Northwest view of the project site from Bayard Street and the north side of Columbus Park, showing the South Tower, the pedestrian bridge connecting the tower to the Manhattan Criminal Court Building, and the sallyport entrance **5**

Northeast view of the project site from Centre Street, showing the west façade of the South Tower and the sallyport entrance **6**

Existing Conditions: Project Site
Manhattan Site - 124-125 White Street

South view of the project site from Baxter and White Streets, showing the north façade of the South Tower with the pedestrian bridge over White Street **7**

West view of the project site from Bayard Street and Mulberry Street, showing the South Tower of the House of Detention on the right and the Manhattan Criminal Court Building to the left **8**

Existing Conditions: Project Area
Manhattan Site - 124-124 White Street

North view on Centre Street, showing the Manhattan Criminal Court Building at 100 Centre Steret, the Louis J. Lefkowitz State Office Building at 80 Centre Street, 125 Worth Street, and 111 Centre Street; the project site is in the distance **9**

East view of 111 Centre Street from Lafayette Street **10**

Existing Conditions: Primary Study Area
Manhattan Site - 124-125 White Street

and sections that have large glass and metal curtain walls. A row of stone piers is along the south side of the building's base; the base and piers support the building's upper stories (see **Figure 4.6-7**, photo 10). South of the project site, the Manhattan Criminal Courts Building at 100 Centre Street is a 16-story, approximately 221-foot-tall building with a 24-story, approximately 354-foot-tall central tower. The building is clad in polished granite at the base and limestone above, with vertically banded windows (see **Figure 4.6-8**, photo 11). The building occupies the majority of the large block bounded by Centre Street, Hogan Place, Baxter Street and White Street adjacent to the project site, with an approximately 330-foot-long street frontage on Centre and Baxter Streets and an approximately 224-foot-long street frontage on Hogan Place (see **Figure 4.6-8**, photo 12). The building is organized with projecting blocks along Centre Street and Baxter Street that form U-shaped courts. The primary façade with main entrances is along Centre Street, with two entrances set within the courts created by the projecting bays and with colossal freestanding granite columns flanking the entrances at the sidewalk; the entrances consist of tall openings with decorative Art Deco glass and metal grilles above the entry doors. A smaller entrance with similar decorative grillwork above the entry doors is along Hogan Place; this entrance projects from the rest of the façade. A stepped-back tower is centrally located on the building. The building's Hogan Place streetwall is 16 stories and approximately 204 feet tall, with the center three bays that rise an additional two stories (approximately 29 feet).

In the southern portion of the primary study area, the City of New York Building at 125 Worth Street is an approximately 110-foot-tall 10-story masonry office building that covers the entire block bounded by Centre Street, Leonard Street, Lafayette Street and Worth Street (see **Figure 4.6-9**, photo 13). The building has a U-shaped plan with a shorter streetwall at the center of the building along Leonard Street. The building has a seven-story streetwall with the upper stories stepping back in a series of setbacks. A decorative frieze with a wave motif is above the second floor and separates the base of the building from the upper stories; a projecting stone cornice is at the seventh floor. Sidewalk sheds are at the east and south sides of the building. The Louis J. Lefkowitz State Office Building at 80 Centre Street is a nine-story, approximately 117-foot-tall building with a footprint that covers the entire block bounded by Centre Street, Hogan Place, Baxter Street and Worth Street. The building has a footprint that generally fits within the irregularly shaped block created by the angle of Baxter Street to the east (see **Figure 4.6-9**, photo 14). The building is clad in granite, with Art Deco detailing, including friezes, decorated window spandrels, and a cornice above the seventh floor.

Immediately north of the project site, Centre Street is developed with mixed-use buildings with commercial storefronts. Northwest of the project site, the west side of Centre Street is developed with two nine-story 115-foot-tall office buildings. Both buildings have two-story bases clad in stone and brick-clad upper stories. The northern building at 139 Centre Street has arched windows on the ground floor, with storefronts containing a pharmacy and bakery. The southern building at 133 Centre Street has a single entrance on Centre Street and windows framed by paneled metal spandrels. Immediately north of the project site the building at 125 Walker Street is three- to 14-stories, clad in brick, with horizontal banded windows and retail space on the ground floor. The building fronts Centre, Walker and Baxter Streets with ground-floor retail spaces facing each street (see **Figure 4.6-10**, photo 15). The west end of the building is three stories, and the east end is taller with a 14-story streetfront on Baxter and Walker Streets.

Canal Street is 100 feet wide and crosses through the northern portion of the study area at an angle, with six lanes of traffic. The street is lined with one- to 14-story mixed-use buildings built to the sidewalk, with stores on the ground floor. The sidewalk is busy with pedestrian traffic; portions of the sidewalk are also occupied by street vendors and businesses have displays on the sidewalks

East view of 100 Centre Street from Lafayette and Leonard Street, showing the Collect Pond Park in the foreground **11**

North view on Baxter Street, showing 100 Centre Street on the left and Columbus Park on the right, with the project site in the distance **12**

Existing Conditions: Primary Study Area
Manhattan Site - 124-125 White Street

Northwest view of 125 Worth Street **13**

Southeast view of the Louis J. Lefkowitz State Office Building at 80 Centre Street **14**

Existing Conditions: Primary Study Area
Manhattan Site - 124-125 White Street

South view on Centre Street and Canal Street **15**

West view on Canal Street, showing the intersection with Walker Street to the left **16**

Existing Conditions: Primary Study Area
Manhattan Site - 124-124 White Street

(see **Figures 4.6-10** and **4.6-11**, photos 16 and 17). Subway entrances are on both sides of the street, with staircases and elevator entrances on the sidewalk. The street is developed with a mixture of building styles and types, including a five-story approximately 86-foot-tall contemporary building with glass curtain walls at 235 Canal Street, a historic cast iron building at 254-260 Canal Street, and a one-story approximately 23-foot-wide commercial building housing a bakery with a glazed storefront on 242 Canal Street.

Baxter Street to the east of the project site is an approximately 50-foot-wide one-lane street with one-way traffic. South of the project site, the west side of Baxter Street includes the stone façade of the Criminal Courts Building (see **Figure 4.6-6**, photo 8). The Criminal Courts Building has a few entrances on this street. The east side of the street is typically developed with narrow four- to five-story mixed-use brick buildings with fire escapes at the upper stories and retail spaces covered with awnings on the ground floor. A large seven-story brick building at the corner of Baxter Street and Hogan Place has a restaurant and other commercial space on the ground floor. South of Bayard Place, the southeast portion of the study area is occupied by Columbus Park, described below (see **Figure 4.6-11**, photo 18).

At the west end of the study area, Lafayette Street is developed with a mix of older and modern tall buildings, including a 12-story tile-clad courthouse building at 109 Leonard Street with a contemporary design and horizontal bands of windows across the upper stories (see **Figure 4.6-12**, photo 19). The late-19th century stone and brick Fire Engine Company No. 31 at 87 Lafayette Street is on the east side of the street, with a tall mansard roof, a corner tower, and French Renaissance style stone ornament across the façade (see **Figure 4.6-12**, photo 20). On the west side of the street, the Ahrens Building at 70-76 Lafayette Street is a late-19th century Romanesque Revival style building clad in sandstone and buff brick, with brown terracotta and rock-faced brick detailing (see **Figure 4.6-13**, photo 21). The cast iron front of 254-260 Canal Street and the New York Life Insurance Company Building at 346 Broadway also have frontage on Lafayette Street. The New York Life Insurance Company Building at 346 Broadway occupies the block between Lafayette Street, Leonard Street, Catherine Lane, and Broadway. This 13-story-tall building is clad in white marble with paired arched windows between paneled pilasters (see **Figure 4.6-13**, photo 22). The buildings on Lafayette Street have three- to 13-story tall streetwalls that meet the sidewalk (see **Figure 4.6-14**, photo 23). The southwestern portion of the study area, on Lafayette Street, is occupied by Collect Pond Park, described below.

Two parks are located in the southern portion of the study area. Columbus Park occupies an irregular-shaped block bounded by Baxter, Worth, Mulberry, and Bayard Streets. The park contains mature trees that create a dense tree canopy, and has paved areas with seating and two stone comfort stations that have peaked roofs supported on columns (see **Figure 4.6-14**, photo 24). The southern portion of the park (outside the study area) is developed with active recreational spaces, including basketball courts, a soccer field and a playground (see **Figure 4.6-15**, photo 25). The park is surrounded by a tall, iron picket fence, and entrances are located at the street corners and the midblock. At the exterior of the park, groupings of bench seating are on Baxter Street and on Worth Street (see **Figure 4.6-15**, photo 26). A landscaped triangular area at the northeast corner of Hogan Place and Baxter Street is outside the perimeter of the park, with benches for seating facing in all directions surrounded by hedges and trees. Collect Pond Park is the block bounded by Centre, Leonard, Lafayette, and Worth Streets. Collect Pond Park contains benches for seating around a plaza, with two ponds at the center crossed by a metal walkway. The perimeter of the park is bordered by an iron fence and additional landscaping including large and mature trees, with entries to the park are at the four corners (see **Figure 4.6-16**, photos 27 and 28).

Southwest view on Canal Street, showing the 14-story apartment building at 125 Walker Street and the Project Site to the south **17**

North view on Baxter Street, showing the Project Site to the left **18**

Existing Conditions: Primary Study Area
Manhattan Site - 124-124 White Street

North view on Lafayette Street **19**

East view on Lafayette Street of the Fire Engine Company No. 31 at 87 Lafayette Street **20**

Existing Conditions: Primary Study Area
Manhattan Site - 124-125 White Street

View of the Ahrens Building at 70 Lafayette Street **21**

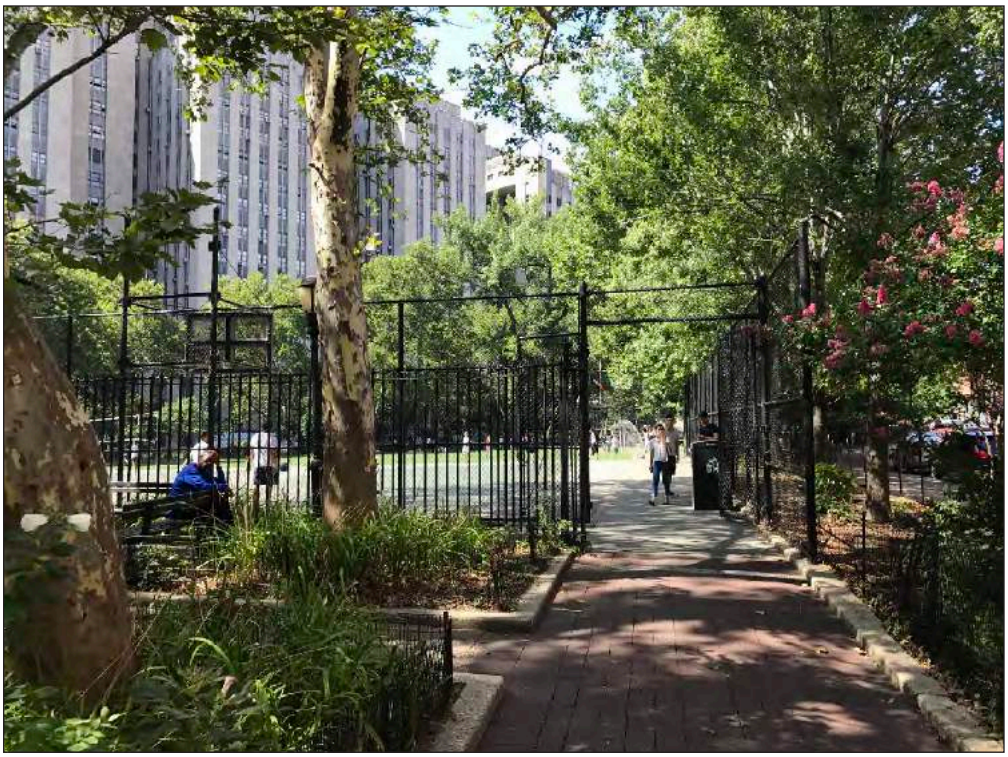
The New York Life Insurance building with frontages on Lafayette Street and Broadway **22**

Existing Conditions: Primary Study Area
Manhattan Site - 124-125 White Street
Figure 4.6-13

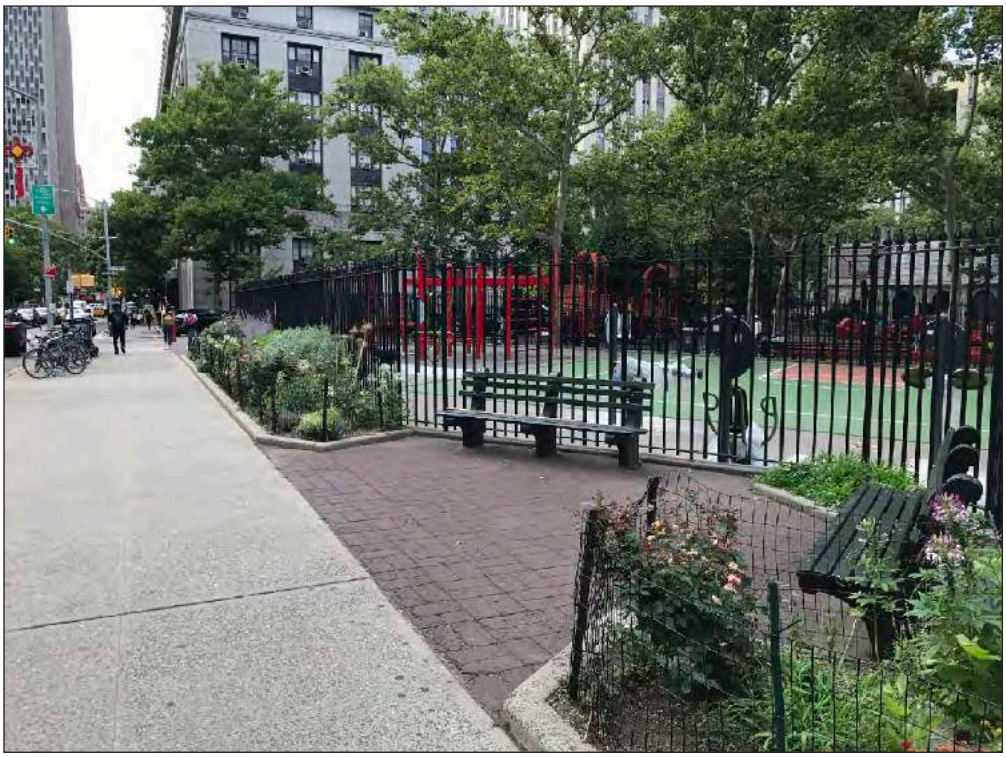
East view on Lafayette Street and White Street, showing the project site in the distance **23**

The interior of Columbus Park, looking northeast toward the project site **24**

Existing Conditions: Primary Study Area
Manhattan Site - 124-124 White Street



North view of Columbus Park, showing recreation fields in the southern portion; the east façade of 100 Centre Street and the project site are visible in the distance **25**



West view of the south side of Columbus Park, showing seating and landscaping at the exterior of the park **26**

Existing Conditions: Primary Study Area
Manhattan Site - 124-125 White Street

North view on Centre Street and Hogan Place, showing Collect Pond Park and 111 Centre Street **27**

North view from Collect Pond Park, showing the project site on Centre Street **28**

Existing Conditions: Primary and Secondary Study Area
Manhattan Site - 124-125 White Street

East of the project site, the urban design differs; Columbus Park and Baxter Street separate the Civic Center neighborhood from the Chinatown neighborhood to the east. Within this residential and commercial neighborhood, Mulberry Street is an approximately 40-foot-wide street with one lane of traffic and parking on both sides (see **Figure 4.6-17**, photo 29). Baxter Street and Mulberry Street are included within the boundaries of the Chinatown and Little Italy Historic District, a neighborhood typically characterized by older four- to five-story brick residential buildings with ground-floor commercial spaces. The buildings are on narrow lots that typically measure approximately 20 to 30 feet wide.

SECONDARY ¼-MILE STUDY AREA

The secondary study area is characterized by large-scale municipal buildings and parks to the south, the commercial corridors of Canal Street and Broadway, and mixed-use buildings that line narrow streets in the Chinatown and Little Italy neighborhoods to the north and east of the study area. North of Worth Street, the study area is developed as an irregular grid, with Canal Street crossing at an angle from east to west and narrow streets forming rectangular blocks. In the northern portion of the study area, Mulberry, Mott and Elizabeth Streets turn slightly west. South of Worth Street, the southern portion of the study area is characterized by wider streets and large superblocks that are developed with large stone-clad municipal buildings.

Areas containing groupings of older, historic buildings are located to the east, west and north of the project site. Buildings in the Tribeca East Historic District are located in the western portion of the study area, in an area roughly bounded by Canal Street to the north, Cortlandt Alley to the east, Church Street to the west, and Franklin Street to the south. The buildings typically include ornate cast-iron and masonry store and loft buildings (see **Figure 4.6-17**, photo 30). On Church Street and Broadway, taller contemporary buildings are constructed among the typical five- to seven-story loft buildings that characterize the historic district. A 27-story approximately 241-foot-tall brick-clad building is located at 90 Franklin Street, at the northeast corner of Church and Franklin Streets. South of Canal Street, many corner lots on Broadway are developed with taller building that rise over 200 feet in height (see **Figure 4.6-18**, photo 31). A 15-story approximately 205-foot-tall stone-clad apartment building is at the southwest corner of Walker Street and Broadway (395 Broadway), and a 26-story approximately 347-foot-tall office building is at the northwest corner of Walker Street and Broadway (60 Walker Street). The office building at 60 Walker Street is clad in brick, and features a 15-story streetwall and stepped upper stories. Farther south and beyond the boundaries of the Tribeca East Historic District, Broadway is more densely developed with tall buildings, including the 24-story approximately 271-foot-tall contemporary brick-clad apartment building at the southeast corner of White Street and Broadway (376 Broadway), and the approximately 584-foot-tall 41-story Jacob K. Javits Federal Building that has a large footprint that covers the block (see **Figure 4.6-18**, photo 32). The Jacob K. Javits Federal Building is a limestone-and-granite-clad building distinguished by its offset vertically oriented windows that form an irregular checkerboard pattern across the façade. The building rises behind a landscaped plaza to the west of Thomas Paine Park, and a smaller plaza along Broadway. Farther south, the 32-story approximately 474-foot-tall stone-clad Ted Weiss Federal Building is located at 290 Broadway. The New York Life Insurance Company Building at 346 Broadway, as described above, also has a streetfront on Broadway. Immediately west, 7 Thomas Street is a monumental stone-clad building with a windowless façade rising approximately 533 feet in height.

The northwestern portion of the study area, bound roughly by Canal Street and Crosby Street, is developed with three- to five-story brick mixed-use buildings, typically with cast-iron and ground-floor storefronts. Within the study area, Crosby Street is paved in Belgian pavers and lined with

North view on Mulberry Street, showing the Little Italy and Chinatown Historic District including Columbus Park to the left **29**

View west on Leonard Street, showing typical narrow streets in the Tribeca East Historic District **30**

Existing Conditions: Secondary Study Area
Manhattan Site - 124-125 White Street

View south on Broadway in the western portion of the study area **31**

Southwest view of the K. Javits Federal Building, from Thomas Paine Park **32**

Existing Conditions: Primary and Secondary Study Area
Manhattan Site - 124-125 White Street

Figure 4.6-18

brick and cast-iron front buildings (see **Figure 4.6-19**, photo 33). On Broadway north of Canal Street, several cast-iron-fronted buildings on the street display multiple floors of columns, evenly spaced to frame historic windows (see **Figure 4.6-19**, photo 34).

North of Canal Street, the urban design of Lafayette Street and Centre Street is less cohesive. The streets are lined with light industrial buildings, parking lots, hotels, and apartments, ranging in height from 1 to 26-stories and featuring stone and brick cladding as well as contemporary materials such as glazing and metal panels. Between Howard Street and Grand Street, the west side of Lafayette Street is developed with a 26-story, approximately 343-foot-tall hotel building at 9 Crosby Street. The building's tower is clad in a glass curtain wall set back over a one-story base with metal panel cladding (see **Figure 4.6-20**, photo 35). The former Police Headquarters at 240 Centre Street is a stone-clad neo-Classical building with porticos on the south and west façades and a large dome. The building has a footprint that covers the entire block (see **Figure 4.6-20**, photo 36).

In the eastern portion of the study area, north of Worth Street and east of Centre Street, the study area is developed with mixed-use buildings on narrow streets. The buildings typically have approximately 50-foot-wide brick-clad façades and range in height from three to seven stories (see **Figure 4.6-21**, photo 37). Portions of the sidewalk are used for displaying goods in front of stores, as well as outdoor seating for restaurants. Grand Street is a 70-foot-wide street with one-way traffic and a bike lane. The street is typically developed with brick buildings, with illuminated signs and awnings (see **Figure 4.6-21**, photo 38). At the northeast corner of Grand Street and Elizabeth Street, the Bowery Savings Bank is a large neo-Classical building with a monumental portico on the south façade. South of Grand Street, the side streets are narrow and angled slightly midblock between Hester and Grand Streets (see **Figure 4.6-22**, photo 39). The Bowery is a major thoroughfare at the eastern edge of the study area. The 100-foot-wide street has six lanes of traffic, and is typically lined with brick-clad mixed-use buildings (see **Figure 4.6-22**, photo 40). At the southeast corner of Hester Street and Bowery, an 18-story approximately 164-story hotel rises above the other buildings on the street. South of Canal Street, the urban design of Bowery changes to include taller buildings with larger footprints. An approximately 395-foot-tall mixed-use building at 1 Bowery occupies an entire block bounded by Division Street, Bowery, and the Manhattan Bridge access road; this building is clad in brick. Farther south, Bowery becomes Park Row as the street curves to the west and surrounds superblocks with municipal buildings. Kimlau Square is a small plaza at the junction of East Broadway, St James Place, Park Row, and Worth Street (see **Figure 4.6-23**, photo 41).

Worth Street is a 65-foot-wide two-lane street with parking on one side. The south side of the street includes tall buildings that are slightly set back from the street behind hardscape plazas. South of Worth Street, the southern portion of the secondary study area is developed with wide streets, large municipal buildings, and parks. Centre Street, Park Row, and Pearl Street are curved or angled roads; the streets form irregular blocks where they intersect. Large municipal buildings are constructed on the blocks, often with landscaped areas or hardscape plazas at the corners of the blocks. Municipal buildings include the United States Courthouse at 1 Foley Square, the New York County Courthouse at 60 Centre Street, the U.S. Courthouse at 500 Pearl Street, and the Jacob K. Javits Federal Building at 26 Federal Plaza. These buildings range in age and design and are approximately 80 to 550 feet tall and with large footprints. The stone-clad U.S. Courthouse at 500 Pearl Street is located directly south of Baxter Street, facing Columbus Park. The approximately 462-foot-tall building has a semicircular curved roof, with a central entrance flanked by two stone pier light fixtures. To the east, Chatham Towers is a residential complex with two freestanding approximately 222-foot-tall 25-story concrete towers with corner balconies. The

View south on Crosby Street, within the SoHo Historic District **33**

View south on Broadway in the SoHo Historic District **34**

Existing Conditions: Secondary Study Area
Manhattan Site - 124-125 White Street

View north on Centre Street, showing the hotel at 9 Crosby Street in the distance **35**

View south on Centre Street showing the Police Headquarters at 240 Centre Street **36**

Existing Conditions: Secondary Study Area
Manhattan Site - 124-125 White Street

View north on Mulberry Street in the Chinatown and Little Italy Historic District **37**

View west on Grand Street in the Chinatown and Little Italy Historic District **38**

Existing Conditions: Secondary Study Area
Manhattan Site - 124-125 White Street

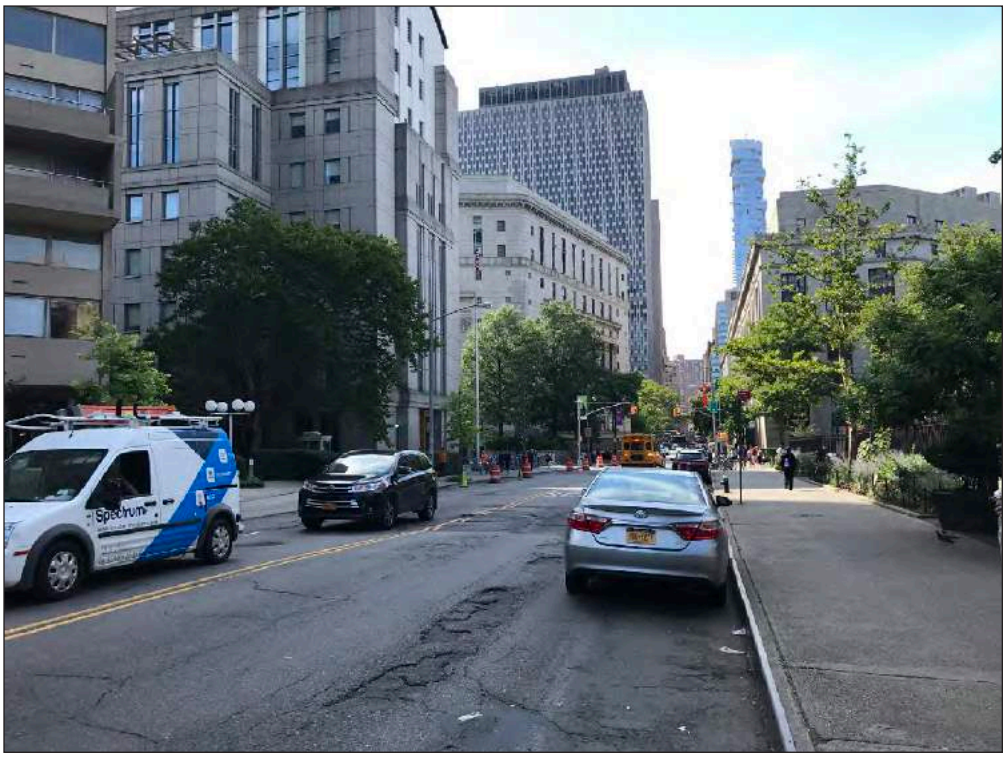
View south on Elizabeth Street in the Chinatown and Little Italy Historic District **39**

View south on Bowery, showing the 18-story contemporary hotel in the distance **40**

Existing Conditions: Secondary Study Area
Manhattan Site - 124-125 White Street

Figure 4.6-22

View east of Kimlau Square **41**



West view on Worth Street, showing the Project Site in the distance and Columbus Park on the right **42**

Existing Conditions: Secondary Study Area
Manhattan Site - 124-125 White Street
Figure 4.6-23

development is set at an angle to Worth Street, and set within landscaped grounds (see **Figure 4.6-23**, photo 42).

Thomas Paine Park, also known as Foley Square, is located south of Worth Street on a triangular block that is bound by Centre, Lafayette, and Duane Streets. Thomas Paine Park contains a landscaped area with grass and trees, with walkways lined with park benches. The perimeter of park is open to the street, with park benches also along the sidewalks (see **Figure 4.6-24**, photo 43). The southern portion of the park is a paved plaza with a large circular fountain with a sculpture at its center. Municipal buildings surround Thomas Paine Park, including 125 Worth Street and the Louis K. Lefkowitz State Office Building at 80 Centre Street. West of Thomas Paine Park the James L. Watson Court of International Trade at 1 Federal Plaza is an approximately eight-story building clad with a black glass curtain wall, connected by a five-story glazed connector to the Jacob K. Javits Federal Building. On the southeast side of the park, the approximately 544-foot-tall U.S. Courthouse at 1 Foley Square has a square tower with a pyramidal roof set atop a base with a classical style portico (see **Figure 4.6-25**, photo 44). The New York County Court House at 60 Centre Street is on the east side of the Park, described below. The south side of Thomas Paine Park is overlooked by the approximately 552-foot-tall Municipal Building at 1 Centre Street, a wide U-shaped stone-clad building with a tower capped by a cupola at its center.

East of Thomas Paine Park and south of Worth Street, a large superblock is bounded by Worth Street, Centre Street, Pearl Street, and Park Row. At the west end of this block along Centre Street is the New York County Court House at 60 Centre Street, an approximately 140-foot-tall nine-story hexagonal-plan building with a monumental classical portico supported on five-story-tall columns facing Centre Street. A broad set of stairs provides access to the portico and the building's entrance. The other façades are symmetrically fenestrated with windows separated by fluted Corinthian pilasters that extend from the second to sixth stories. Above the eighth floor, a decorative frieze extends around the exterior of the building; a bracketed cornice crowns the building (see **Figure 4.6-25**, photo 45). The stone-clad building is set back from the street behind landscaped areas at the southeast corner of Worth and Centre Streets, and the south side of Worth Street at its junction with Baxter Street. Raised concrete planters with trees and shrubs are located between the New York County Court House and the U.S. Courthouse building at 500 Pearl Street.

VISUAL RESOURCES AND VIEW CORRIDORS

PROJECT SITE

The *CEQR Technical Manual* defines a visual resource as the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources.

The project site is occupied by the MDC North and South Towers, which do not constitute visual resources.

PRIMARY 400-FOOT STUDY AREA

Visual resources in the study area include known architectural resources that consist of architecturally significant buildings with classical ornament, such as the Manhattan Criminal Courts Building at 100 Centre Street (see **Figure 4.6-8**, photo 11), the City of New York Building at 125 Worth Street (see **Figure 4.6-9**, photo 13), the Fire Engine Company No. 31 at 87 Lafayette Street with its distinctive stone cladding and tall mansard roof (see **Figure 4.6-12**, photo 20), and the Louis J. Lefkowitz State Office Building at 80 Centre Street (see **Figure 4.6-9**, photo 14).

View north from Thomas Paine Park and Foley Square **43**

North south on Centre Street showing buildings that front the east side of Thomas Paine Park and Foley Square, including the New York County Courthouse at 60 Centre Street, the United States Courthouse at 1 Foley Square, and the Manhattan Municipal Building at 1 Centre Street **44**

Existing Conditions: Secondary Study Area
Manhattan Site - 124-125 White Street

East view of the New York County Courthouse **45**

Existing Conditions: Secondary Study Area
Manhattan Site - 124-125 White Street

Figure 4.6-25

Buildings on Centre Street to the north, west, and south of the project site are visual resources. The Manhattan Criminal Courts Building at 100 Centre Street is a visual resource in the study area, with a symmetrical design that features the central stepped tower and recessed entrance bays. The building faces Columbus Park to the east, and Collect Pond Park to the west, providing long views of the approximately 221-foot-tall 16-story façade and 354-foot-tall tower. The Manhattan Criminal Courts Building's stepped tower is visible from a distance on Centre Street; from the far edges of Columbus Park, from Collect Pond Park, and with the entirety of the principal west façade of the building including the tower visible from Leonard and Lafayette Streets across Collect Pond Park. The City of New York Building at 125 Worth Street, an approximately 110-foot-tall stone-clad office building, is visible from a distance to the south from Foley Square and from the north on Collect Pond Park.

Columbus Park with its dense tree canopy is a prominent visual resource that is also a historic resource in the study area. The park is included within the boundaries of the Chinatown and Little Italy Historic District and located to the east of the project site (see **Figure 4.6-21**, photo 37 and **Figure 4.6-17**, photo 29). Columbus Park is visible from the immediately surrounding streets. Because the streets turn at a 45-degree angle around the park, Hogan (Leonard), Mulberry, and Baxter Streets include distant views of the park. Collect Pond Park is also visual resources in the primary study area that provides greenery and water features. Collect Pond Park is primarily visible only from the immediate streets around the park due to the surrounding tall buildings built to the sidewalk.

Tall buildings are visible from the primary study area in views north and south on Centre Street. The domed roof of the Former Police Headquarters at 240 Centre Street is visible to the north on Centre Street. Long, southern views from the primary study area on Centre Street include the columned portico and pyramidal tower of the United States Courthouse at 1 Foley Square, the tiered and colonnaded tower of the Manhattan Municipal Building at 1 Centre Street, the Neo Classical Jones Building at 52 Duane Street, and the Beaux Arts façade of 31 Chambers Street (see **Figure 4.6-24**, photo 44 and **Figure 4.6-20**, photo 36). The 76-story New York by Gehry building at 8 Spruce Street is also visible at a distance to the south. The primary study area also includes distant views of tall buildings to the east and west. The 395-foot brick tower at 1 Bowery is visible to the east from the primary study area. A contemporary approximately 825-foot-tall apartment building at 56 Leonard Street, approximately three blocks west of Centre Street, is visible to the west from within the primary study area.

SECONDARY ¼-MILE STUDY AREA

Visual resources in the secondary study area are concentrated in the southern portion of the study area, and include prominent architectural resources such as the Jacob K. Javits Federal Building and James L. Watson Court of International Trade (see **Figure 4.6-18**, photo 36), the New York County Court House at 60 Centre Street (see **Figure 4.6-25**, photo 45), the New York Life Insurance Company at 346 Broadway (see **Figure 4.6-13**, photo 22), the Manhattan Municipal Building at 1 Centre Street including its central tower and cupola (see **Figure 4.6-24**, photo 44), the United States Courthouse at 1 Foley Square including its tower capped by a pyramidal roof (see **Figure 4.6-24**, photo 44), and the Police Headquarters at 240 Centre Street (see **Figure 4.6-20**, photo 36). As in the primary study area, the numerous large municipal buildings in the southern portion of the secondary study area are visual resources that are distinctive architecturally and also visible from a distance. New York County Court House's large stone portico is visible from a distance to the west, south across Foley Square. Thomas Paine Park and Foley Square are

visual resources that contain greenery and a fountain with a sculpture. The foliage of Thomas Paine Park is visible at a distance to the south on Centre Street.

The angled roads and narrow streets in the northern portion of the study area obscure most long views. However, the Empire State Building is visible looking north up Mulberry Street and Mott Street from their intersections with Grand Street.

D. THE FUTURE WITHOUT THE PROPOSED PROJECT

PROJECT SITE

In the No Action condition, it is assumed that the project site will not be altered and the existing use on the sites will remain unchanged. Therefore, the visual resources on the project site will not be affected.

PRIMARY AND SECONDARY STUDY AREAS

As described in Section 4.1, "Land Use, Zoning, and Public Policy-Manhattan," development projects that are anticipated to be complete by 2027 include lower-density residential, retail, hotel, and community facility uses within the primary and secondary study areas. These projects include a 23-dwelling unit building at 114 Mulberry Street, a 61-room hotel development at 88 Walker Street, a mixed-use development with 12 dwelling units at 185 Grand Street, and a 14,488-square-foot office space at 76 Bowery. The projects will add to the mix of uses and buildings in the study area. The anticipated developments will not obstruct views of visual resources within the primary and study areas, nor will they obstruct view corridors within the study areas.

E. THE FUTURE WITH THE PROPOSED PROJECT

This section considers urban design and visual resources of the With Action condition in 2027 in comparison with the No Action condition. **Figures 4.6-26 through 4.6-33** provide illustrative massings and street views depicting the With Action development.

PROJECT SITE

URBAN DESIGN

In the With Action condition, the proposed project would redevelop the existing detention facilities at 124 and 125 White Street with a new detention facility containing approximately 1,270,000 gsf of floor area. The detention facility would contain approximately 1,437 beds for people in detention and would feature support space, and community facility and/or retail space. The project site is located in a C6-4 district which is a commercial district characterized by high-bulk commercial uses in high-rise, mixed-use buildings, and where court facilities and prisons are permitted uses. While there are no prescribed maximum building heights, development is guided by sky exposure planes that are established based on the width of the street(s). In addition, towers are permitted in the C6-4 district. The maximum zoning height for the purposes of analysis would be approximately 450 feet. The proposed detention facility would include pedestrian bridges between the new detention facility and the Manhattan Criminal Courts Building to the south at approximately the third floor and at a higher floor. The community facility and/or retail space would be located along Baxter Street. Loading functions and a sallyport would be located on the

Source: Google Earth, 2018.

Illustrative Building Massing (see Note)

Maximum Zoning Envelope

Maximum Envelope for Rooftop Mechanical Bulkheads (40 feet higher than maximum zoning envelope)

Note: Illustrative building massing indicates a conceptual building, which may be located anywhere within the maximum zoning envelope. Portions of the illustrative building massing that extend above the maximum zoning envelope represent illustrative mechanical bulkheads that could be located on the rooftop of the proposed building.

Aerial View of the Proposed Development
Manhattan Site - 124-125 White Street

Figure 4.6-26

Illustrative Street Level Rendering
Manhattan Site - 124-125 White Street

Existing Conditions View 15 - View south from Centre Street and Canal Street

View south from Centre Street and Canal Street

Illustrative Building Massing (see Note)

Maximum Zoning Envelope

Maximum Envelope for Rooftop Mechanical Bulkheads (40 feet higher than maximum zoning envelope)

Note: Illustrative building massing indicates a conceptual building, which may be located anywhere within the maximum zoning envelope. Portions of the illustrative building massing that extend above the maximum zoning envelope represent illustrative mechanical bulkheads that could be located on the rooftop of the proposed building.

With Action Conditions: Illustrative Massing
Manhattan Site - 124-125 White Street

Existing Conditions View 17 - View southwest from Canal Street

View southwest from Canal Street

Illustrative Building Massing (see Note)

Maximum Zoning Envelope

Maximum Envelope for Rooftop Mechanical Bulkheads (40 feet higher than maximum zoning envelope)

Note: Illustrative building massing indicates a conceptual building, which may be located anywhere within the maximum zoning envelope. Portions of the illustrative building massing that extend above the maximum zoning envelope represent illustrative mechanical bulkheads that could be located on the rooftop of the proposed building.

With Action Conditions: Illustrative Massing
Manhattan Site - 124-125 White Street

Existing Conditions View 28 - North view from Collect Pond Park

North view from Collect Pond Park

Illustrative Building Massing (see Note)

Maximum Zoning Envelope

Maximum Envelope for Rooftop Mechanical Bulkheads (40 feet higher than maximum zoning envelope)

Note: Illustrative building massing indicates a conceptual building, which may be located anywhere within the maximum zoning envelope. Portions of the illustrative building massing that extend above the maximum zoning envelope represent illustrative mechanical bulkheads that could be located on the rooftop of the proposed building.

With Action Conditions: Illustrative Massing
Manhattan Site - 124-125 White Street

Existing Conditions View 43 - View north from Foley Square

View north from Foley Square

Illustrative Building Massing (see Note)

Maximum Zoning Envelope

Maximum Envelope for Rooftop Mechanical Bulkheads (40 feet higher than maximum zoning envelope)

Note: Illustrative building massing indicates a conceptual building, which may be located anywhere within the maximum zoning envelope. Portions of the illustrative building massing that extend above the maximum zoning envelope represent illustrative mechanical bulkheads that could be located on the rooftop of the proposed building.

With Action Conditions: Illustrative Massing
Manhattan Site - 124-125 White Street

Existing Conditions View 24 - Northwest view from the interior of Columbus Park

Northwest view from the interior of Columbus Park

Illustrative Building Massing (see Note)

Maximum Zoning Envelope

Maximum Envelope for Rooftop Mechanical Bulkheads (40 feet higher than maximum zoning envelope)

Note: Illustrative building massing indicates a conceptual building, which may be located anywhere within the maximum zoning envelope. Portions of the illustrative building massing that extend above the maximum zoning envelope represent illustrative mechanical bulkheads that could be located on the rooftop of the proposed building.

With Action Conditions: Illustrative Massing
Manhattan Site - 124-125 White Street

Existing Conditions View 23 - East view from Lafayette Street and White Street

East view from Lafayette Street and White Street

Illustrative Building Massing (see Note)

Maximum Zoning Envelope

Maximum Envelope for Rooftop Mechanical Bulkheads (40 feet higher than maximum zoning envelope)

Note: Illustrative building massing indicates a conceptual building, which may be located anywhere within the maximum zoning envelope. Portions of the illustrative building massing that extend above the maximum zoning envelope represent illustrative mechanical bulkheads that could be located on the rooftop of the proposed building.

With Action Conditions: Illustrative Massing
Manhattan Site - 124-125 White Street

south side of the site, abutting 100 Centre Street. The proposed detention facility would provide approximately 125 accessory parking spaces below grade.

Construction of the proposed detention facility would require a Special Permit to waive or modify certain zoning requirements including FAR, height and setback, and loading, including to permit a maximum commercial FAR of 10.0 and maximum overall FAR of 10.0 (excluding bonuses). A modification of maximum commercial and maximum total FAR is requested to allow a total FAR of 13.15, or which up to 0.13 FAR may be Use Group 3, 4, or 6a, and all other space, up to 13.02 FAR, must be Use Group 6d or 8d. Under existing zoning, the maximum permitted commercial floor area for the 149,427-sf proposed project area (zoning lot) is 1,494,270 zoning square feet (zsf) and the maximum total floor area is also 1,494,270 zsf. With the proposed modification, the maximum permitted floor area for Use Groups 6d and 8d will be 1,945,011 zsf, the maximum permitted floor area for Use Groups 3, 4, or 6a will be 20,000 zsf, and the maximum permitted total floor area will be 1965,011zsf. This modification is necessary to accommodate the proposed jail space program, accommodate proposals for ample support spaces, retain space for existing court/court related space in the Manhattan Criminal Court Building, provide pedestrian-oriented ground floor retail and/or community facility uses in character with the area, and achieve the objectives of providing a modern, humane, and safe detention facility.

The special permit would require modifications and waivers with respect to height and setback. Existing zoning permits a maximum base height of 85, requires a setback from the base of at least 20 feet from narrow streets and 15 feet from wide streets, and governs building volumes above the base and setback by sky exposure plane regulations. A modification of height, setback, and sky exposure plane regulations is requested to allow a building volume, as defined in waiver plan and section drawings, with a maximum base and building heights that exceeds the limit of the sky exposure plane regulations. The proposed building would be allowed a maximum base and building height of 450 feet for areas containing habitable space and a maximum base and building height above the average curb level of each street frontage of 490 feet, for rooftop mechanical bulkheads, parapets, and rooftop horticultural and related spaces. The building envelope will apply to an area measuring 72,884 square feet, i.e., the perimeter of the area where the new borough-based jail will be constructed. This modification is necessary to accommodate the proposed jail space program, provide efficient programming, viable floorplates, and achieve the objective of providing a modern, humane, and safe detention facility.

In addition, the proposed Manhattan borough-based jail requires other city approvals that are the subject of related, but separate applications. These include: City Map Change to change White Street between Centre and Baxter streets and reestablish the street with a narrower right-of-way with a slightly different alignment and a volume bounded by vertical planes; Site Selection, to approve the siting of proposed borough-based jails, including the proposed project area as the location for the Manhattan borough-based jail (this action is subject to a Fair Share analysis); and Zoning Text Amendment to Article VII, Chapter 4 of the ZR to create the new special permit for borough-based jail facilities permitting modification of zoning requirements for use, bulk—including floor area, height, and setback—and parking and loading.

On the east frontage of the project site, one new curb cut on Baxter Street would provide staff vehicle access to the underground garage. The existing sallyport entrances in the former Bayard Street streetbed would continue to be used, to provide secure sallyport entrances on the west and east sides of the project site. The streetbed on White Street would serve as the White Street Arcade, with the proposed new detention facility spanning over the streetbed commencing at the third floor level. The proposed project would include six pedestrian entrances. According to conceptual

designs, two community facility and/or retail space entrances would be anticipated to be located at the White Street Arcade in similar locations to the entrances to the existing building. A staff entrance would be located at the northern end of the Centre Street frontage, and a visitor entrance would be located farther south on the same frontage. The Baxter Street frontage would include two community facility and/or retail space entrances. Two one-level potential pedestrian bridges would connect the new detention facility to the Criminal Courts Building at approximately the third floor and at a higher floor.

The tower of the proposed detention facility would set back minimally above a six-story base. The conceptual designs show the proposed tower with a spine and projecting wings and mechanical floors above. According to the conceptual designs, the proposed detention facility could be clad in modern materials, such as a glass curtain wall and terracotta-clad panels. The bottom two floors on Baxter Street and Centre Street would be glazed, providing transparent frontages on the main entrance and the community spaces. Materials are subject to change, but a goal of the Borough Based Jail System program is for the new facilities to be compatible with its existing surrounding area. A pedestrian entrance would be located on White Street, with no sallyport entrances on White Street unlike the existing building. A narrow vertical panel of welded wire mesh would enclose the recreation yards. According to conceptual designs, the recreation yards would be located in the tower on each story, and the high security welded wire mesh wall of the yard would be located on the north and south sides of the building and visible as a narrow vertical strip extending the height of the tower.

On the sidewalks adjacent to the proposed detention facility, the proposed project would include seating, street trees and planting buffers along Baxter Street. Additional street trees would be added along Centre Street. The White Street Arcade would serve as a pedestrian street and the proposed project would include outdoor furnishings and improvements at this location. Site lighting would be present on all the sidewalks around the proposed detention facility. A kiosk with wayfinding would be installed on Centre Street to provide guidance to visitors to the jail. Bioswale planting would be added on the Baxter Street sidewalk, providing additional greenspace around the project site and contributing to stormwater management.

VISUAL RESOURCES AND VIEW CORRIDORS

As described above, the MDC North and South Towers on the project site are not a visual resource. Therefore, the proposed project would not result in an adverse impact on visual resources on the project site.

PRIMARY AND SECONDARY STUDY AREA

URBAN DESIGN

In the With Action condition, the proposed detention facility's height and form would be compatible with the surrounding urban design. South of the project site, both sides of Centre Street and Lafayette Street are developed with tall stone-clad buildings, including the 31-story approximately 544-foot-tall U.S. Courthouse at 1 Foley Square, the 39-story approximately 552-foot-tall Municipal Building at 1 Centre Street, and the 41-story approximately 584-foot-tall Jacob K. Javits Federal Building. Immediately south of the project site, 100 Centre Street is approximately 221 feet and 16 high with an approximately 353-foot-tall 24-story tower. The proposed detention facility would be larger than buildings in the northern portion of the study area, which is developed with 3- to 24-story buildings (see **Figure 4.6-26**).

The potential use of a glass curtain wall and terracotta panel cladding of the proposed tower, as well as the wire mesh exterior of the recreation yards, would vary from the cladding of most of the buildings in the study area, which typically include stone or concrete façades with punched or vertically oriented windows. However, as described above, there are buildings in the study area with glass and metal curtain walls, such as 111 Centre Street, the Jacob K. Javits Federal Building at 26 Federal Plaza, and 9 Crosby Street. The existing MDC North and South Towers on the project site have metal grilles and mesh enclosing roof top recreation yards. Therefore, these design features would not be out of context with the existing urban design of the study area.

According to conceptual drawings for the proposed project, the proposed detention facility would be comparable with the urban design of nearby 100 Centre Street. Conceptual drawings show the proposed detention facility having a tower with projecting wings, which would follow a similar form to 100 Centre Street, which is organized with projecting blocks along Centre Street and Baxter Street that form U-shaped courts. The study area is developed with tall buildings that are built in a variety of forms and massings. The approximately 584-foot-tall Jacob K. Javits Federal Building at 26 Federal Plaza is a simple rectangular shaft rising behind a landscaped plaza. The approximately 544-foot-tall U.S. Courthouse at 1 Foley Square has a square tower with a pyramidal roof set atop a base with a classical style portico. The approximately 552-foot-tall Municipal Building at 1 Centre Street is a wide, U-Shaped building with a tower capped by a cupola at the center. Southwest of the project site, the approximately 110-foot-tall City of New York Building has a U-shaped tower on a square base. Southeast of the project site, the approximately 462-foot-tall U.S. Courthouse at 500 Pearl Street is composed of a rectangular-shape tower with bowed ends.

The potential pedestrian bridges connecting the proposed detention facility with the Manhattan Criminal Courts Building at 100 Centre Street would not be inconsistent with the urban design of the study area. As described above, an existing pedestrian bridge connects the Manhattan Criminal Courts Building to the existing South Tower on the project site. The existing towers on the project site are also connected by a pedestrian bridge over White Street.

The proposed detention facility would provide additional street furniture, site lighting, and landscaping on the sidewalks along Baxter Street and Centre Street. These changes would provide a more active and pedestrian-friendly environment than that of the existing conditions (see **Figure 4.6-27**). In addition, glass curtain walls on the ground floors along Baxter Street and Centre Street would further activate the pedestrian environment and would be compatible with the transparent storefronts near the project site on Centre Street and Canal Street. The inclusion of community facility space and/or retail space on Baxter Street would activate this side of the project site that currently does not have pedestrian entrances or windows, providing an active ground floor that is more consistent with the existing storefronts and restaurants on the east side of Baxter Street. The proposed detention facility's White Street Arcade would maintain the existing pedestrian passage between Baxter and Centre Streets, and it would enhance this pedestrian corridor by removing sallyport entrances along the street, sheltering the arcade with the upper levels overhead, and reserving the street as an exclusively pedestrian passage with limited vehicle access. This pedestrian pass-through would be designed to ensure that the proportions of the opening (width to height rations), as well as uses fronting the space and use of materials and furniture, will create on inviting pedestrian environment that is open and accessible 24/7.

The proposed detention facility would be set back from Walker Street, behind an existing 14-story building at 125 Walker Street. Canal Street, a wide street, as well as Walker Street and the wedge-shaped blocks between Walker and Canal Streets, would further separate the project site from the

northern portion of the study area. The urban design of the northern and northwestern portions of the study area also include buildings over 300 feet tall, such as the 26-story approximately 343-foot-tall hotel at 9 Crosby Street, facing Lafayette Street and the 347-foot-tall office building at 60 Walker Street. Although the proposed detention facility would be taller than buildings in the Chinatown and Little Italy neighborhoods located north and east of the project site, both Canal Street and Columbus Park would act as physical and visual buffers between the project site and these neighborhoods.

VISUAL RESOURCES AND VIEW CORRIDORS

Under the With Action condition, the proposed project would not change urban design features so as to alter the context of a natural or built resource in the study area.

In the With Action condition, the proposed detention facility would not have the potential to obstruct views to visual resources in the study area. The existing buildings on the project site are 14 stories tall and bulky. These existing buildings block southern views of the Manhattan Criminal Courts Building at 100 Centre Street from Canal Street (see **Figure 4.6-28**). The two proposed pedestrian bridges on the north façade of the Manhattan Criminal Courts Building would replace existing pedestrian bridges that connect the existing South Tower to the north façade of 100 Centre Street. The pedestrian bridges of the proposed detention facility would result in a comparable condition to the Manhattan Criminal Courts Building, and the proposed pedestrian bridges would not obscure substantial portions of the north façade of 100 Centre Street. Therefore, the proposed detention facility at 124-125 White Street would not result in significant adverse visual impacts to 100 Centre Street.

South views from Canal Street and the northern portion of the study area would include the upper portion of the proposed detention facility (see **Figures 4.6-29**). Although the detention facility would be taller than buildings on Canal Street, the building would be compatible with the tall buildings that are visible from the primary study area. In the primary study area, views south on Centre Street would include the proposed detention facility and the tall municipal buildings that surround Thomas Paine Park, such as the U.S. Courthouse at 1 Foley Square and the Municipal Building at 1 Centre Street. Views south on Centre Street also include distant views of the 76-story New York by Gehry building at 8 Spruce Street. Views from the primary study area also include the 395-foot-tall brick tower at 1 Bowery to the east and the 825-foot-tall building at 56 Leonard Street to the west.

The proposed detention facility at the Manhattan Site would be visible from public open spaces in the study areas, including Collect Pond Park, Thomas Paine Park (Foley Square), and Columbus Park. Within public parks that have hardscape plazas and low plantings, views to the project site would include the glazed bottom floors, and the terracotta-finish panels and glass curtain walls of the tower. Collect Pond Park includes hardscape plazas, moderate tree canopy, and low plantings at the perimeter of the park, providing open southeast views from within the park that would include the base and tower of the proposed detention facility (see **Figure 4.6-30**). The northern portion of Thomas Paine Park contains mature trees that partially block views to the proposed tower, and the southern portion is a hardscape plaza that would have direct views of the upper stories of the tower rising behind the Manhattan Criminal Courts Building and the Louis J. Lefkowitz State Office Building (see **Figure 4.6-31**). In the densely planted Columbus Park, pedestrian views of the upper stories of the tower would be visible from the park interior during seasons when the trees are not in foliage. The recreation fields and playgrounds in the southern portion of Columbus Park have less tree cover, providing these active recreation areas with views

of the proposed detention facility's tower (see **Figure 4.6-32**). Views from the park would include the proposed detention facility, as well as the upper stories of 353-foot-tall Manhattan Criminal Courts Building and the 462-foot-tall U.S. District Courthouse that faces the south side of the park.

Views from the surrounding streets to Collect Pond Park, Thomas Paine Park, and Columbus Park would also include the upper stories of the proposed detention facility at 124-125 White Street. In these views, the proposed detention facility would be visible behind the existing parks that are adjacent to the project site. Although the proposed detention facility would introduce an alteration to the views of the parks and from within the parks, the project's size and form would be compatible with its surroundings and would not have the potential to obstruct views to the parks that are not already blocked by the existing MDC.

The upper stories of the proposed detention facility would be built over the White Street streetbed, potentially blocking view corridors in the study area along this street. However, White Street terminates at Baxter Street, already truncating views along White Street east of the project site. To the west of the project site, long views from White Street would include the proposed detention facility. The detention facility would be visible from Broadway in the western portion of the study area (see **Figure 4.6-33**). The existing view east at Lafayette Street and White Street includes a distant view of the 395-foot-tall brick tower at 1 Bowery; therefore the proposed development would not block views or introduce a view that is incompatible with the existing urban design.

F. CONCLUSION

The proposed project would not have a significant adverse impact on the urban design of the study area. The study area contains a mixture of building types, styles, and sizes, including stone-clad municipal buildings on Centre Street, three- to four-story buildings in the Little Italy and Chinatown neighborhoods, parking lots and a 26-story hotel building on the streets north of the project site, older cast iron store and loft buildings in Tribeca East and SoHo neighborhoods, and buildings over 200-feet tall along Broadway and other locations. Open spaces are located southwest and southeast of the project site. The proposed detention facility would be of a height comparable to existing towers in the primary and secondary study areas, including the approximately 584-foot-tall 41-story Jacob K. Javits building, the 462-foot-tall U.S. District Courthouse at 500 Pearl Street, and the 224-foot-tall 100 Centre Street building (with a 354-foot-high tower). The form of the proposed detention facility's tower would be compatible with the surrounding urban design, which includes towers in a variety of forms, such as the U-shaped Manhattan Municipal Building and the projecting wings and spine design of 100 Centre Street. The use of pedestrian bridges to connect the proposed detention facility at 124-125 White Street with the Manhattan Criminal Courts Building at 100 Centre Street would also be consistent with the existing urban design of the project site and study area.

The proposed project would not have the potential to result in a significant adverse impact to visual resources. The project site does not contain visual resources, and the proposed detention facility would not have the potential to adversely affect views to visual resources in the study area.

The potential bridges connecting from the proposed detention facility to the Manhattan Criminal Courts Building at 100 Centre Street would not adversely impact views of the Criminal Courts Building. The bridges would replace existing bridges that connect the existing South Tower to the Manhattan Criminal Courts Building and the bridges of the propose detention facility would not obscure substantial portions of the north façade. The potential pedestrian bridges would not

obstruct the more prominent west and east façades of the building, which are visible from the adjacent Collect Pond Park and Columbus Park, respectively. Views from the parks include the tower on 100 Centre Street, a visual resource, and these views would not be affected. ✷

Section 4.7: Hazardous Materials-Manhattan

A. INTRODUCTION

This section addresses the potential for the presence of hazardous materials resulting from previous or existing uses at the Manhattan Site and the surrounding area, and identifies potential issues of concern that could pose a hazard to users of the new building, the surrounding communities, and/or the environment during or after development of the proposed project. All existing buildings/facilities of the Manhattan Detention Complex (MDC) North and South Towers would be demolished and new facilities would be constructed, requiring extensive excavation of the entire Site, including White Street.

According to City Environmental Quality Review (CEQR) criteria, a hazardous material assessment is to be conducted when elevated levels of hazardous materials exist on a site, when a project would increase pathways to their exposures, either human or environmental, or when an action would introduce new activities or processes using hazardous materials, thereby increasing the risk of human or environmental exposure. An analysis should be conducted for any site with the potential to contain hazardous materials or if any future redevelopment of the property is anticipated.

The proposed project would facilitate the development of the Manhattan Site with a new detention facility; support space; retail and/or community facility space; and parking spaces. Without appropriate controls the required demolition and excavation could create a potential for exposure to any contaminated materials present (within existing buildings or in the subsurface).

A Phase I Environmental Site Assessment (ESA) addressing the Manhattan Site was prepared by Matrix New World Engineering, Land Surveying and Landscape Architecture, P.C. (Matrix) in accordance with ASTM E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Practice in May 2018 (see **Appendix E)**. The Phase I ESA included an interior visual inspection and, for the site and nearby, a review of historical land-use maps, aerial photographs, local records, and state and federal regulatory databases relating to use, generation, storage, treatment, and/or disposal of hazardous materials. Additional information on geology/hydrogeology was obtained from an October 2018 Preliminary Geotechnical Report, prepared by Mueser Rutledge Consulting Engineers.

Unlike the proposed sites in the Bronx, Brooklyn, and Queens, a Phase II Investigation, and the resulting Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP), have not yet been completed for the Manhattan Site. As noted in the Final Scope of Work, the Manhattan Site was changed in response to public comments during the scoping process, and access to the site for subsurface investigations requires approval from New York City Transit (NYCT) because of nearby subway infrastructure. As a result, site access and completion of the subsurface investigations was delayed compared with the other proposed borough jail sites. It is expected that the Phase II Investigation, RAP, and CHASP will be completed prior to the Final EIS, and this section will be updated as appropriate in the Final EIS.

PRINCIPAL CONCLUSIONS

Evaluation of the Manhattan Site was performed via review of a Phase I ESA. The ESA revealed evidence of recognized environmental conditions (RECs). ASTM, in the E1527-13 Standard for conducting ESAs, identifies these as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property."

Given the age of the structures that would need to be demolished at MDC South, it is likely that they contain substances that are typical of older buildings, for example asbestos-containing materials (ACM), lead-based paint (LBP), and/or polychlorinated biphenyls (PCBs). Since MDC North was built in 1989, the potential for these materials to be present is lower, but some ACM could still be present. There are a variety of federal, state, and local regulatory requirements that would be followed prior to and during demolition to address disturbance and disposal of these materials.

Construction of the new facilities would require extensive excavation of the Manhattan Site. Impacts would be avoided by conducting subsurface investigations in accordance with Work Plans pre-approved by the New York City Department of Environmental Protection (DEP) and then preparing (also subject to DEP approval) a RAP and associated CHASP for implementation during the subsurface disturbance associated with construction. Occupancy permits would only be issued once DEP receives and approves a Remedial Closure Report, certified by a New York-licensed Professional Engineer, that documents that the RAP and CHASP were properly implemented.

With the implementation of applicable regulatory requirements and the measures required by the RAP/CHASP, the potential for significant adverse hazardous materials impacts from construction at the project sites would be avoided. Following construction, there would be no potential for significant adverse impacts relating to hazardous materials.

B. EXISTING CONDITIONS

HAZARDOUS MATERIALS ASSESSMENT

POTENTIAL CONTAMINANTS OF CONCERN

Soil and groundwater can become contaminated because of past or current activities on a project site or on adjacent areas. Most of the Manhattan Site previously contained a body of water called Collect Pond and bordered marshlands that were eventually filled for land development and the street grid was established. Many industrial activities use, store, or generate contaminated materials that can be spilled, dumped, or buried nearby. Other activities common in mixed-use neighborhoods, such as gas stations and auto repair shops, can also result in contamination due to improper handling/management of raw product and/or waste materials, or inadvertent spills/release.

Exposure to contaminants can potentially occur through direct contact. Exposure to contaminated groundwater through ingestion is not expected as New York City is served by municipal water systems that rely on upstate reservoirs. However, if such contaminants are not properly managed, the proposed excavation, earthmoving, dewatering, and other construction activities can introduce potential risk to construction workers and others nearby by providing a pathway of exposure from contaminants. Demolition or disturbance of existing structures that have ACM, LBP, electrical equipment containing PCBs, or fluorescent lights or older thermostats containing mercury have the potential to release contaminants if these materials are not properly managed.

Based on the types of contaminants that are typically found in New York City, some of the potential contaminants of concern are described below. The list provides a summary of potential categories of contaminants and is not a comprehensive list of all contaminants that may be encountered:

1. **Volatile organic compounds (VOCs)**: These include aromatic compounds—such as benzene, toluene, ethylbenzene, xylene (BTEX), which are found in petroleum products (especially gasoline, which can also contain methyl tertiary butyl ether [MTBE])—and chlorinated compounds, such as tetrachloroethene (also known as perchloroethylene or "perc") and trichloroethene, which are common ingredients in solvents, degreasers, and cleansers. VOCs represent the greatest potential for contamination since, in addition to soil and groundwater contamination, they can generate organic vapors.
2. **Semivolatile organic compounds (SVOCs)**: The most common SVOCs in urban areas are polycyclic aromatic hydrocarbons (PAHs), which are constituents of partially combusted coal- or petroleum-derived products, such as coal ash, and fuel oil. PAHs are commonly found in New York City urban fill material, which likely underlies all of the project site. Petroleum-related SVOCs could be present and are typically associated with buried tanks currently or formerly located in the study area. SVOCs can also be present in creosote-treated timber (e.g., piles).
3. **Polychlorinated biphenyls**: Commonly used as a dielectric fluid in transformers, some underground high-voltage electric lines, and hydraulically operated machinery, PCBs are of special concern near electrical transformers where leakage into soil may have occurred. PCBs and/or PCB-containing materials were once widely used in manufacturing and industrial applications (e.g., hydraulic lifts, transformers, and plastics manufacturing). PCBs tend to travel only short distances in soil, except in unusual circumstances (e.g., large spills of PCB-containing oils over many years).
4. **Pesticides, herbicides, and rodenticides**: These are commonly used to control rodents and/or insects and vegetation in vacant structures or in vegetated areas or vacant lots. Pesticides/herbicides are relatively immobile and tend to be persistent in surface soils.
5. **Metals (including lead, arsenic, cadmium, chromium, mercury and cyanide)**: Metals are often used in smelters, foundries, and metal works and are found as components in paint, ink, petroleum products, fluorescent lights, older thermostats, and coal ash, and were used in the past (copper, chrome, and arsenic) as wood preservatives (e.g., on piles). These metals tend not to migrate far in soil. Metals at levels above natural background levels are frequently present in fill material throughout the New York metropolitan area.
6. **Fuel oil and gasoline from storage tanks**: Current or historical buildings at or near the project sites could have had aboveground storage tanks and/or underground storage tanks for fuels, including heating oil and gasoline.
7. **Fill materials of unknown origin**: In the past, waste materials, including coal and incinerator ash, demolition debris (including from demolished cinder blocks), and industrial wastes, were commonly used as fill in urban areas. Even fill material consisting primarily of soil may exhibit elevated levels of PAHs, metals, PCBs, SVOCs, and other contaminants. Such materials are potentially present on the project sites.
8. **Asbestos**: Asbestos is a common component of building materials, especially insulation, fireproofing, tile flooring, plaster, sheetrock, ceiling tiles, mastic, and roofing materials.

In addition to materials within existing structures, subsurface utility lines may be coated with asbestos or encased in "transite," an ACM. Asbestos was widely used before 1980. Because of the age of many of the project site buildings, ACM is almost certainly present in the older project site buildings.

9. **Lead-based paint**: The use of LBP in New York City residential buildings was banned in 1960. Its use in other buildings and outdoors was severely restricted by the Consumer Products Safety Commission in 1977. It is regulated under the Occupational Safety and Health Administration (OSHA) Lead Exposure in Construction standard (29 CFR 1926.62). Lead that is released as dust (or as a fume if heated) is potentially hazardous, especially to children. The older project site buildings are likely to include LBP.

MDC NORTH (124 WHITE STREET) - PHASE I ESA

MDC North is a nine-story (plus cellar) building built in 1989.

Associated RECs included:

- A 10,000-gallon fiberglass reinforced plastic (FRP) diesel fuel UST was installed in 2002 outside the building in front of the sallyport at the southeast corner of the facility. No tank tightness test results were available and the facility received a Notice of Violation (NOV) for the fill port and replaced it with a new compliant one with secondary containment in approximately 2016.
- Perimeter drains in the aboveground storage tank (AST) area. A 5,000-gallon diesel fuel FRP AST location is in a basement room with a perimeter drain. Although the tank and concrete floor appeared to be in good condition, had a spill occurred, the drain could have provided a pathway to the subsurface.
- A former filling station was shown in the northwest corner of the site on historical Sanborn maps from between 1950 and 1980.

In addition to these RECs, certain areas were inaccessible and could be associated with RECs. Prior to the construction of the current building, the location included numerous businesses including printing, engraving, and other trades with potential hazardous material use. Numerous Con Edison manholes and vaults near the site were identified with petroleum spills. However, based on the volumes released and given that these structures are usually self-contained, there is little potential for impact to the site.

MDC SOUTH - PHASE I ESA

MDC South is a 13-story (plus cellar and partial sub-cellar) building built in 1941. It is separated from the North Tower by White Street, but the towers are connected by a tunnel and two bridges.

Associated RECs included:

- Floor drains are present in the cellar mechanical room, where there is a fuel distribution panel, a lathe with cutting oil, and hydraulic press (with speedy dry applied to an apparent leak). Although the floor drains presumably connect to the municipal sewer system, any cracks in the floor or drainage system could have created a pathway for contaminants into the subsurface.

In addition to this REC, certain areas, including the electrical/plumbing shop, were inaccessible and could be associated with RECs. Numerous Con Edison manholes and vaults near the site were

identified with petroleum spills. However, based on the volumes released and given that these structures are usually self-contained, there is little potential for impact to the site.

HAZARDOUS MATERIALS WITH THE EXISTING STRUCTURES

Although not part of the scope of the Phase I ESAs, given the age of the structures that would need to be demolished at MDC South, it is likely that they contain substances that are typical of older buildings, for example ACM, LBP, and/or PCBs. Since MDC North was built in 1989, the potential for these materials to be present is lower, but some ACM could still be present. There are a variety of federal, state, and local regulatory requirements that would be followed prior to and during demolition to address disturbance and disposal of these materials.

C. THE FUTURE WITHOUT THE PROPOSED PROJECT

In the future without the proposed project (i.e., the No Action condition), it is assumed that the buildings would remain in their current conditions. Regulatory requirements relating to petroleum storage tanks, ACM, LBP, PCBs would continue to apply, but without the demolition and subsurface disturbance associated with the proposed project, the potential for exposure (to construction workers and the community) to any hazardous materials would not be expected to occur.

D. THE FUTURE WITH THE PROPOSED PROJECT

As currently contemplated, all existing structures/facilities on the Manhattan Site would be demolished/removed and new buildings would be constructed. Given the age of given the age of the structures that would need to be demolished at MDC South, it is likely that they contain substances that are typical of older buildings, for example ACM, LBP, and/or PCBs. Since MDC North was built in 1989, the potential for these materials to be present is lower, but some ACM could still be present. There are a variety of federal, state, and local regulatory requirements that would be followed prior to and during demolition to address disturbance and disposal of these materials.

These include:

- Prior to demolition, the existing buildings would be surveyed for asbestos by a New York City-certified asbestos investigator and all ACM would be removed and disposed of prior to demolition in accordance with local, state and federal requirements.
- Demolition would be performed in accordance with applicable requirements (including federal OSHA regulation 29 CFR 1926.62–Lead Exposure in Construction).
- Unless there is labeling or test data indicating that any suspect PCB-containing electrical equipment and fluorescent lighting fixtures do not contain PCBs, and that any fluorescent lighting bulbs do not contain mercury, disposal of these items would be conducted in accordance with applicable federal, state, and local requirements.

Construction of the new facility would require extensive excavation of the Manhattan Site. Impacts would be avoided by incorporating the following into the project:

- Additional investigation of the Manhattan Site would be performed: a “Phase II Environmental Site Assessment ”, including collection of soil, groundwater and soil vapor samples for laboratory analysis. A Work Plan for the investigation, dated May 2018, not only tailored to the locations/depths where construction would occur, but also to the RECs identified in its Phase I ESA, has been prepared and submitted to DEP for review and approval

in advance of conducting the testing. Because the Manhattan Site was relocated to 124 and 125 White Street in response to public comments and since this site is close to subway tunnels, approval for the investigation drilling work has been sought from NYCT and testing will commence once this is received.

- Following implementation of the investigation, a report would be prepared for DEP and, based on its findings, a RAP and associated CHASP would be prepared for implementation during the subsurface disturbance associated with construction. The RAP and CHASP would set out procedures to be followed to avoid the potential for adverse impacts related to hazardous materials identified by the investigation as well as other hazardous materials that could be (unexpectedly) encountered. The RAP would address requirements for items such as: field oversight of soil disturbance by an environmental professional, soil management (including stockpiling, handling, transportation and disposal), dust control and air monitoring, criteria for chemical testing of any imported soil needed for landscaping, and contingency measures should UST or soil contamination be encountered. The RAP also would include any necessary requirements for vapor controls (likely a vapor barrier around the foundation elements, and, if the foundations do not extend below the groundwater table, potentially a sub-slab depressurization system) to avoid the potential for soil vapor intrusion into new structures. The CHASP would present a hazard assessment for the construction workers and set out the requirements for real-time air monitoring (for respirable dust and VOCs) during subsurface disturbance, to protect both the construction workers and the community. The RAP and CHASP would be subject to DEP for approval and, following construction, occupancy permits would only be issued once DEP receives and approves a Remedial Closure Report, certified by a New York-licensed Professional Engineer, that documents that the RAP and CHASP have been properly implemented.
- Removal of all known USTs, ASTs and any unforeseen petroleum tanks would be performed in accordance with applicable regulatory requirements including New York State Department of Environmental Conservation requirements relating to spill reporting and tank registration.
- If dewatering were to be necessary for the proposed construction (groundwater was encountered at approximately 19 feet below grade during the geotechnical investigation of the White Street sites), water would be discharged to sewers in accordance with DEP requirements.

With the implementation of the regulatory requirements relating both to the demolition/renovation of the existing facilities and the measures required by the RAP/CHASP and other applicable regulatory requirements, the potential for significant adverse hazardous materials impacts from construction at the Manhattan Site would be avoided. Following construction, there would be no potential for significant adverse impacts relating to hazardous materials. ✷

Section 4.8: Water and Sewer Infrastructure-Manhattan

A. INTRODUCTION

This section evaluates the potential for the proposed project to result in significant adverse impacts on the City's water supply as well as wastewater and stormwater conveyance and treatment infrastructure.

As discussed in Chapter 1, "Project Description," the proposed project would redevelop the existing detention facility on the Manhattan Site at 124 and 125 White Street (Block 198, Lot 1 and Block 167, Lot 1) with a new detention facility, supporting uses, community facility and/or retail space and accessory parking.

According to the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, projects that increase density or change drainage conditions on a large site require a water and sewer infrastructure analysis. The project site is located in a combined sewer area.

The proposed project would see the redevelopment of the project site with approximately 1,270,000 gsf of space; therefore, following the guidelines of the *CEQR Technical Manual*, an analysis of the project site's potential for impacts on the wastewater and stormwater conveyance and treatment system were performed.

PRINCIPAL CONCLUSIONS

This analysis finds that the proposed actions are not anticipated to have the potential to result in significant adverse impacts related to the City's water supply or to wastewater and stormwater conveyance and treatment infrastructure.

WATER SUPPLY

By 2027, the future with the proposed project (With Action condition) would generate an incremental water demand of 280,850 gallons per day (gpd) as compared with the future without the proposed project (the No Action condition). This represents a 0.03 percent increase in demand on the New York City water supply system. It is expected that there would be adequate water service to meet the incremental water demand, and there would be no potential for significant adverse impacts on the City's water supply.

SANITARY SEWAGE

By 2027, the With Action condition would generate an incremental 138,900 gpd of sewage over the future without the proposed project. This incremental volume in sanitary flow to the combined sewer systems would represent approximately 0.07 percent of the average daily flow to the Newtown Creek Wastewater Treatment Plant (WWTP). This volume would not result in an exceedance of the Newtown Creek WWTP's capacity, and is not anticipated to have the potential to create a significant adverse impact on the City's sanitary sewage treatment system.

STORMWATER

The Manhattan Site is located in two sub catchment areas of the Newtown Creek WWTP. As compared with the No Action condition, the With Action condition would result in an increase in stormwater flows to the WWTP during wet weather due to an increase in impervious surfaces. A reduction in stormwater peak flows to the combined sewer system would be achieved with the incorporation of stormwater source control best management practices (BMPs) in accordance with the New York City Department of Environmental Protection (DEP) site connection requirements. Therefore, the proposed project is not anticipated to have the potential for a significant adverse impact on the City's combined sewer system or the City's sewage treatment system.

B. METHODOLOGY

This analysis follows the *CEQR Technical Manual* guidelines that recommend a preliminary water analysis if a project would result in an exceptionally large demand for water (over 1 million gpd), or if it is located in an area that experiences low water pressure (e.g., an area at the end of the water supply distribution system such as the Rockaway Peninsula or Coney Island). The proposed project would not generate an incremental water demand of 1 million gpd and is not located in an area that experiences low water pressure. Therefore, it is anticipated that there would be adequate water service to meet the incremental demand, and there would be no potential for significant adverse impacts on the City's water supply. Additionally, DEP has confirmed that the existing water supply infrastructure serving the project site should be sufficient to handle the incremental increase in water demand.

The *CEQR Technical Manual* indicates certain scenarios in which a sewer analysis is warranted.[1] The proposed project would result in development exceeding the *CEQR Technical Manual* thresholds of 250,000 square feet of non-residential uses in an area served by combined sewers in Manhattan. Therefore, this section includes an analysis of the proposed project's potential for impacts on the wastewater and stormwater conveyance and treatment system.

Existing and future water demand and sanitary sewage generation are calculated based on use rates set by the *CEQR Technical Manual*.[2] The DEP Volume Calculation Matrix is then used to calculate the overall combined sanitary sewage and stormwater runoff volume discharged to the combined sewer system for four rainfall volume scenarios with varying durations. The ability of the City's sewer infrastructure to handle the anticipated demand from the proposed project is assessed by estimating existing sewage generation rates, and then comparing these existing rates with the No Action condition and the With Action condition, per *CEQR Technical Manual* methodology.

C. EXISITING CONDITIONS

WATER SUPPLY SYSTEM

The New York City water supply system—comprised of three watersheds: the Croton, Delaware, and Catskill—extends as far north as the Catskill Mountains and delivers on average

[1] *CEQR Technical Manual*, Table 13-1, Page 13-9.

[2] *CEQR Technical Manual*, March 2014, Table 13-2.

approximately 1.1 billion gallons of water per day to customers in the five boroughs and Westchester County. From these watersheds, potable water is conveyed to the City via a system of reservoirs, aqueducts, and tunnels. Within the City, a grid of water pipes distributes water to customers. Based on a review of available DEP water system mapping, the project site is served by water mains along Baxter Street, Centre Street, and White Street.

CONVEYANCE SYSTEM

The Manhattan Site is located at 124 and125 White Street (Block 198, Lot 1 and part of Block 167, Lot 1). Both buildings are located within a part of Manhattan served by a combined sewer system that collects both sanitary sewage and stormwater. In periods of dry weather, the combined sewers located in the adjacent streets convey only sanitary sewage. The project site currently contains the Manhattan Detention Complex South and North Towers. The project site has an area of approximately 1.86 acres. Combined sewers running south along Baxter Street, south along Centre Street, and west along White Street serve the project site.

Approximately 75 percent (1.40 acres) of the project site's sanitary and stormwater flow is conveyed to a combined sewer system running east underneath Columbus Park to Mulberry Street, and then east to Regulators M18/19 north of the Brooklyn Bridge along the East River. The remaining 25 percent, which is approximately 0.46 acres of the project site area, is conveyed to the west side of Centre Street (north of White Street) and flows south and west to Regulator M4 on West Street, between Harrison and Chambers Streets. From Regulators M18 and M19, flow is conveyed to an interceptor running along the East River to the Manhattan Pump Station near FDR Drive and East 14th Street. Flow from Regulator M4 is conveyed to an interceptor running south along West Street that runs along the southern tip of Manhattan to the same interceptor which is connected to the Manhattan Pump Station. From the pump station, the flow is pumped east under the East River to the Newtown Creek WWTP in the neighborhood of Greenpoint, Brooklyn.

At the Newtown Creek WWTP, wastewater is treated by physical and biological process before it is discharged into the East River. The quality of the treated wastewater (effluent) is regulated by a State Pollutant Discharge Elimination System (SPDES) permit issued by the New York State Department of Environmental Conservation (NYSDEC), which establishes limits for effluent parameters (i.e., suspended solids, fecal coliform bacteria, and other pollutants). Since the volume of flow to a WWTP affects the level of treatment a plant can provide, the maximum permitted capacity for the Newtown Creek WWTP is 310 million gallons per day (mgd). The average monthly flow over the past 12 months is 212 mgd,[3] which is well below the maximum permitted capacity.

During and immediately after wet weather, combined sewers can experience a much larger flow due to stormwater runoff collection. To control flooding at the Newtown Creek WWTP, the regulators built into the system allow only approximately two times the amount of design dry weather flow into the interceptors. The interceptor then takes the allowable flow to the WWTP, while the excess flow is discharged to the nearest waterbody as combined sewer overflow (CSO). The project site is located within two CSO drainage areas: in wet weather, excess sanitary flow and stormwater runoff from these drainage area is conveyed to CSO outfalls NCM-050 and NCM-073. NCM-050 is located along the East River directly north of the Brooklyn

[3] For the 12-month period through March 2017, the most recent available data.

Bridge. NCM-073 is located along the Hudson River south of Pier 25, between Harrison and Chambers Streets.

SANITARY FLOWS

For purposes of analysis, the amount of sanitary sewage is estimated as all water demand generated on the project site except water used by air conditioning, which is typically not discharged to the sewer system. **Table 4.8-1** summarizes the water demand and sewage generation from the project site under the existing conditions. The Manhattan Site includes a total of approximately 435,000 square feet of primarily detention facility uses (including 898 beds) and approximately 5,808 square feet of ground-floor retail. The total sanitary sewage generated by the existing conditions on the project site is estimated to be approximately 91,200 gpd, while the total water demand generated is approximately 165,150 gpd.

Table 4.8-1
Manhattan Site Water Consumption and Sewage Generation: Existing Conditions

Use	Size/Population	Rate*	Consumption (gpd)
Detention Housing[1]			
Domestic	898 persons	100 per person	89,800
Air Conditioning	428,700 sf	0.17 gpd/sf	72,879
Retail			
Domestic	6,300 sf	0.24 gpd/sf	1,400
Air Conditioning	6,300 sf	0.17 gpd/sf	1,071
		Total Water Supply Demand	165,150
		Total Sewage Generation	91,200

Notes:
* Rates are from the *CEQR Technical Manual*, Table 13-2.
[1] Utilizes Residential rates for calculation.

STORMWATER FLOWS

The Manhattan Site has a combined lot area of approximately 1.86 acres. The majority of the project site includes the Manhattan Detention Complex South and North Towers, with some landscaping along the exterior, and the proposed demapped portion of White Street. **Table 4.8-2** summarizes the surfaces and surface areas, as well as the weighted runoff coefficient (the fraction of precipitation that becomes surface runoff for each surface type). The project site is split between two CSO drainage areas: approximately 1.40 acres is conveyed to CSO NCM-050, and approximately 0.46 acres to CSO NCM-073.

Table 4.8-2
Existing Surface Coverage

Affected CSO Outfall	Surface Type	Roof	Pavement and Walkways	Other	Grass and Soft Scape	Total
NCM-050	Area (percent)	53%	47%	0%	0%	**100%**
	Surface Area (sf)	32,544	28,625	–	–	**61,169**
	Runoff Coefficient*	1.00	0.85	–	–	**0.93**
NCM-073	Area (percent)	70%	30%	0%	0%	**100%**
	Surface Area (sf)	14,106	5,989		–	**20,095**
	Runoff Coefficient*	1.00	0.85		–	**0.96**

Notes:
* Weighted Runoff Coefficient calculations based on the DEP Flow Volume Calculation Matrix provided in the *CEQR Technical Manual*, retrieved September 2018.
Totals may not sum due to rounding.

D. THE FUTURE WITHOUT THE PROPOSED PROJECT

Absent the proposed project, the Manhattan Site will remain as is. Therefore, there will be no changes to the conveyance system or sanitary or stormwater flows on the site.

E. THE FUTURE WITH THE PROPOSED PROJECT

The proposed project would redevelop 124 and 125 White Street with a new detention facility containing approximately 1,270,000 gsf of above-grade floor area, including approximately 1,437 beds for people in detention; support space; and community facility and/or retail space. This site would also provide approximately 125 accessory parking spaces. The proposed detention facility is expected to include pedestrian bridges to the south to provide access to the existing court facilities at 100 Centre Street.

WATER SUPPLY SYSTEM

As shown in **Table 4.8-3**, the proposed project is expected to generate an incremental water demand of 280,850 gpd as compared with the No Action condition. This represents a 0.03 percent increase in demand on the New York City water supply system; however, per DEP, it is expected that there would be adequate water service to meet the incremental water demand with the proposed actions, and there would be no potential for significant adverse impacts on the City's water supply.

Table 4.8-3
Total Water Consumption and Sewage Generation

Use	Size/Population	Rate*	Consumption (gpd)
Detention Housing[1]			
Domestic	1,437 persons	100 per person	143,700
Air Conditioning	910,000 sf	0.17 gpd/sf	154,700
Community Facility and/or Retail[2]			
Domestic	20,000 sf	0.24 gpd/sf	4,800
Air Conditioning	20,000 sf	0.17 gpd/sf	3,400
Support Services[2]			
Domestic	340,000 sf	0.24 gpd/sf	81,600
Air Conditioning	340,000 sf	0.17 gpd/sf	57,800
		Total Water Supply Demand	**446,000**
		Total Sewage Generation	**230,100**

Notes:
* Rates are from the *CEQR Technical Manual* Table 13-2.
[1] Total number of persons in Detention Housing is determined by the number of beds provided in the facility. Utilizes Residential rates for calculation.
[2] Utilizes Retail rates for calculation.

There is a 12-inch water main that runs along the existing portion of White Street, above- and below-grade volumes of which are to be demapped and redeveloped into a public arcade as part of the proposed detention facility. Because the demapped portion of White Street would have no vehicular access, the water main would be disconnected from the distribution system. According to DEP, the New York City Department of Correction (DOC) would submit a plan to abandon

the infrastructure in accordance with DEP specifications for review and approval. Upon completion of the work, DOC would report to DEP for final inspection.

CONVEYANCE SYSTEM

In the With Action condition, it is anticipated that the sewers in Baxter Street and along Centre Street would be available for connection, and would convey the sanitary and stormwater flow from the Manhattan Site to the Newtown Creek WWTP. Similarly to the plan for disconnection of the water main, DOC would submit a plan to DEP for the disconnection and abandonment of the existing 48"x 28" sewer in White Street in accordance with DEP specifications. Once the plan is reviewed and approved, and upon completion of the work, DOC would report to DEP for final inspection.

SANITARY FLOWS

As shown in **Table 4.8-3**, the proposed project is expected to generate 230,100 gpd of daily sanitary sewage. Additionally, the incremental sanitary sewage generated by the proposed project over the No Action condition would be138,900 gpd. The incremental increase in sewage generation is approximately 0.07 percent of the average daily flow at the Newtown Creek WWTP and would not result in an exceedance of the WWTP's permitted capacity of 310 mgd. In addition, in accordance with the New York City Plumbing Code (Local Law 33 of 2007), the proposed project would plan to utilize low-flow plumbing fixtures. Therefore, the proposed project is not anticipated to result in the potential for a significant adverse impact to the City's sanitary sewage conveyance and treatment system.

STORMWATER FLOWS

The amount of impervious surfaces in the No Action condition would increase in the With Action condition with the increase of roof surface area. Since the proportion of impervious surfaces would change from the No Action condition to the With Action condition, theanticipated stormwater flow would also change (see **Table 4.8-4**).

Table 4.8-4
Manhattan Site Surface Coverage
With Action Condition

Affected CSO Outfall	Surface Type	Roof	Pavement and Walkways	Other[1]	Grass and Softscape	Total
NCM-050	Area (percent)	64%	36%	0%	0%	**100%**
	Surface Area (sf)	39,114	22,055	–	–	**61,169**
	Runoff Coefficient*	1.00	0.85	–	–	**0.95**
NCM-073	Area (percent)	85%	15%	0%	0%	**100%**
	Surface Area (sf)	16,981	3,113	–	–	**20,095**
	Runoff Coefficient*	1.00	0.85	–	–	**0.98**

Notes:
* The Runoff Coefficient is a weighted average. The calculations are based on the DEP Volume Calculation Matrix provided in the *CEQR Technical Manual*, retrieved September 2018.
Totals may not sum due to rounding.

Using these sanitary and stormwater flow calculations, the DEP Flow Volume Calculation Matrix was completed for the existing conditions and the proposed project. The calculations from the Flow Volume Calculation Matrix help to determine the change in wastewater flow volumes to the combined sewer system from existing conditions to the With Action condition, and include four rainfall volume scenarios with varying durations. The summary tables of the Flow Volume Calculation Matrix are included in **Table 4.8-5**.

Table 4.8-5
DEP Flow Volume Matrix: Existing and Build Volume Comparison

Rainfall Volume (in)	Rainfall Duration (hr)	Runoff Volume to Direct Drainage (MG)	Runoff Volume to CSS (MG)*	Sanitary Volume to CSS (MG)	Total Volume to CSS (MG)	Runoff Volume to River (MG)	Runoff Volume to CSS (MG)*	Sanitary Volume to CSS (MG)	Total Volume to CSS (MG)	Increased Total Volume to CSS (MG)*
NCM-050		Existing				With Action				**Increment**
		1.40 acres				1.40 acres				
0.00	3.80	0.00	0.00	0.01	**0.01**	0.00	0.00	0.03	**0.03**	0.02
0.40	3.80	0.00	0.01	0.01	**0.03**	0.00	0.01	0.03	**0.04**	0.02
1.20	11.30	0.00	0.04	0.03	**0.07**	0.00	0.04	0.08	**0.12**	0.05
2.50	19.50	0.00	0.09	0.06	**0.14**	0.00	0.09	0.14	**0.23**	0.09
NCM-073		Existing				With Action				**Increment**
		0.46 acres				0.46 acres				
0.00	3.80	0.00	0.00	0.00	**0.00**	0.00	0.00	0.01	**0.01**	0.01
0.40	3.80	0.00	0.00	0.00	**0.01**	0.00	0.00	0.01	**0.01**	0.01
1.20	11.30	0.00	0.01	0.01	**0.03**	0.00	0.01	0.03	**0.04**	0.02
2.50	19.50	0.00	0.03	0.02	**0.05**	0.00	0.03	0.05	**0.08**	0.03

Notes:
*Assumes no on-site detention or Best Management Practices (BMPs) for purposes of calculations
CSS = Combined Sewer System; MG = Million Gallons

As shown in **Table 4.8-5**, in all rainfall volume scenarios flow to the drainage areas of CSO outfalls NCM-050 and NCM-073 would increase. The increase in flow is attributable to the addition of sanitary flows as well as the increase of impervious surface as compared with the No Action condition.

The Flow Volume Matrix calculations do not, however, reflect the use of any sanitary and stormwater source control BMPs to reduce sanitary flow and stormwater runoff volumes to the combined sewer system. As noted above, the proposed project would incorporate low-flow plumbing fixtures to reduce sanitary flow in accordance with the New York City Plumbing Code. In addition, stormwater BMPs would be required as part of the DEP site connection approval process in order to bring the building and site into compliance with the required stormwater release rate. Specific BMP methods would be determined with further refinement of the building design and in consultation with DEP, but may include planted rooftop spaces ("green roofs"), detention tanks, and/or additional plantings around the project site.

The incorporation of the appropriate sanitary flow and stormwater source control BMPs that would be required, as part of the site connection approval process, would help reduce the overall additional volume of sanitary sewer discharge as well as the peak stormwater runoff rate from the project site. Sewer conveyance infrastructure adjacent to the project site and the treatment capacity at the Newtown Creek WWTP is sufficient to handle wastewater flow resulting from the proposed project; therefore, it is anticipated that there would be no potential for significant adverse impacts on the City's wastewater or stormwater conveyance and treatment infrastructure. ✷

A. INTRODUCTION

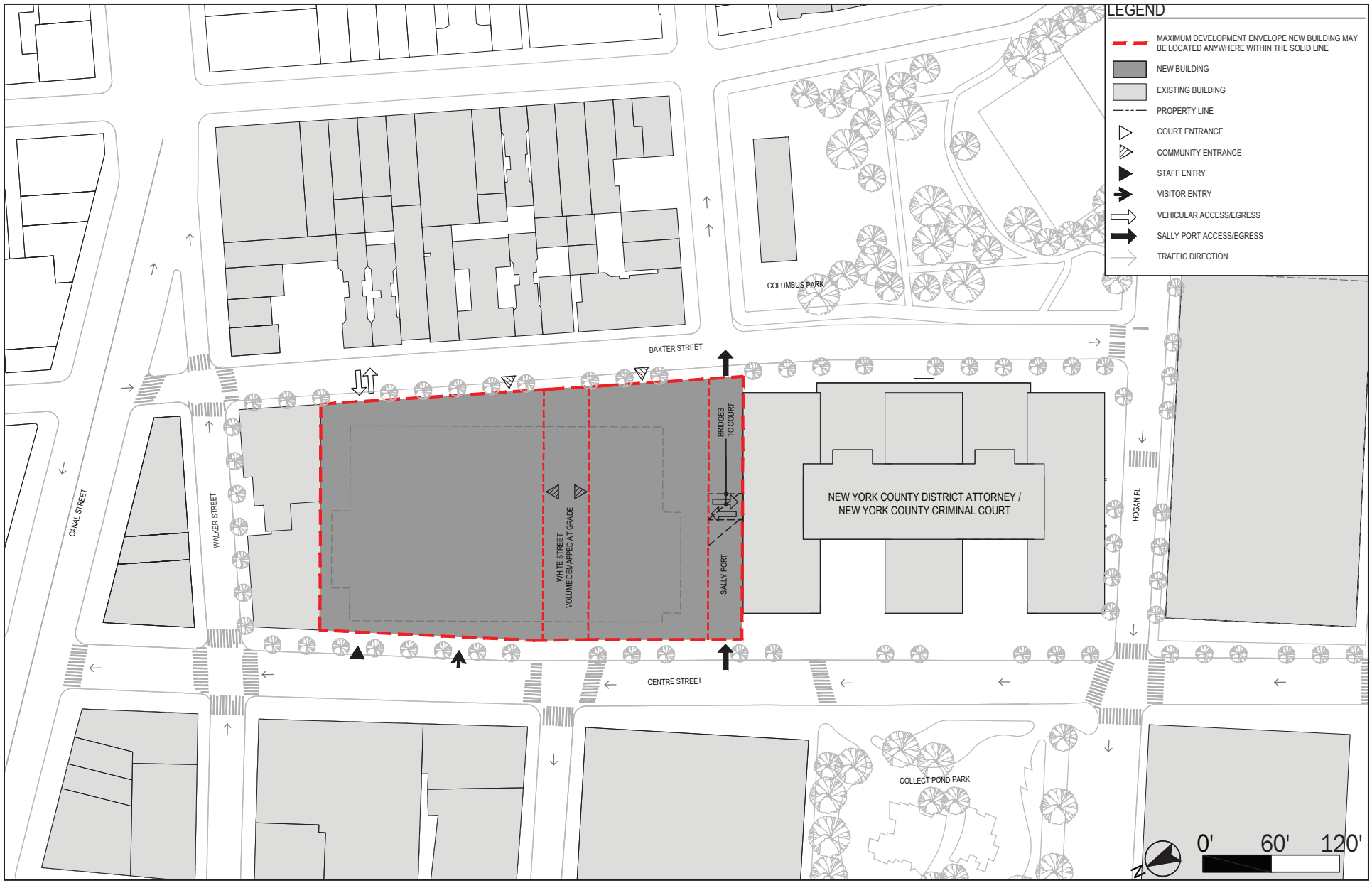
This section describes the transportation characteristics and potential impacts associated with the redevelopment of the existing Manhattan Detention Complex (MDC). As shown in **Figure 4.9-1**, the Manhattan project site is located at 124-125 White Street (Block 198, Lot 1 and part of Block 167, Lot 1) in the Civic Center neighborhood of Manhattan Community District 1. The site is the block bounded by Centre Street, Hogan Place (the extension of Leonard Street), Walker Street, and Baxter Street. The site would also involve the demapping of above- and below-grade volumes of White Street between Centre Street and Baxter Street to facilitate the construction of the structure above the street-bed and a cellar below the street-bed.

The Manhattan Site is currently occupied by the MDC, which consists of a 9-story North Tower (124 White Street) and a 14-story South Tower (125 White Street) with approximately 439,000 gross square feet (gsf) of court and detention center uses and 898 beds for people in detention. The proposed project would redevelop the existing buildings with a new detention facility containing approximately 1,270,000 gsf of above-grade floor area, including approximately 1,437 beds for people in detention (approximately 910,000 gsf of housing space); 340,000 gsf support space; and 20,000 gsf of community facility and/or retail space. This site would also provide approximately 125 accessory parking spaces. As shown in **Figure 4.9-2**, access to the below-grade parking garage would be provided via a curb-cut on Baxter Street. Loading functions and a sally port would abut 100 Centre Street. With the proposed project, White Street would function as a pedestrian-only street between Baxter Street and Centre Street. The proposed community facility/and or retail space would be primarily located on Baxter Street. Staff and visitor pedestrian entrances would be located on Centre Street.

Based on the current conceptual designs and programming objectives for the proposed project, actions necessary to develop the proposed facility at the Manhattan Site include site selection for public facilities, a special permit allowing modifications of height and setback requirements, floor area requirements, and a special permit for loading requirements. In addition, a City Map change to White Street, between Centre Street and Baxter Street, is necessary to narrow and adjust the street lines of White Street and establish lower and upper limiting planes of the street volume. With this "demapping", White Street would be converted to a pedestrian-only corridor.

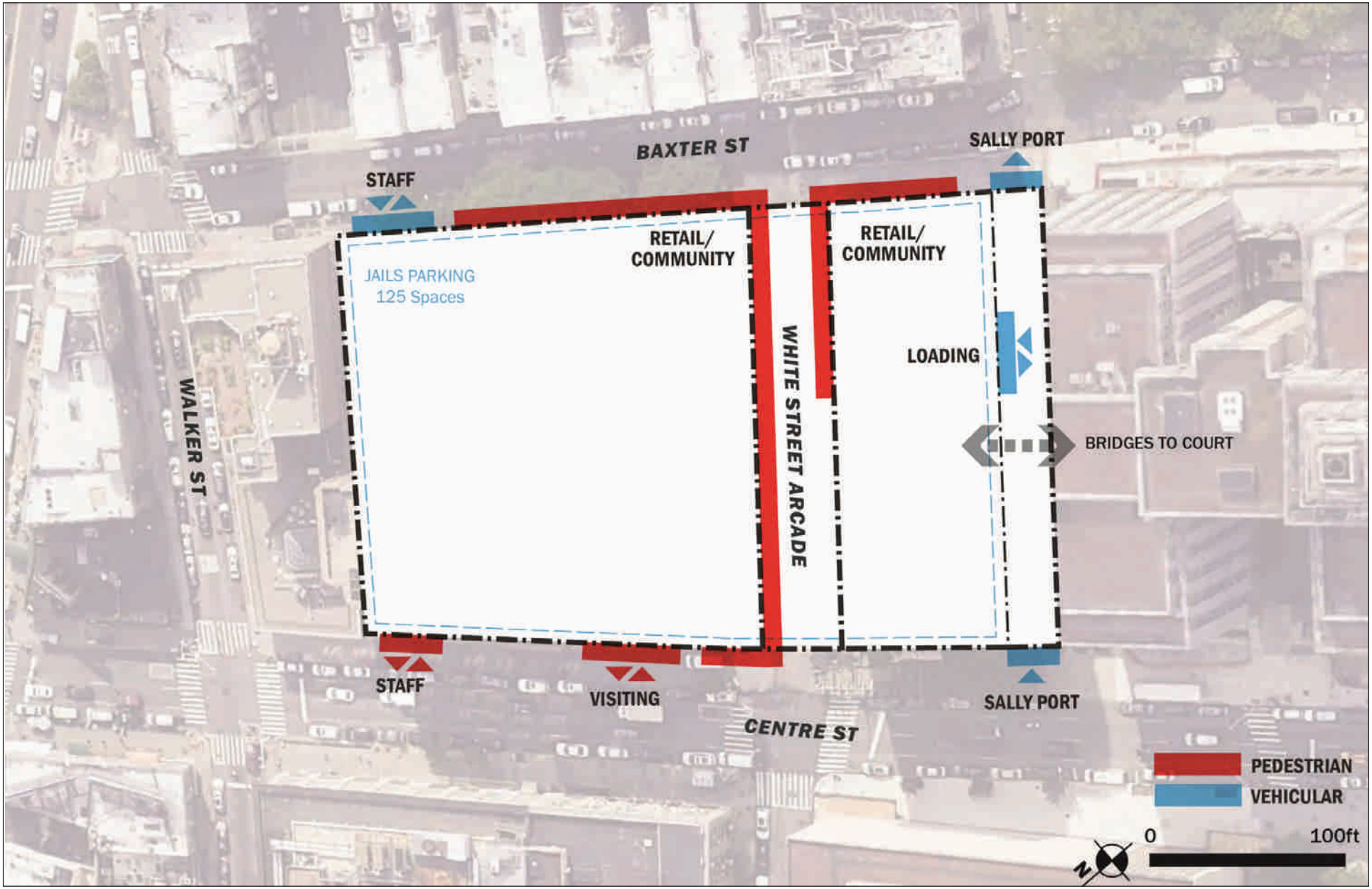
In order to assess the potential effects of the proposed project on transportation systems and services in proximity to the Manhattan Site, a reasonable worst case development scenario (RWCDS) for both "future without the Proposed Actions" (No Action) and "future with the Proposed Actions" (With Action) conditions are analyzed for an analysis year of 2027, the year by which the proposed project is expected to be complete. Under the No Action condition, it is assumed that Rikers Island would continue operating as the city's main detention center, and that the existing MDC would remain.

This section of Chapter 4 describes in detail the existing transportation conditions in proximity to the Manhattan Site. Future conditions in the year 2027 without the proposed project (the No Action



Source: Perkins Eastman

Manhattan Site - 124-125 White Street
Project Location
Figure 4.9-1



Source: Perkins Eastman

Manhattan Site - 124-125 White Street
Access/Circulation Plan
Figure 4.9-2

condition) are then determined, including additional transportation-system demand and any changes expected by the year 2027. The increase in travel demand resulting from the proposed project is then projected and added to the No Action condition to develop the 2027 future with the proposed project (the With Action condition). The potential for significant adverse impacts from project-generated trips are then identified and described in detail.

PRINCIPAL CONCLUSIONS

TRAFFIC

Traffic conditions were evaluated for the weekday 6:30-7:30 AM and 2:45-3:45 PM (midday) peak hours, and the Saturday 2:45-3:45 PM peak hour which are the periods when incremental traffic associated with the proposed project is expected to be highest as they coincide with the peak hour within the uniformed DOC staff shift periods. The traffic study area includes a total of four intersections (three signalized and one stop-controlled) in proximity to the Manhattan Site where incremental vehicle trips generated by the proposed project are expected to exceed the 50 trips/hour *CEQR Technical Manual* analysis threshold. As summarized in **Tables 4.9-1 and 4.9-2**, the results of the traffic impact analysis indicate the potential for significant adverse impacts at one analyzed intersection in the analyzed weekday midday peak hour. The potential for significant adverse impacts to one analyzed lane group at the Centre Street & Walker Street intersection was identified during the analyzed weekday midday peak hour. No potential significant adverse impacts were identified at any analyzed intersection during the analyzed weekday midday and Saturday peak hours. Section 4.15, "Mitigation," discusses potential measures under consideration, such as signal timing changes, to mitigate this identified potential significant adverse traffic impact.

Table 4.9-1
Number of Potentially Impacted Intersections and Lane Groups by Peak Hour

	Peak Hour		
	Weekday AM	**Weekday Midday**	**Saturday**
Lane Groups	0	1	0
Intersections	0	1	0

Table 4.9-2
Summary of Potentially Significantly Impacted Intersections

		Peak Hour		
Intersection	**Control**	**Weekday AM**	**Weekday Midday**	**Saturday**
Centre Street & Hogan Place	Signal			
Centre Street & Walker	Signal		X	
Bayard Street & Mulberry Street	Signal			
Baxter Street & Walker Street	Two-Way Stop			

TRANSIT

Transit analyses typically focus on the weekday AM and PM commuter peak periods as it is during these periods that overall demand on the subway and bus systems is usually highest. The proposed

project is expected to generate its peak travel demand during the weekday AM and midday, and Saturday periods when uniformed DOC staff are changing shifts. Peak transit demand from the proposed project would therefore only coincide with peak transit system demand during the weekday AM period. There would be fewer transit trips associated with the proposed project during the weekday PM commuter peak period as this period would not coincide with a uniformed DOC staff shift change period.

Subway

Three MTA New York City Transit (NYCT) subway stations are located within ¼-mile of the Manhattan Site. To the north of the site are the three stations that comprise the Canal Street Station complex which is served by N and Q express trains and R and W local trains operating on the Broadway Line; Nos. 4 and 5 express trains and No. 6 local trains operating on the Lexington Avenue Line; and J express trains and Z express trains (which provide peak direction, peak period service) operating on the Nassau Street Line. During the weekday AM and PM commuter peak hours, the proposed project would generate a total of approximately 134 and 56 new subway trips, respectively, at the three stations in proximity to the project site—less than the *CEQR Technical Manual* analysis threshold of 200 total incremental trips/hour. Therefore, the potential for significant adverse impacts to subway station and line haul conditions is not anticipated as a result of the proposed project, and a detailed subway analysis is not warranted.

Bus

A total of six NYCT local bus routes operate within or near a ¼-mile radius of the Manhattan Site. These include the M9, M15, M22, M55 and M103 routes and the M15 Select Bus Service (SBS) route. In addition, approximately ten NYCT express bus routes serve stops within ¼-mile of the site, including the SIM1, SIM1c, SIM2, SIM3c, SIM4/4x, SIM4c, SIM32 and SIM34 Staten Island services and the X27 and X28 Brooklyn services. NJ Transit route 120 buses also stop along Broadway in the vicinity of the site.

During the weekday AM and PM commuter peak hours, the proposed project would generate a total of approximately 29 and 20 new transit bus trips, respectively, on bus routes operating within ¼-mile of the project site. As these numbers of trips would be less than the 50 total trips/hour *CEQR Technical Manual* analysis threshold for a detailed bus analysis, the potential for significant adverse impacts is considered unlikely, and a detailed bus analysis is not warranted.

PEDESTRIANS

The proposed project would generate a net increment of approximately 6, 362, 188 and 225 walk-only trips in the weekday AM, midday and PM peak hours, and the Saturday peak hour, respectively. Persons walking en route to and from subway station entrances and bus stops would bring the total number of project-generated pedestrian trips on area sidewalks and crosswalks to 169, 598, 264 and 417 during these same periods, respectively. The total number of pedestrian trips in the weekday midday, weekday PM and Saturday periods would therefore exceed the *CEQR Technical Manual* analysis threshold of 200 incremental trips/hour. However, the origins/destinations of these trips would be distributed among multiple entrances located along the three project site frontages, and they would be dispersed among subway station entrances, bus stops and other origins/destinations to the north, south, east and west of the site. It is therefore unlikely that any one pedestrian element in the vicinity of the site (sidewalk, corner area or crosswalk) would experience 200 or more trips in the weekday midday peak hour, and a detailed analysis of pedestrian conditions is not warranted.

VEHICULAR AND PEDESTRIAN SAFETY

The *Vision Zero Manhattan Pedestrian Safety Action Plan* was released on February 18, 2015. In the vicinity of the Manhattan Site, Canal Street was identified as a Priority Corridor and the intersection of Bowery with Canal Street and the Manhattan Bridge approach was identified as a Priority Intersection. The site is also located in both a Priority Area and in the designated Chinatown Senior Pedestrian Focus Area (SPFA).

Crash data for intersections within ¼-mile of the project site were obtained from the New York City Department of Transportation (DOT) for the three-year reporting period between January 1, 2014, and December 31, 2016 (the most recent period for which data were available for all locations). During this period, a total of 455 reportable and non-reportable crashes, 186 pedestrian/bicyclist-related injury crashes and one fatality occurred at study area intersections. A review of the crash data identified six intersections as high crash locations (defined as those with 48 or more total reportable and non-reportable crashes or five or more pedestrian/bicyclist injury crashes occurring in any consecutive 12 months of the most recent three-year period for which data are available). NYCDOT has proposed or recently implemented improvements at four of these five high crash locations. Additional measures that could be employed to increase pedestrian/bicyclist safety could include installation of additional high visibility crosswalks where not already present, and improved street lighting.

PARKING

The parking analyses document changes in the parking supply and utilization within a ¼-mile radius of the Manhattan Site under both No-Action and With-Action conditions. There are currently a total of 12 active public parking lots and garages within the parking study area with a combined capacity of 1,808 spaces during the weekday midday and Saturday midday periods and 1,720 spaces during the early AM period (as two public parking facilities are closed overnight).

As part of the proposed project, 125 on-site accessory parking spaces would be provided for DOC and Correctional Health Services (CHS) staff. After accounting for this new accessory capacity and existing displaced spaces dedicated for existing MDC staff, it is estimated that compared to the No-Action condition, project-generated incremental parking demand at off-street public facilities and on-street would total approximately 27 spaces in the weekday early AM period, 49 in the weekday midday and 26 on Saturday. (This would include demand from DOC staff, authorized services workers and jail visitors.) It is anticipated that spaces available on-street and in off-street public parking facilities within the parking study area would be sufficient to accommodate this demand in the weekday early AM period. Although demand would not be fully accommodated in the weekday midday and Saturday midday periods, this shortfall would not be considered potentially significant per *CEQR Technical Manual* criteria as drivers would be expected to utilize alternative means of travel in lieu of available parking capacity.

B. PRELIMINARY ANALYSIS METHODOLOGY

The *City Environmental Quality Review* (CEQR) *Technical Manual* describes a two-level screening procedure for the preparation of a "preliminary analysis" to determine if quantified operational analyses of transportation conditions are warranted. As discussed in the following sections, the preliminary analysis begins with a trip generation (Level 1) analysis to estimate the numbers of person and vehicle trips attributable to the proposed actions for each site. According to the *CEQR Technical Manual*, if the proposed actions are expected to result in fewer than 50 peak hour vehicle trips and fewer than 200 peak hour transit or pedestrian trips, further quantified

analyses are not warranted. When these thresholds are exceeded, detailed trip assignments (a Level 2 analysis) are to be performed to estimate the incremental trips that would be incurred at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the proposed actions would generate 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips (inbound and outbound) at a station, 50 or more peak hour transit bus trips in one direction along a bus route, or 200 or more peak hour pedestrian trips traversing a sidewalk, corner area or crosswalk, then further quantified operational analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, pedestrians, parking, and vehicular and pedestrian safety.

C. LEVEL 1 SCREENING ASSESSMENT

A Level 1 trip generation screening assessment was conducted to estimate the numbers of person and vehicle trips by mode expected to be generated at the Manhattan Site during the weekday AM, midday and PM peak hours, and Saturday peak hours with implementation of the proposed project. These estimates were then compared to the *CEQR Technical Manual* analysis thresholds to determine if a Level 2 screening and/or quantified operational analyses may be warranted. The travel demand assumptions used for the assessment are described in the following sections along with a summary of the travel demand that would be generated at the Manhattan Site by the proposed project. A detailed travel demand forecast is then provided for the Manhattan Site.

It should be noted that the development program for the proposed detention facility on the Manhattan Site was revised shortly before publication of this EIS as the transportation analyses was nearing completion. Although, the travel demand forecast included in the transportation analyses presented below were not updated to reflect the proposed program (which is described above), the provided assessments are conservative as they are based on a larger development program. Overall, the travel demand forecast presented below is based on a development plan that, compared to the proposed program described above, assumed an additional 110,000 gsf of above-grade floor area (20,000 gsf of housing space and 90,000 gsf of support space) and 73 beds for people in detention.

BACKGROUND

The Manhattan Site is currently occupied by the MDC, which consists of a 9-story North Tower (124 White Street) and a 14-story South Tower (125 White Street) with approximately 439,000 gross square feet (gsf) of court and detention center uses and 898 beds for people in detention. The proposed project would redevelop the existing buildings with a new detention facility containing approximately 1,270,000 gsf of above-grade floor area, including approximately 1,437 beds for people in detention (approximately 910,000 gsf of housing space); 340,000 gsf support space; and 20,000 gsf of community facility and/or retail space. This site would also provide approximately 125 accessory parking spaces. As shown in **Figure 4.9-2**, access to the below-grade parking garage would be provided via a curb-cut on Baxter Street. Loading functions and a sally port would abut 100 Centre Street. With the proposed project, above- and below-grade volumes of White Street between Baxter Street and Centre Street would be demapped and would function as a pedestrian-only street. Staff and visitor pedestrian entrances would be located on Centre Street. The proposed community facility/and or retail space would be primarily located on Baxter Street. To be conservative, the transportation analysis assumes this 20,000 gsf area would be comprised entirely of local retail as that use generates more trips.

As mentioned above, the travel demand forecast included in the provided transportation analyses was based on a development program that is larger than the proposed project. For analysis purposes, the following larger program described below and summarized in **Table 4.9-3** serves as the basis of the travel demand forecast and subsequent transportation analyses. **Table 4.9-3** summarizes the number of beds, the anticipated staffing levels, the number of visitors, and the amount of local retail space proposed assumed in the transportation analyses' travel demand forecast As shown in **Table 4.9-3**, in the future without the proposed project (the No Action condition), the existing MDC would remain open with 898 beds, an average weekday uniformed staff count of 323 (272 on Saturday), 26 non-uniformed staff, 55 clinical/medical staff and 5,300 gsf of local retail space. By contrast, in the future with the proposed project (the With Action condition), the MDC would be replaced with a new facility with a total of 1,510 beds, an average of 642 uniformed staff on weekdays (544 on Saturday), 144 non-uniformed staff, 90 clinical/medical staff and 20,000 gsf of local retail space. Therefore, for travel demand forecasting purposes, the proposed project would result in a net incremental increase of 612 beds, 319 uniformed staff on weekdays (272 on Saturday), 118 non-uniformed staff, 35 clinical/medical staff and 14,700 gsf of local retail space at the Manhattan Site.

Table 4.9-3
Manhattan Site No Action and With Action
Bed Count, Staff Populations and Local Retail Space

	No Action[1]	With Action	Net Increment
Beds	898	1,510	+612
Uniformed Staff (Weekday)	323	642	+319
Uniformed Staff (Saturday)	272	544	+272
Non-Uniformed Staff	26	144	+118
Clinical/Medical Staff	55	90	+35
Local Retail (gsf)	5,300[2]	20,000	+14,700

Sources: DOC and CHS projections.

Notes: [1]No Action scenario reflects the existing MDC at 124-125 White Street remaining open.

[2]Based on updated information from DCAS, the existing local retail space is approximately 6,300 gsf. The transportation analysis accounts for 5,300 gsf. This is a conservative approach as this results in a larger project increment.

While most DOC staffers would be uniformed officers, some non-uniformed DOC employees – e.g., administrative personnel, kitchen aides, maintenance crews, etc., and medical/infirmary personnel staffed by CHS – would also travel to and from the Manhattan Site on a typical day. Additional travel demand would also be generated by DOC buses transporting people who are detained, third-party programming aides, lawyers and visitors, and patrons and staff at the proposed community facility and retail uses. As detention centers operate 24-hours a day, uniformed officers, the predominant staffing group, are generally divided into three shifts which start at 7 AM, 3PM and 11 PM. The non-uniformed staff would operate on a separate schedule, with the majority expected to work shifts during daytime hours. Medical staff are also generally divided into three shifts but, with start times one hour later than those of uniformed staff (e.g. first shift starts at 8 AM instead of 7 AM, etc.) It is anticipated that travel demand associated with the proposed project would be highest during the shift overlap periods for uniformed officers as they would comprise the majority of staff on the site. Consequently, the transportation analyses focus on three daytime peak periods—an early weekday AM peak hour (6:30 AM to 7:30 AM) to reflect the peak hour during the shift change period that would occur around the start of the 7 AM morning

shift, and the weekday midday (2:45 PM to 3:45 PM) and Saturday (2:45 PM to 3:45 PM) peak hours to reflect the peak hour during the shift change period that would occur around the start of the 3 PM to 11 PM work shift. The 11 PM shift change is not included for analysis as overall demand on the area's transportation systems is substantially lower during this late night period than during the daytime hours.

TRANSPORTATION PLANNING FACTORS

The transportation planning factors used to forecast project-generated travel demand at the Manhattan Site are summarized in **Table 4.9-4**. Factors are shown for the weekday AM, midday and PM peak hours; and the Saturday peak hour. The trip generation rates, temporal distributions and directional splits for detention center staff and visitors were based on data provided by DOC and CHS and data from counts conducted at existing detention facilities in Manhattan and Brooklyn. Modal splits and vehicle occupancies were based on data from surveys conducted at existing detention facilities in Manhattan and Brooklyn, from 2010 Census reverse-journey-to-work data, and from data cited in the 2013 *Hudson Square Rezoning FEIS*. The factors for the local retail land use were based on those cited in the *CEQR Technical Manual* and the 2018 Two Bridges LSRD FEIS, as well as data from the 2003 Number 7 Extension Hudson Yards Rezoning and Development Program FGEIS. Additional details on the transportation planning factors used for the travel demand forecast are presented in the *Transportation Planning Factors and Travel Demand Forecast Technical Memorandum* provided in **Appendix F**.

Table 4.9-4
Transportation Planning Factors

Land Use:	Uniformed Staff	Non-Uniformed Staff	Clinic Staff	Authorized Visitors	Other Visitors	Manhattan Local Retail
Trip Generation:	(1)	(1)	(1)	(1)	(5)	(7)
Weekday	2.0	2.0	2.0	0.89	0.30	205.0
Saturday	2.0	2.0	2.0	0.19	0.30	240.0
	trips/employee	trips/employee	trips/employee	trips/bed	trips/bed	per 1,000 sf
Temporal Distribution:	(1)	(1)	(1)	(1)	(5)	(7,8)
AM	29.1%	36.6%	3.3%	5.2%	0.5%	0.0%
Midday	29.8%	39.0%	10.3%	4.4%	9.6%	19.0%
PM	0.0%	0.0%	0.0%	8.2%	9.0%	10.0%
Saturday	29.0%	39.0%	10.3%	4.3%	11.7%	10.0%
	(2)	(2)	(2)	(2)	(2)	(9)
Modal Splits:	All Periods	All Periods	All Periods	All Periods	All Periods	All Periods
Auto	52.7%	20.0%	20.0%	20.0%	10.3%	2.0%
Taxi	3.7%	6.7%	6.7%	6.7%	5.1%	3.0%
Subway	32.8%	60.0%	60.0%	60.0%	84.6%	6.0%
Bus	7.8%	13.3%	13.3%	13.3%	0.0%	6.0%
Walk/Ferry/Other	3.0%	0.0%	0.0%	0.0%	0.0%	83.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

	(1)		(1)		(1)		(1)		(5)		(9)	
In/Out Splits:	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
AM	65.0%	35.0%	100.0%	0.0%	100.0%	0.0%	60.8%	39.2%	100.0%	0.0%	50.0%	50.0%
Midday	37.0%	63.0%	0.0%	100.0%	100.0%	0.0%	73.1%	26.9%	47.6%	52.4%	50.0%	50.0%
PM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	31.8%	68.3%	55.3%	44.7%	50.0%	50.0%
Saturday	43.0%	57.0%	0.0%	100.0%	100.0%	0.0%	71.4%	28.6%	26.9%	73.1%	50.0%	50.0%

Vehicle Occupancy:	(2)	(3,4)	(3,4)	(3,4)	(6)	(9)
Auto	1.18	1.36	1.36	1.36	1.50	1.65
Taxi	1.00	1.40	1.40	1.40	1.00	1.40
Truck/bus Trip Generation:	(1)					(7)
Weekday	0.06					0.35
Saturday	0.06					0.04
	per bed					per 1,000 sf
	(1)					(7)
AM	2.9%					8.0%
Midday	5.9%					11.0%
PM	9.8%					2.0%
Saturday	5.9%					11.0%

	In	Out	In	Out
All	55.0%	45.0%	50.0%	50.0%

Notes :

(1) Trip generation rate, temporal distribution, and in/out splits assumes DOC & CHS staff do not typically leave facility during their 8-hour work shifts. DOC & CHS temporal distribution and in/out splits are derived from DOC & CHS staff schedule and information for existing Manhattan and Brooklyn jails. Authorized Visitor rates are derived from day-time count data collected at the Manhattan and Brooklyn jails in July 2018. Rates were determined by discounting expected trips made by DOC & CHS staff from the count data. Authorized Visitor Saturday trip generation rate based on similar ratio between weekday and saturday rates for office use provided in Table 16-2 of the 2014 City Environmental Quality (CEQR) Technical Manual (3.9 trips/18 trips = 0.22 ratio).

(2) Based on survey data collected at Manhattan House of Detention, May and June 2018.

(3) Based on 2010 census reverse journey to work data for New York County Census Tract 15.01,16, 25, 27, 29, 31, 41 and 45.

(4) Taxi occupancy rate based on Hudson Square Rezoning FEIS, 2013.

(5) Based on Manhattan and Brooklyn House of Detention average hourly weekday and weekend visitation data for 2017 provided by DOC.

(6) Based on survey data collected at Manhattan and Brooklyn Houses of Detention, May and June 2018.

(7) Based on 2014 City Environmental Quality Review (CEQR) Technical Manual.

(8) Based on Number 7 Extension Hudson Yards Rezoning and Development Program FGEIS, Appendix S.1, 2003.

(9) Based on Two Bridges LSRD FEIS, 2018.

TRAVEL DEMAND FORECAST

The net incremental change in person and vehicle trips expected to be generated by the proposed project at the Manhattan Site in the 2027 analysis year was derived based on the net change in the number of beds and staff populations shown in **Table 4.9-3**, the net 14,700 gsf increase in local retail space on the project site, and the transportation planning factors shown in **Table 4.9-4**. **Table 4.9-5** shows an estimate of the net incremental change in peak hour person trips (by all modes) and vehicle trips by population component and land use (versus the No Action condition) that would occur at the Manhattan Site in 2027 with implementation of the proposed project. A summary of these data is presented in **Table 4.9-6**. As shown in **Tables 4.9-5 and 4.9-6**, the proposed project would generate a net increase of approximately 303 person trips in the weekday AM peak hour, 759 in the weekday midday, 288 in the weekday PM, and 549 in the Saturday peak hour. Peak hour vehicle trips (including auto, truck, DOC shuttle bus and taxi trips balanced to reflect that some taxis arrive or depart empty) would increase by a net total of approximately 120, 145, 24, and 123 (in and out combined) in the weekday AM, midday and PM, and Saturday peak hours, respectively. Peak hour subway trips would increase by a net total of 134, 180, 56 and 151 during these periods, respectively, while transit bus trips would increase by approximately 29, 56, 20 and 41, respectively. Lastly, trips made entirely on foot (walk-only trips) would increase by 6, 362, 188 and 225 during the weekday AM, midday and PM, and Saturday peak hours, respectively. The walk-only trips in the weekday midday, weekday PM and Saturday peak hours would be predominantly generated by the proposed local retail uses.

Table 4.9-5
Travel Demand Forecast

Land Use:		Uniformed Staff		Non-uniformed Staff		Clinic Staff		Authorized Visitors		Other Visitors		Manhattan Local Retail		Total	
Size/Units:	**Weekday**	319		118		35		612 beds				14,700 gsf			
	Saturday	272		118		35									
Peak Hour Trips:															
	AM	186		86		2		28		1		0		303	
	Midday	190		92		7		24		18		428		759	
	PM	0		0		0		45		17		226		288	
	Saturday	158		92		7		5		21		266		549	
Person Trips:															
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
AM	**Auto**	63	34	17	0	1	0	3	2	0	0	0	0	84	36
	Taxi	4	2	6	0	0	0	1	1	0	0	0	0	11	3
	Subway	41	22	52	0	1	0	10	7	1	0	0	0	105	29
	Bus	9	5	11	0	0	0	3	1	0	0	0	0	23	6
	Walk/Ferry/Other	4	2	0	0	0	0	0	0	0	0	0	0	4	2
	Total	121	65	86	0	2	0	17	11	1	0	0	0	227	76
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Midday	**Auto**	37	64	0	18	1	0	4	1	1	1	4	4	47	88
	Taxi	3	4	0	6	0	0	1	0	0	0	6	6	10	16
	Subway	23	39	0	56	5	0	11	4	8	8	13	13	60	120
	Bus	5	9	0	12	1	0	2	1	0	0	13	13	21	35
	Walk/Ferry/Other	2	4	0	0	0	0	0	0	0	0	178	178	180	182
	Total	70	120	0	92	7	0	18	6	9	9	214	214	318	441
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
PM	**Auto**	0	0	0	0	0	0	3	6	1	1	2	2	6	9
	Taxi	0	0	0	0	0	0	1	2	0	0	3	3	4	5
	Subway	0	0	0	0	0	0	9	18	8	7	7	7	24	32
	Bus	0	0	0	0	0	0	2	4	0	0	7	7	9	11
	Walk/Ferry/Other	0	0	0	0	0	0	0	0	0	0	94	94	94	94
	Total	0	0	0	0	0	0	15	30	9	8	113	113	137	151
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Saturday	**Auto**	36	47	0	18	1	0	0	0	1	2	3	3	41	70
	Taxi	3	3	0	6	0	0	0	0	0	1	4	4	7	14
	Subway	22	30	0	56	5	0	3	2	5	12	8	8	43	108
	Bus	5	7	0	12	1	0	0	0	0	0	8	8	14	27
	Walk/Ferry/Other	2	3	0	0	0	0	0	0	0	0	110	110	112	113
	Total	68	90	0	92	7	0	3	2	6	15	133	133	217	332
Vehicle Trips :															
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
AM	**Auto**	53	29	13	0	1	0	2	1	0	0	0	0	69	30
	Taxi	4	2	4	0	0	0	1	1	0	0	0	0	9	3
	Taxi Balanced	4	4	4	4	0	0	2	2	0	0	0	0	10	10
	Truck/Bus	1	0	0	0	0	0	0	0	0	0	0	0	1	0
	Total	58	33	17	4	1	0	4	3	0	0	0	0	80	40
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Midday	**Auto**	31	54	0	13	1	0	3	1	1	1	2	2	38	71
	Taxi	3	4	0	4	0	0	1	0	0	0	4	4	8	12
	Taxi Balanced	6	6	4	4	0	0	1	1	0	0	6	6	17	17
	Truck/Bus	1	1	0	0	0	0	0	0	0	0	0	0	1	1
	Total	38	61	4	17	1	0	4	2	1	1	8	8	56	89
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
PM	**Auto**	0	0	0	0	0	0	2	4	1	1	1	1	4	6
	Taxi	0	0	0	0	0	0	1	1	0	0	2	2	3	3
	Taxi Balanced	0	0	0	0	0	0	2	2	0	0	3	3	5	5
	Truck/Bus	2	2	0	0	0	0	0	0	0	0	0	0	2	2
	Total	2	2	0	0	0	0	4	6	1	1	4	4	11	13
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Saturday	**Auto**	31	40	0	13	1	0	0	0	1	1	2	2	35	56
	Taxi	3	3	0	4	0	0	0	0	0	1	3	3	6	11
	Taxi Balanced	5	5	4	4	0	0	0	0	1	1	5	5	15	15
	Truck/Bus	1	1	0	0	0	0	0	0	0	0	0	0	1	1
	Total	37	46	4	17	1	0	0	0	2	2	7	7	51	72

Note:
25% linked trip credit taken for local retail use

Table 4.9-6
Summary of Net Incremental Peak Hour Trips

Mode	Trip Type	Weekday AM	Weekday Midday	Weekday PM	Saturday
Vehicle (Auto/Taxi/DOC Bus/Truck)	Vehicle Trips	120	145	24	123
Subway	Person Trips	134	180	56	151
Transit Bus	Person Trips	29	56	20	41
Walk-only	Person Trips	6	362	188	225
All Pedestrians[1]	Person Trips	169	598	264	417

Notes: [1] Includes walk-only trips and pedestrians en route to and from subway stations and bus stops.

The following evaluates the traffic, transit, and pedestrian trips that would be generated by the proposed project in each peak hour with respect to the *CEQR Technical Manual* Level 1 screening analysis thresholds.

TRAFFIC

As shown in **Table 4.9-6**, the number of incremental peak-hour vehicle trips generated by the proposed project—120, 145, 24 and 123 in the weekday AM, midday and PM peak hours, and Saturday peak hours, respectively—would exceed the 50-trip *CEQR Technical Manual* analysis threshold in all but the weekday PM period. A Level 2 screening assessment is therefore warranted for the weekday AM and midday periods along with the Saturday period to determine which, if any, intersections would require quantified analysis.

TRANSIT

Transit analyses typically focus on the weekday AM and PM commuter peak periods as it is during these periods that overall demand on the subway and bus systems is usually highest. As noted previously, the proposed project is expected to generate its peak travel demand during the weekday AM and midday, and Saturday periods (i.e., when uniformed DOC staff are changing shifts). Peak transit demand from the proposed project would therefore only coincide with peak transit system demand during the weekday AM period. As it would not coincide with a uniformed DOC staff shift change, there would be fewer incremental transit trips at the Manhattan Site in the weekday PM commuter peak period.

Subway

The proposed project would generate a total of approximately 134 and 56 incremental subway trips (inbound and outbound combined) during the weekday AM and PM commuter peak hours, less than the *CEQR Technical Manual* analysis threshold of 200 total incremental trips/hour at any one station or on any one subway route. Therefore, a potential for significant adverse impacts to subway station and line haul conditions is not anticipated as a result of the proposed project, and a detailed subway analysis is not warranted.

Bus

A total of six NYCT local bus routes operate within ¼-mile of the Manhattan Site. These include the M9, M15, M22, M55 and M103 routes and the M15 Select Bus Service (SBS) route. In addition, approximately ten NYCT express bus routes serve stops within ¼-mile of the site, including the SIM1, SIM1c, SIM2, SIM3c, SIM4/4x, SIM4c, SIM32 and SIM34 Staten Island

services and the X27 and X28 Brooklyn services. NJ Transit route 120 buses also stop along Broadway in the vicinity of the site.

The proposed project would generate approximately 29 and 20 incremental transit bus trips during the weekday AM and PM commuter peak hours. Given these numbers of peak hour trips, no single route would experience an incremental increase of 50 or more trips/hour in one direction. Therefore, based on *CEQR Technical Manual* guidance, a detailed bus analysis is not warranted.

PEDESTRIANS

The Proposed Actions would generate a net increment of approximately 6, 362, 188 and 225 walk-only trips in the weekday AM, midday and PM peak hours, and the Saturday peak hour, respectively. Persons walking en route to and from subway station entrances and bus stops would bring the total number of incremental project-generated pedestrian trips on area sidewalks and crosswalks to 169, 598, 264 and 417 during these same periods, respectively. The total number of incremental pedestrian trips in the weekday midday and PM, and Saturday periods would therefore exceed the *CEQR Technical Manual* analysis threshold of 200 trips/hour. A Level 2 screening assessment is therefore warranted for the weekday midday, weekday PM and Saturdays period to determine which, if any, pedestrian street elements (sidewalk, corner or crosswalk) would require quantified analysis.

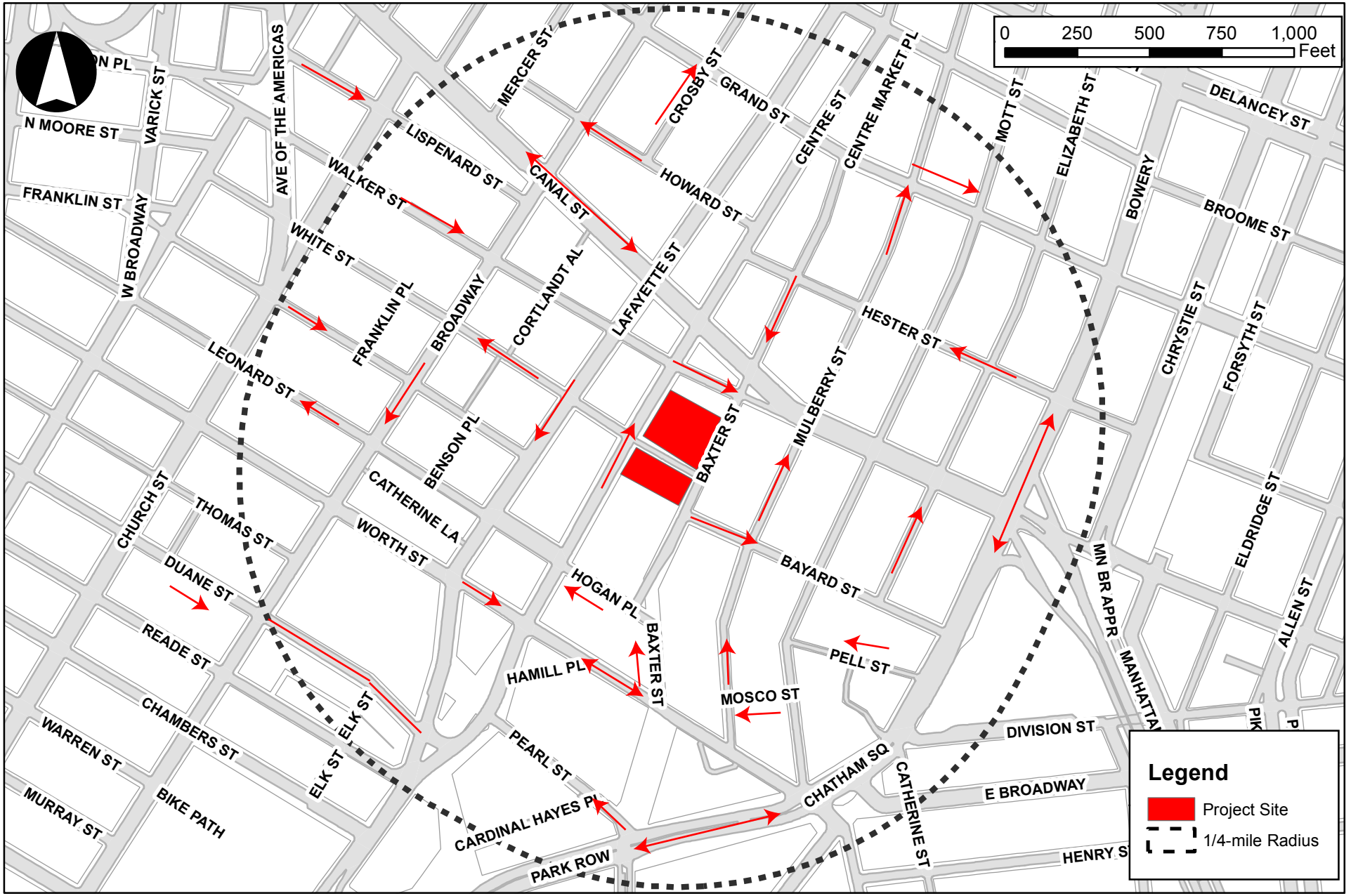
D. LEVEL 2 SCREENING ASSESSMENT

A Level 2 screening assessment involves the assignment of project-generated trips to the study area street network, pedestrian elements, and transit facilities, and the identification of specific locations where the incremental increase in demand may potentially exceed *CEQR Technical Manual* analysis thresholds and therefore require a quantitative analysis.

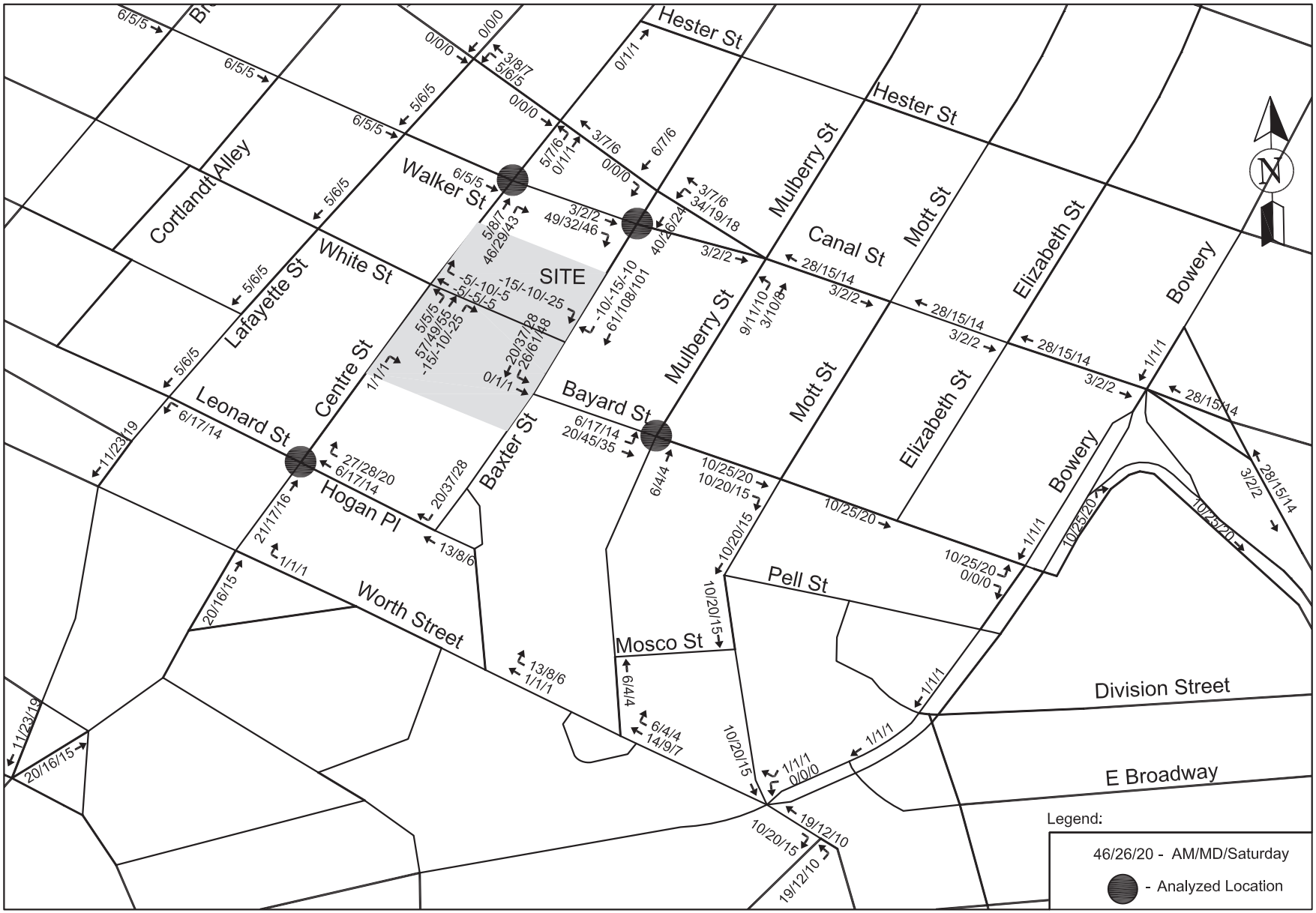
TRAFFIC

Based upon the proposed project's travel demand forecast, there would be 120 additional vehicle trips during the weekday AM peak hour, 145 during the midday peak hour and 123 during the Saturday peak hour. These traffic volumes would exceed the *CEQR Technical Manual* threshold of 50 vehicles during the peak hours for Level 1 screening and, therefore, a Level 2 screening was performed to help identify intersections for detailed analysis.

The *CEQR Technical Manual* Level 2 screening threshold for detailed analysis is also 50 vehicles, but this threshold applies to individual intersections during the peak hours (rather than total trips generated). Peak hour project increment traffic volumes were therefore assigned to the street network in proximity to the Manhattan Site (shown in **Figure 4.9-3**) to identify the intersections that would potentially exceed the 50-trip threshold during one or more periods. For this assignment, which is shown in **Figure 4.9-4**, it was assumed that a staff parking entrance would be located along the east frontage of the site on Baxter Street and that trucks and shuttle buses would enter the site's sally port via an entrance on Centre Street and exit on to Baxter Street. In addition, as White Street (between Centre Street and Baxter Street) would be converted to a pedestrian-only corridor as part of the project, a redistribution of future traffic would occur as vehicles would no longer be able to turn on to or off of this portion of White Street. As this redistribution is a result of the project, the assignment also includes anticipated traffic diversions associated with this action. Based on this assignment, a total of four intersections (three signalized and one stop-controlled) are expected to experience 50 or more net incremental vehicle trips (including discrete trips generated by the project and future diverted traffic volumes) in one or



Manhattan Site - 124-125 White Street
Street Network
Figure 4.9-3



Manhattan Site - 124-125 White Street
Peak Hour Project Increment Traffic Volumes and Analyzed Intersections
Figure 4.9-4

more peak hours and have therefore been selected for analysis. The four intersections selected for analysis are shown in **Figure 4.9-4** and include the following:

1. Centre Street and Hogan Place (signalized)
2. Centre Street and Walker Street (signalized)
3. Bayard Street & Mulberry Street (signalized)
4. Baxter Street & Walker Street (stop-controlled)

PEDESTRIANS

As discussed above, the proposed project would generate a total incremental pedestrian demand of approximately 598, 264 and 417 trips during the weekday midday, weekday PM and Saturday peak hours, respectively. These trips would be concentrated along sidewalks, corners and crosswalks along corridors providing access to the future jail facility entrances and local retail entrances. It is anticipated that pedestrian trips en route to/from the subway would be concentrated on sidewalks and crosswalks along Centre Street. Trips associated with pedestrians that would utilize one of several bus routes would be well dispersed across the study area. The majority of pedestrian trips in the weekday midday, weekday PM and Saturday peak periods were anticipated to be generated by the local retail use and these trips were anticipated to be well dispersed further from the site and then concentrate towards on-site retail entrances. However, as the site would include two separate jail entrances (one for staff and another for visiting family/friends) and likely include local retail entrances on both the east and west sides of the site as well as within the proposed White Street pedestrian corridor, not all trips would concentrate at one entrance location. Therefore, it is unlikely that any particular pedestrian corner, crosswalk, or sidewalk element would attract more than 200 incremental pedestrian trips in any analyzed peak hour.

PARKING

It is anticipated that the on-site accessory parking would not be sufficient to accommodate the overall incremental demand that would be generated by the proposed project. As such, detailed existing on-street and off-street parking inventories for the weekday early morning and midday periods and a Saturday midday period are provided in this EIS to document the existing supply and demand during each period. The parking analysis documents changes in the parking supply and utilization within a ¼-mile radius of the Manhattan Site under both No Action and With Action conditions.

E. TRANSPORTATION ANALYSES METHODOLOGIES

TRAFFIC

ANALYSIS METHODOLOGY

Traffic conditions at study area intersections were evaluated for the weekday 6:30-7:30 AM and 2:45-3:45 PM (midday) peak hours, and the Saturday 2:45-3:45 PM peak hour which are the periods when incremental traffic associated with the proposed project is expected to be highest as these periods coincide with the peak hour within the uniformed DOC staff shift change periods. The capacity analyses at analyzed intersections are based on the methodology presented in the Highway Capacity Manual (HCM) and utilize HCS+ Version 5.5 software. Traffic data required for these analyses include the hourly volumes on each approach, turning movements, the percentage of trucks and buses, and pedestrian volumes at crosswalks. Field inventories are also

necessary to document the physical layout and street widths, lane markings, curbside parking regulations, and other relevant characteristics needed for the analysis.

The HCM methodology produces a volume-to-capacity (v/c) ratio for each signalized intersection approach. The v/c ratio represents the ratio of traffic volume on an approach to the approach's carrying capacity. A v/c ratio of less than 0.90 is generally considered indicative of non-congested conditions in dense urban areas; when higher than this value, the ratio reflects increasing congestion. At a v/c ratio between 0.95 and 1.0, near-capacity conditions are reached and delays can become substantial. Ratios of greater than 1.0 indicate saturated conditions with queuing. The HCM methodology also expresses the quality of traffic flow in terms of level of service (LOS), which is based on the amount of delay that a driver typically experiences at an intersection. Levels of service range from A, representing minimal delay (ten seconds or less per vehicle), to F, which represents long delays (greater than 80 seconds per vehicle).

For unsignalized (stop-controlled) intersections, the HCM methodology generally assumes that traffic on major streets is not affected by traffic flows on minor streets. Left turns from a major street are assumed to be affected by the opposing, or oncoming, traffic flow on that major street. Traffic on minor streets is affected by all conflicting movements. Similar to signalized intersections, the HCM methodology expresses the quality of traffic flow at unsignalized intersections in terms of LOS based on the amount of delay that a driver experiences. Level of service definitions used to characterize traffic flows at unsignalized intersections differ somewhat from those used for signalized intersections, primarily because drivers anticipate different levels of performance from the two different kinds of intersections. For unsignalized intersections, LOS ranges from A, representing minimal delay (ten seconds or less per vehicle, as it is for signalized intersections), to F, which represents long delays (greater than 50 seconds per vehicle, compared to greater than 80 seconds per vehicle for signalized intersections).

Table 4.9-7 shows the LOS/delay relationship for signalized and unsignalized intersections using the HCM methodology. Levels of service A, B, and C generally represent highly favorable to fair levels of traffic flow. At LOS D, the influence of congestion becomes noticeable. LOS E reflects heavy delay, and LOS F is considered to be unacceptable to most drivers. In these traffic impact analyses, a signalized lane grouping operating at LOS E or F or a v/c ratio of 0.90 or more is identified as congested. For unsignalized intersections, a movement with LOS E or F is also identified as congested.

Table 4.9-7
Intersection Level of Service Criteria

LOS	Average Delay per Vehicle (seconds)	
	Signalized Intersections	Unsignalized Intersections
A	Less than 10.1	Less than 10.1
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	Greater than 80.0	Greater than 50.0

Source: *2000 Highway Capacity Manual*.

POTENTIAL SIGNIFICANT IMPACT CRITERIA

The identification of the potential for significant adverse traffic impacts at analyzed intersections is based on criteria presented in the *CEQR Technical Manual*. If a lane group in the With Action condition would be LOS A, B, or C, or marginally acceptable LOS D (i.e., delay less than or equal to 45.0 seconds/vehicle for signalized intersections and 30.0 seconds/vehicle for unsignalized intersections), the impact is not considered potentially significant. If the lane-group LOS would deteriorate from LOS A, B, or C in the No Action condition to worse than mid-LOS D or to LOS E or F in the With Action condition, a potential for a significant traffic impact is identified. For a lane group that would operate at LOS D in the No Action condition, an increase in delay of 5.0 or more seconds in the With Action condition is considered a potential significant impact if the With Action delay would exceed mid-LOS D. For a lane group that would operate at LOS E in the No Action condition, a projected With Action increase in delay of 4.0 or more seconds is considered a potential significant impact. For a lane group that would operate at LOS F in the No Action condition, a projected With Action increase in delay of 3.0 or more seconds is considered a potential significant impact.

The same criteria apply to signalized and unsignalized intersections. However, for traffic on a minor street at an unsignalized intersection to result in a potential significant impact, 90 passenger car equivalents (PCEs) must be projected in the future With Action condition in any peak hour.

VEHICULAR AND PEDESTRIAN SAFETY EVALUATION

Under *CEQR Technical Manual* guidance, an evaluation of vehicular and pedestrian safety is needed for locations within the traffic and pedestrian study areas that have been identified as high crash locations. These are defined as locations with 48 or more total reportable and non-reportable crashes or where five or more pedestrian/bicyclist injury crashes have occurred in any consecutive 12 months of the most recent three-year period for which data are available. For these locations, crash trends would be identified to determine whether projected vehicular and pedestrian traffic would further impact safety, or whether existing unsafe conditions could adversely impact the flow of the projected new trips. The determination of potential significant safety impacts depends on the type of area where the project site is located, traffic and pedestrian volumes, crash types and severity, and other contributing factors. Where appropriate, measures to improve traffic and pedestrian safety should be identified and coordinated with DOT.

PARKING

ANALYSIS METHODOLOGY

A parking analysis initially documents the ability of the proposed project's on-site accessory parking to accommodate projected demand. If the proposed capacity would be insufficient to accommodate projected demand, then a detailed analysis of on-street and off-street public parking is prepared. A detailed parking analysis identifies the supply of on-street and off-street public parking near a proposed project and determines the extent to which the supply is utilized in existing conditions and in the future without and with a proposed action. The analysis considers anticipated changes in the study area's parking supply and demand, and compares project-generated parking demand with future parking availability to determine if the potential for a parking shortfall is likely to result. The displacement of existing parking capacity attributable to the proposed action or project is also considered.

Typically, the analysis encompasses the parking facilities—public parking lots and garages and on-street curbside spaces—that vehicular traffic destined to the project site or area would likely

utilize. According to the *CEQR Technical Manual*, a ¼-mile radius around a project site is generally assumed as the distance that someone driving to the site would be willing to walk. A parking analysis would therefore document changes in the parking supply and utilization within a ¼-mile radius of the Manhattan Site under both No Action and With Action conditions.

POTENTIALLY SIGNIFICANT SHORTFALL CRITERIA

Should a proposed action generate the need for more parking than it provides, a shortfall of spaces may be considered potentially significant. The availability of off-street and on-street parking spaces within a convenient walking distance (about a ¼-mile), as well as the availability of alternative modes of transportation, are considered in making this determination.

Under *CEQR Technical Manual* guidance, different criteria for determining potential significance are applied based on whether or not a proposed project is located in residential or commercial areas designated as Parking Zones 1 and 2 as shown in Map 16-2, "CEQR Parking Zones, May 2010," in the 2014 *CEQR Technical Manual*. As the Manhattan Site is located within Zone 1 as shown in Map 16-2, the inability of the proposed project or the surrounding area to accommodate future parking demands would be considered a parking shortfall, but would generally not be considered potentially significant due to the magnitude of available alternative modes of transportation.

F. TRAFFIC

EXISTING CONDITIONS

STUDY AREA STREET NETWORK

As shown in **Figure 4.9-3**, the Manhattan Site at 124-125 White Street and the adjoining Civic Center area are served by an irregular pattern of streets. The streets in the immediate vicinity of the site serve primarily local vehicle and pedestrian trips with the exception of Canal Street, which provides a crosstown connection between the Manhattan Bridge (to Brooklyn) on the east and the Holland Tunnel (to New Jersey) on the west; Broadway, which spans the north-south length of Manhattan and provides southbound through access in the vicinity of the site; and the Centre Street/Lafayette Street couplet which provide northbound/southbound through access connecting to the Brooklyn Bridge (to Brooklyn). Major arteries in the vicinity of the site include the FDR Drive, a limited access parkway to the east, and West Street (Route 9A), a major arterial to the west.

The Manhattan site is bordered to the east by **Baxter Street**, which operates one-way southbound with one moving lane plus parking along both curbs from **Walker Street** to **Hogan Place**. On the west the site is bordered by **Centre Street**, which operates one-way northbound with two to three moving lanes plus parking along both curbs. Between Centre Street and Baxter Street, the site is bisected by White Street. This portion of White Street, although it provides an unencumbered connection between Centre Street and Baxter Street, is not a typical street as it mainly functions as a pedestrian corridor and accessory parking lot to the MDC. As noted previously, the project would include the demapping of above- and below-grade volumes of White Street between Baxter Street and Centre Street. In addition, this segment of White Street (from Centre Street to Baxter Street) would have its street lines adjusted and its width narrowed but, would remain open to pedestrians only (vehicles would not be allowed). Paralleling Centre Street to the west is **Lafayette Street** which operates one-way southbound with two moving lanes, a conventional bicycle lane, and parking along both curbs. Approximately 0.5-mile to the north of the project site

Centre Street merges into Lafayette Street which then continues as a one-way northbound corridor. To the south of Foley Square, Lafayette Street merges into Centre Street which then continues as a two-way street that provides access to southbound Park Row and functions as a northbound outlet for traffic exiting the Brooklyn Bridge. Also providing north-south through access in the vicinity of the Manhattan Site are Broadway and Bowery. **Broadway** is located two blocks to the west of the site and extends the length of Manhattan from the Battery to Inwood, and from there into the Bronx. In Lower Manhattan, Broadway typically operates one-way southbound with two to three moving lanes and parking along one or both curbs. It is a designated local truck route and is used by NYCT's M55 local bus route as well as numerous express routes operated by NYCT and MTA Bus.

The primary east-west corridor in the vicinity of the Manhattan Site is **Canal Street** which is located to the north of the site and is a key crosstown artery that connects the Manhattan Bridge on the east with West Street and the Holland Tunnel on the west. It is a designated through truck route that typically operates with two to three moving lanes plus commercial vehicle parking along one or both curbs during non-peak hours. Another east-west corridor in the vicinity of the site is **Walker Street** which operates one-way eastbound from West Broadway to Mulberry Street where it merges with Canal Street. It typically has one moving lane plus parking along both curbs, and is a designated through truck route. Other local streets in the vicinity of the Manhattan Site, including Walker Street, Hogan Place, **Mulberry Street and Bayard** Street, serve primarily local access functions and also typically operate one-way with one moving lane plus parking along one or both curbs.

Major arteries connecting Lower Manhattan with points north include West Street and the FDR Drive. **West Street (Route 9A)**, located approximately 0.8-mile to the west of the site is an at-grade arterial roadway that extends along the west side of Manhattan from the Hugh L. Carey (Brooklyn-Battery) Tunnel northward to West 57th Street where it becomes the Henry Hudson Parkway. In Lower Manhattan it typically operates with three to four moving lanes plus turn lanes in each direction, and is a designated through truck route. The **FDR Drive** is a limited-access parkway (commercial vehicles are prohibited) located approximately 0.5-mile to the east of the site that runs along the east side of Manhattan from South Ferry to East 125th Street where it becomes the East River Drive.

Truck Routes

The City has established local and through truck routes to manage the flow of trucks and improve the quality of neighborhoods. The City defines a truck as "a vehicle which is designed for transportation of property, which has either of the following characteristics: two axles and six tires or three or more axles." Trucks must generally travel on local truck routes to reach the intersection nearest their destinations. Through trucks are defined as having neither an origin nor a destination within the Borough of Manhattan. As shown in **Figure 4.9-5**, in proximity to the Manhattan Site both Canal Street and Walker Street have been designated as through truck routes, and Bowery, Broadway, Church Street, St. James Place and Worth Street have been designated as local truck routes.

Bicycle Lanes

As shown in **Figure 4.9-6**, bicycle routes in proximity to the Manhattan Site include conventional bicycle lanes along Lafayette Street and along Centre Street from Reade Street to Worth Street. Potential future bicycle lanes are proposed for Centre Street north of Worth Street and Bowery.

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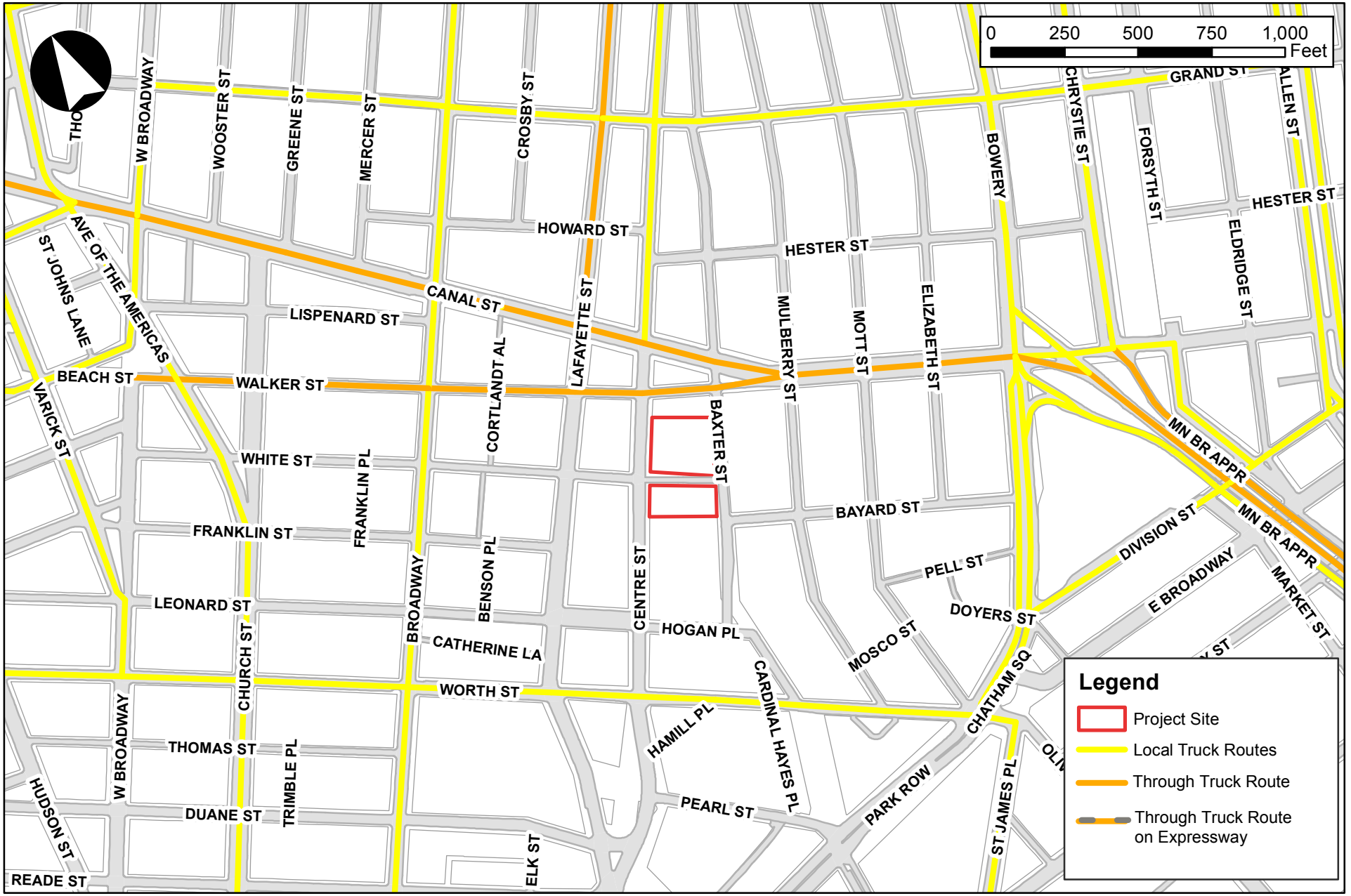
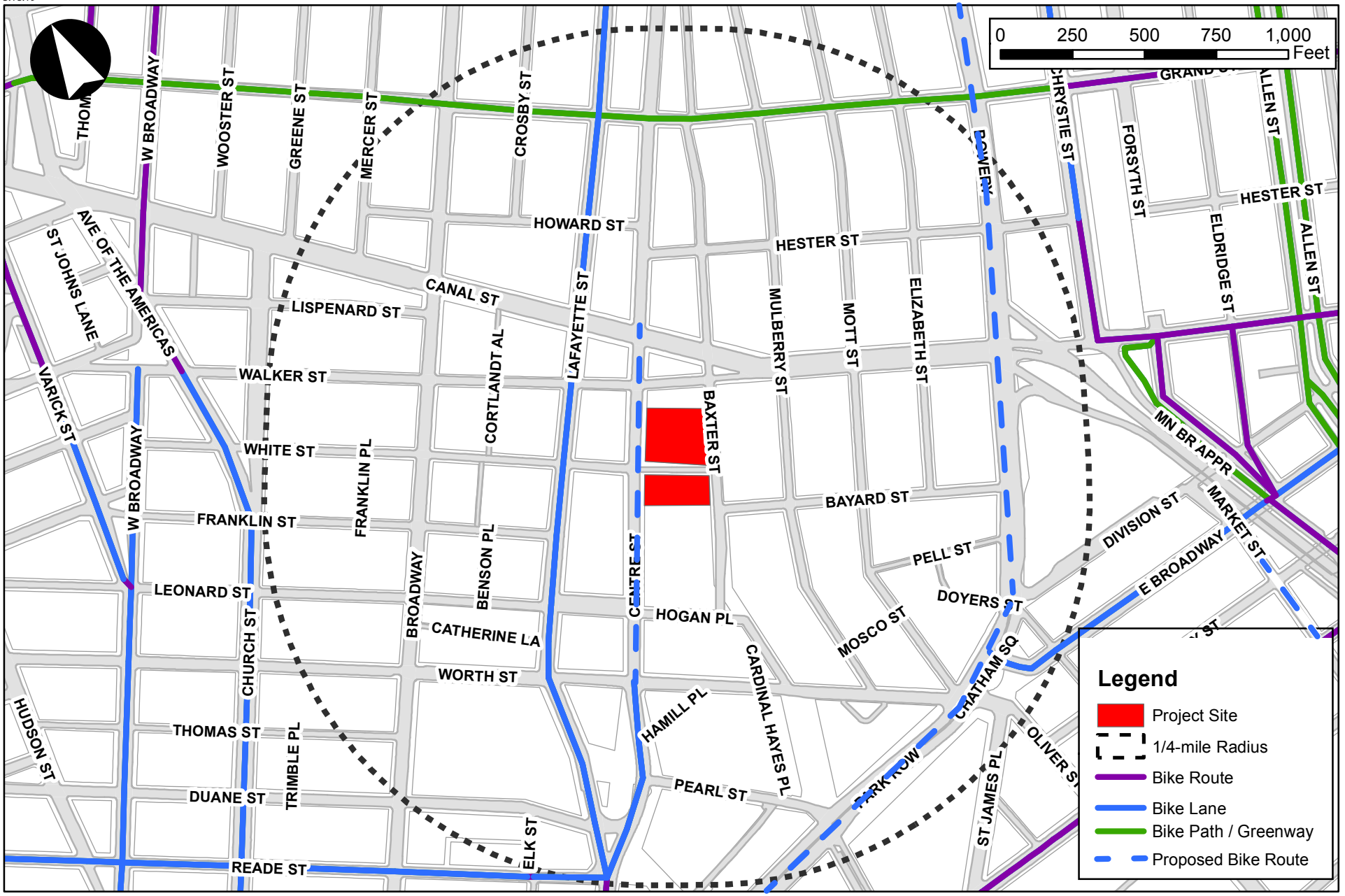


Manhattan Site - 124-125 White Street
Designated Truck Routes

Figure 4.9-5



Manhattan Site - 124-125 White Street
Bicycle Routes
Figure 4.9-6

TRAFFIC CONDITIONS

To establish the Existing conditions traffic network, an extensive traffic data collection program—including ATR counts, turning movement counts, vehicle classification counts, and travel time and delay surveys—was undertaken in June 2018. Physical inventory data needed for operational analysis—e.g., the number of traffic lanes, lane widths, pavement markings, turn prohibitions, bus stops, and typical parking regulations—were also collected in June 2018. Signal timing plans for signalized intersections within the study area were obtained from DOT. **Figure 4.9-7** shows existing traffic volumes during weekday AM, midday and Saturday peak hours. To present a conservative traffic assessment, the existing traffic volumes utilized in the analysis and shown in **Figure 4.9-7**, were based on data for the weekday 7:00-8:00 AM and 3:00-4:00 PM periods and the 3:00-4:00 PM period on a Saturday. According to the June 2018 ATR data, the weekday 7:00-8:00 AM and 3:00-4:00 PM periods exhibited approximately 4.8 and 1.5 percent higher volumes than the 6:30-7:30 AM and 2:45-3:45 PM peak hours, respectively. For Saturday, the 3:00-4:00 PM period also exhibited approximately 0.03 percent higher traffic volume than the 2:45-3:45 PM period.

INTERSECTION CAPACITY ANALYSIS

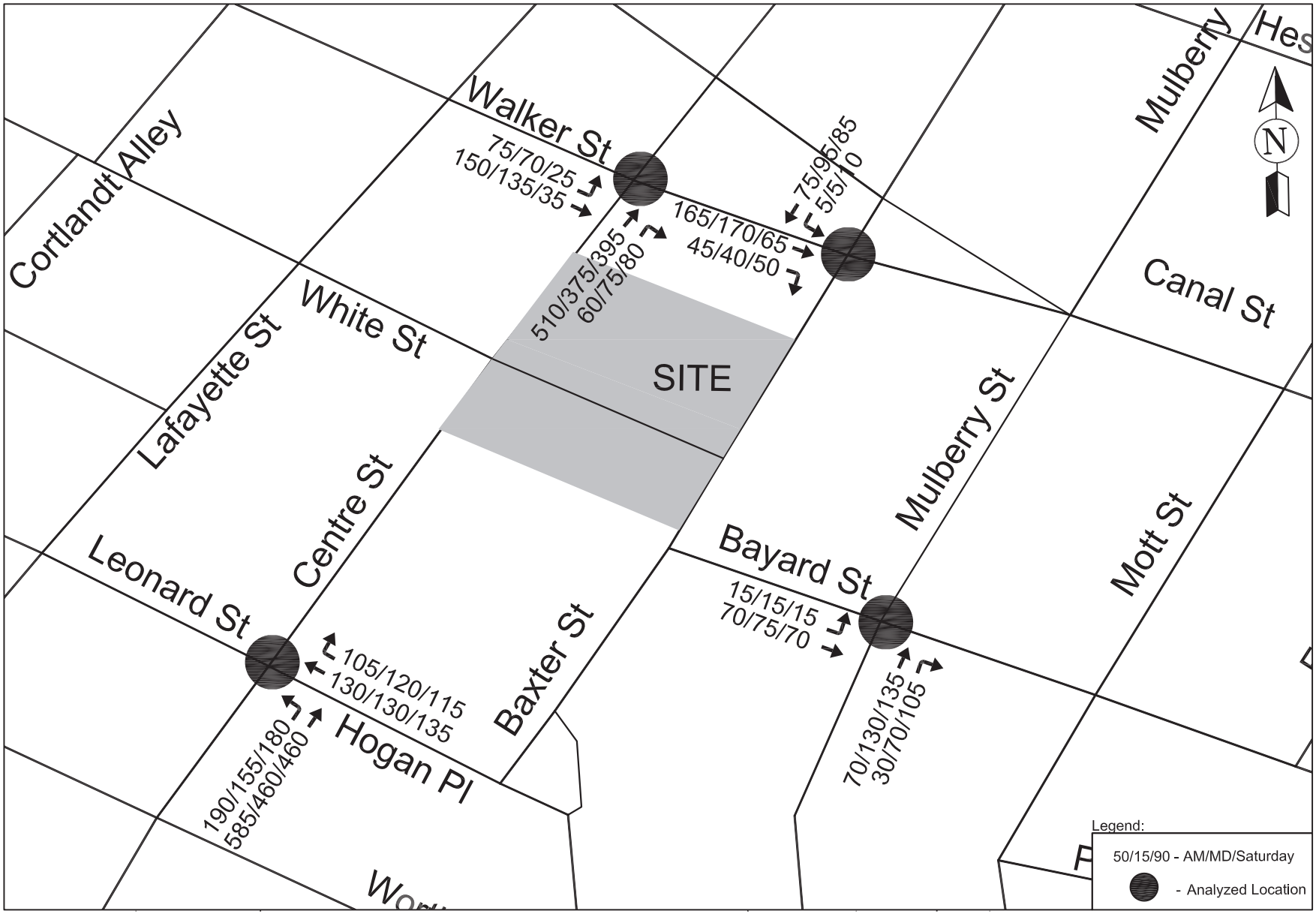
Table 4.9.8 details the v/c ratios, LOS and delays of each lane group at analyzed intersections during the analyzed weekday AM, weekday midday and Saturday peak hours under existing conditions. As shown in **Table 4.9-8**, during both the analyzed weekday AM and Saturday peak hours, all analyzed lane groups would operate at LOS C or better. During the analyzed weekday midday peak hour, all but three analyzed lane groups would operate at LOS C or better.

Table 4.9-8
Existing Peak Hour Traffic Conditions

	Existing Weekday AM					Existing Weekday Midday					Existing Saturday				
Intersection	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS
Centre Street & Hogan Place (signalized)	WB	TR	0.60	30.0	C	WB	TR	0.90	62.1	E *	WB	TR	0.67	33.0	C
	NB	LT	0.72	19.1	B	NB	LT	1.06	144.6	F *	NB	LT	0.77	21.9	C
Centre Street & Walker Street (signalized)	EB	LT	0.50	21.2	C	EB	LT	0.47	20.6	C	EB	LT	0.12	15.1	B
	NB	TR	0.55	20.3	C	NB	TR	0.90	41.7	D *	NB	TR	0.50	19.5	B
Bayard Street & Mulberry Street (signalized)	EB	LT	0.19	16.0	B	EB	LT	0.21	16.2	B	EB	LT	0.22	16.4	B
	NB	TR	0.23	16.5	B	NB	TR	0.51	21.9	C	NB	TR	0.75	33.2	C
Baxter Street & Walker Street (two-way stop-controlled)	EB	TR	0.33	12.3	B	EB	TR	0.45	16.2	C	EB	TR	0.19	11.3	B
	SB	LT	0.00	7.3	A	SB	LT	0.00	7.4	A	SB	LT	0.01	7.5	A

- Approach: EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound.
- Lane Group: L-Left, T-Through, R-Right, DefL-Defacto left.
* Denotes congested lane group.

A lane group is considered congested if it operates at LOS E or F and/or with a v/c ratio of 0.90 or above. A v/c ratio of 1.00 or above reflects capacity conditions. As shown in **Table 4.9-8**, two analyzed intersections currently have at least one congested lane group in the weekday midday peak hour. These congested lane groups include the westbound shared through-right lane group and the northbound shared left-through lane group at the analyzed intersection of Centre Street and Hogan Place, as well as the northbound shared through-right lane group at the analyzed intersection of Centre Street and Walker Street. The northbound shared left-through group at the analyzed intersection of Centre Street and Hogan Place also operates at capacity (v/c ratio $\geq$ 1.0) in the weekday midday peak hour. No other analyzed lane group during any of the analyzed peak hours operates at capacity. Overall, the data in **Table 4.9-8** indicate that traffic congestion at



Manhattan Site - 124-125 White Street
Existing Peak Hour Traffic Volumes

Figure 4.9-7

analyzed intersections in proximity to the Manhattan Site is most evident in the weekday midday peak hour.

THE FUTURE WITHOUT THE PROPOSED PROJECT (NO ACTION CONDITION)

Under the No Action condition, it is assumed that Rikers Island would continue operating as the city's main detention center, and that the existing Manhattan Detention Complex would remain operational.

NO ACTION CHANGES TO THE STUDY AREA STREET NETWORK

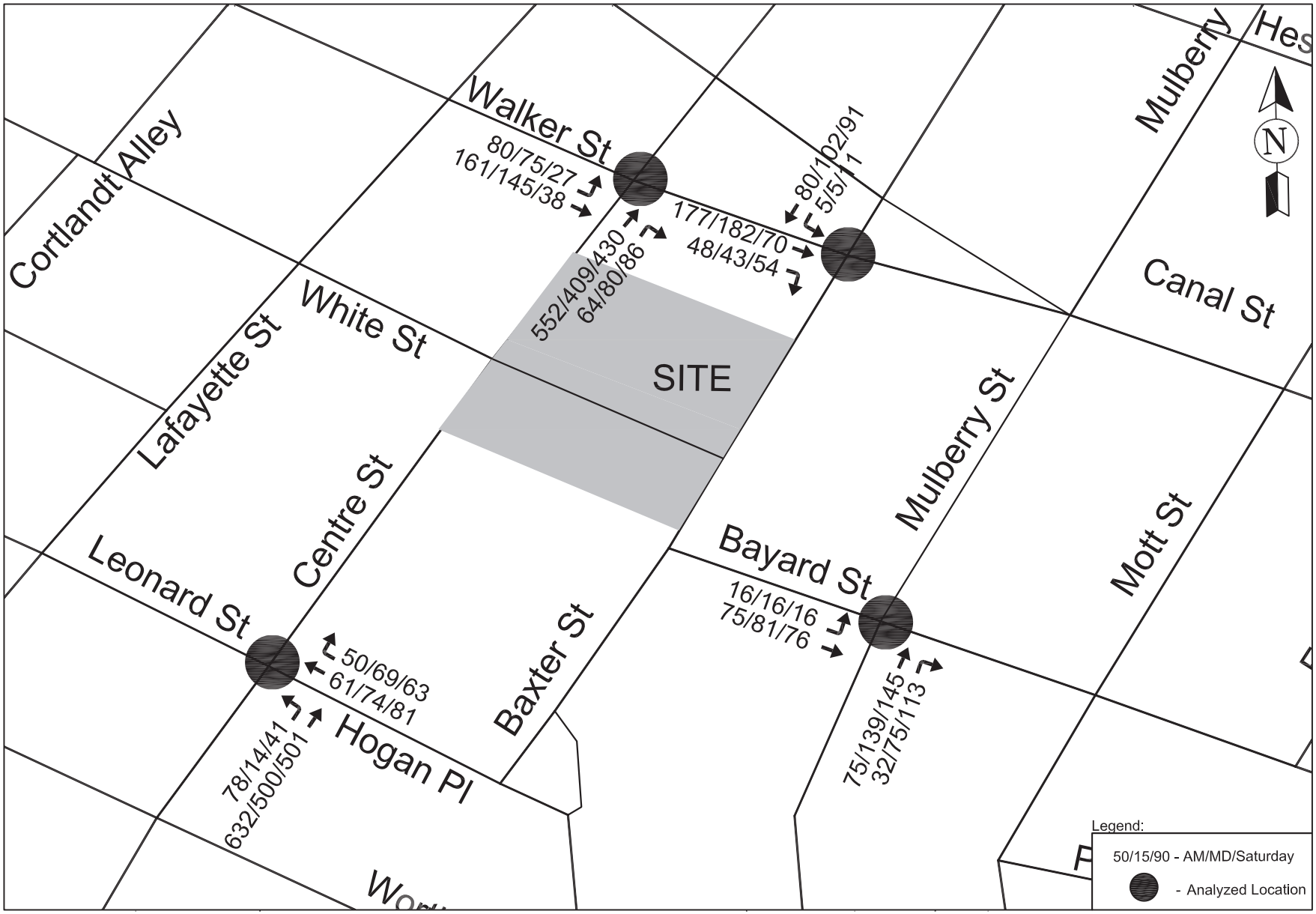
The No Action traffic analysis reflects the anticipated completion of the in-street construction work along Worth Street west of Centre Street and the return of this street segment to two-way operation. Worth Street is located two blocks south of the site and a redistribution of future traffic volumes associated with the return to full two-way operation is reflected in the No Action traffic volume network.

NO ACTION TRAFFIC GROWTH

Between 2018 and 2027, it is expected that transportation demands in the vicinity of the Manhattan Site will increase due to long-term background growth as well as development that could occur pursuant to existing zoning. The No Action traffic volumes reflect annual background growth rates of 0.25 percent per year for the 2018 through 2023 period and 0.125 percent for the 2023 through 2027 period. These background growth rates, recommended in the *CEQR Technical Manual* for projects in Manhattan, are applied to account for smaller projects and general increases in travel demand not attributable to specific development projects. In addition, to be conservative, an additional 5.4 percent of background growth was also applied for 2027 to reflect the many small to moderate sized developments in the area. **Figure 4.9-8** shows the total No Action traffic volumes during the analyzed weekday AM and midday, and Saturday peak hours.

INTERSECTION CAPACITY ANALYSIS

Table 4.9.9 details the v/c ratios, LOS and delays of each lane group at analyzed intersections during the analyzed weekday AM, weekday midday and Saturday peak hours under No Action conditions. As shown in **Table 4.9.9**, only one analyzed lane group would continue to experience congestion during the analyzed weekday midday peak hour – the northbound shared-through right lane group at the analyzed intersection of Centre Street and Walker Street. The northbound shared left-through lane group at the analyzed intersection of Centre Street and Hogan Place would no longer experience congestion or operate at capacity in any analyzed peak hour due to changes in traffic flow associated with the reintroduction of two-way operation on Worth Street west of Centre Street.



Manhattan Site - 124-125 White Street
No-Action Peak Hour Traffic Volumes
Figure 4.9-8

Table 4.9-9
No Action Peak Hour Traffic Conditions

Intersection	No Action Weekday AM					No Action Weekday Midday					No Action Saturday				
	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS
Centre Street & Hogan Place (signalized)	WB	TR	0.28	23.0	C	WB	TR	0.52	34.1	C	WB	TR	0.38	24.8	C
	NB	LT	0.64	16.9	B	NB	LT	0.80	46.2	D	NB	LT	0.62	16.9	B
Centre Street & Walker Street (signalized)	EB	LT	0.54	22.2	C	EB	LT	0.51	21.5	C	EB	LT	0.13	15.2	B
	NB	TR	0.59	21.2	C	NB	TR	0.98	55.5	E *	NB	TR	0.54	20.2	C
Bayard Street & Mulberry Street (signalized)	EB	LT	0.21	16.2	B	EB	LT	0.22	16.4	B	EB	LT	0.24	16.7	B
	NB	TR	0.25	16.7	B	NB	TR	0.56	23.2	C	NB	TR	0.82	38.9	D
Baxter Street & Walker Street (two-way stop-controlled)	EB	TR	0.35	12.7	B	EB	TR	0.49	17.6	C	EB	TR	0.21	11.6	B
	SB	LT	0.00	7.3	A	SB	LT	0.00	7.4	A	SB	LT	0.01	7.5	A

- Approach: EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound.
- Lane Group: L-Left, T-Through, R-Right, DefL-Defacto left.
* Denotes congested lane group.

THE FUTURE WITH THE PROPOSED PROJECT (WITH ACTION CONDITION)

STREET NETWORK CHANGES WITH THE PROPOSED ACTIONS

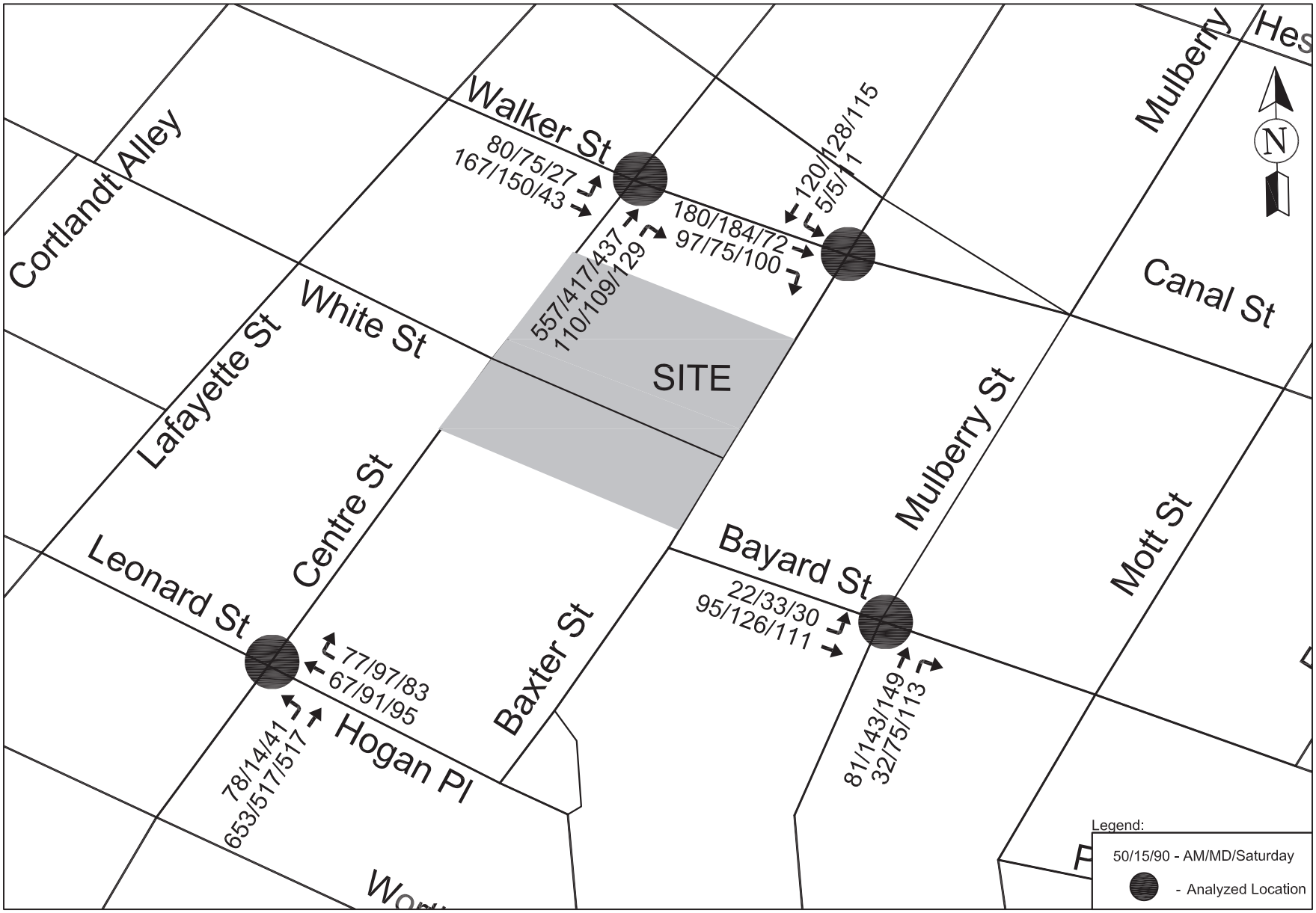
With the exception of the segment of White Street between Baxter and Centre Street, which would have above- and below-grade volumes demapped, its street lines narrowed and adjusted, and would be converted to a pedestrian only corridor, no changes to the street network in the vicinity of the Manhattan Site are contemplated as part of the proposed project.

WITH ACTION TRAFFIC GROWTH

As shown in **Table 4.9-5 and Table 4.9-6**, under the proposed project there would be a total of approximately 120, 145 and 123 additional vehicles (auto, truck, DOC shuttle bus and taxi trips balanced to reflect that taxis arrive or depart empty) trips during the weekday AM and midday, and Saturday peak hours, respectively. Auto and taxi trips were assigned to the various bridges, tunnels, limited-access highways and arterials providing access to Lower Manhattan based on the anticipated origins and destinations of vehicle trips associated with the different populations projected for the site (e.g., DOC staff and visitors, local retail staff and patrons, etc.). DOC staff autos were assigned via the most direct routes to the on-site accessory parking entrance on Baxter Street while taxis were assigned to the pedestrian entrances. Although auto demand not associated with DOC staff is expected to park on-street or at off-street public parking facilities in the area, these auto trips were also assigned directly to the Manhattan Site frontages. This can be considered a conservative approach with respect to the traffic impact analysis as it concentrates project-generated traffic at analyzed intersections in proximity to the site rather than dispersing it to outlying public parking facilities. DOC buses were assigned to the proposed project's sally port entrance on Centre Street and exit on Baxter Street. Any truck trips were assigned to designated truck routes and then to the most direct path to and from the proposed project's loading dock entrance which is accessible via the on-site sally port.

Figure 4.9-4 shows the assignment of net incremental vehicle trips (includes discrete trips generated by the project and future diverted traffic volume associated with the conversion of White Street to a pedestrian-only corridor) during the weekday AM and midday, and Saturday peak hours with implementation of the proposed project.

Figure 4.9-9 shows the total traffic volumes in each peak hour in the 2027 With Action. The volumes shown in **Figure 4.9-9** are the combination of the net incremental traffic generated by the proposed project and the No Action volumes.



Manhattan Site - 124-125 White Street
With-Action Peak Hour Traffic Volumes
Figure 4.9-9

INTERSECTION CAPACITY ANALYSIS

The v/c ratios, delays and LOS for analyzed lane groups during all analyzed peak hours under With Action conditions are shown in **Table 4.9-10**. As shown in **Table 4.9-10**, only one analyzed intersection would have a congested lane group during the weekday midday peak hour under With-Action conditions (same as under No Action conditions).

Table 4.9-10
With Action Peak Hour Traffic Conditions

	With Action Weekday AM					With Action Weekday Midday					With Action Saturday				
Intersection	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS
Centre Street &	WB	TR	0.38	24.6	C	WB	TR	0.69	41.5	D	WB	TR	0.48	26.9	C
Hogan Place	NB	LT	0.66	17.4	B	NB	LT	0.82	48.9	D	NB	LT	0.63	17.3	B
(signalized)															
Centre Street &	EB	LT	0.55	22.5	C	EB	LT	0.52	21.7	C	EB	LT	0.14	15.3	B
Walker Street	NB	TR	0.67	23.1	C	NB	TR	1.09	88.0	F *	NB	TR	0.62	22.1	C
(signalized)															
Bayard Street &	EB	LT	0.27	17.0	B	EB	LT	0.38	18.7	B	EB	LT	0.37	18.8	B
Mulberry Street	NB	TR	0.26	16.9	B	NB	TR	0.56	23.4	C	NB	TR	0.82	39.7	D
(signalized)															
Baxter Street &	EB	TR	0.45	14.2	B	EB	TR	0.58	20.3	C	EB	TR	0.29	12.3	B
Walker Street	SB	LT	0.00	7.3	A	SB	LT	0.00	7.4	A	SB	LT	0.01	7.5	A
(two-way stop-controlled)	WB	TR	0.38	24.6	C	WB	TR	0.69	41.5	D	WB	TR	0.48	26.9	C

- Approach: EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound.
- Lane Group: L-Left, T-Through, R-Right, DefL-Defacto left.
* Denotes congested lane group.

Table 4.9-10 also highlights analyzed lane groups with the potential for significant adverse impacts. The potential for significant adverse impacts was identified at one analyzed lane group at one analyzed intersection during the weekday midday peak hour. No analyzed lane group was identified as having the potential for significant adverse impacts during the analyzed weekday AM and Saturday peak hours. Potential measures to mitigate the potential for significant adverse traffic impact identified in **Table 4.9-10** are discussed in Section 4.15, "Mitigation."

G. VEHICULAR AND PEDESTRIAN SAFETY

RECENT NYCDOT INITIATIVES

VISION ZERO MANHATTAN PEDESTRIAN SAFETY ACTION PLAN

The City's Vision Zero initiative seeks to eliminate all deaths from traffic crashes regardless of whether on foot, bicycle, or inside a motor vehicle. In an effort to drive these fatalities down, DOT and the New York City Police Department (NYPD) developed a set of five plans, each of which analyzes the unique conditions of one New York City borough and recommends actions to address the borough's specific challenges to pedestrian safety. These plans pinpoint the conditions and characteristics of pedestrian fatalities and severe injuries; they also identify priority corridors, intersections, and areas that disproportionately account for pedestrian fatalities and severe injuries, prioritizing them for safety interventions. The plans outline a series of recommended actions comprised of engineering, enforcement, and education measures that intend to alter the physical and behavioral conditions on City streets that lead to pedestrian fatality and injury.

The *Vision Zero Manhattan Pedestrian Safety Action Plan* was released on February 18, 2015. In the vicinity of the Manhattan Site, Canal Street was identified as a Priority Corridor and the intersection of Bowery with Canal Street and the Manhattan Bridge approach was identified as a Priority Intersection. The site is also located in both a Priority Area and in the designated Chinatown Senior Pedestrian Focus Area (SPFA). Actions recommended in the *Vision Zero*

Manhattan Pedestrian Safety Action Plan to enhance pedestrian safety in Manhattan are summarized below.

Engineering and Planning

- Implement at least 50 Vision Zero safety engineering improvements at Priority Corridors, Intersections, and Areas citywide, informed by community input
- Expand exclusive pedestrian crossing time, install expanded speed limit signage, and modify signal timing to reduce off-speak speeding on Priority Corridors and Intersections where feasible
- Expand community outreach and engagement with regard to Priority Corridors, Intersections, and Areas
- Install additional lighting under elevated trains and around other key transit stops
- Coordinate with MTA to ensure bus operations contribute to a safe pedestrian environment
- Expand a bicycle network in Manhattan that improves safety for all road users
- Proactively design for pedestrian safety in high-growth areas in Manhattan including locations in the *Housing New York* plan

Enforcement

- Install the majority of speed cameras at Priority Corridors, Intersections, and Areas
- Focus enforcement and deploy dedicated resources to Manhattan NYPD precincts that overlap substantially with Priority Areas
- Prioritize targeted enforcement at all Priority Corridors, Intersections, and Areas annually

Education and Awareness

- Target child and senior safety education at Priority Corridors and Priority Areas
- Launch multilingual public information campaigns in Priority Areas
- Target Street Team outreach at Priority Corridors, Intersections, and Areas

STUDY AREA HIGH CRASH LOCATIONS

Crash data for intersections within ¼-mile of the Manhattan Site were obtained from DOT for the three-year period between January 1, 2014 and December 31, 2016 (the most recent three-year period for which data are available). The data quantify the total number of reportable (involving a fatality, injury, or more than $1,000 in property damage) and non-reportable crashes as well as the total number of crashes involving injuries to pedestrians or bicyclists. During the three-year reporting period, a total of 455 reportable and non-reportable crashes, 186 pedestrian/bicyclist-related injury crashes, and one fatality occurred at study area intersections. **Table 4.9-11** provides details of crash characteristics by intersection during the 2014 to 2016 period, as well as a breakdown of pedestrian and bicycle crashes by year and location.

Table 4.9-11
Summary of Motor Vehicle Crash Data 2014-2016

Intersection		Pedestrian Injury Accidents			Bicycle Injury Accidents			Total Pedestrian/ Bicyclist Injury Accidents			Total Accidents (Reportable + Non-Reportable)		
North-South Roadway	East-West Roadway	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
Church Street	Walker Street	1	0	0	0	0	0	1	0	0	2	1	0
	White Street	0	0	0	0	2	0	0	2	0	0	3	0
	Franklin Street	1	0	0	0	0	1	1	0	1	2	1	4
Mercer Street	Howard Street	0	0	0	0	0	0	0	0	0	1	0	0
	Canal Street	1	2	1	0	0	0	1	2	1	1	3	1
Franklin Place	White Street	0	0	0	0	0	0	0	0	0	0	0	0
	Franklin Street	0	0	0	0	0	0	0	0	0	0	0	0
Broadway	Grand Street	0	1	4	0	0	2	0	1	6	1	4	13
	Howard Street	0	1	0	0	1	0	0	2	0	0	2	0
	Canal Street	2	2	5	1	0	0	3	2	5	12	11	10
	Lispenard Street	0	0	0	0	0	0	0	0	0	0	1	0
	Walker Street	0	0	1	0	0	0	0	0	1	2	0	1
	White Street	0	0	0	0	0	0	0	0	0	0	1	0
	Franklin Street	0	2	1	0	0	0	0	2	1	2	4	2
	Leonard Street	1	0	0	0	0	1	1	0	1	1	0	2
	Catherine Lane	0	0	0	0	0	0	0	0	0	0	0	0
	Worth Street	1	0	1	0	3	0	1	3	1	3	3	2
	Thomas Street	0	0	0	0	0	0	0	0	0	0	0	0
	Duane Street	0	0	1	1	0	0	1	0	1	3	2	5
Crosby Street	Grand Street	0	0	0	0	0	0	0	0	0	1	1	2
	Howard Street	0	0	0	0	0	0	0	0	0	0	2	0
Cortlandt Alley	Canal Street	0	0	0	0	0	0	0	0	0	1	0	2
	Walker Street	0	0	0	0	0	0	0	0	0	0	0	0
	White Street	0	0	0	0	0	0	0	0	0	0	0	0
	Franklin Street	0	0	0	0	0	0	0	0	0	0	0	0
Benson Place	Franklin Street	0	0	0	0	0	0	0	0	0	0	0	0
	Leonard Street	0	0	0	0	0	0	0	0	0	0	0	0
Elk Street	Duane Street	0	0	0	0	0	0	0	0	0	0	0	0
	Reade Street	0	0	0	0	0	0	0	0	0	0	0	1
Lafayette Street	Grand Street	0	1	1	0	1	0	0	2	1	2	3	3
	Howard Street	0	0	1	0	0	1	0	0	2	1	0	2
	Canal Street	3	0	7	0	0	0	3	0	7	6	9	15
	Walker Street	0	0	0	0	0	0	0	0	0	0	0	2
	White Street	0	0	0	0	0	0	0	0	0	0	0	1
	Franklin Street	0	0	0	0	0	0	0	0	0	0	1	0
	Leonard Street	0	0	0	0	1	0	0	1	0	0	1	0
	Catherine Lane	0	1	0	0	0	0	0	1	0	0	1	0
	Worth Street	1	2	1	0	0	1	1	2	2	2	2	2
	Duane Street	1	0	0	0	0	0	1	0	0	.	0	0
	Reade Street	0	0	0	0	1	0	0	1	0	0	1	0
Centre Street	Grand Street	2	1	0	0	0	0	2	1	0	2	2	1
	Howard Street	0	0	0	0	1	0	0	1	0	0	2	2
	Hester Street	0	0	0	0	0	0	0	0	0	0	0	0
	Canal Street	2	0	0	0	0	1	2	0	1	6	7	3
	Walker Street	1	0	0	1	0	0	2	0	0	2	1	1
	White Street	0	0	0	1	0	0	1	0	0	1	1	1
	Leonard Street	0	1	0	0	0	0	0	1	0	0	1	0
	Worth Street	0	0	0	0	0	1	0	0	1	0	1	2
	Pearl Street	0	0	0	0	0	0	0	0	0	0	0	0
	Duane Street	0	0	0	0	0	0	0	0	0	0	0	0
Baxter Street	Grand Street	0	0	1	0	0	0	0	0	1	0	0	1
	Hester Street	0	0	1	1	0	0	1	0	1	1	0	1
	Canal Street	1	1	1	0	0	0	1	1	1	3	7	3
	Walker Street	0	0	0	0	0	0	0	0	0	0	2	1
	White Street	0	1	0	0	0	0	0	1	0	0	1	0
	Bayard Street	0	0	0	0	0	0	0	0	0	0	0	0
	Hogan Place	0	0	0	0	0	0	0	0	0	0	0	2
	Worth Street	0	3	0	1	0	0	1	3	0	1	2	1
Cardinal Hayes Place	Pearl Street	0	0	0	0	0	0	0	0	0	0	0	0
Mulberry Street	Grand Street	0	1	0	0	0	0	0	1	0	1	5	0
	Hester Street	0	1	2	0	0	0	0	1	2	1	1	2
	Canal Street	1	0	3	0	0	1	1	0	4	8	4	11
	Bayard Street	0	0	0	0	0	0	0	0	0	0	1	0
	Mosco Street	0	0	1	0	0	0	0	0	1	0	0	1
	Worth Street	0	2	1	0	0	1	0	2	2	2	3	3
Mott Street	Grand Street	0	1	1	0	0	1	0	1	2	1	1	3
	Hester Street	1	1	2	0	0	0	1	1	2	4	1	4
	Canal Street	1	4	3	0	0	0	1	4	3	2	11	13
	Bayard Street	0	1	1	0	0	0	0	1	1	1	1	1
	Pell Street	0	0	0	0	0	0	0	0	0	1	1	0
	Mosco Street	0	0	0	0	0	0	0	0	0	0	0	0
	Worth Street	0	2	1	1	3	0	1	5	1	1	8	5
Elizabeth Street	Grand Street	0	1	2	0	0	0	0	1	2	0	1	3
	Hester Street	0	1	0	0	0	0	0	1	0	2	4	1
	Canal Street	0	3	1	0	2	1	0	5	2	2	7	5
	Bayard Street	1	0	0	0	0	0	1	0	0	1	1	0
Doyers Street	Pell Street	0	0	0	0	0	0	0	0	0	0	0	0
Bowery	Hester Street	3	4	3	.	0	0	3	4	3	4	8	5
	Canal Street	1	20	4	0	2	2	1	22	6	10	17	14
	MN Bridge Approach	0	0	0	0	0	0	0	0	0	0	0	0
	Bayard Street	1	2	1	0	0	1	1	2	2	6	3	5
	Pell Street	0	0	0	0	0	0	0	0	0	0	1	0
	Doyers Street	1	0	0	0	0	1	1	0	1	3	6	4
Chatham Square	E Broadway	0	0	0	1	0	0	1	0	0	2	1	2
MN Bridge Approach	Canal Street	0	0	0	0	0	0	0	0	0	0	0	0
Park Row	Pearl Street	0	0	0	0	0	0	0	0	0	0	0	0
St James Place	Oliver Street	0	0	0	0	0	0	0	0	0	0	0	0
Catherine Street	E Broadway	0	1	0	0	0	0	0	1	0	1	2	0

Data soure: NYSDMV/DOT

According to the 2014 *CEQR Technical Manual*, a high crash location is one where there were 48 or more reportable and non-reportable crashes or five or more pedestrian/bicyclist-related crashes in any consecutive 12 months within the most recent three-year period for which data are available. As shown in **Table 4.9-11**, no analyzed intersections experienced 48 or more reportable and non-reportable crashes within a consecutive 12-month period during the 2014 to 2016 period; however, six analyzed intersections experienced five or more pedestrian/bicyclist-related crashes within a consecutive 12-month period. These intersections, identified as high crash locations in **Table 4.9-11**, are the following:

- Broadway at Canal Street
- Broadway at Grand Street
- Lafayette Street at Canal Street
- Mott Street at Worth Street (also known as Chatham Square)
- Elizabeth Street at Canal Street
- Bowery at Canal Street

The seven high crash intersections are discussed below.

BROADWAY AT CANAL STREET

The intersection of Broadway and Canal Street, located northwest of the project site, experienced five reported pedestrian injury crashes in 2016. Two pedestrian injury crashes were reported in both 2014 and 2015. In the three-year period only one 2015 bicycle injury crash was reported.

BROADWAY AT GRAND STREET

The intersection of Broadway and Grand Street, also located northwest of the Site, experienced six total pedestrian/bicycle injury crashes in 2016 – four pedestrian and two bicycle. In 2015, only one pedestrian injury crash was reported. No injury crash involving a pedestrian or cyclist was reported in 2014.

LAFAYETTE STREET AT CANAL STREET

The intersection of Lafayette Street and Canal Street, located northwest of the project site, experienced seven reported pedestrian injury crashes in 2016. Three other pedestrian injury crashes occurred in 2014. No injury crash involving a pedestrian or cyclist was reported in 2015.

CHATHAM SQUARE

Chatham Square, located southeast of the project site, is considered a high accident location as five pedestrian/bicycle injury crashes were reported in 2015. The intersection experienced two and one reported pedestrian injury crashes in 2015 and 2016, respectively. One and three bicycle injury crashes were reported in 2014 and 2015, respectively.

ELIZABETH STREET AT CANAL STREET

The intersection of Elizabeth Street and Canal Street, located east of the project site, experienced five total pedestrian/bicycle injury crashes in 2015 - three pedestrian and two bicycle. One pedestrian and one bicycle injury crash was reported in 2016. No pedestrian or bicycle injury crashes were reported in 2014.

BOWERY AT CANAL STREET

The intersection of Bowery and Canal Street/Manhattan Bridge approach, located northeast of the project site experienced 22 total reported pedestrian and bicycle injury crashes in 2015, and six total in 2016. In 2015, there were twenty pedestrian injury crashes and two bicycle injury crashes, while in 2016, there were four pedestrian injury crashes and two bicycle injury crashes. In 2014, only one pedestrian injury crash was reported.

H. PARKING

EXISTING CONDITIONS

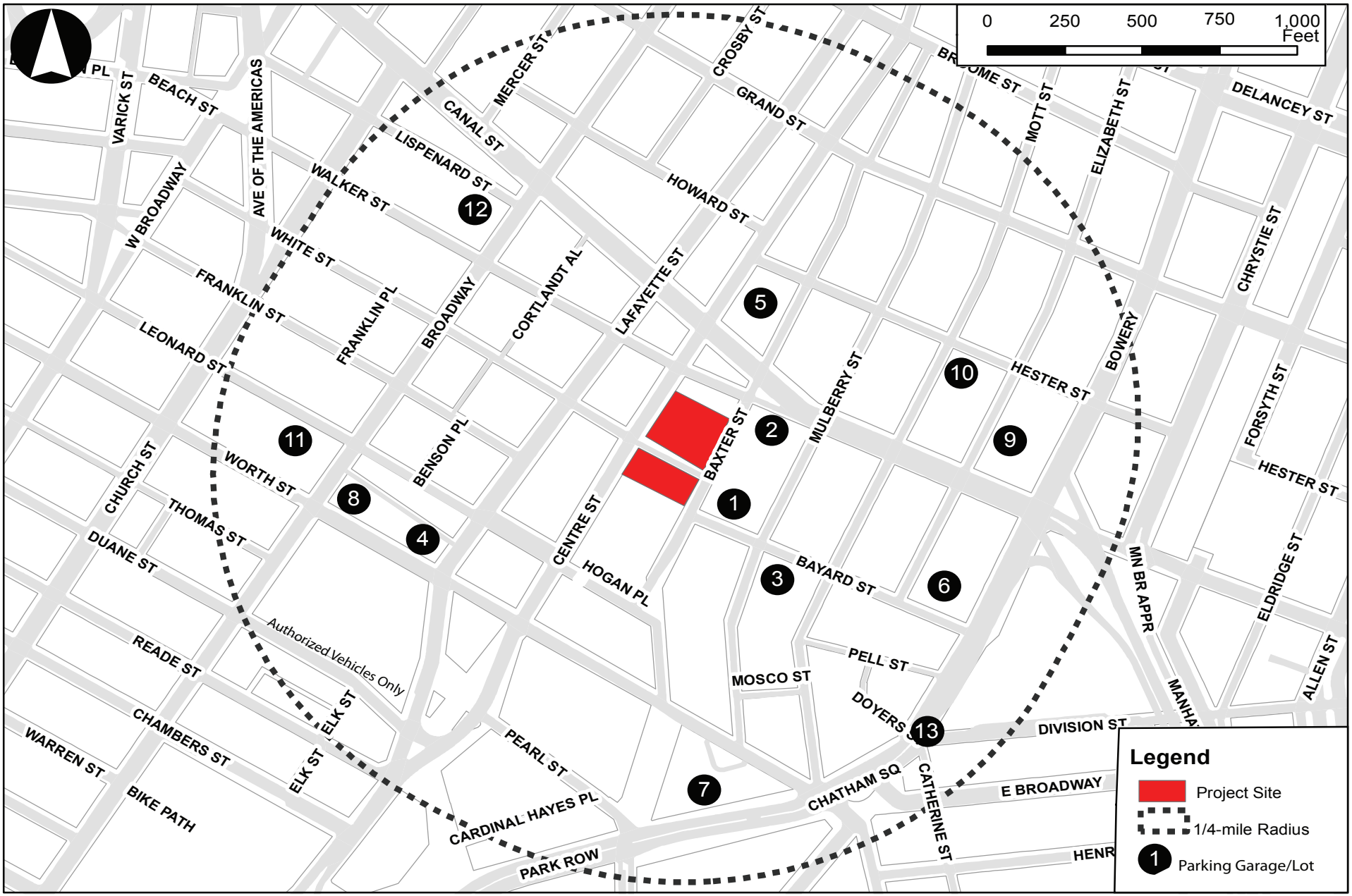
OFF-STREET PARKING

An inventory of the surrounding area identified 13 off-street parking facilities located within approximately ¼-mile of the Manhattan Site – 12 of which were in operation (as of October 2018). **Figure 4.9-10** shows the locations of these parking facilities and **Table 4.9-12** provides a summary of their names, addresses, license numbers, capacities, and estimated utilization during the weekday early morning and midday periods and the Saturday midday period. Based on field observations and interviews with parking attendants conducted in June and October 2018, the 12 active parking facilities have a combined licensed capacity of 1,720 spaces during the weekday early morning period and 1,808 spaces during both the weekday and Saturday midday periods. Two facilities are closed overnight (Nos. 2 and 12 in **Table 4.9-12**). Approximately 32 percent, 67 percent and 62 percent of off-street public spaces within the parking study area are utilized during the weekday early morning, weekday midday and Saturday midday periods, respectively, leaving a residual supply of approximately 1,170, 598 and 687 available off-street public parking spaces during these same periods, respectively.

ON-STREET PARKING

An inventory of existing parking regulations within a ¼-mile radius of the Manhattan Site was compiled from field surveys and on-line sources. Curbside parking regulations for all block faces within the study area are shown in **Appendix F**. On-street public parking is generally governed by alternate-side-of-the-street regulations to facilitate street cleaning, with more restrictive regulations in place at locations where additional traffic flow capacity is needed, especially during the weekday AM and PM peak periods. Based on existing curbside parking regulations, and taking into account curb space obstructed by curb cuts, fire hydrants, and other impediments, there are a total of approximately 1,789 legal curbside parking spaces during the weekday early morning period and 1,449 spaces during the weekday midday period within ¼-mile of the site, while during the Saturday midday period there are a total of approximately 1,604 legal curbside parking spaces.

As shown in **Table 4.9-13**, based on data collected during field surveys conducted in within ¼-mile of the site in June and October 2018, on-street parking within the overall parking study area is approximately 34, 95 and 90 percent utilized during the weekday early morning, weekday midday and Saturday midday periods, respectively. Approximately 1,180, 68, and 154 on-street parking spaces are currently available within the study area during each of these periods, respectively.



Manhattan Site - 124-125 White Street
Off-Street Public Parking Facilities

Figure 4.9-10