due to the existing high ambient noise levels in the community, any commercial or residential buildings that are constructed in the Project Area would be required to include in the building designs appropriate measures to achieve the desired window-wall noise attenuation. The recommended noise attenuation level required to reduce to the acceptable interior L_{10} noise level of 45 dBA or less are presented in Table ES-3 for each of the six noise monitoring sites. For commercial sites, the required level of attenuation would be reduced by 5 dBA. Noise attenuation measures require that the interior noise levels be achieved under a closed-window condition. Therefore, alternate means of ventilation are required.

To avoid the potential for noise impacts, it is recommended that (E) designations for noise be placed on the New York City Zoning Map privately owned tax lots requiring attenuation, based on the *CEQR Technical Manual*. Table ES-4 and ES-5 present the projected and potential development sites along with their block and lot numbers and the level of attenuation needed to comply with the CEQR criteria for interior noise levels.

**Table ES-3
CEQR Recommended Noise Attenuation Requirements**

Noise Monitoring Site	Location	Projected Land Use	Attenuation Level
1	242-246 Lynch Street	Residential & Retail	35 dBA
2	159 Lorimer Street	Residential	25 dBA
3	62 Throop Avenue	Residential & Retail	30 dBA
4	Walton Street (midblock)	Residential & Retail	25 dBA
5	47 Bartlett Street	Residential	None
6	2 Whipple Street	Residential, Commercial & Retail	30 dBA

Source: The Louis Berger Group, Inc., 2009.

Although these tables display all tax lots that make up the projected and potential development sites, only those that are privately owned will be mapped with an (E) designation on the zoning map, as indicated in the table. For publicly-owned properties, (E) designations are not recommended. Since development of publicly owned sites would occur through disposition by HPD to a private entity, similar window-wall attenuation measures would be required through the Land Disposition Agreement (LDA) between HPD and a private entity. The provisions would be similar to an (E) designation and would ensure that adequate window-wall attenuation is provided with any future construction, utilizing the noise analysis results presented in this chapter as guidance.

In order to maintain an interior noise level of 45 dB in a closed-window condition, an alternate means of ventilation must also be provided for all sites mapped with an (E) Designation for any development requiring window-wall attenuation above 25 dB/dBA. Alternate means of ventilation include, but are not limited to, central air conditioning or through the wall air conditioning sleeves fitted with an air conditioner.

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Prior to development on the privately owned sites that require noise attenuating measures to meet CEQR interior noise level criteria, the New York City Department of Buildings must receive a report from the Mayor's Office of Environmental Remediation stating that the environmental requirements related to the (E) designation have been met. Therefore, with the placement of (E) designations for noise on the parcels listed in Tables ES-4 and ES-5, no impacts related to noise are expected and no further analysis is warranted.

A noise analysis pursuant to the HUD noise guidance was also conducted for the Proposed Action due to the anticipated use of federal funds for future development in the Project Area. This analysis is presented in section H, "NEPA Considerations" of Chapter 21, "Noise." The analysis revealed that the CEQR and HUD noise attenuation requirements for the Proposed Action are generally the same, with the exception of noise monitoring sites 1, 4, and 5. The CEQR and HUD attenuation requirements are both presented in tables ES-4 and ES-5 for informational purposes. The higher noise attenuation requirement of the two analyses (shown in bold in both tables) has been conservatively applied to the development sites as the minimum required attenuation level. The "Implementing Mechanism" column shows whether the attenuation will be required through the placement of an (E) designation on the zoning map for privately owned sites, or through the provisions to be included in the LDA between HPD and private sponsor for publicly owned sites.

CONSTRUCTION IMPACTS

The Proposed Action would have significant adverse impacts resulting from construction activities proximate to historic architectural resources. Construction-related activities resulting from the Proposed Action are not expected to have significant adverse impacts on land use and neighborhood character, socioeconomic conditions, community facilities and services, open space, natural resources, traffic and parking, air quality, noise, infrastructure, or hazardous materials conditions.

Four architectural resources potentially eligible for listing on the State and/or National Register of Historic Places (S/NR-listed) are located within 90 feet of projected or potential development sites: The Lincoln Savings Bank is located across Broadway from potential development Site #34; United Talmudical Academy is located across Bartlett Street from potential development Site #11; All Saints Church is located across Throop Street from potential development Site # 1; and the Charles Pfizer & Co. building is located across Harrison Street from potential development Site #9.

Inadvertent construction-related damage could potentially occur to these S/NR eligible resources as a result of development in the Project Area. The resources would be afforded some protection from construction-related impacts under DOB regulations applicable to all buildings located adjacent to construction sites; however, since the resources are not S/NR-listed or New York City Landmarks (NYCL-designated), the resources are not afforded special protections under the New York City Department of Buildings' *Technical Policy and Procedure Notice #10/88, (TPPN 10/88)*. However, the resources would be provided a measure of protection from construction as Building Code section 27-166 (C26-112.4), which requires that all lots, buildings, and service facilities adjacent to foundation and earthwork areas be protected and supported in accordance with the requirements of Building Construction Subchapter 7 and Building Code Subchapters 11 and 19. Additional protective measures afforded under TPPN 10/88, which apply to designated historic resources, would not be applicable in this case, unless the eligible resources are designated in the future prior to the initiation of construction. If these resources are not designated, however, they would not be subject to the above construction protection procedures and adjacent or nearby development resulting from the Proposed Action could potentially result in significant adverse construction-related impacts to these resources.

**Table ES-4
Minimum Required Noise Attenuation
For Projected Development Sites in Project Area**

Proj Dev Site	Block	Lot	Address	Proposed Zoning	Governing Noise Analysis Site ^a	CEQR Max. Build L ₁₀	HUD Max. Build L _{dn}	CEQR Required Attenuation Level ^b	HUD Required Attenuation Level ^b	Implementing Mechanism
1	2274	16	134 Throop Avenue	C4-3 (R6)	6	71.4	73	30 dBA	30 dB	(E) designation
2	2274	1	2 Whipple Street	C4-3 (R6)	6	71.4	73	30 dBA	30 dB	(E) designation
	2274	5	16 Whipple Street	C4-3 (R6)	6	71.4	73	30 dBA	30 dB	(E) designation
	2274	6	Whipple Street	C4-3 (R6)	6	71.4	73	30 dBA	30 dB	(E) designation
	2274	24	687 Flushing Avenue	C4-3 (R6)	6	71.4	73	30 dBA	30 dB	(E) designation
3	2272	3	207 Harrison Avenue	R7A/C2-4	5	64.2	66	NONE	25 dB	N/A
4	2272	6	24 Bartlett Street	R7A	5	64.2	66	NONE	25 dB	N/A
5	2272	9	30 Bartlett Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2272	11*	36 Bartlett Street	R7A	5	64.2	66	NONE	25 dB	N/A
6	2272	45	11 Whipple Street	R7A	6	71.4	73	30 dBA	30 dB	(E) designation
	2272	46	9 Whipple Street	R7A	6	71.4	73	30 dBA	30 dB	(E) designation
	2272	147	5 Whipple Street	R7A	6	71.4	73	30 dBA	30 dB	(E) designation
	2272	49	669 Flushing Avenue	R7A	6	71.4	73	30 dBA	30 dB	(E) designation
	2272	51	665 Flushing Avenue	R7A	6	71.4	73	30 dBA	30 dB	(E) designation
	2272	52	665 Flushing Avenue	R7A/C2-4	6	71.4	73	30 dBA	30 dB	(E) designation
	2272	53	663 Flushing Avenue	R7A/C2-4	6	71.4	73	30 dBA	30 dB	(E) designation
7	2272	108	Bartlett Street	R7A	6	71.4	73	30 dBA	30 dB	(E) designation
	2272	54	661 Flushing Avenue	R7A	6	71.4	73	30 dBA	30 dB	(E) designation
8	2272	55	659 Flushing Avenue	R7A	6	71.4	73	30 dBA	30 dB	(E) designation
9	2269	52*	31 Bartlett Street	R7A	5	64.2	66	NONE	25 dB	N/A
10	2269	1	58 Gerry Street	R7A/C2-4	5	64.2	66	NONE	25 dB	N/A
10	2269	14*	68 Gerry Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2269	16*	72 Gerry Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2269	17*	74 Gerry Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2269	18*	76 Gerry Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2269	19	78 Gerry Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2269	p/o 40	84 Gerry Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2269	23*	86 Gerry Street	R7A	5	64.2	66	NONE	25 dB	N/A
11	2269	24*	88 Gerry Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2269	25	90 Gerry Street	R7A/C2-4	5	64.2	66	NONE	25 dB	N/A
	2269	27*	84 Throop Avenue	R7A/C2-4	5	64.2	66	NONE	25 dB	N/A
	2269	28*	86 Throop Avenue	R7A/C2-4	5	64.2	66	NONE	25 dB	N/A
	2269	29*	88 Throop Avenue	R7A/C2-4	5	64.2	66	NONE	25 dB	N/A
	2269	30*	90 Throop Avenue	R7A/C2-4	5	64.2	66	NONE	25 dB	N/A
	2269	31*	90 Throop Avenue	R7A/C2-4	5	64.2	66	NONE	25 dB	N/A
	2269	33*	69 Bartlett Street	R7A/C2-4	5	64.2	66	NONE	25 dB	N/A
12	2269	35*	65 Bartlett Street	R7A/C2-4	5	64.2	66	NONE	25 dB	N/A
	2269	36*	63 Bartlett Street	R7A/C2-4	5	64.2	66	NONE	25 dB	N/A
12	2269	39	57 Bartlett Street	R7A	5	64.2	66	NONE	25 dB	N/A

Broadway Triangle

Proj Dev Site	Block	Lot	Address	Proposed Zoning	Governing Noise Analysis Site ^a	CEQR Max. Build L ₁₀	HUD Max. Build L _{dn}	CEQR Required Attenuation Level ^b	HUD Required Attenuation Level ^b	Implementing Mechanism
	2269	p/o 40	55 Bartlett Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2269	41*	53 Bartlett Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2269	42	51 Bartlett Street	R7A	5	64.2	66	NONE	25 dB	N/A
13	2269	43	49 Bartlett Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2269	44	47 Bartlett Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2269	45*	43 Bartlett Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2269	47*	41 Bartlett Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2269	48*	39 Bartlett Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2269	49*	37 Bartlett Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2269	50*	35 Bartlett Street	R7A	5	64.2	66	NONE	25 dB	N/A
14	2266	1	Harrison Avenue	R7A/C2-4	4	66.6	71	25 dBA	30 dB	(E) designation
	2266	9	366 Wallabout Street	R7A/C2-4	4	66.6	71	25 dBA	30 dB	(E) designation
15	2266	14	376 Wallabout Street	R7A	4	66.6	71	25 dBA	30 dB	(E) designation
	2266	15	378 Wallabout Street	R7A	4	66.6	71	25 dBA	30 dB	(E) designation
	2266	16	380 Wallabout Street	R7A	4	66.6	71	25 dBA	30 dB	(E) designation
	2266	17	382 Wallabout Street	R7A	4	66.6	71	25 dBA	30 dB	(E) designation
	2266	18 [±]	384 Wallabout Street	R7A	-4	66.6	74	25 dBA	30 dB	LDA
16	2266	18*	384 Wallabout Street	R7A	4	66.6	71	25 dBA	30 dB	LDA
	2266	19	386 Wallabout Street	R7A	3	73.4	75	30 dBA	30 dB	(E) designation
	2266	20	388 Wallabout Street	R7A	3	73.4	75	30 dBA	30 dB	(E) designation
	2266	21	390 Wallabout Street	R7A	3	73.4	75	30 dBA	30 dB	(E) designation
	2266	22	392 Wallabout Street	R7A	3	73.4	75	30 dBA	30 dB	(E) designation
	2266	23	394 Wallabout Street	R7A	3	73.4	75	30 dBA	30 dB	(E) designation
	2266	24	396 Wallabout Street	R7A	3	73.4	75	30 dBA	30 dB	(E) designation
17	2266	25	398 Wallabout Street	R7A	3	73.4	75	30 dBA	30 dB	(E) designation
	2266	29	72 Throop Avenue	R7A/C2-4	3	73.4	75	30 dBA	30 dB	(E) designation
	2266	30	74 Throop Avenue	R7A/C2-4	3	73.4	75	30 dBA	30 dB	(E) designation
18	2266	31	76 Throop Avenue	R7A/C2-4	3	73.4	75	30 dBA	30 dB	(E) designation
	2266	32	78 Throop Avenue	R7A/C2-4	3	73.4	75	30 dBA	30 dB	(E) designation
	2266	34	82 Throop Avenue	R7A/C2-4	3	73.4	75	30 dBA	30 dB	(E) designation
19	2266	37	97 Gerry Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2266	38	95 Gerry Street	R7A	5	64.2	66	NONE	25 dB	N/A
20	2266	39	93 Gerry Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2266	40	91 Gerry Street	R7A	5	64.2	66	NONE	25 dB	N/A
	2266	41	89 Gerry Street	R7A	5	64.2	66	NONE	25 dB	N/A
21	2266	46	75 Gerry Street	R7A	5	64.2	66	NONE	25 dB	N/A
22	2250	4	161 Harrison Avenue	R7A/C2-4	4	66.6	71	25 dBA	30 dB	(E) designation
23	2250	10	86 Wallabout Street	R7A	4	66.6	71	25 dBA	30 dB	(E) designation
	2250	11	88 Wallabout Street	R7A	4	66.6	71	25 dBA	30 dB	(E) designation
	2250	12	90 Wallabout Street	R7A	4	66.6	71	25 dBA	30 dB	(E) designation
24	2250	14	94 Wallabout Street	R7A	4	66.6	71	25 dBA	30 dB	(E) designation
	2250	46	291 Wallabout Street	R7A	4	66.6	71	25 dBA	30 dB	(E) designation

Proj Dev Site	Block	Lot	Address	Proposed Zoning	Governing Noise Analysis Site ^a	CEQR Max. Build L ₁₀	HUD Max. Build L _{dn}	CEQR Required Attenuation Level ^b	HUD Required Attenuation Level ^b	Implementing Mechanism
	2250	48	289 Wallabout Street	R7A	4	66.6	71	25 dBA	30 dB	(E) designation
26	2250	129	56 Throop Avenue	R7A/C2-4	3	73.4	75	30 dBA	30 dB	(E) designation
	2250	32	62 Throop Avenue	R7A/C2-4	3	73.4	75	30 dBA	30 dB	(E) designation
	2250	33	66 Throop Avenue	R7A/C2-4	3	73.4	75	30 dBA	30 dB	(E) designation
	2250	36	313 Wallabout Street	R7A	3	73.4	75	30 dBA	30 dB	(E) designation
27	2250	37	311 Wallabout Street	R7A	3	73.4	75	30 dBA	30 dB	(E) designation
	2242	2	131 Harrison Avenue	R6A/C2-4	2	69.8	68	25 dBA	25 dB	N/A
29	2242	3	100 Harrison Avenue	R6A/C2-4	2	69.8	68	25 dBA	25 dB	N/A
	2242	53	153 Lorimer Street	R6A	2	69.8	68	25 dBA	25 dB	N/A
30	2242	54	151 Lorimer Street	R6A	2	69.8	68	25 dBA	25 dB	N/A
	2242	45	165 Lorimer Street	R6A	2	69.8	68	25 dBA	25 dB	N/A
31	2242	46	167 Lorimer Street	R6A	2	69.8	68	25 dBA	25 dB	N/A
	2242	47	165 Lorimer Street	R6A	2	69.8	68	25 dBA	25 dB	N/A
	2242	22	196 Middleton Street	R6A	2	69.8	68	25 dBA	25 dB	N/A
32	2242	22	196 Middleton Street	R6A	2	69.8	68	25 dBA	25 dB	N/A
33	2238	49	120 Union Avenue	R6A/C2-4	2	69.8	68	25 dBA	25 dB	N/A
34	2238	27	240 Lynch Street	R6A/C2-4	1	77.0	73	35 dBA	30 dB	(E) designation
35	2238	41	221 Middleton Street	R6A	1	77.0	73	35 dBA	30 dB	(E) designation
	2245	136	Harrison Avenue	R6A/C2-4	1	77.0	73	35 dBA	30 dB	(E) designation
	2245	149	Walton Street	R6A/C2-4	1	77.0	73	35 dBA	30 dB	(E) designation
	2245	35	Union Avenue	R6A/C2-4	1	77.0	73	35 dBA	30 dB	(E) designation
	2245	40	148 Harrison Avenue	R6A/C2-4	1	77.0	73	35 dBA	30 dB	(E) designation
	2245	42	152 Harrison Avenue	R6A/C2-4	1	77.0	73	35 dBA	30 dB	(E) designation
	2245	43	154 Harrison Avenue	R6A/C2-4	1	77.0	73	35 dBA	30 dB	(E) designation
	2245	44	Harrison Avenue	R6A/C2-4	1	77.0	73	35 dBA	30 dB	(E) designation
	2245	47	79 Walton Street	R6A/C2-4	1	77.0	73	35 dBA	30 dB	(E) designation
2245	48	77 Walton Street	R6A/C2-4	1	77.0	73	35 dBA	30 dB	(E) designation	

Source: Louis Berger Group, Inc., 2009

* indicates publicly owned tax lot - all others are privately owned.

- a) To supplement the maximum Build L₁₀ and L_{dn} values shown above for the six analysis sites, the L_{eq} noise contours provided by the SoundPLAN model run for the 2018 Build conditions (as described in Section F, under “Mobile and Stationary Sources Cumulative Effects”) were used to more accurately represent the level of attenuation that would be required at the projected development sites within the Project Area. These SoundPLAN maps are available for reference in Appendix H.
- b) Minimum required attenuation levels are shown in bold and highlighted. The higher requirement of the two analyses (CEQR and HUD) has been conservatively applied to the tax lot. Minimum required attenuation levels are shown for residential uses; commercial uses would require approximately 5 dBA less attenuation.
- c) Sites listed as N/A under “Implementing Mechanism” were determined to be in the 65-70 dB “marginally acceptable” category according to CEQR, not requiring an (E)-designation. However, should new construction projects on these sites utilized HUD funding, they would be within the “normally unacceptable” category according to HUD noise guidelines, requiring the appropriate level of attenuation indicated in the table.

**Table ES-5
Minimum Required Noise Attenuation
For Potential Development Sites in Project Area**

Pot. Dev Site	Block	Lot	Address	Proposed Zoning	Governing Noise Analysis Site ^a	CEQR Max. Build L ₁₀	HUD Max. Build L _{dn}	CEQR Required Attenuation Level ^b	HUD Required Attenuation Level ^b	Implementing Mechanism
25	2250	27	52 Throop Avenue	R7A/C2-4	3	73.4	75	30 dBA	30 dB	(E) designation
	2250	28	56 Throop Avenue	R7A/C2-4	3	73.4	75	30 dBA	30 dB	(E) designation
	2250	29	56 Throop Avenue	R7A/C2-4	3	73.4	75	30 dBA	30 dB	(E) designation
	2250	25	116 Walton Street	R7A/C2-4	3	73.4	75	30 dBA	30 dB	(E) designation
28	2250	38	307 Wallabout Street	R7A	3	73.4	75	30 dBA	30 dB	(E) designation
	2250	40	305 Wallabout Street	R7A	3	73.4	75	30 dBA	30 dB	(E) designation
	2250	41	295 Wallabout Street	R7A	3	73.4	75	30 dBA	30 dB	(E) designation
37	2250	6	159 Harrison Avenue	R7A/C2-4	4	66.6	71	25 dBA	30 dB	(E) designation
	2250	7	157 Harrison Avenue	R7A-C2-4	4	66.6	71	25 dBA	30 dB	(E) designation
	2250	8	155 Harrison Avenue	R7A-C2-4	4	66.6	71	25 dBA	30 dB	(E) designation

Source: Louis Berger Group, Inc., 2009

- a) To supplement the maximum Build L₁₀ and L_{dn} values shown above for the six analysis sites, the L_{eq} noise contours provided by the SoundPLAN model run for the 2018 Build conditions (as described in Section F, under “*Mobile and Stationary Sources Cumulative Effects*”) were used to more accurately represent the level of attenuation that would be required at the projected development sites within the Project Area. These SoundPLAN maps are available for reference in Appendix H.
- b) Minimum required attenuation levels are shown in bold and highlighted. The higher requirement of the two analyses (CEQR and HUD) has been conservatively applied to the tax lot. Minimum required attenuation levels are shown for residential uses; commercial uses would require approximately 5 dBA less attenuation.

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As discussed in Chapter 26, “Unavoidable Adverse Impacts,” these impacts would be unmitigated for privately owned development sites as no mechanism to require a CPP is currently in place for private sites, aside from the standard Building Code measures identified above.

For City-owned development sites that are under HPD jurisdiction and located within 90 feet of potentially eligible resources, the Land Disposition Agreement (LDA) between HPD and the private entity will include a requirement for a CPP to insure that the potentially eligible historic resource is not adversely impacted by construction activities. The measure would require consultation with and review and acceptance by the LPC. With this measure required through provisions in the LDA, no significant adverse construction-related impacts would result from redevelopment of City-owned property. Construction activity associated with Projected Development Sites 9 and 11 would result in potential construction-related impacts. The resource within 90’ feet of Projected Development Site 9 is the Charles Pfizer & Co. building, located on Harrison Avenue. The resource within 90’ feet of Projected Development Site 11 is the United Talmudical Academy (former Bartlett School, PS 168), which is located on Bartlett Street. See the *CEQR Technical Manual: 2001*, chapter F, page 3F-18, section 523, regarding references and suggested elements for inclusion in the construction protection plan.

As discussed in Chapter 26, “Unavoidable Adverse Impacts,” these impacts would be unmitigated for privately owned development sites as no mechanism to require a Construction Protection Plan (CPP) is currently in place for private sites, aside from the standard measures identified in the New York City Building Code.

PUBLIC HEALTH

The Proposed Action would not result in significant adverse public health impacts. Based on a preliminary screening analysis in accordance with the *CEQR Technical Manual* guidelines, it was determined that a full assessment of the Proposed Action’s potential impacts on public health is not necessary and that no significant adverse impacts are expected as a result of the Proposed Action. The Proposed Action would incorporate noise attenuation, air quality, and hazardous materials testing and remediation requirements in accordance with the proposed (E) designations. For city-owned development sites, similar mechanisms would be required through the LDA between HPD and a private sponsor.

MITIGATION

SOCIOECONOMIC CONDITIONS

As stated in Chapter 3, “Socioeconomic Conditions,” the Proposed Action could result in significant adverse indirect residential displacement impacts. Within the study area there are an estimated 3,543 residents living in 1,189 units that are currently vulnerable to indirect displacement due to increased rents. The Proposed Action could initiate a trend toward increased rents in the study area. Although there are ongoing trends of increased rent pressures in the study area and adjacent Williamsburg and Bushwick neighborhoods, the Proposed Action’s contributions to rent pressures in the study area could be significant. The Proposed Action would not result in significant adverse impacts related to direct residential displacement, direct or indirect displacement of businesses or institutions, or effects on specific industries.

The significant adverse indirect residential displacement impacts that could occur as a result of the Proposed Action would be partially mitigated by the Proposed Action’s provision of ~~905~~ 844 affordable housing units for low income households which, unlike the existing unprotected units occupied by vulnerable populations, would be rent protected. Combined with the ~~322~~ 370 affordable housing units

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that would be developed pursuant to City actions on other sites in the future without the No-Action, there are expected to be an additional ~~1,227~~ 1,214 affordable housing units in the study area by 2018.

These and other factors may lessen the impact of the Proposed Action:

- **There is an existing trend toward increased rents that is expected to accelerate in the future without the Proposed Action.** Recent data show that there is already an existing trend toward rent increases due to post-2000 development. As evidenced through local real estate data, asking rents for rental units within the study area are considerably higher, particularly with respect to rental units closer to Williamsburg—a neighborhood that in recent years, has experienced an influx of new residential development consisting of market-rate and luxury rental units. Market pressures have in effect, spread to adjacent neighborhoods such as East Williamsburg, South Williamsburg, Bushwick, and Bedford-Stuyvesant. Census Tracts 491, 505, 507, 509, 527, 529, and 531, located in the northern portion of the study area (containing 1,189 at risk units) are those located closest to Williamsburg. Given their close proximity, it is likely that some vulnerable units already have been or will be displaced as a result of these existing market pressures.

Furthermore, 1990 and 2000 Census data indicate that within the Project Area, the poverty rate has decreased 73.6 percent between 1990 and 2000, while the median household income has increased 19.6 percent during that same period. Within the socioeconomic study area, the poverty rate has fallen by 5.0 percent while the median household income has increased by 9.4 percent between 1990 and 2000. This illustrates a shift in the socioeconomic profile of the neighborhood with a higher income population currently present in the study area. Therefore, increased market pressures in the area are the result of an existing trend spurred by the influx of higher income residents that would continue to exist in the future with or without the Proposed Action.

- **The Proposed Action would encourage a mix of market-rate and affordable housing.** The Proposed Action would introduce 1,851 units to the study area. As determined by the RWCDs, ~~905~~ 844 units (~~48.8~~ 45.6 percent) would be affordable through the redevelopment of city-owned property, utilization of the Inclusionary Housing program, or a combination of both. The new residential population would likely mirror the economic diversity of the existing population in the study areas and would likely be more diverse than the population that will be introduced to the study areas in the future without the Proposed Action. As detailed below, this diverse new population and increased housing supply could help to relieve the trend toward increased rents in the study areas, rather than accelerate it. The ~~905~~ 844 affordable housing units generated by the Proposed Action, which would be rent protected units that would shield vulnerable populations from indirect displacement pressures unlike the existing unprotected units in the study area, would serve to partially mitigate the significant adverse indirect displacement impacts that potentially could occur as a result of the Proposed Action. Combined with the ~~322~~ 370 affordable housing units that would be provided by known future developments under the 2018 no-action condition a total of ~~1,227~~ 1,214 affordable units would be added to the study area by 2018.

The future no-action condition, by contrast, is not expected to include additional affordable housing within the Project Area and residents of unprotected units would remain potentially vulnerable to displacement pressures from the general trends of rising rents the area is experiencing.

- **The Proposed Action could serve to relieve, rather than increase market pressure in the study area.** Presently, there is a high demand for housing in the surrounding area due to its

proximity to Manhattan, access to transit, and increased housing costs in nearby neighborhoods. The proposal would allow as-of-right residential development in an area that currently prohibits most new residential uses. The development of new residential buildings in the proposed Broadway Triangle Project Area would increase the supply of both market rate and affordable housing in an area where housing demand is high.

In conclusion, one of the key goals of the Proposed Action is to provide affordable housing units, which would be rent protected. These ~~905~~ 844 projected affordable units would partially mitigate the significant adverse indirect residential displacement impacts that could occur to up to 1,189 unprotected units. While this EIS discloses this impact, in the future without the Proposed Action there would be no additional affordable housing units in the Project Area and the existing units would remain unprotected and households occupying them potentially vulnerable to indirect displacement due to rent increases.

OPEN SPACE

With the Proposed Action, the population of the open space study area would increase by 5,516 residents, from ~~92,120 to 97,636~~ 92,263 to 97,779. The amount of public open space would remain the same, with 33.99 total acres of public open space, consisting of 27.41 acres of active open space and 6.58 acres of passive open space. In the future with the Proposed Action, the open space ratio would decrease by approximately 5.6 percent as compared to the future without the Proposed Action. The private recreational space created under the *Quality Housing Program* for all action-generated residential units in the future with the Proposed Action would contribute to alleviating some of the shortage of open space in the study area. In addition, there are several large open space resources just outside the study area and bike lanes on existing roadways in the area which would also partially alleviate the shortage of open space for ~~new~~ residents of the study area. ~~Proposed Action~~. However, the decrease in the open space ratio would exceed the 5 percent threshold for quantitative impacts under CEQR. In light of the low open space ratios for both passive and active recreation in the study area under No-Action conditions and the worsening that would occur with the Proposed Action, there would be a quantitative significant adverse open space impact.

HPD has considered the following measures to mitigate the significant adverse quantitative open space impacts: ~~may include:~~

- The creation of new open space within the open space study area; or
- The enhancement and improvement of existing open spaces within the open space study area.

~~HPD will explore the feasibility of implementing mitigation measures between the Draft and Final EIS and will coordinate this effort with relevant public agencies and other parties as necessary and appropriate. In the event that no mitigation measures are found feasible or practicable, the quantitative open space impact would remain unmitigated, as discussed in Chapter 26, "Unavoidable Adverse Impacts."~~

In order to partially mitigate the significant adverse impact associated with the deficiency in passive open space, a site would be set aside within the open space study area at the junction of Beaver Street and Bushwick Avenue within the West Bushwick URA. The open space mitigation site is also known as URA Site 8 (Block 3137, Lots 1, 6, 9 and 11). The site is approximately 18,000 square feet and is City-owned (under HPD jurisdiction). As discussed below, once funds for the design and development of the open space are identified and secured HPD would transfer jurisdiction of the site to the Department of Parks and Recreation (DPR), which would develop and maintain the site as passive open space. The new site would partially mitigate the passive open space impact; however, the study area would continue to be underserved by passive and active open space.

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According to the assessment contained in Chapter 6, “Open Space,” some open spaces within the study area are in fair condition and are in need of some improvement. The analysis also concludes that the amount of active open space in the study area is low relative to the future study area population. HPD will continue to work with DPR and other agencies to seek out opportunities for improvements to existing open spaces and increase access to recreational facilities for future residents in the study area. Short of creating new active open space, a possible measure to address the deficiency in active open space could be providing public access to existing schoolyards during non-school hours, which is an initiative of PlaNYC. However, increasing access to school yards may require capital improvements and necessitates approval of and coordination among DPR, the New York City Department of Education (DOE). In the event that access to school yards could be provided to the public during non-school hours, this could represent a potential measure to mitigate the impact associated with the deficiency in active open space. Furthermore, some active open spaces within the Project Area and surrounding study area are in need of improvements such as repairs to children’s spray showers, water fountains, and comfort stations. In the event funding becomes available, repairs, improvements and enhancements to existing active open spaces could also be considered a partial mitigation measure to address the significant adverse impacts associated with active open space.

With respect to the creation of new active open space, the study area generally lacks sites which can accommodate features such as ball fields and playgrounds. DPR determined that passive open space is likely better suited for URA Site 8 due to its size and configuration. URA Site 8 is the largest City-owned site within the study area available for the development of new open space. Other large City-owned sites under HPD jurisdiction in the study area were considered, however, the sites are better suited to the development of much needed affordable housing.

Therefore, HPD (in consultation with DPR) has determined that new passive open space on URA Site 8 is the most practicable and reasonable measure to partially mitigate the significant adverse open space impact of the Proposed Action. Development of a passive open space on the site would provide a community amenity to residents in the surrounding neighborhoods by providing needed green space and a place for residents to gather. Although a specific design for the open space is unknown at this time, it may include seating areas and a range of plantings and shrubbery. Because of the site’s triangular shape, its orientation relative to the sun and its location at the junction of two wide streets, the site would be afforded ample sunlight throughout much of the day.

URA Site 8 is largely vacant; however, the northern portion of the site is occupied by two former commercial buildings. Prior to the transfer of jurisdiction to DPR for creation of the new open space, HPD would demolish the existing buildings, remove pavement and replace with clean soil. Funding for these activities is committed in HPD’s Capital Plan. HPD is targeting demolition and site preparation activities to be completed within approximately twenty-four months. Once site preparation is completed and jurisdiction is transferred from HPD, DPR would solicit the public’s input on the design of the open space.

According to the quantitative open space assessment contained in Chapter 6, “Open Space,” an additional 0.39 acres of passive open space would be necessary to bring the Build Condition open space ratio to the No-build Condition open space ratio of 0.073 acres/1,000 residents. Should funding become available to construct a new open space, the addition of approximately 18,000 square feet of passive open space to the study area, which amounts to over one-third of an acre of new open space (or 0.41 acre) would increase the passive open space ratio to that of the No-Build condition, thereby mitigating the impact associated with passive open space as a result of the Proposed Action. However, as discussed above, the Proposed Action would reduce the availability of active open space and a significant adverse impact would result.

SHADOWS

As discussed in Chapter 7, “Shadows,” the Proposed Action has the potential to result in significant adverse impacts due to shadows cast on the Bartlett Playground and the “Project Roots” Community Garden.

Bartlett Playground

Bartlett Playground, located along the south side of Bartlett Street, would receive significant incremental shadow coverage resulting from the future condition with the Proposed Action, specifically from future development at projected development sites 5 and 6. Sun sensitive resources located within the playground include deciduous trees and vegetative cover. The duration of the shadow coverage over the four analysis periods (6 ¼ to 11 ¼ hours) would reduce the exposure of vegetation to sunlight to 3 hours on May 6th and 4 hours and 35 minutes on June 21st. While the reduction in sunlight exposure as a result of the Proposed Action would not significantly affect active recreation areas within the playground such as basketball courts, the lack of sunlight on the Bartlett Playground is a significant adverse impact during the May 6th analysis period because the resource would receive less than the minimum required for its vegetative cover and trees during part of the growing season.

HPD, in consultation with DPR, considered the following measures to mitigate significant adverse shadow impacts on the Bartlett Playground: ~~may include:~~

- Eliminating projected development sites 5 and 6 (the sites creating the shadow impact);
- Reducing the height of buildings causing the shadow impact; or
- Choosing shade tolerant species for vegetation to be planted in areas that would be in shadow.

~~HPD will explore the feasibility of implementing mitigation measures between the Draft and Final EIS and will coordinate this effort with relevant public agencies and other parties as necessary and appropriate. In the event that no mitigation measures are found feasible or practicable, the significant adverse shadow impacts will remain unmitigated, as discussed in Chapter 26 “Unavoidable Adverse Impacts.”~~

The primary source of project-generated shadows on the Bartlett Playground is development that would occur as-of-right on projected development sites 5 and 6 in the future with the Proposed Action. These large development sites are predominately City-owned and would provide approximately 127 units of affordable housing at a density and scale consistent with the surrounding neighborhood. Therefore, eliminating the development sites or reducing the allowable heights of buildings on the sites would not be consistent with the goals and objectives of the Proposed Action.

According to CEQR Technical Manual, the shadow impact on the vegetation and tree canopy associated with the Bartlett Playground is considered a significant adverse impact because during the May 6th analysis period, the vegetation would receive approximately 3 hours of sunlight during the day. The CEQR Technical Manual states that 4-6 hours of sunlight per day is generally a minimum requirement, particularly in the growing season (April to October). The existing vegetation in the area of the playground that could be impacted by incremental shadows consists of approximately 7 to 10 mature honey locust trees. Replacing mature, deciduous trees with a shade tolerant species would not be feasible or practicable. Therefore the significant adverse shadow impact on Bartlett Playground would remain unmitigated.

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“Project Roots” Community Garden

The “Project Roots” Community Garden is located along the south side of Walton Street. Incremental shadows, as a result of the Proposed Action, would primarily result from development on projected development site 24, where a distinctly taller building (80 feet in height) is projected. The duration of the shadow coverage over the four analysis periods (6 ¼ hours to 12 hours) would significantly reduce the exposure of vegetation (including the greenhouse) to sunlight and diminish the attractiveness of the open space and utility of the greenhouse.

HPD, in consultation with DPR, considered the following measures to mitigate significant adverse shadow impacts on the “Project Roots” community garden: ~~may include:~~

- Eliminating projected development site 24 (the site creating the shadow impact);
- Reducing the height of buildings causing the shadow impact;
- Choosing shade tolerant species for vegetation to be planted in areas that would be in shadow; or
- Realignment or relocation of the greenhouse to another area of the garden.

~~HPD will explore the feasibility of implementing mitigation measures between the Draft and Final EIS and will coordinate this effort with relevant public agencies and other parties as necessary and appropriate. In the event that no mitigation measures are found feasible or practicable, the significant adverse shadow impacts will remain unmitigated, as discussed in Chapter 26 “Unavoidable Adverse Impacts.”~~

The primary source of project-generated shadows on the “Project Roots” community garden is development that would occur as-of-right on projected development site 24 in the future with the Proposed Action. Projected development site 24 is privately owned, and once the zoning is changed to R7A, redevelopment of the site would occur on an as-of-right basis. Excluding the development site from the area proposed for a zoning change would leave two mid-block lots zoned as M1-2 surrounded by lots zoned as R7A, which would not be consistent with the City’s zoning practices. Furthermore, restricting the allowable building height for this particular development site would not be consistent with the goals and objectives of the Proposed Action. According to the Reasonable Worst-Case Development Scenario (RWCDS), redevelopment on the site would result in approximately 104 new residential units, of which 21 would be affordable through utilization of the Inclusionary Housing bonus.

According to CEQR Technical Manual, the shadow impact associated with the “Project Roots” community garden is considered a significant adverse impact because the greenhouse within the garden would be subject to incremental shadows throughout the year. According to DPR’s GreenThumb Program, much of the existing vegetation in the garden (excluding the greenhouse) consists of shade tolerant plant species that would not be substantially impacted by a reduction in sunlight. Furthermore, according to the GreenThumb Program, the shadows which are currently cast upon the garden from adjacent buildings have not affected the overall utilization of the garden, so it is unlikely that an additional minor contribution of shadows from project-generated development would significantly affect utilization of the garden for passive uses.

The greenhouse is used for educational purposes by students from Eugenio DeHostos School (IS 318), particularly during the months during which school is in session. The school is located across the street from the garden. Therefore, relocating the greenhouse further from the school would be impractical as it would reduce the educational value the greenhouse provides to students. Furthermore, realigning or relocating the greenhouse to another location within the garden would not mitigate the impact, as most of the garden is in shadows for much of the day (under existing, no-build and build conditions). A potential

measure to address the lack of sunlight to the greenhouse (while still maintaining the garden's current location relative to the school) could be the provision of artificial lighting to simulate natural sunlight. At this time, there is no funding commitment for the provision of artificial lighting; therefore, the significant adverse impact would be unmitigated. However, in the event that funding could be made available, the provision of artificial lighting could be considered mitigation for the significant adverse impact associated with shadows on the greenhouse.

HISTORIC RESOURCES

As discussed in Chapter 8, "Historic Resources," the Proposed Action would not result in significant impacts to archaeological resources, but would result in construction-related impacts to two historic resources.

Inadvertent direct construction-related damage could potentially occur to two (the Lincoln Savings Bank and the All Saints Church) of these S/NR eligible resources as a result of development in the Project Area. Construction activity associated with projected development sites 9 and 11 would result in potential construction-related impacts. The resource within 90 feet of projected development site 9 is the Charles Pfizer & Co. building, located on Harrison Avenue. The resource within 90 feet of projected development site 11 is the Bartlett School/PS 168 (United Talmudical Academy) which is located on Bartlett Street.

The impacted resources would be afforded some protection from construction-related impacts under DOB regulations applicable to all buildings located adjacent to construction sites; however, since the resources are not S/NR-listed or New York City Landmarks (NYCL-designated), the resources are not afforded special protections under the New York City Department of Buildings' *Technical Policy and Procedure Notice #10/88*, (TPPN 10/88). However, the resources would be provided a measure of protection from construction as Building Code section 27-166 (C26-112.4), which requires that all lots, buildings, and service facilities adjacent to foundation and earthwork areas be protected and supported in accordance with the requirements of Building Construction Subchapter 7 and Building Code Subchapters 11 and 19.

Additional protective measures afforded under TPPN 10/88, which apply to designated historic resources, would not be applicable in this case, unless the eligible resources are designated in the future prior to the initiation of construction. If these resources are not designated, however, they would not be subject to the above construction protection procedures and adjacent or nearby development resulting from the Proposed Action would result in significant adverse construction-related impacts to these resources.

Potential mitigation could include measures comparable to TPPN #10/88, which include a Construction Protection Plan (CPP) submitted to LPC for review and approval. However, as discussed in Chapter 26, "Unavoidable Adverse Impacts," these impacts would be unmitigated for privately owned development sites as no mechanism to require a CPP is currently in place for private sites, aside from the standard Building Code measures identified above.

TRAFFIC AND PARKING

Traffic

The Proposed Action would result in significant adverse traffic impacts at a total of nine signalized intersections in the vicinity of the Project Area in one or more peak hours by 2018. A traffic mitigation plan was therefore developed to address these impacts. This mitigation plan, summarized in Table ES-6,

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consists of changes to signal timing and phasing, ~~lane striping~~, and curb-side parking regulations in order to increase capacity.

According to the *CEQR Technical Manual*, a significant traffic impact can be considered mitigated if measures implemented return projected future conditions to what they would be if a proposed action were not in place, or to acceptable levels. For a future No-Action condition level of service (LOS) mid-D, E or F, mitigation back to the No-Action condition is required; for No-Action LOS A, B or C, mitigating to mid-LOS D is required (45 seconds of delay for signalized intersections, and 30 seconds of delay for unsignalized intersections).

The effectiveness of the proposed traffic mitigation plan, in terms of addressing significant adverse impacts that would result from the Proposed Action, is shown in Table ES-6. As discussed below, the proposed traffic mitigation measures would fully mitigate all of the traffic impacts that would occur as a result of the Proposed Action in each analyzed peak hour.

Broadway at Union Avenue/Heyward Street

As shown in Table ES-6, at this intersection it is proposed to add a “no standing, 7-10 AM Monday through Friday” regulation to the existing no parking anytime regulation along the length of the east curb of northbound Broadway between Boerum Street and Union Avenue. As shown in Table ES-7, with this parking regulation adjustment, the significant adverse impact to the northbound approach in the weekday AM peak hour would be fully mitigated. The northbound approach would operate with ~~36.8~~ 37.2 seconds of delay (LOS D) in the AM under mitigated conditions compared to ~~86.8~~ 88.4 seconds of delay (LOS F) in the future condition without the Proposed Action.

Broadway at Gerry Street

As shown in Table ES-6, at this intersection it is proposed to transfer one second of green time from the northbound/southbound (Broadway) phase to the eastbound/westbound (Gerry Street) phase in the weekday AM peak period. As shown in Table ES-7, with this signal timing adjustment, the significant adverse impact to the eastbound Gerry Street approach in the weekday AM peak hour would be fully mitigated. The eastbound approach would operate with 44.8 seconds of delay (LOS D) in the AM compared to 46.7 seconds of delay (LOS D) with the Proposed Action and 41.3 seconds of delay (LOS D) with the future condition without the Proposed Action.

Broadway at Whipple Street

As shown in Table ES-6, at this intersection it is proposed to transfer one second of green time from the eastbound/westbound (Whipple Street) phase to the northbound/southbound (Broadway) phase in the weekday AM peak period. As shown in Table ES-7, with this signal timing adjustment, the significant adverse impact to southbound Broadway in the weekday AM peak hour would be fully mitigated. The southbound approach would operate with ~~44.3~~ 44.8 seconds of delay (LOS D) in the AM compared to 47.5 48.1 seconds of delay (LOS D) with the Proposed Action and ~~36.4~~ 36.7 seconds of delay (LOS D) in the future condition without the Proposed Action.

**Table ES-6
Proposed Traffic Mitigation Measures**

Intersection	Approach	Period	Current Signal Timing (Seconds)	Mitigation Signal Timing (Seconds)	Description of Mitigation
Broadway (N-S) at Heyward St (W)/ Union Ave (E-W)	EB/WB NB/SB	AM	48/36/48/36 72/54/72/54	48/36/48/36 72/54/72/54	Implement no standing, 7-10 AM, Monday-Friday regulation along east curb of NB approach.
Broadway (N-S) at Gerry Street (E-W)	EB/WB NB/SB	AM	36/36/36/36 84/54/84/54	37/36/36/36 83/54/84/54	Transfer 1 sec. of green time from NB/SB phase to EB/WB phase in AM peak period.
Broadway (N-S) at Whipple St (E-W)	EB/WB NB/SB	AM	48/36/48/36 72/54/72/54	47/36/48/36 73/54/72/54	Transfer 1 sec. of green time from EB/WB phase to NB/SB phase in AM peak period.
Throop Ave (N) at Flushing Ave (E-W)/ Thorton Street (S)	EB/WB NB SB	AM/PM	54/40/54/40 36/27/36/27 30/23/30/23	55/40/55/40 36/27/36/27 29/23/29/23	Transfer 1 sec. of green time from SB phase to EB/WB phase in AM <u>and PM</u> peak periods.
Harrison Ave (S) at Gerry Street (E-W)	EB/WB SB	AM/PM	48/48/48/48 72/72/72/72	44/48/44/48 76/72/76/72	Transfer 4 sec. of green time from EB/WB phase to SB phase in AM and PM peak periods.
Harrison Ave (S) at Bartlett St (E-W)	EB/WB SB	AM/PM	48/48/48/48 72/72/72/72	48/48/48/48 72/72/72/72	Implement no standing, 7-10 AM and 4-7 PM, Monday-Friday regulation for 100' along west curb of SB approach.
Harrison Ave (S) at Flushing Ave (E-W)	EB/WB SB	ALL	60/45/60/45 60/45/60/45	63/47/64/47 57/43/56/43	Transfer 3 sec. of green time from SB phase to EB/WB phase in AM peak period, 2 sec. in MD and Sat MD, and 4 sec. in PM. Implement no standing, 4-7 PM, Monday-Friday regulation for 100' along west curb of SB approach.
Union Ave (N)/ Marcy Ave (N) at Flushing Ave (E-W)/ Gerry Street (E-W)	EB/WB NB	ALL	77/58/77/58 43/32/43/32	80/58/80/58 40/32/40/32	Re-stripe EB approach to include an exclusive left turn lane and one through lane. Transfer 4 <u>3</u> sec. of green time from NB phase to EB/WB phase in AM <u>and PM</u> peak periods.
Lee Ave (S)/ Nostrand Ave (S) at Flushing Ave (E-W)	EB/WB SB	ALL	60/45/60/45 60/45/60/45	64/47/64/48 56/43/56/42	Transfer 4 sec. of green time from SB phase to EB/WB phase in AM peak period, 2 sec. in MD, 4 sec. in PM and 3 sec. in Sat MD.

Notes: AM/MD/PM/Sat MD signal timings indicate green plus yellow (including all-red) for each phase.
EB – eastbound; WB – westbound; NB – northbound; SB – southbound.

Table ES-7

Future With the Proposed Action With Mitigation Conditions
Levels of Service at Analyzed Intersections

Intersection	Lane Group	AM Peak Hour									MD Peak Hour								
		2018 No-Action			2018 With-Action			2018 Mitigation			2018 No-Action			2018 With-Action			2018 Mitigation		
		V/C Ratio	Delay sec/veh	LOS	V/C Ratio	Delay sec/veh	LOS	V/C Ratio	Delay sec/veh	LOS	V/C Ratio	Delay sec/veh	LOS	V/C Ratio	Delay sec/veh	LOS	V/C Ratio	Delay sec/veh	LOS
Broadway (N-S) @ Heyward Street (W)/ Union Avenue (E-W this intersection)	EB-LTR	0.55	36.0	D	0.70	43.5	D	0.70	43.5	D	0.50	27.7	C	0.56	29.3	C	0.56	29.3	C
	WB-LTR	0.62	39.0	D	0.62	39.0	D	0.62	39.0	D	0.62	32.1	C	0.63	32.5	C	0.63	32.5	C
	NB-LT							0.91	42.7	D									
	NB-R							0.32	16.0	B									
	NB-LTR	1.09	<u>88.4</u>	F	1.14	<u>107.6</u>	F *		<u>37.2</u>	D	0.76	<u>23.7</u>	C	0.78	<u>24.7</u>	C	0.78	<u>24.7</u>	C
	SB-LT	0.69	<u>24.6</u>	C	0.71	<u>25.6</u>	C	0.74	<u>27.1</u>	C	0.48	<u>15.2</u>	B	0.51	<u>15.8</u>	B	0.51	<u>15.8</u>	B
SB-R	0.12	13.1	B	0.13	13.2	B	0.13	13.2	B	0.11	10.4	B	0.13	10.5	B	0.13	10.5	B	
Broadway (N-S) @ Gerry Street (E-W)	EB-LTR	0.40	41.3	D	0.54	46.7	D *	0.52	44.8	D	0.18	21.5	C	0.22	22.0	C	0.22	22.0	C
	WB-LR	0.17	35.9	D	0.17	35.9	D	0.16	34.9	C	0.08	20.3	C	0.08	20.3	C	0.08	20.3	C
	NB-LT	<u>0.38</u>	10.4	B	<u>0.39</u>	10.5	B	0.39	<u>11.1</u>	B	0.42	13.7	B	0.44	14.1	B	0.44	14.1	B
	SB-LT	0.75	<u>20.9</u>	C	0.76	<u>21.4</u>	C	0.77	<u>22.5</u>	C	0.79	<u>26.6</u>	C	0.81	<u>27.9</u>	C	0.81	<u>27.9</u>	C
Broadway (N-S) @ Whipple St (E-W)	EB-LR	0.39	30.7	C	0.40	30.9	C	0.41	31.8	C	0.39	24.5	C	0.39	24.6	C	0.39	24.6	C
	NB-LT	0.48	<u>18.1</u>	B	0.47	<u>18.0</u>	B	0.47	<u>17.3</u>	B	0.52	15.4	B	0.54	15.9	B	0.54	15.9	B
	SB-TR	<u>0.87</u>	<u>36.7</u>	D	0.94	<u>48.1</u>	D *	0.93	<u>44.8</u>	D	0.78	<u>25.6</u>	C	<u>0.84</u>	<u>29.5</u>	C	<u>0.84</u>	<u>29.5</u>	C
Throop Avenue (N) @ Flushing Avenue (E-W)/ Thornton Street (W)	EB-LT	1.16	130.1	F	1.18	134.0	F *	1.15	124.1	F	0.75	34.3	C	0.76	34.7	C	0.76	34.7	C
	WB-T (Flushing)	0.62	32.8	C	0.63	33.2	C	0.62	32.0	C	0.61	26.8	C	0.62	27.0	C	0.62	27.0	C
	WB-R (Flushing)	0.13	22.7	C	0.14	22.9	C	0.14	22.3	C	0.10	18.0	B	0.11	18.1	B	0.11	18.1	B
	NB-LTR (Throop)	0.83	56.4	E	0.84	57.5	E	0.84	57.5	E	0.50	32.4	C	0.52	32.7	C	0.52	32.7	C
	SB-TR (Thornton)	0.52	49.6	D	0.52	49.6	D	0.55	51.6	D	0.36	35.1	D	0.36	35.1	D	0.36	35.1	D
Harrison Avenue (S) @ Gerry Street (E-W)	EB-TR	0.13	26.6	C	0.21	28.0	C	0.23	31.2	C	0.13	26.6	C	0.23	28.4	C	0.23	28.4	C
	WB-LT	0.09	26.1	C	0.24	28.9	C	0.27	32.4	C	0.06	25.6	C	0.19	27.8	C	0.19	27.8	C
	SB-LTR	0.94	47.8	D	1.01	63.3	E *	0.95	46.3	D	0.70	25.0	C	0.76	27.6	C	0.76	27.6	C
Harrison Avenue (S) @ Bartlett Street (E-W)	SB-LTR	0.88	40.4	D	1.04	74.1	E *		22.2	C	0.70	25.5	C	0.80	31.4	C	0.80	31.4	C
	SB-LT						0.67	24.5	C										
	SB-R						0.34	16.5	B										
Harrison Avenue (S) @ Flushing Avenue (E-W)	EB-TR	0.98	62.3	E	1.00	67.0	E *	0.94	52.8	D	0.71	27.3	C	0.72	27.6	C	0.68	24.7	C
	WB-LT	1.18	129.5	F	1.23	151.2	F *	1.17	122.9	F	1.14	110.6	F	1.21	140.1	F *	1.10	95.9	F
	SB-LTR	0.65	31.2	C	0.71	33.9	C	0.75	38.6	D	0.65	25.7	C	0.68	27.1	C	0.72	30.5	C
	SB-L																		
	SB-TR																		
Union Avenue (N)/ Marcy Avenue (N) @ Flushing Avenue (E-W)/ Gerry Avenue (E-W)	EB-LT	0.95	46.7	D	0.99	56.1	E *	0.95	44.9	D	0.60	15.6	B	0.73	20.8	C	0.73	20.8	C
	WB-TR	0.78	24.8	C	0.84	28.7	C	0.80	24.4	C	0.59	14.6	B	0.63	15.7	B	0.63	15.7	B
	NB-LTR	0.56	36.8	D	0.57	37.0	D	0.62	40.6	D	0.59	30.3	C	0.61	30.8	C	0.61	30.8	C
Lee Avenue (S)/ Nostrand Ave (S) @ Flushing Avenue (E-W)	EB-TR	1.16	120.3	F	1.20	137.5	F *	1.12	102.4	F	1.07	84.0	F	1.12	102.4	F *	1.07	81.4	F
	WB-LT	1.16	124.0	F	1.25	159.2	F *	1.16	121.5	F	1.31	182.2	F	1.43	234.7	F *	1.29	169.1	F
	SB-LTR	0.60	27.0	C	0.60	27.0	C	0.65	31.0	C	0.36	17.5	B	0.36	17.5	B	0.38	19.0	B

Notes:

EB - eastbound, WB - westbound, NB - northbound, SB - southbound
 L-left, T-through, R-right
 V/C Ratio - Volume to capacity ratio, Sec/veh - seconds per vehicle
 LOS - Level of service
 * Denotes a significant adverse impact based on CEQR Technical Manual criteria.
 Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.3)

Table ES-7 (continued)
Future Condition With the Proposed Action With Mitigation Conditions
Levels of Service at Analyzed Intersections

Intersection	Lane Group	PM Peak Hour									SAT MD Peak Hour								
		2018 No-Action			2018 With-Action			2018 Mitigation			2018 No-Action			2018 With-Action			2018 Mitigation		
		V/C Ratio	Delay sec/veh	LOS	V/C Ratio	Delay sec/veh	LOS	V/C Ratio	Delay sec/veh	LOS	V/C Ratio	Delay sec/veh	LOS	V/C Ratio	Delay sec/veh	LOS	V/C Ratio	Delay sec/veh	LOS
Broadway (N-S) @ Heyward Street (W)/ Union Avenue (E-W this intersection)	EB-LTR	0.66	40.6	D	0.72	44.7	D	0.72	44.7	D	0.30	23.2	C	0.33	23.9	C	0.33	23.9	C
	WB-LTR	0.80	50.2	D	0.82	52.3	D	0.82	52.3	D	0.55	29.9	C	0.55	29.9	C	0.55	29.9	C
	NB-LT																		
	NB-R																		
	NB-LTR	0.84	<u>33.6</u>	C	<u>0.89</u>	<u>38.7</u>	D	<u>0.89</u>	<u>38.7</u>	D	0.80	<u>24.9</u>	C	0.82	<u>26.4</u>	C	0.82	<u>26.4</u>	C
	SB-LT	<u>0.46</u>	<u>17.8</u>	B	<u>0.52</u>	<u>19.0</u>	B	<u>0.52</u>	<u>19.0</u>	B	<u>0.46</u>	14.3	B	0.48	<u>14.8</u>	B	0.48	<u>14.8</u>	B
SB-R	0.21	14.1	B	0.23	14.3	B	0.23	14.3	B	0.10	10.2	B	0.10	10.2	B	0.10	10.2	B	
Broadway (N-S) @ Gerry Street (E-W)	EB-LTR	0.37	39.8	D	0.40	40.7	D	0.40	40.7	D	0.21	21.9	C	0.25	22.4	C	0.25	22.4	C
	WB-LR	0.15	35.4	D	0.15	35.4	D	0.15	35.4	D	0.28	23.1	C	0.28	23.1	C	0.28	23.1	C
	NB-TR	0.35	<u>10.1</u>	B	0.37	<u>10.4</u>	B	0.37	<u>10.4</u>	B	0.52	<u>15.5</u>	B	<u>0.54</u>	<u>15.8</u>	B	<u>0.54</u>	<u>15.8</u>	B
	SB-LT	0.77	<u>21.6</u>	C	0.78	<u>22.3</u>	C	0.78	<u>22.3</u>	C	0.85	<u>31.6</u>	C	0.86	<u>32.6</u>	C	0.86	<u>32.6</u>	C
Broadway (N-S) @ Whipple St (E-W)	EB-LR	0.41	31.1	C	0.42	31.2	C	0.42	31.2	C	0.48	26.1	C	0.48	26.2	C	0.48	26.2	C
	NB-LT	0.49	<u>18.2</u>	B	<u>0.52</u>	18.7	B	<u>0.52</u>	18.7	B	0.65	<u>18.5</u>	B	0.66	18.7	B	0.66	18.7	B
	SB-TR	0.83	<u>32.8</u>	C	0.88	<u>38.0</u>	D	0.88	<u>38.0</u>	D	<u>0.77</u>	<u>23.8</u>	C	<u>0.80</u>	<u>25.5</u>	C	<u>0.80</u>	<u>25.5</u>	C
Throop Avenue (N) @ Flushing Avenue (E-W)/ Thorton Street (W)	EB-LT	1.12	113.8	F	1.14	118.1	F *	1.11	108.6	F	1.04	78.7	E	1.05	79.3	E	1.05	79.3	E
	WB-T (Flushing)	0.54	30.3	C	0.55	30.3	C	0.54	29.4	C	0.48	23.5	C	0.49	23.5	C	0.49	23.5	C
	WB-R (Flushing)	0.09	22.1	C	0.10	22.4	C	0.10	21.7	C	0.08	17.7	B	0.09	17.8	B	0.09	17.8	B
	NB-LTR (Throop)	0.67	45.9	D	0.69	46.8	D	0.69	46.8	D	0.46	31.4	C	0.47	31.6	C	0.47	31.6	C
	SB-TR (Thornton)	0.54	51.8	D	0.57	51.8	D	0.59	54.0	D	0.68	46.5	D	0.68	46.5	D	0.68	46.5	D
Harrison Avenue (S) @ Gerry Street (E-W)	EB-TR	0.15	26.9	C	0.31	29.8	C	0.34	33.4	C	0.12	26.5	C	0.22	28.2	C	0.22	28.2	C
	WB-LT	0.08	25.9	C	0.14	26.9	C	0.16	30.0	C	0.06	25.5	C	0.13	26.8	C	0.13	26.8	C
	SB-LTR	1.02	64.2	E	1.07	81.5	F *	1.01	60.4	E	0.48	18.2	B	0.52	19.0	B	0.52	19.0	B
Harrison Avenue (S) @ Bartlett Street (E-W)	SB-LTR	0.95	49.8	D	1.03	68.3	E *		29.1	C	0.44	18.0	B	0.51	19.5	B	0.51	19.5	B
	SB-LT						0.82	31.8	C										
	SB-R						0.18	14.2	B										
Harrison Avenue (S) @ Flushing Avenue (E-W)	EB-TR	1.00	68.6	E	1.01	70.2	E	0.94	50.6	D	0.97	52.0	D	0.98	53.9	D	0.93	42.6	D
	WB-LT	1.15	127.1	F	1.24	155.8	F *	1.16	118.9	F	1.17	126.5	F	1.22	142.8	F *	1.16	117.8	F
	SB-LTR	0.91	51.5	D	0.91	51.3	D		43.6	D	0.42	19.3	B	0.43	19.5	B	0.45	21.2	C
	SB-L						0.13	21.6	C										
	SB-TR						0.85	46.3	D										
Union Avenue (N)/ Marcy Avenue (N) @ Flushing Avenue (E-W)/ Gerry Avenue (E-W)	EB-LT	0.76	24.6	C	1.00	60.0	E *	0.93	41.6	D	0.68	16.7	B	0.75	19.4	B	0.75	19.4	B
	WB-TR	0.62	18.4	B	0.66	19.6	B	0.63	17.1	B	0.44	11.8	B	0.47	12.3	B	0.47	12.3	B
	NB-LTR	0.60	38.0	D	0.62	38.7	D	0.68	42.8	D	0.49	28.2	C	0.50	28.4	C	0.50	28.4	C
Lee Avenue (S)/ Nostrand Ave (S) @ Flushing Avenue (E-W)	EB-TR	1.09	95.1	F	1.16	123.0	F *	1.08	90.4	F	1.05	76.3	E	1.10	93.4	F *	1.03	65.5	E
	WB-LT	1.15	120.0	F	1.21	146.1	F *	1.13	110.9	F	1.17	127.7	F	1.25	159.2	F *	1.16	122.0	F
	SB-LTR	0.53	25.0	C	0.53	25.0	C	0.57	28.5	C	0.38	17.7	B	0.38	17.7	B	0.41	20.0	C

Notes:

EB - eastbound, WB - westbound, NB - northbound, SB - southbound
L-left, T-through, R-right
V/C Ratio - Volume to capacity ratio, Sec/veh - seconds per vehicle
LOS - Level of service
* Denotes a significant adverse impact based on CEQR Technical Manual criteria.
Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.3)

Broadway Triangle

Flushing Avenue at Throop Avenue/Thorton Street

As shown in Table ES-6, at this intersection it is proposed to transfer one second of green time from the southbound (Thorton Street) phase to the eastbound/westbound (Flushing Avenue) phase in the weekday AM and PM peak periods. As shown in Table ES-7, with this signal timing adjustment, the significant adverse impacts to the eastbound Flushing Avenue approach in the weekday AM and PM peak hours would be fully mitigated. In the AM peak hour, the eastbound approach would operate with 124.1 seconds of delay (LOS F) compared to 130.1 seconds of delay (LOS F) in the future condition without the Proposed Action. In the PM peak hour, the eastbound approach would operate with 108.6 seconds of delay (LOS F) compared to 113.8 seconds of delay (LOS F) in the future condition without the Proposed Action.

Harrison Avenue at Gerry Street

As shown in Table ES-6, at this intersection it is proposed to transfer four seconds of green time from the eastbound/westbound (Gerry Street) phase to the southbound (Harrison Avenue) phase in the weekday AM and PM peak periods. As shown in Table ES-7, with this signal timing adjustment, the significant adverse impacts to the southbound Harrison Avenue approach in the weekday AM and PM peak hours would be fully mitigated. The southbound approach would operate with 46.3 seconds of delay (LOS D) and 60.4 seconds of delay (LOS E) in the AM and PM peak hours, respectively, compared to 47.8 seconds of delay (LOS D) and 64.2 seconds of delay (LOS E), respectively, in the future condition without the Proposed Action.

Harrison Avenue at Bartlett Street

As shown in Table ES-6, at this intersection it is proposed to implement a no standing, 7-10 AM and 4-7 PM, Monday through Friday regulation for 100 feet along the west curb of southbound Harrison Avenue. As shown in Table ES-7, with this parking regulation adjustment, the significant adverse impacts to the southbound Harrison Avenue approach in the weekday AM and PM peak hours would be fully mitigated. The southbound approach would operate with 22.2 seconds of delay (LOS C) and 29.1 seconds of delay (LOS C) in the AM and PM peak hours, respectively, compared to 40.4 seconds of delay (LOS D) and 49.8 seconds of delay (LOS D), respectively, in the future condition without the Proposed Action.

Harrison Avenue at Flushing Avenue

As shown in Table ES-6, at this intersection it is proposed to implement a no standing 4-7 PM Monday through Friday regulation for 100 feet along the west curb of the southbound Harrison Avenue approach, and to transfer three seconds of green time from the southbound Harrison Avenue phase to the eastbound/westbound Flushing Avenue phase in the weekday AM peak period, two seconds in the midday, four seconds in the PM and two seconds in the Saturday midday peak period. As shown in Table ES-7, with these parking regulation and signal timing adjustments, the significant adverse impacts to the eastbound approach in the weekday AM peak hour and to the westbound approach in all four peak periods would be fully mitigated. The eastbound approach would operate with 52.8 seconds of delay (LOS D) in the AM compared to 62.3 seconds of delay (LOS E) in the future condition without the Proposed Action. The westbound approach would continue to operate at LOS F in all periods with 122.9, 95.9, 118.9 and 117.8 seconds of delay in the weekday AM, midday and PM and Saturday midday peak hours, respectively, compared to 129.5, 110.6, 127.1 and 126.5 seconds of delay in these periods, respectively, in the future condition without the Proposed Action.

Union Avenue/Marcy Avenue at Flushing Avenue

As shown in Table ES-6, at this intersection it is proposed to ~~re-stripe the 24' wide eastbound Flushing Avenue approach to include an exclusive left turn lane and one through lane, and to transfer one second~~ three seconds of green time from the northbound Marcy Avenue phase to the eastbound/westbound Flushing Avenue phase in the weekday AM and PM peak periods. As shown in Table ES-7, with ~~these lane striping and this~~ signal timing adjustments, the significant adverse impacts to the eastbound approach in the weekday AM and PM peak hours would be fully mitigated. The eastbound approach would operate with ~~22.4~~ 44.9 seconds of delay (LOS ~~E~~ D) in the AM and ~~23.5~~ 41.6 seconds (LOS ~~E~~ D) in the PM compared to ~~95.5~~ 46.7 seconds of delay (LOS ~~F~~ D) and ~~33.3~~ 24.6 seconds (LOS C) during these periods, respectively, in the future condition without the Proposed Action.

Lee Avenue/Nostrand Avenue at Flushing Avenue

As shown in Table ES-6, at this intersection it is proposed to transfer four seconds of green time from the southbound Lee Avenue phase to the eastbound/westbound Flushing Avenue phase in the weekday AM peak period, two seconds in the midday, four seconds in the PM and three seconds in the Saturday midday peak period. As shown in Table ES-7, with these signal timing adjustments, the significant adverse impacts to the eastbound and westbound approaches in all four peak periods would be fully mitigated. The eastbound approach would operate at LOS F in the weekday AM, midday and PM peak hours and LOS E in the Saturday midday (unchanged from the No-Action condition), with 102.4, 81.4, 90.4, and 65.5 seconds of delay during these periods, respectively, compared to 120.3, 84.0, 95.1 and 76.3 seconds of delay, respectively, in the future condition without the Proposed Action. The westbound approach would continue to operate at LOS F in all periods with 121.5, 169.1, 110.9 and 122 seconds of delay in the weekday AM, midday and PM and Saturday midday peak hours, respectively, compared to 124, 182.2, 120 and 127.7 seconds of delay in these periods, respectively, in the future condition without the Proposed Action.

TRANSIT AND PEDESTRIANS

Local Bus

As discussed in Chapter 19, "Transit and Pedestrians," the Proposed Action would result in significant adverse impacts to southbound B46 bus service in the PM peak hour in the 2018 build year. In the PM peak hour southbound B46 buses would be operating with a capacity shortfall of approximately 32 spaces, compared to a surplus of approximately 44 spaces in the future without the Proposed Action. According to current NYC Transit guidelines, increases in bus load levels to above their maximum capacity at any load point is considered a significant impact as it would necessitate the addition of more bus service along that route. As standard practice, NYC Transit routinely conducts ridership counts and adjusts bus service frequency to meet its service criteria, within fiscal and operating constraints. Therefore, no mitigation is needed for the Proposed Action.

CONSTRUCTION IMPACTS

Construction-related activities resulting from the Proposed Action are not expected to have significant adverse impacts on land use and neighborhood character, socioeconomic conditions, community facilities and services, open space, traffic and parking, air quality, noise, infrastructure, or hazardous materials conditions.

Inadvertent direct construction-related impacts could potentially occur to two (the Lincoln Savings Bank and the All Saints Church) of the State and/or National Registers of Historic Places S/NR eligible

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resources as a result of development in the Project Area. Construction activity associated with projected development sites 1 and 34 would result in potential construction-related impacts. The resource within 90 feet of projected development site 1 is the All Saints Church building, located on Throop Avenue. The resource within 90 feet of projected development site 34 is Lincoln Savings Bank which is located on Broadway.

The impacted resources would be afforded some protection from construction-related impacts under DOB regulations applicable to all buildings located adjacent to construction sites; however, since the resources are not S/NR-listed or New York City Landmarks (NYCL-designated), the resources are not afforded special protections under the New York City Department of Buildings' *Technical Policy and Procedure Notice #10/88*, (TPPN 10/88). However, the resources would be provided a measure of protection from construction as Building Code section 27-166 (C26-112.4), which requires that all lots, buildings, and service facilities adjacent to foundation and earthwork areas be protected and supported in accordance with the requirements of New York City Building Code.

Additional protective measures afforded under TPPN 10/88, which apply to designated historic resources, would not be applicable in this case, unless the eligible resources are designated in the future prior to the initiation of construction. If these resources are not designated, however, they would not be subject to the above construction protection procedures and adjacent or nearby development resulting from the Proposed Action would result in significant adverse construction-related impacts to these resources.

Possible mitigation for these impacts would be comparable to TPPN #10/88, which includes a Construction Protection Plan (CPP) submitted to LPC for review and approval prior to construction. However, as discussed in Chapter 26, "Unavoidable Adverse Impacts," these impacts would be unmitigated for privately owned development sites as no mechanism to require a CPP is currently in place for private sites, aside from the standard Building Code measures identified above.

ALTERNATIVES

A total of ~~four~~ five alternatives were assessed to determine whether they would substantively meet the stated goals and objectives of the Proposed Action while reducing or eliminating its adverse impacts:

- The No Action Alternative, which assumes that the amendments to the Broadway Triangle Urban Renewal Plan and associated zoning map amendments, zoning text amendments and disposition of City owned property would not occur.
- The No Impact Alternative, which would reduce the development density of the Proposed Action to result in no unavoidable adverse impacts to any CEQR category.
- The Lesser Density Alternative, which would reduce the development density of the Proposed Action to result in no adverse traffic and parking impacts.
- The Higher Density Alternative, which would increase the development density of the Proposed Action in response to concerns expressed during scoping by certain members of the public including the Broadway Triangle Community Coalition.
- The Additional Open Space within the Project Area Alternative, which considers comments received during the DEIS public comment period concerning additional open space.

NO-ACTION ALTERNATIVE

Consideration of the No-Action Alternative, mandated by SEQRA and CEQR, is intended to provide the lead agency with an assessment of the consequences of not selecting the Proposed Action. The No-Action Alternative has been discussed and analyzed as “Future Condition Without the Proposed Action” in the preceding chapters. In total, it is projected that 18 dwelling units, 134,260 square feet of commercial space, 83,944 square feet of retail space and 51,275 square feet of industrial floor space would be developed in the future condition without the Proposed Action. The benefits expected to result from the Proposed Action on land use, urban design, and neighborhood character would not be realized under the No-Action Alternative. In addition, the No Action Alternative would fall short of the objectives of the Proposed Action in facilitating opportunities for new residential development, including the provision of substantial amounts of affordable housing. Under the No-Action Alternative, the Project Area would be continue to be occupied by vacant land and underutilized sites. Land use would be characterized by vacant lots, light manufacturing and storage uses, some commercial redevelopment and very limited residential growth. Residential development would not be allowed as-of-right under the existing zoning districts and a substantial amount of affordable housing would not be provided. The limited amount of residential development that would occur would be through BSA variances. The observed trend of increased residential rental pressure would continue to occur in the area under the No-Action Alternative and opportunities for providing needed affordable housing would be lost.

NO IMPACT ALTERNATIVE

It is the City’s practice to include, whenever feasible, a “No Impact” alternative that avoids, without the need for mitigation, all significant adverse environmental impacts of the Proposed Action. The Proposed Action is anticipated to result in significant adverse impacts in the areas of socioeconomic conditions (indirect residential displacement), shadows, open space, traffic, transit, and construction-related impacts associated with two historic resources. To avoid the significant adverse impacts, the No Impact Alternative replaces the proposed R6A and R7A zoning districts with an R5B district, making the portion of the Project Area north of Whipple Street entirely R5B rather than a combination of R6A and R7A as under the Proposed Action. The R5B district was chosen for this alternative because it is generally consistent with surrounding zoning districts and it would allow lower maximum building heights than the R6A and R7A districts under the Proposed Action.

The lower maximum building height of the R5B district would avoid significant impacts from project-generated shadows onto the Bartlett Playground and the “Project Roots” community garden. The lower residential density and building bulk allowed under the R5B zoning district would also avoid significant open space, traffic, and transit impacts. Due to the low-rise character of the buildings expected under this alternative, no construction-related impacts would be expected. This is due to construction techniques which would generally result in less ground-borne vibration.

In terms of socioeconomic conditions, the magnitude of development associated with the Proposed Action could potentially increase rent pressures resulting in significant adverse indirect residential displacement impacts on 3,543 residents in 1,189 unprotected housing units who are vulnerable to increased rents; this is considered unlikely to occur with the No Impact Alternative. As the 640 new units (~~409~~ 433 market rate and ~~234~~ 207 affordable units) generated by this alternative would represent substantially less development than the ~~4,020~~ 1,063 (~~698~~ 693 market rate and ~~322~~ 370 affordable units) that would be created in the study area under no-action conditions, the No Impact Alternative is unlikely to have the potential to appreciably alter real estate trends. By contrast, the Proposed Action, with 1,851 units (~~946~~ 1,007 market rate and ~~905~~ 844 affordable units) would generate substantially more

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development and could potentially result in market pressure that would not occur under the No Impact Alternative.

While the No Impact Alternative eliminates the significant adverse impacts to socioeconomic conditions (indirect residential displacement), open space, shadows, traffic, transit, and construction-related impacts, such an alternative would not address the overall goals of the Proposed Action. Specifically, the mix of uses that would facilitate the development of a substantial amount of new affordable housing, local retail, and community facility space in the Project Area would not be achieved through an R5B district. Therefore, for analysis purposes the No Impact Alternative is not considered feasible and will not be analyzed further in the ~~DEIS~~ FEIS. The only feasible alternative that would avoid all significant project-generated impacts would be the No-Action Alternative.

LESSER DENSITY ALTERNATIVE

The Lesser Density Alternative is proposed for the purposes of assessing whether development in the Project Area with lower density than the Proposed Action would result in impacts substantially different from those of the Proposed Action and whether it would meet the purpose and need for the Proposed Action identified in Chapter 1, “Project Description.” The Lesser Density Alternative would result in a net increase of 1,662 dwelling units, of which ~~796~~ 750 would be affordable. This represents a decrease of 207 dwelling units (~~409~~ 94 affordable) when compared to the incremental development anticipated under the Proposed Action.

The Lesser Density Alternative replaces the proposed R7A zoning district with an R6A district, making the portion of the Project Area north of Whipple Street entirely R6A rather than being a combination of R6A and R7A. The Project Area boundary would remain the same as under the Proposed Action, however the zoning district boundary shown at Walton Street under the Proposed Action would be eliminated to create the single R6A district. Similar to the Proposed Action, the Inclusionary Housing bonus would be utilized throughout the R6A district to maximize affordable housing. It is also assumed that the disposition of City-owned property would be sought under the Lesser Density Alternative. The C2-4 commercial overlays along Throop Avenue, Harrison Avenue, Union Avenue, and Lynch Street would be maintained under this alternative, as would the C4-3 zoning district proposed for Block 2274 at the southern edge of the Project Area, generally bounded by Flushing Avenue to the south, Whipple Street to the north, and Throop Avenue to the east. The Lesser Density Alternative is expected to result in the same amount of incremental nonresidential development as the Proposed Action.

The environmental effects of the Lesser Density Alternative are summarized in more detail in Chapter 25, “Alternatives.” Overall, the Lesser Density Alternative would have similar, but slightly lesser effects on the environmental areas analyzed when compared to the Proposed Action. Like the Proposed Action, the Lesser Density Alternative would result in significant adverse impacts related to socioeconomic conditions (indirect residential displacement), shadows, open space, historic (architectural) resources, traffic, transit (bus service), and construction-related impacts (to architectural resources). The significant adverse impacts would require similar mitigation measures as the Proposed Action. Although the extent of some of the impacts for density-related areas of analysis would be less under the alternative as compared to the Proposed Action, the Lesser Density Alternative would result in approximately ~~409~~ 94 less units of affordable housing.

HIGHER DENSITY ALTERNATIVE

Compared to the Proposed Action, the Higher Density Alternative would result in five new significant adverse impacts that would otherwise not result under the Proposed Action. The new significant adverse impacts are associated with zoning, community facilities (publicly funded daycare and libraries), and

outpatient health care facilities) historic resources (contextual impacts), urban design and neighborhood character. As discussed in Chapter 25, “Alternatives”, the Higher Density Alternative would result in development at a density and scale inconsistent with existing (and proposed) development in the surrounding study areas. In addition, it would result in the same significant adverse impacts as the Proposed Action, including socioeconomic conditions (indirect residential displacement), open space, shadows, historic (architectural) resources, traffic, transit (bus) and construction-related impacts (to architectural resources).

In some areas of analysis, the alternative would exacerbate significant adverse impacts. This would occur for open space, shadows, traffic and transit (bus) impacts. Impacts for density-related areas would generally be greater under the Higher Density Alternative as compared to the Proposed Action, due to the increases in floor area and the residential population. The environmental effects of the Higher Density Alternative are summarized in more detail in Chapter 25, “Alternatives.”

With respect to traffic, the Higher Density Alternative would generally result in the same impacted intersections as under the Proposed Action; however, the alternative would result in significant adverse impacts at three new intersections and an additional impact at one intersection during peak hours not impacted under the Proposed Action. Lastly, the Higher Density Alternative would result in four unmitigated significant adverse traffic impacts, while all impacts under the Proposed Action would be mitigated with standard traffic mitigation measures such as signal timing, removal of on-street parking and lane re-striping.

The Higher Density Alternative considers a zoning proposal that would allow for higher density and bulk in the Project Area than that found under the Proposed Action. This alternative responds to concerns expressed during scoping by certain members of the public including the Broadway Triangle Community Coalition, that the Project Area should be significantly up-zoned to allow for greater density, taller buildings, and more affordable housing. In addition, comments received during scoping also called for development within the Project area to be similar to nearby NYCHA and Mitchell-Lama developments. For development comparable to nearby NYCHA and Mitchell-Lama developments to occur in the Project Area, substantial costs associated with the removal and reconstruction of streets and infrastructure would be necessary. These significant changes would be necessary to create zoning lots and development parcels large enough to accommodate the buildings and open areas that are characteristic of these types of developments. In addition, the changes could potentially result in permanent disruptions to existing traffic, transit, and pedestrian patterns and increased construction-related noise, vibration, and emissions. For these reasons, the creation of super blocks was not considered in the Higher Density Alternative. The EIS concludes that the Higher Density Alternative would result in development that would not be consistent with the density, bulk and scale of existing development found throughout the primary and secondary study areas.

The Higher Density Alternative would result in a net increase of 3,710 dwelling units, of which ~~4,818~~ 1,692 units would be affordable. The commercial and community facility development would remain the same under both the Proposed Action and the alternative. The Higher Density Alternative represents an additional 1,859 units (~~913~~ 848 of which would be affordable) when compared to the Proposed Action. The Higher Density Alternative replaces the proposed R7A zoning district with an R9A district, and the proposed R6A district with an R8A district, and maintains the same rezoning area boundaries as the Proposed Action. Similar to the Proposed Action, the Inclusionary Housing bonus would be utilized for both residential districts to maximize affordable housing. It is also assumed that the disposition of City-owned property would be sought under this alternative. The C2-4 commercial overlays along Throop Avenue, Harrison Avenue, Union Avenue, and Lynch Street would be maintained under this alternative, as would the C4-3 zoning district proposed for Block 2274 at the southern edge of the Project Area,

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generally bounded by Flushing Avenue to the south, Whipple Street to the north, and Throop Avenue to the east.

ADDITIONAL OPEN SPACE WITHIN THE PROJECT AREA ALTERNATIVE

This alternative is based on recommendations received from elected officials concerning the existing shortage of open space in the study area, which would be exacerbated in the future with an increased residential population. The alternative includes zoning map amendments, zoning text amendments, a City map amendment and generally calls for the enlargement of Bartlett Playground and more affordable housing.

The alternative calls for enlarging Bartlett Playground, which is located within the Project Area (Block 2272, Lot 13), midblock between Bartlett and Whipple Streets, by approximately 30,000 square feet (0.69 acres). The enlargement to Bartlett Playground would be provided by closing off and demapping Whipple Street and adding several, adjacent City-owned parcels (Block 2272, Lots 11,45 and p/o 46) to the park, thereby increasing the overall acreage of the open space. The demapping of Whipple Street would require an amendment to the City Map.

As a result of utilizing City-owned property (under HPD jurisdiction) for open space, no affordable housing would be developed on the adjacent City-owned lots. Under the alternative, the approximately 45 affordable units lost on Projected Development Site 5 and 6 would be made up by upzoning the midblock portion of the blockfront (Block 2269) north of Bartlett street to an R7D district, which allows greater FAR than the R7A district under the Proposed Action. The R7D district has an FAR of 5.6 with utilization of the Inclusionary Housing Bonus, which is significantly greater than the density allowed under the R7A district, which has an FAR of 4.6 with an Inclusionary Housing Bonus. Rezoning the midblock portion of the blockfront to an R7D district would require a zoning map amendment and zoning text amendment to allow for utilization of the Inclusionary Housing Bonus.

In addition, according to the recommendations, more affordable housing units could be generated throughout the Project Area by amending the zoning text to allow lower base FARs and higher bonusable FARs. The alternative would include a higher percentage of affordable housing in R7A and R6A districts and the base FAR of the R6A and R7A districts would be reduced to 2.0 from 2.7 FAR and 3.45 FAR respectively, substantially increasing the bonusable portion of floor area from 33 percent for all zoning districts to 80 percent in the R6A and 130 percent in the R7A. Lastly, the alternative calls for increasing the portion of the affordable housing floor area from 20 percent to 25 percent for R6A and 30 percent for R7A. This would require a zoning text amendment to the Inclusionary Housing Bonus (IHP) regulations.

Several of the actions described above are out of ULURP scope, including the zoning map amendment and the zoning text amendments. The R7D district proposed under the alternative would allow significantly greater density than the R7A district (therefore the zoning text changes to make the IHP applicable in the R7D district would also be out of scope). The zoning text changes to the IHP which would modify the base and bonusable FARs of the R6A and R7A districts would also be out of scope and would apply to all R6A and R7A districts mapped throughout New York City. Furthermore, the demapping of Whipple Street would also be out of ULURP scope as the Proposed Action does not include any City Map amendments.

The zoning map amendment to establish an R7D district would result in zoning which is inconsistent with surrounding zoning districts and development which, at 100 feet and an FAR of 5.6, would be taller and more dense than any developments found in the surrounding blocks. The modification to the IHP which would lower the base FAR and increase the affordable housing floor area would be inconsistent with the City's established policies concerning zoning incentives for the provision of affordable housing. The

densities and FARs established in the IHP have been designed to create a powerful incentive for the provision of affordable housing. The alternative could potentially result in the provision of less affordable housing if developers choose not to utilize the bonus. The existing base and bonus FARs included under the IHP have been shown to work throughout New York City, and thousands of affordable units have been constructed in other neighborhoods including Community District 1 in Brooklyn. The IHP has been carefully calibrated to provide an incentive that maximizes the provision of permanently-affordable housing. The program has citywide applicability and is maintained in accordance with a consistent set of well established rules administered HPD.

The demapping of Whipple Street between Flushing and Throop Avenues would create a superblock and could potentially result in disruptions to traffic and increased costs associated with the removal and reconstruction/reconfiguration of infrastructure within the bed of Whipple Street.

If the additional 30,000 square feet (or 0.69 acres) of open space created by expanding the Bartlett Playground was to be programmed as passive open space, the expansion would fully mitigate the significant adverse impacts to passive open space that would result from the increases in population under the Proposed Action. However, even if the entire 0.69 acres was to be programmed for active open space, there would still be a deficiency in active open space under this alternative, and like the Proposed Action, significant adverse impacts to active open space would remain.

The use of City-owned property adjacent to the Bartlett Playground for open space is not the most efficient use of the property. HPD is charged with the task of developing and preserving affordable housing throughout New York City, and the use of City-owned land to facilitate the provision of affordable housing is one of its key strategies. The size and shape of the parcels, combined with the potential for assemblages with adjacent private lots, makes these sites well-suited for the development of multi-family residential buildings. For all the reasons described above, the alternative is inconsistent with the goals and objectives of the Proposed Action and further assessment of the alternative is not warranted.

UNAVOIDABLE ADVERSE IMPACTS

Most of the potential significant adverse impacts of the Proposed Action could be avoided or mitigated by implementing a broad range of measures. However, there are a number of significant adverse impacts for which there are no reasonably practical mitigation measures or reasonable alternatives that would eliminate the impacts and meet the purpose and need of the proposed action. These include unavoidable adverse impacts related in the areas of open space, shadows, historic (architectural) resources, and construction-related impacts (to architectural resources).

OPEN SPACE

As described in Chapter 6, “Open Space,” the Proposed Action would result in a significant adverse impact to open space. With the Proposed Action, the population of the open space study area would increase by 5,516 residents, from 92,120 to 97,636. The amount of public open space would remain the same, with 33.99 total acres of public open space, consisting of 27.41 acres of active open space and 6.58 acres of passive open space. In the future with the Proposed Action, open space ratios in the open space ratio would decrease by approximately 5.6 percent as compared to the future without the Proposed Action. The private recreational space created under the *Quality Housing Program* for all action-generated residential units in the future with the Proposed Action would contribute to alleviating some of the shortage of open space in the study area. In addition, there are several large open space resources just outside the study area and bike lanes on existing roadways in the area which would also partially alleviate the shortage of open space for new residents of the study area proposed action. However, the decrease in open space ratio would exceed the 5 percent threshold for possible impacts, In light of the very low open

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space ratios for both passive and active recreation in the study area under No-Action conditions and worsening that would occur with the Proposed Action, there would be a significant adverse open space impact.

~~Possible measures to mitigate significant adverse quantitative open space impacts are discussed in Chapter 24 “Mitigation.” HPD will explore the feasibility of implementing mitigation measures between the Draft and Final EIS and will coordinate this effort with relevant public agencies and other parties as necessary and appropriate. In the event that no mitigation measures are found feasible or practicable, the quantitative open space impact would remain unmitigated.~~

As discussed in Chapter 24 “Mitigation,” HPD has considered the following measures to mitigate the significant adverse quantitative open space impacts: may include:

- The creation of new open space within the open space study area; or
- The enhancement and improvement of existing open spaces within the open space study area.

HPD has identified partial mitigation for the shortfall in passive open space. In order to partially mitigate the significant adverse open space impact, a new open space would be created within the open space study area at the junction of Beaver Street and Bushwick Avenue within the West Bushwick URA. The open space mitigation site is also known as URA Site 8 (Block 3137, Lots 1, 6, 9 and 11). The site is approximately 18,000 square feet and is City-owned (under HPD jurisdiction). As discussed in Chapter 24 “Mitigation”, HPD would transfer jurisdiction of the site to the Department of Parks and Recreation (DPR), which would create and maintain the site as passive open space. The creation of new passive open space would mitigate the passive open space impact; however, the study area would continue to be underserved by active open space. Furthermore, due to the absence of available funding, enhancements and/or improvements to existing open spaces in the open space study area is not considered feasible and no commitments can be made at this time. As a result, significant adverse impacts related to active open space would remain unmitigated.

SHADOWS

As discussed in Chapter 7, “Shadows,” the Proposed Action has the potential to result in significant adverse impacts due to shadows cast on the Bartlett Playground and the “Project Roots” Community Garden.

Bartlett Playground

Bartlett Playground, located along the south side of Bartlett Street, would receive significant incremental shadow coverage resulting from the future condition with the Proposed Action, specifically from future development at projected development sites 5 and 6. Sun sensitive resources located within the playground include deciduous trees, playground facilities, spray showers, benches and basketball courts. The duration of the shadow coverage over the four analysis periods (6 ¼ to 11 ¼ hours) would reduce the exposure of vegetation to sunlight to 3 hours on May 6th and 4 hours and 35 minutes on June 21st. While the reduction in sunlight exposure as a result of the Proposed Action would not significantly affect active recreation areas within the playground such as basketball courts, the lack of sunlight on the Bartlett Playground is a significant adverse impact during the May 6th analysis period because the resource would receive less than the minimum required for its vegetative cover and trees during part of the growing season.

~~Possible measures to mitigate significant adverse shadows impacts are discussed in Chapter 24 “Mitigation.” HPD will explore the feasibility of implementing mitigation measures between the Draft~~

~~and Final EIS and will coordinate this effort with relevant public agencies and other parties as necessary and appropriate. In the event that no mitigation measures are found feasible or practicable, the shadows impacts would remain unmitigated.~~

HPD, in consultation with DPR, considered the following measures to mitigate significant adverse shadow impacts on the Bartlett Playground:

- Eliminating projected development sites 5 and 6 (the sites creating the shadow impact);
- reducing the height of buildings causing the shadow impact; or
- choosing shade tolerant species for vegetation to be planted in areas that would be in shadow.

HPD explored the aforementioned measures and has determined that the measures are not feasible. Therefore, as described in Chapter 24 “Mitigation”, the significant adverse shadow impacts to the Bartlett Playground would remain unmitigated.

“Project Roots” Community Garden

The “Project Roots” Community Garden is located along the south side of Walton Street. Incremental shadows, as a result of the Proposed Action, would primarily result from development on projected development site 24, where a distinctly taller building (80 feet in height) is projected. The duration of the shadow coverage over the four analysis periods (6 ¼ hours to 12 hours) would significantly reduce the exposure of vegetation (including the greenhouse) to sunlight and diminish the attractiveness of the open space and utility of the greenhouse.

~~Possible measures to mitigate significant adverse shadows impacts are discussed in Chapter 24 “Mitigation.” HPD will explore the feasibility of implementing mitigation measures between the Draft and Final EIS and will coordinate this effort with relevant public agencies and other parties as necessary and appropriate. In the event that no mitigation measures are found feasible or practicable, the shadows impacts would remain unmitigated.~~

HPD, in consultation with DPR, considered the following measures to mitigate significant adverse shadow impacts on the “Project Roots” Community Garden:

- Eliminating projected development site 24 (the site creating the shadow impact);
- reducing the height of buildings causing the shadow impact;
- choosing shade tolerant species for vegetation to be planted in areas that would be in shadow; or
- realignment or relocation of the greenhouse to another area of the garden.

HPD explored the aforementioned measures and has determined that the measures are not feasible. Therefore, as described in Chapter 24 “Mitigation”, the significant adverse shadow impacts to the “Project Roots” Community Garden would remain unmitigated.

HISTORIC RESOURCES

As discussed in Chapter 8, “Historic Resources,” the Proposed Action would not result in significant impacts to archaeological resources but would result in unmitigated construction-related impacts to two historic (architectural) resources, as discussed below.

CONSTRUCTION IMPACTS

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Inadvertent direct construction-related damage could potentially occur to two (the Lincoln Savings Bank and the All Saints Church) of the S/NR eligible historic resources as a result of development in the Project Area. Construction activity associated with projected development sites 1 and 34 would result in potential construction-related impacts. The resource within 90 feet of projected development site 1 is the All Saints Church building, located on Throop Avenue. The resource within 90 feet of projected development site 34 is Lincoln Savings Bank which is located on Broadway.

These impacts would be unavoidable and remain unmitigated for privately owned development sites as no mechanism to require a Construction Protection Plan (CPP) is currently in place for private sites, aside from the standard Building Code measures.

GROWTH INDUCING ASPECTS OF THE PROPOSED ACTION

According to the *CEQR Technical Manual*, a proposed action's growth-inducing aspects chiefly refer to secondary or indirect impacts that could result in additional development. Projects or actions that result in substantially different land use in an area, or substantial new residents or employees coming to an area could induce additional similar development or of support uses.

This EIS evaluates the potential environmental effects of the anticipated changes in land use. While the Proposed Action would result in more intensive land uses and generate new residents, employees and visitors; it is not anticipated that this growth would spill over into adjacent neighborhoods or cause indirect effects in nearby areas that would result in substantial new development.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Under the Proposed Action, both natural and man-made resources would be expended in the construction, renovation, reuse, and operation on development sites within the Project Area. These resources include vegetation removed from sites without being replaced; construction materials; energy consumed during construction and operation of buildings; fossil fuels used in motor vehicle and construction equipment operation; the human effort required to develop, construct, renovate, and operate various elements of projected and potential developments and the capital investment and operating funds necessary for building design, construction and operation. These are considered irretrievably committed because once used they can not be recovered. These resources, however, are not considered to be in limited supply, and their use by the Proposed Action would not adversely impact the availability of such resources for other projects in the city, both now and in the future.

The construction projected under the Proposed Action would also require the irreversible and irretrievable commitment of energy, construction materials, human effort, and funds. The Proposed Action would also result in the increased consumption of energy. This, however, is not significant energy consumption or a significant adverse impact.