DRAFT SCOPE OF WORK FOR AN ENVIRONMENTAL IMPACT STATEMENT FOR THE BLOCK 675 EAST

A. INTRODUCTION

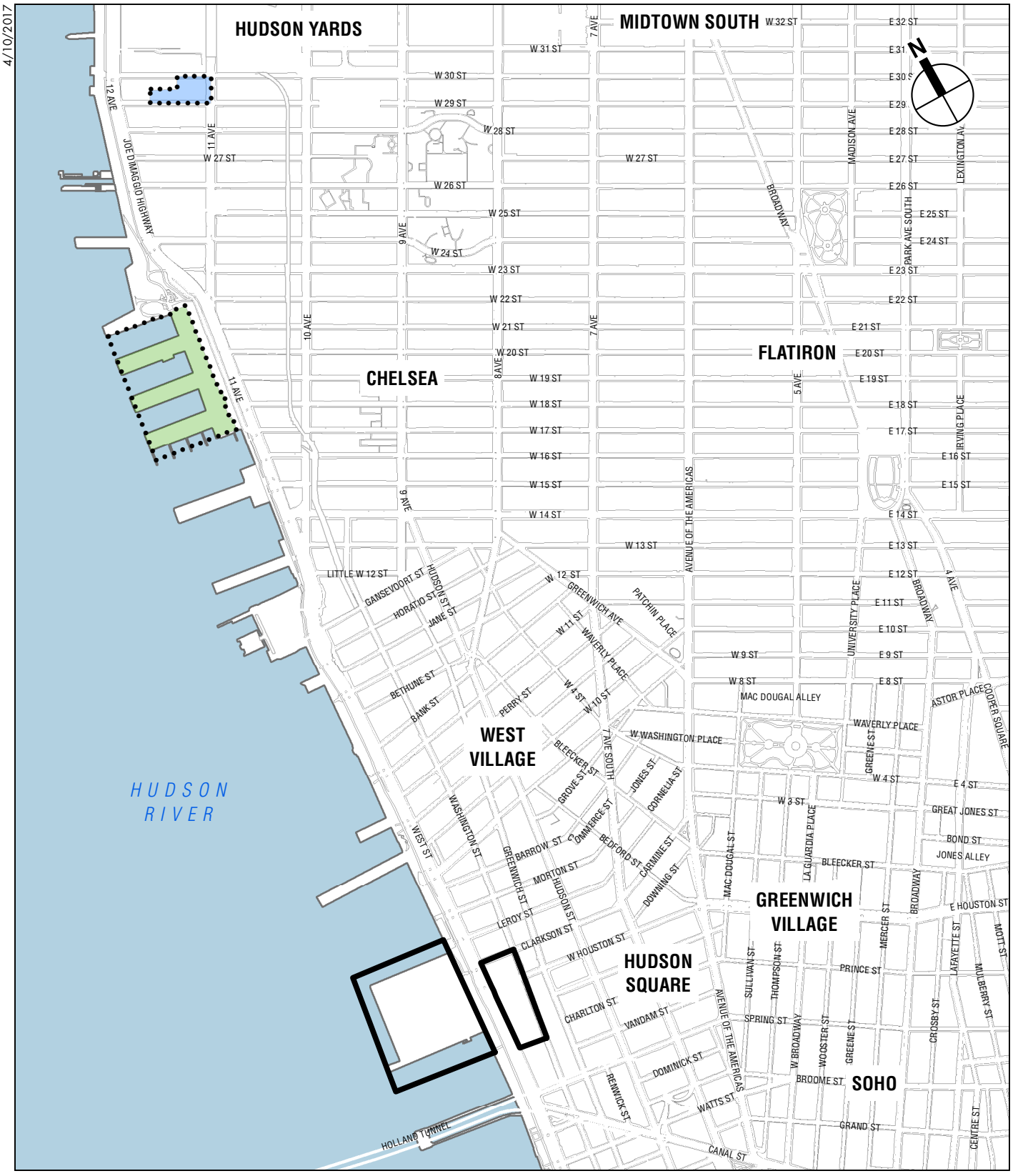
This Draft Scope of Work outlines the technical areas to be analyzed in the preparation of an Environmental Impact Statement (EIS) for the proposed rezoning of the eastern end of Block 675 and additional land use actions necessary for the development of two new mixed-use buildings. The two applicants—DD West 29th Street LLC (Applicant A) and West 30th Street LLC (Applicant B)—are requesting discretionary actions to facilitate the redevelopment of two project sites in the West Chelsea neighborhood of Manhattan Community District 4 (see **Figure 1**). The two project sites (project site A—601 West 29th Street and project site B—606 West 30th Street) are located on Block 675, Lots 12, 29, 36, and 39 bounded by West 29th and West 30th Streets, Route 9A/Twelfth and Eleventh Avenues (see **Figure 2**). The project area includes the two project sites as well as an intervening lot (Lot 38), which is not part of either project site. The two project sites and Lot 38 would be rezoned and included in the Special Hudson River Park District.

The two projects will be considered together for the purposes of environmental review due to their adjacency, similarity of the land use actions being proposed, and concurrent development schedules. As such, the potential environmental impacts of the two projects will be considered cumulatively.

The New York City Department of City Planning (DCP), acting on behalf of the City Planning Commission (CPC), will be the lead agency for the environmental review. The Hudson River Park Trust (HRPT) will be an involved agency. Based on the Environmental Assessment Statement (EAS) that has been prepared, the lead agency has determined that the proposed actions have the potential to result in significant adverse environmental impacts, requiring that an EIS be prepared. Scoping is the first step in the preparation of the EIS and provides an early opportunity for the public and other agencies to be involved in the EIS process. It is intended to determine the range of issues and considerations to be evaluated in the EIS. This Draft Scope of Work includes a description of the proposed developments and the actions necessary for their implementation, presents the proposed framework for the EIS analysis, and discusses the procedures to be followed in the preparation of the Draft EIS (DEIS). The 2014 *City Environmental Quality Review (CEQR) Technical Manual* will serve as a general guide on the methodologies and impact criteria for evaluating the proposed actions' effects on the various areas of environmental analysis.

The proposed actions, which are described more fully below include zoning text amendments to Article VIII Chapter 9 of the Zoning Resolution (Special Hudson River Park District), amendments to Appendix F of the Zoning Resolution, and special permits pursuant to Section 89-21 of the Special Hudson River Park District. The applicants are also seeking zoning map amendments to rezone an area on the eastern end of Block 675 (i.e. the project area) from an M2-3 manufacturing district to a C6-4X commercial district, which would permit residential,

4/10/2017



Project Area/Proposed Receiving Sites

Proposed Granting Site

Existing Special Hudson River Park District

Proposed Special Hudson River Park District

BLOCK 675 EAST

Project Location

Figure 1



BLOCK 675 EAST

Project Sites
Figure 2

community facility, and local retail and service uses as well as increased density subject to the Special Hudson River Park District regulations (see **Figures 3 and 4**). The project area includes the two project sites as well as an intervening lot (Lot 38), which is not part of either project site. In addition to the project area, the affected area includes a portion of Hudson River Park, which is the granting site for the transfer of floor area to the project sites; the granting site as well as the receiving sites would be mapped as part of the Special Hudson River Park District. The proposed projects will require Chairperson certifications pursuant to Zoning Resolution Section 89-21 of the Special Hudson River Park District to allow building permits to be issued, on the basis that the applicants and HRPT have agreed on payment terms for the proposed transfer of development rights.

With the proposed actions, project site A would be redeveloped with up to 960,000 gross square feet (gsf) in a mixed use residential and commercial building. Project site B would be developed with up to 229,157 gsf in a mixed use residential and commercial building. Both projects are expected to be complete in 2021.

B. AREA AFFECTED BY THE PROPOSED ACTIONS

PROJECT AREA

The project area consists of project site A (Block 675, Lots 12, 29, and 36), project site B (Block 675, Lot 39), as well as Lot 38. These lots are divided between two project sites and an intervening lot which is part of neither project site (see **Figures 2 and 5**). The two project sites and Lot 38 would be rezoned and included in the Special Hudson River Park District, eligible to become receiving sites for development rights from HRPT pursuant to the special district regulations. As described in detail below, inclusion in the special district alone does not enable the transfer of development rights from Hudson River Park to these sites. The applicants of project site A and project site B would individually seek special permits pursuant to the special district regulations to transfer floor area from Hudson River Park to project site A and project site B.

PROJECT SITE A

Project site A is composed of Lots 12, 29, and 36 which front West 29th Street and Eleventh Avenue. The three tax lots are under the common ownership of Westside 11th and 29th LLC. Pursuant to an agreement between the property owner and Applicant A, Applicant A will enter into a 99-year ground lease for the project site A at the time of the rezoning.

The Port Authority of New York and New Jersey (PANYNJ) has a temporary surface easement for the western 210 feet of Lot 12 for the sole purpose of staging for the Access to the Region's Core (ARC) project. While that specific project has since been abandoned, PANYNJ, NJ TRANSIT and Amtrak recently announced plans for the Hudson Tunnel Project to reinforce the Northeast Corridor's Hudson River rail crossing by constructing a new tunnel under the Hudson River that will connect to Pennsylvania Station. The agencies, with the Federal Railroad Administration, are coordinating preparation of an EIS pursuant to the National Environmental Policy Act (NEPA). The Tunnel project schedule calls for issuance of a DEIS in 2017, start of construction in 2019, and completion of the project in 2026. As part of the Hudson Tunnel Project, the new tunnel would cross under Block 675, Lot 1 (not on the project area) and include a ventilation structure on the west end of the project block. It is possible that, in addition to the ventilation structure, Lot 1 would be developed in the future; however, development plans for the lot are not known at this time.



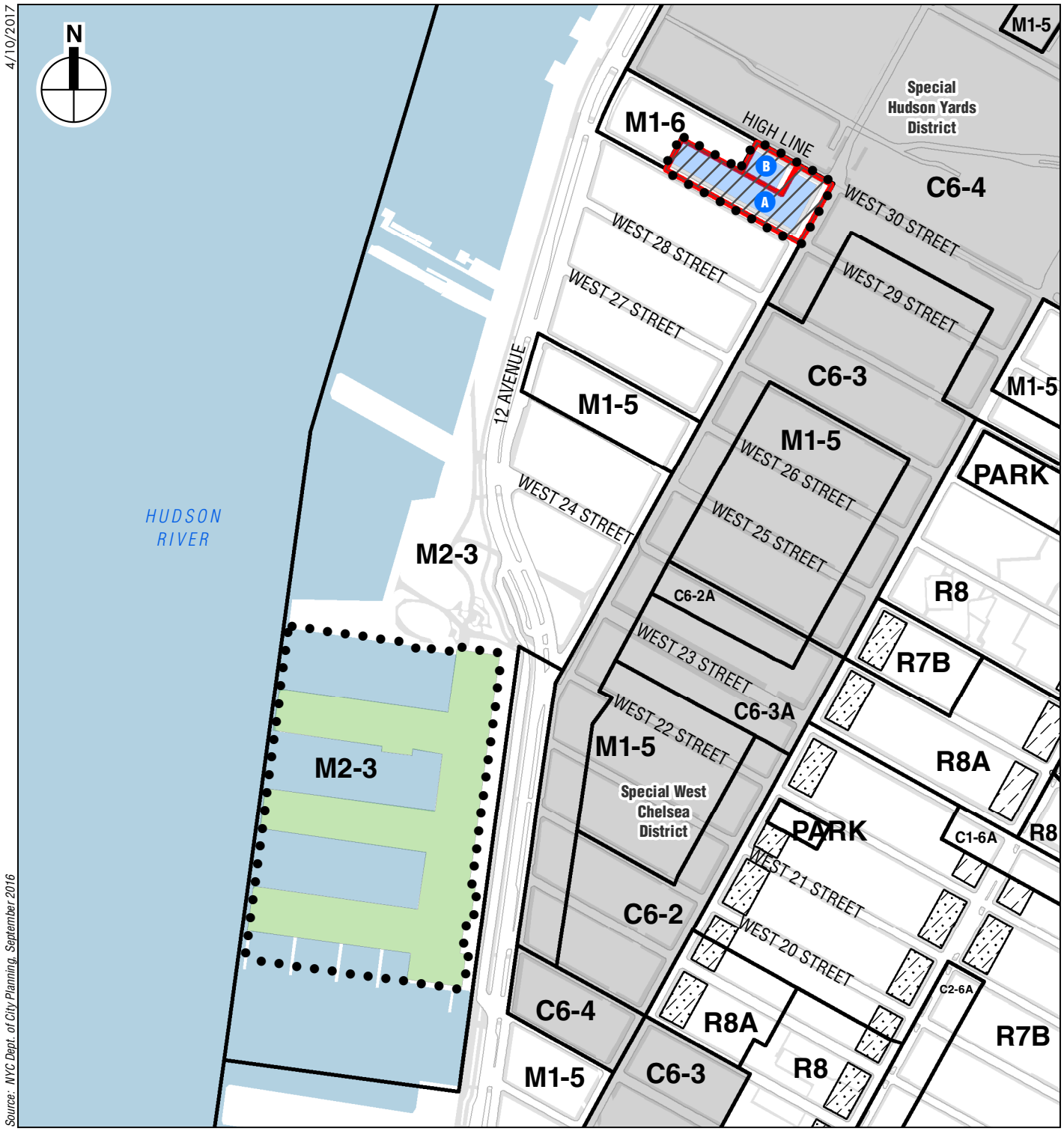
A Project Sites
Granting Site
Zoning Districts
C1-5 Commercial Overlay District
C2-5 Commercial Overlay District
Special Purpose District

Project Area
Receiving Sites

0 500 FEET

BLOCK 675 EAST

Existing Zoning
Figure 3



A Project Sites
Granting Site
Proposed C6-4X
Zoning Districts
C1-5 Commercial Overlay District
C2-5 Commercial Overlay District
Special Purpose District

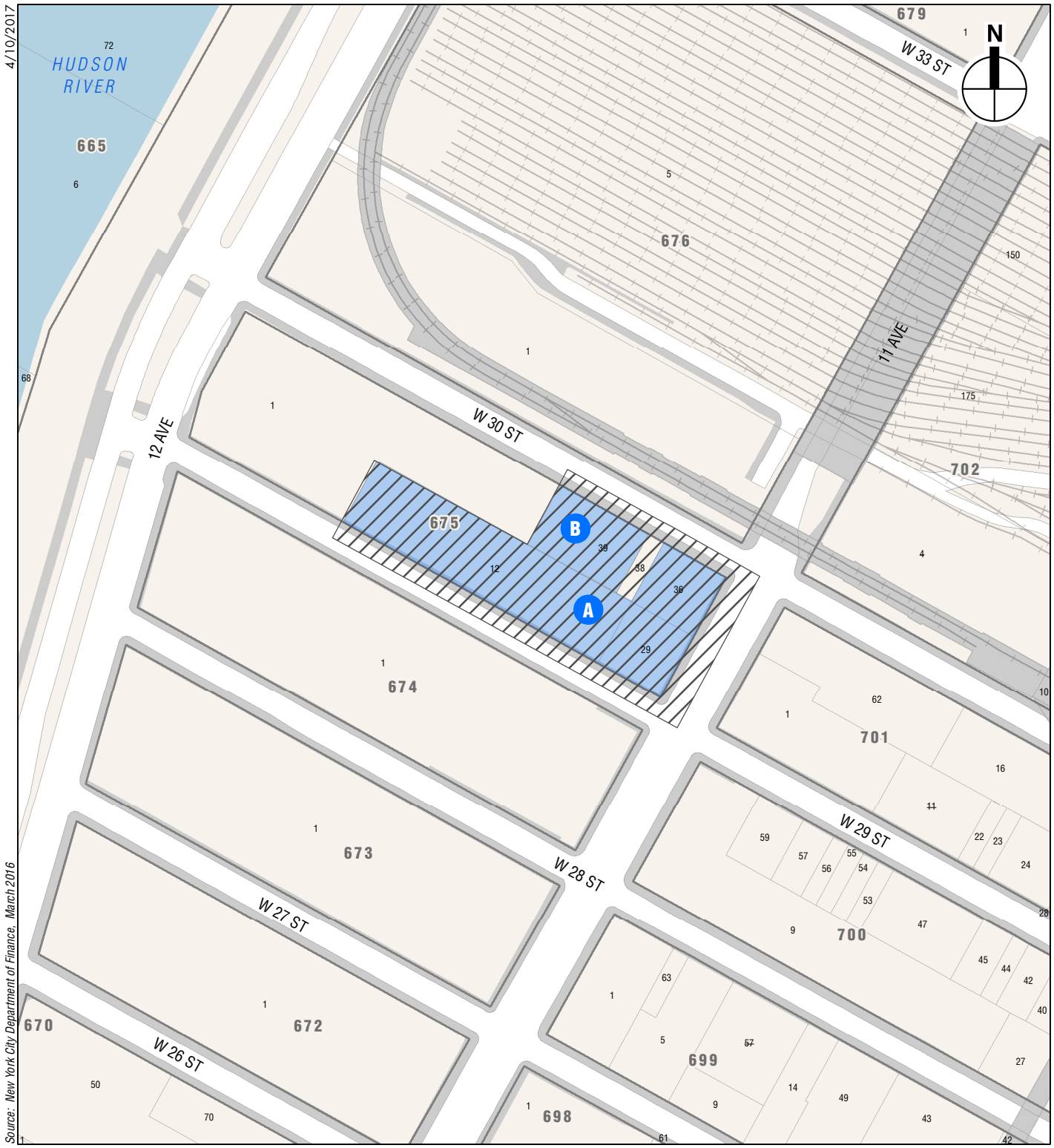
Project Area
Receiving Sites

Proposed Special Hudson River Park District

0 500 FEET

BLOCK 675 EAST

Proposed Zoning
Figure 4



BLOCK 675 EAST

Project/Receiving Sites Tax Map
Figure 5

As described in greater detail below, a portion of project site A may be used for temporary construction staging and discussions between Applicant A and the rail agencies are ongoing.

The tax lots, which will be merged into a single tax lot for development, have a combined lot area of approximately 61,719 square feet. While a maximum of 2.0 FAR is permitted in M2-3 districts, project site A is currently improved with only 0.82 FAR (a total of 50,692 gsf). Block 675, Lot 12 is currently improved with 0.95 FAR (a total of 40,050 gsf). Block 675, Lot 29 is currently improved with 0.97 FAR (9,586 gsf). Block 675, Lot 36 is improved with 0.11 FAR (1,056 gsf). Project site A currently contains:

- A Mobil Gas station and minimart at 309 Eleventh Avenue (the corner of West 30th Street and Eleventh Avenue). The gas station includes a 1,056 gsf building on a 9,875 sf lot (Lot 36).
- A center of operations for the American artist Jeff Koons, who is known for his oversized sculptures of balloon animals, at 609, 603, and 601 West 29th Street (portion of Lot 12 and Lot 29). The Koons facility operates within a single-story garage with frontage on West 29th Street (Lot 29), a four-story loft building (portion of Lot 12), as well as a two-story art studio space. The Koons studio employs approximately 150 people as painters, sculptors, digital artists, and administrators in a total of 43,859 gsf of space.
- A New York Department of Sanitation (DSNY) facility at 613 West 29th Street (portion of Lot 12). The DSNY facility includes a two-story office building totaling 11,950 gsf and is used as an office and worker lounge. DSNY has plans to vacate the property and is currently constructing a replacement facility.
- A PANYNJ lot at 615 West 29th Street (portion of Lot 12). PANYNJ uses this lot for security and office functions as well as vehicle parking.

PROJECT SITE B

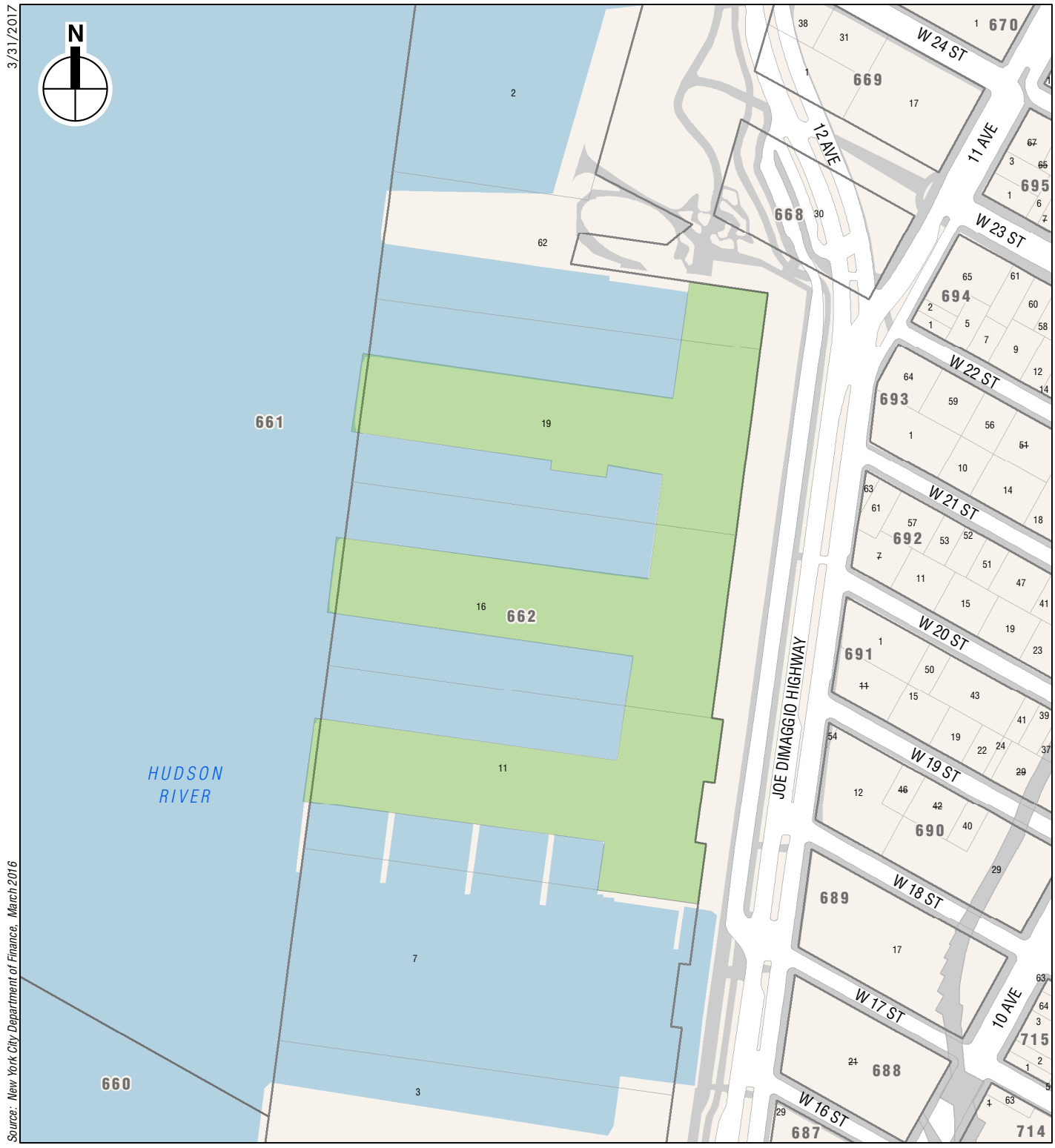
Project site B is Lot 39, and it fronts on West 30th Street. It is 14,812 sf in size and currently developed with a one-story (33 feet tall), approximately 16,052 gsf building used for vehicle storage/maintenance.

LOT 38

Lot 38 fronts on West 30th Street and has a total area of approximately 2,468 sf. It is occupied by a single-story building housing an auto repair shop. Lot 38 would be rezoned and included in the Special Hudson River Park District along with the surrounding lots. No development is proposed for this site at this time.

GRANTING SITE

The Hudson River Park Trust has identified portions of the property known as Chelsea Piers as the granting site. Pursuant to the Act, Chelsea Piers includes Piers 59, 60 and 61 and the headhouse. The Act defines this area as a "park/commercial use." As such, it is eligible to transfer unused floor area subject to local zoning. Even though the zoning lots include zoned water areas not occupied by piers, pursuant to the Act, such water areas would not be eligible to generate transferable floor area. It is expected that the granting site zoning lot would include portions of tax Block 662, Lots 11, 16, 19, and part of 62, as shown on **Figure 6**.



BLOCK 675 EAST

Granting Site Tax Map
Figure 6

C. BACKGROUND—HUDSON RIVER PARK ACT AND SPECIAL HUDSON RIVER PARK DISTRICT

The Hudson River Park Act created the Park in 1998 and established HRPT to continue the planning, construction, management, and operation of the Park. The Hudson River Park Act noted that the establishment of the Park was intended to enhance and protect the natural, cultural, and historic aspects of the Hudson River; provide and enhance public access to the River; allow for an array of cultural and recreational programs; and provide numerous other public benefits.

The Hudson River Park Act designated certain areas for commercial development that would generate revenue to support the operations of the Park. In 2013, Governor Andrew M. Cuomo signed an amendment to the Hudson River Park Act in to law to help the Park address its ongoing financial constraints. Under the amended Act, HRPT can sell development rights for projects up to one block east of the park's boundaries, across West Street. However, the transfer of development rights required supporting provisions in the City's Zoning Resolution.

In 2016, CPC and the New York City Council adopted a zoning change to establish the Special Hudson River Park District in the Zoning Resolution and approved private applications pursuant to the special district provisions to transfer unused development rights from Pier 40 (granting site) to 550 Washington Street (receiving site). The intent of the special district is to facilitate the repair, rehabilitation, maintenance and development of the Hudson River Park through the transfer of development rights within the Special Hudson River Park District, as well as to promote appropriate uses on the receiving sites that complement the Park and serve residents of varied income levels, to the extent residential use is included.

D. PURPOSE AND NEED

The applicants intend to enable the transformation of the eastern portion of an underutilized block into a vibrant mixed-use area. The applicants believe that the proposed developments would contribute to the vitality of the surrounding Chelsea and Hudson Yards neighborhoods, and provide housing for residents of varied incomes. The transfer of floor area to the project sites would support significant improvements to Hudson River Park, a critical asset and an important amenity for neighborhoods in the surrounding area and beyond.

HUDSON RIVER PARK IMPROVEMENTS

There are a number of incomplete park areas within the Community Board 4 area of Hudson River Park. The Trust has committed to work with Community Board 4 to prioritize improvements that could be funded by the transfer. Options include:

UPLAND PARK BETWEEN 29TH TO 35TH STREETS

The area opposite Hudson Yards is among the least improved in the entire Park; an upgrade from existing conditions would provide immediate benefit to Park patrons and the neighboring community.

UPLAND PARK BETWEEN WEST 39TH TO WEST 44TH STREETS

The area centers at the foot of 42nd Street and is one of the Park's busiest sections and includes or is in proximity to numerous tourist and commuter oriented commercial activities such as the Pier 79 ferry terminal, Circle-Line tours, World Yacht cruises, public Pier 84, and the Intrepid

Sea, Air and Space Museum. An improved waterside esplanade is needed to link the various activity nodes in this area of the Park.

PIER 97 UPLAND PARK & PARK BUILDING AT WEST 57TH STREET

The Park's northernmost public open pier, Pier 97, is slated to become a public recreation space that will serve the expanding residential neighborhood of West Clinton. The Trust has completed the piles and structural deck; however the pier finishes and upland area remain incomplete and unfunded.

PEDESTRIAN PLATFORM BETWEEN WEST 57TH AND WEST 58TH STREETS

At the northernmost edge of the Park, plans call for a new over-water pedestrian platform and related upland park construction to improve circulation and safety between West 57th and West 58th Streets.

In addition, the Trust has stated that it intends to set aside 20 percent of the total value of the transfers for future capital maintenance needs. These funds would be for capital maintenance and reconstruction of park areas such as: pile repairs, dock repairs, bulkhead repairs, playgrounds, paving, landscaping, lighting and utility repairs or replacement, roof or other structural repairs and replacements at park buildings (as opposed to park/commercial buildings as defined in the Act), or other capitally eligible park items.

PROJECT AREA

The proposed actions are intended to transform the project sites from, in the applicants' opinion, underutilized properties that detract from the surrounding area into a vibrant, mixed-use development with much-needed market-rate and affordable housing, a potential Fire Department of the City of New York (FDNY) Emergency Medical Services (EMS) station, and retail uses that are suited to the needs of the neighborhood.

To allow and support the proposed redevelopment of the project sites, the applicants are seeking to rezone the eastern end of Block 675 to a C6-4X commercial district. The proposed C6-4X zoning is needed because M2-3 zoning districts do not allow residential use. The proposed C6-4X zoning district would permit a wider range of land uses appropriate for the area including a range of commercial uses, as well as residential and community facility uses. The proposed actions would also allow participation in the Mandatory Inclusionary Housing (MIH) program to promote the development of permanently affordable housing to ensure that the neighborhood continues to serve diverse housing needs.

The massing for the two project sites has been developed to be responsive to a series of neighborhood and site conditions. The bulk serves to mediate transitions between the vastly different scales of the Hudson Yards development immediately to the north, the West Chelsea neighborhood to the east and south, and the large scale industrial and converted-industrial blocks due south. Consistent with zoning and land use patterns throughout the city, the planning rationale for the project area concentrates bulk along the avenue (project site A along Eleventh Avenue) with less bulk at the mid-block (project site A on West 29th Street and project site B on West 30th Street). The design of the two projects takes into consideration the High Line across West 30th Street. For example, on project site A, the western portion of the 30th Street streetwall would drop to create a terrace at the height of the High Line and on project site B, there would be a restaurant with an open air terrace to provide visual interaction with the adjacent High Line.

E. PROPOSED ACTIONS

The applicants are proposing the following actions in order to facilitate the development of the two proposed projects.

ACTIONS REQUIRED FOR PROJECT SITE A

- Zoning text amendment to modify the Appendix to the Special Hudson River Park District regulations (Zoning Resolution Section 89-00 et seq.) to define a portion of Piers 59, 60 and 61 and the headhouse in Hudson River Park as the "granting site" and project site A as the "receiving site" in the special district (see **Figure 1**).
- Zoning text amendment to Appendix F of the Zoning Resolution to map a MIH designated area on project site A (see **Figure 1**).
- Zoning text amendment to Zoning Resolution Section 89-10 of the Special Hudson River Park District to modify the bulk regulations of the underlying C6-4X District.
- Zoning map amendment to rezone project site A from an M2-3 manufacturing zoning district to a C6-4X commercial zoning district, which would permit residential, community facility, and local retail and service uses and increased density (see **Figures 3 and 4**). Under the special district regulations, the uses and increased density permitted by the proposed C6-4X zoning district would not be applicable to the project site absent the grant of the special permit pursuant to ZR Section 89-21 of the Special Hudson River Park District.
- Special permit pursuant to Zoning Resolution Section 89-21 of the Special Hudson River Park District to permit the transfer of 123,437.5 square feet of unused development rights from the granting site to project site A, and to permit certain bulk waivers on project site A.
- Chairperson's certification pursuant to Zoning Resolution Section 89-21 of the Special Hudson River Park District to allow a building permit for project site A to be issued, on the basis that Applicant A and HRPT have agreed on payment terms for the proposed transfer of development rights.

It is expected that there will be a Restrictive Declaration in connection with the proposed project, which would govern the proposed project's development.

In addition, the development on project site A also requires an action by HRPT. HRPT must conduct a Significant Action process as required by the Hudson River Park Act, Chapter 592 of the Laws of 1998 ("the Act") before its Board of Directors can approve the proposed transfer of development rights. Further, before the Board can approve the sale, it must also comply with SEQRA and adopt SEQRA Findings.

Independent of the proposed actions described above, there may also be site selection of an FDNY EMS station by FDNY and the New York City Department of Citywide Administrative Services (DCAS).

ACTIONS REQUIRED FOR PROJECT SITE B

- Zoning text amendment to create a Map in the Appendix to the Special Hudson River Park District regulations (ZR Section 89-00 et seq.) to define a portion of Piers 59, 60 and 61 and the headhouse in Hudson River Park as the "granting site," and project site B and Lot 38 as the "receiving site" in the special district.
- Zoning text amendment to Appendix F of the Zoning Resolution to map an MIH designated area on project site B.

- Zoning text amendment to Zoning Resolution Section 89-10 of the Special Hudson River Park District to modify the bulk regulations of the underlying C6-4X District.
- Zoning map amendment to rezone project site B from an M3-2 manufacturing zoning district to a C6-4X commercial zoning district, which would permit residential, community facility, and local retail and service uses and increased density. Under the special district regulations, the uses and increased density permitted by the proposed C6-4X zoning district would not be applicable to the project site absent the grant of the special permit pursuant to ZR Section 89-21 of the Special Hudson River Park District.
- Special permit pursuant to ZR Section 89-21 of the Special Hudson River Park District to permit the transfer of 29,625 square feet of unused development rights from the granting site to project site B and to permit certain bulk and use waivers on project site B, which are being developed.
- Chairperson's certification pursuant to ZR Section 89-21 of the Special Hudson River Park District to allow a building permit for project site B to be issued, on the basis that Applicant B and HRPT have agreed on payment terms for the proposed transfer of development rights.

It is expected that there will be a Restrictive Declaration in connection with the proposed project, which would govern the proposed project's development.

In addition, the development on project site B requires an action by HRPT. HRPT must conduct a Significant Action process as required by the Hudson River Park Act, Chapter 592 of the Laws of 1998 (the "Act") before its Board of Directors can approve the proposed transfer of development rights. Further, before the Board can approve the sale, it must also comply with SEQRA and adopt SEQRA Findings.

ACTIONS APPLICABLE TO LOT 38

As part of the actions proposed by Applicant B, Lot 38 would be rezoned to C6-4X and included in the Special Hudson River Park District along with the surrounding lots. No development is proposed for this site and no floor area is proposed to be transferred from Hudson River Park to this site at this time.

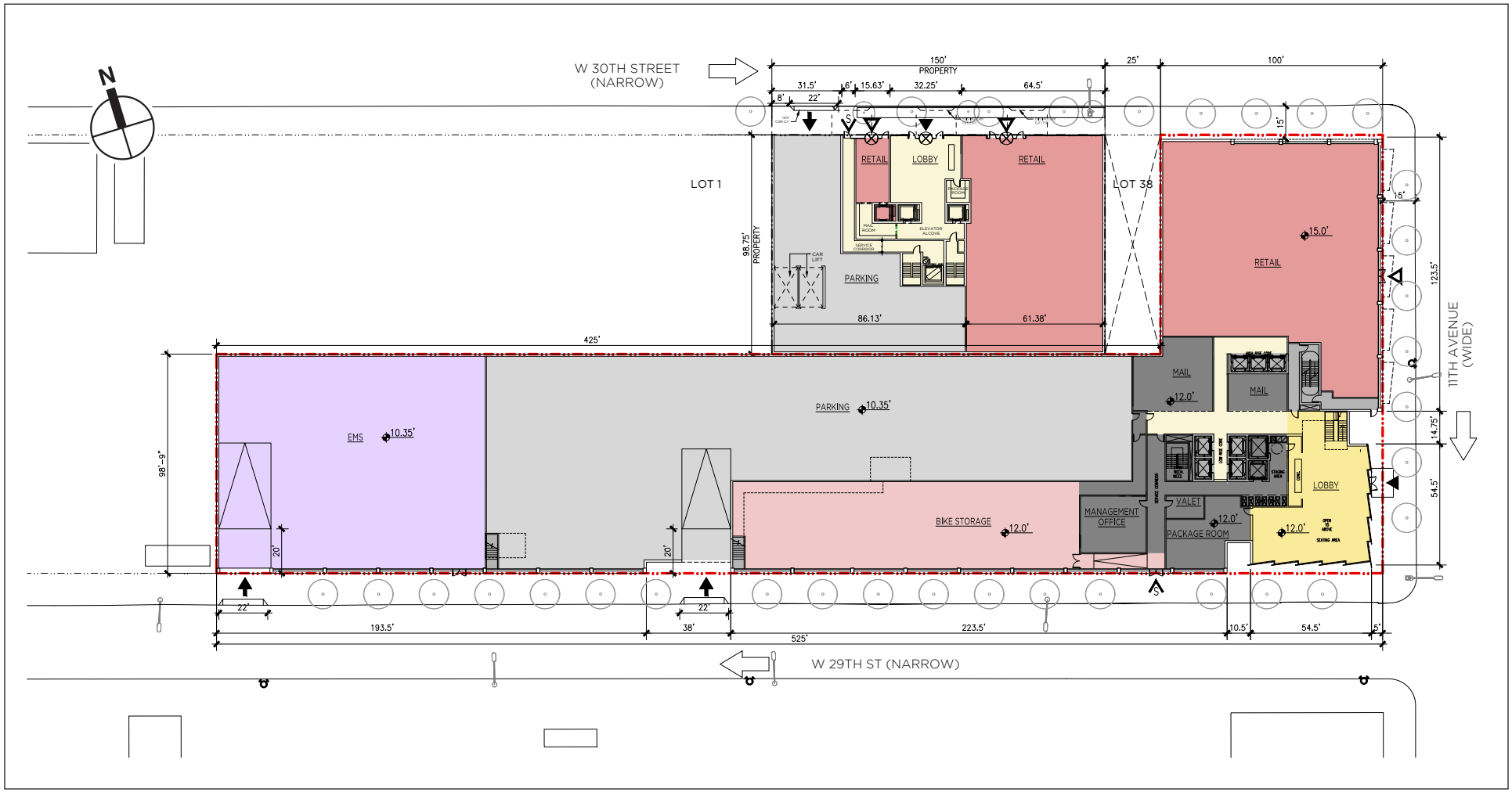
Pursuant to the special district regulations, since no special permit to transfer floor area is being sought for Lot 38, the use and bulk regulations of the M2-3 district apply. The maximum amount of development that would be permitted would remain 2 FAR, and no residential use is or would be allowed on this site. However, since it would be rezoned and included in the special district, potential development on this site is conservatively assumed for purposes of the environmental review to be similar to the development on the two project sites.

F. PROPOSED DEVELOPMENTS

The two project sites would both be developed with mixed use residential and commercial structures which are expected to be complete in 2021.

PROJECT SITE A

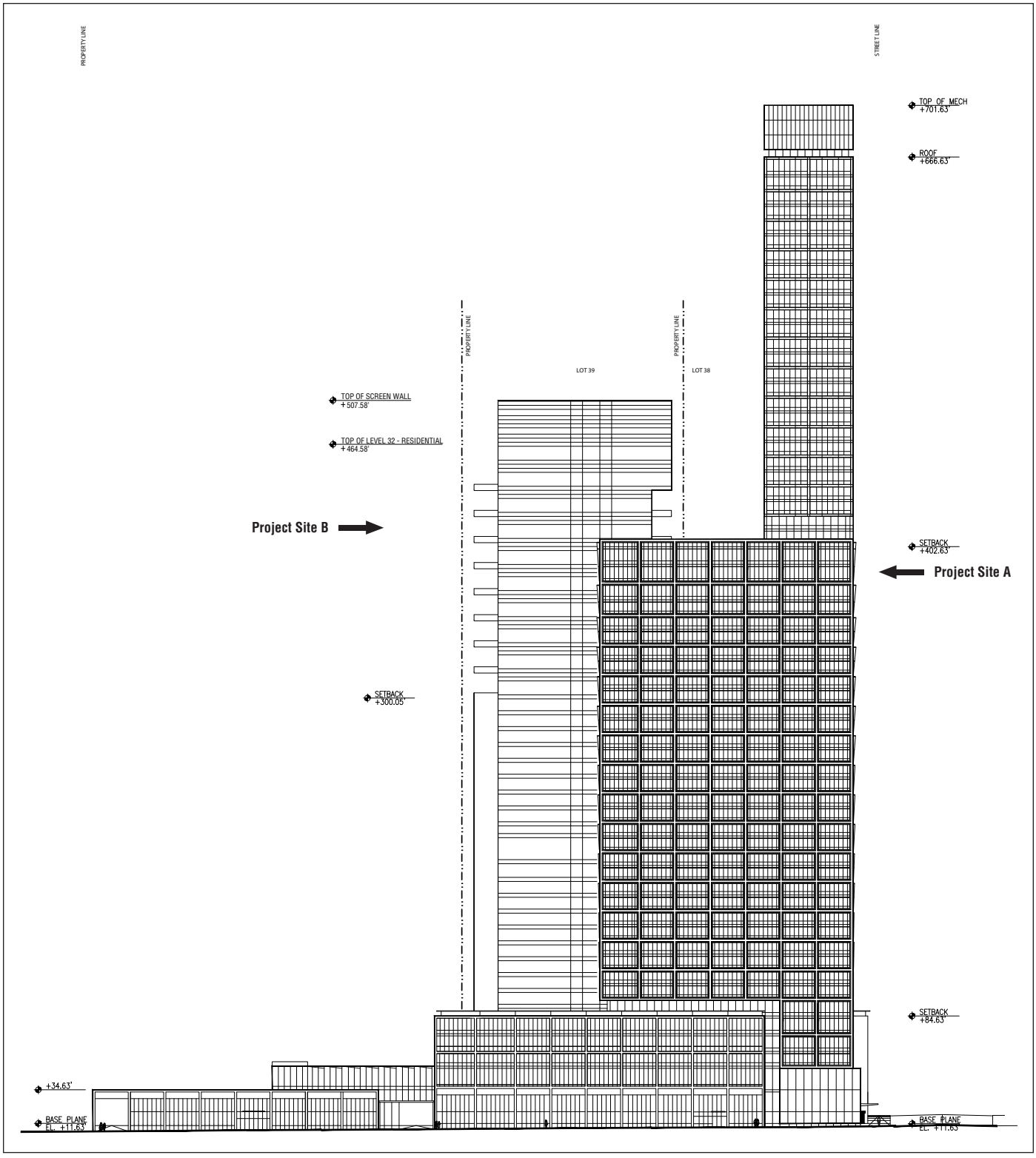
DD West 29th Street LLC is requesting several discretionary approvals to facilitate the redevelopment of project site A (601 West 29th Street) with a mixed use residential and commercial building (see **Figures 7**, **8, 9, and 10**). Applicant A is seeking to rezone project site A to a C6-4X commercial district, which permits a maximum FAR of 10, when mapped in an MIH area, within an appropriate bulk envelope. Project site A would comply with either Option



Source: *FXFowle*

Certain elements of building design, such as building height and bulk, will be controlled under the proposed Special Permit. Other elements, such as facade materials, are shown for illustrative purposes only.

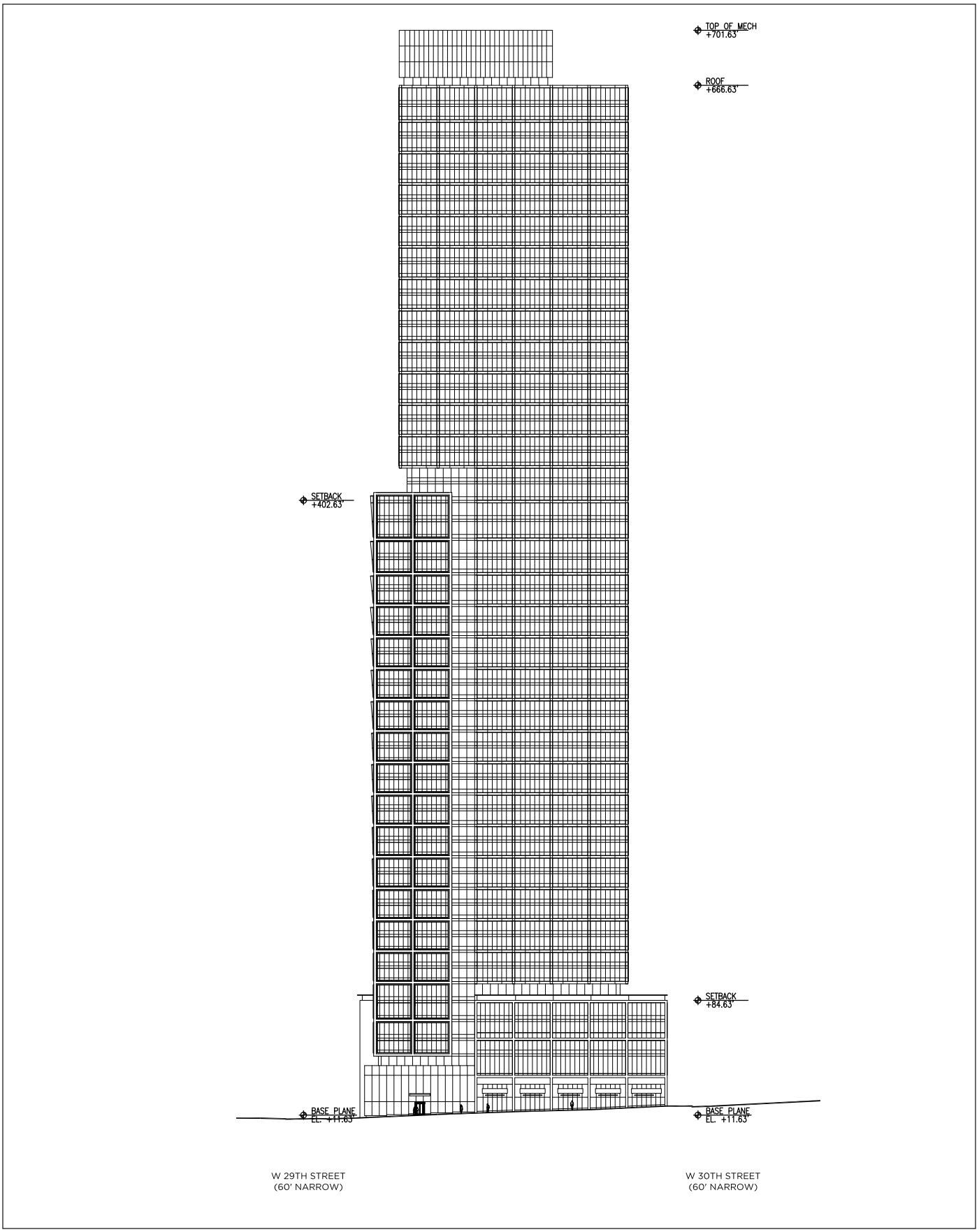
Ground-Floor Plan



Source: *FXFowle*

Certain elements of building design, such as building height and bulk, will be controlled under the proposed Special Permit. Other elements, such as facade materials, are shown for illustrative purposes only.

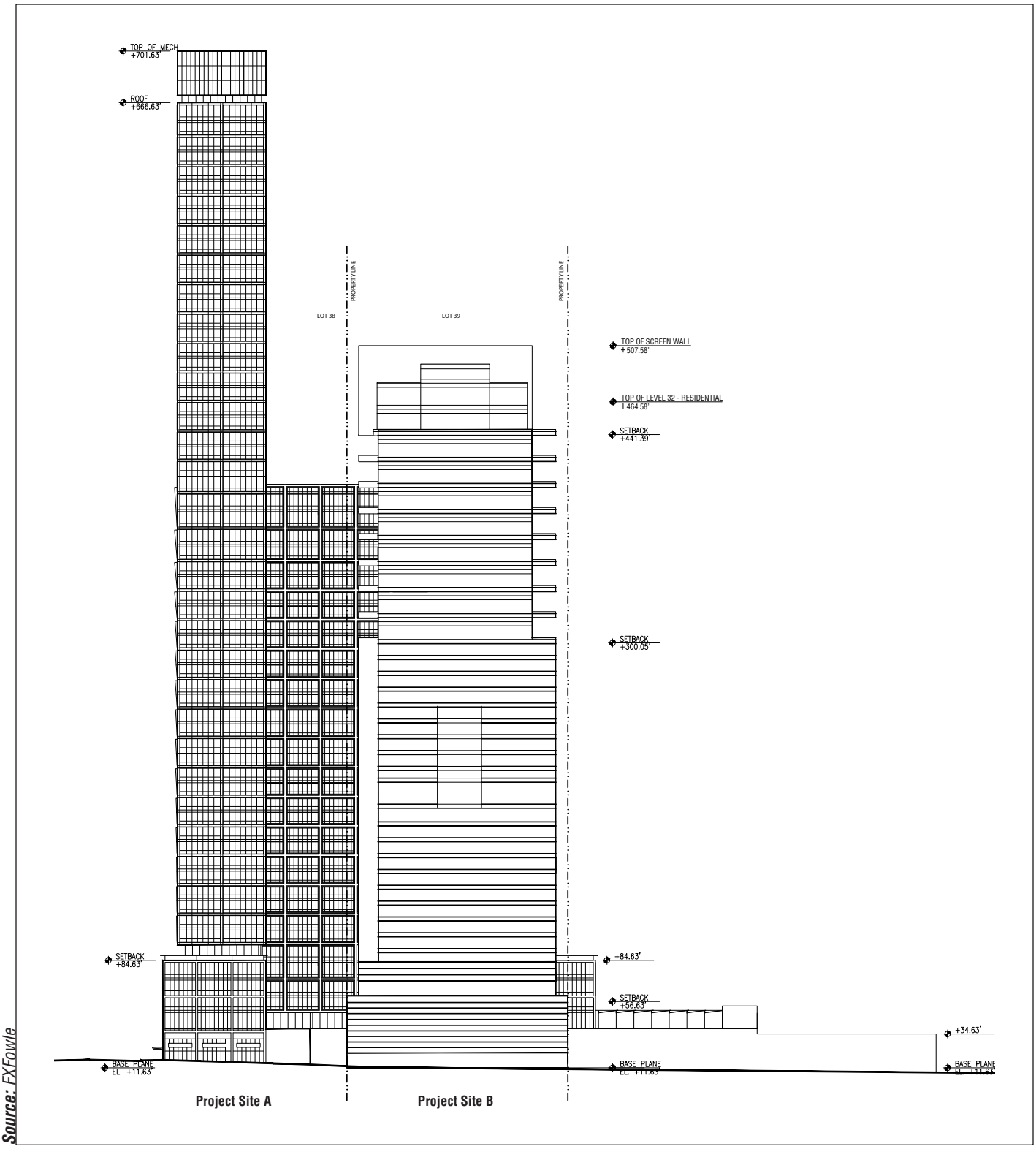
Project Sites A and B:
South Elevation



Source: *FXFowle*

Certain elements of building design, such as building height and bulk, will be controlled under the proposed Special Permit. Other elements, such as facade materials, are shown for illustrative purposes only.

Project Site A: East Elevation



Source: *FXFowle*

Certain elements of building design, such as building height and bulk, will be controlled under the proposed Special Permit. Other elements, such as facade materials, are shown for illustrative purposes only.

Project Sites A and B:
North Elevation
Figure 10

1 or Option 2 of MIH program; at this time, Applicant A anticipates pursuing Option 1 at income levels consistent with MIH. Further, pursuant to the special permit regulations of Zoning Resolution Section 89-21 (Special Hudson River Park District), the maximum FAR of project site A may be increased by up to 20 percent to a proposed 740,625 zoning square feet (12 FAR) upon the transfer of 123,437.5 zoning square feet from the granting site within the Hudson River Park.

With the proposed actions, the project site A would be improved with 12 FAR building, maximizing the allowable FAR on the site. The proposed development on project site A would create an up to 960,000 gsf mixed use residential and commercial building. The proposed building would be 62-stories (approximately 702 feet including the mechanical bulkheads) tall and would contain up to 905,000 gsf of residential uses (up to 990 units); up to 15,000 gsf of retail uses; up to 21,000 gsf of accessory parking (up to 198 spaces); and up to 6,500 gsf of bicycle parking (proposed project A). The building may also include approximately 12,500-gsf to be occupied by a FDNY EMS station. Site selection of an FDNY EMS station by FDNY and DCAS may be undertaken independent of the proposed actions.

The residential entrances would be located on the corner of Eleventh Avenue and West 29th Street. The proposed local retail use would be located on the ground level of the building fronting Eleventh Avenue and West 30th Street. Parking for the proposed development would be located on the ground level with access on West 29th Street. The potential proposed FDNY-EMS Station would also have its access on West 29th Street, with most of the use located on the ground floor.

PROJECT SITE B

The proposed actions would facilitate the development project site B with an approximately 229,157 gsf (including cellar, parking and mechanical space), 32-story (approximately 507 foot tall) primarily mixed-use building (see **Figures 7, 8, and 10**). It would include approximately 175,393 gsf of residential space (Use Group 2), approximately 20,732 gsf of commercial retail space (Use Group 6) (including 8,461 sf of cellar level back of house and retail storage space), and 33,032 sf of other uses (including parking/mechanical with 42 parking spaces). Approximately 206 residential dwelling units would be developed, and the development on project site B would comply with either Option 1 or Option 2 of MIH program. The proposed development would include a cellar level, parking, commercial retail space on lower levels, and residential space on floors four through 32.

G. FRAMEWORK FOR ENVIRONMENTAL REVIEW

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

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

REASONABLE WORST CASE DEVELOPMENT SCENARIO (RWCDS)

In order to assess the possible effects of the proposed actions, a RWCDS was developed to account for existing conditions, the future without the proposed actions (No Action condition) and the future with the proposed actions (With Action condition). The incremental difference between the future No Action and future With Action conditions serves as the basis for the impact analysis of the environmental review. Under the With Action condition, the proposed actions are expected to result in an incremental increase over the No Action condition, as described below.

BUILD YEAR

For the purposes of environmental review, both of the project sites are anticipated to be complete by 2021, including all residential units, the EMS facility (on project site A), and retail space. This timeframe accounts for the approximately 7-month ULURP process, with project approvals occurring in early 2018. The construction period is anticipated to be up to 36 months with work beginning shortly after project approvals are in place.

PROJECT SITE A

The Hudson Tunnel Project may use part of the interior parking area inside the single-story west wing of the project site A building for temporary construction staging until 2026. Applicant A has been coordinating with the rail agencies regarding this potential arrangement. This would allow construction of the entire project on project site A to be completed as planned by 2021 with the understanding that, if necessary, Applicant A would allow Hudson Tunnel construction staging in its indoor parking area[1] in the west wing of the building.

If the Hudson Tunnel Project requires construction staging in the project site A building, there would be garage doors or a similar opening on the north side of the structure to provide access for staging directly to and from the adjacent (off-site) tunnel construction staging area. When the construction staging is no longer required, the opening would be sealed and the area would be used as intended as accessory parking for building residents.

Amtrak and PANYNJ have agreed to continue working with Applicant A to coordinate construction of the Hudson Tunnel and site A projects. As part of the Hudson Tunnel Project's engineering review, they have indicated that the area slated for the EMS facility and garage may be needed for tunnel construction staging purposes, for some or all of the construction period of the Hudson Tunnel Project. If the Hudson Tunnel Project ultimately decides to use the far western portion of project site A as an open yard for construction, completion of the west wing of the building on West 29th Street would not occur until 2027, if not later. In this situation, the Hudson Tunnel Project would build the west wing as part of its project. Because the construction plans for the Hudson Tunnel Project are evolving and may include any number of options, the EIS for that project will consider the potential construction impacts of building this portion of the structure along West 29th Street at a later date.

For a conservative worst case analysis, the full number of residential units would generate the full number of resident trips in 2021; and all resident trips would be routed to the site regardless of the number of parking spaces available. If parking is not available in the building, the trips

[1] The proposed automobile parking is an accessory use and is not required by zoning.

would more likely be dispersed to other garages in the area. The dispersed trips would be less likely to have impacts and/or require detailed analysis. This assumption is conservative because it will allow for analysis of the full project and account for potential mitigation measures, if necessary. Similarly, the EMS facility will be assumed in the analysis as a worse case, since it will generate additional traffic beyond that generated by the residents of the proposed building. Therefore, this EIS will evaluate the reasonably conservative worst case by the base 2021 build year.

PROJECT SITE B

Project site B would not be affected by construction staging for the Hudson Tunnel Project.

FUTURE WITHOUT THE PROPOSED ACTIONS (NO ACTION CONDITION)

Absent the proposed actions, it is conservatively assumed that the existing structures will remain on both project sites with uses similar to or the same as existing uses. Further it is assumed that any improvements to the structures or sites would be minimal.

For project site A in the No Action condition, the gasoline filling station (1,056 sf of building on a 9,875 sf lot), industrial buildings used as an artist's studio and offices (43,859 gsf), DSNY staff building (11,950 gsf), and PANYNJ security, office, and vehicle storage (21,675 sf) are assumed to remain on site (see **Table 1**). PANYNJ is assumed to retain control of their portion of the site. Project site A is currently zoned M2-3, which permits manufacturing uses up to a maximum FAR of 2.0. Project site A is currently improved with 0.82 FAR (a total of 50,692 gsf), of which Block 675, Lot 12 is improved with only 0.95 FAR; Block 675, Lot 29 is improved with 0.97 FAR; and Block 675, Lot 36 is improved with 0.11 FAR.

For project site B, the existing vehicle storage and maintenance building is assumed to remain on site. Like project site A, project site B is currently zoned M2-3, which permits manufacturing uses up to a maximum FAR of 2.0. Project site B is currently improved with 1.08 FAR (a total of 16,052 gsf).

Lot 38 is located on West 30th Street between project sites A and B. There is no proposal to develop Lot 38 at this time. However, because Lot 38 would be rezoned and included in the Special Hudson River Park District as part of the proposed actions, its potential to be redeveloped under the proposed rezoning will be conservatively considered as part of the environmental review. Lot 38 is developed with a one-story auto repair shop totaling 2,469 sf that is assumed to remain on site in the No Action condition.

Table 1
Project Area—No Action Conditions (gsf)

Commercial Uses	No Action Condition
Project Site A	
Gasoline Filling Station	1,056
Artist Studios and Offices	43,859
DSNY Staff Building	11,950
Project Site A Total	**56,865**
Project Site B	
Vehicle storage and maintenance	16,052
Project Site B Total	**16,052**
Lot 38[1]	
Auto Repair Shop	2,469
Lot 38 Total	**2,469**

Note: [1] There is no proposal to develop Lot 38 at this time. However, because Lot 38 would be rezoned and included in the Special Hudson River Park District as part of the proposed actions, its potential to be redeveloped under the proposed rezoning will be conservatively considered as part of the environmental review.
Source: Project site A FXFOWLE Architects, September 2016; Project site B and Lot 38 Ismael Leyva Architects, March 2017.

FUTURE WITH THE PROPOSED ACTIONS (WITH ACTION CONDITION)

As described above, the applicants are seeking to rezone the sites to a C6-4X commercial district, which permits a maximum FAR of 10 within an appropriate bulk envelope. Additional floor area would be transferred to the sites from the granting site within Hudson River Park for a total FAR of 12. The increments between the No Action and With Action conditions as well as the proposed changes in use will form the basis for analysis in the EIS (see **Table 2**). In total, in the With Action condition, it is assumed that the project area would contain up to 1,230 dwelling units, up to 39,186 gsf of retail, up to 66,036 gsf of accessory parking and mechanical space (246 parking spaces), and 12,500 gsf of public facility (anticipated as a FDNY-EMS Station). The development program assumed in the With Action condition is described below.

PROJECT SITE A

In the With Action condition, the existing warehouses, garages and gas station on project site A would be demolished and a mixed-use development would be constructed, as described above. For the purposes of a conservative analysis, it is assumed that the building would contain up to 990 dwelling units, up to 15,000 gsf of retail, up to 21,000 gsf of accessory parking, and 12,500 gsf of public facility (anticipated as a FDNY-EMS Station). Based on the preliminary design, the number of residential units has been estimated at fewer than 950; however, in order to allow some flexibility in design and possible response to market conditions, up to 990 residential units will be conservatively assumed for the purposes of environmental analysis. Further, Applicant A will commit in a Restrictive Declaration to building no more than 990 units as part of the approval process. Project site A would comply with either Option 1 or Option 2 of MIH program; at this time, Applicant A anticipates that 25 percent of the residential floor area would be designated for affordable housing at income levels consistent with MIH. Based on up to 990 total residential units and assuming a similar mix of unit sizes, the proposed development on

project site A would provide up to 248 affordable units under Option 1 of the MIH Program (or up to 297 affordable units under Option 2 of the MIH program).[2] For the day care analysis, it will be conservatively assumed that 20 percent would be at or below 80 percent AMI (up to 198 units). Pursuant to Zoning Resolution Section 13-11, accessory off-street parking spaces may be provided for not more than 20 percent of the total number of dwelling units contained in the development for Community District 4. Therefore, Applicant A would develop up to 198 parking spaces, based on 990 residential units, which is within the maximum permitted by the special parking regulations for the Manhattan Core. The parking garage will contain ceiling heights that can allow for attended stackers that will help accommodate all of the parking spaces.

Table 2
Project Area—Comparison of No Action and With Action Conditions (gsf)

Uses	No Action Condition	With Action Condition	Increment for Analysis
Project Site A			
Commercial/DSNY	56,865	Up to 15,000	-41,865
Residential	—	Up to 905,000 (up to 990 units)	+905,000 (up to 990 units)
EMS Facility	—	Up to 12,500	+12,500
Parking	—	Up to 198 spaces	Up to 198 spaces
Project Site A Subtotal	**56,865**	**Up to 960,000**	**+903,135**
Project Site B			
Industrial (Vehicle Storage Maintenance)	16,052		-16,052
Commercial		20,732	+20,732
Residential	—	175,393 (206 units)	+175,393
Parking/Mechanical	—	33,032 (42 spaces)	+33,032
Project Site B Subtotal	**16,052**	**229,157**	**+213,105**
Lot 38[1]			
Industrial (Auto Repair)	2,469	—	-2,469
Commercial	—	3,454	+3,454
Residential	—	29,224 (34 units)	+29,224
Parking/Mechanical	—	5,504 (6 spaces)	+5,504
Lot 38 Subtotal	**2,469**	**38,183**	+35,713
Project Area Total			
Industrial	18,521	—	-18,521
Commercial/DSNY	56,865	39,186	-17,679
Residential	—	1,109,617 (1,230 units)	+1,109,617
EMS Facility	—	12,500	+12,500
Parking/Mechanical	—	66,036 (246 spaces)	+66,036
Project Area Total	**75,386**	**1,227,339**	**+1,151,953**

Note: [1] There is no proposal to develop Lot 38 at this time. However, because Lot 38 would be rezoned and included in the Special Hudson River Park District as part of the proposed actions, its potential to be redeveloped under the proposed rezoning will be conservatively considered as part of the environmental review.

Source: Project site A FXFOWLE Architects, September 2016; Project site B and Lot 38 Ismael Leyva Architects, March 2017.

[2] The number of affordable units is based on a percent of total residential floor area; therefore, if the total residential floor area is reduced, then the number of affordable residential floor area will be reduced.

Although it is anticipated that the EMS facility will be developed at project site A as part of the proposed project, it is possible that there would be no EMS facility on project site A. In either case, Applicant A would develop up to 198 parking spaces, based on 990 residential units (the maximum permitted by the special parking regulations for the Manhattan Core); however, this would be achieved through different layouts by using stackers. Assuming that project site A includes the EMS facility is the more conservative assumption because it will generate additional traffic beyond that generated by the residents of the proposed building and the proposed actions with or without EMS would include the same maximum number of residential units, the same maximum retail floor area and the same maximum number of parking spaces in either case. Therefore, the proposed actions with EMS generate more users or trips for the quantitative analyses.

In the event that the EMS is ultimately not included as part of the proposed actions, the residential floor area would be 905,000 gsf (up to 990 residential units). If EMS is part of the proposed actions, the residential square footage would be reduced by 12,500 gsf to 892,500 gsf. Therefore, to conservatively assess a reasonable worst case development scenario, the analyses for the proposed actions will assume both the maximum amount of residential development (up to 990 dwelling units) as well as a 12,500-gsf EMS facility in addition to up to 15,000 gsf of retail uses and up to 198 parking spaces.

PROJECT SITE B

The proposed actions would facilitate the development project site B with an approximately 229,157 gsf (including cellar, parking and mechanical space), 32-story (approximately 507 foot tall) primarily mixed-use building. It would include approximately 175,393 gsf of residential space, approximately 20,732 gsf of commercial retail space (including 8,461 sf of cellar level back of house and retail storage space), and 33,032 sf of other uses (including parking/mechanical with 42 parking spaces). Approximately 206 residential dwelling units would be developed, and the development on project site B would comply with either Option 1 or Option 2 of MIH program. Pursuant to Zoning Resolution Section 13-11, accessory off-street parking spaces may be provided for not more than 20 percent of the total number of dwelling units contained in the development for Community District 4. Therefore, Applicant B would develop up to 42 parking spaces, based on 206 residential units, which is within the maximum permitted by the special parking regulations for the Manhattan Core.

LOT 38

While there is no proposal to develop or to transfer floor area from Hudson River Park to Lot 38 at this time, since it would be rezoned and included in the Special Hudson River Park District as a receiving site, its potential to be redeveloped under the proposed rezoning will be conservatively considered as part of the environmental review. Assuming full utilization of the development potential of this site at 12.0 FAR, Lot 38 would generate approximately 3,454 gsf of commercial space, 29,224 gsf of residential space (34 units), and 5,504 gsf of parking/mechanical space (6 parking spaces).

H. SCOPE OF WORK

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

The EIS will contain:

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

The first step in preparing the EIS document is the public scoping process. Scoping is the process of focusing the environmental impact analysis on the key issues that are to be studied in the EIS. The proposed scope of work for each technical area to be analyzed in the EIS follows. The EAS that has been prepared for the proposed actions identified one technical area (natural resources) in which the proposed actions would not result in significant adverse impacts. Therefore, a natural resources analysis is not included in this scope of work. The scope of work and the proposed impact assessment criteria below are based on the methodologies and guidance set forth in the *CEQR Technical Manual*.

TASK 1: PROJECT DESCRIPTION

As the first chapter of the EIS, the Project Description will introduce the reader to the proposed actions and projects and set the context in which to assess impacts. The chapter will identify the proposed actions (brief description and location of the project sites) and provide the following:

- An introduction to the background and history of the project area, the granting site, and the proposed actions;
- A statement of the public purpose and need for the proposed actions, and key planning considerations that have shaped the proposal;
- A description of the analysis framework for the environmental review, including a discussion of the No Action condition and the build year for analysis;
- A detailed description of the proposed actions, including both the No Action program and the With Action program;
- A description of the design of the project sites with supporting figures;
- A discussion of the approvals required, procedures to be followed, the role of the EIS in the process, and its relationship to any other approvals.

TASK 2: LAND USE, ZONING, AND PUBLIC POLICY

Under CEQR, a land use analysis characterizes the uses and development trends in the area that may be affected by a proposed project, describes the public policies that guide development, and determines whether a proposed project is compatible with those conditions and policies or whether it may affect them. In addition to considering the proposed project's effects in terms of land use compatibility and trends in zoning and public policy, this chapter will also provide a baseline for other analyses.

The land use chapter will provide the following:

- A brief development history of the project area, the granting site, and the study area. The study area will include the project sites and the area within approximately ¼-mile (see **Figure 11**).
- Describe conditions in the study area, including existing uses and the current zoning.
- Describe predominant land use patterns in the study area, including recent development trends and zoning changes.
- Summarize other public policies that may apply to the project area and study area, including any formal neighborhood or community plans (such as the 1996 Chelsea 197-a plan), the New York City Waterfront Revitalization Program (WRP), and OneNYC.
- Prepare a list of other projects expected to be built in the study area that would be completed by the analysis year. Describe the effects of these projects on land use patterns and development trends. Also, describe any pending zoning actions or other public policy actions that could affect land use patterns and trends in the study area.
- Describe the proposed actions and provide an assessment of the impacts of the proposed actions on land use and land use trends, zoning, and public policy. Consider the effects of the proposed actions related to issues of compatibility with surrounding land use, consistency with public policy initiatives, including the completion of a WRP Consistency Assessment Form, and the effect on development trends and conditions in the area.

TASK 3: SOCIOECONOMIC CONDITIONS

The socioeconomic character of an area includes its population, housing, and economic activity. Socioeconomic changes may occur when a project directly or indirectly changes any of these elements. Although some socioeconomic changes may not result in impacts under CEQR, they are disclosed if they would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area. In some cases, these changes may be substantial but not adverse. The objective of the CEQR analysis is to disclose whether any changes would have a significant adverse impact compared to what would happen in the future without the proposed actions.

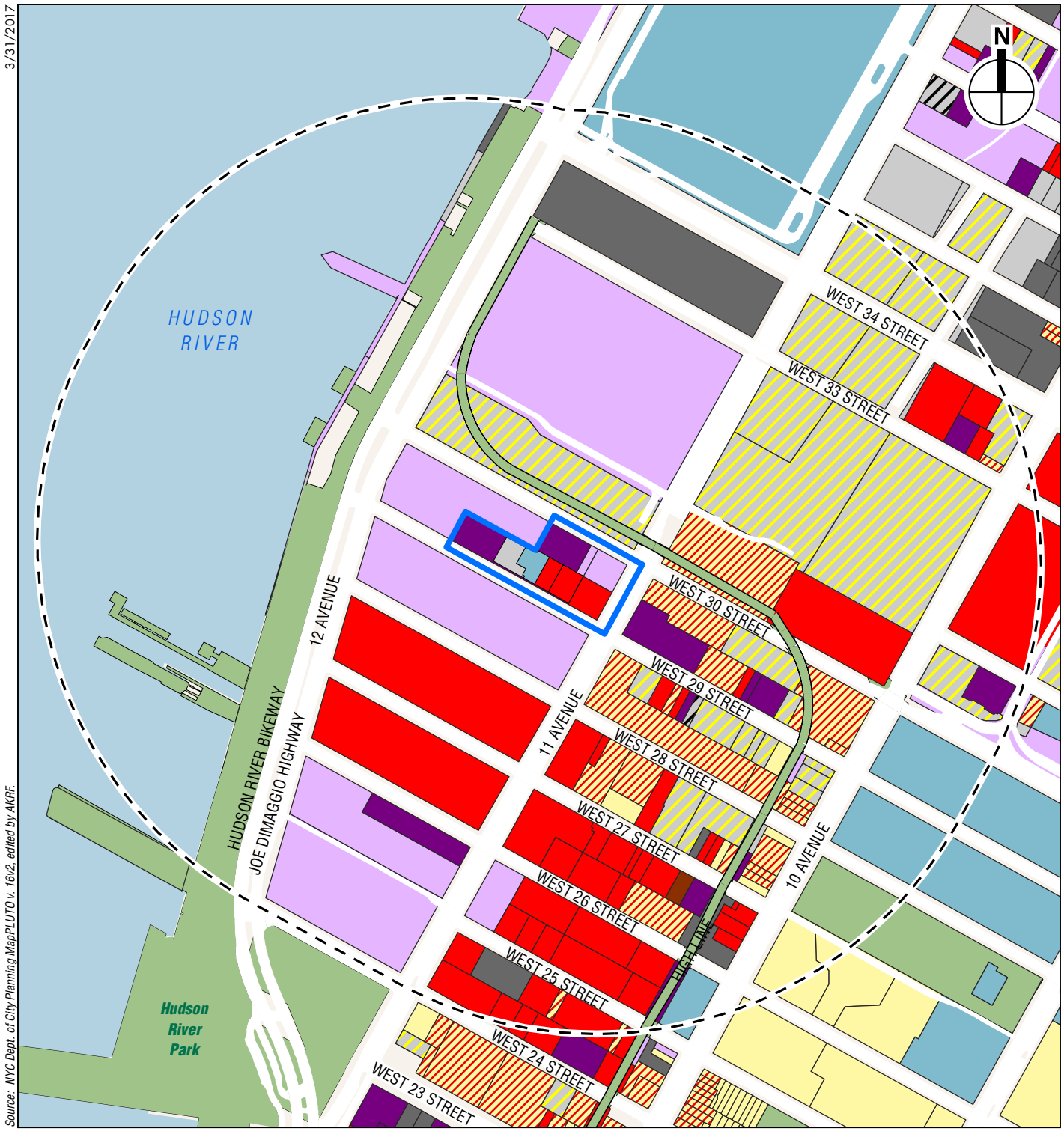
According to the *CEQR Technical Manual*, the five principal issues of concern with respect to socioeconomic conditions are whether a proposed project would result in significant impacts due to: (1) direct residential displacement; (2) direct business displacement; (3) indirect residential displacement; (4) indirect business displacement; and (5) adverse effects on a specific industry. The following describes whether and how each of these concerns is addressed in the analysis.

DIRECT RESIDENTIAL DISPLACEMENT

The proposed projects would not directly displace any residents. Therefore, an assessment of direct residential displacement is not warranted.

DIRECT BUSINESS DISPLACEMENT

Direct business displacement is the involuntary displacement of businesses from a site directly affected by the proposed actions. Since the proposed projects could directly displace several businesses, a building and business inventory will be undertaken to determine the number of businesses on the project sites and an estimated number of employees that could be displaced.



Project Area
Study Area (1/4-mile boundary)
Commercial and Office Buildings
Hotels
Industrial and Manufacturing
Open Space and Outdoor Recreation
Parking Facilities
Public Facilities and Institutions
Residential
Residential with Commercial Below
Transportation and Utility
Vacant Land
Vacant Building
Under Construction

0 500 FEET

BLOCK 675 EAST

Existing Land Use
Figure 11

It is expected that the employment displaced from the project sites would exceed the 100-employee CEQR threshold warranting a preliminary assessment. The preliminary assessment will disclose the estimated the number of employees and the number and types of businesses that would be displaced by the proposed projects, and characterize the economic profile of the study area using current employment and business data from the New York State Department of Labor or U.S. Census Bureau. This information will be used in addressing the following CEQR criteria for determining the potential for significant adverse impacts:

- Whether the businesses to be displaced provide products or services essential to the local economy that would no longer be available in its "trade area" to local residents or businesses due to the difficulty of either relocating the businesses or establishing new, comparable businesses.
- Whether a category of businesses is the subject of other regulations or publicly adopted plans to preserve, enhance, or otherwise protect it.

If any of the conditions listed above are possible, then a detailed assessment will be conducted. The detailed analysis, if determined to be warranted, would describe existing and anticipated future conditions to a level necessary to understand the operational characteristics of the displaced businesses, determine whether they can be relocated, and assess whether the potential loss of the businesses from the study area could result in changes that would be significant and adverse.

INDIRECT RESIDENTIAL DISPLACEMENT

The concern with respect to indirect residential displacement is whether the proposed projects could lead to increases in property values, and thus rents, making it difficult for some residents to afford their homes. The objective of the indirect residential displacement assessment is to determine whether the proposed projects would either introduce a trend or accelerate a trend of changing socioeconomic conditions that may potentially displace a vulnerable population to the extent that the socioeconomic character of the neighborhood would change.

The proposed projects would result in incremental development in excess of 200 dwellings units, which is the CEQR threshold for assessment of potential indirect residential displacement. The indirect residential displacement assessment will use the most recent available U.S. Census data, New York City Department of Finance's Real Property Assessment Data (RPAD) database, as well as current real estate market data to present demographic and residential market trends and conditions for an approximately ½-mile study area. The presentation of study area characteristics will include population, housing value and rent, and average household income. Following *CEQR Technical Manual* guidelines, the analysis will start with a preliminary assessment which entails the following step-by-step evaluation:

- **Step 1**: Determine if the proposed projects would add substantial new population with different income levels as compared with the income of the study area population and any new population expected to reside in the study area in the future without the projects. If the expected average incomes of the new population would be similar to the average incomes of the study area populations, no further analysis is necessary. If the expected average incomes of the new population would exceed the average incomes of the study area populations, then Step 2 of the analysis will be conducted.
- **Step 2**: Determine if the project-generated populations are large enough to affect real estate market conditions in the study area. According to the *CEQR Technical Manual*, a population

increase of greater than 5 percent in the study area or within any identified subareas could potentially affect real estate market conditions in an area. If the projects' population would exceed this threshold, then Step 3 will be conducted.

- **Step 3**: Consider whether the study area has already experienced a readily observable trend toward increasing rents and new market rate development, and the likely effect of the proposed projects on such trends.

If the preliminary assessment cannot rule out the potential for significant adverse impacts due to indirect residential displacement, then a detailed analysis will be conducted. The detailed analysis would utilize more in-depth demographic analysis and field survey to characterize existing population and housing conditions; identify populations at risk for displacement; and assess potential impacts on any identified population at risk.

INDIRECT BUSINESS DISPLACEMENT

The indirect business displacement analysis determines whether the proposed projects may introduce trends that make it difficult for those businesses that provide products and services essential to the local economy, or those subject to regulations or publicly adopted plans to preserve, enhance, or otherwise product them, to remain in the area. The analysis will describe and characterize conditions and trends in employment and businesses within the study area using the most recent available data from such as New York State Department of Labor and the U.S. Census Bureau, as well as private sources such as ESRI and real estate brokerage firms, as necessary. This information will be used in a preliminary assessment to consider whether the proposed projects would:

- Introduce enough of a new economic activity to alter existing economic patterns;
- Add to the concentration of a particular sector of the local economy enough to alter or accelerate existing economic patterns; or
- Directly displace any type of use that either directly supports businesses in the area or brings a customer base to the area for local businesses, or if it directly or indirectly displaces residents, workers or visitors who form the customer base of existing businesses in the area.

If the preliminary assessment cannot rule out the potential for significant adverse impacts due to indirect business displacement, then a detailed analysis will be conducted. The detailed analysis would utilize more in-depth demographic analysis and field survey to characterize existing business conditions; identify businesses at risk for displacement; and assess potential impacts on any identified businesses at risk.

ADVERSE EFFECTS ON SPECIFIC INDUSTRIES

Based on the guidelines in the *CEQR Technical Manual*, a preliminary assessment of effects on specific industries is conducted to determine whether the proposed projects would significantly affect business conditions in any industry or category of businesses within or outside the study area, or whether the proposed projects would substantially reduce employment or impair viability in a specific industry or category of businesses.

TASK 4: COMMUNITY FACILITIES AND SERVICES

The demand for community facilities and services is directly related to the type and size of the new population generated by any proposed development. New workers tend to create limited demands for community facilities and services, while new residents create more substantial and permanent demands. According to the thresholds presented in the *CEQR Technical Manual*, the

proposed actions are not expected to trigger detailed analyses of public high schools, outpatient health care facilities, or police and fire protection serving the project area. However, the proposed actions would introduce a residential population that would have the potential to affect elementary/middle schools, child care facilities, and libraries. The assessment of potential impacts on each are described below.

PUBLIC ELEMENTARY AND MIDDLE SCHOOLS

A schools analysis is required under CEQR for proposed actions that would result in more than 50 elementary/middle school or 150 high school students. In Manhattan, based on CEQR guidelines, this threshold is 310 residential units. Accordingly, a detailed analysis of elementary and intermediate schools will be included in the EIS. This analysis will include the following:

- Identify schools serving the project sites and discuss the most current information on enrollment, capacity, and utilization using information from the New York City Department of Education (DOE).
- Based on the data provided from DOE and DCP, determine future No Action conditions in the area.
- Based on methodology presented in the *CEQR Technical Manual*, assess the potential impact of students generated by the proposed actions on schools.

However, since the proposed actions would not result in more than 2,492 residential units (the CEQR threshold for performing an analysis of high school conditions), an analysis of high schools is not warranted.

PUBLICLY FUNDED CHILD CARE

Because the number of affordable residential units would exceed the minimum number of residential units requiring detailed analyses of publicly funded child care (170), the EIS will include an analysis of child care as described below:

- Identify existing publicly funded group child care facilities within approximately 1.5 miles of the project sites.
- Describe each facility in terms of its location, number of slots (capacity), and existing enrollment. Information will be based on publicly available information and consultation with the Administration for Children's Services' Division of Child Care and Headstart (CCHS).
- Any expected increases in the population of children under 12 within the eligibility income limitations, based on CEQR methodology, will be discussed as potential additional demand, and the potential effect of any population increases on demand for publicly funded group child care services in the study area will be assessed. The potential effects of the additional eligible children resulting from the proposed actions will be assessed by comparing the estimated net demand over capacity to the net demand over capacity estimated in the No Action condition.

LIBRARIES

In Manhattan, based on CEQR guidelines, the minimum number of residential units that triggers a detailed analysis of libraries is 901. Because the number of residential units would exceed this threshold, an analysis of libraries is warranted and will include the following tasks:

- Describe and map the local libraries and catchment areas in the vicinity of the project sites.

- Identify the existing user population, branch holdings and circulation. Based on this information, estimate the holdings per resident.
- Determine conditions in the No Action condition based on planned developments and known changes to the library system.
- Based on the population to be added by the proposed actions, estimate the holdings per resident and compare With Action to No Action conditions.

If necessary, mitigation measures to avoid or reduce potential significant adverse impacts will be identified.

TASK 5: OPEN SPACE

The *CEQR Technical Manual* recommends performing an open space assessment if a project would have a direct effect on an area open space (e.g., displacement of an existing open space resource) or an indirect effect through increased population size. For the project sites, which are in an area considered neither well served nor underserved in terms of open space, the *CEQR Technical Manual* threshold for analysis is a population increase of more than 200 residents or 500 employees. The population of the project would exceed the 200-resident CEQR threshold but is not expected to exceed the 500-worker threshold. Therefore, a residential open space analysis is warranted and will be prepared using the methodology set forth in the *CEQR Technical Manual.*

The open space analysis will consider both passive and active open space resources. The study area would generally comprise those census tracts that have 50 percent or more of their area located within the ½-mile radius of the project sites (see **Figure 12**).

The open space analysis will include the following tasks:

Characteristics of the open space user groups will be determined. To determine the number of residents in the study areas, 2015 American Community Survey data will be compiled for census tracts comprising the residential open space study area.

Existing active and passive open spaces within the ½-mile open space study area will be inventoried and mapped. The condition and usage of existing facilities will be described based on the inventory and field visits. This inventory will include examining these spaces for their facilities (active vs, passive use), quality/condition, factors affecting usage, hours of operation, user groups, and use (crowded or not). Acreages of these facilities will be determined and the total study area acreages will be calculated. The percentage of active and passive open space will also be calculated.

Based on the inventory of facilities and study area populations, total, active, and passive open space ratios will be calculated for the residential population and compared to City guidelines to assess adequacy. Open space ratios are expressed as the amount of open space acreage (total, passive, and active) per 1,000 user population.

Expected changes in future levels of open space supply and demand in the analysis year will be assessed, based on other planned development projects within the open space study area. Any new open space or recreational facilities that are anticipated to be operational by the analysis year, including open spaces at Hudson Yards, will also be accounted for. Open space ratios will be calculated for future No Action conditions and compared with exiting ratios to determine changes in future levels of adequacy.



BLOCK 675 EAST

Open Space
Figure 12

Effects on open space supply and demand resulting from increased residential populations added under the RWCDS associated with the proposed projects will be assessed. The assessment of the proposed projects' impacts will be based on a comparison of open space ratios for the No Action versus With Action conditions. In addition to the quantitative analysis, a qualitative analysis will be performed to determine if the changes resulting from the proposed projects constitutes a substantial change (positive or negative) or an adverse effect to open space conditions. The qualitative analysis will assess whether or not the study areas are sufficiently served by open space, given the type (active vs. passive), capacity, condition, and distribution of open space, and the profile of the study area populations. The qualitative analysis will also include a discussion of the improvements to Hudson River Park resulting from the purchase of development rights by the applicants.

In coordination with other tasks, any potential direct impacts on nearby open space resources from shadows, air quality, or noise generated by the proposed projects will be assessed.

The analysis will begin with a preliminary assessment to determine the need for further analysis. If warranted, a detailed assessment will be prepared following the guidelines of the *CEQR Technical Manual*. If an impact is identified, potential mitigation measures will be determined and discussed.

TASK 6: SHADOWS

The *CEQR Technical Manual* requires a shadows assessment for proposed actions that would result in new structures (or additions to existing structures) greater than 50 feet in height or located adjacent to, or across the street from, a sunlight-sensitive resource. Such resources include publicly accessible open spaces, important sunlight-sensitive natural features, or historic resources with sun-sensitive features.

The proposed projects would result in new structures taller than 50 feet. A shadows assessment is therefore required to determine whether project-generated shadow might affect nearby publicly accessible open space resources such as the High Line to the north, Hudson River Park and the Route 9A bikeway/walkway to the west, or any other nearby sunlight-sensitive resources. In addition, the Hudson River is considered a sunlight-sensitive natural resource. A shadows assessment is therefore required to determine how the project-generated shadows might affect these resources, and whether it would reach other nearby sunlight-sensitive resources. The proposed projects' shadows will be compared to shadows in the No Action condition.

The shadows assessment will follow the methodology described in the *CEQR Technical Manual*. It would include the following tasks:

- Develop a base map illustrating the project sites in relationship to existing and proposed publicly accessible open spaces, historic resources with sunlight-dependent features, and natural features in the area.
- Determine the longest possible shadow that could result from the proposed projects to determine whether it could reach any sunlight-sensitive resources at any time of year.
- Develop a three-dimensional computer model of the elements of the base map developed in the preliminary assessment.
- Develop a three-dimensional representation of the proposed projects.

- Using three-dimensional computer modeling software, determine the extent and duration of new shadows that would be cast on sunlight-sensitive resources as a result of the proposed actions on four representative days of the year.
- Document the analysis with graphics comparing shadows in the No Action condition with shadows resulting from the proposed projects, with incremental shadow highlighted in a contrasting color. Include a summary table listing the entry and exit times and total duration of incremental shadow on each applicable representative day for each affected resource.
- Assess the significance of any shadow impacts on sunlight-sensitive resources. If any significant adverse shadow impacts are anticipated, identify and assess potential mitigation strategies.

TASK 7: HISTORIC AND CULTURAL RESOURCES

Historic and cultural resources include archaeological (buried) resources and architectural resources. The *CEQR Technical Manual* identifies historic resources as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archaeological importance. Historic resources include designated New York City Landmarks (NYCLs), Interior Landmarks, Scenic Landmarks, and Historic Districts; properties calendared for consideration as NYCLs by the New York City Landmarks Preservation Commission (LPC) or determined eligible for NYCL designation (NYCL-eligible); properties listed on the State and National Registers of Historic Places (S/NR) or formally determined eligible for S/NR listing (S/NR-eligible), or properties contained within a S/NR-listed or eligible historic district; properties recommended by the New York State Board for listing on the S/NR; National Historic Landmarks (NHLs); and potential historic resources (i.e., properties that appear to meet the eligibility criteria for listing on the State/National Register of Historic Places [S/NR] and/or New York City Landmark [NYCL] designation).

According to the *CEQR Technical Manual*, a historic and cultural resources assessment is required if there is the potential to affect either archaeological or architectural resources. The analysis will consider the potential of the proposed projects to affect historic and cultural resources as follows.

ARCHAEOLOGICAL RESOURCES

As part of the review of the *No. 7 Subway Extension - Hudson Yards Rezoning and Development Program Final Generic Environmental Impact Statement* (2004), LPC reviewed the potential for a portion of Block 675, including the project area, and determined that it was unlikely to contain archaeological resources and could be eliminated from further study. However, LPC's review of the project area will be requested to confirm that prior finding. If LPC confirms that the project area is not determined to be archaeologically sensitive, no further work will be required with respect to archaeological resources.

ARCHITECTURAL RESOURCES

There are no known architectural resources on the project sites, nor do there appear to be any potential architectural resources on the project sites that appear to meet the criteria for S/NR listing or for NYCL designation. However, there are multiple known architectural resources in the vicinity of the project sites. These resources include: the High Line (S/NR-eligible, also within the West Chelsea Historic District); the former W&J Sloane Warehouse and Garage (S/NR-eligible) at 306 Eleventh Avenue/ 541-561 West 29th Street; the former manufacturing building at 550 West 29th Street; the West Chelsea Historic District (S/NR, NYCL), the New

York Terminal Warehouse on the block bounded by West 28th and West 27th Streets and Eleventh and Twelfth Avenues; and the two-story former stable building at 554 West 28th Street (S/NR-eligible, also within the West Chelsea Historic District).

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

- Identify, map, and describe known architectural resources on the project sites and within a 400-foot study area surrounding the project sites.
- Conduct a field survey of the study area to determine whether there are any potential architectural resources that could be affected by the proposed projects. Potential architectural resources comprise properties that appear to meet the eligibility criteria for NYCL designation and/or S/NR listing. Map and briefly describe any potential architectural resources in the study area.
- Assess the potential impacts of the proposed actions on any identified architectural resources, including visual and contextual changes as well as any direct physical impacts. Potential impacts will be evaluated through a comparison of the future no action condition and future with action condition, and a determination made as to whether any change would alter or eliminate the significant characteristics of the resource that make it important.
- If applicable, develop measures in consultation with LPC to avoid, minimize, or mitigate any adverse impacts on historic and cultural resources.

TASK 8: URBAN DESIGN AND VISUAL RESOURCES

According to the methodologies of the *CEQR Technical Manual*, if a project requires actions that would result in physical changes to a project site beyond those allowed by existing zoning and which could be observed by a pedestrian from street level, a preliminary assessment of urban design and visual resources should be prepared. The proposed actions involve a rezoning that would increase the allowable density and would change the urban design and visual character of the project sites. Therefore, a preliminary assessment of urban design and visual resources will be prepared to determine whether the proposed actions, in comparison to the No Action condition, would create a change to the pedestrian experience that is sufficiently significant to require greater explanation and further study.

The analysis will be undertaken based on the *CEQR Technical Manual* methodologies, as follows:

- Following the guidelines of the *CEQR Technical Manual*, the study area will be consistent with the study area for the analysis of land use, zoning and public policy with a particular focus on the area within 1/4-mile of the project sites. A description of visual resources in the area and view corridors, if any, will be provided.
- The preliminary assessment will include a narrative and graphics depicting the existing project area, the future No Action condition, and the future With Action condition.
- The preliminary assessment will determine whether the proposed actions, in comparison to the No Action condition, would create a change in the pedestrian experience that would result in significant adverse impacts to urban design and visual resources.

A detailed urban design and visual resources analysis will be prepared if warranted based on the findings of the preliminary assessment. Examples of projects that may require a detailed analysis are those that would make substantial alterations to the streetscape of a neighborhood by noticeably changing the scale of buildings, potentially obstruct view corridors, or compete with

icons in the skyline. The detailed analysis would describe the proposed projects and the urban design and visual resources of the surrounding area. The analysis would describe the potential changes that could occur to urban design and visual resources in the With Action condition, in comparison to the No Action condition, focusing on the changes that could negatively affect a pedestrian's experience of the area.

If necessary, mitigation measures to avoid or reduce potential significant adverse impacts will be identified.

TASK 9: HAZARDOUS MATERIALS

A hazardous materials assessment determines whether a proposed action may increase the exposure of people or the environment to hazardous materials and, if so, whether this increased exposure would result in potential significant public health or environmental impacts. The potential for significant impacts related to hazardous materials can occur when: a) elevated levels of hazardous materials exist on a site and the project would increase pathways to human or environmental exposure; b) a project would introduce new activities or processes using hazardous materials and the risk of human or environmental exposure is increased; or c) the project would introduce a population to potential human or environmental exposure from off-site sources.

The hazardous materials section will examine the potential for significant hazardous materials impacts from the proposed actions. The EIS will include a discussion of the sites' history and current environmental conditions. Phase I Environmental Site Assessments (ESAs) for the project sites that include the review of historic Sanborn maps, regulatory databases, and a site reconnaissance will be summarized in the hazardous materials chapter. If needed, additional hazardous materials studies (e.g., Phase II Environmental Site Investigation) will also be performed. The chapter will include a discussion of the proposed projects' potential to result in significant adverse hazardous materials impacts and, if necessary, will include a description of any additional testing, remediation, or other measures that would be necessary to avoid impacts.

TASK 10: WATER AND SEWER INFRASTRUCTURE

According to the *CEQR Technical Manual*, a water and sewer infrastructure assessment analyzes whether a proposed project may adversely affect New York City's water distribution or sewer system and, if so, assess the effects of such projects to determine whether their impact is significant, and present potential mitigation strategies and alternatives. Because the proposed projects would introduce an incremental increase above the No Action condition of more than 1,000 residential units and is located in a combined sewer area within Manhattan, an analysis of water and sewer infrastructure is warranted. This analysis will consist of the following:

- A description of the existing stormwater drainage system and surfaces (pervious or impervious) on the project sites and of the existing sewer system that serves the project sites (based on records obtained from the New York City Department of Environmental Protection (DEP)).
- A description of any changes to the project sites' stormwater drainage system, the project sites' surface area, and the area's sewer system that are expected in the No Action condition.
- An analysis of potential project impacts that will consist of the identification and assessment of the effects of the incremental With Action sanitary and stormwater flows on the capacity of the sewer infrastructure. The DEP volume calculation worksheet will be prepared. Any best management practices to be included as part of the proposed projects will be described.

TASK 11: SOLID WASTE AND SANITATION SERVICES

A solid waste assessment determines whether an action has the potential to cause a substantial increase in solid waste production that may overburden available waste management capacity or otherwise be inconsistent with the City's Solid Waste Management Plan or with State policy related to the City's integrated solid waste management system. The proposed projects would bring new populations that would require sanitation services. If a project's generation of solid waste in the With Action condition would not exceed 50 tons per week, it may be assumed that there would be sufficient public or private carting and transfer station capacity in the metropolitan area to absorb the increment, and further analysis generally would not be required. This chapter will provide an estimate of the additional solid waste expected to be generated by the proposed projects and assess potential effects on the City's solid waste and sanitation services. This assessment will:

- Describe existing and future New York City solid waste disposal practices.
- Estimate solid waste generation in the existing, No Action, and With Action conditions.
- Assess the impacts of the proposed actions' solid waste generation on the City's collection needs and disposal capacity. The proposed actions' consistency with the City's Solid Waste Management Plan will also be assessed.

TASK 12: ENERGY

According to the *CEQR Technical Manual*, because all new structures requiring heating and cooling are subject to the New York State Energy Conservation Code (which reflects State and City energy policy), actions resulting in new construction would not create significant energy impacts, and as such would not require a detailed energy assessment. For CEQR purposes, energy impact analyses focuses on an action's consumption of energy. A qualitative assessment will be provided in the EIS, as appropriate, including an estimate of the additional energy consumption associated with the proposed projects

TASK 13: TRANSPORTATION

The transportation analysis will be undertaken pursuant to the methodologies outlined in the *CEQR Technical Manual*. This analysis will begin with the projection of travel demand estimates to identify transportation elements that would be subject to the evaluation of potential impacts, will present the collection of baseline data, and will continue with detailed analyses of existing and future conditions. Where necessary, improvement measures will be explored to address significant adverse impacts identified by the detailed analyses.

TRAVEL DEMAND PROJECTIONS AND SCREENING ASSESSMENTS

Travel demand estimates and a transportation screening analysis will be prepared and summarized in a Travel Demand Factors (TDF) Memorandum (a draft of the TDF Memorandum is attached). Detailed trip estimates will be developed using standard sources, including the *CEQR Technical Manual*, U.S. census data, approved studies, and other references. The trip estimates (Level-1 screening assessment) will be prepared for the weekday peak hours, identifying total peak hour person-trips and estimated trips made by different modes of transportation (i.e., auto, taxi, rail, subway, bus, and walk only, etc.).

The *CEQR Technical Manual* states that a quantified transportation analysis may be warranted if a proposed action results in more than 50 vehicle-trips and/or 200 transit or pedestrian trips during a given peak hour. The *CEQR Technical Manual* also indicates that the analysis should

include intersections at the four corners of a typical square block site even though the assigned trips may be less than the established thresholds. The information presented in the draft TDF memo will be reviewed with the lead agency and involved expert agencies, such as the New York City Department of Transportation (DOT) and/or New York City Transit (NYCT). For technical areas determined to require further detailed analyses (i.e., traffic, parking, transit, and/or pedestrians), those analyses will be prepared in accordance with *CEQR Technical Manual* procedures.

In addition to trip estimates, detailed vehicle, transit, and pedestrian trip assignments (Level-2 screening assessment) will be prepared to determine if quantified analyses are warranted for traffic, transit, and pedestrians. As part of the vehicle trip assignment effort, an evaluation of the area's parking supply and utilization, as described below, will be conducted.

Traffic

As discussed above, the proposed projects are expected to yield traffic increments that would require a detailed analysis of area intersections. This analysis will be prepared for the weekday AM, midday, and PM peak hours to identify potential significant adverse traffic impacts. Where necessary, feasible traffic mitigation measures will be explored for DOT approval and implementation. Based on preliminary trip estimates and in consultation with DOT, the traffic study area is expected to comprise of four analysis intersections—Eleventh Avenue and West 29th Street, Eleventh Avenue and West 30th Street, Twelfth Avenue and West 29th Street, and Twelfth Avenue and West 30th Street. This list of study area intersections is preliminary and is subject to change based on findings made from the travel demand estimates, traffic distribution, and assignment patterns, as well as crash data.

Data Collection and Baseline Traffic Volumes

Data collection efforts will be undertaken pursuant to CEQR Technical Manual guidelines. The traffic data collection program will include 9-day automatic traffic recorder (ATR) counts, intersection turning movement counts, vehicle classification counts, conflicting bike/pedestrian volumes, curbside parking activities, and an inventory of existing roadway geometry (including street widths, traffic flow directions, lane markings, curbside regulations, bus stop locations, etc.) and traffic control. Official signal timing data will be obtained from DOT for incorporation into the capacity analysis described below. Using the collected traffic data, balanced traffic volume networks will be developed for the weekday AM, midday, and PM peak hours.

Existing Conditions Capacity Analysis

The traffic analysis will be performed using the 2000 Highway Capacity Manual (HCM) procedures and the Highway Capacity Software (HCS+) version 5.5. Analysis results for the weekday AM, midday, and PM peak hours will be tabulated to show intersection, approach, and lane group volume-to-capacity (v/c) ratio, average vehicle delay, and level-of-service (LOS).

No Action Condition Analysis

The future No Action traffic volumes will incorporate CEQR Technical Manual recommended background growth plus trips expected to be generated by nearby development projects. The same intersections selected for analysis under existing conditions will be assessed to identify changes in v/c ratio, average vehicle delay, and LOS. The analysis of these intersections under the No Action condition will also incorporate any planned changes to the roadway network.

With Action Condition Analysis

Incremental vehicle trips associated with the proposed projects will be overlaid onto the No Action peak hour traffic networks for analysis of potential impacts. Vehicle movements found to incur delays exceeding the CEQR Technical Manual thresholds will be described. For these locations, traffic engineering improvement measures will be explored to mitigate the identified significant adverse traffic impacts to the extent practicable.

PARKING

With regard to parking, projected growth and additional demand from the proposed projects will be overlaid onto the existing supply and utilization levels for an area within ¼-mile of the project sites to determine if there is a potential for a parking shortfall. As with the traffic impact analysis, this parking study will be conducted for the weekday peak periods.

TRANSIT

For transit, the preliminary trip estimates conducted for the Transportation Demand Forecast (TDF) memo show that a line-haul analysis would be warranted for the No. 7 subway line; however, this analysis would not be warranted for nearby bus services. Critical station elements (i.e., stairs and escalators for vertical circulation and turnstiles and gates at control areas) of the new No. 7 train–Hudson Yards station will also need to be evaluated for potential impacts. This assessment will be performed for the weekday AM and PM commuter peak periods, following the same procedure described above for traffic.

PEDESTRIANS

To address potential pedestrian-related impacts, a quantified pedestrian analysis will be conducted for a study area of pedestrian elements determined by the Level-2 screening. These pedestrian elements are anticipated to include numerous corner reservoirs and crosswalks at the West 29th, West 30th, and West 33rd Street intersections with Eleventh Avenue, as well as some of their connecting sidewalks. Similar to what was described above for traffic, pedestrian analyses will be prepared for the existing, No Action, and With Action conditions at these study area elements to identify potential impacts and recommend feasible mitigation measures where needed.

VEHICULAR AND PEDESTRIAN SAFETY

In connection with preparing the traffic and pedestrian impact analyses, a study of vehicular and pedestrian safety at the study area intersections will be undertaken to identify any safety issues and to recommend safety improvement measures where appropriate. For this effort, the latest three years of crash data will be obtained to identify, if any, high crash locations, where a more in-depth review of safety issues will be undertaken. At these locations, the effects from increased vehicular and pedestrian traffic from the proposed projects will also be assessed and potential measures that could be implemented to improve safety will be identified.

TASK 14: AIR QUALITY

The vehicle trips generated by the proposed projects would likely be below the *CEQR Technical Manual* carbon monoxide (CO) screening threshold of 170 vehicles in a peak hour at any intersection. The proposed projects are unlikely to exceed the particulate matter (PM) emission screening threshold discussed in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*. Therefore, it is anticipated that the mobile source air quality analysis will include a screening analysis; if screening thresholds are exceeded, a detailed mobile source analysis will

be prepared. A mobile source air quality screening will be performed considering all requirements of Section 210 of the *CEQR Technical Manual*.

An assessment of the potential CO and PM impacts associated with proposed parking facilities will be performed. Information on the conceptual design of the parking facilities will be employed to determine potential off-site impacts from emissions. Cumulative impacts from on-street sources and emissions from the proposed parking facilities will be calculated, where appropriate. Future pollutant levels with the proposed projects will be compared with the CO NAAQS and the City's CO and PM *de minimis* guidance criteria to determine the impacts of the proposed projects.

Potential impacts from the heating and hot water systems that would serve the proposed projects on surrounding uses (project-on-neighborhood) as well as proposed project buildings (project-on-project) will be assessed using the *CEQR Technical Manual* screening analysis. A screening analysis will be performed to determine whether emissions from any on-site fuel-fired heat and hot water systems (for example, boilers or hot water heaters) are significant. The screening analysis will use the procedures outlined in the *CEQR Technical Manual* that consider the distance of the heat and hot water system exhaust to the nearest building of equal or greater height, the proposed building size, the height of the exhaust and the type of fuel used. A screening analysis will also be performed using EPA's AERSCREEN model to determine whether there are any potential significant adverse impacts with respect to the 1-hour nitrogen dioxide (NO_2) NAAQS, as well as the CEQR *de minimis* criteria for $PM_{2.5}$, and, if fuel oil is proposed to be used, the 1-hour sulfur dioxide (SO_2) ambient air quality standard would be analyzed.

If either project's heat and hot water system fails the screening analysis, a detailed stationary source analysis will be performed using EPA's AERMOD dispersion model, using available design information and five years of meteorological data. Five years of recent meteorological data, consisting of surface data from LaGuardia, and concurrent upper air data from Brookhaven, New York, will be used for the simulation modeling. Concentrations of the air contaminants of concern (i.e., PM, NO_2 and SO_2) will be determined at ground level receptors as well as elevated receptors representing floors on the proposed building. Predicted values will be compared with NAAQS, and if required, the City's $PM_{2.5}$ *de minimis* criteria.

The effect of existing large and major sources on the proposed projects will be analyzed, if required based on the methodology outlined in the CEQR Technical Manual.

The rezoning would allow residential development in an area adjacent to manufacturing zoning. Therefore, a field survey and review of surrounding land uses in the project area (i.e., within 400 feet) will be conducted to determine the potential for impacts from industrial source emissions. The DEP's Bureau of Environmental Compliance (BEC) files will be examined to determine if there are permits to construct or certificates to operate for any industrial facilities that are identified. A review of federal and state air emission permits and registrations will also be conducted. If sources of concern within the manufacturing zone are identified through the site survey and permit search, a screening analysis will be performed following the *CEQR Technical Manual* methodology.

TASK 15: CLIMATE CHANGE RESILIENCY AND GHG EMISSIONS

In accordance with the *CEQR Technical Manual*, greenhouse gas (GHG) emissions generated by the proposed projects will be quantified, and an assessment of consistency with the City's established GHG reduction goal will be prepared. Emissions will be estimated for the analysis year and reported as carbon dioxide equivalent (CO_2e) metric tons per year. GHG emissions

other than carbon dioxide (CO_2) will be included if they would account for a substantial portion of overall emissions, adjusted to account for the global warming potential.

Relevant measures to reduce energy consumption and GHG emissions that could be incorporated into the proposed projects will be discussed, and the potential for those measures to reduce GHG emissions from the proposed projects will be assessed to the extent practicable.

Since the proposed projects would be in a current and future flood hazard zone, the potential impacts of climate change on the proposed projects will be evaluated. The discussion will focus on sea level rise and changes in storm frequency projected to result from global climate change and the potential future impact of those changes on project infrastructure and uses.

The analysis will consist of the following subtasks:

Climate Change Resiliency Assessment

- The potential effects of climate change on the proposed projects will be evaluated based on the best available information. The evaluation will focus on potential future sea and storm levels and the interaction with project infrastructure and uses. The discussion will focus on early integration of climate change considerations into the project design to allow for uncertainties regarding future environmental conditions resulting from climate change.

Greenhouse Gas Emissions Evaluation

- Direct Emissions—GHG emissions from on-site boilers used for heat and hot water, natural gas used for cooking, and fuel used for on-site electricity generation, if any, will be quantified. Emissions will be based on available project-specific information regarding the project's expected fuel use or carbon intensity factors specified in the *CEQR Technical Manual*.
- Indirect Emissions—GHG emissions from purchased electricity and/or steam generated off-site and consumed on-site during the project's operation will be estimated.
- Indirect Mobile Source Emissions—GHG emissions from vehicle trips to and from the project sites will be quantified using trip distances and vehicle emission factors provided in the *CEQR Technical Manual*.
- Emissions from project construction and emissions associated with the extraction or production of construction materials will be qualitatively discussed. Opportunities for reducing GHG emissions associated with construction will be considered.
- Design features and operational measures to reduce the proposed projects' energy use and GHG emissions will be discussed.
- Consistency with the City's GHG reduction goal will be assessed. While the City's overall goal is to reduce GHG emissions by 30 percent below 2005 level by 2025, individual project consistency is evaluated based on building energy efficiency, proximity to transit, on-site renewable power and distributed generation, efforts to reduce on-road vehicle trips and/or to reduce the carbon fuel intensity or improve vehicle efficiency for project-generated vehicle trips, and other efforts to reduce the project's carbon footprint.

TASK 16: NOISE

The noise analysis will examine the impacts of project-generated traffic on noise-sensitive land uses near the project sites and the effects of noise generated by existing noise sources on the proposed projects building. Existing noise levels adjacent to the project sites are relatively high due to traffic on Route 9A (Twelfth Avenue) and Eleventh Avenue and local streets.

Consequently, the focus of the noise analysis will be to identify the levels of building attenuation necessary to meet CEQR interior noise levels requirements. The required level of building attenuation will be specified and the general recommendations for meeting the requirements will be provided.

Additionally, potential noise effects on the proposed projects from construction and operation of the new Hudson Tunnel will be described based on information provided in the Hudson Tunnel DEIS.

Specifically, the proposed analysis will include the following tasks:

- Select appropriate noise descriptors for the existing noise environment. The L_{eq} and L_{10} levels will be the primary noise descriptors used for the EIS analysis. Other noise descriptors including the L_1, L_{10}, L_{50}, L_{90}, L_{min}, and L_{max} levels will be examined when appropriate.
- Based on the traffic studies, perform a screening analysis to determine whether there are any locations where there is the potential for the proposed projects to result in significant noise impacts (i.e., doubling of Noise PCEs) due to project generated traffic.
- Select receptor locations in consultation with the Department of City Planning for building attenuation analysis purposes. The noise receptor locations will be selected to provide geographic coverage of the project area and to represent the locations most likely to experience increased noise as a result of the proposed projects or represent the locations of newly introduced noise receptors that would experience high levels of noise exposure.
- Perform 20-minute measurements at each receptor location during typical weekday AM, midday, and PM peak periods. L_1, L_{10}, L_{50}, L_{90}, L_{min}, and L_{max} values will be recorded. Data analysis and reduction. The results of the noise measurement program will be analyzed and tabulated.
- Determine future noise levels without and with the proposed actions. At each of the receptor locations identified above, determine noise levels without and with the proposed actions using existing noise levels, acoustical fundamentals, and mathematical models. Noise exposure from the adjacent Western Rail Yards will be evaluated using the Federal Transit Administration (FTA) guidance methodology for rail yards.
- Compare noise levels with standards, guidelines, and other impact evaluation criteria. Compare existing noise levels and future noise levels, both with and without the proposed actions, with various noise standards, guidelines, and other appropriate noise criteria.
- Determine the level of attenuation necessary to satisfy CEQR criteria. The level of building attenuation necessary to satisfy CEQR requirements is a function of exterior noise levels. Projected noise levels in the future with the proposed actions will be compared to appropriate standards and guideline levels. As necessary, recommendations regarding general noise attenuation measures needed for the proposed projects to achieve compliance with standards and guideline levels will be made. If noise exposure at the project buildings in the future with the proposed actions are in the relatively high range, development would be required to provide acoustically rated windows together with some kind of alternate ventilation—that does not degrade the acoustical performance of the façade—to achieve acceptable interior noise levels.

TASK 17: PUBLIC HEALTH

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

TASK 18: NEIGHBORHOOD CHARACTER

Neighborhood character is determined by a number of factors, including land use, socioeconomic conditions, open space, historic and cultural resources, urban design, visual resources, shadows, transportation, and noise. According to the guidelines of the *CEQR Technical Manual,* an assessment of neighborhood character is generally needed when a proposed project has the potential to result in significant adverse impacts in one of the technical areas presented above, or when a project may have moderate effects on several of the elements that define a neighborhood's character. Therefore, if warranted based on an evaluation of the proposed projects' impacts, an assessment of neighborhood character will be prepared following the methodologies outlined in the *CEQR Technical Manual*. The analysis would begin with a preliminary assessment, which would involve identifying the defining features of the area that contribute to its character. If the preliminary assessment establishes that the proposed actions would affect a contributing element of neighborhood character, a detailed assessment will be prepared to examine the potential neighborhood character-related effects of the proposed actions through a comparison of future conditions both with and without the proposed actions.

TASK 19: CONSTRUCTION IMPACTS

Construction impacts, though temporary, can have a disruptive and noticeable effect on the adjacent community, as well as people passing through the area. Construction activity could affect transportation conditions, community noise patterns, air quality conditions, and mitigation of hazardous materials. According to the *CEQR Technical Manual,* a large-scale development project with an overall construction period lasting longer than two years and that is near to sensitive receptors (i.e., residences, open spaces, etc.) should undergo a construction impact assessment. The construction chapter will describe the preliminary construction schedule and logistics for the proposed actions, as well as discuss anticipated on-site activities and provide estimates of construction workers and truck deliveries for the two project sites. As appropriate, this chapter of the EIS will present relevant information from the DEIS that is being prepared for the Hudson Tunnel Project.

Technical areas to be analyzed include:

- *Transportation Systems*. This assessment will consider losses in lanes, sidewalks, off-street parking on the project sites, and effects on other transportation services (i.e., transit and pedestrian circulation) during the construction period, and identify the increase in vehicle trips from construction workers and equipment. Based on the trip projections of activities associated with peak construction, an assessment of potential impacts during construction and how they are compared to the trip projections under the operational condition will be provided. If this effort identifies an exceedance of the *CEQR Technical Manual* quantified transportation analyses thresholds (50 or more vehicle-trips and/or 200 or more transit/pedestrian trips during a given peak hour), a detailed analysis would be conducted. If a detailed construction traffic impact analysis is determined to be warranted, it will be

prepared to identify potential impacts during peak construction of the proposed projects. Construction activities associated with the Hudson Tunnel Project during the proposed projects' peak construction will be described, as appropriate based on information provided in the Hudson Tunnel DEIS

- *Air Quality*. A detailed dispersion modeling analysis of construction sources will be performed to determine the potential for air quality impacts on sensitive receptor location (i.e., residences, open spaces such as the High Line, and if applicable, completed and occupied project building). Air pollutant sources would include combustion exhaust associated with non-road construction engines and trucks operating on-site, construction-generated traffic on local roadways, as well as onsite activities that generate fugitive. The pollutants of concern include CO, PM, and NO_2. The potential for significant impacts will be determined by a comparison of model predicted total concentrations to the NAAQS, or by comparison of the predicted increase in concentrations to applicable interim guidance thresholds. The air quality analysis will also include a discussion of the strategies to reduce project related air pollutant emissions associated with construction activities. Similar to transportation, construction activities associated with the Hudson Tunnel will be described, as appropriate, based on information provided in the Hudson Tunnel DEIS.
- *Noise and Vibration*. The construction noise impact section will contain a quantitative (modeling) analysis of noise from the proposed projects' construction activity. Appropriate recommendations will be made such that construction activities comply with the DEP Rules for Citywide Construction Noise Mitigation and the New York City Noise Control Code. The detailed analysis will estimate construction noise levels based on projected activity and equipment usage for various phases of construction on the project sites. The projected construction noise levels will be compared to existing condition noise levels as determined by a noise survey. The noise analysis will identify potential construction noise impacts based on the intensity, duration, and location of emissions relative to nearby sensitive locations (i.e., residences, open spaces such as the High Line, and if applicable, completed and occupied project building). As necessary, feasible and practicable project-specific control measures to further reduce construction noise disruption to the surrounding community will be considered. Additionally, noise conditions during construction of the proposed projects and the new Hudson Tunnel will be described, as appropriate, based on information provided in the Hudson Tunnel DEIS.

  Construction activities have the potential to result in vibration levels that may result in structural or architectural damage, and/or annoyance or interference with vibration-sensitive activities. A construction vibration assessment will be performed. This assessment will determine critical distances at which various pieces of equipment may cause damage or annoyance to nearby buildings based on the type of equipment, the building construction, and applicable vibration level criteria. Should it be necessary for certain construction equipment to be located closer to a building than its critical distance, vibration mitigation options will be proposed.
- *Hazardous Materials*. In coordination with the hazardous materials summary, determine whether the construction of the project has the potential to expose construction workers to contaminants.
- *Other Technical Areas*. As appropriate, discuss other areas of environmental assessment for potential construction-related impacts.

TASK 20: MITIGATION

Where significant adverse project impacts have been identified for the proposed actions, measures to mitigate those impacts will be identified and described. The mitigation chapter will address the anticipated impacts requiring mitigation, likely mitigation measures, and the timing of the mitigation measures. Where impacts cannot be practicably mitigated, they will be disclosed as unavoidable adverse impacts.

TASK 21: ANALYSIS OF PROJECT PERMUTATIONS

Where significant adverse impacts and mitigation needs have been identified under the cumulative impact analysis of the two projects, further detail will be provided to identify the mitigation requirements for each project. In order to understand how the cumulative impacts of the proposed projects might change if one of the two projects is delayed indefinitely or ultimately not pursued, the EIS will also provide an analysis of such permutations in a separate chapter. The analysis will be limited to evaluating specific locations or facilities for which impacts and mitigation needs have been identified under the cumulative impact analysis of both projects. The assessments for the relevant technical areas will be targeted to focus on those impacts.

TASK 22: ALTERNATIVES

The purpose of an alternatives analysis is to examine reasonable and feasible options that avoid or reduce project-related significant adverse impacts and achieve the stated goals and objectives of the proposed actions. The EIS will include an analysis of the following alternatives:

- A No Action Alternative, which is considered throughout the EIS as the No Action condition;
- A No Unmitigated Significant Adverse Impacts Alternative; and
- Other possible alternatives that may be developed during the EIS preparation process.

The specifics of these alternatives will be finalized as project impacts become clarified. The description and evaluation of each alternative will be provided at a level of detail sufficient to permit a comparative assessment of each alternative discussed.

TASK 23: EIS SUMMARY CHAPTERS

In accordance with *CEQR Technical Manual* guidelines, the EIS will include the following summary chapters:

- Unavoidable Adverse Impacts—which summarizes any significant adverse impacts that are unavoidable if the proposed actions are implemented regardless of the mitigation employed (or if mitigation is not feasible or practicable);
- Growth-Inducing Aspects of the proposed actions—which generally refers to "secondary" impacts of a proposed project that trigger further development; and
- Irreversible and Irretrievable Commitments of Resources—which summarizes the proposed actions and their impacts in terms of the loss of environmental resources (i.e., use of fossil fuels and materials for construction, etc.), both in the immediate future and in the long term.
- Executive Summary—which will use relevant material from the body of the EIS to describe the proposed actions, its significant and adverse environmental impacts, measures to mitigate those impacts, and alternatives to the proposed projects. ✷

DRAFT TRAVEL DEMAND FACTORS (TDF) MEMORANDUM

AKRF

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Draft Travel Demand Factors (TDF) Memorandum

To:	Project File
From:	AKRF, Inc.
Date:	April 12, 2017
Re:	Block 675 East (CEQR Project ID No. 17DCP159M) Travel Demand Analysis

A. INTRODUCTION

This memorandum details the trip generation assumptions and travel demand estimates for the proposed developments on the eastern end of Block 675, Lots 12, 29, 36, 38, and 39 in the West Chelsea neighborhood of Manhattan. The two project sites—project site A (601 West 29th Street) and project site B (606 West 30th Street)—as well as Lot 38 are located in Manhattan Community District 4, on a block bounded by West 30th Street to the north, Eleventh Avenue to the east, West 29th Street to the south, and Twelfth Avenue to the west. **Table 1** provides a summary of the incremental development subject to the evaluation of potential transportation-related impacts.

PROJECT SITE A

Project site A currently contains a Mobil Gas station facing West 30th Street and a surface parking lot (Lot 36); a two-story office building, an art studio space, and a four-story loft building (Lot 12); and a single-story garage with frontage on West 29th Street (Lot 29). In the future without the proposed actions (the No Action condition), the project site's existing uses are assumed to remain. Specifically, the gasoline filling station (1,056 sf of building on a 9,875 sf lot), industrial buildings used as an artist's studio and offices (43,859 gsf), and a Department of Sanitation of New York (DSNY) staff building (11,950) and a parking area (21,675 sf) used as an office and worker lounge, are expected to remain on site. The Port Authority of New York and New Jersey (PANYNJ) is assumed to retain their portion of the project site that is currently used as a storage lot. As shown in **Table 1**, in the future with the proposed actions (the With Action condition), the proposed development would include up to 990 residential units, approximately 15,000-gsf of local retail uses, a 12,500-gsf government facility (anticipated as a FDNY-EMS Station), and a parking structure of up to 198 parking spaces. The residential entrance would be located on the corner of Eleventh Avenue and West 29th Street. The proposed local retail use would be located on the ground level of the building fronting Eleventh Avenue and West 30th Street. Parking for the proposed development would be located on the ground level, behind the development mid-block, with access along West 29th Street between Eleventh and Twelfth Avenues. The proposed FDNY-EMS Station would have entry on West 29th Street, with most of the use located on the ground floor.

DRAFT

Table 1
Development Program Assumptions (gsf) – Block 675 East

Uses	No Action Condition	With Action Condition	Increment for Analysis
Project Site A			
Commercial/DSNY	56,865	Up to 15,000	-41,865
Residential	—	Up to 905,000 (up to 990 units)	+905,000 (up to 990 units)
EMS Facility	—	Up to 12,500	+12,500
Parking	—	Up to 198 spaces	Up to 198 spaces
Project Site A Subtotal	**56,865**	**Up to 960,000**	**+903,135**
Project Site B			
Industrial (Vehicle Storage Maintenance)	16,052		-16,052
Commercial		20,732	+20,732
Residential	—	175,393 (206 units)	+175,393
Parking/Mechanical	—	33,032 (42 spaces)	+33,032
Project Site B Subtotal	**16,052**	**229,157**	**+213,105**
Lot 38[1]			
Industrial (Auto Repair)	2,469	—	-2,469
Commercial	—	3,454	+3,454
Residential	—	29,224 (34 units)	+29,224
Parking/Mechanical	—	5,504 (6 spaces)	+5,504
Lot 38 Subtotal	**2,469**	**38,183**	+35,713
Rezoning Areas Total			
Industrial	18,521	—	-18,521
Commercial/DSNY	56,865	39,186	-17,679
Residential	—	1,109,617 (1,230 units)	+1,109,617
EMS Facility	—	12,500	+12,500
Parking/Mechanical	—	66,036 (246 spaces)	+66,036
Rezoning Areas Total	**75,386**	**1,227,339**	**+1,151,953**

Note: [1] There is no proposal to develop Lot 38 at this time. However, because Lot 38 is in the rezoning areas, its potential to be redeveloped under the proposed rezoning will be conservatively considered as part of the environmental review.
Source: Project site A FXFOWLE Architects, September 2016; Project site B and Lot 38 Ismael Leyva Architects, March 2017.

Table 2 provides a summary of the development program assumptions for project site A under the future With Action (Residential and EMS Scenario) condition. Although it is anticipated that the EMS facility would be developed at the site as part of the proposed actions, an alternative scenario was considered in the event such an agreement is not made. Under this development scenario, project site A would include up to 990 residential units, approximately 15,000-gsf of local retail uses, and a parking structure of up to 198 parking spaces. **Table 3** provides a summary of the development program assumptions for project site A under the future With Action (Alternative Scenario [No EMS]) condition.

Table 2
Future With Action (Residential and EMS Scenario)
Development Program Assumptions – Project Site A

Components	Future With Action
Residential (dwelling units)	Up to 990
Local Retail (gsf)	15,000
EMS Facility (gsf)	12,500
# of Parking Spaces	Up to 198
Source: FXFOWLE Architects, September 2016	

Table 3
Future With Action (Alternative Scenario [No EMS])
Development Program Assumptions – Project Site A

Components	Future With Action
Residential (dwelling units)	Up to 990
Local Retail (gsf)	15,000
# of Parking Spaces	Up to 198
Source: FXFOWLE Architects, September 2016	

A comparison of the development scenarios shows that the Residential and EMS scenario would represent the overall worst-case for evaluating transportation-related impacts. The Alternative [No EMS] scenario would yield the same residential and local retail trips, but no EMS trips, and would therefore be less impactful than the Residential and EMS scenario. Projected trips associated with the future With Action (Residential and EMS Scenario) condition were evaluated and subjected to the screening assessments described below. For conservative analysis purposes in determining incremental trip generation associated with project site A, credit was not taken for trips associated with existing uses, which are instead included as part of the background.

PROJECT SITE B

Project site B (Lot 39) currently contains a one-story, approximately 16,052-gsf building used for vehicle maintenance and storage. In the future without the proposed actions (the No Action condition), the project site's existing uses are assumed to remain the same. As shown in **Table 1**, in the future with the proposed actions (the With Action condition), the proposed development for project site B would include approximately 206 residential units, 20,732-gsf of local retail uses, and a parking structure of up to 42 parking spaces. The entrances to all proposed uses on project site B would be located along West 30th Street between Eleventh and Twelfth Avenues. For conservative analysis purposes in determining incremental trip generation associated with project site B, credit was not taken for trips associated with existing uses, which are instead included as part of the background.

LOT 38

Lot 38 currently contains a one-story, approximately 2,468-gsf building housing an auto repair shop. In the future without the proposed actions (the No Action condition), the existing uses are assumed to remain the same. Although there is no proposal to develop Lot 38 at this time, since it would be rezoned, its potential to be redeveloped under the proposed zoning will be conservatively considered as part of the screening assessments provided below. As shown in **Table 1**, in the future with the proposed actions (the With Action condition), the proposed development for Lot 38 would include approximately 34 residential units, 3,454-gsf of local retail uses, and a parking structure for up to 6 spaces. For conservative analysis purposes in determining incremental trip generation associated with Lot 38, credit was not taken for trips associated with existing uses, which are instead included as part of the background.

B. TRANSPORTATION PLANNING ASSUMPTIONS

Trip generation factors for the proposed actions were developed based on information from the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, U.S. Census Data, the 2009 *Western Rail Yard FEIS*, and other approved EASs and EISs—as summarized in **Table 4**.

RESIDENTIAL

The daily person trip rate and temporal distribution for the residential component are from the 2014 *CEQR Technical Manual*. Peak period Journey-to-Work (JTW) data from the 2011-2015 U.S. Census Bureau American Community Survey (ACS) for Manhattan census tracts 83, 89, 93, 97, 99, 103, 111, and 117 were used for residential modal splits.

Table 4
Travel Demand Assumptions

Use	Residential			Local Retail			EMS Facility [6]		
Total Daily Person Trip	(1) Weekday 8.075 Trips / DU			(1) Weekday 205 Trips / KSF					
Trip Linkage	0%			25%					
Net Daily Person trip	Weekday 8.075 Trips / DU			Weekday 154 Trips / KSF					
	AM	**MD**	**PM**	**AM**	**MD**	**PM**			
Temporal	(1)			(1)					
	10%	5%	11%	3%	19%	10%			
Direction	(2)			(2)					
In	15%	50%	70%	50%	50%	50%			
Out	85%	50%	30%	50%	50%	50%			
Total	100%	100%	100%	100%	100%	100%			
Modal Split	(3)			(4)			(5)		
	AM	**MD**	**PM**	**AM**	**MD**	**PM**	**AM**	**MD**	**PM**
Auto	6.0%	6.0%	6.0%	2.5%	2.5%	2.5%	18.0%	18.0%	18.0%
Taxi	6.0%	6.0%	6.0%	0.5%	0.5%	0.5%	2.0%	2.0%	2.0%
Subway	42.0%	42.0%	42.0%	16.5%	16.5%	16.5%	51.0%	51.0%	51.0%
Railroad	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	11.0%	11.0%	11.0%
Bus	5.0%	5.0%	5.0%	4.0%	4.0%	4.0%	11.0%	11.0%	11.0%
Walk	38.0%	38.0%	38.0%	76.5%	76.5%	76.5%	7.0%	7.0%	7.0%
Other	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
Vehicle Occupancy	(2, 3) Weekday / Saturday			(2) Weekday / Saturday					
Auto	1.13			1.65					
Taxi	1.40			1.40					
Daily Delivery Trip Generation Rate	(1) Weekday 0.06 Delivery Trips / DU			(1) Weekday 0.35 Delivery Trips / KSF					
	AM	**MD**	**PM**	**AM**	**MD**	**PM**			
Delivery Temporal	(1)			(1)					
	12%	9%	2%	8%	11%	2%			
Delivery Direction	(1)			(1)					
In	50%	50%	50%	50%	50%	50%			
Out	50%	50%	50%	50%	50%	50%			
Total	100%	100%	100%	100%	100%	100%			

Sources:
(1) 2014 *CEQR Technical Manual*
(2) *Western Rail Yard FEIS* (2009)
(3) U.S. Census Bureau, ACS 2011-2015 Five-Year Estimates - Journey-to-Work (JTW) Data
(4) NYCDOT Trip Generation and Mode Choice Study
(5) U.S. Census Bureau, ACS 2006-2010 Five-Year Estimates - Reverse-Journey-to-Work (RJTW) Data
(6) Trip Generation Rates developed from *FDNY/EMS Emergency Ambulance Deployment Matrix* provided by FDNY.

The directional distribution for all peak periods is from the 2009 *Western Rail Yard FEIS*. The vehicle occupancies are from the 2011-2015 U.S. Census ACS for Autos and from the *Western Rail Yard FEIS* for Taxis. The daily delivery trip rate and temporal and directional distributions are from the 2014 *CEQR Technical Manual*.

LOCAL RETAIL

The daily trip generation and delivery vehicle trip generation rates for the local neighborhood retail component were obtained from the 2014 *CEQR Technical Manual*. In line with accepted City practice, a 25-percent linked trip credit was applied to the local retail trip generation estimates. The modal splits were obtained from the New York City Department of Transportation (NYCDOT) Trip Generation and Mode Choice Study. The vehicle occupancies were obtained from the 2009 *Western Rail Yard FEIS*. The temporal and directional distributions for all peak periods were obtained from the 2014 *CEQR Technical Manual* and the *Western Rail Yard FEIS*, respectively. The daily delivery trip rate and temporal and directional distributions are from the 2014 *CEQR Technical Manual*.

EMERGENCY MEDICAL SERVICES (EMS FACILITY)

Trip generation factors for the proposed EMS facility are primarily based on the *FDNY/EMS Emergency Ambulance Deployment Matrix*, which provides information on the daily worker shifts expected at the

facility. The daily staff person trip rate assumes that each EMS staff member would generate one commuting trip in the beginning of their shift and one commuting trip out at the end of their shift. Similarly, one EMS ambulance trip would be generated at the beginning and end of each shift. Based on FDNY/EMS's anticipated shift allocations, the various staff shifts were distributed over the 24-hour period to develop peak hour worker and ambulance trips, as shown in **Table 5**. The modal splits for all peak periods are from the Reverse Journey-to-Work (RJTW) data from the 2006-2010 U.S. Census Bureau ACS for Manhattan census tracts 83, 89, 93, 97, 99, 103, 111, and 117.

Table 5
EMS Facility Staff Peak Hour Trips

Time Period			EMS Facility						
			Staff			Ambulance			Total
Begin	-	End	In	Out	Total	In	Out	Total	Trips
12:00 AM	-	1:00 AM		4	4	2		2	6
1:00 AM	-	2:00 AM		2	2	1		1	3
2:00 AM	-	3:00 AM		4	4	2		2	6
3:00 AM	-	4:00 AM			0			0	0
4:00 AM	-	5:00 AM			0			0	0
5:00 AM	-	6:00 AM	3	1	4		1	1	5
6:00 AM	-	7:00 AM	4	2	6	1	2	3	9
7:00 AM	-	8:00 AM	6	6	12	3	3	6	18
8:00 AM	-	9:00 AM	2	2	4	1	1	2	6
9:00 AM	-	10:00 AM	4		4		2	2	6
10:00 AM	-	11:00 AM			0			0	0
11:00 AM	-	12:00 PM			0			0	0
12:00 PM	-	1:00 PM			0			0	0
1:00 PM	-	2:00 PM	3	1	4		1	1	5
2:00 PM	-	3:00 PM	4	2	6	1	2	3	9
3:00 PM	-	4:00 PM	6	6	12	3	3	6	18
4:00 PM	-	5:00 PM	2	4	6	2	1	3	9
5:00 PM	-	6:00 PM	4	2	6	1	2	3	9
6:00 PM	-	7:00 PM		4	4	2		2	6
7:00 PM	-	8:00 PM			0			0	0
8:00 PM	-	9:00 PM			0			0	0
9:00 PM	-	10:00 PM	3	1	4		1	1	5
10:00 PM	-	11:00 PM	6	2	8	1	3	4	12
11:00 PM	-	12:00 AM	2	6	8	3	1	4	12

C. CEQR TRANSPORTATION ANALYSIS SCREENING

The 2014 *CEQR Technical Manual* identifies procedures for evaluating a proposed project's potential impacts on traffic, transit, pedestrian, and parking conditions. This methodology begins with the preparation of a trip generation analysis to determine the volume of person and vehicle trips associated with the proposed project. The results are then compared with the *CEQR Technical Manual*-specified thresholds (Level 1 screening analysis) to determine whether additional quantified analyses are warranted. If the proposed project would result in 50 or more peak hour vehicle trips, 200 or more peak hour transit trips (200 or more peak hour transit riders at any given subway station or 50 or more peak hour bus trips on a particular route in one direction), and/or 200 or more peak hour pedestrian trips, a Level 2 screening analysis is undertaken. For the Level 2 screening analysis, project-generated trips would be assigned to specific intersections, transit routes, and pedestrian elements. If the results of this analysis show that the proposed project would generate 50 or more peak hour vehicle trips through an intersection, 50 or more peak hour bus riders on a bus route in a single direction, 200 or more peak hour subway passengers at any given station, or 200 or more peak hour pedestrian trips per pedestrian element, further quantified analyses may be warranted to evaluate the potential for significant adverse traffic, transit, pedestrian, and parking impacts.

TRIP GENERATION SUMMARY

As summarized in **Table 6,** the proposed actions are estimated to generate approximately 1,171, 1,638, and 1,702 person trips during the weekday AM, midday, and PM peak hours, respectively. Approximately 151, 92, and 161 vehicle trips would be generated during the same respective time periods.

Table 6
Trip Generation Summary: Incremental Trips
Block 675 East - Project Site A, Project Site B, and Lot 38

Program		Peak Hour	In/Out	Person Trip							Vehicle Trip				
				Auto	Taxi	Subway	Railroad	Bus	Walk	Total	Auto	Taxi	Ambulance	Delivery	Total
Site A	Residential	AM	In	7	7	50	4	6	46	120	6	33	0	4	43
			Out	41	41	285	20	34	258	679	36	33	0	4	73
			Total	48	48	335	24	40	304	799	42	66	0	8	116
		Midday	In	12	12	84	6	10	76	200	11	15	0	3	29
			Out	12	12	84	6	10	76	200	11	15	0	3	29
			Total	24	24	168	12	20	152	400	22	30	0	6	58
		PM	In	37	37	259	18	31	234	616	33	30	0	1	64
			Out	16	16	111	8	13	100	264	14	30	0	1	45
			Total	53	53	370	26	44	334	880	47	60	0	2	109
	Local Retail	AM	In	1	0	6	0	1	26	34	1	0	0	0	1
			Out	1	0	6	0	1	26	34	1	0	0	0	1
			Total	2	0	12	0	2	52	68	2	0	0	0	2
		Midday	In	5	1	36	0	9	168	219	3	2	0	0	5
			Out	5	1	36	0	9	168	219	3	2	0	0	5
			Total	10	2	72	0	18	336	438	6	4	0	0	10
		PM	In	3	1	19	0	5	88	116	2	2	0	0	4
			Out	3	1	19	0	5	88	116	2	2	0	0	4
			Total	6	2	38	0	10	176	232	4	4	0	0	8
	EMS Facility	AM	In	1	0	1	0	0	0	2	1	0	1	0	2
			Out	1	0	1	0	0	0	2	1	0	1	0	2
			Total	2	0	2	0	0	0	4	2	0	2	0	4
		Midday	In	0	0	0	0	0	0	0	0	0	0	0	0
			Out	0	0	0	0	0	0	0	0	0	0	0	0
			Total	0	0	0	0	0	0	0	0	0	0	0	0
		PM	In	2	0	2	0	0	0	4	2	0	1	0	3
			Out	1	0	1	0	0	0	2	1	0	2	0	3
			Total	3	0	3	0	0	0	6	3	0	3	0	6
Site B	Residential	AM	In	1	1	10	1	1	9	23	1	7	0	1	9
			Out	8	8	59	4	7	54	140	7	7	0	1	15
			Total	9	9	69	5	8	63	163	8	14	0	2	24
		Midday	In	2	2	17	1	2	16	40	2	2	0	1	5
			Out	2	2	17	1	2	16	40	2	2	0	1	5
			Total	4	4	34	2	4	32	80	4	4	0	2	10
		PM	In	8	8	54	4	6	49	129	7	6	0	0	13
			Out	3	3	23	2	3	21	55	3	6	0	0	9
			Total	11	11	77	6	9	70	184	10	12	0	0	22
	Local Retail	AM	In	1	0	8	0	2	37	48	1	0	0	0	1
			Out	1	0	8	0	2	37	48	1	0	0	0	1
			Total	2	0	16	0	4	74	96	2	0	0	0	2
		Midday	In	8	2	50	0	12	232	304	5	1	0	0	6
			Out	8	2	50	0	12	232	304	5	1	0	0	6
			Total	16	4	100	0	24	464	608	10	2	0	0	12
		PM	In	4	1	26	0	6	122	159	2	2	0	0	4
			Out	4	1	26	0	6	122	159	2	2	0	0	4
			Total	8	2	52	0	12	244	318	4	4	0	0	8
Lot 38	Residential	AM	In	0	0	2	0	0	2	4	0	1	0	0	1
			Out	1	1	10	1	1	9	23	1	1	0	0	2
			Total	1	1	12	1	1	11	27	1	2	0	0	3
		Midday	In	0	0	3	0	0	3	6	0	0	0	0	0
			Out	0	0	3	0	0	3	6	0	0	0	0	0
			Total	0	0	6	0	0	6	12	0	0	0	0	0
		PM	In	1	1	9	1	1	8	21	1	2	0	0	3
			Out	1	1	4	0	0	3	9	1	2	0	0	3
			Total	2	2	13	1	1	11	30	2	4	0	0	6
	Local Retail	AM	In	0	0	1	0	0	6	7	0	0	0	0	0
			Out	0	0	1	0	0	6	7	0	0	0	0	0
			Total	0	0	2	0	0	12	14	0	0	0	0	0
		Midday	In	1	0	8	0	2	39	50	1	0	0	0	1
			Out	1	0	8	0	2	39	50	1	0	0	0	1
			Total	2	0	16	0	4	78	100	2	0	0	0	2
		PM	In	1	0	4	0	1	20	26	1	0	0	0	1
			Out	1	0	4	0	1	20	26	1	0	0	0	1
			Total	2	0	8	0	2	40	52	2	0	0	0	2
Total		AM	In	11	8	78	5	10	126	238	10	41	1	5	57
			Out	53	50	370	25	45	390	933	47	41	1	5	94
			Total	64	58	448	30	55	516	1,171	57	82	2	10	151
		Midday	In	28	17	198	7	35	534	819	22	20	0	4	46
			Out	28	17	198	7	35	534	819	22	20	0	4	46
			Total	56	34	396	14	70	1,068	1,638	44	40	0	8	92
		PM	In	56	48	373	23	50	521	1,071	48	42	1	1	92
			Out	29	22	188	10	28	354	631	24	42	2	1	69
			Total	85	70	561	33	78	875	1,702	72	84	3	2	161

LEVEL 1 SCREENING

TRAFFIC

As shown in **Table 6**, the incremental trips generated by the proposed actions would be 151, 92, and 161 vehicle trips during the weekday AM, midday, and PM peak hours, respectively. Since the incremental vehicle trips would be greater than 50 vehicles during the weekday AM, midday and PM peak hours, a Level 2 screening assessment (presented in the section below) was conducted to determine if there is a need for additional quantified traffic analyses.

TRANSIT

As shown in **Table 6**, the incremental transit trips generated by the proposed actions would be 448, 396, and 561 person trips by subway during the weekday AM, midday, and PM peak hours, respectively. A Level 2 screening assessment (presented in the section below) was conducted to determine if there is a need for additional quantified subway analyses.

As shown in **Table 6**, the incremental railroad trips generated by the proposed actions would be 30, 14, and 33 person trips by railroad during the weekday AM, midday, and PM peak hours, respectively. Since these increments do not exceed the *CEQR Technical Manual* analysis threshold of 200 peak hour trips made by rail, a detailed analysis of rail facilities is not warranted and the proposed actions are not expected to result in any significant adverse rail impacts.

As shown in the **Table 6**, the incremental bus trips generated by the proposed actions would be 55, 70, and 78 person trips during the weekday AM, midday, and PM peak hours, respectively. Considering that these trips would be further dispersed among the multiple local bus routes serving the study area, including the M11, M12, and M34 SBS routes, no single bus route would exceed the *CEQR Technical Manual* analysis threshold of 50 or more peak hour bus riders in a single direction. Therefore, a detailed bus line-haul analysis is also not warranted and the proposed actions are not expected to result in any significant adverse bus line-haul impacts.

PEDESTRIANS

All person trips generated by the proposed actions would traverse the pedestrian elements surrounding the development sites. As shown in **Table 6**, the net incremental pedestrian trips would be greater than 200 during the weekday AM, midday and PM peak hours. A Level 2 screening assessment (presented in the section below) was conducted to determine if there is a need for additional quantified pedestrian analyses.

LEVEL 2 SCREENING

Based on the above discussions, the Level 2 screening assessment presented below was prepared for the reasonable worst-case development scenario presented in **Table 1**.

SITE ACCESS AND EGRESS

As part of the Level 2 screening assessment, With Action trips were assigned to specific pedestrian elements near the development sites. As previously stated, according to *CEQR Technical Manual* methodology, further quantified analyses to assess the potential impacts of the proposed actions on the transportation system may be warranted if the trip assignments were to identify traffic intersections incurring 50 or more peak hour incremental vehicle trips or pedestrian elements incurring 200 or more peak hour incremental pedestrian trips.

For the proposed building on project site A, the residential entrance would be located on the corner of Eleventh Avenue and West 29th Street. The proposed local retail use would be located on the ground level of the building fronting Eleventh Avenue and West 30th Street. Parking for the proposed development would be located on the ground level, behind the development mid-block, with access along West 29th Street between Eleventh and Twelfth Avenues.

For the proposed buildings on project site B and Lot 38, the residential and retail entrances would be located along West 30th Street between Eleventh and Twelfth Avenues. Similarly, access to parking structures for the proposed developments would be located along West 30th Street between Eleventh and Twelfth Avenues.

TRAFFIC

As shown in **Table 6**, incremental vehicle trips resulting from the proposed actions would exceed the *CEQR* Level-1 screening threshold during the weekday AM, midday and PM peak hours. These vehicle trips were assigned to area intersections based on the most likely travel routes to and from the development sites, prevailing travel patterns, commuter origin-destination (O-D) summaries from the census data, the configuration of the roadway network, and the anticipated locations of site access and egress. The environmental review for the proposed actions will describe how the projected parking demand would be accommodated within the development sites' parking garages. For this preliminary assessment, the auto trips were assigned to the development sites' parking garages. Taxi trips were assigned to the block faces along Eleventh Avenue, West 29th Street, and West 30th Street. All delivery trips were assigned to the development sites via the New York City Department of Transportation (NYCDOT) designated truck routes. Traffic assignments for autos, taxis, and deliveries for individual components are discussed below.

Residential

Auto trips generated by the proposed residential use were based on the 2006-2010 U.S. Census ACS JTW origin-destination estimates. Many of the destinations for the residential trips would be toward Manhattan south of the development sites (31 percent) and New Jersey (29 percent). The remaining trips would be toward Manhattan north of the development sites (12 percent), the Bronx (2 percent), Queens (2 percent), Brooklyn (8 percent), Upstate New York (9 percent), Long Island (2 percent), and Connecticut (5 percent). The vehicle trips were assigned to the development sites' parking garages via the most direct routes available, primarily along the Twelfth Avenue, Eleventh Avenue, West 29th Street, and West 30th Street. The majority of the trips destined for New Jersey would use the Lincoln Tunnel via various access points nearby.

Local Retail

The proposed local retail uses are expected to serve the immediate surrounding area. Therefore, auto trips were generally assigned from local origins within the neighborhood and adjacent residential areas. Overall, the vehicle trips generated by the local retail component were distributed to the study area streets/roadways in the following manner: approximately 25 percent were assigned from points north of the project sites, 50 percent from points east of the sites, and 50 percent were assigned from points south of the sites.

Emergency Medical Services (EMS Facility)

Auto trips generated by staff of the EMS component were based on the 2006-2010 U.S. Census ACS RJTW origin-destination estimates. Many of the auto trips made by office workers would originate from New Jersey (23 percent), from Queens (15 percent), Brooklyn (12 percent), the Bronx (11 percent), Long Island (12 percent), and Upstate New York (10 percent). The remaining trips would originate from within Manhattan (11 percent), Staten Island (4 percent), and from Connecticut (2 percent). The vehicle trips were assigned to the project site A's parking garage via the most direct routes available, primarily along Twelfth Avenue, Eleventh Avenue, and West 29th Street. The majority of the trips destined for New Jersey would use the Lincoln Tunnel via various access points nearby.

Taxis

Taxi pick-ups and drop-offs for all project components were assigned to pick up and drop off along the project site frontages on Eleventh Avenue, West 29th Street, and West 30th Street.

Deliveries

Truck delivery trips for all project components were assigned to NYCDOT-designated truck routes. Trucks were assigned to the study area from regional origins via Twelfth Avenue, Tenth Avenue, West 29th Street, and West 30th Street.

Summary

According to the *CEQR Technical Manual*, intersections expected to incur 50 or more incremental peak hour vehicle trips as a result of the proposed actions would have the potential for significant adverse traffic impacts and should be assessed in a quantified traffic impact analysis. As shown in **Figures 1 through 3** and presented in **Table 7**, four intersections would incur incremental vehicle trips exceeding the CEQR threshold and have been recommended for analysis.

Table 7

Traffic Level 2 Screening Analysis Results - Recommended Analysis Locations

Intersection	Weekday			Recommended Analysis locations
	AM	Midday	PM	
12th Avenue and West 30th Street	**67**	39	**73**	✓
12th Avenue and West 29th Street	**85**	45	**77**	✓
12th Avenue and West 28th Street	42	20	46	
11th Avenue and West 30th Street	**61**	44	**76**	✓
11th Avenue and West 29th Street	**62**	49	**90**	✓
11th Avenue and West 28th Street	21	13	19	
10th Avenue and West 30th Street	23	15	16	
10th Avenue and West 29th Street	24	20	30	
10th Avenue and West 28th Street	19	11	20	

Note: ✓ denotes intersections recommended for detailed traffic analysis.
Bold numbers indicate 50 or more incremental vehicle trips.

TRANSIT

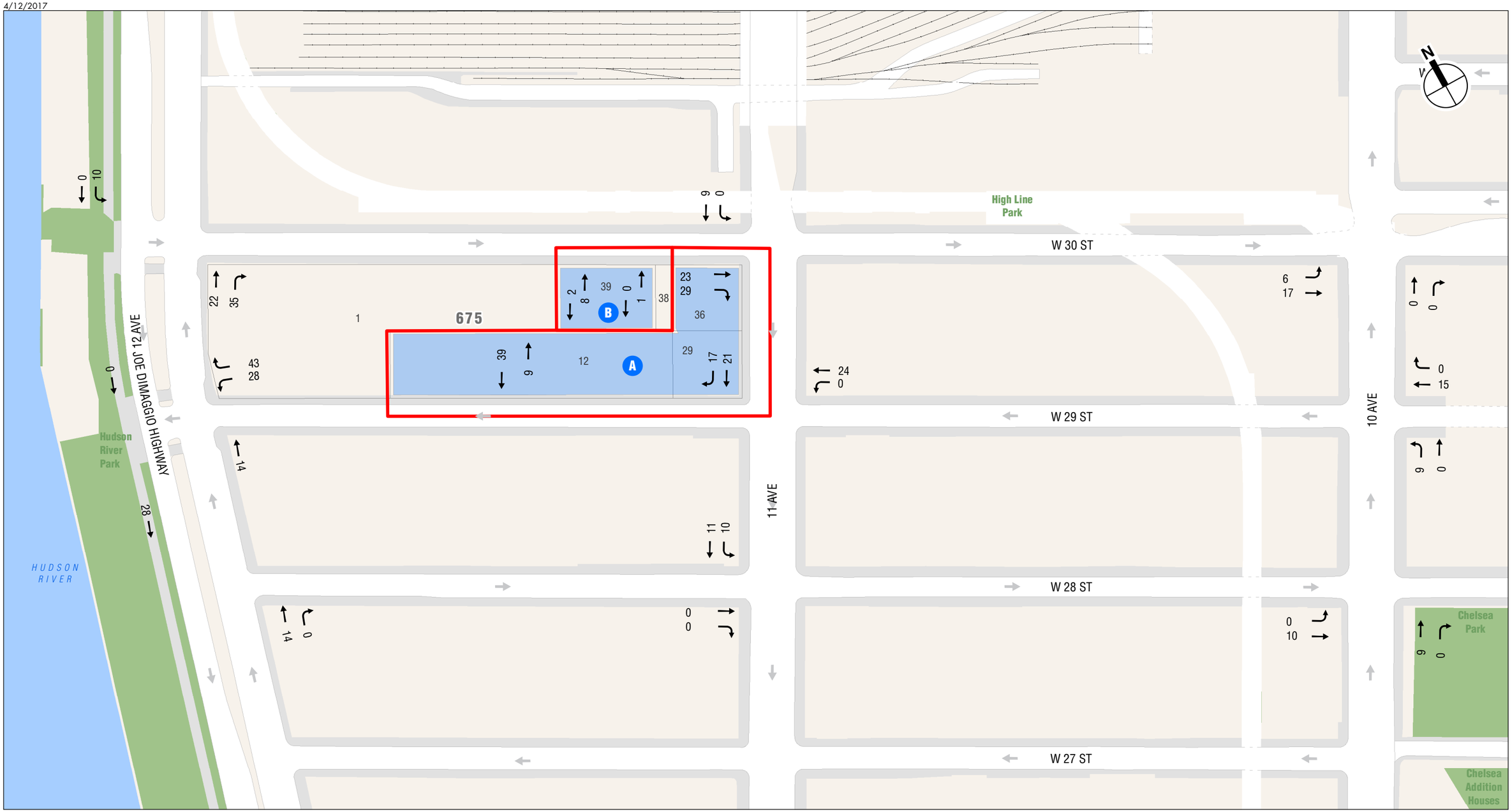
As shown in **Table 6**, the projected peak hour incremental subway trips would exceed the CEQR analysis threshold of 200 riders during the weekday AM and PM peak hours, the critical commuter hours for which a transit analysis is typically prepared. The proposed development is located in the vicinity of the newly constructed 34th Street–Hudson Yards (No. 7 train) Station, the 34th Street–Penn Station (A, C, and E, and nos. 1, 2, and 3 trains) Station, and the 28th Street (No. 1 train) Station. Based on discussions with NYCT, it is expected that 85 percent of the project-generated subway trips would use the 34th Street-Hudson Yards Station, with the remaining 15 percent using the 34th Street-Penn Station and 28th Street Station. This distribution would yield more than 200 incremental peak hour subway trips added to the 34th Street-Hudson Yards Station resulting from the proposed actions. The analysis of key station elements at this station and subway line-haul for the No. 7 line for the weekday AM and PM peak hours would be warranted and will be conducted in collaboration with NYCT.

PEDESTRIANS

As shown in **Table 6**, the projected peak hour incremental pedestrian trips would exceed the CEQR analysis threshold of 200 pedestrians during the weekday AM, midday, and PM peak hours. Level 2 incremental pedestrian trip assignments were individually developed for the proposed project components and are shown in **Figures 4 through 6** and discussed below.

- Auto Trips – Motorists were conservatively assigned to the block faces immediately adjacent to the proposed building.
- Taxi Trips – Taxi patrons would get dropped off and picked up along Eleventh Avenue, West 29th Street, and West 30th Street.
- City Bus Trips – City bus riders would use buses stopping on West 34th Street, and Tenth, Eleventh, and Twelfth Avenues and would get on and off at bus stops nearest to the development sites.

4/12/2017



A *Project Sites*

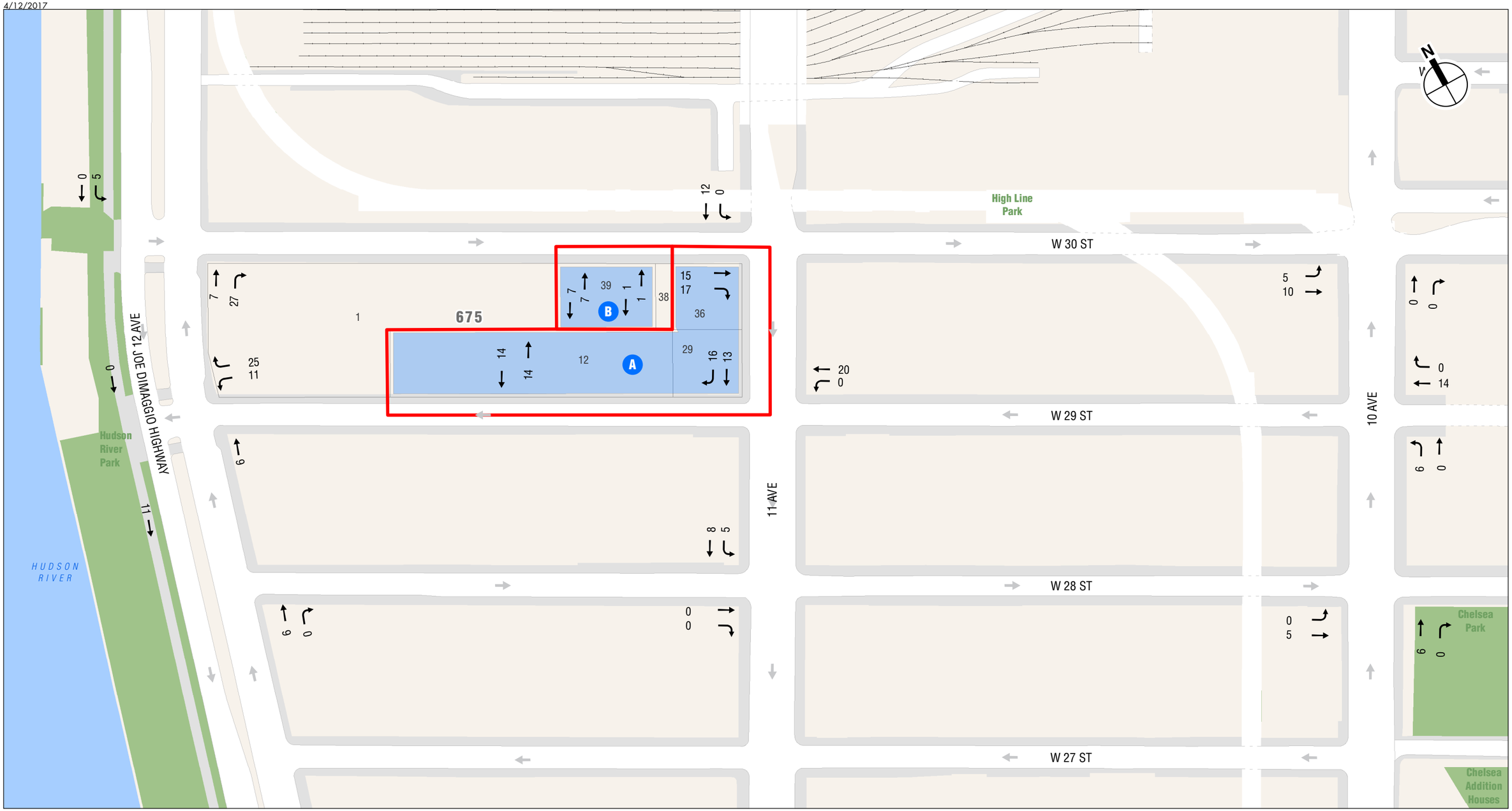
Proposed C6-4X

675 *Tax Block*

12 *Tax Lot (Block 675)*

BLOCK 675 EAST

With Action Incremental Vehicle Trips
Weekday AM Peak Hour
Figure 1



A *Project Sites*

Proposed C6-4X

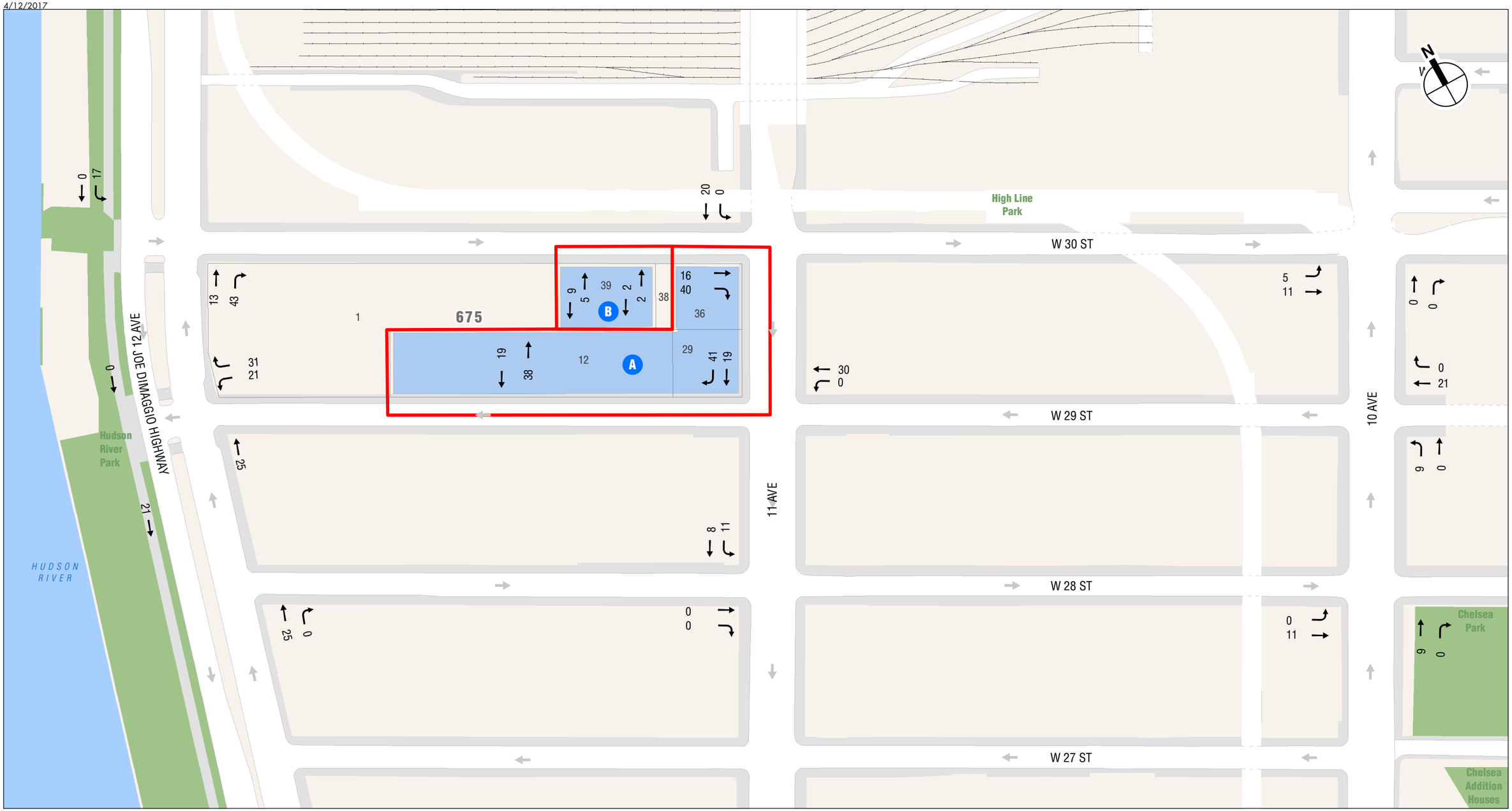
675 *Tax Block*

12 *Tax Lot (Block 675)*

0 200 FEET

BLOCK 675 EAST

With Action Incremental Vehicle Trips
Weekday Midday Peak Hour
Figure 2



A *Project Sites*

Proposed C6-4X

675 *Tax Block*

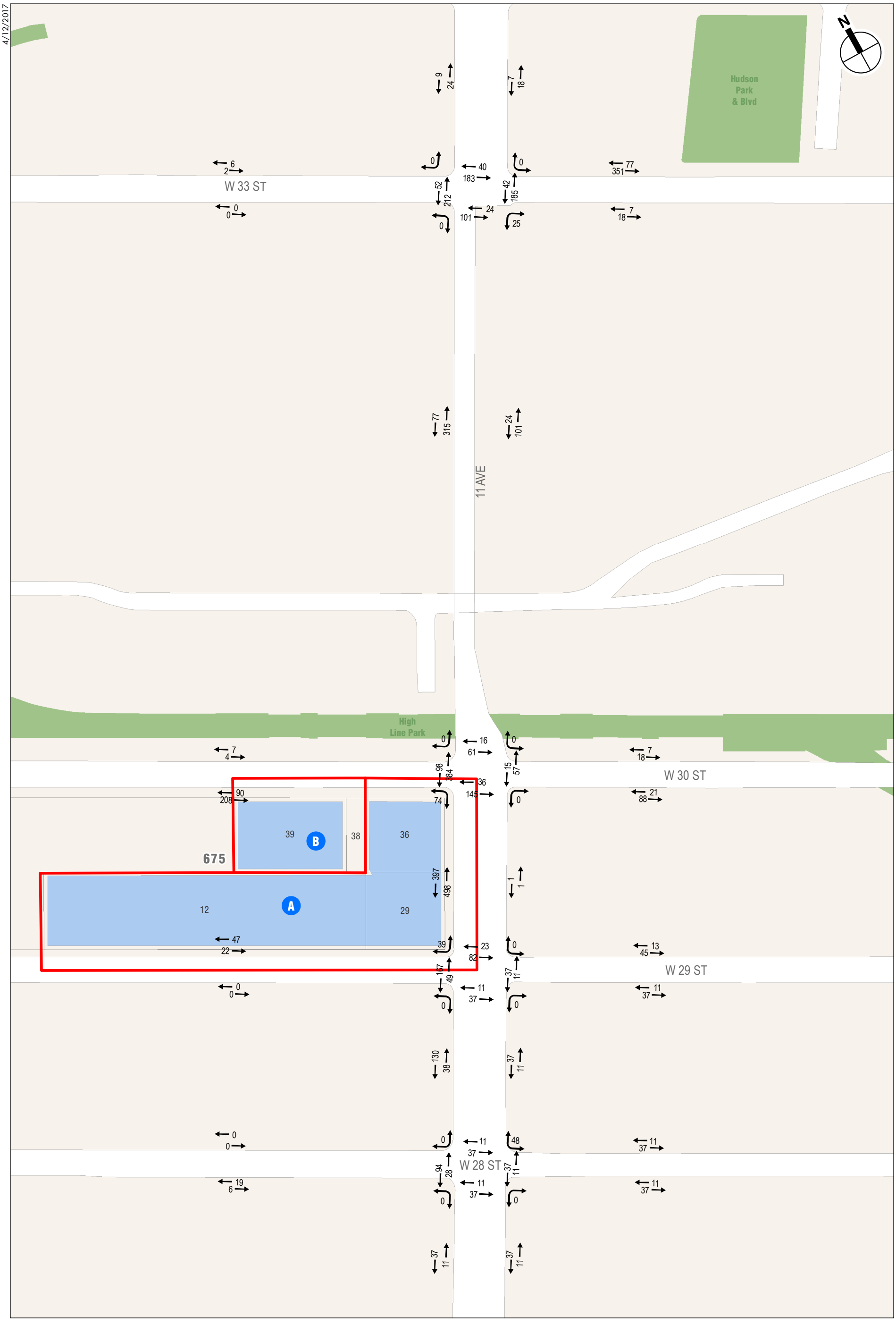
12 *Tax Lot (Block 675)*

0 200 FEET

BLOCK 675 EAST

With Action Incremental Vehicle Trips
Weekday PM Peak Hour
Figure 3

4/12/2017



A Project Sites

Proposed C6-4X

675 Tax Block

12 Tax Lot (Block 675)

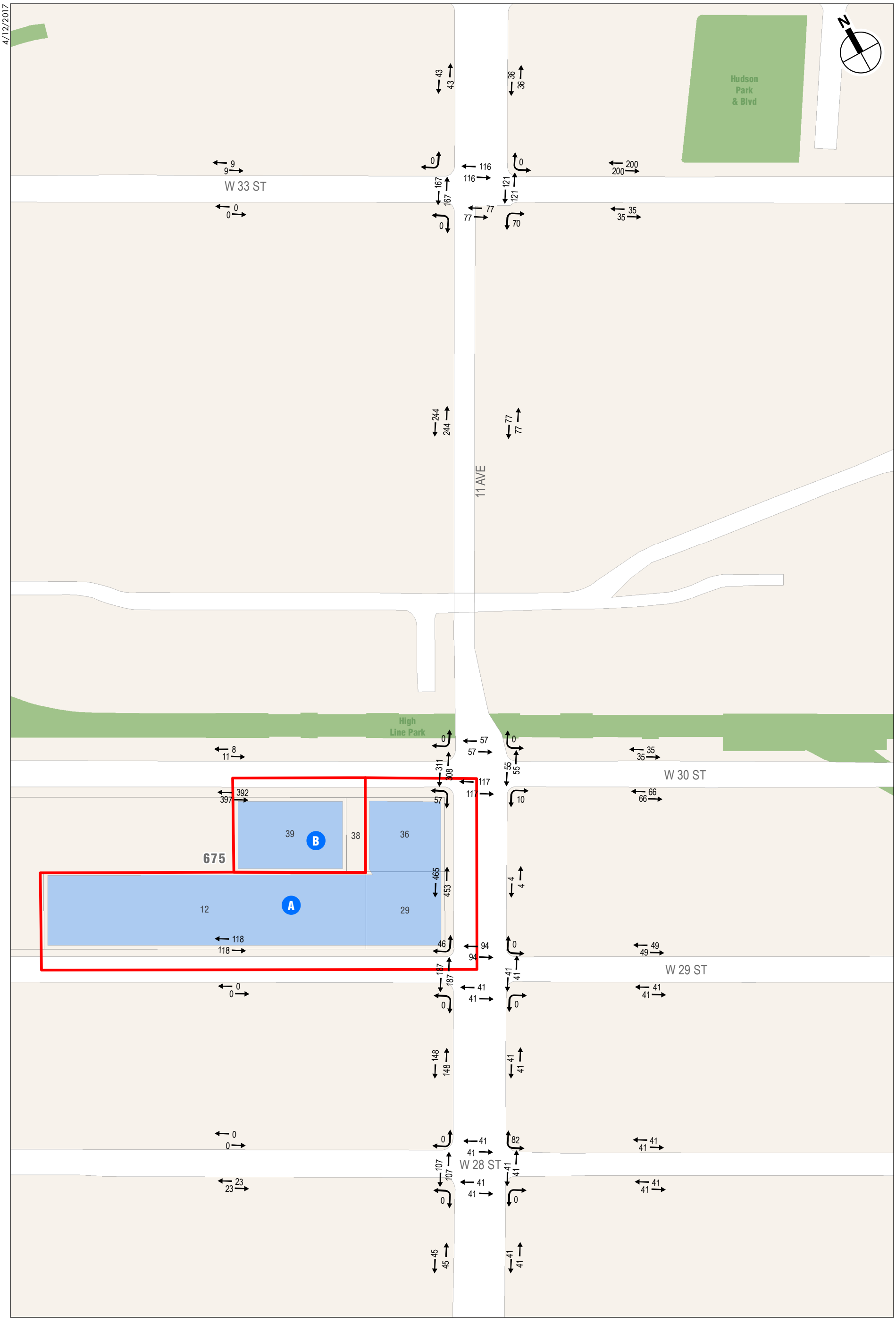
0 300 FEET

BLOCK 675 EAST

With Action Incremental Pedestrian Trips
Weekday AM Peak Hour

Figure 4

4/12/2017



A *Project Sites*

Proposed C6-4X

675 *Tax Block*

12 *Tax Lot (Block 675)*

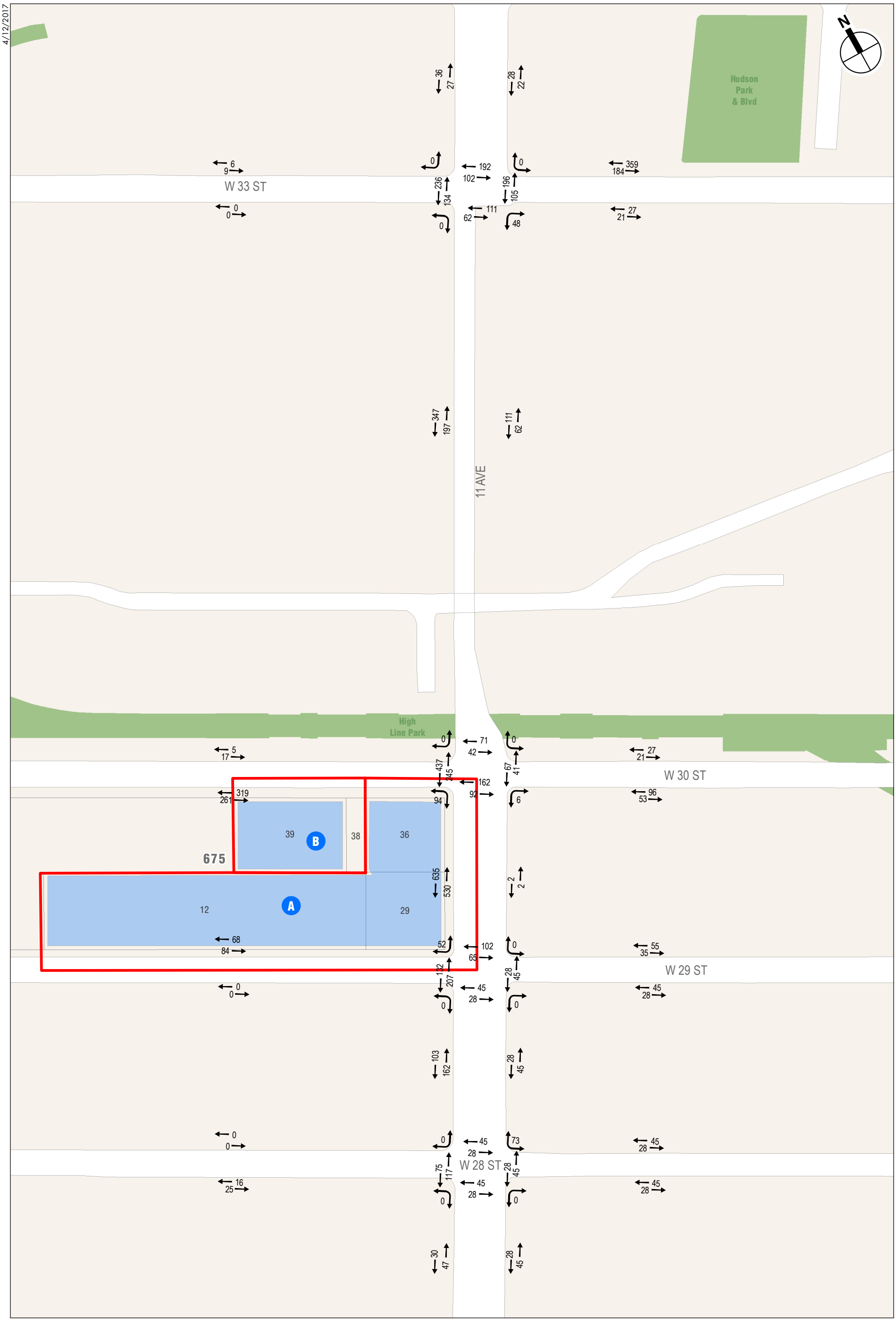
0 300 FEET

With Action Incremental Pedestrian Trips
Weekday Midday Peak Hour

Figure 5

BLOCK 675 EAST

4/12/2017



A *Project Sites*

Proposed C6-4X

675 *Tax Block*

12 *Tax Lot (Block 675)*

BLOCK 675 EAST

With Action Incremental Pedestrian Trips
Weekday PM Peak Hour

Figure 6

- Subway Trips – Subway riders were assigned to the 34th Street – Hudson Yards Station (No. 7 train), the 34th Street–Penn Station (A, C, and E, and Nos. 1, 2, and 3 trains) Station, and the 28th Street (No. 1 train) Station.
- Walk-Only Trips – Pedestrian walk-only trips were developed by distributing project-generated person trips to surrounding pedestrian facilities (i.e., sidewalks, corner reservoirs, and crosswalks) based on population origin-destination data as well as the land use characteristics of the surrounding neighborhood.

Based on the detailed assignment of incremental pedestrian trips, seven crosswalks, six sidewalks and fourteen corners are recommended for detailed analysis for the weekday AM, midday, and PM peak hours, as shown in **Table 8**.

Table 8
Pedestrian Level 2 Screening Analysis Results
With Action Incremental Pedestrian Trips

Pedestrian Elements	Weekday			Recommended Analysis Location
	AM	Midday	PM	
Eleventh Avenue and West 33rd Street				
East Sidewalk along Eleventh Avenue between 33rd Street and 34th Street	25	72	50	
West Sidewalk along Eleventh Avenue between 33rd Street and 34th Street	33	86	63	
East Sidewalk along Eleventh Avenue between 33rd Street and 30th Street	125	154	173	
West Sidewalk along Eleventh Avenue between 33rd Street and 30th Street	392	488	544	✓
North Sidewalk along 33rd Street between Eleventh Avenue and Tenth Avenue	428	400	543	✓
South Sidewalk along 33rd Street between Eleventh Avenue and Tenth Avenue	25	70	48	
North Sidewalk along 33rd Street between Eleventh Avenue and Twelfth Avenue	8	18	15	
South Sidewalk along 33rd Street between Eleventh Avenue and Twelfth Avenue	0	0	0	
Northeast Corner	450	474	595	✓
Southeast Corner	377	466	522	✓
Northwest Corner	487	566	664	✓
Southwest Corner	389	488	543	✓
North Crosswalk	223	232	294	✓
South Crosswalk	125	154	173	
East Crosswalk	227	242	301	✓
West Crosswalk	264	334	370	✓
Eleventh Avenue and West 30th Street				
East Sidewalk along Eleventh Avenue between 30th Street and 29th Street	2	8	4	
West Sidewalk along Eleventh Avenue between 30th Street and 29th Street	895	918	1165	✓
North Sidewalk along 30th Street between Eleventh Avenue and Tenth Avenue	25	70	48	
South Sidewalk along 30th Street between Eleventh Avenue and Tenth Avenue	109	132	149	
North Sidewalk along 30th Street between Eleventh Avenue and Twelfth Avenue	11	19	22	
South Sidewalk along 30th Street between Eleventh Avenue and Twelfth Avenue	298	789	580	✓
Northeast Corner	149	224	221	✓
Southeast Corner	253	354	368	✓
Northwest Corner	559	733	795	✓
Southwest Corner	737	910	1030	✓
North Crosswalk	77	114	113	
South Crosswalk	181	234	254	✓
East Crosswalk	72	110	108	
West Crosswalk	482	619	682	✓
Eleventh Avenue and West 29th Street				
East Sidewalk along Eleventh Avenue between 29th Street and 28th Street	48	82	73	
West Sidewalk along Eleventh Avenue between 29th Street and 28th Street	168	296	265	✓
North Sidewalk along 29th Street between Eleventh Avenue and Tenth Avenue	58	98	90	
South Sidewalk along 29th Street between Eleventh Avenue and Tenth Avenue	48	82	73	
North Sidewalk along 29th Street between Eleventh Avenue and Twelfth Avenue	69	236	152	✓
South Sidewalk along 29th Street between Eleventh Avenue and Twelfth Avenue	0	0	0	
Northeast Corner	153	270	240	✓
Southeast Corner	96	164	146	
Northwest Corner	360	608	558	✓
Southwest Corner	264	456	412	✓
North Crosswalk	105	188	167	
South Crosswalk	48	82	73	
East Crosswalk	48	82	73	
West Crosswalk	216	374	339	✓

Table 8 (cont'd)
Pedestrian Level 2 Screening Analysis Results
With Action Incremental Pedestrian Trips

Pedestrian Elements	Weekday			Recommended Analysis Location
	AM	Midday	PM	
Eleventh Avenue and West 28th Street				
East Sidewalk along Eleventh Avenue between 28th Street and 27th Street	48	82	73	
West Sidewalk along Eleventh Avenue between 28th Street and 27th Street	48	90	77	
North Sidewalk along 28th Street between Eleventh Avenue and Tenth Avenue	48	82	73	
South Sidewalk along 28th Street between Eleventh Avenue and Tenth Avenue	48	82	73	
North Sidewalk along 28th Street between Eleventh Avenue and Twelfth Avenue	0	0	0	
South Sidewalk along 28th Street between Eleventh Avenue and Tenth Avenue	25	46	41	
Northeast Corner	144	246	219	✓
Southeast Corner	96	164	146	
Northwest Corner	170	296	265	✓
Southwest Corner	170	296	265	✓
North Crosswalk	48	82	73	
South Crosswalk	48	82	73	
East Crosswalk	48	82	73	
West Crosswalk	122	214	192	✓
Twelfth Avenue and West 33rd Street				
East Sidewalk along Twelfth Avenue between 33rd Street and 34th Street	25	70	48	
West Sidewalk along Twelfth Avenue between 33rd Street and 34th Street	0	0	0	
East Sidewalk along Twelfth Avenue between 33rd Street and 30th Street	34	88	80	
West Sidewalk along Twelfth Avenue between 33rd Street and 30th Street	0	0	0	
Twelfth Avenue and West 30th Street				
East Sidewalk along Twelfth Avenue between 30th Street and 29th Street	2	20	10	
West Sidewalk along Twelfth Avenue between 30th Street and 29th Street	0	0	0	
North Sidewalk along 30th Street between Twelfth Avenue and Hudson River Greenway	0	0	0	
South Sidewalk along 30th Street between Twelfth Avenue and Hudson River Greenway	0	0	0	
Northeast Corner	36	89	79	
Southeast Corner	27	86	65	
Northwest Corner	0	0	0	
Southwest Corner	0	0	0	
North Crosswalk	0	0	0	
South Crosswalk	0	0	0	
East Crosswalk	25	70	57	
West Crosswalk	0	0	0	
Twelfth Avenue and West 29th Street				
East Sidewalk along Twelfth Avenue between 29th Street and 28th Street	4	26	14	
West Sidewalk along Twelfth Avenue between 29th Street and 28th Street	0	0	0	
North Sidewalk along 29th Street between Twelfth Avenue and Hudson River Greenway	0	0	0	
South Sidewalk along 29th Street between Twelfth Avenue and Hudson River Greenway	0	0		
Northeast Corner	4	30	16	
Southeast Corner	4	26	14	
Northwest Corner	0	0	0	
Southwest Corner	0	0	0	
North Crosswalk	0	0	0	
South Crosswalk	0	0	0	
East Crosswalk	4	26	14	
West Crosswalk	0	0	0	
Twelfth Avenue and West 28th Street				
East Sidewalk along Twelfth Avenue between 28th Street and 27th Street	29	72	53	
West Sidewalk along Twelfth Avenue between 28th Street and 27th Street	0	0	0	

Note: ✓ denotes elements recommended for detailed pedestrian analysis.
Bold numbers indicate 200 or more incremental pedestrian trips.

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