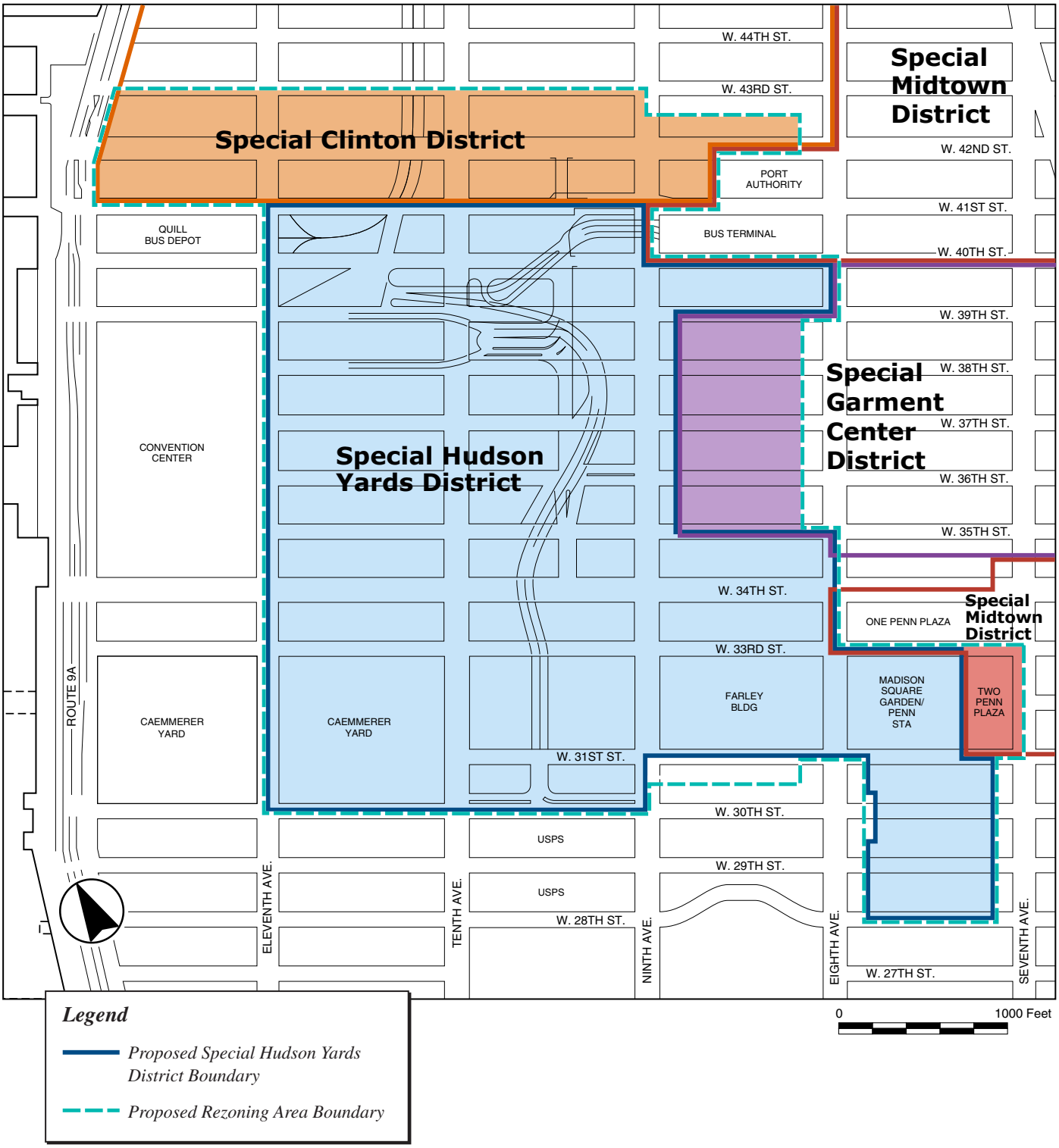
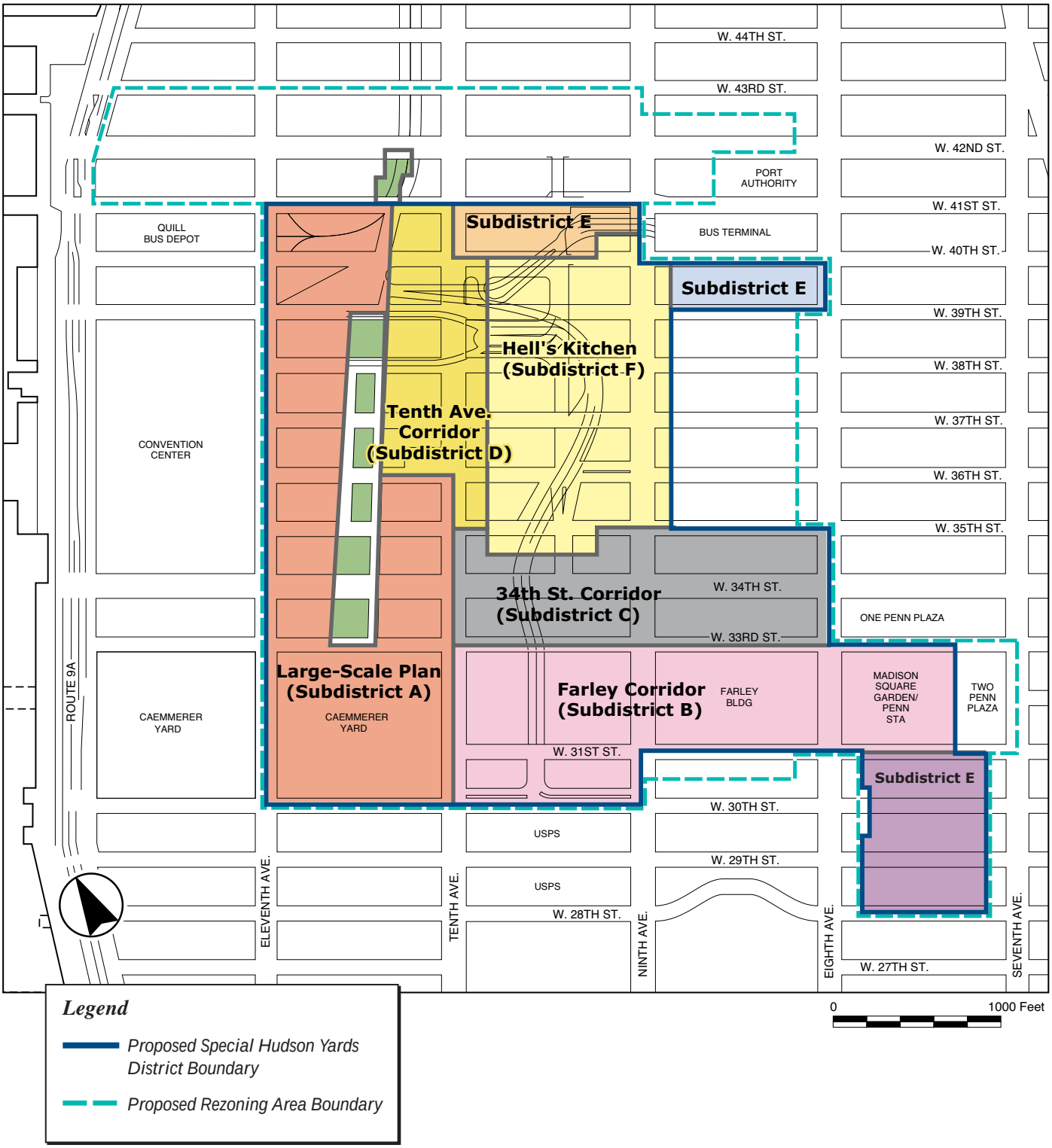


Special Districts in the Rezoning Area

Figure 2-1

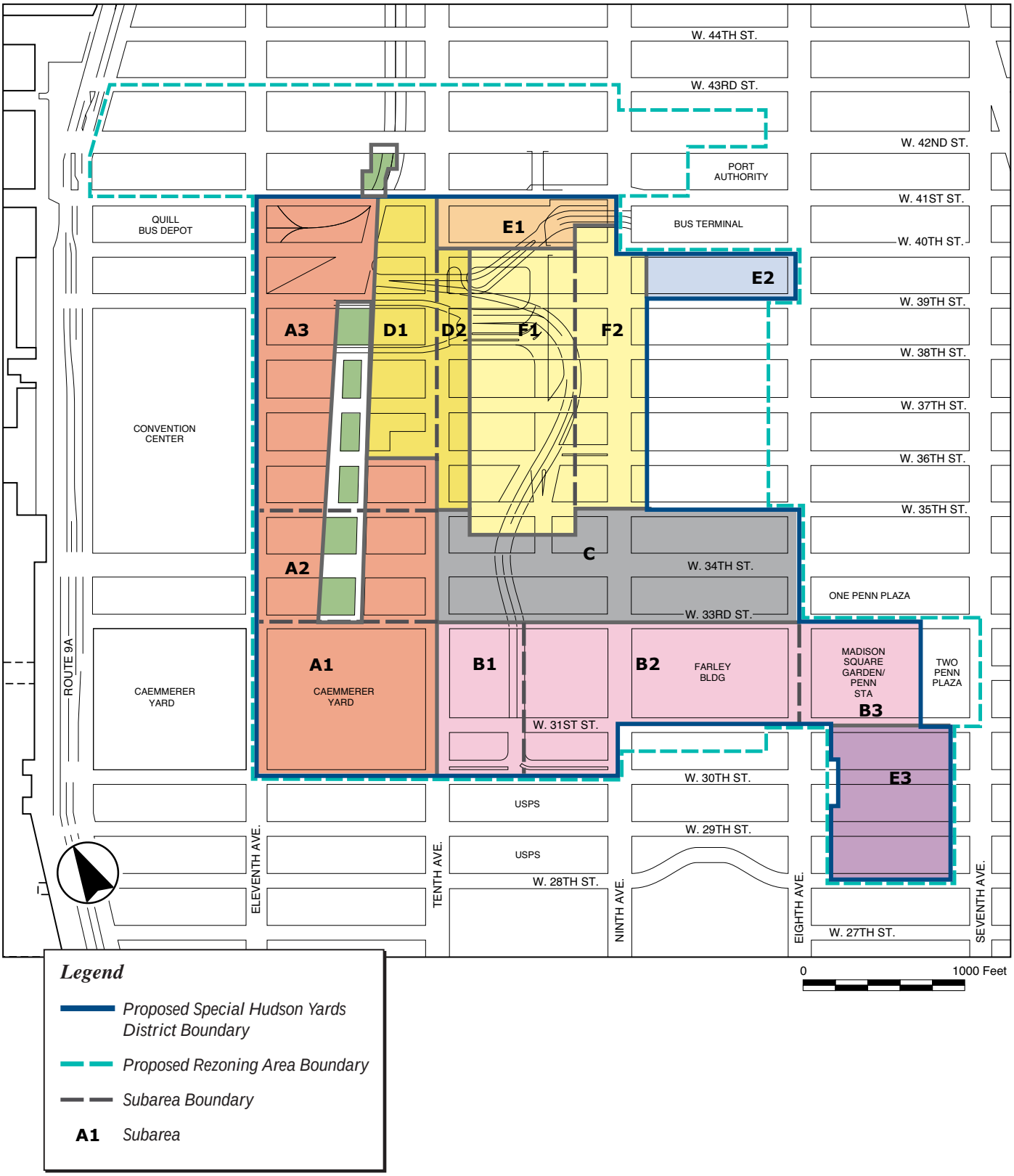
Source: New York City Department of City Planning



Proposed Subdistricts

Figure 2-2

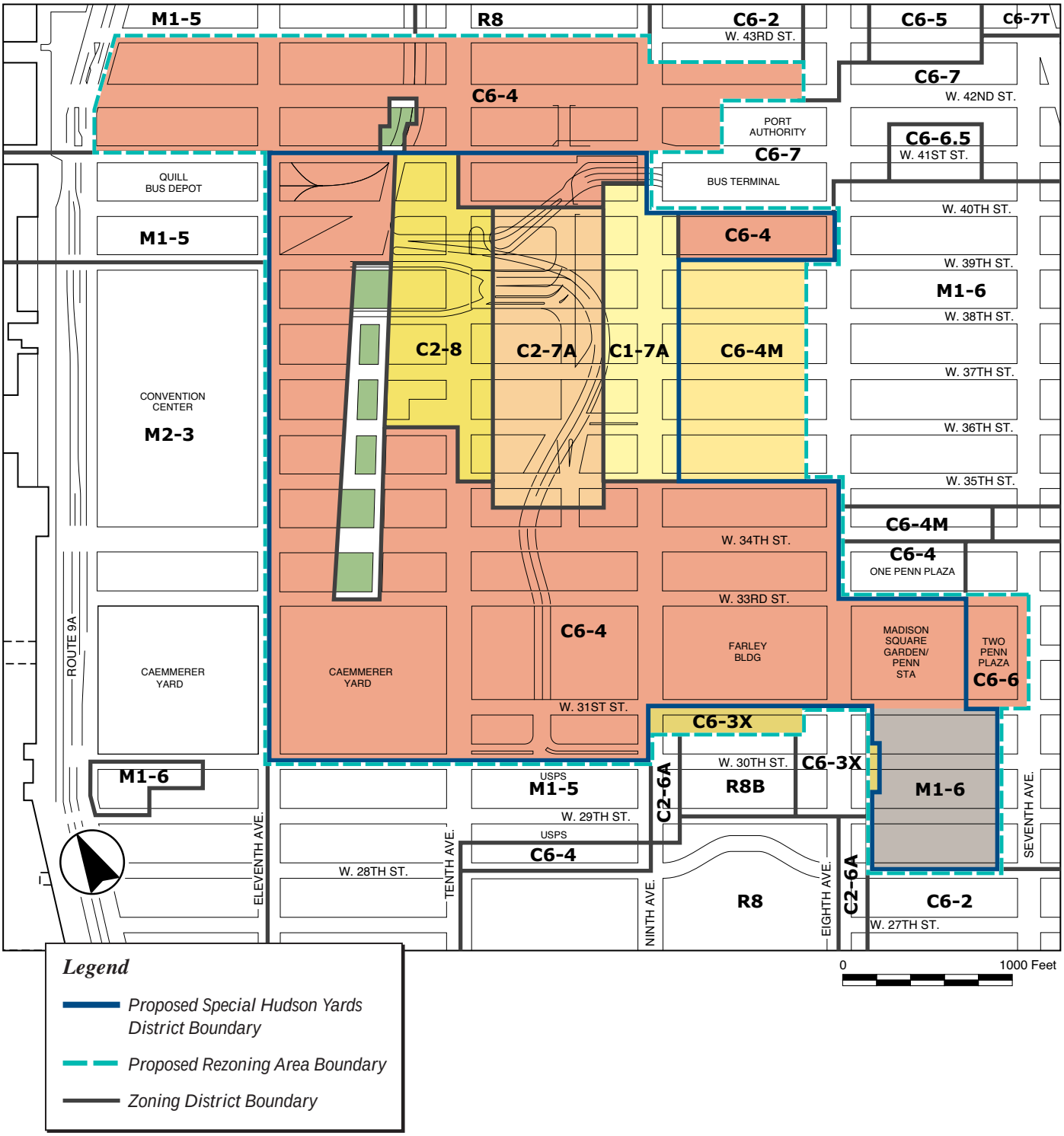
Source: New York City Department of City Planning



Proposed Subdistricts/Subareas

Figure 2-3

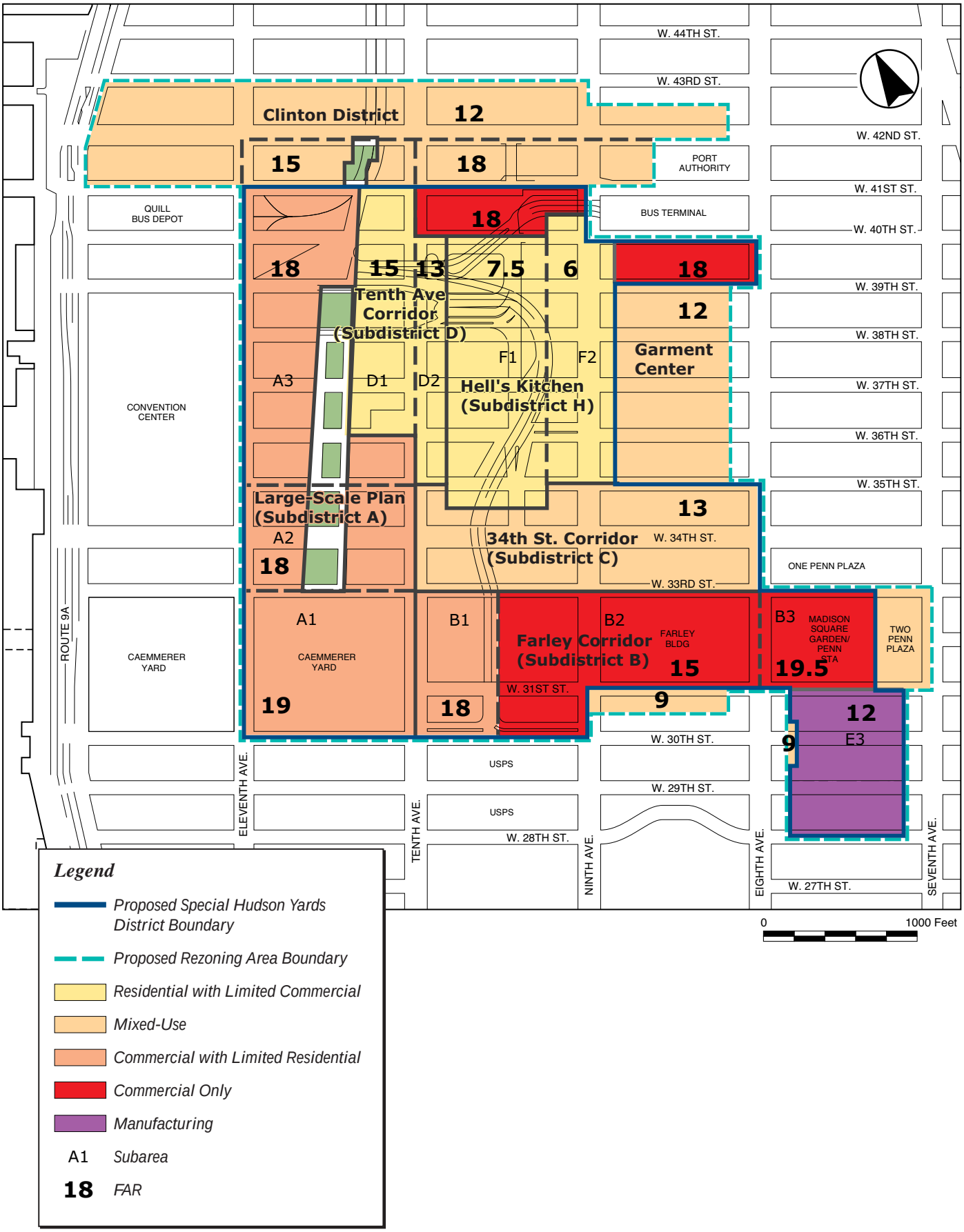
Source: New York City Department of City Planning



Proposed Zoning Districts

Figure 2-4

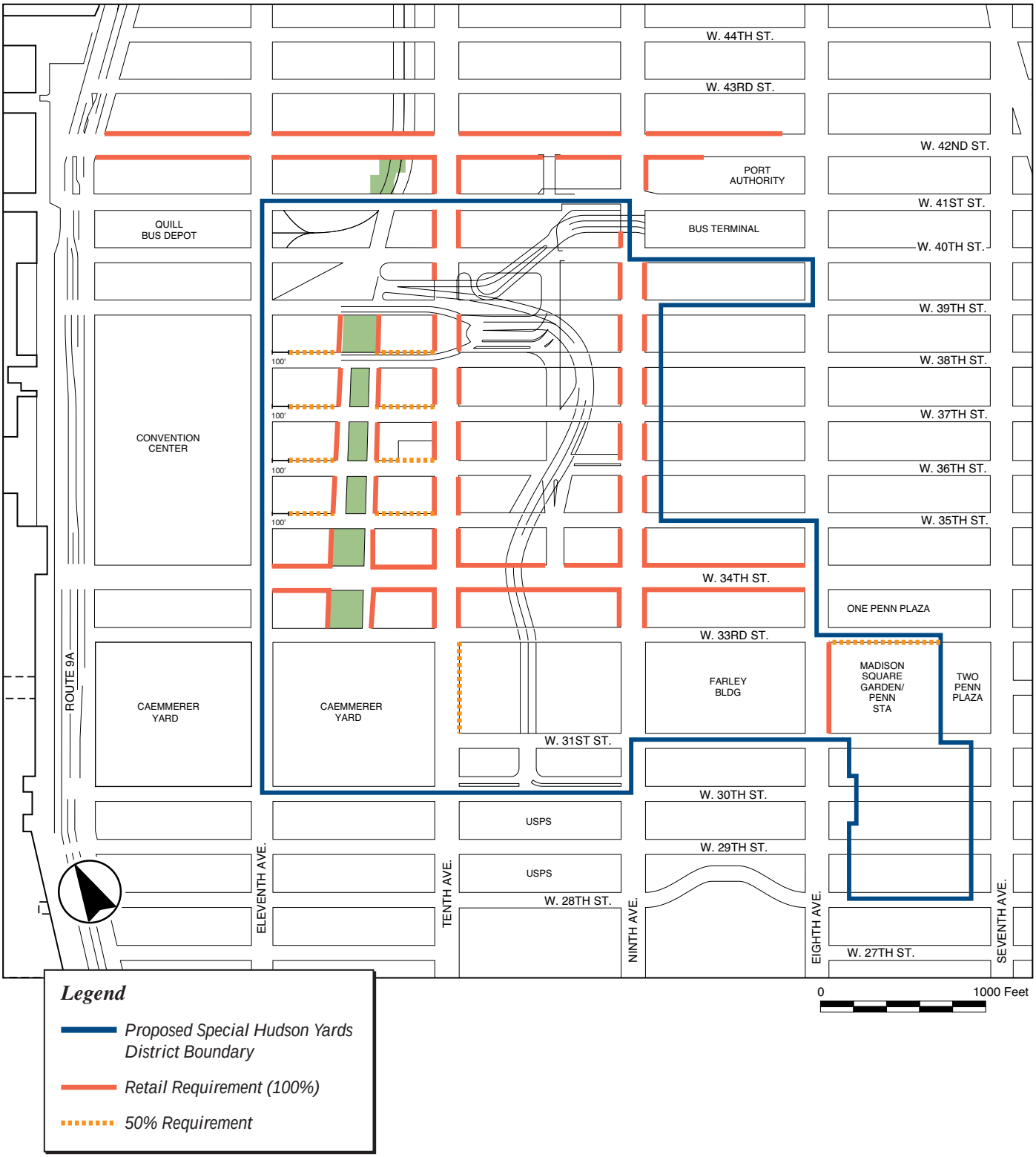
Source: New York City Department of City Planning



Proposed Land Use and Density by Subdistrict

Figure 2-5

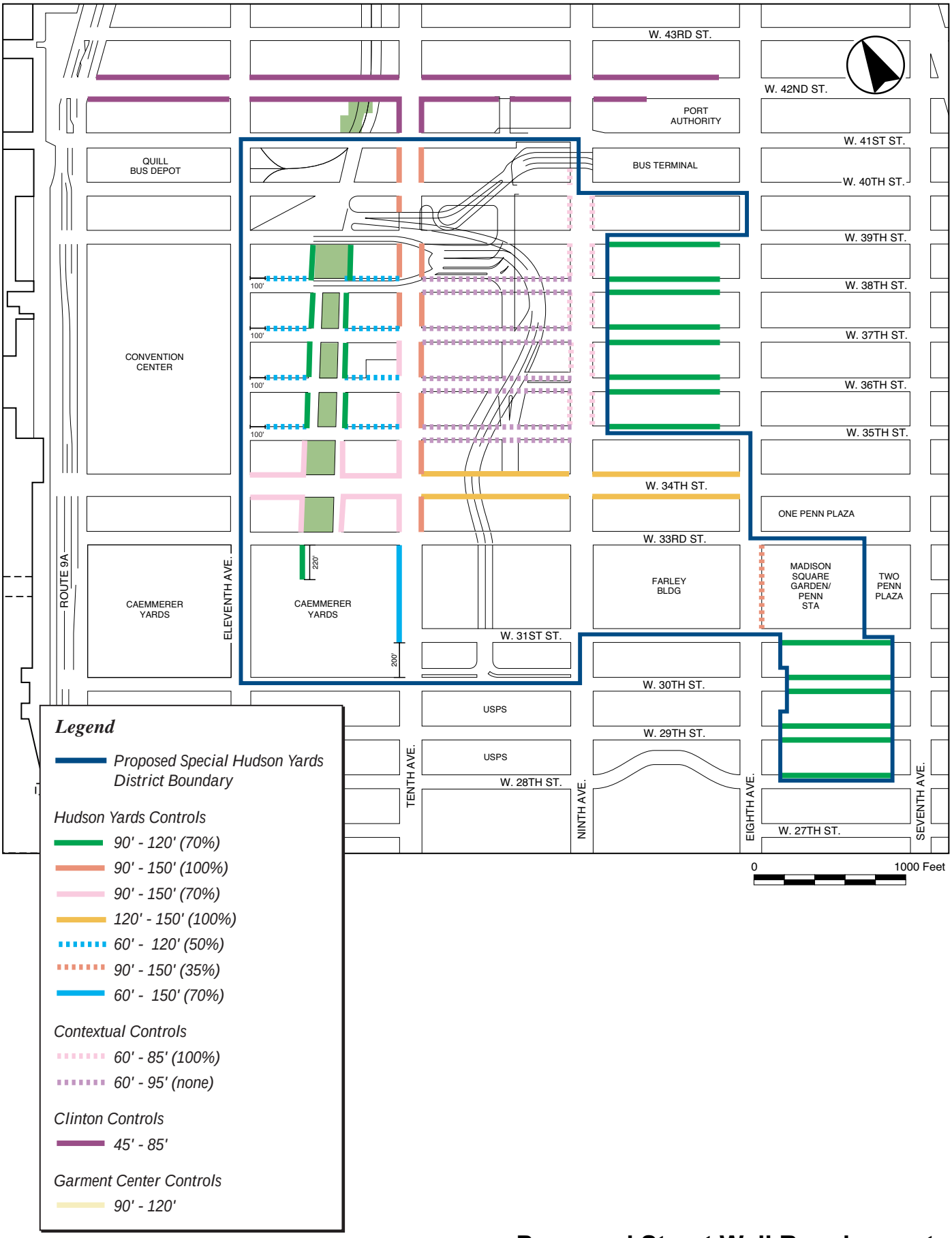
Source: New York City Department of City Planning



Proposed Requirements Retail Frontage

Figure 2-6

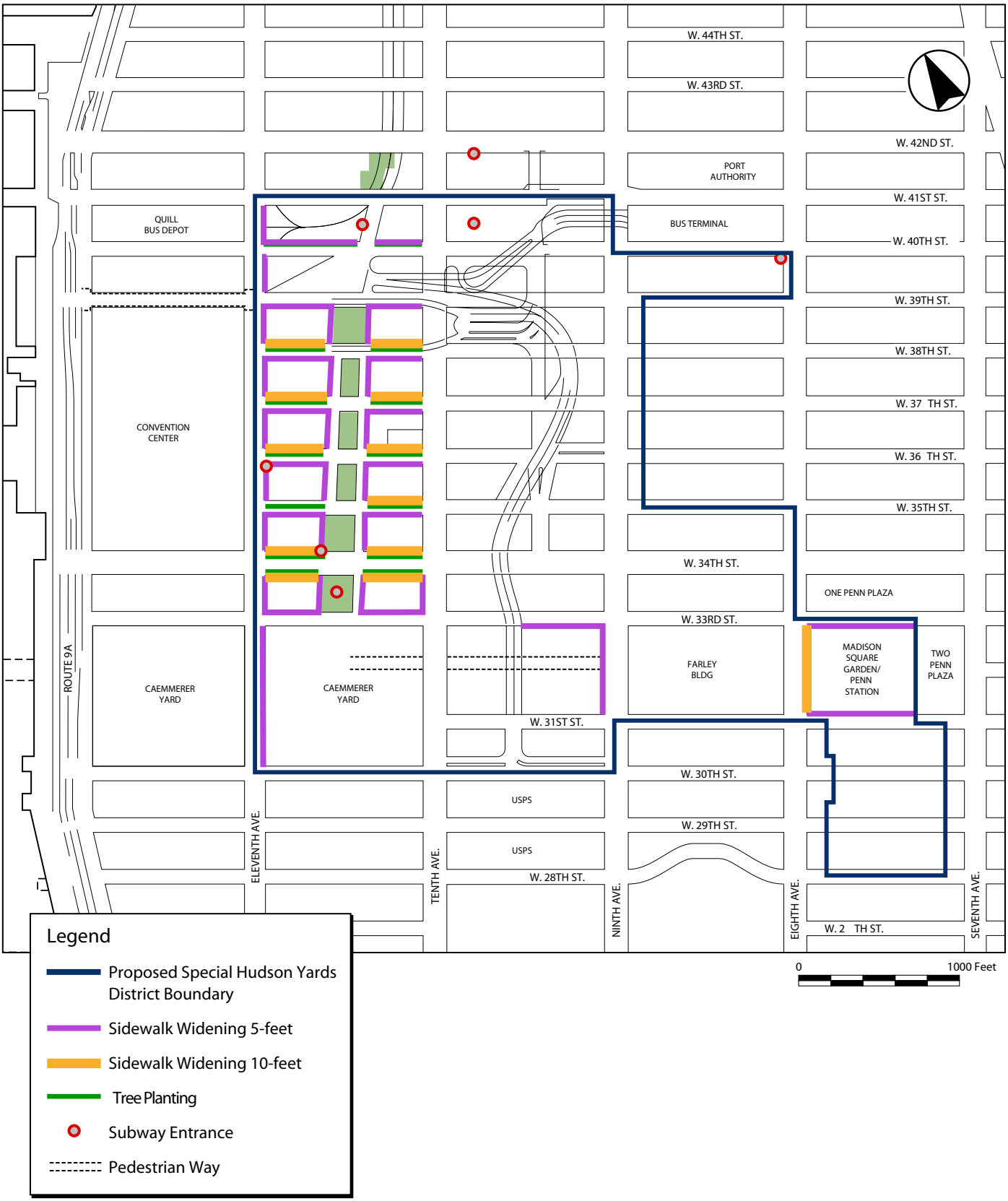
Source: New York City Department of City Planning



Proposed Street Wall Requirements

Figure 2-7

Source: New York City Department of City Planning

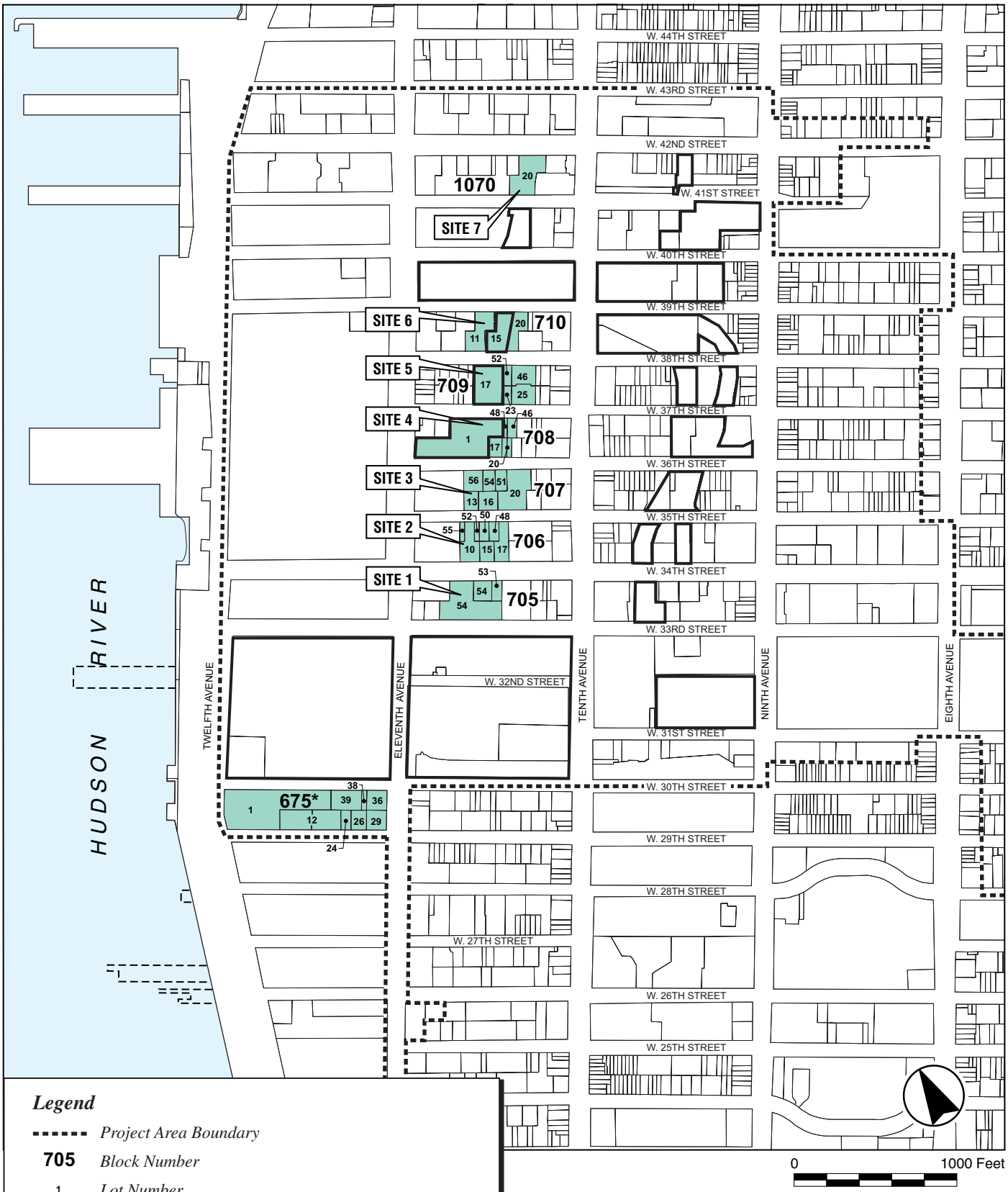


Proposed Mandatory Site Improvements

Figure 2-8

Proposed Mapped Parks

Figure 2-9



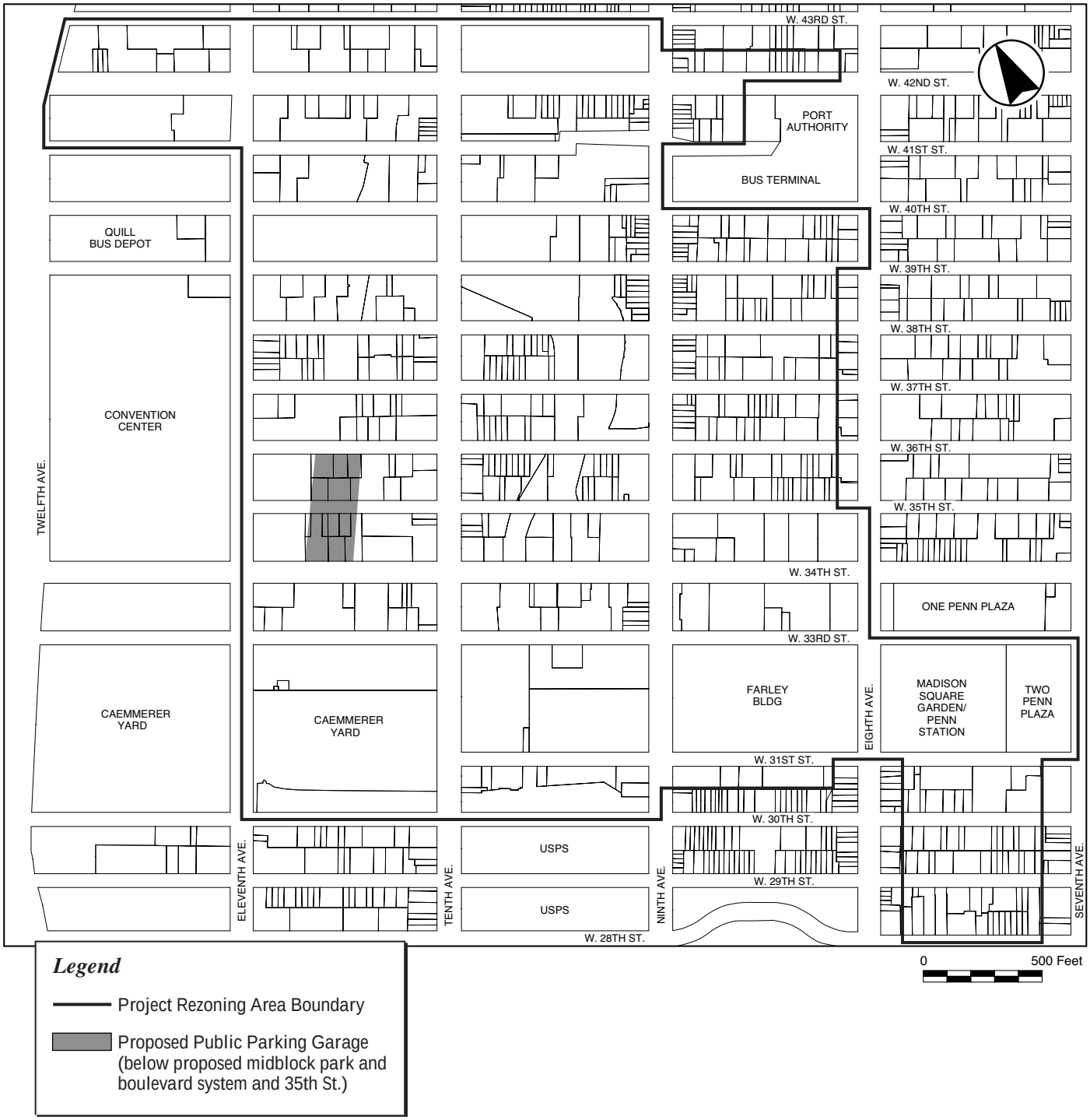
Legend

- *Project Area Boundary*
- **705** *Block Number*
- 1 *Lot Number*
- *Open Rail Yards and Approaches to Lincoln Tunnel*
- *Property to be Acquired (in whole or in part)*

NOTES: See Table 2-1 and 2-2 for description of each property
**Block would accommodate open space and municipal facilities*

Property Acquisition for Open Space

Figure 2-10



Proposed Below-Grade Parking Garage

Figure 2-11

2010 Projected Sites without Relocation of Madison Square Garden

Figure 2-12

Legend

- Proposed Rezoning Area Boundary
- 33 Projected Development Sites
- Existing Buildings to Remain
- Residential
- Predominately Residential with Commercial
- Commercial
- Predominately Commercial with Residential
- Hotel
- Transportation
- Open Space
- Open Space/Park with *Accommodation for* DSNY/Tow Pound Below
- Entertainment

2025 Projected Sites without Relocation of Madison Square Garden

Figure 2-13

Legend

- Proposed Rezoning Area Boundary
- Projected Development Sites
- Existing Buildings to Remain
- Residential
- Predominately Residential with Commercial
- Commercial
- Predominately Commercial with Residential
- Hotel
- Transportation
- Open Space
- Open Space/Park with *Accommodation for* DSNY/Tow Pound Below
- Entertainment

2010 Projected Sites
with Relocation of Madison Square Garden
Figure 2-14

Legend

- Proposed Rezoning Area Boundary
- Projected Development Sites
- Existing Buildings to Remain
- Residential
- Predominately Residential with Commercial
- Commercial
- Predominately Commercial with Residential
- Hotel
- Transportation
- Open Space
- Open Space/Park with *Accommodation for* DSNY/Tow Pound Below
- Entertainment

2025 Projected Sites with Relocation of Madison Square Garden

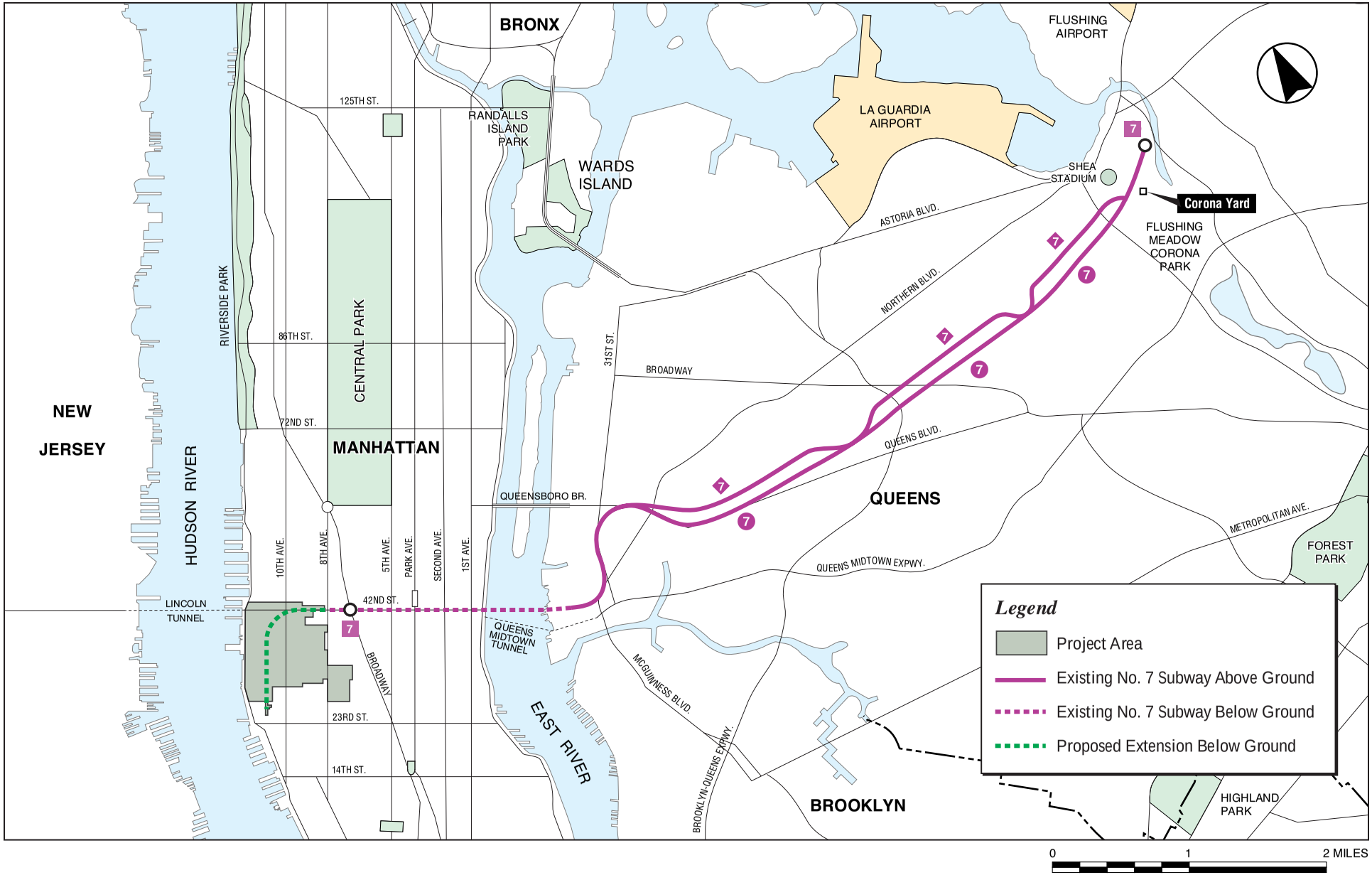
Figure 2-15

2025 Potential Sites Without Relocation of Madison Square Garden

Figure 2-16

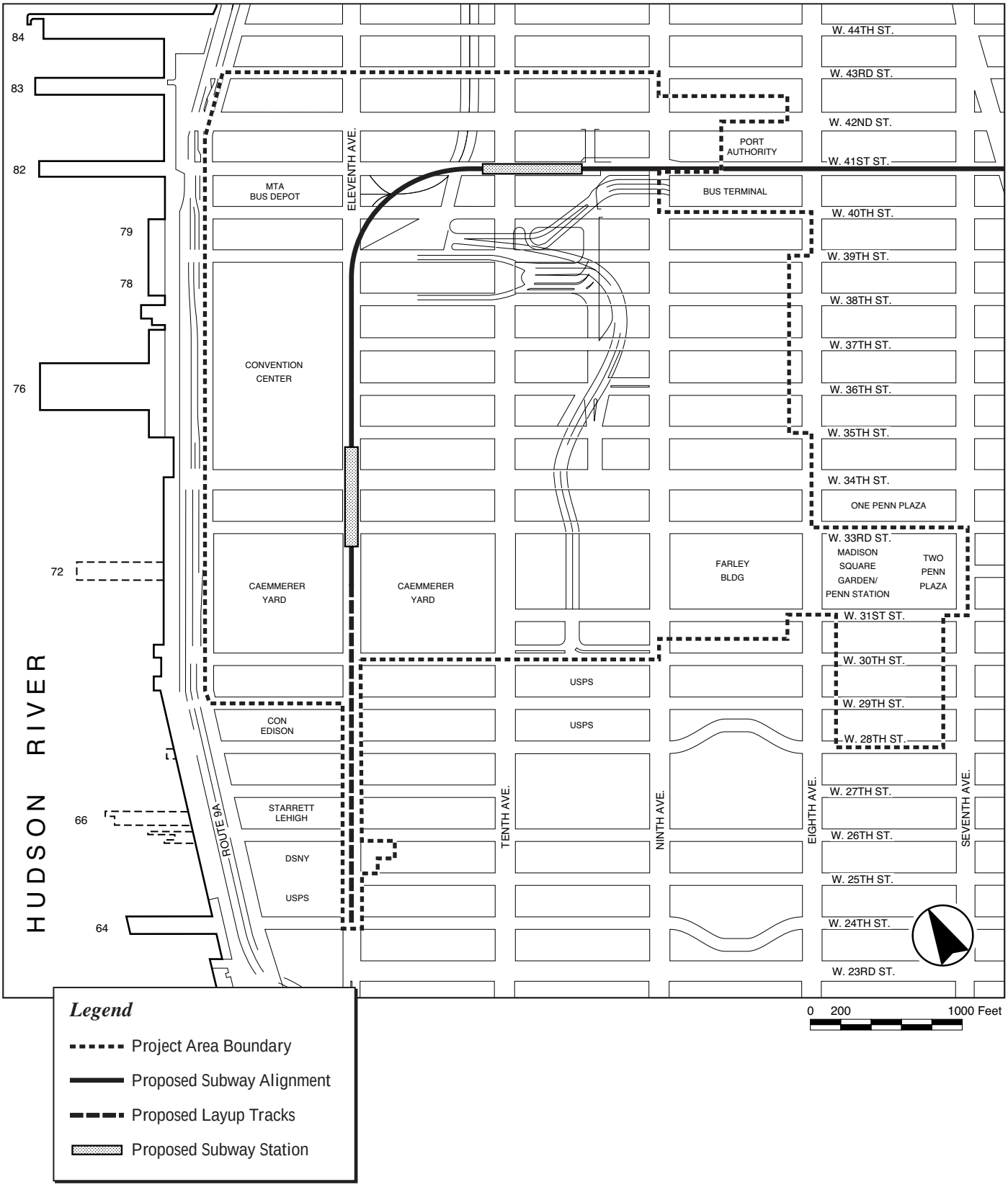
2025 Potential Sites
With Relocation of Madison Square Garden

Figure 2-17



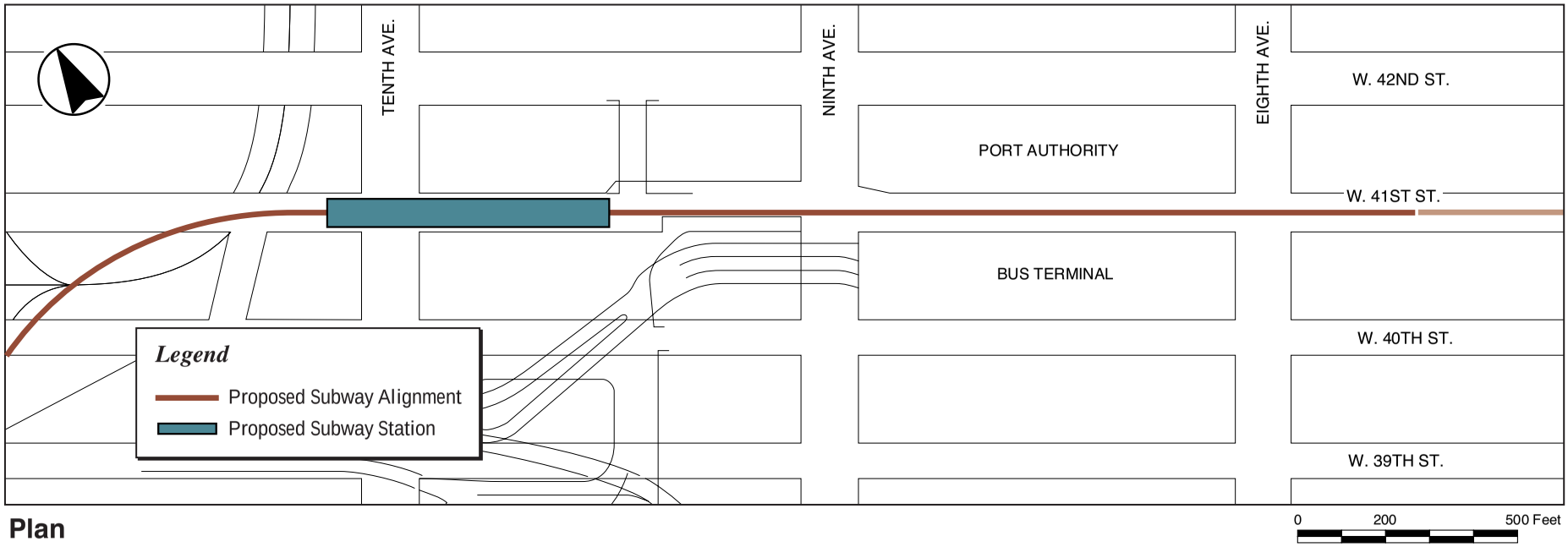
Location of Proposed Action: No 7 Subway Extension

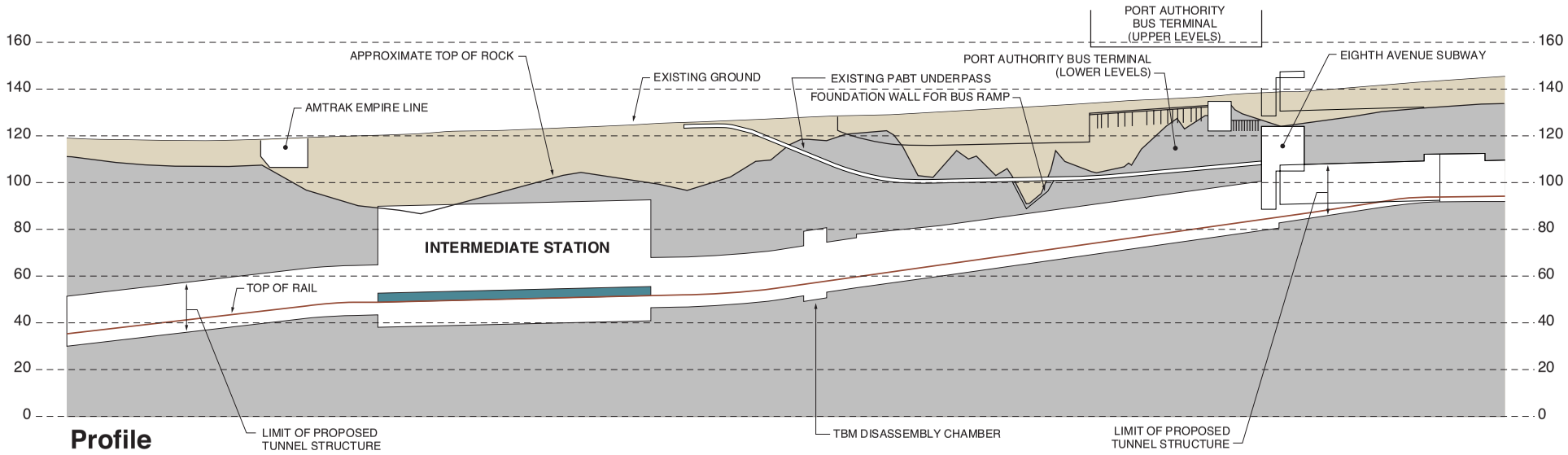
Figure 2-18



Proposed Subway Alignment

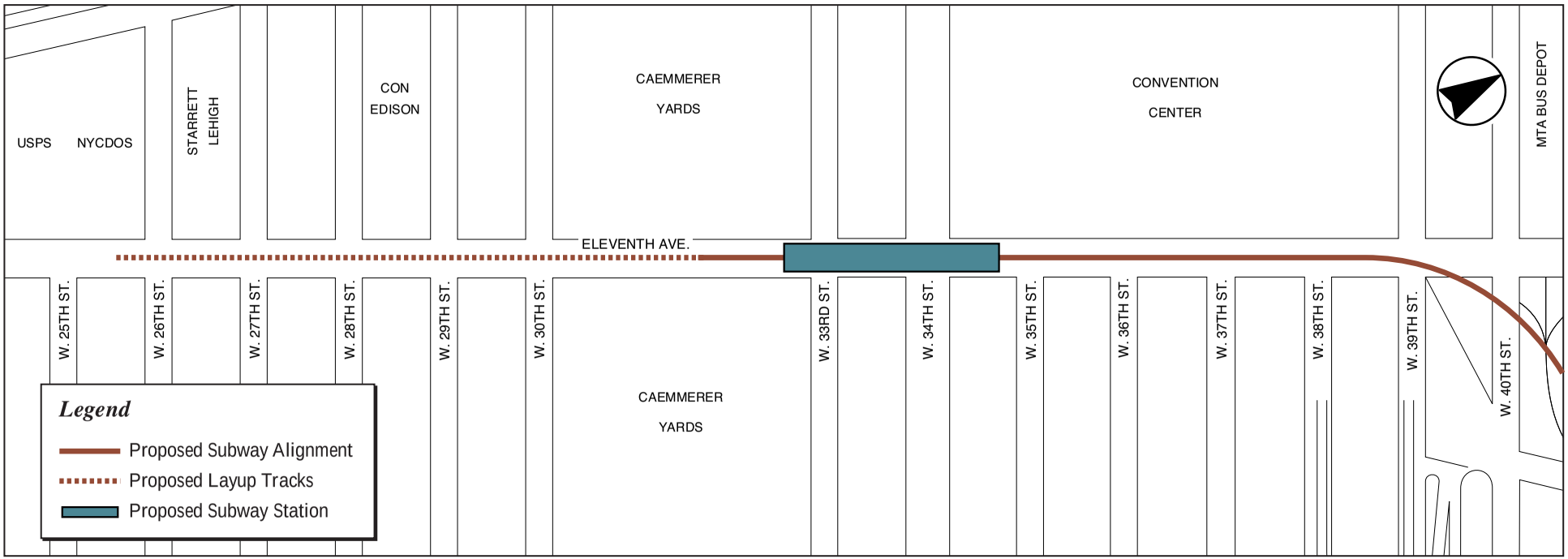
Figure 2-19



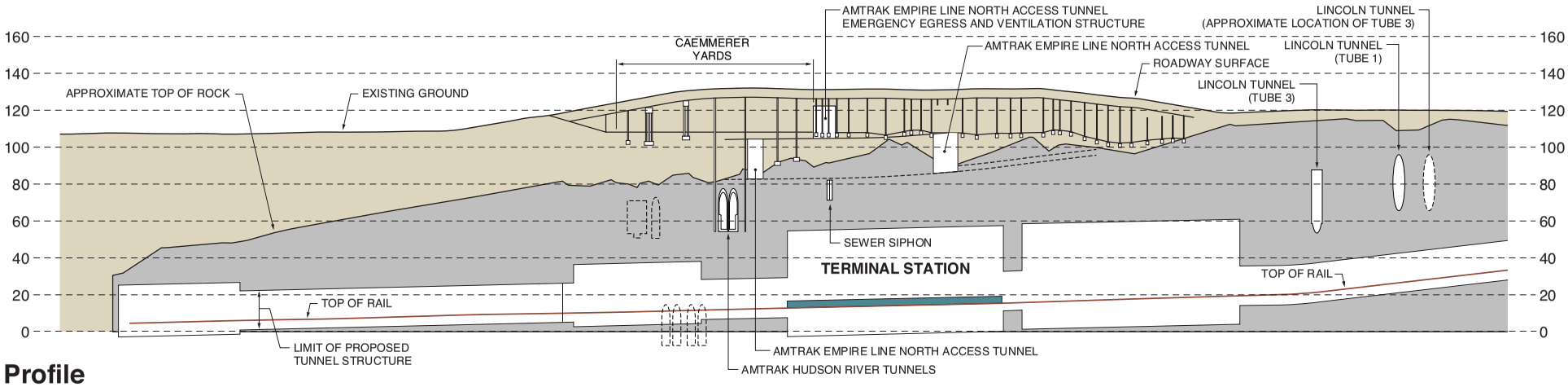


Proposed Subway Alignment and Profile: Looking North

Figure 2-20



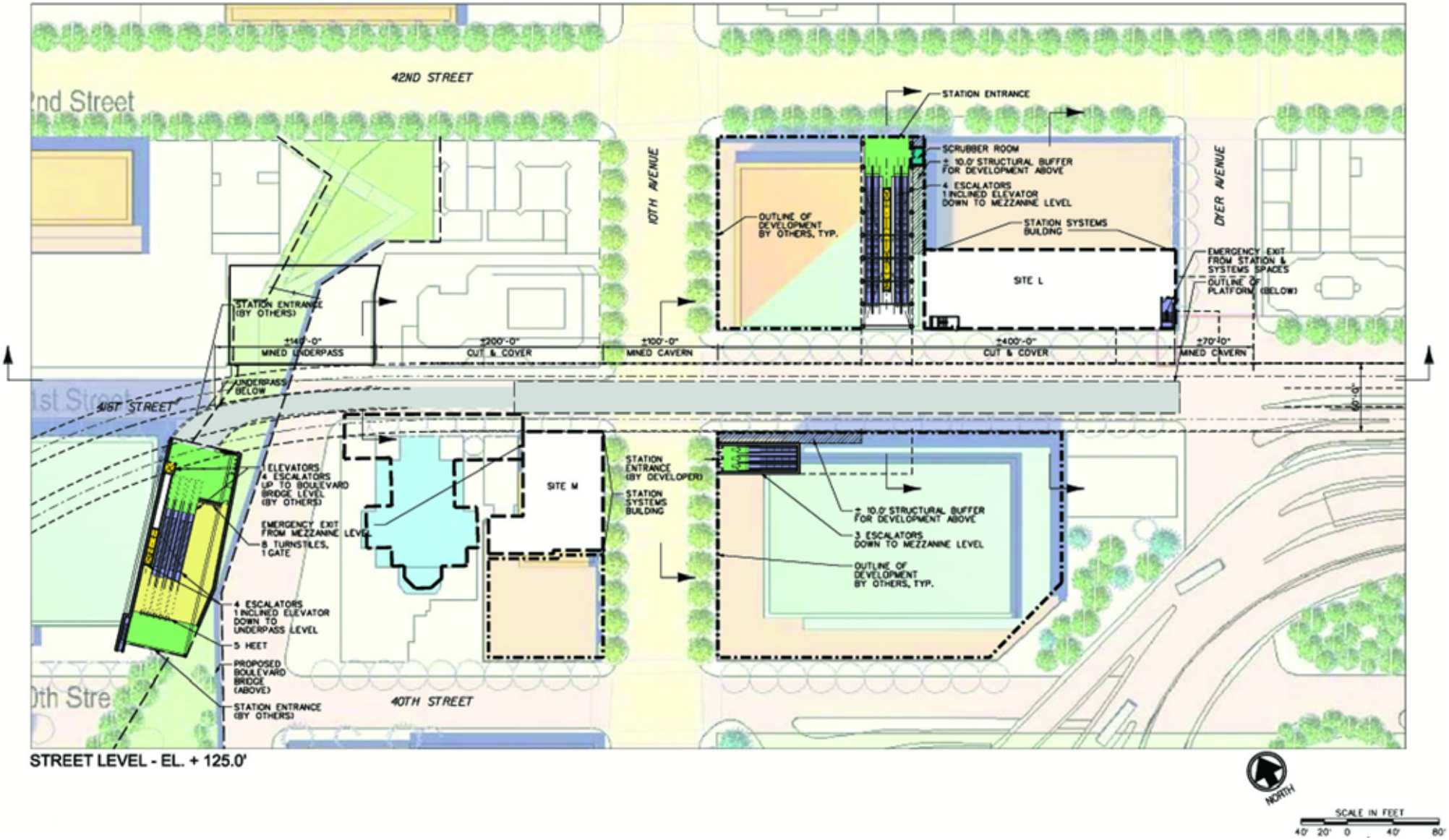
Plan



Profile

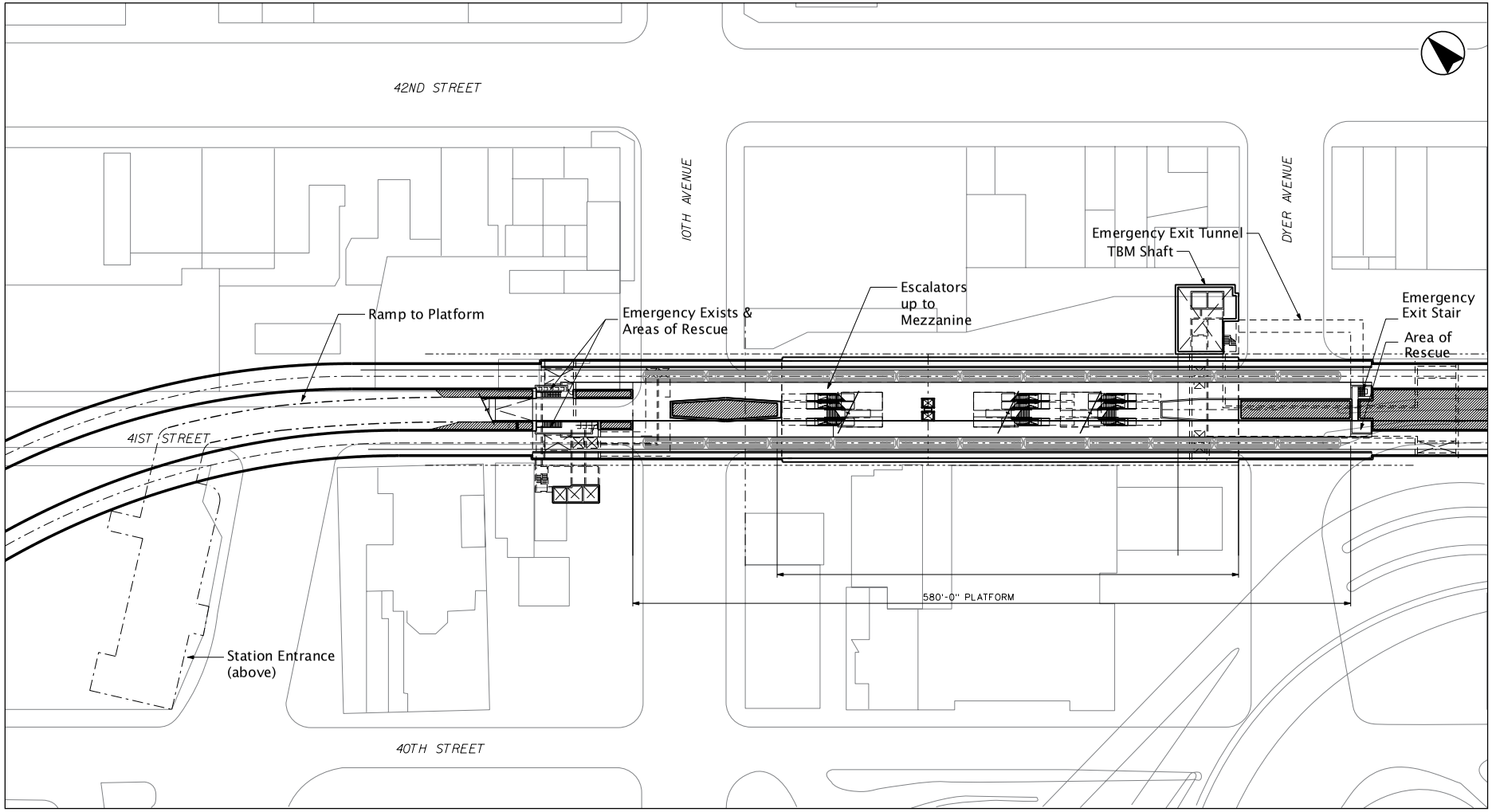
Proposed Subway Alignment and Profile: Looking West

Figure 2-21



Intermediate Subway Station at West 41st Street and Tenth Avenue

Figure 2-22



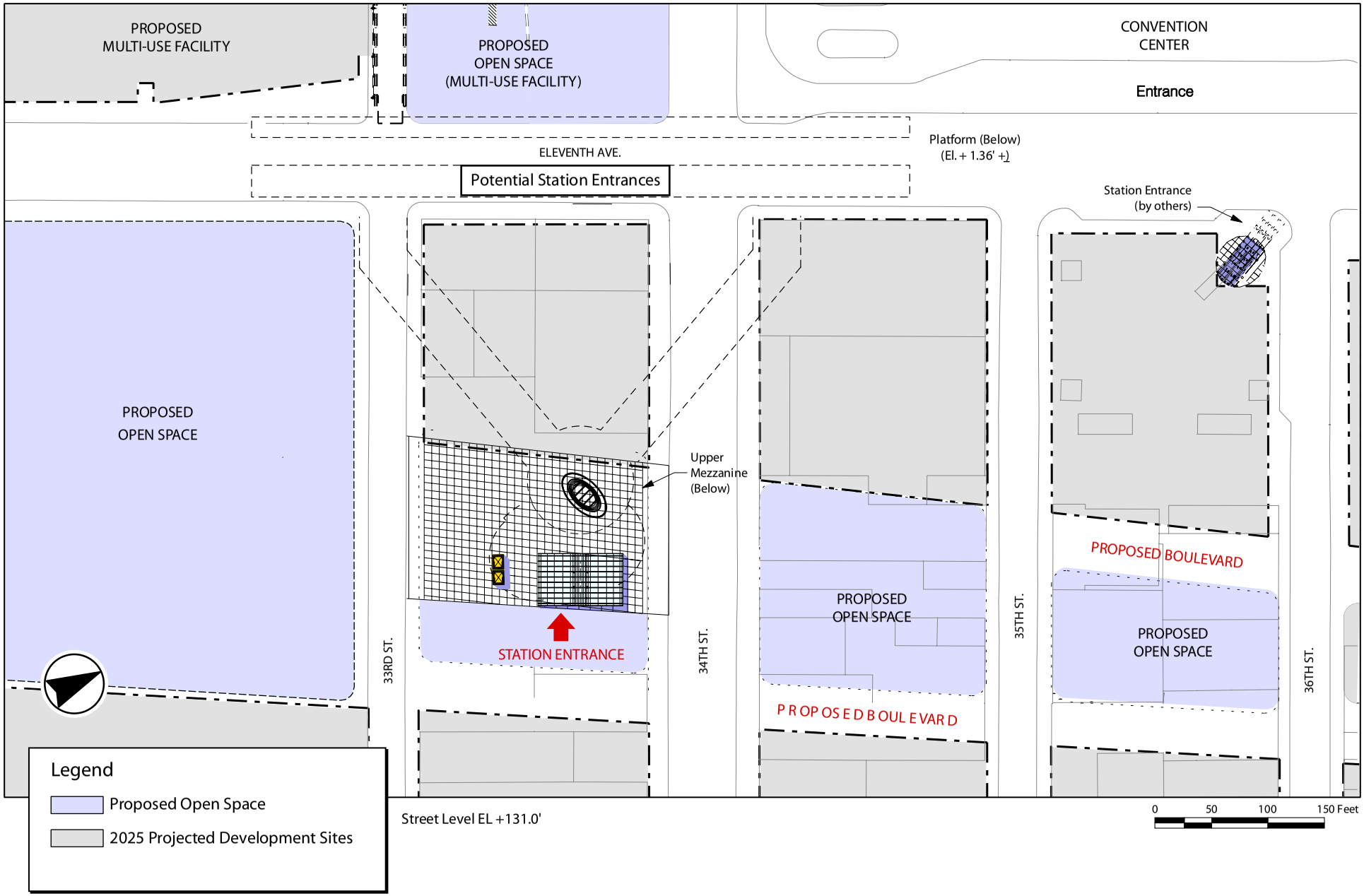
Platform Level - EL.+52.0'

Intermediate Station: Platform Level

Figure 2-23

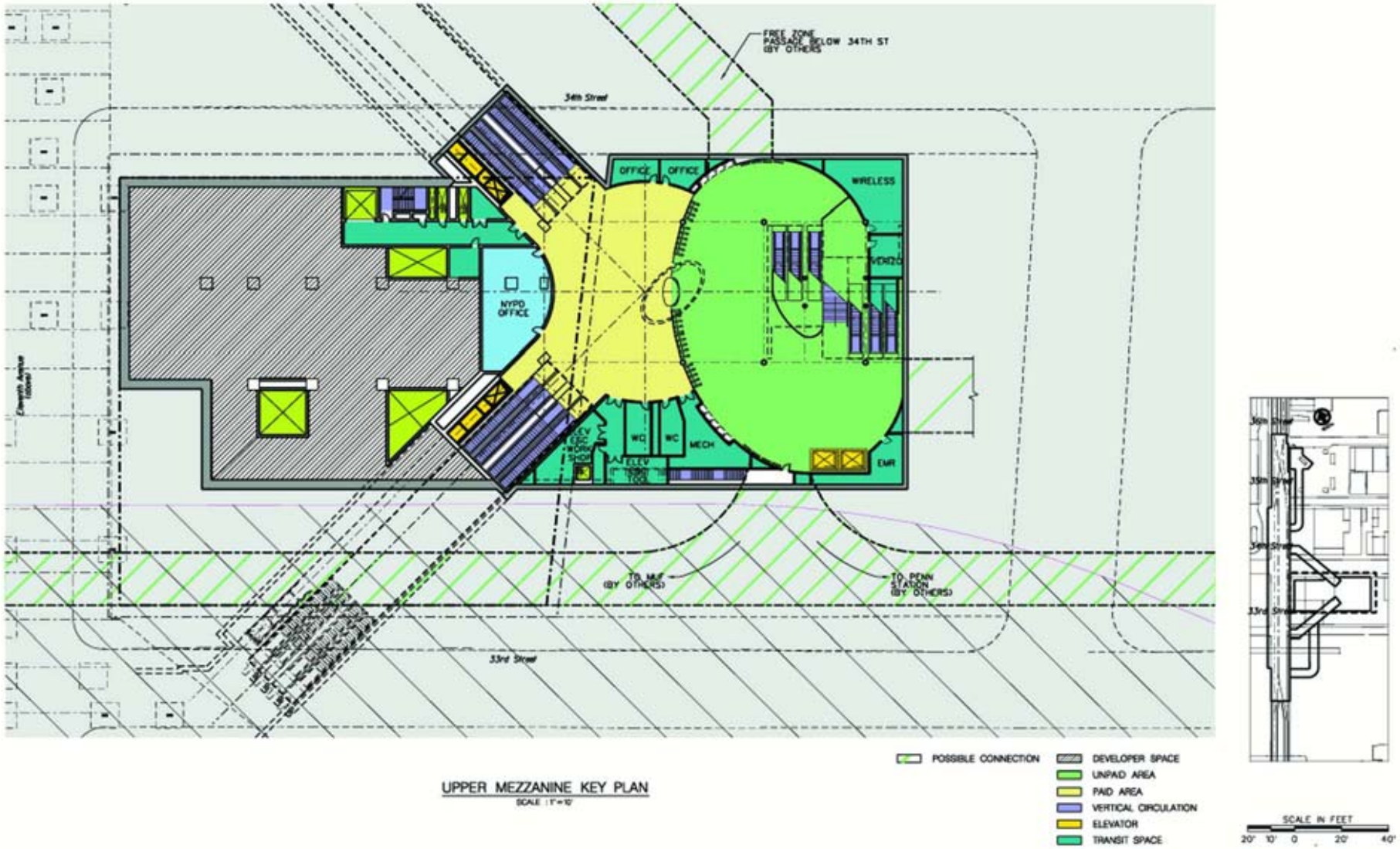
Terminal Station: Cavern Section

Figure 2-24



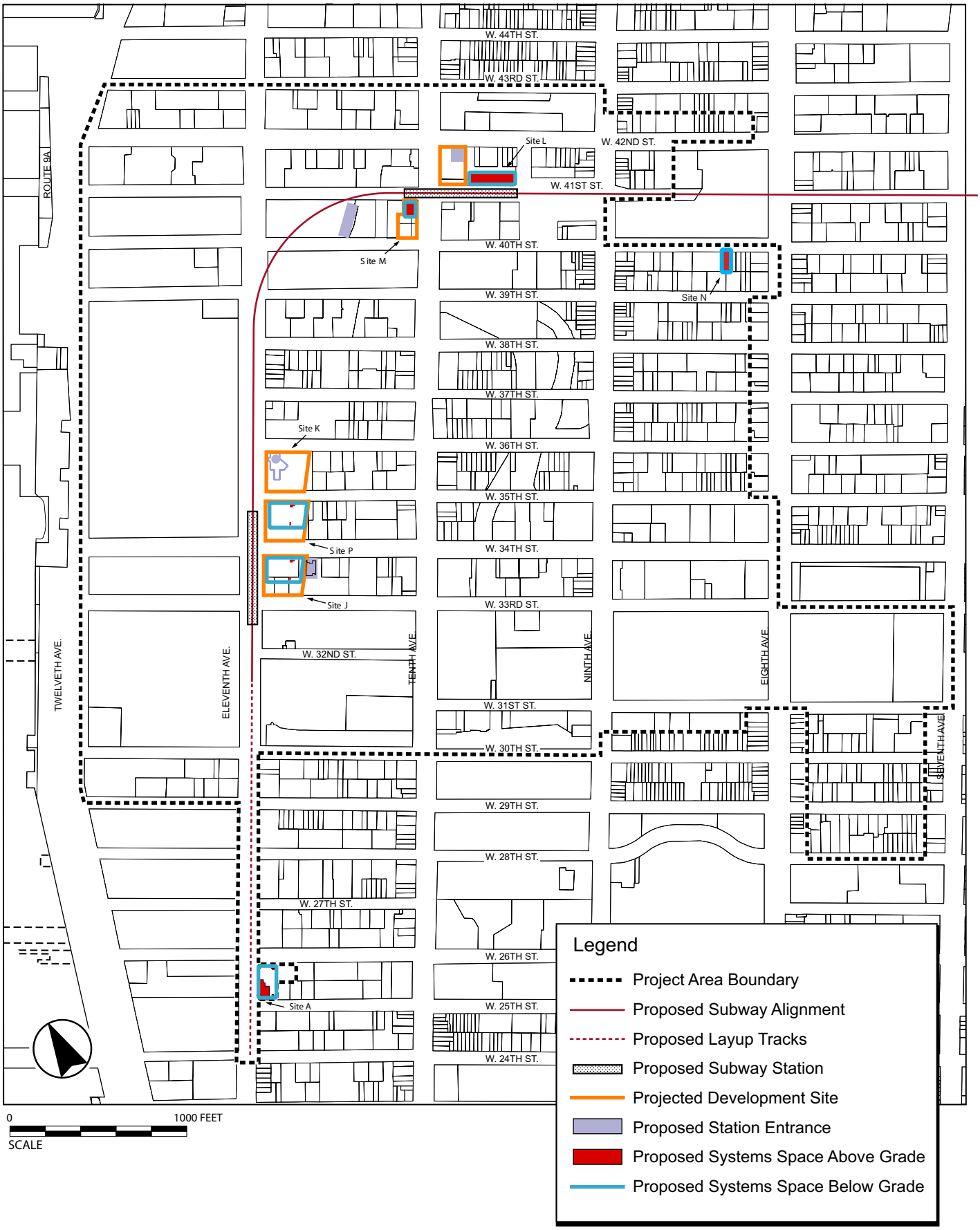
Terminal Station: Street Level Entrances

Figure 2-25



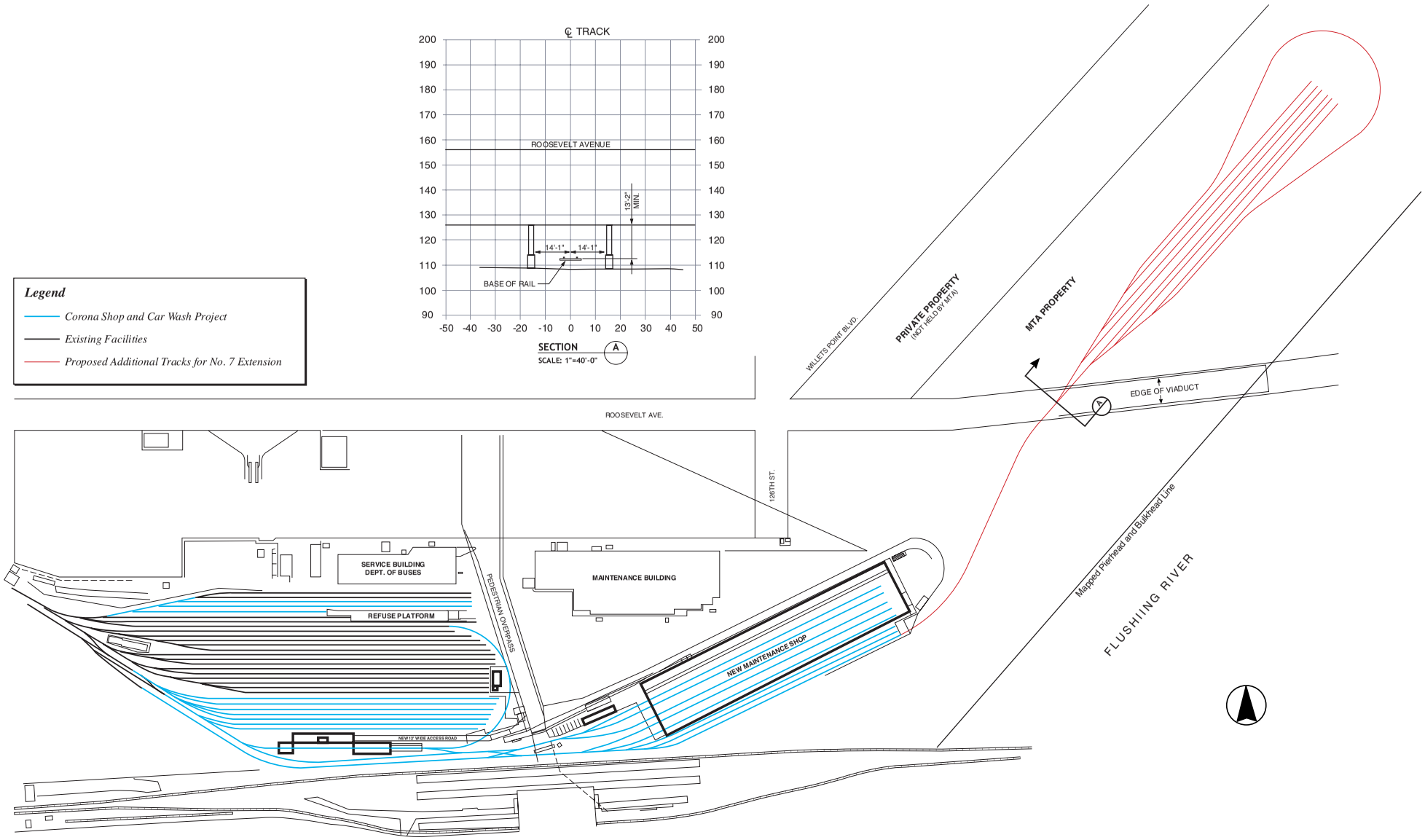
Terminal Station: Upper Mezzanine

Figure 2-26



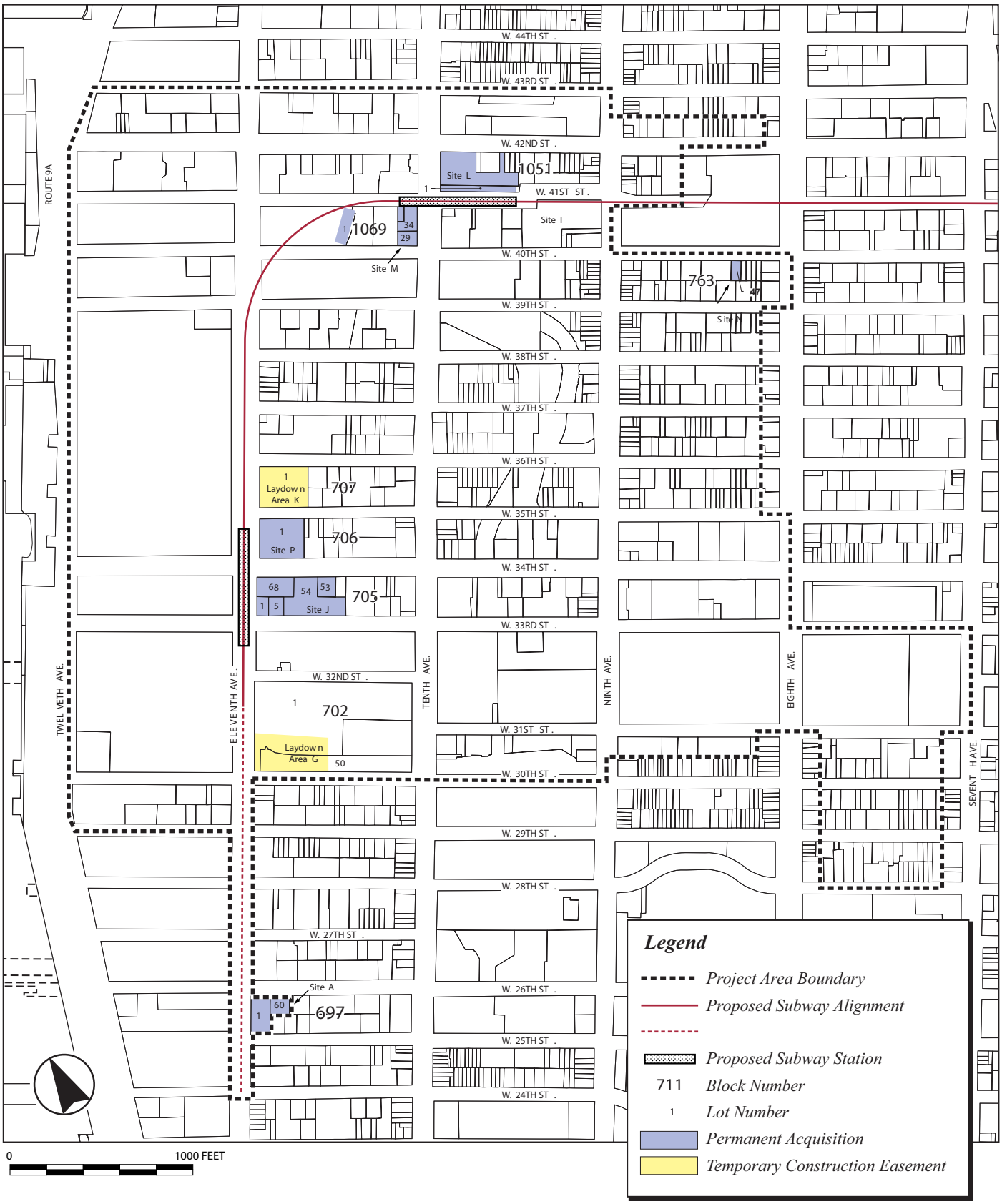
Proposed Subway Ancillary Facilities

Figure 2-27



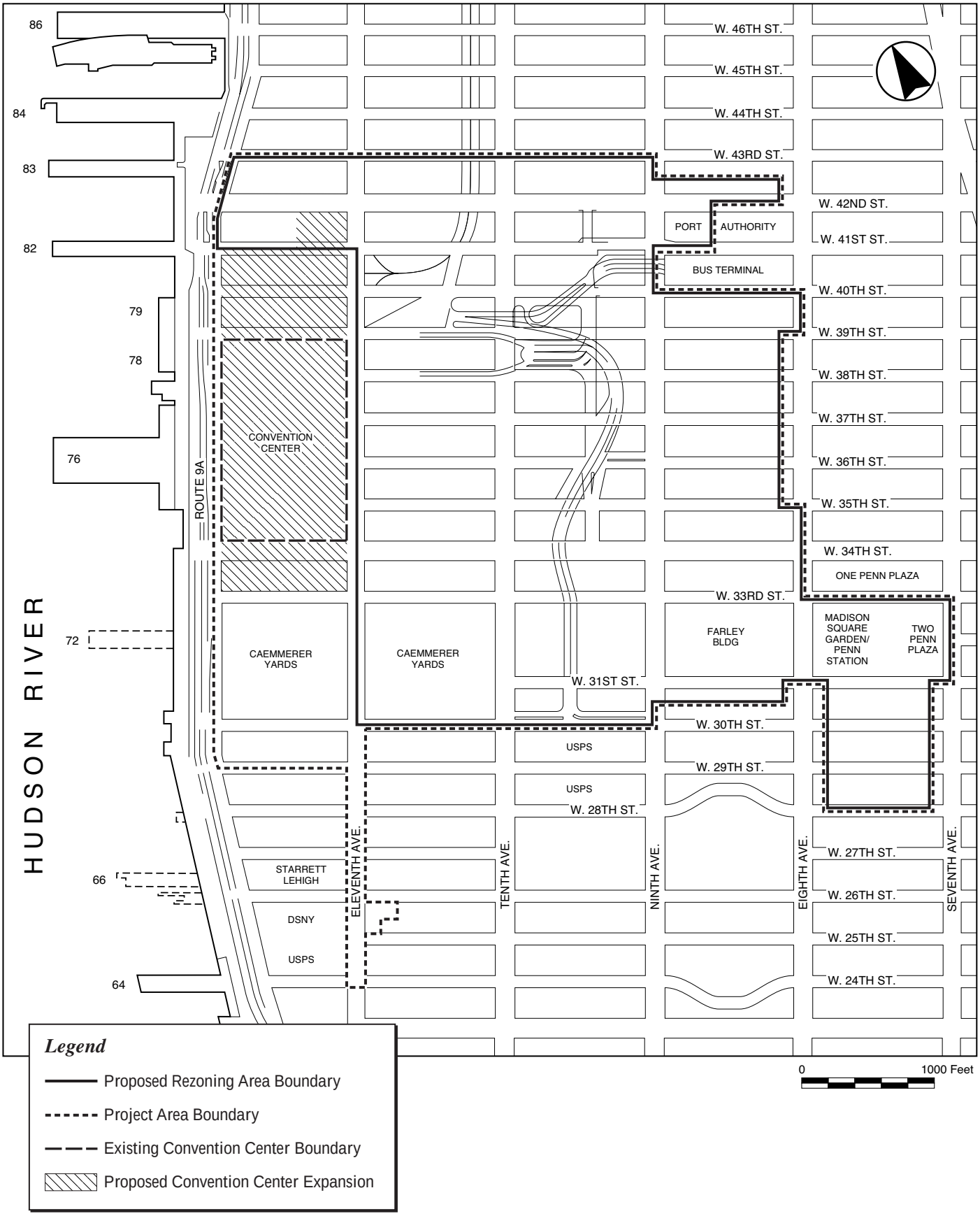
Corona Yard Improvements

Figure 2-28



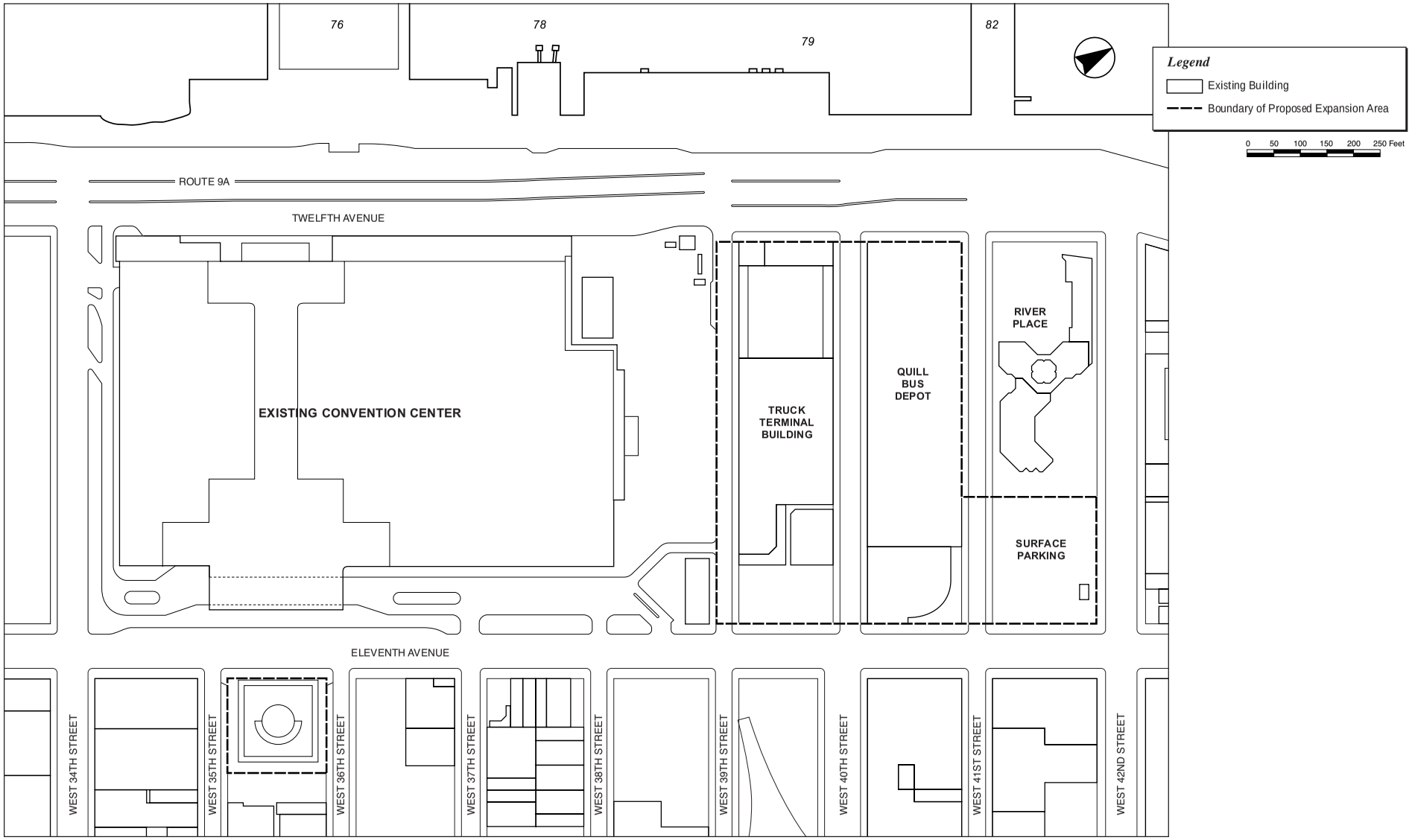
Property Acquisition for the Proposed No. 7 Subway Extension

Figure 2-29



Proposed Convention Center Expansion

Figure 2-30

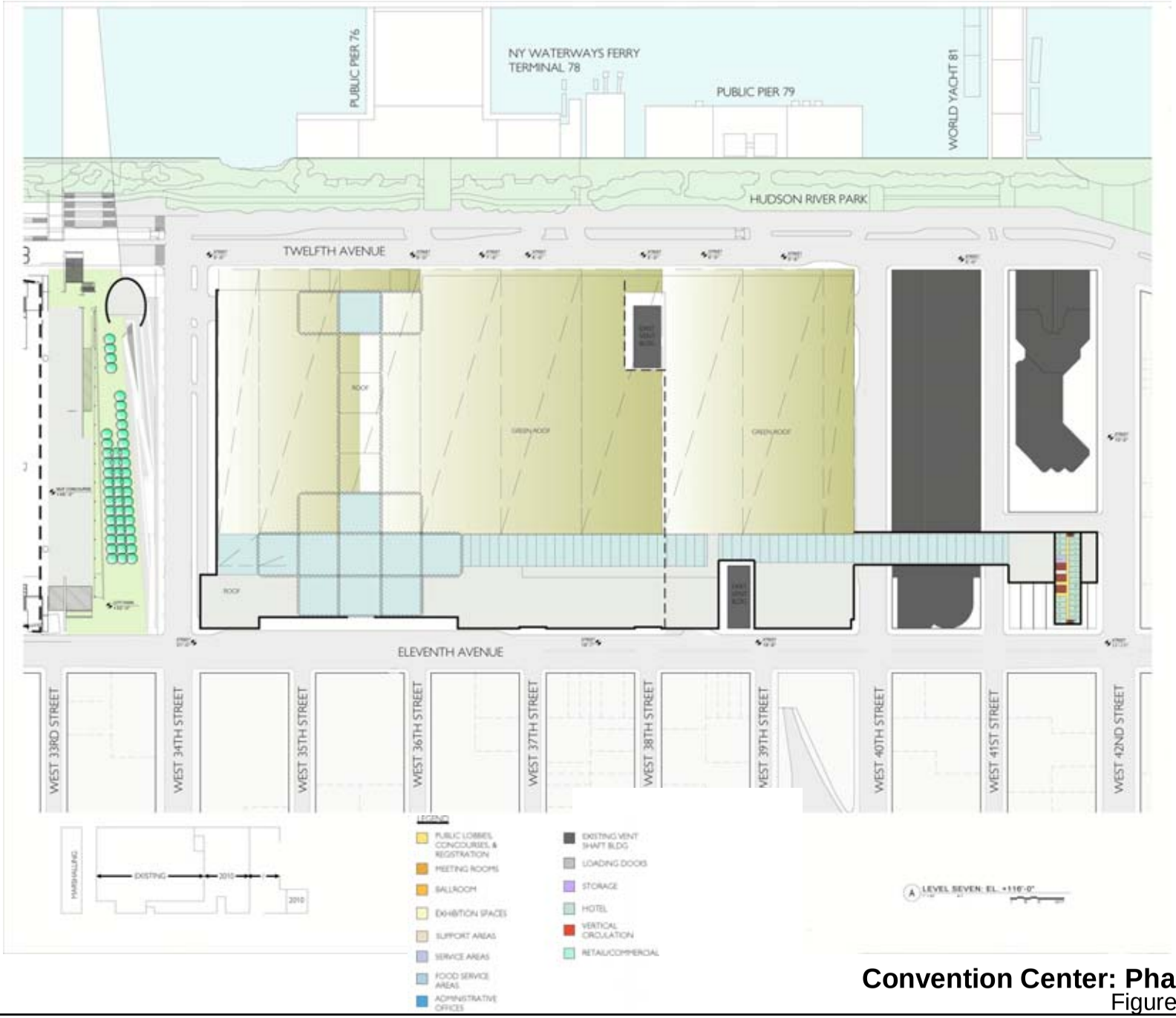


Convention Center Expansion: Existing Conditions

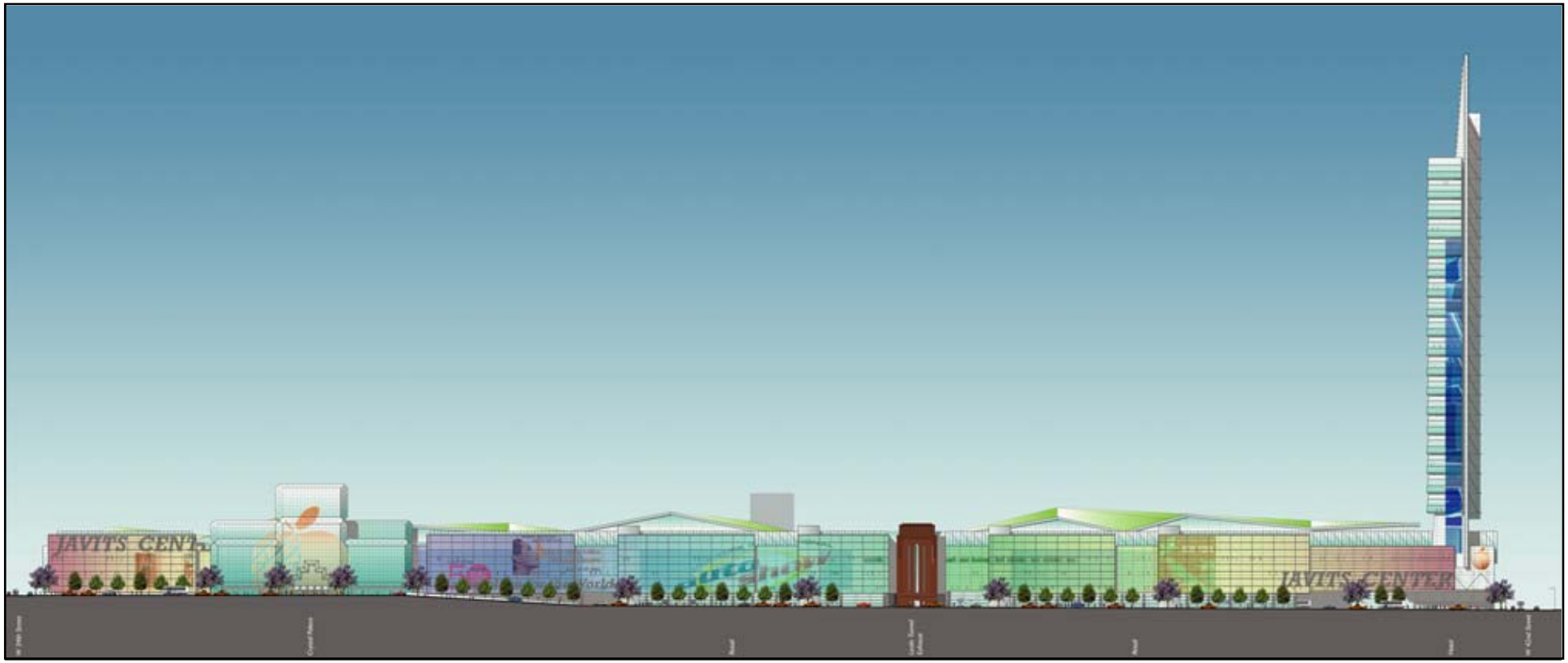
Figure 2-31

Convention Center Expansion: Phase 1

Figure 2-32

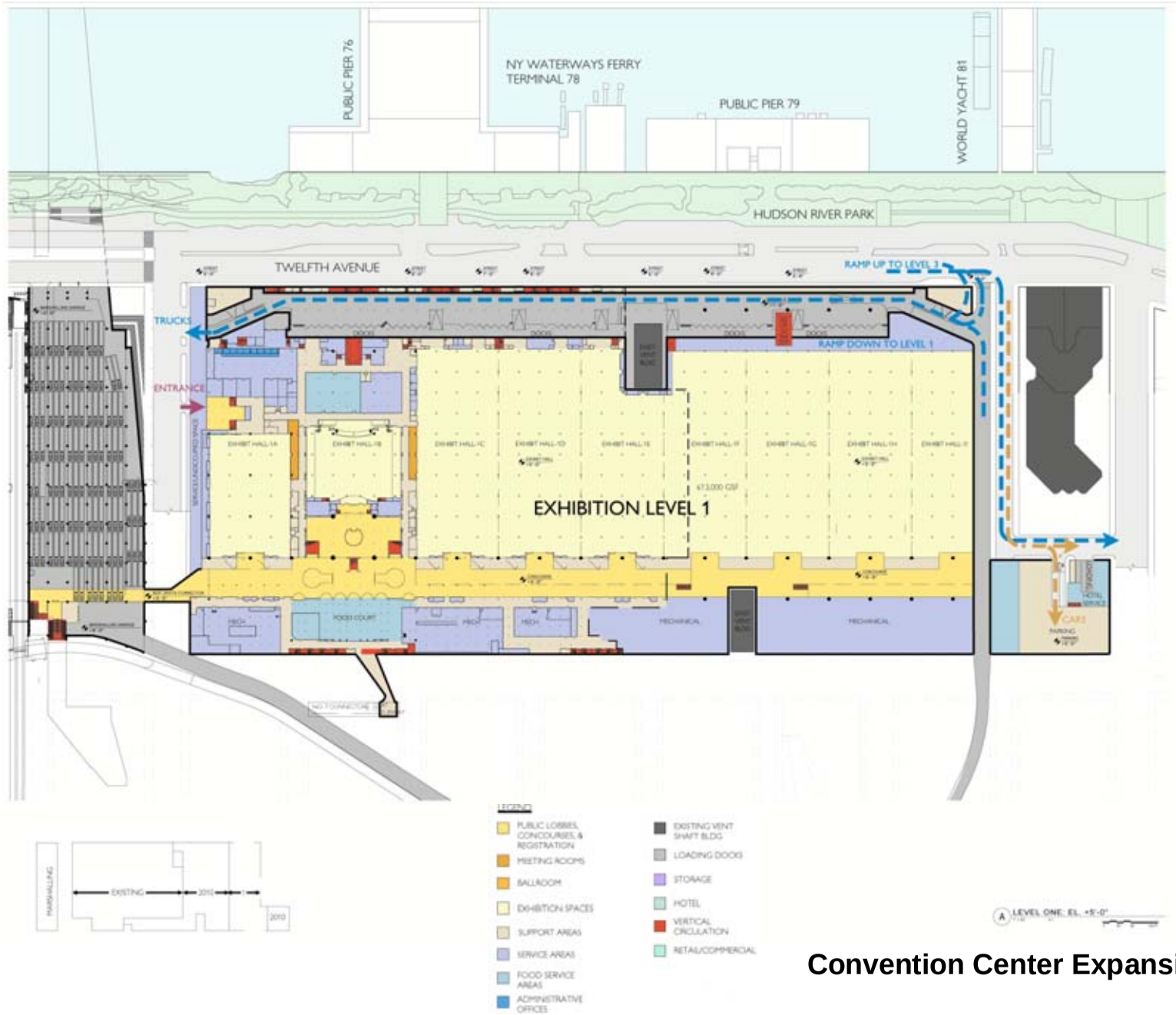


Convention Center: Phase 1
Figure 2-33



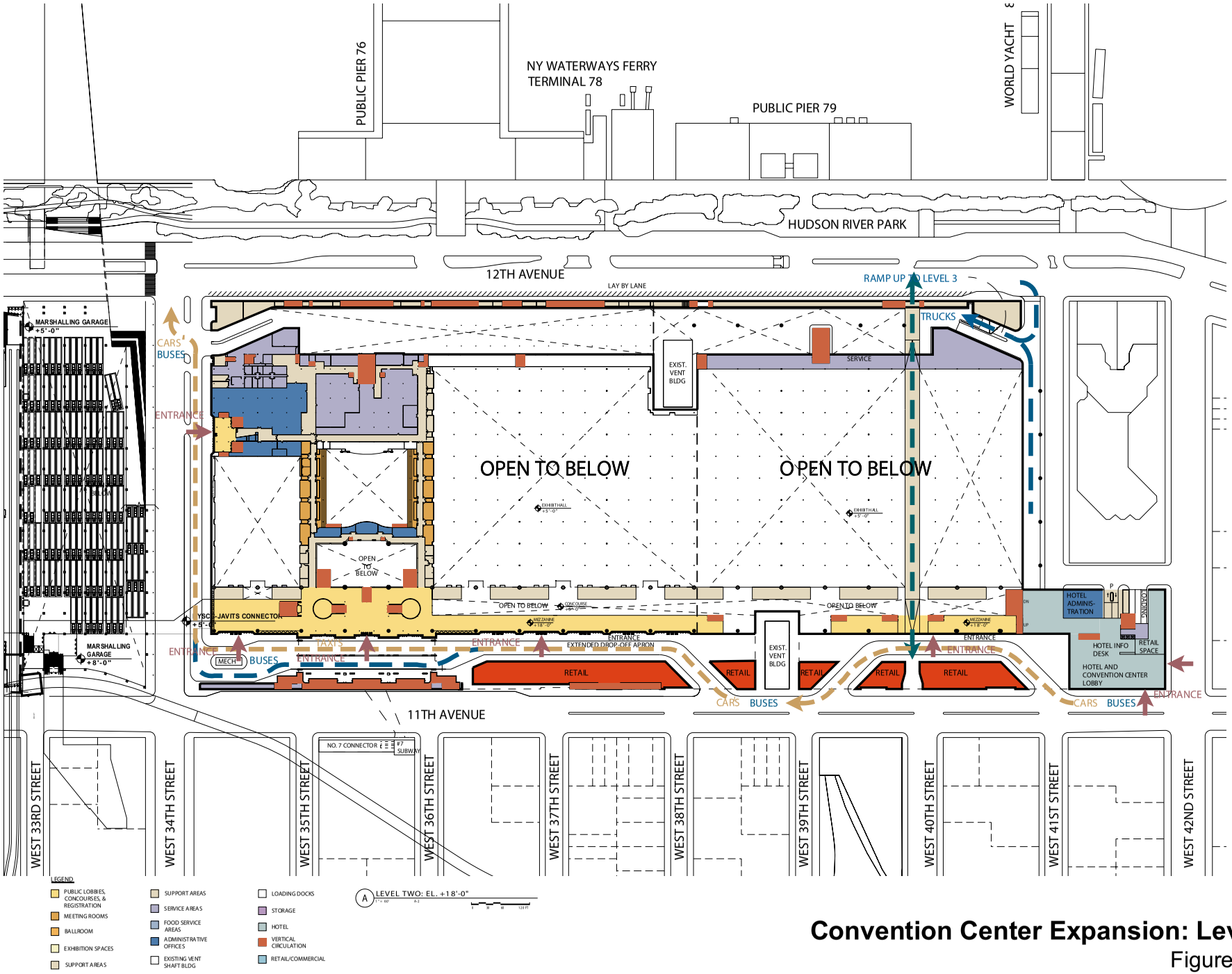
Convention Center Expansion: Phase 2

Figure 2-34



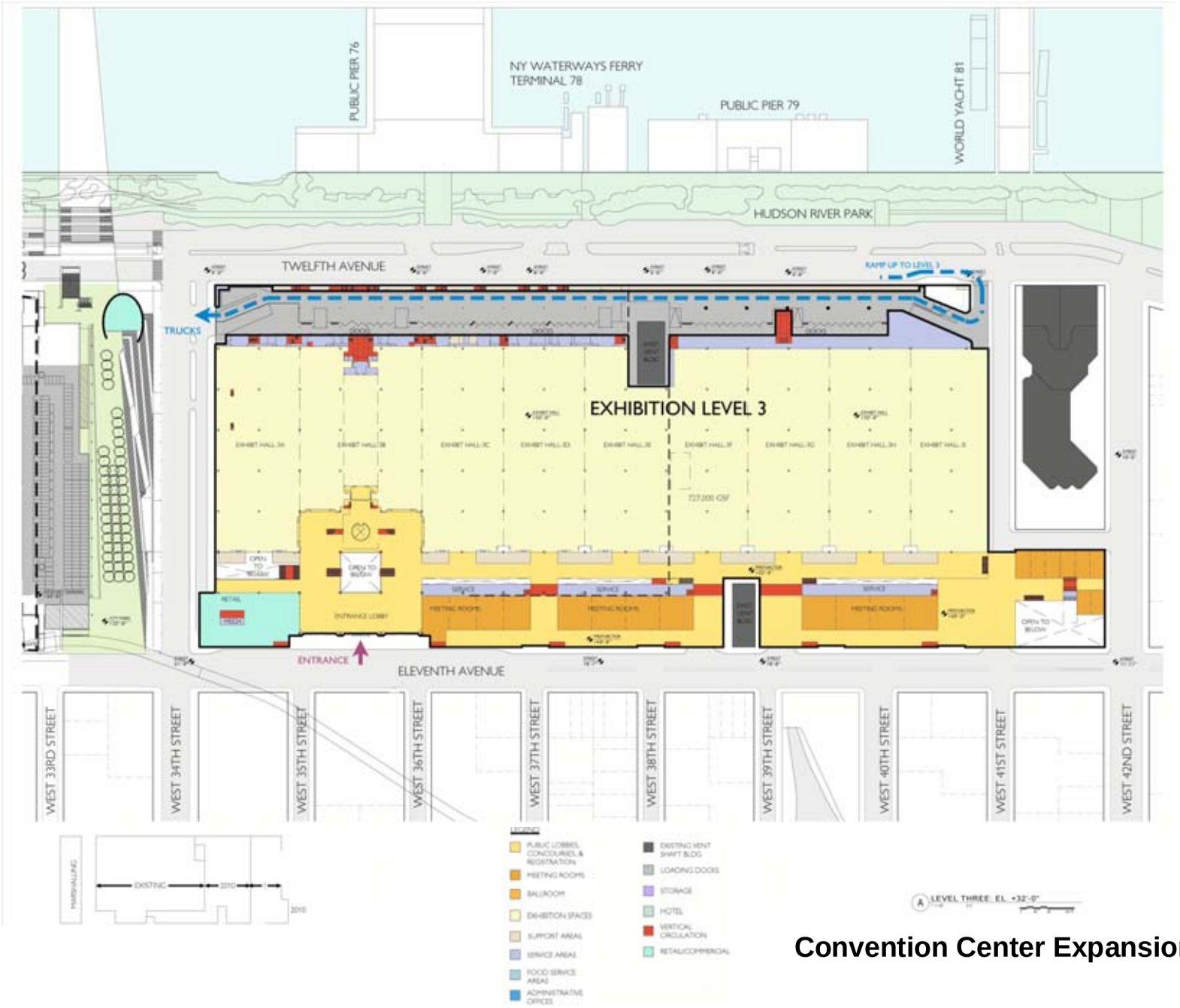
Convention Center Expansion: Level 1

Figure 2-35



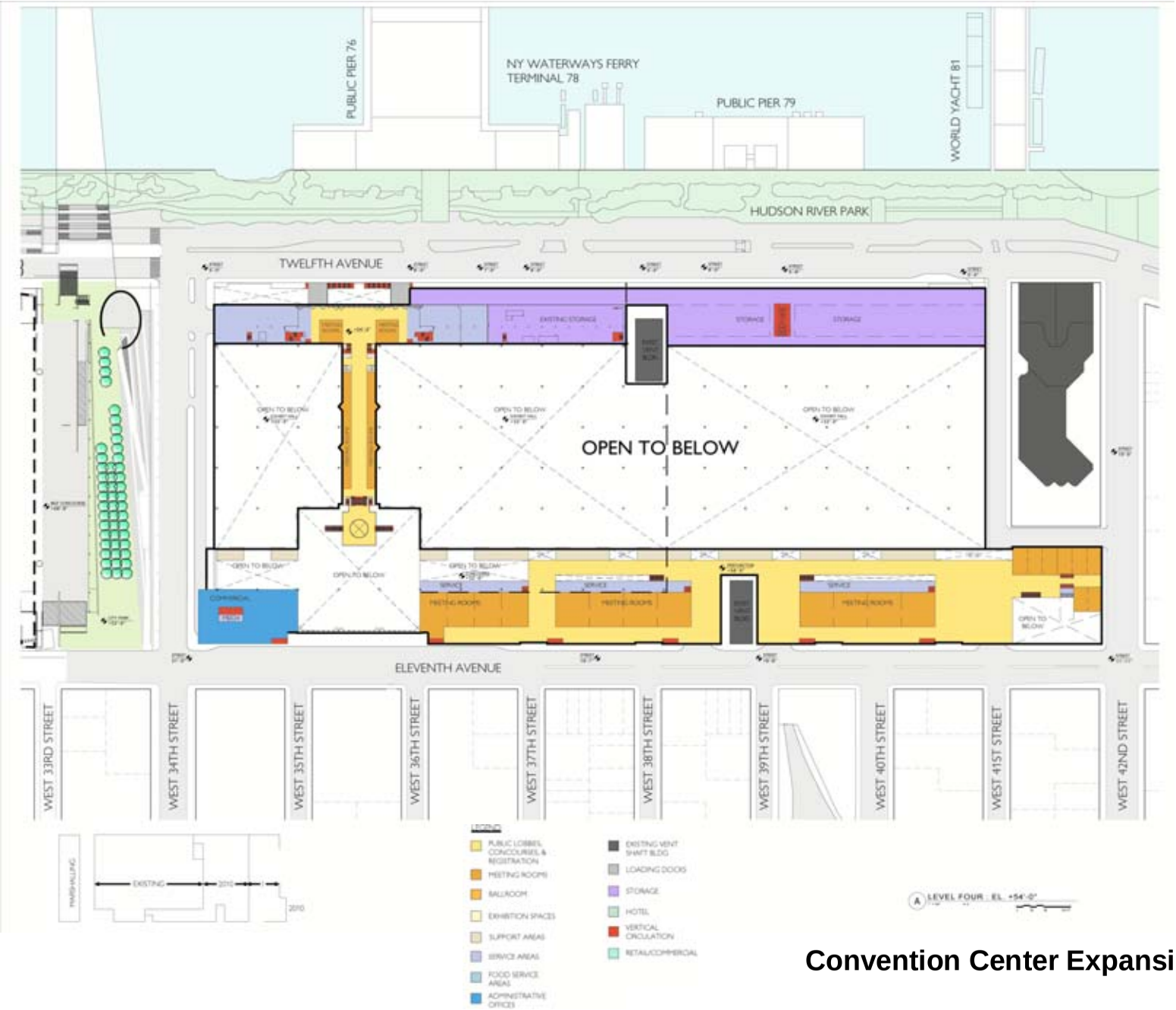
Convention Center Expansion: Level 2

Figure 2-36



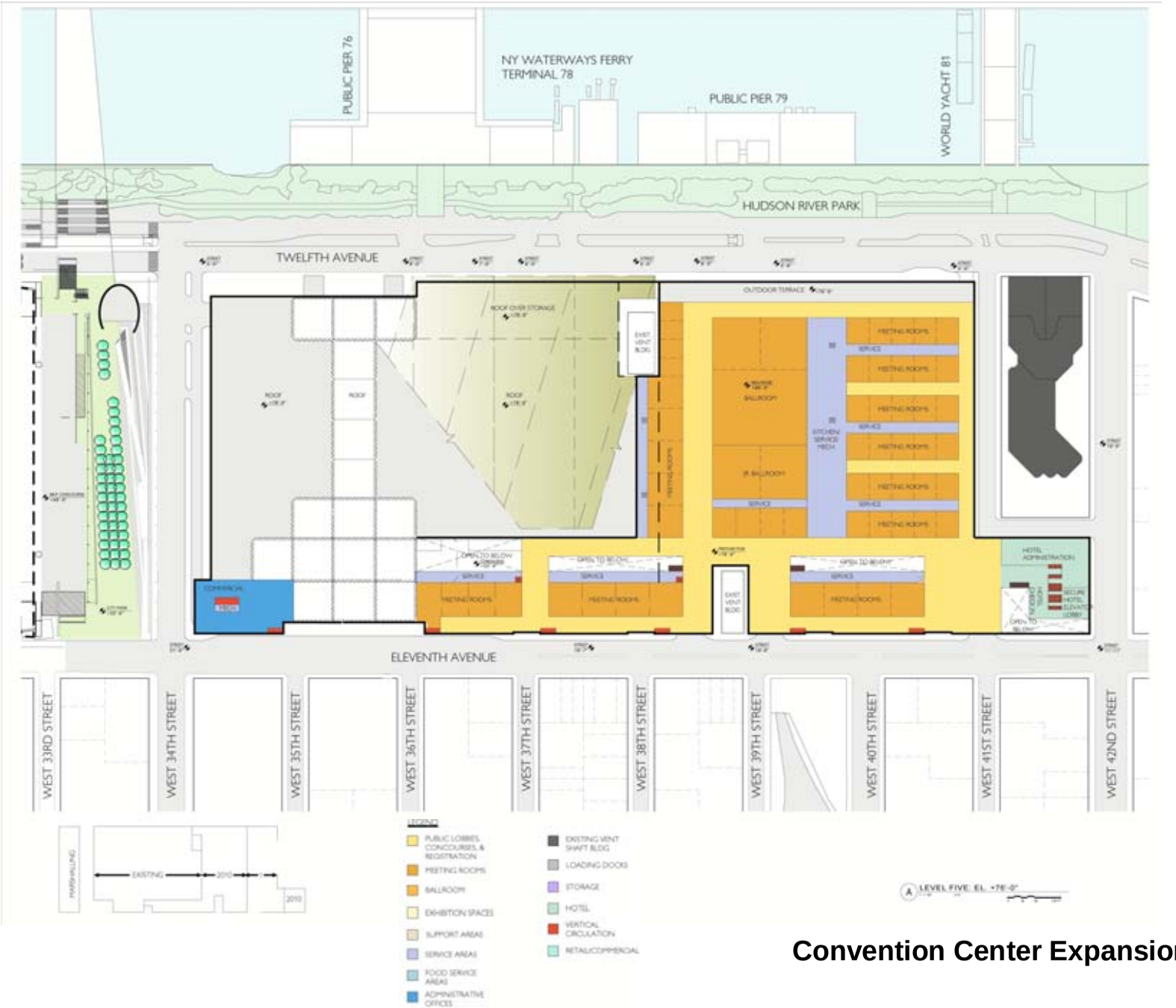
Convention Center Expansion: Level 3

Figure 2-37



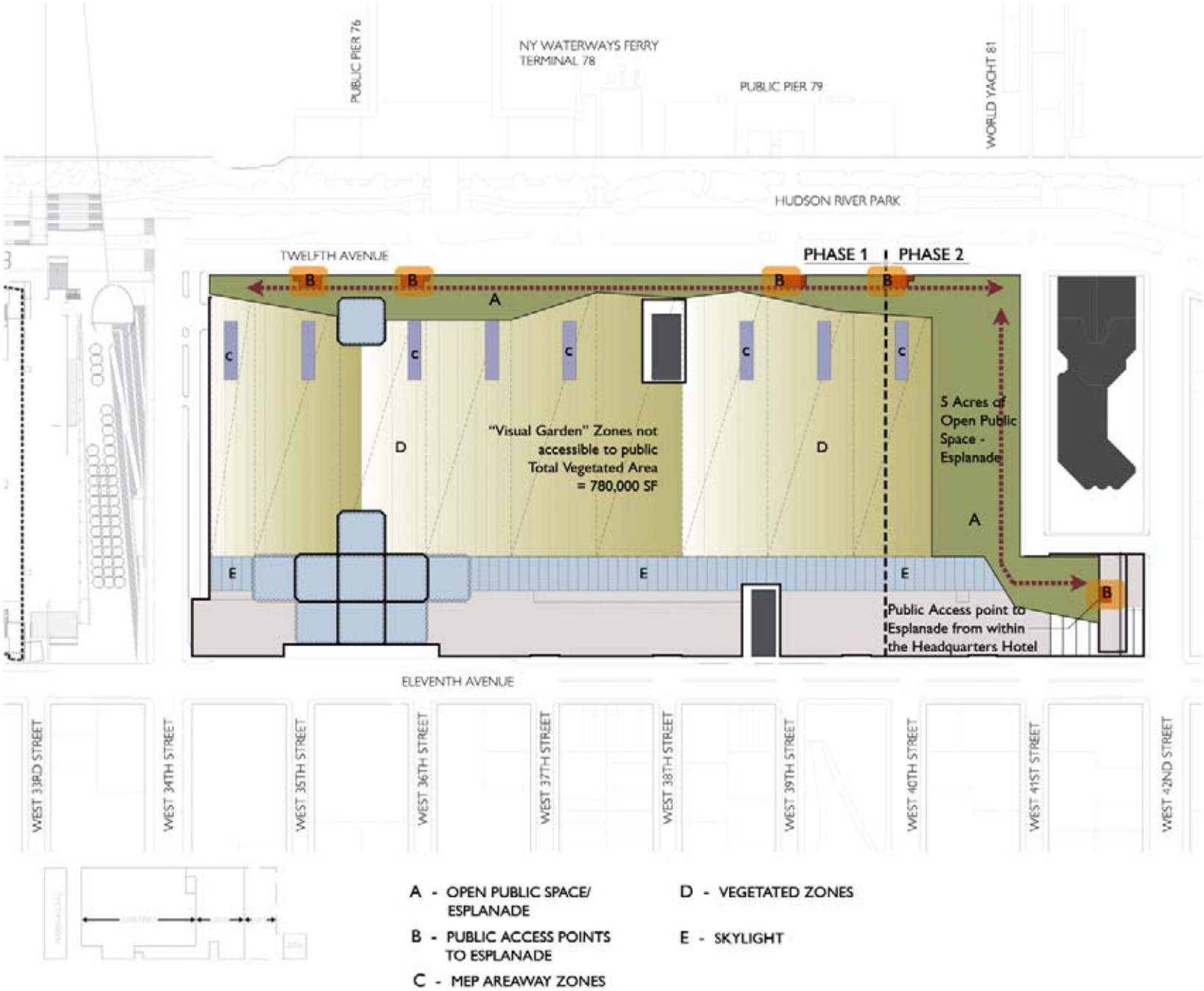
Convention Center Expansion: Level 4

Figure 2-38



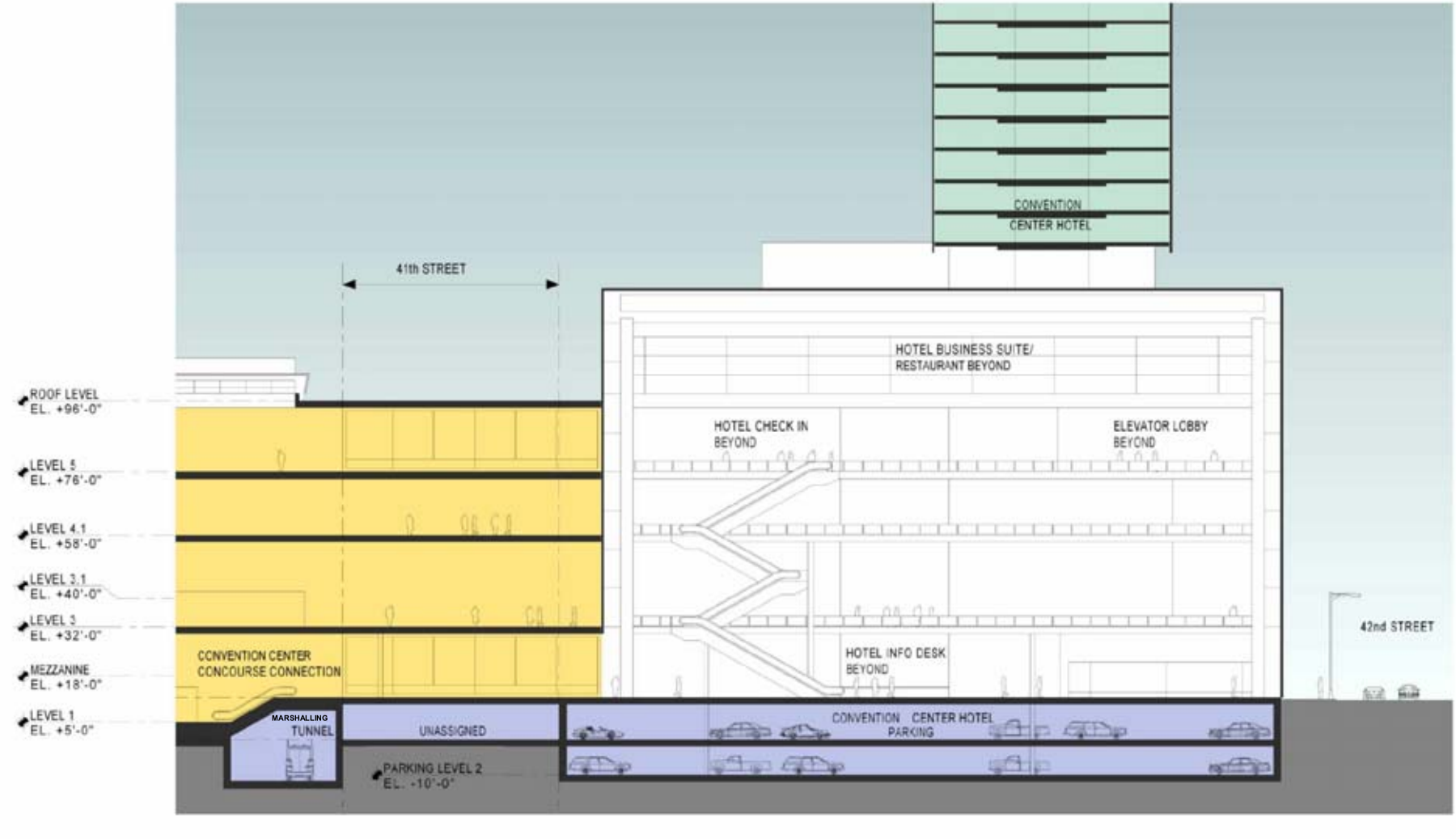
Convention Center Expansion: Level 5

Figure 2-39



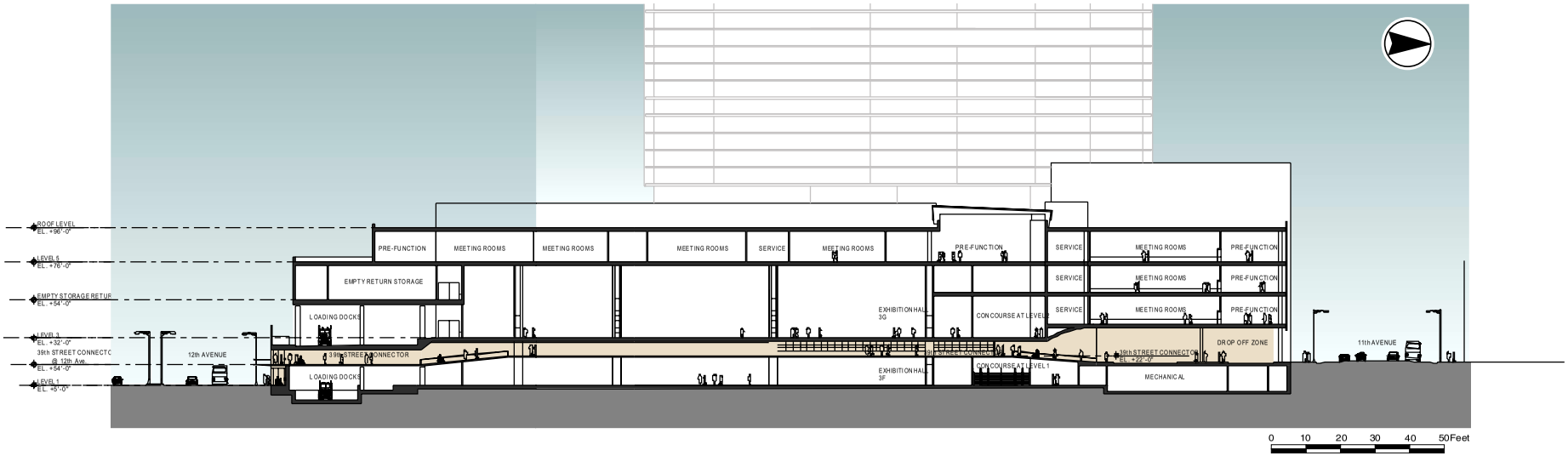
Convention Center: Rooftop Open Space

Figure 2-40



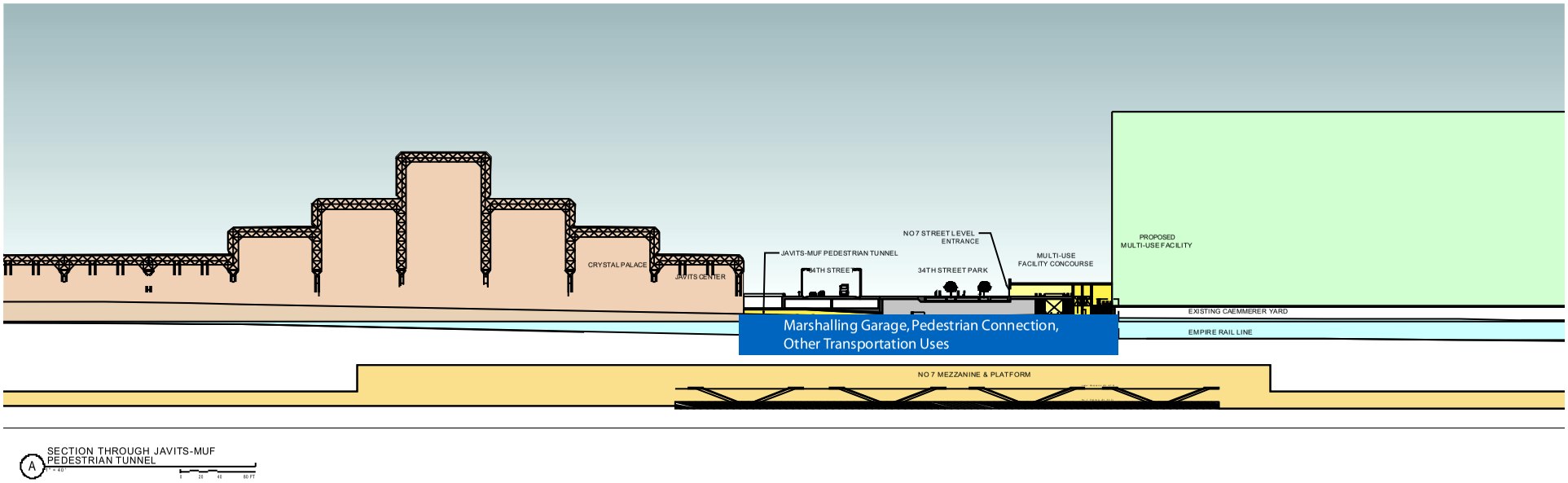
Convention Center Hotel: Section Looking South

Figure 2-41



Convention Center: 40th Street Pedestrian Connector

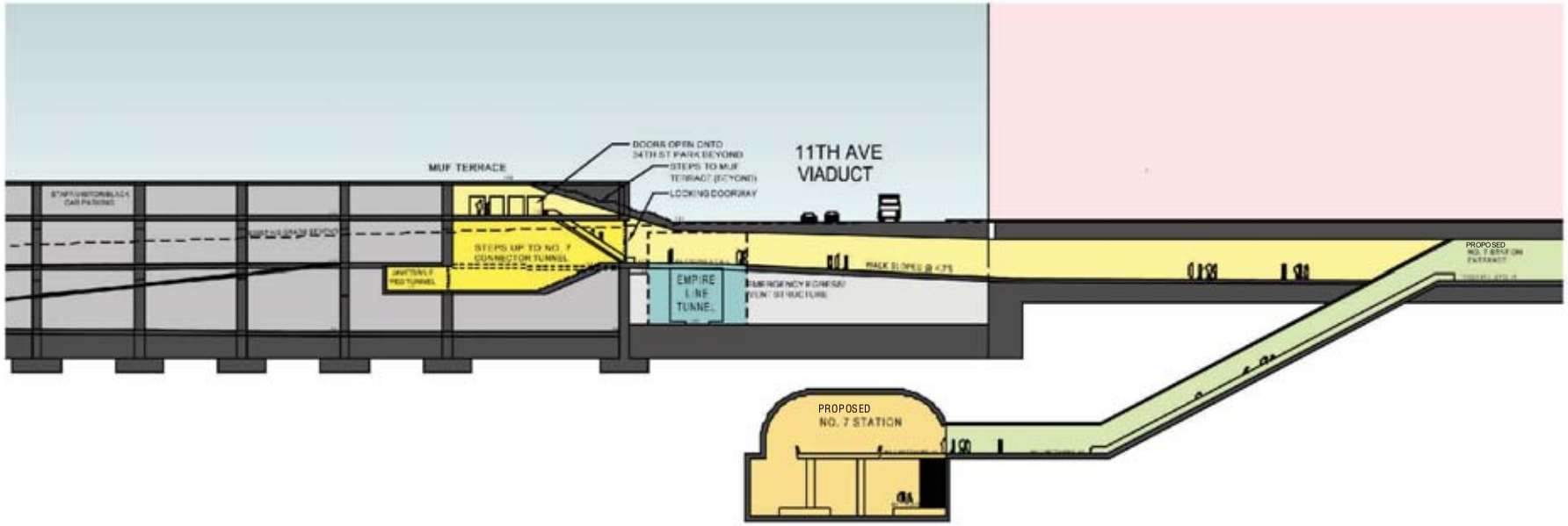
Figure 2-42



A SECTION THROUGH JAVITS-MUF PEDESTRIAN TUNNEL

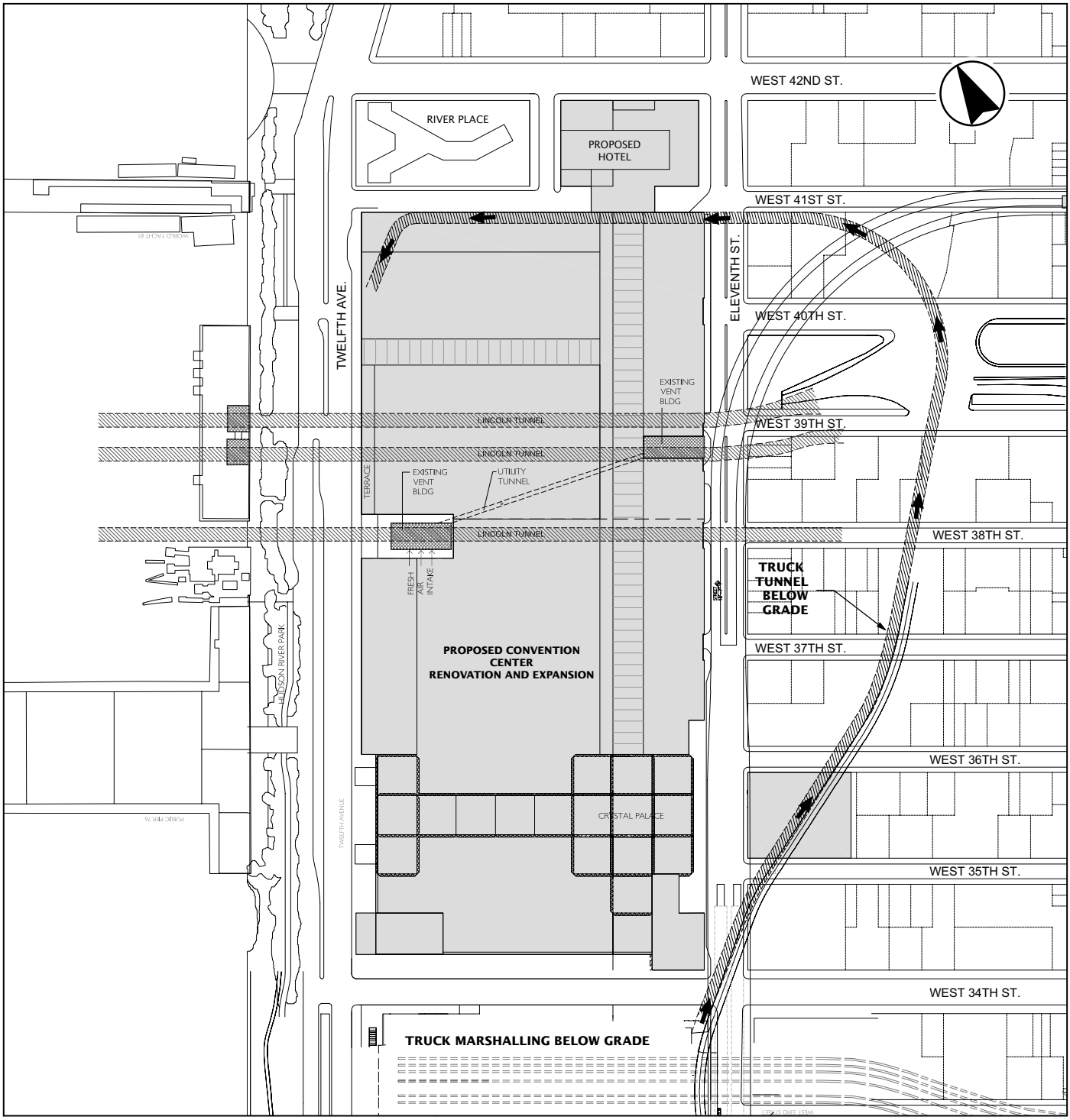
Marshalling Yards Below the Convention Center & Multi-Use Facility

Figure 2-43



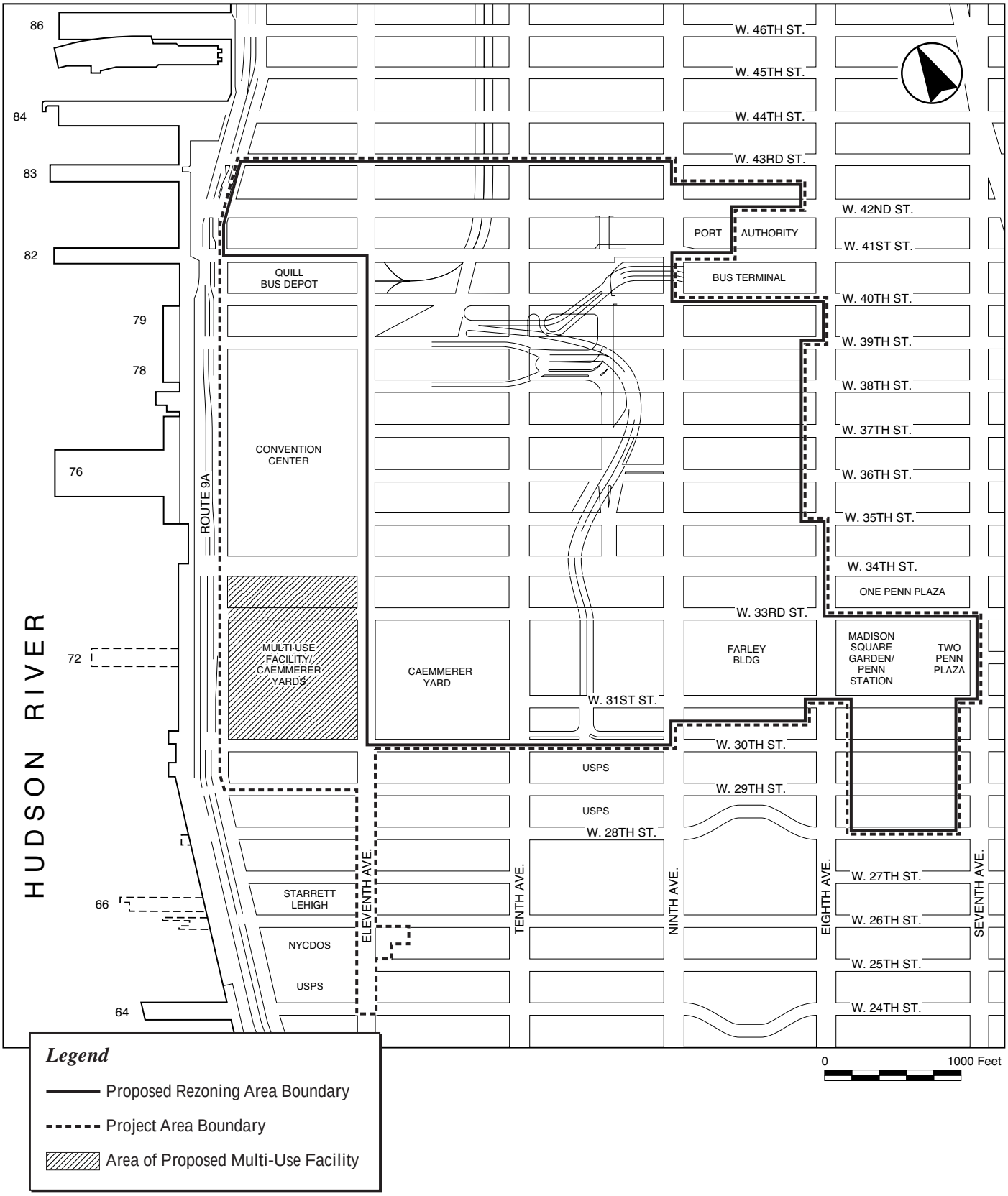
Convention Center Truck Marshalling at West 34th Street: Section Looking North

Figure 2-44



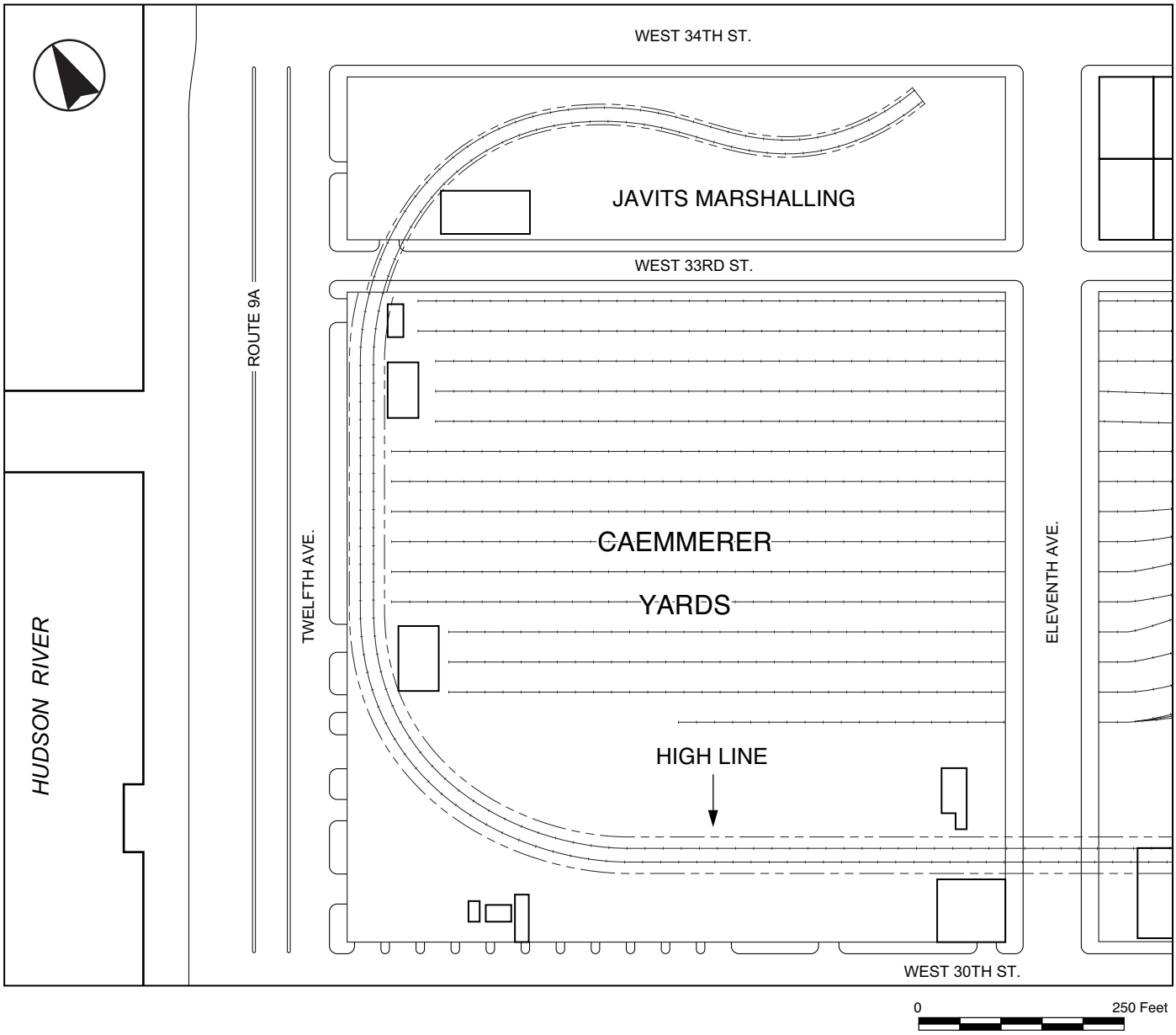
Convention Center Truck Marshalling Plan

Figure 2-45



Proposed Multi-Use Facility

Figure 2-46

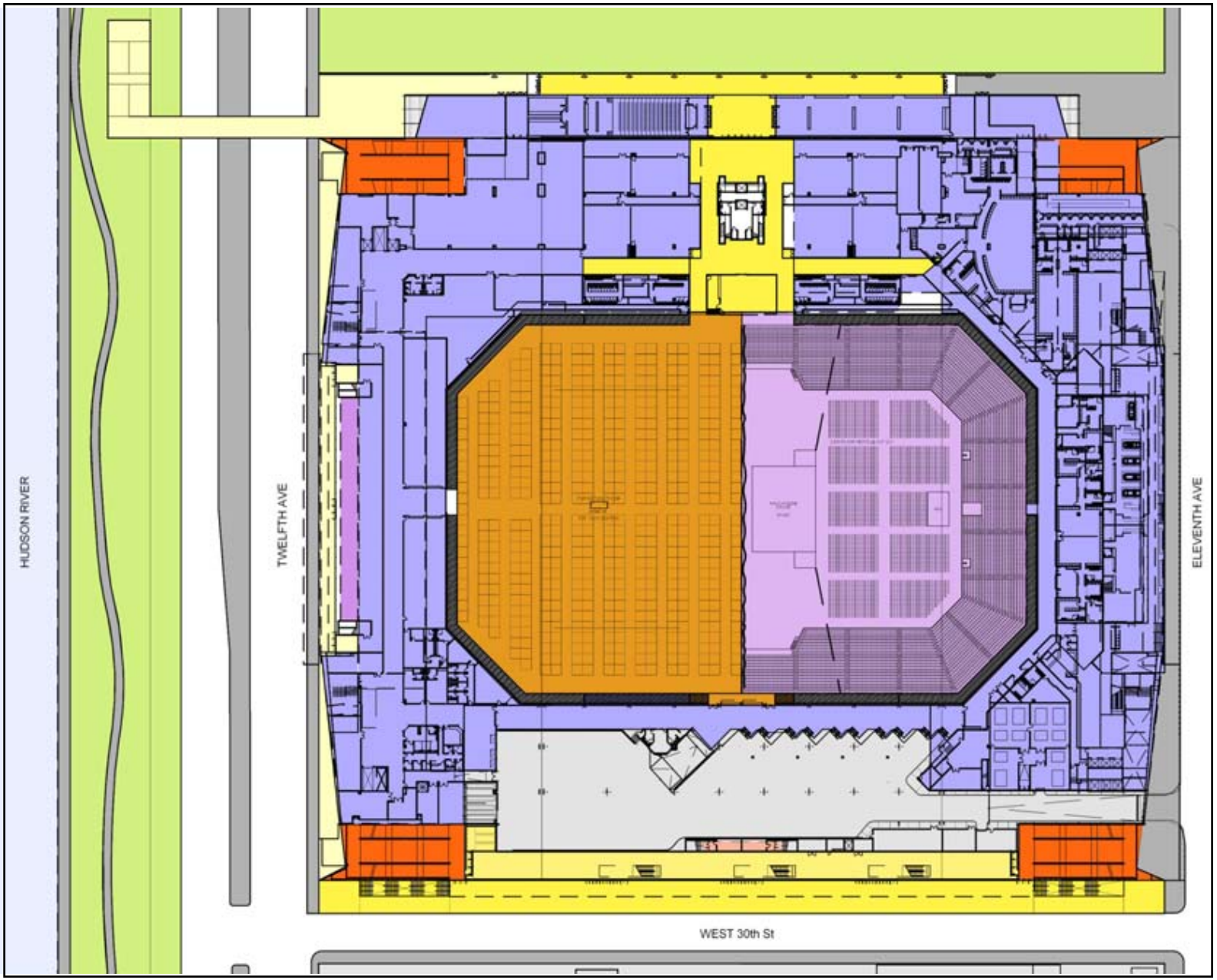


Multi-Use Facility: Existing Conditions

Figure 2-47

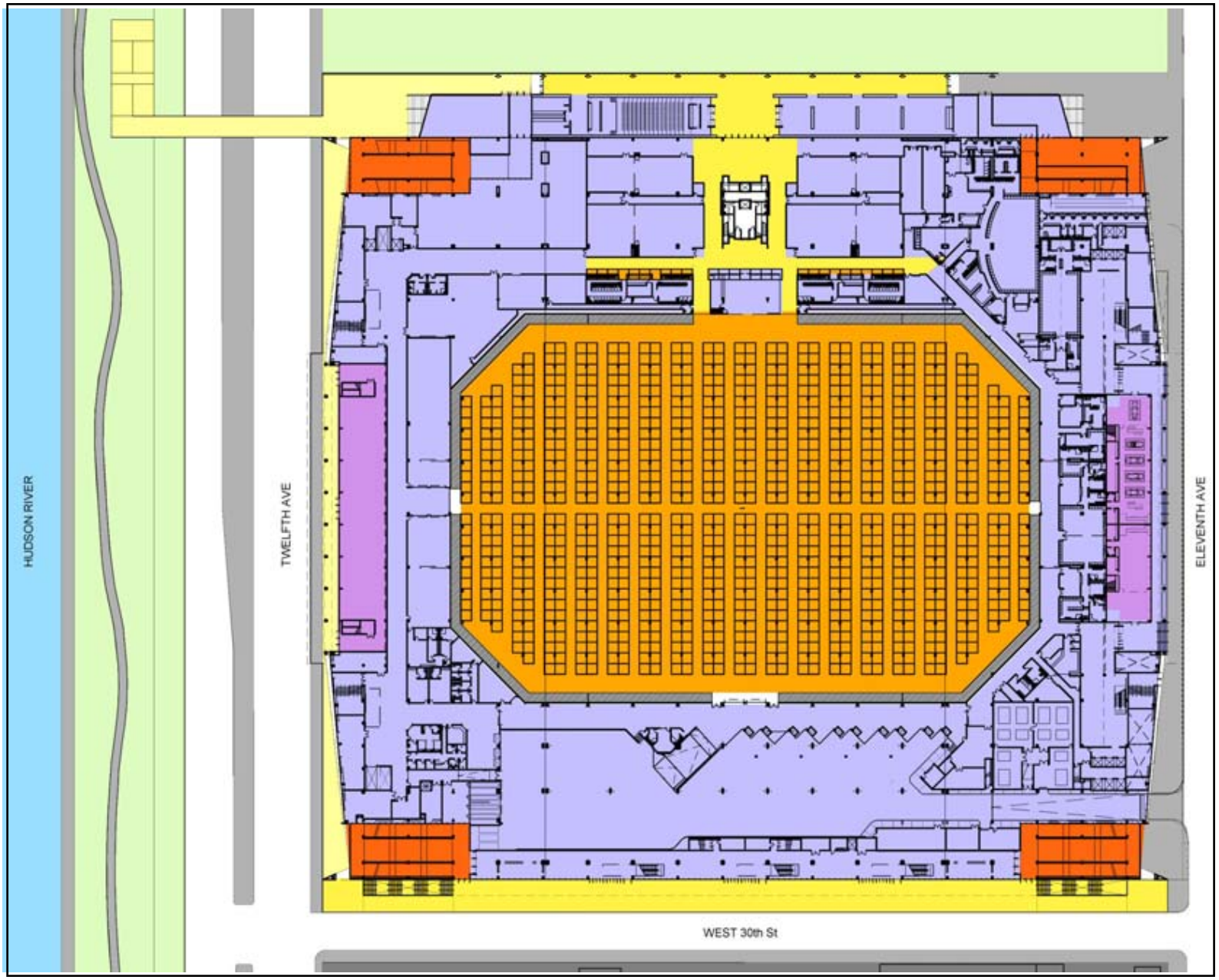
Multi-Use Facility: Stadium Mode

Figure 2-48



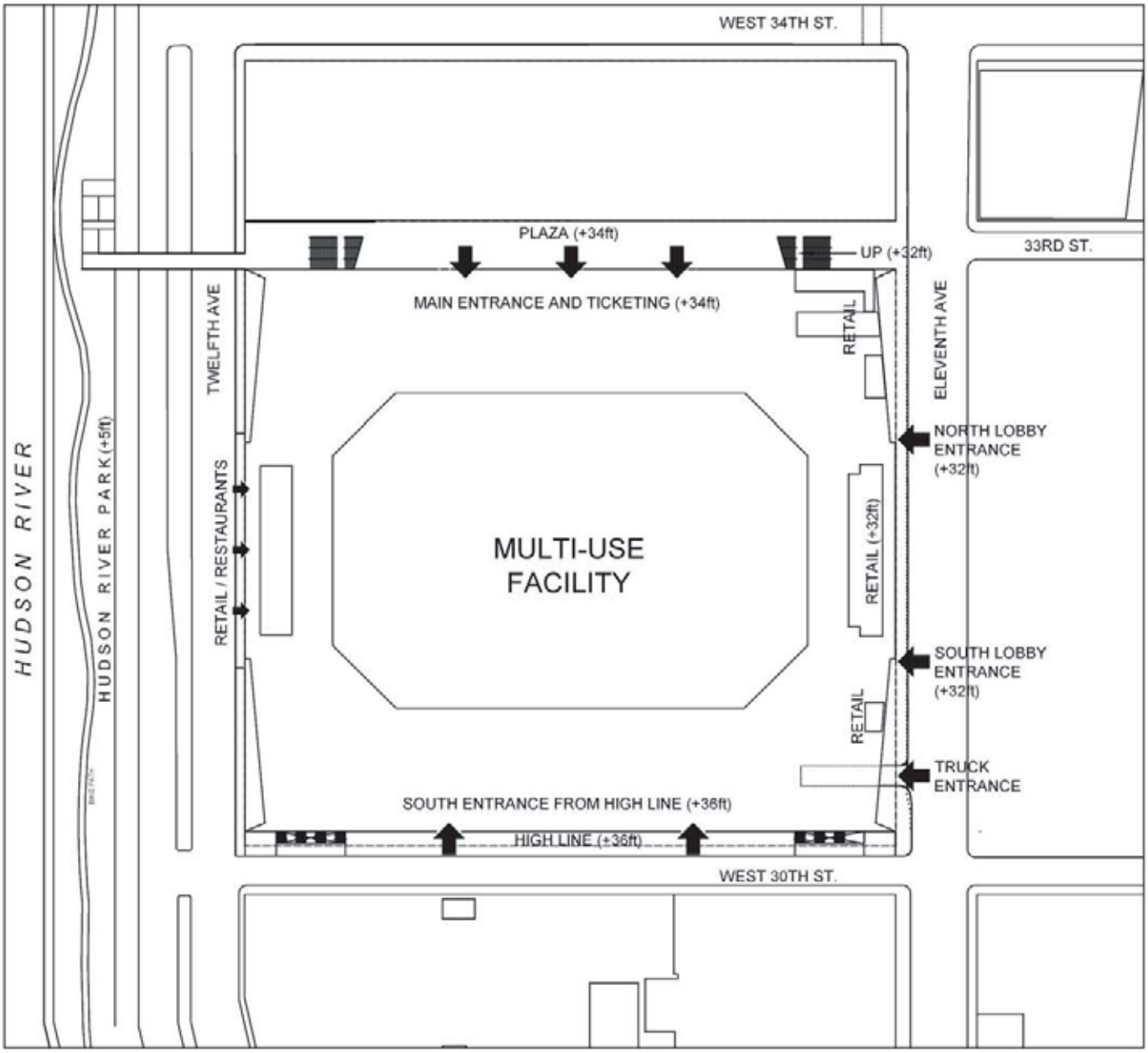
Multi-Use Facility: Plenary Hall Mode

Figure 2-49



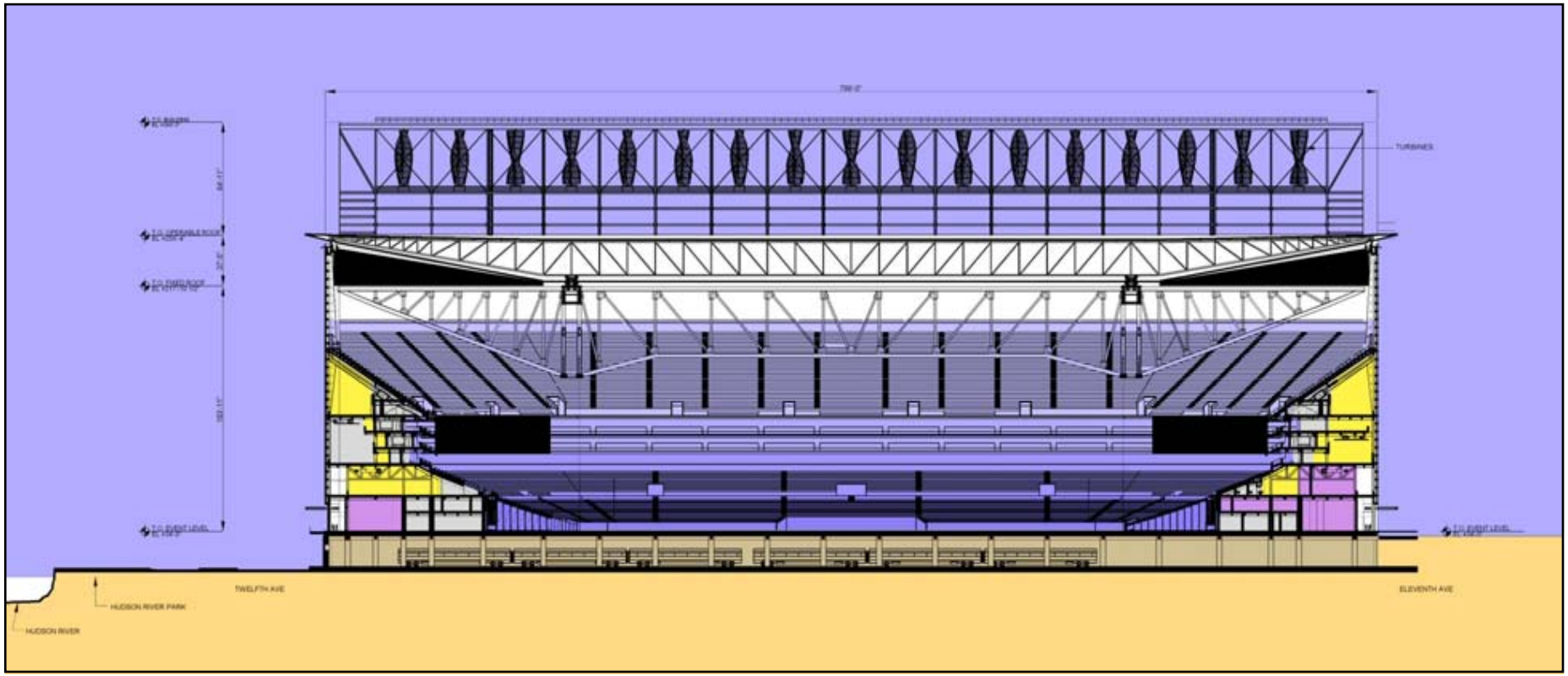
Multi-Use Facility: Exposition Hall Mode

Figure 2-50



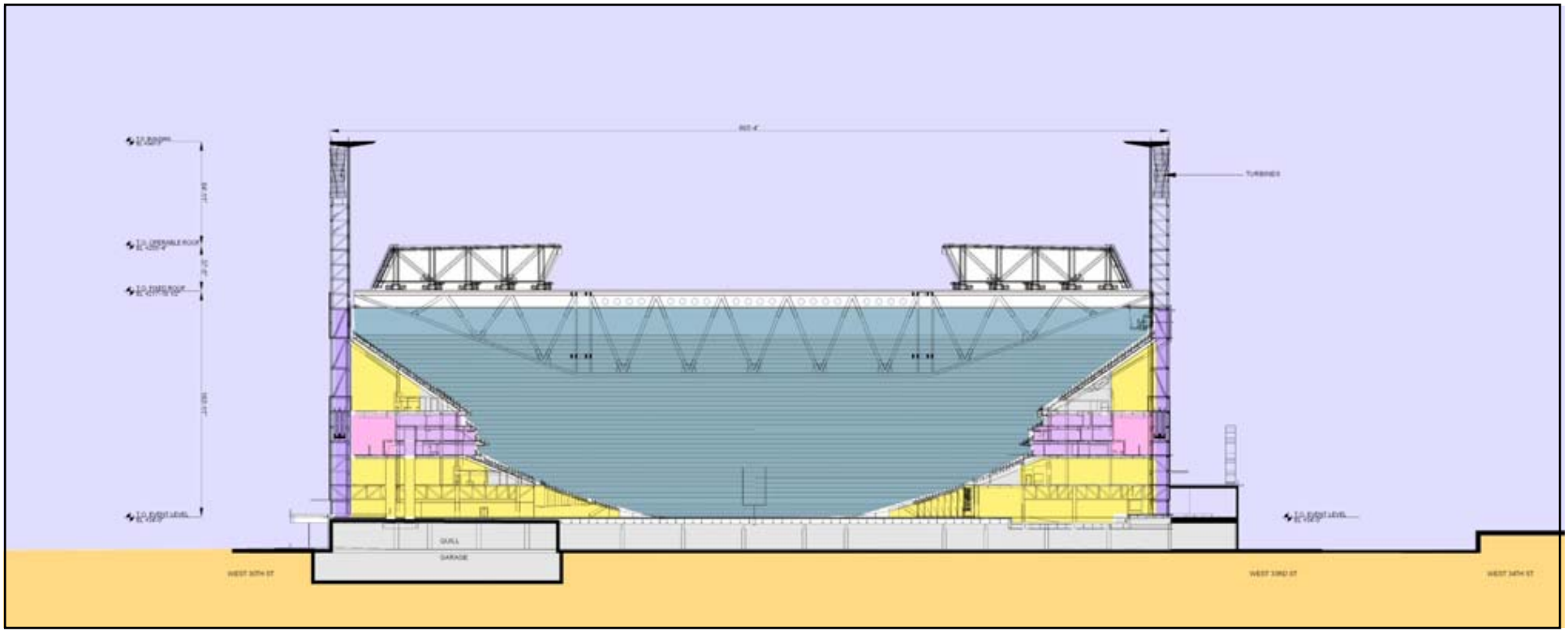
Multi-Use Facility: Access Plan

Figure 2-51



Multi-Use Facility: East-West Section

Figure 2-52

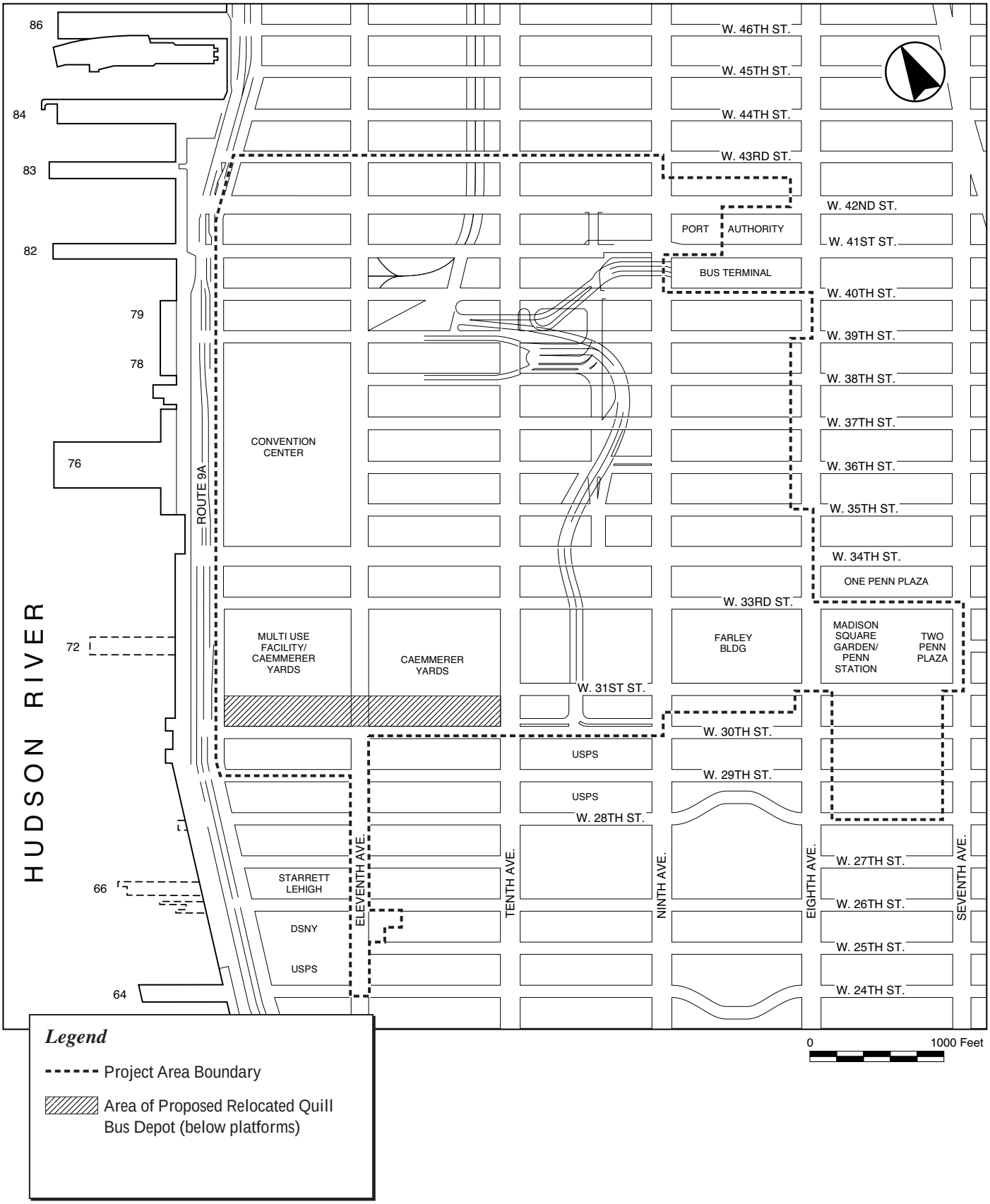


Multi-Use Facility: East-West Section with Stadium

Figure 2-53

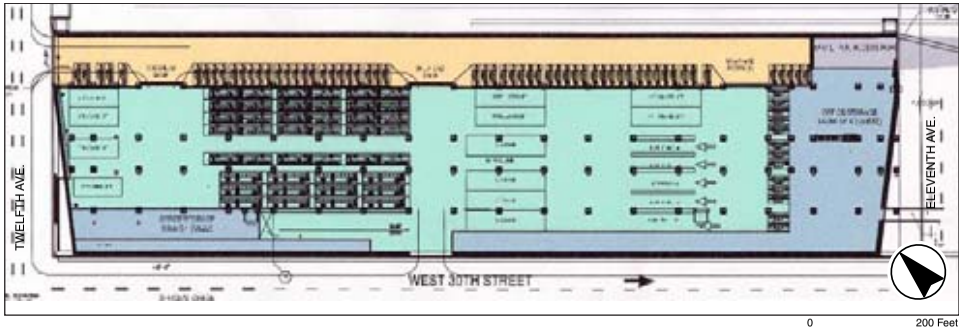
Multi-Use Facility Northeasterly View

Figure 2-54

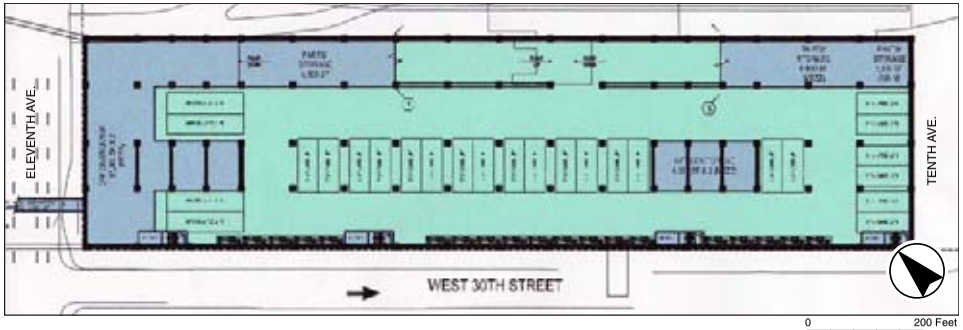


Proposed Relocated Quill Bus Depot

Figure 2-55



Ground Floor Level
Elevation +8



Basement Level
Elevation -5

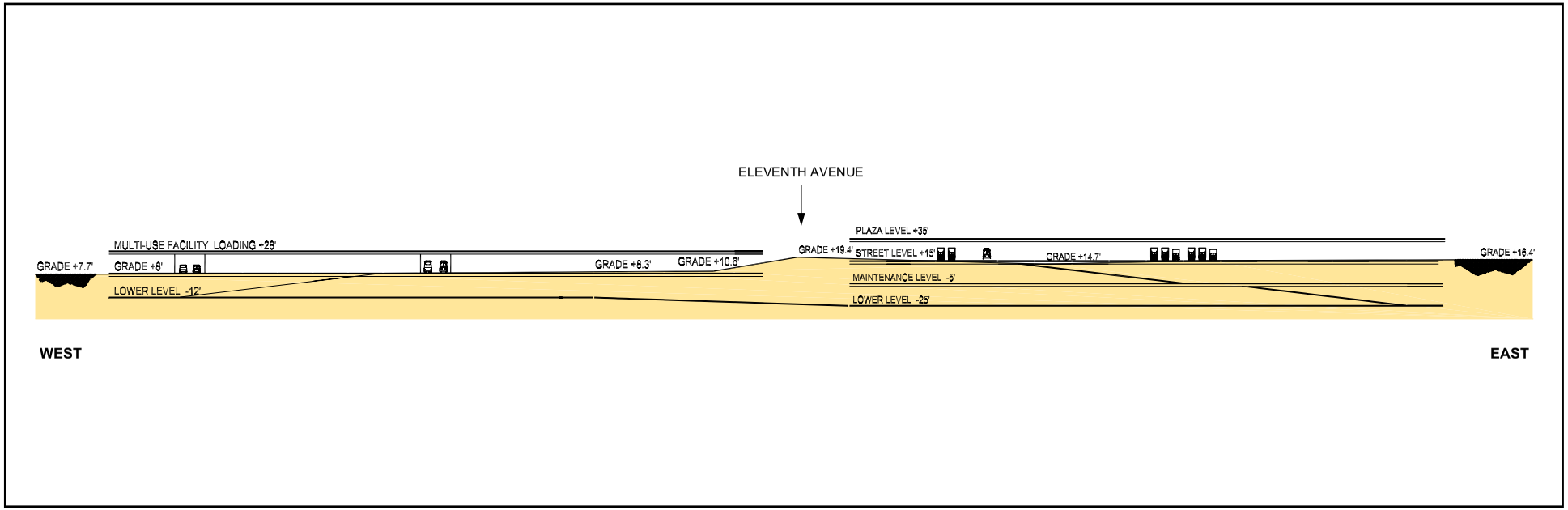
Lower Basement Level
Elevation -25

Legend

- *Bus Storage and Maintenance*
- *Office, Storage, Ventilation*
- *Shared Driveway (Quill and LIRR)*

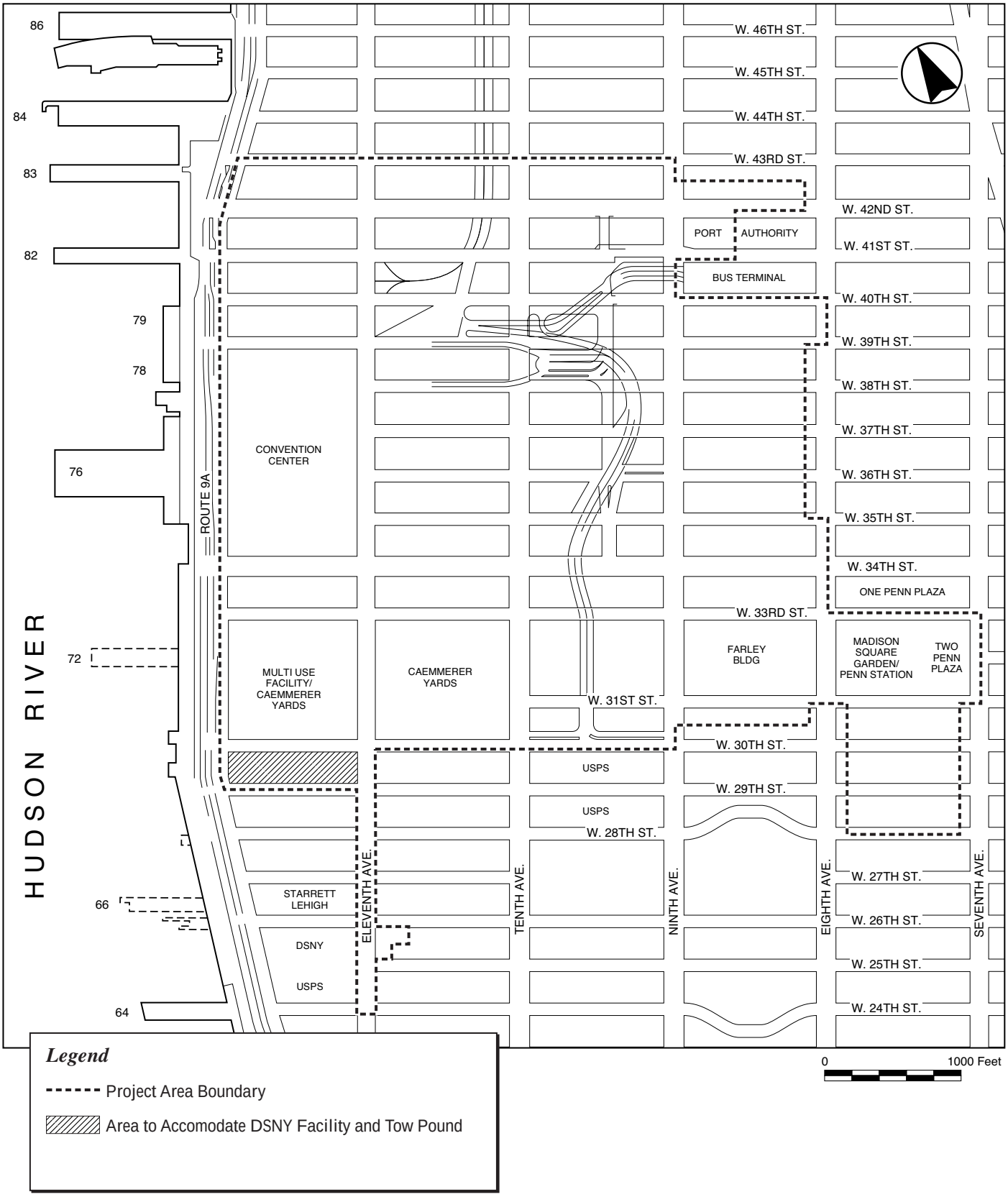
Relocation of Quill Bus Depot: Site Plan

Figure 2-56



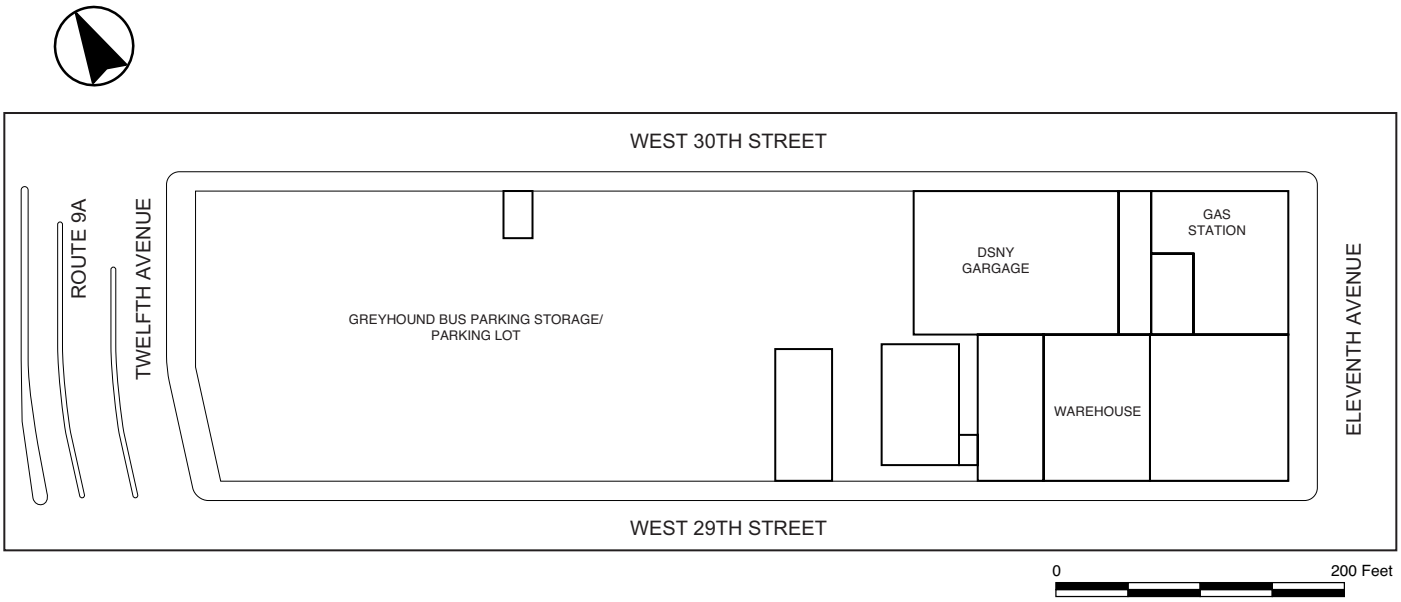
Relocation of Quill Bus Depot: Section Looking North

Figure 2-57



Accommodation for DSNY Facilities and NYPD Tow Pound

Figure 2-58

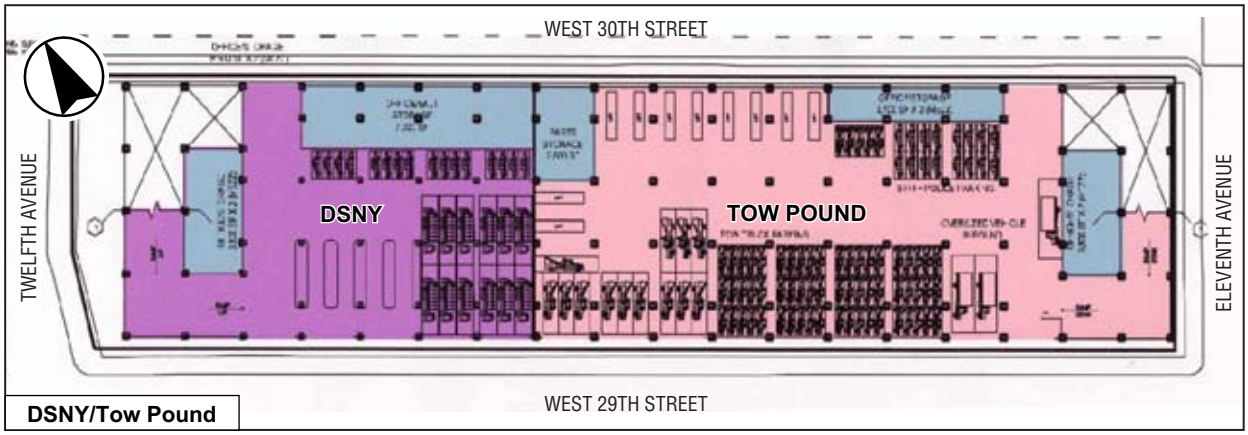


Accommodation for DSNY/Tow Pound Facilities: Existing Conditions

Figure 2-59

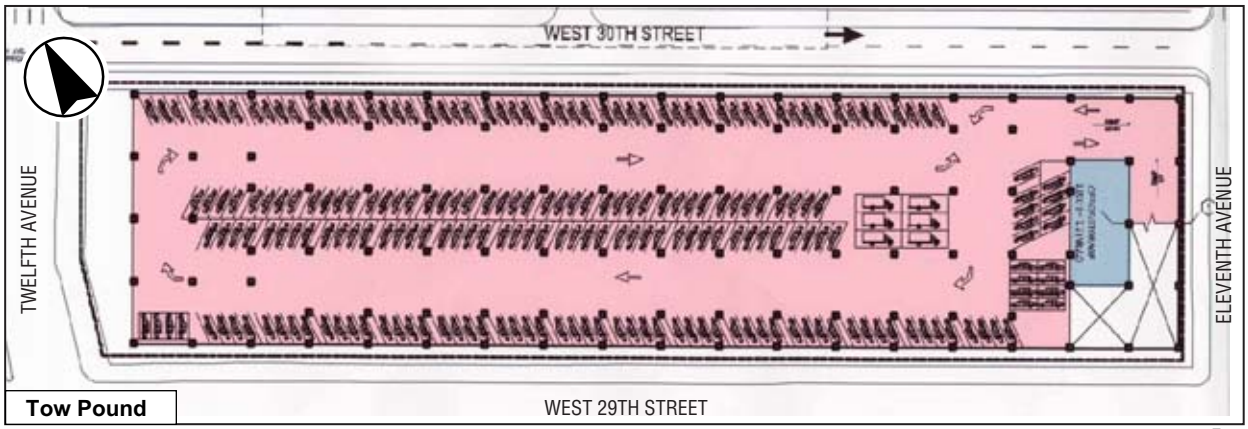
1st Floor Level
Elevation +28

0 200 Feet



Ground Floor Level
Elevation +8

0 200 Feet



Basement Level
Elevation -12

0 200 Feet

Legend

- Tow Pound
- DSNY
- Office, Storage, Ventilation

Accommodation for DSNY/Tow Pound Facilities

Figure 2-60

TABLE OF CONTENTS

Chapter 2: Description of the Proposed Action.....2-1
A. INTRODUCTION.....2-1
B. REZONING AND RELATED LAND USE ACTIONS.....2-2
1. OVERVIEW.....2-2
2. REZONING ACTION BY DISTRICT.....2-4
a) Overview.....2-4
b) Special Hudson Yards District.....2-4
c) Special Jacob K. Javits Convention Center District.....2-10
d) Special Clinton District.....2-11
e) Special Garment Center District.....2-12
f) Special Midtown District.....2-14
3. ADDITIONAL REZONING ACTIONS.....2-15
a) South Side of West 31st Street between Eighth and Ninth Avenues.....2-15
b) East Side of Eighth Avenue between West 29th and West 30th Streets.....2-15
4. (E) DESIGNATIONS.....2-15
5. PUBLIC OPEN SPACES AND PARKING GARAGE.....2-16
a) Open Space Plan.....2-16
b) Parking Garage.....2-18
6. REASONABLE WORST-CASE DEVELOPMENT SCENARIOS (RWCDS), 2010 AND 2025.....2-18
a) Overview.....2-18
b) Overall Development Levels, 2010 and 2025.....2-19
c) Reasonable Worst-Case Development Scenario.....2-19
d) Projected Development Sites.....2-21
e) Potential Development Sites.....2-23
C. TRANSIT ACTION.....2-23
1. PLANNING AND DESIGN CRITERIA.....2-23
1. DESCRIPTION OF THE NO. 7 SUBWAY EXTENSION.....2-24
a) Alignment and Profile.....2-24
b) Stations.....2-25
c) Ancillary Facilities.....2-27
d) Signals.....2-29
e) Rolling Stock.....2-29
f) Corona Yard Improvements.....2-30
g) Property Acquisitions and Easements.....2-30
D. OTHER ELEMENTS OF THE PROPOSED ACTION.....2-32
1. CONVENTION CENTER EXPANSION.....2-33
a) Overview.....2-33
b) Project Components.....2-34
c) Access.....2-37
d) Facility Planning and Design.....2-38
e) Materials and Exterior Design.....2-38
f) Sustainable Design.....2-38
g) Land Assemblage Necessary to Allow Expansion.....2-39
h) Existing and Future Utilization Assumptions.....2-39
2. MULTI-USE FACILITY.....2-40
a) Overview.....2-40
b) Project Components.....2-41
c) Access.....2-43
d) Facility Planning and Design.....2-43
e) Materials and Exterior Design.....2-44

f) Sustainable Design 2-44
g) Utilization Assumptions 2-45
3. ACCOMMODATIONS FOR OTHER PUBLIC FACILITIES 2-45
a) Quill Bus Depot 2-45
b) PANYNJ Bus Garage 2-46
c) DSNY and NYPD Tow Pound Facility 2-46
E. CONSTRUCTION SCHEDULE AND ACTIVITIES 2-47
1. OVERVIEW 2-47

LIST OF TABLES

TABLE 2-1 PROPERTIES TO BE ACQUIRED FOR THE PROPOSED MIDBLOCK PARK AND BOULEVARD SYSTEM 2-17
TABLE 2-2 PROPERTIES TO BE ACQUIRED FOR THE PROPOSED ACTIVE OPEN SPACE ON BLOCK 675 2-17
TABLE 2-3 PROPERTIES TO BE ACQUIRED FOR THE MIDBLOCK PUBLIC PARKING GARAGE 2-18
TABLE 2-4 PROPOSED SUBWAY EXTENSION ANCILLARY FACILITIES 2-28
TABLE 2-5 PROPERTIES IDENTIFIED FOR SUBWAY SITE ACQUISITIONS 2-31
TABLE 2-6 PROPERTIES IDENTIFIED FOR SUBWAY EASEMENTS 2-31
TABLE 2-7 EXISTING AND FUTURE CONVENTION CENTER, KEY FACILITY COMPONENTS 2-35
TABLE 2-8 PROPOSED MULTI-USE FACILITY COMPONENTS 2-41

LIST OF FIGURES

FIGURE 2-1 SPECIAL DISTRICTS IN THE REZONING AREA
FIGURE 2-2 PROPOSED SUBDISTRICTS
FIGURE 2-3 PROPOSED SUBDISTRICTS/SUBAREAS
FIGURE 2-4 PROPOSED ZONING DISTRICTS
FIGURE 2-5 PROPOSED LAND USE AND DENSITY BY SUBDISTRICT
FIGURE 2-6 PROPOSED REQUIREMENTS RETAIL FRONTAGE
FIGURE 2-7 PROPOSED STREET WALL REQUIREMENTS
FIGURE 2-8 PROPOSED MANDATORY SITE IMPROVEMENTS
FIGURE 2-9 PROPOSED MAPPED PARKS
FIGURE 2-10 PROPERTY ACQUISITION FOR OPEN SPACE
FIGURE 2-11 PROPOSED BELOW-GRADE PARKING GARAGE
FIGURE 2-12 2010 PROJECTED SITES WITHOUT RELOCATION OF MADISON SQUARE GARDEN
FIGURE 2-13 2025 PROJECTED SITES WITHOUT RELOCATION OF MADISON SQUARE GARDEN
FIGURE 2-14 2010 PROJECTED SITES WITH RELOCATION OF MADISON SQUARE GARDEN
FIGURE 2-15 2025 PROJECTED SITES WITH RELOCATION OF MADISON SQUARE GARDEN
FIGURE 2-16 2025 POTENTIAL SITES WITHOUT RELOCATION OF MADISON SQUARE GARDEN
FIGURE 2-17 2025 POTENTIAL SITES WITH RELOCATION OF MADISON SQUARE GARDEN
FIGURE 2-18 LOCATION OF PROPOSED ACTION: NO. 7 SUBWAY EXTENSION
FIGURE 2-19 PROPOSED SUBWAY ALIGNMENT
FIGURE 2-20 PROPOSED SUBWAY ALIGNMENT AND PROFILE: LOOKING NORTH
FIGURE 2-21 PROPOSED SUBWAY ALIGNMENT AND PROFILE: LOOKING WEST
FIGURE 2-22 INTERMEDIATE STATION AT WEST 41ST STREET AND TENTH AVENUE
FIGURE 2-23 INTERMEDIATE STATION: PLATFORM LEVEL
FIGURE 2-24 TERMINAL STATION: CAVERN STATION
FIGURE 2-25 TERMINAL STATION: STREET LEVEL ENTRANCES
FIGURE 2-26 TERMINAL STATION: UPPER MEZZANINE
FIGURE 2-27 PROPOSED SUBWAY ANCILLARY FACILITIES

FIGURE 2-28 CORONA YARD IMPROVEMENTS
FIGURE 2-29 PROPERTY ACQUISITION FOR THE PROPOSED NO. 7 SUBWAY EXTENSION
FIGURE 2-30 PROPOSED CONVENTION CENTER EXPANSION
FIGURE 2-31 CONVENTION CENTER EXPANSION: EXISTING CONDITIONS
FIGURE 2-32 CONVENTION CENTER EXPANSION: PHASE 1
FIGURE 2-33 CONVENTION CENTER: PHASE 1
FIGURE 2-34 CONVENTION CENTER EXPANSION: PHASE 2
FIGURE 2-35 CONVENTION CENTER EXPANSION: LEVEL 1
FIGURE 2-36 CONVENTION CENTER EXPANSION: LEVEL 2
FIGURE 2-37 CONVENTION CENTER EXPANSION: LEVEL 3
FIGURE 2-38 CONVENTION CENTER EXPANSION: LEVEL 4
FIGURE 2-39 CONVENTION CENTER EXPANSION: LEVEL 5
FIGURE 2-40 CONVENTION CENTER: ROOFTOP OPEN SPACE
FIGURE 2-41 CONVENTION CENTER HOTEL: SECTION LOOKING SOUTH
FIGURE 2-42 CONVENTION CENTER: 39TH STREET PEDESTRIAN CONNECTOR
FIGURE 2-43 MARSHALLING YARDS BELOW CONVENTION CENTER AND MULTI-USE FACILITY
FIGURE 2-44 CONVENTION CENTER TRUCK MARSHALLING AT WEST 34TH STREET: NORTH
FIGURE 2-45 CONVENTION CENTER TRUCK MARSHALLING PLAN
FIGURE 2-46 PROPOSED MULTI-USE FACILITY
FIGURE 2-47 MULTI-USE FACILITY: EXISTING CONDITIONS
FIGURE 2-48 MULTI-USE FACILITY: STADIUM MODE
FIGURE 2-49 MULTI-USE FACILITY: PLENARY HALL MODE
FIGURE 2-50 MULTI-USE FACILITY: EXPOSITION HALL MODE
FIGURE 2-51 MULTI-USE FACILITY: ACCESS PLAN
FIGURE 2-52 MULTI-USE FACILITY: EAST-WEST SECTION
FIGURE 2-53 MULTI-USE FACILITY: NORTH-SOUTH SECTION
FIGURE 2-54 MULTI-USE FACILITY: NORTHEASTERLY VIEW
FIGURE 2-55 PROPOSED RELOCATED QUILL BUS DEPOT
FIGURE 2-56 RELOCATION OF QUILL BUS DEPOT: SITE PLAN
FIGURE 2-57 RELOCATION OF QUILL BUS DEPOT: SECTION LOOKING NORTH
FIGURE 2-58 ACCOMMODATION FOR DSNY FACILITIES AND NYPD TOW POUND
FIGURE 2-59 ACCOMMODATION FOR DSNY/NYPD TOW POUND FACILITIES: EXISTING CONDITIONS
FIGURE 2-60 ACCOMMODATION FOR DSNY/NYPD TOW POUND FACILITIES

Chapter 2: Description of the Proposed Action

A. INTRODUCTION

As described in Chapter 1, "Project Purpose and Need," the goals of the Proposed Action are to ensure the future growth of the City through redevelopment of the Hudson Yards area, provide transit services to support such development, and maintain or improve environmental conditions as part of the overall development plan. These goals, and their related objectives, have served to select and shape the components of the Proposed Action, described in detail in this chapter. This chapter is organized in three sections that correspond to these components, namely: *rezoning and related land use actions; transit action;* and *other elements* (which include accommodations for other public facilities). Briefly, the components comprise:

- Zoning map and text amendments to the New York City Zoning Resolution and related land use actions to permit development of the Hudson Yards area as a mixed-use community with new commercial and residential space, and a substantial amount of new open space;
- Construction and operation of an extension of the No. 7 Subway Line (No. 7 Subway Extension) to serve Hudson Yards; and
- Other public actions intended to complement such development and serve the City as a whole, including:
  - Expansion, renovation, and modernization of the Convention Center, including construction of approximately one million square feet of new exhibition space plus additional space for meeting rooms, banquet halls, and other facilities, and development of a new hotel with up to approximately 1,500 rooms;
  - A new Multi-Use Sports, Exhibition, and Entertainment Facility (Multi-Use Facility) with approximately 18,000 square feet of permanent meeting room space and the capability to convert into a number of different uses and configurations, including a stadium configuration with a seating capacity of approximately 75,000, an exposition configuration including 180,000 square feet of exhibition floor space, or a plenary hall configuration that provides a maximum seating capacity of approximately 40,000; and
  - Accommodations for other facilities, new or replacement transportation facilities for pedestrian movement, vehicle storage, and other public purposes.

Each of these components responds to the project goals and objectives by contributing to the creation of a vital, 24-hour mixed-use commercial and residential community in the Hudson Yards area, as described below.

This FGEIS also analyzes a broad range of alternatives to the Proposed Action. Among the alternatives considered, Alternative S, which is more fully described and analyzed in Chapter 26, "Alternatives," was proposed by the Department of City Planning largely in response to public comment received in the early phases of the land use review process. Alternative S is therefore under particularly active consideration by the co-lead agencies. Upon completion of the environmental review process, it is possible that, in accordance with SEQRA and CEQR, the co-lead agencies will select Alternative S or another alternative for approval and implementation.

B. REZONING AND RELATED LAND USE ACTIONS

1. Overview

The rezoning and related land use actions proposed for the Hudson Yards area are intended to foster a mix of uses and densities, provide new publicly accessible open space, offer opportunities for substantial new office development, and reinforce existing residential neighborhoods while encouraging new housing opportunities. The New York City Economic Development Corporation (EDC) and the New York City Department of City Planning (DCP) have estimated that 28 million square feet of commercial office space and 12.6 million square feet of residential space would need to be accommodated in the Hudson Yards area in order to meet demands for new office and residential space over the next 30 years. As described in Chapter 1, "Project Purpose and Need," the strengths of the Hudson Yards area are threefold: it offers large sections of underdeveloped land on its southern and western portions; it contains several thriving, mixed-use communities that could benefit from major transit improvements; and it is close to the Midtown CBD. The Proposed Action would reinforce the existing mixed-use communities, primarily along Ninth Avenue and along 42nd Street, and create a new high-density mixed-use commercial and residential district.

The high-density office development essential to the City's future would be located primarily within a new commercial corridor. Forming an L-shape within the plan, this commercial corridor would be located along a north-south corridor between Tenth and Eleventh Avenues, from West 30th to West 41st Streets, and an east-west corridor above the eastern portion of Caemmerer Yard and the rail right-of-way, between West 31st and West 33rd Streets, from Seventh to Tenth Avenues. Currently dominated by storage, auto-related and transportation uses, this commercial corridor would provide the greatest opportunity for land assemblages and large floor-plate office buildings, while avoiding land use conflict with the established mixed-use community along Ninth Avenue and along West 42nd Street. The east-west corridor would accommodate high-density office development, because of its access to the extensive public transportation network at Penn Station, proximity to Midtown, and public ownership of much of the land. The planned location of a new terminal subway station at West 34th Street and Eleventh Avenue, and substantial new open space would help ensure the success of this area as a premier urban neighborhood. The planned open space would create a continuous north-south pedestrian route. This route would begin at a pedestrian bridge at West 42nd Street, continue through a midblock open space between West 33rd and West 39th Streets, and terminate at a large public square between West 30th and West 33rd Streets, built over the eastern portion of Caemmerer Yard between Tenth and Eleventh Avenues.

New development in the commercial corridor of the Hudson Yards area would be restricted principally to commercial use, in order to better ensure that new residential development envisioned for Hudson Yards would not reduce the supply of potential land assemblages for large floor-plate office buildings. However, to create a vibrant, 24-hour community, some residential use would be allowed in combination with significant office development. Recently completed, high-density, mixed-use commercial and residential buildings located in Midtown, such as the Time Warner headquarters at Columbus Circle, and the Random House Headquarters at Broadway and West 55th Street, serve as examples of the type of mixed-use development possible within this new neighborhood.

The development of large, predominantly commercial towers within a defined area would create a unique opportunity for major, iconic contributions to the City's skyline. Building height, setback, and location controls would provide sufficient flexibility to encourage exciting architectural expression and accommodate projected office needs, while ensuring that the new buildings enhance and enliven the neighborhood at street level. Likewise, the allowable density within these areas would be sufficiently high to accommodate estimated office space needs, with the highest densities allowed along West 34th Street, at the convergence of the new subway station, along the Midblock Park and

Boulevard System, and around a public square on a deck over the eastern portion of Caemmerer Yard.

New office development would also be located within existing commercial neighborhoods, where there are both existing and planned public transportation infrastructure, and sufficiently large development sites. These areas include sites near the planned location of a new intermediate subway station for the No. 7 Subway Extension at Tenth Avenue and West 41st Street, sites immediately south of the Port Authority Bus Terminal (PABT), and sites within the blocks to the south of Penn Station.

Portions of the Hudson Yards area also contain existing neighborhoods that exhibit a strong mix of uses and distinctive built character. Specifically, Ninth Avenue between West 34th and West 41st Streets typifies a New York City "Main Street," with walk-up apartment buildings and active ground-floor retail; West 34th Street between Ninth and Tenth Avenues contains high-streetwall, pre-war apartment buildings; and West 42nd Street continues to develop with residential towers above a low commercial base. The plan seeks to strengthen these existing neighborhoods by directing compatible, predominantly residential development to these areas, and requiring building bulk envelopes that reinforce each area's distinctive built character.

The midblocks between Ninth and Tenth Avenues, from West 35th to West 40th Streets, known as Hell's Kitchen South, contain a mixture of walk-up tenement and apartment buildings, vacant lots, and access ramps to the Lincoln Tunnel. The residential presence on these blocks would be reinforced with new residential infill development that would be permitted at medium densities and regulated by contextual envelopes. Opportunities for creating "pocket parks" and greening publicly owned property adjacent to the Lincoln Tunnel access ramps could greatly enhance this area.

Tenth Avenue would serve as the transition between Hell's Kitchen to the east and the new, predominantly commercial neighborhood to the west. Density and bulk would be at appropriate levels to provide this transition, with slightly higher density and building height expected along the west side of Tenth Avenue. Predominantly residential use would also be permitted along Tenth Avenue and would help to ensure a lively 24-hour community to the west. Higher density and building heights would be permitted along Tenth Avenue, helping to provide a transition between the lower scale to the east and the higher scale to the west. Densities and height would form a "bowl" within the Hudson Yards area—medium densities along Ninth Avenue and the midblocks to the west, surrounded by higher densities along Tenth Avenue to the west, West 34th Street to the south, West 42nd Street to the north, and the Garment Center to the east of Hell's Kitchen South.

The Special Garment Center District also offers the opportunity for new in-fill development. A large number of vacant sites are located in the midblocks between Eighth and Ninth Avenues, from West 35th Street to West 40th Street. Unlike the rest of the Special Garment Center District, which lies to the east, the majority of built space in this area is occupied by non-garment-related commercial uses. While most of this area would remain in the Special Garment Center District and the preservation controls on existing buildings over 70,000 square feet of floor area would be retained, new residential and commercial uses could be developed on certain vacant and underused sites, thereby providing housing, activating the streetscape on these midblocks, and enhancing pedestrian access to the Hudson Yards area from the east. Envelope controls for the new development would ensure consistency with the Garment Center District's distinctive built form of high streetwall loft buildings.

The proposed zoning amendments are key to implementing this preferred direction and urban design plan. Several other related actions, including park and street mapping and land acquisition, for the Midblock Park and Boulevard System, would also be required.

2. Rezoning Action by District[1]

a) Overview

The proposed zoning would be implemented through the creation of a Special Hudson Yards District and related Zoning Text and Map Amendments. Special zoning districts are created by the City Planning Commission to achieve specific planning and urban design objectives in a limited area. Since the Special Hudson Yards District would not encompass the entire Hudson Yards area, controls affecting other portions of the Hudson Yards area would be implemented through changes to zoning controls in existing districts or by remapping existing districts in conjunction with zoning text amendments. The rezoning proposal has been configured to avoid overlapping districts.

Currently, several Special Districts are either contained entirely or partially within the rezoning area. The rezoning would modify the 42nd Street "Perimeter Area" of the Special Clinton District, the Special Garment Center District west of Eighth Avenue, and the Special Midtown District west of Seventh Avenue between West 31st and West 33rd Streets. In particular, the zoning regulations in the midblock portion of the Special Garment Center District, between West 35th Street and West 39th Street, would be modified, but this portion would still be within the Special Garment Center District. The portion of the Special Garment Center District currently between West 39th Street and West 40th Street would be removed from that Special District and incorporated into the Special Hudson Yards District. The Special Jacob K. Javits Convention Center District would be eliminated and the area incorporated into the Special Hudson Yards District, as shown on Figure 2-1. Detailed descriptions of these districts follow.

b) Special Hudson Yards District

Overview

The Special Hudson Yards District would include a variety of use, bulk, and urban design controls. As depicted on Figure 2-2, the Special District would be divided into six subdistricts (A - Large Scale Plan, B - Farley Corridor, C - 34th Street Corridor, D - Tenth Avenue Corridor, E - Other Areas, and F - Hell's Kitchen) differing from one another in their mix of uses and density. Some subdistricts would be further divided into subareas as depicted on Figure 2-3. This would result in a large-scale plan area, residential core, and mixed-use areas.

The Special Hudson Yards District would permit, in certain zoning districts, floor area ratios (FARs) beyond the underlying zoning district FARs through a District Improvement Bonus (DIB). Contributions deposited in the Hudson Yards District Improvement Fund under the DIB mechanism would support financing of specific capital improvements in the Project Area, or could fund some of these projects directly. In high-density residential districts the FAR could also be increased through the Inclusionary Housing bonus. Within the Large Scale Plan Subdistrict (Subdistrict A), the transfer of floor area from the eastern portion of Caemmerer Yard to the area north of West 33rd Street between Tenth and Eleventh Avenues would also be permitted.

The following sections describe the proposed zoning, land use, permits, site controls, improvements, and parking requirements for the Special Hudson Yards District.

Underlying Zoning

As a base for the regulations of the Special Hudson Yards District, those areas planned for high-density commercial or mixed commercial/residential redevelopment would be rezoned from their current mix of manufacturing (M1-5 and M1-6) and commercial districts (C6-2, C6-2M, and C6-3), to the commercial district C6-4 (Figures 2-4 and 2-5). Among the existing districts, M1-5, a moderate-density manufacturing district which permits no residential use, predominates (see Chapter

[1] This section of Chapter 2 summarizes the proposed rezoning actions; the actual zoning text can be found in Appendix A.

4, "Land Use, Zoning, and Public Policy," for a detailed description of existing zoning districts in the Project Area). Moderate-density commercial districts that permit residential development would be mapped along Ninth Avenue and on West 34th Street in the areas that currently contain residential uses.

C6-4 is a commercial district common to Manhattan's CBDs. It is currently found in the area of the proposed Special Hudson Yards District along Eleventh Avenue opposite the Convention Center. Typically, C6-4 districts allow 10 FAR (12 with certain bonuses) for commercial, residential, and community facility uses. The C6-4 zoning district would be mapped in four of the six subdistricts (A, B, C, and E); however, the floor area maximums would be modified in the Special Hudson Yards District.

The areas slated for predominantly residential use, Subdistricts D and F, would be zoned C1-7A and C2-7A (Subdistrict F), and C2-8 (Subdistrict D). These zones allow up to 2 FAR for commercial use. The "A" designation after the district letter and number indicates a contextual district, as described below. C1-7A and C2-7A districts allow FARs of 6.02 and 7.52, respectively, for residential and community facility use. C2-8 zones allow 10 FAR (bonusable to 12) for residential and community facility use; however, this would be modified in the Special Hudson Yards District to allow densities up to 13 and 15 FAR.

In addition, the portion of the three blocks south of Penn Station that are within the Special Hudson Yards District (Subarea E-3), currently zoned M1-5 (5 FAR), would be rezoned as M1-6, permitting manufacturing, office, or certain community facility uses (by special permit) with a maximum FAR of 10 (which could be increased to 12 through the DIB).

Use and Density Regulations

(a) Subdistrict A—Large Scale Plan

As depicted in Figure 2-5, the proposed rezoning would modify the underlying zoning to allow a broad range of uses and densities in the Special Hudson Yards District. The Large Scale Plan (Subdistrict A) would be substantially commercial in use, with a limited permitted residential and community facility use. The eastern portion of Caemmerer Yard (Subarea A1) would be zoned to permit a total FAR of 19, including 18 FAR of commercial floor area, 6 FAR of residential floor area, and 2 FAR of community facility floor area. However, since site planning for the eastern portion of Caemmerer Yard includes a significant amount of open space, 10 FAR would be permitted to be transferred northward to the sites along Eleventh Avenue to West 41st Street and along Tenth Avenue to West 36th Street. This 10 FAR of transferable floor area could be all commercial or include 5 FAR of residential. As a result of the planned open space, no more than 9 FAR would be permitted to be developed on the eastern portion of Caemmerer Yard, with a maximum commercial FAR of 9, a maximum residential FAR of 1, and a maximum community facility FAR of 2.

Sites in Subarea A2 would be permitted a commercial base FAR of 10 above which an additional 8 FAR could be obtained through the DIB. Additional floor area, without limit, could be transferred from the eastern portion of Caemmerer Yard under the regulations of the large-scale development. Above an FAR of 20, up to 4 FAR could be used for residential floor area.

Sites in Subarea A3 would be permitted a commercial base FAR of 10, above which an additional 8 FAR could be obtained through the DIB. Additional floor area, up to a maximum of 24, could be transferred from the eastern portion of Caemmerer Yard under the regulations of the large-scale development. Above an FAR of 20, up to 4 FAR could be used for residential floor area. Within all of Subdistrict A, community facility use would be limited to 2 FAR.

(b) Subdistrict B—Farley Corridor

Subdistrict B (Farley Corridor) would permit uses similar to those of Subdistrict A, but at slightly lower FARs. The maximum commercial FAR would be 18 west of Dyer Avenue (Subarea B1) and 15 between Dyer and Eighth Avenues (Subarea B2). The 8 and 5 FAR above the base of 10 FAR for Subareas B1 and B2, respectively, could be achieved through the DIB. Subarea B1 would permit up to 6 FAR for residential floor use; the remaining floor area would be required to be commercial, except that up to 2 FAR would be permitted for community facilities. In Subarea B3, east of Eighth Avenue, the floor area regulations would be similar to Subarea B2. However, a floor area bonus of 4.5 FAR up to a maximum of 19.5 would be available, by special permit, for a substantial improvement to facilitate pedestrian movement into or in the vicinity of Pennsylvania Station. Residential uses would not be permitted in Subareas B2 or B3.

(c) Subdistrict C—34th Street Corridor

Subdistrict C, the 34th Street Corridor, would allow a mix of uses, with base FARs of 10 for commercial and community facility uses, and 7.5 for residential uses. An additional 3 FAR over the base commercial and community facility FAR of 10 could be achieved through the DIB. An additional 2.5 FAR over the base residential FAR of 7.5 could be achieved through the DIB, and an additional 2 FAR above a residential FAR of 10 through the Inclusionary Housing Program.

(d) Subdistrict D—Tenth Avenue Corridor

In Subarea D1 of Subdistrict D, the Tenth Avenue Corridor, zoning would limit commercial FAR and promote residential development. The 2 FAR commercial base available in the underlying C2-8 district could be increased to 3 FAR through the DIB. The 7.5 FAR residential base available under the C2-8 district could be increased to 10 FAR through the DIB and from 10 to 12 FAR with an Inclusionary Housing Bonus. The base community facility FAR of 7.5 could be increased to 12 through the DIB. The FAR of all permitted uses combined would be limited to 15. In Subarea D2 of Subdistrict D, the 2 FAR commercial base available in the underlying C2-8 district could be also increased to 3 FAR through the DIB. The 7.5 FAR residential base available under the C2-8 district could be increased to 10 FAR through the DIB and from 10 to 12 FAR with an Inclusionary Housing Bonus. The base community facility FAR of 7.5 could be increased to 12 through the DIB. The FAR of all permitted uses combined would be limited to 13. However, in Subdistrict D, any building containing residences could exceed 10 FAR only through the Inclusionary Housing Program.

(e) Subdistrict E—Other Areas

Subdistrict E is composed of three subareas: E1, E2, and E3. Subareas E1 and E2 (sites around the PABT) would not permit residential use. These sites are particularly suitable for large commercial development, because of their location adjacent to the PABT. The maximum commercial FAR would be 18, achieved by adding 8 FAR to the 10 FAR base through the DIB. The maximum community facility FAR would be 2.

Subarea E3, the midblock portions of the three blocks located south of Penn Station, between Seventh and Eighth Avenues, would permit manufacturing, commercial, and certain community facility uses to a maximum FAR of 12. The 2 FAR above the M1-6 district's base of 10 FAR could be achieved through the DIB.

(f) Subdistrict F—Hell's Kitchen

Subdistrict F, Hell's Kitchen, would make no modifications to floor area regulations of the basic underlying zoning districts, C2-7A and C1-7A. Commercial uses would be limited to 2 FAR and residential uses to 7.52 FAR (R9 equivalent) in Subarea F1. A 2 FAR maximum for commercial use would prevail in Subarea F2, and residential uses would be limited to a maximum FAR of 6.02 (R8

equivalent). Both subareas would have height limitations, as described under "Site Planning, Bulk, and Massing," below.

Applicability of Special Permits

A number of special permits currently apply under existing zoning in the area covered by the proposed Special Hudson Yards District and would continue to apply under the regulations of the zoning districts proposed for the Special District. These permits allow and would continue to allow certain uses, or uses in certain locations, or changes to height and bulk regulations, at the discretion of the CPC. However, some special permits would no longer be required within the Special District, and the actions they now cover would become as-of-right; other permits would be modified to reflect the policies of the Special District. In addition to Special Permits, existing and/or new Authorizations and Certifications could apply under the proposed zoning.

Key changes would be as follows (see Appendix A for full text): Development over railroad rights-of-way would be as-of-right within the entire Special Hudson Yards District to allow development over key sites. Accordingly, the special permit pursuant to Section 74-68 of the Zoning Resolution would not apply in the Special District. Instead, use, density, and design controls of the Special Hudson Yards District would regulate such developments. Proposed development would still require appropriate agreements from affected parties, such as Amtrak and the MTA.

Special permits regarding historic landmarks would remain in effect, subject to Special District regulations, and the provisions of Section 74-74 for General Large Scale Development would continue to apply, except within the Large Scale Plan (Subdistrict A), where transfers of bulk subject to Special District regulations would be as-of-right. As detailed in Appendix A, a number of special permits would no longer be relevant within the Special Hudson Yards District, and so would no longer apply.

Site Planning, Bulk, and Massing

Primary objectives for the Special Hudson Yards District with respect to site planning, bulk, and massing include: (1) flexible as-of-right underlying height and setback controls within the predominantly commercial zones to accommodate large commercial/office floor plates and allow for creative design and signature architecture; and (2) contextual controls where there is a strong built context or where defined controls would establish a new context and place-making. The following controls would apply throughout the district, unless modified as indicated below (see Appendix A for detailed discussion):

- *Streetwall heights:* Maximum streetwall heights at the property line would be 150 feet on avenues and wide streets and 90 feet on narrow streets.
- *Setbacks:* Above the maximum streetwall height, residential portions of buildings would set back from wide streets by 10 feet and from narrow streets by 15 feet. Non-residential portions of buildings would be set back 20 feet from a narrow street and 15 feet from a wide street. The residential setbacks would be similar to existing contextual envelopes and tower-on-a-base rules; the non-residential setbacks are typical of those elsewhere in the City.
- *Ground coverage:* There would be no limit on lot coverage, except for buildings constructed under contextual regulations, which include lot coverage requirements.
- *Tower coverage:* There would be no tower coverage requirements (i.e., the percentage of the lot that the tower is allowed to cover) in Subdistrict A (Large Scale Plan).

Subdistrict B (Farley Corridor) would have tower regulations that allow a maximum of 60 percent coverage. On sites between 20,000 and 30,000 square feet, a maximum coverage up to 70 percent of the lot would be applicable.

Subdistrict C (34th Street) would have residential and commercial tower regulations. Commercial buildings would have tower coverage maximums of 60 percent of the lot. On sites of between 20,000 and 30,000 square feet, a minimum coverage of up to 70 percent of the lot would be applicable. Residential buildings would be required to have a minimum lot coverage of 30 percent and a maximum of 40 percent. On sites of between 10,000 and 20,000 square feet, a maximum coverage of up to 50 percent of the lot would be allowed.

Subdistrict D (Tenth Avenue) would have residential tower coverage regulations of a minimum of 30 percent and a maximum of 40 percent of the lot. On sites of between 10,000 and 20,000 square feet, a maximum coverage of up to 50 percent of the lot would be allowed.

Subdistrict E (Other Areas west and south of the PABT and south of Penn Station) would have tower coverage maximums of 60 percent of the lot. On sites of between 20,000 and 30,000 square feet, a maximum coverage of up to 70 percent of the lot would be applicable.

- *Tower encroachment rules:* Existing tower encroachment rules would not apply within the Hudson Yards Special District.
- *Residential building heights:* Except in the Hell's Kitchen Subdistrict, there would be no height limits for residential buildings. The required streetwalls on designated streets and minimum residential tower coverage would provide predictability. A height limit of 120 feet would apply for residential buildings on Ninth Avenue in the Hell's Kitchen Subdistrict. On the midblocks between Ninth and Tenth Avenues in this subdistrict, the height limit for residential buildings would be 135 feet. These limits would be specified in the area's contextual zoning.
- *Commercial building heights:* No height limits are proposed for commercial buildings.
- *Additional design controls* would be required for very large sites (e.g., the eastern portion of Caemmerer Yard, the Madison Square Garden site, the two Ninth Avenue sites between West 31st and West 33rd Streets, etc.). Such controls would regulate pedestrian circulation space, publicly accessible open space, and through-block connections.

Mandatory District Elements and On-Site Improvements

The regulations for the Special Hudson Yards District would require certain improvements, as follows:

- To ensure ground floor activity, continuity, and visibility, retail use would be required on major corridors in the Special Hudson Yards District, including West 42nd Street, Ninth and Tenth Avenues, and the midblock boulevard (between Tenth and Eleventh Avenues) that would be created in the Special Hudson Yards District (Figure 2-6). Retail would be allowed in all other areas.
- West 34th Street and the midblock boulevard would have 70 percent streetwall continuity requirements. Ninth and Tenth Avenues would have 100 percent streetwall continuity requirements. Minimum and maximum streetwall heights would vary based on land use and density objectives (Figure 2-7).
- Pedestrian circulation space would be required for development greater than 70,000 square feet on lots larger than 5,000 square feet in zones permitting a maximum FAR of 12 and above, at a rate of 1 square foot of pedestrian circulation space for every 350 square feet of new floor area on lot areas between 5,000 and 20,000 square feet. For larger lots, the requirement would be 1 square foot per 300 square feet of new floor area (Figure 2-8).
- Wide sidewalks would be required on Eleventh Avenue, along the midblock boulevard and on designated cross streets (Figure 2-8).

- Other pedestrian circulation spaces (e.g., entrance recesses, sidewalk widenings, corner circulation space, subway connections, through-block connections) would be required for developments in high-density districts (12.0 FAR zones and above), but would not be required along Ninth Avenue or within the midblocks between Ninth and Tenth Avenues. A through-block, east-west connection would be required along the alignment of West 32nd Street on the sites between Ninth and Eleventh Avenues in the event that Madison Square Garden is not relocated west of Ninth Avenue.
- An entrance to commercial buildings would be required on the midblock boulevard. Major residential entrances (where applicable) would be required within 100 feet of Tenth Avenue.
- Easements for subway entrances would be mandatory on key sites located adjacent to existing or proposed subway stations.
- All new developments and enlargements would be required to provide and maintain trees of at least three inches in caliper. All such trees would be provided for the entire length of the street frontage at maximum intervals of 25 feet. All trees will be selected, installed, and maintained in accordance with specifications established by the Department of Parks and Recreation.

Parking Requirements

To accommodate the anticipated need for off-street parking in the Hudson Yards area, the regulations of Article I, Chapter 3 of the Zoning Resolution, which limit new off-street parking facilities in Manhattan Community Districts 1 through 8, would not apply. Instead, parking would be required for all developments on lots greater than 15,000 square feet. All parking would have to be below grade unless it is screened by commercial, community facility, or residential floor area so that it is not visible from the street. Above-grade garages that could not comply with this provision would be allowed by special permit. Design, frontage, curb cut, and entrance controls would be prescribed for above-grade garages to ensure "pedestrian-friendly" façades.

Accessory off-street parking would be required for all commercial development at a rate of approximately one space per 3,000 square feet of commercial floor area. An increase in parking of up to one space per 2,500 square feet would be permitted. Accessory residential parking would be required for 33 percent of the units, with a maximum of 50 percent of units. The commercial parking requirements would be waived if fewer than 40 spaces were required on a zoning lot, and the residential parking requirements would be waived if fewer than 15 spaces were required.

For both commercial and residential developments, accessory parking spaces could be made available for public use. If both accessory and public parking were provided, they would be required to be within the same garage.

Other Requirements

Other requirements in the Special District related to curb cuts and signage are described in Appendix A.[2]

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[2] A zoning text amendment to allow signs on zoning lots with two or more theaters to project across the street lines 4 feet and six inches in any zoning district within ½ mile of the Theater Subdistrict of the Special Midtown District would be included in the Special District text. The proposed amendment is similar to a private application for a text amendment to Section 42-541 allowing signs on zoning lots within M1, M2, and M3 districts with two or more theaters to project across the street line 4 feet and six inches within ½ mile of the Theater Subdistrict of the Special Midtown District. The private application is being sought in connection with the West 37th Street Arts Baryshnikov Center for the Dance development currently under construction. The application is now undergoing public review and is expected to be adopted prior to the Proposed Action. However, because the Proposed Action would rezone the Baryshnikov site in M1-5 district to a C2-7A district, the provisions of Section 42-541, as modified, would not apply to the zoning lot. Thus, a similar provision is included within the Special District text to allow the sign to remain as a conforming use.

c) Special Jacob K. Javits Convention Center District

Overview

As part of the Proposed Action, the Special Jacob K. Javits Convention Center District would be eliminated and replaced by the Special Hudson Yards District. Currently, the Special Jacob K. Javits Convention Center District is located in a portion of the area proposed for Subdistrict A, on the eastern side of Eleventh Avenue between West 34th and West 39th Streets. Following construction and opening of the Convention Center in 1986, the City adopted this special use district in 1990, along with changes to the underlying zoning configuration and appearance of the area across from the main entrance to the Convention Center between West 34th and West 39th Streets. This was intended to make development compatible with the Convention Center and Convention Center Plaza by mandating streetwalls and landscape improvements that would supplement the underlying zoning district regulations. However, the range of uses, densities, and other regulations, described below, have not been successful in attracting a different type of development to the area across from the Convention Center. Without more broad-based changes, this small island of commercial zoning will continue to not meet the goals of the Special District. Therefore, the Proposed Action would eliminate the Special Jacob K. Javits Convention Center District, and that area would become part of the Special Hudson Yards District with Subdistrict A requirements as described above.

Use and Density Regulations

This special district is currently mapped along the east side of Eleventh Avenue between West 34th and West 39th Streets, and extends approximately eastward to include the Amtrak Empire Line rail cut in the blocks towards Tenth Avenue. On Eleventh Avenue between West 34th and West 37th Streets, zoning districts include C6-4 and C6-2; over the rail cut between West 36th and West 38th Streets is a C6-2 district; the zoning in the remaining area is M1-5. As noted above, C6-4 permits commercial, residential and community facility use to an FAR of 10, with additional FAR available through bonus mechanisms. C6-2 permits the same uses at a somewhat lower density (6, 6.02, and 6.5 for commercial, residential, and community facility use, respectively). This is the only area west of Tenth Avenue and south of West 41st Street to permit such uses and to allow such development densities.

Mandatory District Elements and Other Design and Development Controls

Currently, the Special Jacob K. Javits Convention Center District requires that at least 50 percent of a building's ground floor, or any story within five feet of curb level on Eleventh Avenue, be allocated exclusively to retail uses. Where residential uses are permitted in the underlying zoning district, within 50 feet of Eleventh Avenue, the residential development must be located at least 85 feet above curb level. A widened sidewalk area with a width of 15 feet is required along Eleventh Avenue. Street trees are required in the widened sidewalk area as one tree for every 25 feet of frontage.

A through-block pedestrian way, minimum of 50 feet wide, must be provided on through lots located approximately 200 feet east of Eleventh Avenue, between West 34th and West 37th Streets. Tree planting, seating, lighting, paving, signage, and circulation design requirements for the pedestrian way are set forth in Section 93-22 of the New York City Zoning Resolution. Where any streetwall adjoins a sidewalk, widened sidewalk area, or pedestrian way, at least 50 percent of the surface area of the wall, up to 12 feet or to the ceiling of the first story from the curb level, must be transparent. No curb cuts are permitted on Eleventh Avenue in the Special District.

The Special District identifies required streetwall heights and setbacks at various locations. Along Eleventh Avenue, streetwall heights of between 85 and 150 feet are required with a 10-foot setback. Along the pedestrian way and street frontages west of the pedestrian way, streetwall heights of between 23 and 85 feet are required with a 25-foot setback. The only FAR bonus permitted in the

Special District is an increase from 10.0 to 12.0 for inclusionary housing, where residential development is permitted in the underlying zoning district.

Parking Regulations

Currently, accessory parking regulations in the Special Jacob K. Javits Convention Center District are governed by the underlying C6-2, C6-4, and M1-5 zoning districts. Accessory off-street parking spaces are not required for any development in the Special Jacob K. Javits Convention Center District. For residential development permitted in the underlying C6-2 and C6-4 districts, the maximum number of accessory off-street parking spaces is 20 percent of the number of dwelling units or 200 spaces, whichever is less. For community facility, commercial, or manufacturing developments permitted in the underlying districts, the maximum number of accessory parking spaces is one space per 4,000 square feet of floor area or 100 spaces, whichever is less. All accessory parking spaces for any development must be in completely enclosed buildings and not available to the public. Public parking lots or parking garages are currently not permitted in the Special Jacob K. Javits Convention Center District, except by Special Permit from the CPC.

As the Proposed Action would eliminate the Special Jacob K. Javits Convention Center District and this area would become part of the Special Hudson Yards District, the required parking and loading requirements for the Special Hudson Yards District would apply.

d) <u>Special Clinton District</u>

Overview

The Special Clinton District covers the area generally bounded by West 41st and West 59th Streets west of Eighth Avenue. Established in part to protect the scale of the core of the Clinton neighborhood, most of the District is within the Preservation Area, which limits residential and commercial development to moderate densities. However, the portion of the Special Clinton District that would be within the proposed rezoning area would be in the 42nd Street "Perimeter Area," with an underlying zoning of C6-4, which permits high-density commercial (10 FAR) and residential (12 FAR with inclusionary housing) development. A portion of the 42nd Street Perimeter Area, between West 42nd and West 43rd Streets and Eleventh and Twelfth Avenues, is currently zoned M2-3. The property owner, under a separate application, is proposing to change the M2-3 zoning district to a C6-4 zoning district.

Use and Density Regulations

The proposed rezoning would change the existing M2-3 district on West 43rd Street west of Eleventh Avenue to C6-4. M2-3 districts generally permit commercial and manufacturing uses; residential and community facility uses are not permitted in M2-3 districts. M2 districts are generally located between light and heavy industrial areas. Performance standards are lower than in M1 districts in that more noise and vibration are allowed, smoke is permitted, and industrial activities need not be entirely enclosed, except where M2 districts border on a residential district. M2-3 districts permit a maximum FAR of 2.0 for commercial or manufacturing uses. Elsewhere, the C6-4 district would be retained. However, as shown on Figure 2-5, the Special Clinton District would be divided into three subareas within the rezoning area, which collectively would be designated the 42nd Street Perimeter Area. The three subareas would allow maximum FARs of 12, 15, and 18, respectively. As described above, currently this area permits a maximum FAR of 10 for commercial uses and FAR of 12 with Inclusionary Housing for residential development. The highest FAR would be available between West 41st and West 42nd Streets east of Tenth Avenue. Here an FAR of 18 could be achieved for commercial use through the DIB. The subdistrict bounded by Tenth and Eleventh Avenues and West 41st and 42nd Streets would permit a maximum commercial FAR of 15, which would be achieved through the DIB. In the remaining portion of the proposed 42nd Street Perimeter Area, achieving the commercial FAR of 12 would also entail the DIB. In all three subdistricts, a permitted maximum

residential FAR of 12 could be achieved only through the Inclusionary Housing Bonus above the base of 10.

Mandatory District Elements and Other Design and Development Controls

The mandatory district elements and other design and development controls described for the Special Hudson Yards District would apply to the Special Clinton District sub-areas. West 42nd Street and the avenues would be classified as wide streets for the retail requirements shown on Figure 2-6. The current streetwall requirements in the Special Clinton District 42nd Street Perimeter Area would continue to apply. As shown on Figure 2-7, the regulations would stipulate 45- to 85-foot streetwalls. Pedestrian circulation requirements and on-site improvements would also apply, as shown on Figure 2-8.

Parking Regulations

Currently, accessory parking regulations in the 42nd Street Perimeter Area of the Special Clinton District are governed by the underlying C6-4 and M2-3 zoning districts. However, accessory off-street parking spaces are not permitted within the Preservation Area of the Special Clinton District, except by Special Permit from the CPC. Accessory off-street parking spaces are not required for any development in the Special Clinton District. For residential development permitted in the underlying C6-4 district of the 42nd Street Perimeter Area, the maximum number of accessory off-street parking spaces is 20 percent of the number of dwelling units or 200 spaces, whichever is less. For community facility, commercial, or manufacturing developments permitted in the underlying zoning districts, the maximum number of accessory parking spaces is one space per 4,000 square feet of floor area or 100 spaces, whichever is less. All accessory parking spaces for any development must be in completely enclosed buildings and not available to the public. Public parking lots or parking garages are currently not permitted in the 42nd Street Perimeter Area, except by Special Permit from the CPC.

Under the proposed rezoning, the required parking and loading regulations in the Special Clinton District would be the same as those for the Special Hudson Yards District.

e) <u>Special Garment Center District</u>

Overview

The Special Garment Center District, mapped between Broadway and Ninth Avenue, generally between West 35th and West 40th Streets, was instituted in 1987 to provide adequate space for the future needs of the interrelated network of manufacturers, suppliers, wholesalers, and showrooms that service the fashion industry. The Special Garment Center District's underlying manufacturing zoning is augmented by additional regulations for a "Preservation Area" that includes the side streets starting from 100 feet in from the avenues, and excludes buildings fronting on the avenues. Within the Preservation Area, conversion to office use is prohibited unless an equal amount of space is allotted for manufacturing elsewhere in the Special Garment Center District. Residential use is currently not permitted. In addition, special rules limit uses in the Preservation Area and restrict the conversion of existing floor area to office use. In this way, the Preservation Area is intended to provide locations for fashion-related firms as avenue buildings are converted to conventional office space. Additional portions of the Preservation Area are located on midblocks between Seventh and Eighth Avenues and Broadway and Seventh Avenue.

The portion of the Special Garment Center District Preservation Area proposed to be rezoned covers the midblocks between West 35th and West 40th Streets and Eighth and Ninth Avenues. These midblocks offer an opportunity to provide housing and/or allow commercial development on underutilized parcels and conversions of smaller buildings (virtually all garment-related uses within this area are within buildings containing more than 70,000 square feet of floor area) without compromising the intent of the Special Garment Center District.

Use and Density Regulations

Under the proposed rezoning, the portion of the block between West 39th and West 40th Streets more than 100 feet east of Ninth Avenue (the Ninth Avenue frontage is not within the Special Garment Center District) would be removed from the Special Garment Center District, rezoned from M1-5 and M1-6 to C6-4, and incorporated into the Special Hudson Yards District as Subdistrict E (Figure 2-5). South of West 39th Street, the Preservation Area of the Special Garment Center District would be rezoned from M1-5 and M1-6 to C6-4M and the regulations set forth below would apply:

- New construction of residential, commercial, or community facility uses, as per the underlying zoning district, would be permitted. Currently, this area is zoned M1-5 and M1-6, which generally permits commercial and manufacturing uses. Residential uses are not permitted in M1-5 or M1-6 districts. Specifically, the Preservation Area of the Special Garment Center District permits convenience, retail or service establishments, public service establishments, manufacturing, heavy services, wholesale, or storage establishments (those listed in Section 121-111 and 121-112 of the New York City Zoning Resolution). Community facility uses are not permitted in the M1-5 or M1-6 Preservation Area of the Special Garment Center District.
- Conversions to residential, commercial, or community facility uses, as per the underlying zoning district, would be permitted in buildings with less than 70,000 square feet of floor area. Currently, conversions to residential and community facility uses are not permitted in this area. Conversions to office uses (Use Group 6B) in the Preservation Area of the Special Garment Center District are permitted, provided that the equivalent amount of floor area is preserved within the Special Garment Center District for manufacturing, wholesale, or showroom uses. Conversions to those uses that would be permitted as-of-right, as described above, would be permitted without the floor area preservation requirements. Currently, there are no specific requirements regarding the size of buildings for conversions.
- For larger existing buildings (70,000 square feet and above), the existing preservation requirements would apply to conversions to any use permitted by the underlying district other than those listed in Section 121-111 and 121-112 of the New York City Zoning Resolution. Current requirements for conversions in the Preservation Area of the Special Garment Center District are described above.
- A CPC authorization would be available for larger buildings to convert and waive preservation requirements, subject to the findings that the space has not been occupied by a manufacturing, wholesale, or showroom use for at least three years, and that the proposed conversion would not harm the essential character of the Special Garment Center District. Current requirements for conversions in the Preservation Area of the Special Garment Center District are described above.
- A maximum FAR of 12 above the base FAR of 10.0 for commercial and community facility uses would be achieved through the DIB. This area is currently zoned M1-5, which permits a maximum FAR of 5.0 for commercial or manufacturing uses.
- Residential use would have a base FAR of 7.5, which could be raised to 10 FAR through the DIB. 12.0 FAR could be achieved through the Inclusionary Housing Bonus. As described above, residential uses are currently not permitted in this area.
- Existing manufacturing uses would be allowed to continue and new manufacturing uses would be allowed in existing buildings as per the underlying zoning district. Currently, manufacturing uses (those listed in Section 121-111 and 121-112 of the New York City Zoning Resolution) are permitted in this area. New manufacturing developments would not be permitted.

Bulk, Massing, and Site Planning

- Streetwall heights of between 90 and 120 feet would be required for new construction. These could be lowered to a minimum of 70 feet in order to better match adjacent streetwalls. Currently, the maximum streetwall height is 85 feet.
- Setbacks of 15 feet for residential and 20 feet for commercial buildings would be required above the streetwall. Currently, the setback requirement is 20 feet for narrow streets.
- An overall height limit of 250 feet would apply. Currently, there are no overall height limits.
- No tower coverage rules would apply. Tower requirements (Section 43-45 of the New York City Zoning Resolution) are currently applicable. A minimum tower setback of 15 feet is required.
- Required parking and loading would be the same as those for the Special Hudson Yards District.

Parking Regulations

Parking regulations within the Special Garment Center District generally include weekday no standing regulations (except for trucks loading and unloading), overnight no parking regulations, daytime no parking regulations, and no standing any time regulations. The midblocks between the north side of West 35th Street and the south side of West 39th Street between Eighth and Ninth Avenues correspond to the proposed C6-4M zoning district (see Figure 2-4).

Currently, accessory parking regulations in the portion of the Special Garment Center District proposed for rezoning are governed by special parking regulations for Manhattan Community Districts 1-8 in Article 1, Chapter 3 of the Zoning Resolution. Accessory off-street parking spaces are not required for any development in the Special Garment Center District. For commercial or manufacturing developments, the maximum number of accessory parking spaces is one space per 4,000 square feet of floor area or 100 spaces, whichever is less. All accessory parking spaces for any development must be in completely enclosed buildings and not available to the public. Public parking lots or parking garages are currently not permitted in the Special Garment Center District except by authorization (for public parking lots) or Special Permit (for public parking garages) from the CPC.

Under the proposed rezoning, the parking and loading requirements for the Special Hudson Yards District would apply in this area.

f) <u>Special Midtown District</u>

Adopted in May 1982, the Special Midtown District was created to strengthen the Midtown business core by guiding growth toward areas in Midtown Manhattan most able to accommodate new development (primarily the West Side); preserving historic areas, landmarks, and the Theater District; protecting the Fifth Avenue shopping district; and fostering a substantially better pedestrian environment. To that end, special subdistricts were established within the Special Midtown District, including the Penn Center Subdistrict, Grand Central Subdistrict, Theater Subdistrict, Fifth Avenue Subdistrict, and Preservation Subdistrict

The eastern portion of the superblock between West 31st and West 33rd Streets and Seventh and Eighth Avenues is currently occupied by the 2 Penn Plaza development. The development is within two zoning districts: its eastern frontage to a depth of 100 feet is within a C6-4 MiD district (10 FAR) of the Penn Center Subdistrict, while the western portion is within a C6-2 district (6.0 FAR). The proposed rezoning would place the Madison Square Garden site, which occupies the western portion of the superblock, in the Special Hudson Yards District. As a result, the block would be covered by two Special Districts and three zoning designations. To simplify this situation, the proposed rezoning would extend the Midtown C6-6 MiD District (15 FAR), which is mapped on the

west side of Seventh Avenue between West 33rd and West 34th Streets to a depth of 200 feet, to the superblock to the south between West 31st and West 33rd Streets (Figure 2-5) to a depth of 250 feet west of Seventh Avenue. This would create two Special Districts and two zoning designations and allow 2 Penn Plaza to be fully within the C6-6 MiD District. The remaining portion of the superblock would be within the proposed Special Hudson Yards District and mapped with a C6-4 zoning district.

3. Additional Rezoning Actions

Additional rezoning actions are proposed in peripheral areas, to create better transitions, in terms of use, bulk, and density, between the Special Hudson Yards District and the surrounding area, as follows:

a) South Side of West 31st Street between Eighth and Ninth Avenues

This area, from street line to midblock (approximately 100 feet), is currently zoned for C6-2 (6.0 FAR, 7.2 FAR with bonus). The proposed rezoning would extend the existing C6-3X (9.0 FAR) district, which is mapped along both sides of Eighth Avenue between West 29th and West 31st Streets, along West 31st Street to Ninth Avenue. Along West 31st Street, the C6-3X district would be mapped to a line along the midpoint between West 30th and West 31st Streets (see Figure 2-5). The following summarizes the controls for C6-3X:

- Permit commercial and residential development at 9.0 FAR;
- Require streetwalls at 105 to 120 feet, with setbacks above the base of 10 feet on the avenue and 15 feet on the narrow street; and
- Limit overall building height to 170 feet.

b) East Side of Eighth Avenue between West 29th and West 30th Streets

Currently the east side of Eighth Avenue is zoned C6-3X to a depth of 100 feet. With the rezoning of the adjacent midblocks from M1-5 to M1-6, there are a few residential buildings and a potential development site at the boundary that would be affected. The rezoning proposal would increase the depth of the existing C6-3X from 100 to 150 feet for the one block between West 29th and West 30th Streets (Figure 2-5). This would make two existing residential buildings conforming uses and allow a small site to be redeveloped as a residential infill site. The following summarizes the controls for C6-3X:

- Commercial and residential development at 9.0 FAR;
- Within the midblocks the required streetwall would be 60 to 120 feet, with an overall building height of 160 feet. Setbacks above the base of 15 feet on the narrow street would apply.

4. (E) Designations

As part of the zoning map amendments, (E) Designations would be mapped for hazardous materials, air quality, and noise. (E) Designations are applied to specific properties that could require remediation or other measures, should an owner want to demolish, excavate, or otherwise construct on his/her property. Specific texts for (E) Designations, and blocks and lots to which they would apply, are described in greater detail in Chapter 14, “Hazardous Materials,” Chapter 21, “Air Quality,” and Chapter 22, “Noise and Vibration.”

5. Public Open Spaces and Parking Garage

a) Open Space Plan

The City proposes two major public open spaces for the Special Hudson Yards District (Figure 2-9). (The open space associated with the Convention Center roof is described in Section D.1(b).) Currently, the proposed rezoning area has very little publicly accessible open space. The only permanent public open space in the rezoning area is the sitting plaza across Eleventh Avenue from the Convention Center. Several small community parks have recently been created on Port Authority property, between Ninth and Tenth Avenues, through an agreement with the community. In addition, privately owned public space is located at 2 Penn Plaza, and on the midblock between West 41st and West 42nd Streets and Eleventh and Twelfth Avenues. Creating a significant new open space network to provide green spaces is one of the planning objectives for the rezoning and redevelopment. As shown on Figure 2-9, the two spaces are proposed as follows:

- *Midblock Park and Boulevard System:* This would consist of a broad open space and boulevard system in the midblocks between Tenth and Eleventh Avenues, extending from a large public open space on the eastern portion of Caemmerer Yard to West 39th Street (Figure 2-9). Acquisition of the properties required to complete the open space and boulevard would be sequenced. Initially, the parcels located between West 33rd and West 36th Streets would be acquired and developed for the mapped City park and boulevard, with improvement for park purposes of the portion located between West 33rd and West 34th anticipated by 2010 and improvement of the portion between West 34th and West 36th anticipated following the 2012 completion of the proposed 950-space public parking garage located below the Midblock and Boulevard System. Acquisition and development of the remaining parcels would occur between 2010 and 2025. In all, 30 properties would have to be acquired. However, in the event that, pursuant to special regulations governing properties located in the mapped midblock park and boulevard system north of West 36th Street, all development rights from a zoning lot within that area are transferred to a zoning lot(s) within the proposed Large Scale Plan (Subdistrict A) or the Tenth Avenue Corridor (Subdistrict D) (see Appendix A.1, "Proposed Zoning Text and Maps", Section 93-223), acquisition of the property from which development rights are transferred will take place between 2010 and 2025 without condemnation. As shown in Table 2-1 and Figure 2-10, these properties are currently occupied by three residential buildings, one family shelter, and 26 retail, commercial, or industrial uses. From West 39th Street, the mapped midblock park system would connect via a pedestrian bridge to a mapped park at West 42nd Street. In all, this system would add 4.3 acres of mapped parkland to the Project Area. New buildings framing the Midblock Park and Boulevard System would be required to have entrances on the boulevard, so that it would be well used by residents and workers alike. It is anticipated that the open space plan would include facilities for both user groups.

- *Active Open Space:* A full-block, public park (approximately 3.6 acres) for active recreation would be developed on Block 675, between Eleventh and Twelfth Avenues, West 29th and West 30th Streets (Figure 2-9). If that block is to be developed as relocation space for the Department of Sanitation, City of New York (DSNY) Gansevoort facility and/or the New York Police Department (NYPD) Tow Pound, the open space would be constructed on the roof of such a facility. If these facilities are not relocated here, then the park would be built at grade.

- *Open Space Above Dyer Avenue:* Separate from the Midblock Park and Boulevard System, additional open space could be facilitated under the proposed Zoning Amendments. A network of small open spaces would be authorized to be built over the Lincoln Tunnel approaches, running from West 34th Street to West 39th Street between Ninth and Tenth Avenues, in conjunction with adjoining development. These open spaces, which are not included in the open space calculation for the Proposed Action, would function as neighborhood amenities, subject to

design and maintenance standards prescribed by the City under the Zoning Regulations (see Appendix A.3, "Conceptual Analysis").

TABLE 2-1
PROPERTIES TO BE ACQUIRED FOR THE PROPOSED MIDBLOCK PARK AND BOULEVARD SYSTEM

Site No.	Block	Lot	Property Address	Occupant / Use
1	705	53	524-26 West 34th Street	Commercial (Catering company)
1	705	54	528-56 West 34th Street	3 story package distribution center (Fed Ex)
2	706	1	400 Eleventh Avenue	2 story garage
2	706	10	539-45 West 34th Street	Industrial (ABCO Refrigeration)
2	706	15	533-35 West 34th Street	Office (Tech Ready Office Space)
2	706	17	527-31 West 34th Street	Office (Velocity Express)
2	706	48	534-36 West 35th Street	Industrial
2	706	50	538 West 35th Street	Industrial (American Pipe and Tank Manhattan Cooling Towers)
2	706	52	544 West 35th Street	Residential building/Ground floor retail
2	706	55	550 West 35th Street	Commercial (Expert furniture repair)
3	707	13	537-41 West 35th Street	Warehouse/Storage
3	707	16	529-35 West 35th Street	Commercial (Splashlight Studios)
3	707	20	517-27 West 35th Street	Industrial (Warehouse)
3	707	51	524-26 West 36th Street	Industrial (Twinco Supply Corp)
3	707	54	530-34 West 36th Street	Midtown Glass, Hanna's/Stephanie's Deli
3	707	56	542-46 West 36th Street	Industrial (Panavision)
4	708	1	438-44 11th Avenue	Transportation
4	708	17	527-31 West 36th Street	Office
4	708	20	525 West 36th Street	Residential building/Ground floor retail
4	708	46	518-20 West 37th Street	Industrial (Target Advertising)
4	708	48	522-24 West 37th Street	Industrial (Archer Elevator Co.)
5	709	17	West 37th Street	Transportation
5	709	23	521-23 West 37th Street	Industrial
5	709	25	513-19 West 37th Street	Public Parking Lot
5	709	46	510-20 West 38th Street	Public Parking Lot
5	709	52	522-24 West 38th Street	Hotel (Best Western)
6	710	11	535 West 38th Street	Automotive Repair (Mercedes Benz Repair Shop)
6	710	15	520 West 39th Street	Transportation
6	710	20	519 West 38th Street	Industrial (ZHN Auto Service, Citywide Towing Automotive Center)
7	1070	20	515 West 41st Street	American Red Cross Emergency Family Shelter

Sources: New York City Department of Finance, LotInfo 2003; New York State Department of Labor; DCP; Clinton Housing Development Company, Hell's Kitchen Survey, May 2003; John Mungovan, Assistant Director of Family Activities, American Red Cross, May 23, 2003; and AKRF, Inc.

TABLE 2-2
PROPERTIES TO BE ACQUIRED FOR THE PROPOSED ACTIVE OPEN SPACE ON BLOCK 675

Block	Lot	Property Address	Occupant / Use
675	1	260 West Side Hwy	3 story automotive / Greyhound parking
675	12	613 West 29th Street	Bus parking lot
675	24	609 West 29th Street	1 story commercial use
675	26	603 West 29th Street	4 story miscellaneous manufacturing
675	29	301 11th Avenue	1 story art gallery
675	36	309 11th Avenue	1 story gas station
675	38	604 West 30th Street	1 story garage
675	39	606 West 30th Street	2 story garage (DSNY)

Sources: NYC Department of Finance, LotInfo 2003; NYS Department of Labor; DCP; AKRF, Inc.

b) Parking Garage

The City proposes an approximately 950-space public parking garage located below the proposed Midblock Park and Boulevard System between West 34th Street and West 36th Street (Figure 2-11). The garage would be constructed to accommodate a portion of the parking demand generated throughout the Rezoning Area. Vehicular ingress and egress would be provided at midblock ramps from West 35th Street and West 36th Street. As discussed in Chapter 3, "Analytical Framework," site selection and acquisition for a public parking garage by the City is subject to the City's Uniform Land Use Review Procedure (ULURP) process.

TABLE 2-3
PROPERTIES TO BE ACQUIRED FOR THE MIDBLOCK PUBLIC PARKING GARAGE

Block	Lot	Property Address	Occupant / Use
706	10	539-45 West 34th Street	6 story residential
706	15	533-35 West 34th Street	6 story residential
706	17	527-31 West 34th Street	6 story office building
706	48	534-36 West 35th Street	1 story commercial studio
706	50	538 West 35th Street	2 story warehouse, miscellaneous
706	52	544 West 35th Street	5 story residential
706	55	550 West 35th Street	4 story miscellaneous warehouse
707	13	537-41 West 35th Street	1 story warehouse
707	16	529-35 West 35th Street	2 story commercial studio
707	20	517-27 West 35th Street	8 story warehouse, office
707	51	524-26 West 36th Street	2 story commercial
707	54	530-34 West 36th Street	1 story garage
707	56	542-46 West 36th Street	7 story warehouse, office

6. Reasonable Worst-Case Development Scenarios (RWCDS), 2010 and 2025

a) Overview

In considering the potential environmental impacts of the proposal to create a new special use district and alter use, floor area, and other regulations within the area proposed for zoning changes, it is useful to examine the RWCDS resulting from the zoning change (see Chapter 3, "Analytical Framework," Section F.2.) The components of the proposed zoning amendments most likely to significantly affect future development are the proposals to increase FARs and to permit residential use throughout the rezoning area. The new uses that may arise as a result of the proposal are large-scale office development, which could not have been built at existing permitted FARs (which currently are 2.0 and 5.0), and residential use, which is currently not permitted at all in the M zones.

To develop this scenario, *New York City Environmental Quality Review (CEQR) Technical Manual* guidelines and reasonable, worst-case assumptions have been used to identify the likely extent and location of future residential, commercial, and community facility growth. In projecting the amount and location of new residential development, several factors have been considered, including known development proposals, current housing market demands, and the DCP's "soft site" criteria, described below, for identifying likely development sites. In formulating this reasonable worst-case development scenario, the DCP was aware of the large demand for new housing in the area, which has been constrained by zoning that does not permit such development.

b) Overall Development Levels, 2010 and 2025

Long-Term Development Projections

As noted in Chapter 1, "Project Purpose and Need," the proposed zoning amendments have been developed to encourage new commercial and residential development over the next several decades. The more than 40 million square feet presented in the RWCDS is based on a long-term forecast for development potential that can reasonably be expected to occur within the Hudson Yards area with the Proposed Action. The forecast was based on the EDC's long-term projections of regional growth in employment and residential population and the total new development necessary to accommodate the growth. For commercial development, regional estimates were refined to estimate a commercial demand of about 70 million square feet for all of New York City (based on long-term market trends for several key commercial market areas that comprise the region, such as Manhattan, New Jersey, Long Island, etc.). The market study estimated that the Hudson Yards area could capture about 40 percent of this total demand, or about 28 million square feet. Similarly, the residential demand within Hudson Yards was determined by examining overall Manhattan forecasts for new residential units, and assuming that the Hudson Yards area would absorb about 10 percent a year of the Manhattan annual total, for a cumulative estimate of about 12,600 units (12.6 million square feet) through the 2025 analysis year (refer to Chapter 3, "Analytical Framework," for a detailed description of the 2010 and 2025 analysis years). The EDC also determined a retail market demand based on this growth (reflected in the approximately one million square feet of retail space in the development program) and the demand for Convention Center-related hotel rooms (a total of about 1,500 rooms as set forth in the development program).

Development Projections for 2010 and 2025

(a) Commercial Office and Retail Development

The long-term development projections—28 million square feet of office use and approximately one million square feet of retail use—represent the market study's estimate of growth in the foreseeable "long-term" future. It is likely that some of this development would not materialize until after 2025, which is the ultimate future analysis year for the Proposed Action. However, given the margin of error inherent in any long-term projection, and to be conservative for purposes of this FGEIS, the 2025 scenario assumes that up to 29 million square feet of office and up to 1.1 million square feet of retail development would be in place by 2025. Assuming that the area would absorb about 1 million square feet per year, and allowing for time to construct office buildings, the area could receive a total of approximately 2.2 million square feet of office use and 91,500 square feet of retail use by 2010. The projections were based on historical average absorption rates in Midtown Manhattan.

(b) Residential Use

The residential market study determined that the rezoning area could see an additional 12,600 housing units by 2025. Given the strong current market for residential development, the market study estimated that 2.7 million square feet (approximately 2,700 units) would be constructed by 2010.

c) Reasonable Worst-Case Development Scenario

Criteria for Identifying Projected and Potential Development Sites

The sites most likely to be developed over time were identified, based on a set of criteria that focused on appropriate size of site, its current utilization and land use, and the opportunity for assemblages and use of development rights from adjacent properties. Since the proposed rezoning has distinct land use objectives for different parts of the rezoning area, the assumptions regarding general location of particular uses follow the land use restrictions and opportunities presented in Figure 2-5. The Large Scale Plan, Farley and West 34th Street Corridors, and the sites near the PABT would account for the major portion of commercial development. Sites in the residential core, in the West 42nd

Street Corridor, and along Ninth and Tenth Avenues would account for the major portion of residential development. The criteria for identifying specific development sites are as follows:

- Individual lots or assembled lots of 10,000 square feet or larger (for projected development sites west of Tenth Avenue).
- Individual lots or assembled lots of 5,000 square feet or larger (for projected and potential development sites within the rezoning area east of Tenth Avenue).
- Lots that are vacant or contain vacant or partially vacant buildings.
- Lots containing marginal commercial and/or manufacturing uses, including parking lots and auto repair facilities (which are considered "soft" for redevelopment). These uses are located on sites that do not contain substantial investment in buildings or infrastructure and are thus more likely to be assembled and redeveloped.
- Lots constructed to half or less than the permitted FAR under current zoning and those constructed to half or less than the permitted FAR under the proposed zoning. Where a multi-lot development site has been, as a whole, built to less than half the permitted FAR under current zoning, but one or two lots have been built to more than half the currently permitted FAR, those lots remained included in the site.
- Residential buildings with fewer than six units. New York State Rent Stabilization regulations apply to buildings with six or more units; the regulations offer residents protections that make redevelopment less likely. Exceptions to this criterion include existing residential buildings located west of Tenth Avenue, some of which contain more than six residential units. These buildings are an exception, because the greatest opportunity for large-scale redevelopment is found in the area west of Tenth Avenue.
- Lots containing industrial and commercial loft buildings that have seen little or no reinvestment. These sites offer the greatest potential for conversions to residential use or for expansions. The size of buildings in which such conversions could take place as-of-right would be specified in the new zoning (see Section B.2, Rezoning Action by District).

Many sites met one or more of these criteria. The sites most likely to undergo new development were chosen from among this group, based primarily on size, location, and degree of underutilization. These are called projected development sites. The more than 40 million square foot development projection is most likely to be accommodated on the projected sites; this comprises the reasonable worst-case development scenario for analysis in this FGEIS. However, the analysis recognizes that predictions can never be certain and that there are a number of other sites that could potentially be developed under the proposed rezoning and could be substituted for some of the projected sites in accommodating the more than 40 million square foot program. The potential sites are therefore also addressed in this FGEIS. Potential Development Sites generally consist of smaller assemblages, and/or irregular-shaped parcels. In all, 99 development sites were identified, 46 of which are considered to be Projected Development Sites, 1 of which could be either Projected or Potential, and the remaining 52, Potential Development Sites.

Development Scenarios: Without and With Relocation of Madison Square Garden

The identification of development sites was affected by an uncertainty over the future of Madison Square Garden. It is possible that the development potential on that site under the proposed rezoning could give the owners of Madison Square Garden the incentive to move the arena to Ninth Avenue between West 31st and West 33rd Streets on development sites over the Amtrak right-of-way (Projected Development Sites 32 and 33; under the scenario in which Madison Square Garden relocates, this would be Projected Development Site 34). Relocation of Madison Square Garden to

this location would require a Special Permit pursuant to Section 74-41 of the Zoning Resolution for stadium and arena development. Therefore, for each analysis year, there are two scenarios for projected sites: with and without relocation of Madison Square Garden (Figures 2-12 through 2-15). The potential sites are presented for 2025 only; but they also vary depending on the future of Madison Square Garden (Figures 2-16 and 2-17).

d) Projected Development Sites

Projected Development Without Relocation of Madison Square Garden

As described in Chapter 3, "Analytical Framework" and Figure 2-12, development by 2010 is expected to total 2.7 million square feet of office use, 142,500 square feet of retail, and 2,126 housing units—on seven sites, if Madison Square Garden is not relocated. The net increase in development by 2010 would include approximately 2.5 million square feet of office space, 116,476 square feet of retail space, and 1,594 dwelling units. While not generated by the rezoning, a 1,500-room Convention Center hotel would be constructed and in operation. Projected development includes three large sites:

- Projected Development Site 33 on West 31st Street and Ninth Avenue. This site, which is relatively close to subway and rail service at Penn Station, is projected to contain a 2.2 million-square-foot office building with retail in the base.
- Projected Development Site 19, on West 42nd Street (south side) at Tenth Avenue. This site, located in the Perimeter Area of the Special Clinton District near the proposed Tenth Avenue Station of the No. 7 Subway Extension, would contain 466,100 square feet of office and retail space and 552 residential units.
- Projected Development Site 18, on West 42nd Street (north side) at Eleventh Avenue. This site would contain 782 residential units plus ground-floor retail use.

The other sites, Projected Development Sites 14, 22, and 37, would all be primarily residential buildings that would provide a total of approximately 946 residential units and 60,150 square feet of ground floor retail space.

By 2025, development assumed in the Rezoning Area would approximate a total of 44.0 million square feet[3] including 29.7 million square feet of office, 0.5 million square feet of hotel, 1.0 million square feet of retail, and 12,887 housing units. The net increase in development, generated by the Zoning Amendments, would total approximately 38.3 million square feet, including 27.0 million square feet of office, 0.5 million square feet of hotel use (not including the Convention Center hotel), 707,000 square feet of retail, and 10,604 dwelling units. These estimates, based on the development capacity of each Projected Development Site, correspond well to the market demand projections. As described above, the market study projected a demand of about 12,600 housing units, 28 million square feet of office uses, and approximately one million square feet of retail uses in the Hudson Yards area by 2025.

The development total of approximately 44.0 million square feet, expected by 2025, which includes existing uses to remain, varies slightly from the market demand projections of 42.8 million square feet, because it was developed based on the development capacity of each site. Specifically, Madison Square Garden is assumed to have completed renovation and expansion to accommodate 23,000 arena seats on its existing site. The Projected Development Sites could include sites from which transfer of unused air rights is made from existing buildings to adjacent parcels, with existing buildings and uses to remain. Those buildings to remain are identified on Figures 2-12 and 2-13.

[3] As noted above, although full development is not anticipated until 2035 or later, the development generated as a result of the rezoning is assumed conservatively for the impact analyses in this FGEIS.

Tables 3-4 and 3-5 in Chapter 3, "Analytical Framework," identify the total development (both new development and existing uses to remain) that would be located on the Projected Development Sites during each analysis year.

As shown in Table 3-5 (see Chapter 3, "Analytical Framework") and Figure 2-13, the "L" configuration of commercial development would be fully constructed from Ninth to Eleventh Avenues (Projected Development Sites 1, 31-33) and northward to West 42nd Street from Tenth to Eleventh Avenues (Projected Development Sites 2-13, 19, 20, 46). Residential use would be available in some of these buildings (Projected Development Sites 1, 2-13, 19) and Projected Development Site 1 would contain a hotel. Office use would also be provided on Projected Development Sites 14, 15, and 16, in predominantly residential buildings on West 41st and West 42nd Streets. The pattern of development on West 42nd Street would place residential buildings primarily to the west, and a mix of office and residential uses to the east of Tenth Avenue in the direction of Times Square and Midtown.

East of Tenth Avenue in the center of the rezoning area, the Projected Development Sites would generally be smaller than those to the west, south, and north, and are projected to be predominantly residential in use (Projected Development Sites 22-30 and 37-44). Projected Development Sites 39 and 41 are expected to contain manufacturing uses, as well. It is also assumed that by 2025 the Port Authority will have consolidated its bus storage needs in a bus garage (450,000 square feet), most likely on Projected Development Site 21.

Projected Development With Relocation of Madison Square Garden

With relocation of Madison Square Garden to Projected Development Site 34 (the combination of Projected Development Sites 32 and 33 on Ninth Avenue between West 31st and West 33rd Streets), the floor area total and development patterns in 2010 would vary slightly from those described above (Table 3-6 and Figure 2-14). It is assumed that construction of the new Madison Square Garden would be under way on Projected Development Site 34, which includes Projected Development Site 33, so there would be no new office tower there. Instead, a new office tower is projected to be constructed at West 34th Street and Eleventh Avenue, adjacent to the proposed 34th Street Station of the No. 7 Subway Extension, on Projected Development Site 4. It would contain 1.7 million square feet of office, ground-floor retail space, and 194 housing units. It is assumed that the mixed-use building on Projected Development Site 14, Tenth Avenue between West 40th and West 41st Streets, would not be built in this scenario. In all, this scenario includes a total of approximately 5 million square feet by 2010, with 2.2 million square feet of office use, 91,477 square feet of retail, and 2,722 housing units. While not generated by the Zoning Amendments, the 1,500-room Convention Center hotel would be constructed and in operation by 2010. The net increase in development generated by the rezoning would be approximately 2.1 million square feet of office space, 50,929 square feet of retail space, and 1,425 dwelling units.

By 2025, total development assumed in the Rezoning Area would equal approximately 45.0 million square feet, including 29.2 million square feet of office, 1.5 million square feet of hotel (not including the Convention Center hotel), 1.1 million square feet of retail, and 12,887 housing units (see Chapter 3, "Analytical Framework" and Figure 2-15). Madison Square Garden is assumed to have moved into a new, 23,000-seat arena on Projected Development Site 34. Its former location, Projected Development Site 45, is assumed to have been redeveloped with 4.6 million square feet of office use, a 1.0 million-square-foot hotel, and 133,000 square feet of retail (these numbers are included in the totals cited above). This large site, located above a major rail and subway hub, would absorb so much of the anticipated commercial development that Projected Development Site 46, which is the farthest from transportation and on the edge of the Large Scale Plan (Subdistrict A) at West 41st Street at Eleventh Avenue, would not be developed under this scenario. As shown in Table 3-6 and Figure 2-13, the remaining Projected Development Sites would be the same with or without relocation of

Madison Square Garden. By 2025, the net increase in development generated by the Zoning Amendments would include approximately 39.8 million square feet, including 26.3 million square feet of office, 1.5 million square feet of hotel (not including the Convention Center hotel), 806,423 square feet of retail, and 10,604 housing units.

As described below, Projected Development Sites include sites from which transfer of unused air rights is made from existing buildings to adjacent parcels. These estimates are based on the development capacity of each projected site and correspond well to the market demand projections.

e) Potential Development Sites

As noted above, the analysis of the possibilities for the rezoning area to absorb commercial and residential development demand over the long term identified a number of sites with the potential to attract such development, but which were less likely than the projected development sites to do so. As shown on Figures 2-16 and 2-17, these sites are generally smaller than the Projected Development Sites—often created by zoning lot mergers and the transfer of unused air rights—and are located farther east than the projected development sites. The inventory of Potential Development Sites would vary slightly depending on whether Madison Square Garden was relocated (see Appendix A.2 for inventories of Potential Development Sites without and with relocation of Madison Square Garden).

C. TRANSIT ACTION

This section describes the conceptual design of the transit component of the Proposed Action and summarizes technical requirements for further design development.

1. Planning and Design Criteria

The following objectives of the Transit Action have formed the basis for planning and design of the No. 7 Subway Extension:

- Provide transit services to support the anticipated level of development resulting from the proposed rezoning;
- Minimize effects of the new service on systemwide reliability and performance;
- Maximize use of existing transit infrastructure;
- Minimize the energy consumption and congestion associated with auto use; and
- Minimize disruption during construction.

The effort began with consideration of transportation alternatives[4] to determine the mode of transit and alignment and stations that would best support the project goals. This analysis concluded that buses and light rail systems could not provide the capacity to accommodate the anticipated demand that would result from 40 million square feet of redevelopment. The analysis also indicated that the extension of the No. 7 Subway westward and southward into the Hudson Yards area best fulfills the project's goals.

The selected alignment and station locations were identified on the basis of detailed evaluations of 16 alternative alignments and station options. These alternatives were assessed for their ability to serve the redevelopment and were also subject to evaluation based on a variety of design, service, and constructability criteria. The alignment, profile, stations, and operational characteristics that emerged from this process are described in this section. The likely construction methods and construction duration are described in section E of this chapter.

[4] Planning Framework and Alternatives Evaluation, November 2003. MTA NYCT/NYCDCP.

1. Description of the No. 7 Subway Extension

The following describes planned features of the No. 7 Subway Extension, including:

- Proposed alignment and profile
- The Intermediate Station and Terminal Station
- Ancillary facilities, such as power, ventilation, and environmental controls
- Signals
- Rolling stock
- Yard
- Property acquisition.

a) Alignment and Profile

The existing No. 7 Subway Line, constructed in the early 1900s as the Queensboro Subway, provides:

- Service between Main Street in downtown Flushing in Queens and the Times Square Station in Manhattan;
- Connections to the E, F, G, N, R, V, and W in Queens;
- The following connections in Manhattan:
  - Nos. 4, 5, and 6 at Grand Central Station,
  - B, D, F, and V at Fifth Avenue, and
  - 1, 2, 3, 9, A, C, E, N, Q, R, and W at Times Square.

The No. 7 Subway operates "A" Division cars, with trains consisting of eleven 51-foot 4-inch cars. The same "A" Division cars would also serve the proposed extension.

At Times Square, the No. 7 Subway terminates in an east-west orientation; the western end of the subway tunnel consists of two tracks and terminates within the West 41st Street right-of-way, 539 feet west of the Times Square Station. From its current endpoint, the proposed No. 7 Subway Extension would extend westward under West 41st Street, and then turn southward along Eleventh Avenue and continue to West 24th Street (Figures 2-18 and 2-19), a distance of approximately one mile. The proposed extension would have two new stations: an Intermediate Station at approximately West 41st Street and Tenth Avenue and a Terminal Station on Eleventh Avenue at approximately West 34th Street. Along the full length of the proposed extension, the subway would include one track in each direction. At the 34th Street Terminal Station, a third track would be provided to allow trains to reverse directions or move in or out of service under certain operating conditions. This proposed layout would allow for a possible future extension southward toward Downtown or eastward toward Penn Station.

The proposed No. 7 Subway Extension would be deeper than most existing subway lines in New York City, ranging from approximately 75 feet to some 130 feet below the street. Several factors necessitate the system's depth:

- *Clearance* -- The No. 7 Subway Extension tunnel would need to safely pass under a number of existing train and vehicular tunnels, including the A, C, and E lines at Eighth Avenue, a Port Authority Bus Terminal (PABT) bus underpass ramp, the Amtrak Empire Line rail cut, three Port Authority Lincoln Tunnel vehicular tubes, an Amtrak Empire Line tunnel (North Access Tunnel) which curves and descends to approach Penn Station, the Amtrak Hudson (North) River tunnels, the Eleventh Avenue viaduct, and the Long Island Rail Road Caemmerer Yard.
- *Environmental impact minimization* -- A deeper alignment was selected to avoid using cut-and-cover excavation techniques along Eleventh Avenue, and minimize the impacts of traffic

disruption, pedestrian movement interference, and generation of noise and dust associated with exclusive reliance on cut-and-cover excavation.

- *Rock location and quality* -- The location (depth) and quality of bedrock in which the tunnel would be constructed was a factor in the selection of the system's depth. The bedrock (Manhattan schist with pegmatite veins) varies from approximately 5 feet deep to in excess of 100 feet deep. In contrast, the overburden (material overlying the bedrock) includes soft alluvial silts and clays.

Upon modification of the western portion of existing tunnel, the proposed extension would start at the existing No. 7 terminus wall west of the Times Square station below the existing Eighth Avenue Subway, which travels north/south. The Eighth Avenue Subway Station at West 42nd Street contains an unused lower level beneath the active subway; the No. 7 Subway Extension would pass westward through this lower level. The lower-level tunnel structure would be modified to accommodate the No. 7 Subway Extension, including both the subway alignment and ventilation facilities.

The No. 7 Subway Extension would continue westward under 41st Street from Eighth Avenue and pass below the PABT and the bus underpass ramp (Figure 2-20). The proposed alignment would continue westward along West 41st Street to the Intermediate Station. West of this station, the proposed extension would curve for approximately 1,000 feet to the west and south and enter the Eleventh Avenue right-of-way passing below the Lincoln Tunnel tubes (Figure 2-21). The alignment would also pass below the existing Amtrak Empire Line, which runs in an open cut in a southwesterly direction, which carries Amtrak trains between Penn Station and Albany and points beyond. The proposed alignment would continue southward beneath the Eleventh Avenue right-of-way to the West 34th Street Terminal Station.

The proposed extension would also include two lay-up tracks located south of the Terminal Station, with the most southerly end of the lay-up tracks ending in the vicinity of West 24th Street (see Figure 2-19). The lay-up tracks would be used as train layover and staging for Flushing-bound service to accommodate patronage demand after events at the Convention Center and Multi-Use Facility. Each lay-up track of approximately 1,800 feet could store three 11-car trains; therefore, total staging needs at the end of the Terminal Station could be accommodated by provision for six trains on the lay-up tracks and provision for one additional train within the Terminal Station. At the southern end of the Terminal Station, the alignment would pass below the Amtrak North River Tunnel, which runs east-west under the Hudson River, below Pier 62, and continues east to Penn Station.

b) Stations

As shown on Figure 2-19, two new stations are proposed to serve the No. 7 Subway Extension. Both would be deep, and mezzanines would be necessary for each, with the Terminal Station having both an upper and lower mezzanine. At the Terminal Station, passengers entering the station would descend to a fare control area on the upper mezzanine by escalators and stairs at the entrance located in the proposed Midblock Park and Boulevard System. From there, passengers would descend to a lower mezzanine, which would provide access to one island platform and one side platform. At the Intermediate Station, a fare control area would be located at street level for the boulevard entrance and at mezzanine level for the West 42nd Street entrance. From each of the Intermediate Station entrances, passengers would descend to a mezzanine, which would provide access to a single island platform. Each station would have at least one Americans with Disabilities Act (ADA) accessible entrance, and each level would be served by two elevators providing redundant access between the fare control area and the street and between the fare control area and the platform. All station areas would meet ADA standards for elevations and grades for wheelchair access. Barrier-free access would be provided in compliance with ADA requirements for accessible routes, including signage,

vending machines, other public amenities (e.g., telephones and restroom facilities), and surface finishes.

Although it is anticipated that station entrances would initially be freestanding structures, development is expected to occur above many of them in the future. Any development or enlargement on a zoning lot that includes the locations listed below would be required to provide an easement for subway-related use and public access to the subway mezzanine or station (see Appendix A.1, "Proposed Zoning Text and Maps").

- Southeast corner of West 41st Street and Tenth Avenue;
- Northwest corner of West 34th Street and the Midblock Boulevard;
- Southeast corner of West 36th Street and Eleventh Avenue; and
- Southwest corner of West 40th Street and Eighth Avenue.

Additional entrances would be mandatory for new development on designated sites. The proposed zoning amendments would not have retroactive requirements for existing buildings to support subway entrances. However, they would require future developers to provide new subway entrances to supplement the entrances that are being planned for the No. 7 Subway Extension. Options to accommodate such supplemental entrances with use of "knock-out" panels or other similar construction would be explored during continuing engineering and design.

The design of the new subway stations would be reviewed under MTA's Arts for Transit (AFT) program. In 1982, legislation was adopted mandating that all new construction projects allocate funds for public art. Since 1985, this program has been administered by AFT, which oversees public art installations for MTA. Under its mission, AFT applies to new or rehabilitated stations and to new or rehabilitated aboveground facilities that are accessible to the public and/or highly visible by the public.

In addition to its administrative role for the public art program, AFT serves as the "aesthetic eye" for station construction or rehabilitation projects. In that role, AFT provides design consultation, including architectural (selection), design review, and design support. For the No. 7 Subway Extension, AFT would provide input to the selection of architectural firm; the design of stations, including materials selection and entrance design; and the selection of public art installations. Sustainable design principles would be applied throughout the planning and design of the stations. All sustainable design opportunities—including energy efficiency, natural day lighting, natural ventilation, and material conservation—would be explored.

Detailed designs for stations will be developed during continuing Preliminary Engineering and Final Design. However, the basic concepts of each station have been developed and are described below.

Terminal Station: West 34th Street at Eleventh Avenue

The Terminal Station would serve the southern end of the Rezoning Area, the Multi-Use Facility, and the expanded Convention Center. As shown in Figures 2-24 to 2-26, this station, located beneath Eleventh Avenue between West 32nd and West 35th Streets, would be larger than the Intermediate Station, as it would contain additional support facilities, such as transit crew quarters, and dispatchers, cleaners, and other departmental offices. The station would accommodate three tracks approximately 130 feet below the ground level. The station platforms would be constructed beneath the Eleventh Avenue right-of-way to reduce impacts on private property. To serve the three tracks, the platforms for the Terminal Station would be arranged as a side and island platform (Figure 2-24) and would have an upper mezzanine located below the street level outside of the right-of-way and a lower mezzanine located above the platform.

The station would contain one primary entrance located between West 33rd and West 34th Streets, east of Eleventh Avenue in the proposed Midblock Park and Boulevard System (Figure 2-25). This

entrance would lead to escalators and stairs from street level to an upper mezzanine level, from which two main escalator banks would deposit passengers onto a lower mezzanine. Regularly spaced pairs of escalators and stairs would lead from the lower mezzanine level to the platform level. Passage between all levels would also be provided from two elevators per level. The entrance structure located in the proposed Midblock Park and Boulevard System would maximize day lighting available, and would be designed as a focal point at the southern boundary of Subdistrict A.

Additional entrances at the Terminal Station may be developed by others, including a connection west from the upper mezzanine, under Eleventh Avenue, leading to the Multi-Use Facility, and a northern connection to the Convention Center. Lastly, a direct connection could also be made into a future east-west pedestrian connector to Penn Station. The location of the station and its configuration would allow these direct connections by others (Figure 2-26).

Intermediate Station: West 41st Street at Tenth Avenue

The Tenth Avenue Intermediate Station would serve existing residential areas along West 42nd Street, north of West 42nd Street, and along Ninth and Tenth Avenues; the PABT; the commercial, retail, and entertainment uses on West 42nd Street; and tourist destinations along the waterfront. The Intermediate Station would not be open to serve passengers until after 2010. In the future, this station would serve the northern portion of the Rezoning Area, the West Midtown Ferry Terminal, and the proposed Convention Center Expansion and hotel.

As shown in Figures 2-19 and 2-20, this station would be located under West 41st Street, generally between Dyer and Tenth Avenues. The tracks would be approximately 75 feet below the existing ground level. The station would be constructed within the West 41st Street right-of-way and the Port Authority Easement, which would limit impacts on private land. (The Port Authority easement would extend within the midblocks from West 41st to West 39th Streets. It is intended to facilitate construction and use of a pedestrian bridge that will connect from the new park between West 42nd and West 41st Streets, over the Lincoln Tunnel infrastructure between West 41st and 39th Streets, and into the Midblock Park and Boulevard System at the new park between West 39th and 38th Streets.) One entrance would be located in a headhouse on West 42nd Street east of Tenth Avenue. A second westerly entrance would be located at the site of the proposed new pedestrian bridge, which would span between West 42nd Street and the Midblock Park and Boulevard System at West 39th Street (Figure 2-22). A third entrance at Tenth Avenue and West 41st Street would be provided by that site's developer, as a mandatory improvement under the rezoning. The West 42nd Street and West 41st Street fare control areas would be connected by escalators to a mezzanine approximately 50 feet below the surface. From the mezzanine, passengers would descend to the island platform, which would be approximately 580 feet long (Figure 2-23). The westerly entrance would have a fare control at street level and would be connected to the western end of the mezzanine by escalators and a passageway. ADA elevators would be available at all levels.

c) Ancillary Facilities

In addition to tracks and stations, the proposed subway extension would require ancillary facilities, such as electrical substations, ventilation facilities, mechanical equipment rooms, and maintenance rooms. Although some of these would be within the envelope of the proposed stations, certain facilities would have to be located in separate structures (Figure 2-27). Several of the facilities would be located on sites that are also identified as projected development sites. In these cases, the ancillary facilities would be designed to allow for future development overbuild, so that the subway facilities could be incorporated into a new building on the same site. Therefore, although these structures may be visible at the start of the subway extension operation, over time, the facilities could become integrated at street level into new development on the site. Should this occur, the ancillary facility would be indistinguishable from the new development.

Although the above-grade architecture and design of the ancillary facilities have not been established at this time, the structure's façades would be designed to be compatible with the surrounding neighborhood, similar to other subway facilities throughout the City. The locations and range in size of each above-grade ancillary facility identified on Figure 2-27 are summarized in Table 2-4.

TABLE 2-4
PROPOSED SUBWAY EXTENSION ANCILLARY FACILITIES

Site	Location	Area Above Grade (gsf)	Stories Above Grade	Projected Development Site
A	Eleventh Avenue between West 25th and 26th Streets	8,000	1	No
J	Proposed Terminal Station	4,100	1	Yes
P	Proposed Terminal Station	3,800	1	Yes
K	West 36th Street at Eleventh Avenue	0	0	Yes
M	Proposed Intermediate Station	21,900	3	Yes
L	Proposed Intermediate Station	43,000	3	Yes
N	West 40th Street between Eighth and Ninth Avenues	25,000	4	No

Note: Refer to Figure 2-27 for location sites.

Power Substations and Other Electrical Requirements

Two types of power substations would be constructed to meet the power requirements of the proposed subway extension—facilities substations and traction power substations. Traction power substations convert Con Edison-supplied alternating current (ac) electric power to direct current (dc) electric power which is used to power the trains through the conventional third rail. Facilities substations, also known as facility power rooms, supply ac power to all other systems that are necessary for the operation of the subway transit facilities. These facilities include signal and communications, lighting, ventilation, heating and cooling, ticketing, escalators and elevators, public address and telephone systems, etc., in the stations.

The proposed subway extension would require a total of three traction power substations. One traction power substation would be located within a facility building of each proposed subway station and one substation would be located at the end of the lay-up tracks. These sites correspond with Sites L (Intermediate Station), Site P (Terminal Station), and Site A (near the end of the lay-up tracks) on Figure 2-27. All three traction power substations, approximately 50 feet by 70 feet, would be located below grade. The below-grade depth of the traction power substations would range from 20 to 80 feet. Each traction power substation would have two Con Edison electric services, two traction power transformers, two rectifiers, and two dc switchgear lineups. This is to minimize the impact on normal operations in the event of either the loss of one service from Con Edison or a component failure.

The proposed subway extension would require a total of six facilities power substations. Facilities substations would be located at each proposed subway station, at the end of the lay-up tracks, and at West 40th Street near Eighth Avenue. These sites correspond with Sites L and M (Intermediate Station), Sites P and J (Terminal Station), Site A (end of lay-up tracks), and Site N (West 40th Street near Eighth Avenue) on Figure 2-27. Each location, requiring approximately 35 feet by 60 feet, would typically be located underground within the ancillary facilities buildings. Each new facility substation would be fed with duplicate Con Edison service and would contain station battery and charger systems, fire detection and alarm systems, an intrusion detector system, and a remote terminal unit that would communicate with NYCT's Power Control Center. The Con Edison duplicate services would provide back-up power supply feeder in case of the loss of one service.

Ventilation Facilities and Air Temperature Control

The proposed subway extension would require several ventilation and climate control systems for the new stations and tunnels of the No. 7 Subway Extension, including: under-platform exhaust, over-track exhaust, tunnel ventilation, and station air tempering. Ventilation facilities would be located at each proposed subway station, one at the end of the event staging tracks, and one at West 40th Street near Eighth Avenue. These sites correspond with Sites L and M (Intermediate Station), Sites P and J (Terminal Station), Site A (end of lay-up tracks), and Site N (West 40th Street near Eighth Avenue) on Figure 2-27. Each station ventilation facility would require four tunnel ventilation fans and one over-track exhaust fan per track. Each station ventilation facility would also require an air tempering system for station climate control that would include fans, a cooling tower, and a chiller. Over-track exhaust fans and air tempering systems are only required at subway stations and therefore would not be located at Sites A and N. All facility buildings would also include fans and cooling equipment to meet mechanical requirements of the facility building itself. To eliminate the need to exhaust through sidewalk grates, most of the vented air would exhaust through louvers in the façades or through rooftop structures of the proposed facilities described above. Louvers would be located at a minimum distance of 10 feet above the sidewalk level.

Various components of the ventilation and climate control systems would not operate continuously. The tunnel ventilation system would mainly operate during emergency conditions. The air tempering systems would operate only during the summer. The over-track and under-platform ventilation would operate during regular running of the trains.

Environmental Controls

The No. 7 Subway Extension would be designed to comply with the Environmental Management System (EMS) established by the MTA NYCT, which establishes protocols to achieve energy efficiency, enhanced indoor environmental quality, conservation of materials and resources, and water conservation and site management. The EMS conforms with the ISO 14001 Standard, an internationally recognized system that provides a disciplined framework under which NYCT can demonstrate control over key issues related to raw materials consumption, energy usage, emissions, wastes, products, transport, distribution, and services. The subway design would be developed in conformance with "Design for Environment Guidelines" prepared specifically for use during the project's design phase. The purpose of these guidelines is to establish a framework for the creation of an environmentally responsive subway system that is appreciably ahead of current standards and practices when compared with similar transportation systems.

d) Signals

The No. 7 Subway Extension would be designed to accommodate both standard block layout as well as a state-of-the-art Communication-Based Train Control (CBTC) signal system. Currently, fixed signal blocks control most subway operations. Each signal block is a section of track controlled by a particular set of signals. In contrast, the CBTC system, also known as "moving block control," uses an independent communication network to determine safe train separation and permissible speeds for following trains. It is more flexible than the fixed signal block system now in place, because it can continuously update train positions, distances, and travel speeds.

e) Rolling Stock

The rolling stock for the No. 7 Subway Extension would be the same as that currently operating on the NYCT A Division lines including the existing No. 7 Subway Line. The extension would be designed to accommodate 11 A Division 51-foot 4-inch cars, with full train sets that are 564 feet in length. The trains would be powered from a 600-volt third rail. The approximately one-mile extension, which calls for four additional trains per hour in the peak period in the peak direction, would require the operation of approximately 11 new A Division train sets, including spare trains.

f) Corona Yard Improvements

No. 7 Subway cars are currently stored and maintained at the Corona Rail Yard and Maintenance Facility (Corona Yard) located in the Flushing section of Queens. The approximately 17-acre Corona Yard complex contains an existing maintenance building, tracks, and a refuse collection platform where work trains unload trash from No. 7 Line stations. The MTA-owned rail complex currently has two locations used for train storage (lay-up tracks): the "front yard" to the west and the "back yard" to the east of the facility. There are 15 lay-up tracks located in the front yard and an additional 12 in the back yard. Corona Yard currently accommodates and services a fleet assignment of approximately 38 trains, which includes 28 trains stored overnight in the yard and 5 inside the maintenance facility.

In 2003, the MTA approved, independent of the Proposed Action, the reconfiguration of the Corona Yard (New Corona Maintenance Shop and Car Wash and Yard Configuration), which included the construction of a new maintenance shop, a new car wash facility, and a new loop track for cleaning operations. This MTA NYCT reconfiguration project is anticipated to be completed by 2010.

The Proposed Action would require the addition of 11 new trains to the existing No. 7 Subway fleet. In order to accommodate these additional trains, construction of new lay-up tracks would be required at Corona Yard. Approximately six new lay-up tracks are proposed for this purpose and would be constructed as a component of the No. 7 Subway Extension element of the Proposed Action.

The new lay-up tracks would be accommodated by relocating certain functions to the area northeast of the existing storage tracks at Corona Yard, on a largely vacant portion of MTA-owned property located north of Roosevelt Avenue and west of the Flushing River (Figure 2-28). One of the tracks in the maintenance shop located in the back yard would be modified and extended northeast, beneath the Roosevelt Avenue viaduct, where it would branch into four new tracks, two for refuse collection and two for Maintenance of Way. The refuse collection tracks would include a platform between the tracks. The relocation of refuse collection tracks and platform along with the maintenance tracks and area to the "back yard" would allow for the reconfiguration of their former areas in the "front yard". This area would be converted to six lay-up tracks. With the addition of the new lay-up tracks, Corona Yard would be able to accommodate and service a total fleet assignment of 49 trains, including the overnight storage of 33 trains in the Yard and 5 trains in the maintenance facility.

g) Property Acquisitions and Easements

Acquisition of the properties necessary for the No. 7 Subway Extension would be undertaken by the City on behalf of the MTA. The City would also convey to the MTA the properties within City-owned public rights-of-way needed for the subway extension (Figure 2-29). Permanent facilities that would require property acquisition include subway stations, ancillary structures, and substations. No additional acquisition or easement would be required at Corona Yard. During construction, it would be necessary to deliver a wide variety of materials into the underground tunnels. Excavation and materials delivery require shaft sites—areas where the excavated spoils would be removed, and where workers and construction materials would enter and leave the tunnel. In addition, near the shaft sites, various lay-down or staging areas are needed—where the construction machinery and other equipment and materials would be delivered, stored, and operated. Property for these needs would be acquired as fee takings or purchases, temporary easements, and permanent easements. Shaft sites would also be used for inserting or removing tunnel boring machines (TBMs). Table 2-5 lists properties that would require acquisition for operation of the subway as well as temporary construction operations; the acquisition requirements and related displacement and relocation are described in Chapter 5, "Socioeconomic Conditions." Properties that would require temporary and permanent easements for construction access and lay-down areas are listed in Table 2-6.

This FGEIS analysis has based the proposed temporary and permanent uses for the potential locations of new station entrances, ancillary facilities, and construction staging areas being considered based on the current conceptual design.

TABLE 2-5
PROPERTIES IDENTIFIED FOR SUBWAY SITE ACQUISITIONS

Site	Block	Lot	Property Address	Occupant / Use
A	697	1	220 Eleventh Avenue	Parking Lot
A	697	60	544 West 26th Street	Parking Lot
J	705	1	380-386 Eleventh Avenue	1 story Night Club
J	705	5	553-557 West 33rd Street	5 story Warehouse
J	705	53	528-556 West 34th Street	3 story Package Distribution Center (Fed Ex)
L	1051	1	562-574 Tenth Avenue	4 story commercial
M	1069	29	537-541 Tenth Avenue	Parking Lot
M	1069	34	543-551 Tenth Avenue	Car Rental/Parking Lot
N	763	47	310-312 West 40th Street	Parking Lot
P	706	1	400 Eleventh Avenue	2 story garage

Note: Refer to Figure 2-29 for location of sites

TABLE 2-6
PROPERTIES IDENTIFIED FOR SUBWAY EASEMENTS

Block	Lot	Easement	Address	Occupant/Use
670	1	Temporary	480 Twelfth Avenue	Miscellaneous Garage or Gas station
670	50	Temporary	239 11th Avenue	Miscellaneous Garage or Gas station
670	70	Temporary	231 11th Avenue	Miscellaneous Warehouse
672	1	Temporary	20 Joe Dimaggio Highway	Miscellaneous Loft
673	1	Temporary	261 11th Avenue	Miscellaneous Warehouse
674	1	Temporary	24058 Twelfth Avenue	Railroad – private ownership
675	29	Temporary	301 11th Avenue	1 story art gallery
675	36	Temporary	309 11th Avenue	1 story gas station
679	1	Temporary	651 Twelfth Avenue	Convention Center truck marshalling yard
680	1	Temporary	360 Joe Dimaggio Highway	Convention Center
680	33	Temporary	491 11th Avenue	Lincoln Tunnel ventilation bldg
696	1	Temporary	202 11th Avenue	Store Building; 2-story or store/office
696	65	Temporary	210 11th Avenue	Factory - Industrial Miscellaneous
698	1	Temporary	244 11th Avenue	Office Building; Fireproof up to 9 stories
699	1	Temporary	262 11th Avenue	Loft; Fireproof and storage type w/out stores
700	1	Temporary	282 11th Avenue	Garage
701	1	Temporary	302 11th Avenue	Fireproof Warehouse
701	68	Temporary	314 11th Avenue	Factory; Industrial - Miscellaneous
701	70	Temporary	312 11th Avenue	Garage
707	1	Temporary/ Permanent	418 11th Avenue	Public Open Space (Javits Plaza)
708	1	Temporary	438 11th Avenue	Transportation
708	65	Temporary	450 11th Avenue	Gas Station with Enclosed Workshop
709	1	Temporary	456 11th Avenue	Gas Station
709	2	Temporary	460 11th Avenue	Miscellaneous Garage or Gas station
709	3	Temporary	462 11th Avenue	Parking Lot
709	68	Temporary	470 11th Avenue	Parking Lot
709	70	Temporary	466 11th Avenue	Parking Lot
709	71	Temporary	464 11th Avenue	Garage, 2 or more stories
710	1	Temporary	476 11th Avenue	Parking Lot
711	1	Temporary/ Permanent	11th Avenue	Lincoln Tunnel plaza (entrance to north tube)

TABLE 2-6 (CONTINUED)
PROPERTIES IDENTIFIED FOR SUBWAY EASEMENTS

Block	Lot	Easement	Address	Occupant/Use
1012	1	Temporary	620 Eighth Avenue	N/A
1013	1	Temporary	640 Eighth Avenue	N/A
1013	12	Temporary	241 West 41 St.	Miscellaneous Hotel
1032	1	Temporary	566 9 Avenue	Ventilation Bldg for the PABT
1032	5	Temporary	351 West 41 St.	Misc. Warehouse
1032	7	Temporary	347 West 41 St.	Misc. Office Building
1032	29	Temporary/ Permanent	641 Eighth Avenue	PABT
1032	48	Temporary	330 West 42 St.	Office Building (McGraw Hill bldg)
1032	54	Temporary	338 West 42 St.	Post Office
1032	101	Temporary	355 West 41 St.	Old law tenement
1050	1	Temporary	538 Tenth Avenue	Covenant House
1050	6	Temporary	455 West 40 St.	City University (Hunter College MFA Campus)
1050	13	Temporary/ Permanent	441 West 40 St.	Port Authority Bus ramp
1050	49	Temporary/ Permanent	440 West 41 St.	Residential building w/ Ground floor retail
1050	61	Temporary	554 Tenth Avenue	Parking Lot
1050	158	Temporary	454 West 41 St.	Misc. Loft
1051	8	Permanent	Street/ Sidewalk	Street/ Sidewalk
1051	16	Permanent	Street/ Sidewalk/ Dyer Ave	Street/ Sidewalk
1069	1	Temporary/ Permanent	514 11th Avenue	Mercedes Benz Showroom and Offices
1069	24	Temporary/ Permanent	503 West 40 St.	St. Raphael's Church
1069	43	Temporary/ Permanent	West 41 St.	Lincoln Tunnel Approach Road (Cardinal Stepinac Place)
1069	136	Temporary/ Permanent	502 West 41 St.	St. Raphael's Church rectory (5 story bldg)
1070	5	Temporary	521 West 41 St.	Con Edison Substation
1070	20	Temporary	515 West 41 St.	American Red Cross Emergency Family Shelter
1070	29	Temporary/ Permanent	557 Tenth Avenue	45 story Residential High rise (Victory tower)

Note: Refer to Figure 2-29 for location of sites

D. OTHER ELEMENTS OF THE PROPOSED ACTION

An expanded Convention Center and a separate Multi-Use Facility for sports, entertainment, and exhibition uses would occupy the western side of Eleventh Avenue. Currently located between West 34th and West 39th Streets, the Convention Center would be expanded in two phases. In Phase I the Convention Center would expand to the north to the southerly side of West 40th Street, terminating at the Quill Bus Depot (Figures 2-32 and 2-33). In Phase I, West 33rd and West 39th Streets would be closed. A hotel would be built on the west side of Eleventh Avenue between West 42nd and West 41st Streets. A temporary elevated pedestrian passage would be constructed over the Quill Bus Depot to connect the hotel and the expanded Convention Center, which would provide the Convention Center with an entrance on West 42nd Street. As part of Phase I, the existing lot west of Eleventh Avenue between West 33rd and West 34th Streets that is now used for truck marshalling would be the site of a multi-level truck marshalling facility. In addition, other transportation functions could also be located within this block, including LIRR train storage. These uses would be implemented only

upon consideration of the marshalling, parking, and other needs of the Convention Center and would be subject to additional environmental reviews, if necessary. In Phase II, the Quill Bus Depot would be relocated and the Convention Center Expansion would be completed and public access along West 40th and West 41st Streets, between Eleventh and Twelfth Avenues, would be eliminated (Figures 2-34 to 2-40). An east-west internal pedestrian corridor, in alignment with West 40th Street, would maintain public access to Twelfth Avenue (Figure 2-36). In addition, in Phase II a truck lane would be created below-grade adjacent to the Amtrak Empire Line and in an unused former railroad right-of-way to connect the truck marshalling yard with the fully expanded Convention Center (Figure 2-45). This would enable trucks to enter the Convention Center from the marshalling yard without traversing City streets.

To enable the northward expansion of the Convention Center to be completed, the Quill Bus Depot, between West 40th and West 41st Streets and Eleventh and Twelfth Avenues, would be relocated to a below-grade site on the north side of West 30th Street between Tenth and Twelfth Avenues, underneath the new Multi-Use Facility and new office development.

Farther south, a state-of-the-art Multi-Use Facility would occupy the blocks bounded by West 30th and West 33rd Streets, between Eleventh and Twelfth Avenues, with an entry portal on West 33rd Street, that would serve as home to the New York Jets and provide for additional events and exhibition space beyond that provided by the Convention Center. It would be surrounded by an extensive open space system, with a passive open space to the north, a new active recreation park to the south on Block 675 (West 29th to West 30th Streets between Eleventh and Twelfth Avenues), and the planned Hudson River Park to the west. In addition, a pedestrian promenade access to the southern entrance of the Multi-Use Facility would extend over the sidewalk of West 30th Street and provide access to the High Line in the event that structure is renovated as public open space. Finally, a public open space to the east would be located on the eastern portion of Caemmerer Yard between Tenth and Eleventh Avenues. The Multi-Use Facility would also serve as the focal point for the 2012 (or subsequent) Olympics if New York City were chosen as the host city.

Transportation uses in the Hudson Yards area today include the NYPD's Tow Pound on Pier 76, truck parking for the Convention Center, bus parking lots for the Port Authority of New York and New Jersey (PANYNJ), and significant on-street commuter bus parking. The development program described in this FGEIS would encourage the relocation of many of these uses to improve the area's streetscape and to create opportunities for more compatible development and neighborhood amenities. A new Port Authority bus garage could be sited within close proximity to the Lincoln Tunnel bus ramps.

The Hudson River Park legislation states that "…the City must make best efforts…" to relocate the Tow Pound, which occupies Pier 76 in the middle of the developing Hudson River Park, and the DSNY Gansevoort facility, on the West Village waterfront. This FGEIS analyzes the potential relocation of these facilities to a new multi-agency facility between West 29th and West 30th Streets from Eleventh to Twelfth Avenues. The City proposes that an active recreation park be located on the roof of this facility. The relocation of these facilities would open up substantial waterfront property for open space, adding another component to the extensive proposed open space system. As described in Chapter 3, "Analytical Framework," relocation of the DSNY and NYPD Tow Pound operations to a multi-agency facility on Block 675, between West 29th and West 30th Streets from Eleventh to Twelfth Avenues, is subject to the City's ULURP process.

1. Convention Center Expansion

a) Overview

The proposed expansion and modernization of the Convention Center is intended to enable the Convention Center to retain and expand its market share and to ensure its continuation as a major

contributor to the City's economy. The facility currently contains about 790,000 square feet of exhibition and meeting space and about one million square feet of support and staging areas on the superblock between West 34th and West 39th Streets (from Eleventh to Twelfth Avenues). To meet the current market demand for convention facilities, and to enhance the competitiveness of the facility, the proposed expansion would more than double its current size, substantially increase its prime contiguous exhibition space, and add critically needed meeting and ballroom space, as well as add new related components, including a hotel, and other amenities as described below. The new facility would add approximately 1 million square feet of new exhibition, meeting and ballroom space, expand to the north from West 39th Street to West 42nd Street (Figures 2-30 and 2-31), and close West 33rd, West 39th, West 40th, and West 41st Streets to through traffic, although a through-block pedestrian passageway would be provided on West 40th Street. Truck marshalling areas serving the Convention Center would be located below-grade on the block between West 33rd Street and West 34th Street below a publicly accessible open space. In addition, other transportation functions could also be located within this block, including LIRR train storage. These uses would be implemented only upon consideration of the marshalling, parking, and other needs of the Convention Center and would be subject to additional environmental reviews, if necessary. The expansion of the Convention Center would occur in two phases: Phase I—All work south of West 40th Street (including the truck marshalling yard), the West 42nd Street hotel, and an elevated walkway above the Quill Bus Depot connecting the hotel and the Convention Center; and Phase II—Work between West 40th and West 41st Streets, including direct connection between the Phase II expansion and the Phase I work, as well as completion of the truck tunnel between the marshalling yard and the expanded Convention Center. The phasing allows for time flexibility that may be needed to accomplish the actual outfitting of the new Quill Bus Depot at West 30th-31st Streets between Twelfth and Tenth Avenues, the relocation of bus operations, and demolition of the existing Quill Bus Depot. Although Phase II of the Convention Center Expansion is not expected to be completed until after 2010, this FGEIS conservatively assumes, for analytical purposes, full completion of both phases of the Convention Center Expansion by 2010, since such an assumption is generally a more conservative, worst-case scenario. However, where failure to complete the second phase of the Convention Center Expansion by 2010 would result in greater adverse effects, this FGEIS conservatively assumes completion by 2025. For example, completion of the truck tunnel is assumed to occur by 2025, because it is more conservative to assume that the ameliorative effects of removing truck traffic from the surrounding streets will not occur until 2025. Analysis year assumptions are more fully explained in Chapter 3, "Analytical Framework."

Key components and design features of the proposed Convention Center expansion are described below.

b) Project Components

The proposed northward expansion, renovation, and modernization of the Convention Center would provide the prime contiguous exhibition space and amenities necessary for it to compete more effectively in the national marketplace. As presented in Table 2-7, the proposal includes renovation and modernization of the existing facility to add usable space; construction of new prime exhibition space, meeting rooms, service areas, support space, and food service areas contiguous to the existing building; and development of a 1,500-room hotel connected to the Convention Center by an elevated pedestrian walkway. On completion, the facility would have a total of 3.9 million square feet, including: approximately 1.3 million square feet of exhibition space, of which more than 50 percent would be prime contiguous exhibition space on Level 3 (Figure 2-37); nearly 365,000 square feet of meeting rooms, ballrooms, shops, restaurants and public lobbies, concourses, and registration areas; and approximately 1.8 million square feet of support, pre-function, administrative, and service space. With the new hotel, the project would total 5.8 million square feet. The organization of the spaces would be as follows:

TABLE 2-7
EXISTING AND FUTURE CONVENTION CENTER, KEY FACILITY COMPONENTS

Component	Existing Facility (square feet)	Proposed Expansion with Renovation (square feet)	Increase (square feet)
Exhibition Halls	760,000	1,340,000	580,000
Level 3	*410,000*	*727,000*	*317,000*
Level 1	*305,000*	*613,000*	*308,000*
Level 4	*45,000*	*0*	*0*
Meeting Rooms	30,000	365,000	335,000
Ballrooms	0	86,000	86,000
Pre-Function	213,959	579,300	365,341
Support Areas	192,764	420,000	227,236
Service Areas	258,310	780,000	521,690
Empty Returns Storage	0	134,000	134,000
Food Service Areas	37,453	100,000	62,547
Administrative Offices	22,485	117,000	94,515
Vertical Circulation	79,805	87,000	7,195
Enclosed Convention Center Area	1,594,776	3,989,000	2,394,224
Loading Dock Area	254,976	330,000	75,024
Inner Roadway/Drop-off Area	82,248	115,000	32,752
Attached Hotel (1,500 Room Full Service)	0	1,220,000	1,220,000
Gross Convention Program Area	1,932,000	5,879,000	3,947,000
Publicly Accessible Open Space	3,311	374,616	371,305

Source: New York Convention Center, March 2004.

Exhibition Halls

Column-free and open floor area contiguous exhibition halls are the core component of modern convention centers. The existing Convention Center has ten exhibition halls ranging from about 31,100 to 90,000 square feet each for a total of about 760,000 square feet. The facility's 10 halls are located on three levels: Level 1, which is at elevation +5 feet (elevation 5 feet above sea level), the grade of Twelfth Avenue; Level 3 at elevation +32 feet, which is the grade of Eleventh Avenue between West 34th and West 36th Streets; and Level 4 at elevation +54. Level 2, at elevation +18 feet (approximately the elevation of Eleventh Avenue near West 37th Street), is the location of the entrance driveway and mezzanine, the primary vehicular entryway for both the current and proposed future Convention Center (Figure 2-36). Only Level 3 is prime exhibition space due to its high ceiling height and comparatively unobstructed floor area (Figure 2-37).

The proposed expansion would increase the exhibition hall space by extending the building northward to West 41st Street. As the building is expanded, the existing halls would be renovated to provide modernized infrastructure. In all, a total of 1.34 million square feet would be provided in a total of 18 exhibit halls (Figures 2-35 through 2-37). The nine halls at Level 3 would provide an exhibit floor area of approximately 727,000 square feet, placing it among the top 10 facilities in the country for prime contiguous exhibition area (based on current rankings).

Meeting Rooms

Typically, modern convention centers provide meeting rooms to support events in the large halls or to offer accommodation for meetings, lectures, etc. The existing Convention Center offers only 30,000 square feet of meeting rooms. The proposed expansion would greatly increase the meeting room capacity, adding over 335,000 square feet, bringing the combined meeting room space to about 365,000 square feet. Meeting rooms would be located along the Eleventh Avenue frontage on Level

3 adjacent to the exhibition hall (Figure 2-37), as well as on Level 4 overlooking the exhibition hall and Level 5 along the Eleventh Avenue frontage and adjacent to the ballroom (Figures 2-38 and 2-39). The expanded facility would increase the ratio of exhibit to meeting room area by 3 to a ratio of 4.5:1, consistent with competitive convention facilities in other cities.

Ballrooms

In addition to large exhibition halls and meeting rooms, convention centers typically provide for large ballroom facilities on-site as an important amenity. Currently, the Convention Center has only 23,000 square feet available for ballroom functions. The proposed expansion would include an approximately 85,070-square-foot ballroom, which would be located on Level 5 (Figure 2-39) between West 40th and West 41st Streets, across from the hotel, which would maximize the resources of both the Convention Center and the hotel.

Retail/Food Court

With convention centers often staging multiple events with a wide mix of users, there has been a move towards providing retail and commercial amenities within the facility, most notably a food court concept (such as a café or coffee bar). The current amenity of this type in the Convention Center is located on Level 1 and Level 3. As part of the renovation, an additional 60,000 square feet of retail, food service, and similar amenities would be provided throughout the Convention Center (Figure 2-35). Along Eleventh Avenue, approximately 44,000 square feet of non-destination retail would be added on Level 2 (Figure 2-36). In the expanded facility, the eastern portion of the block between West 41st and West 42nd Streets would be the Convention Center's "Gateway to New York." This space would be shared with retail uses and the new hotel facing West 42nd Street. This new space would total an estimated 33,080 square feet for a combined retail/commercial component of just under 50,000 square feet.

Hotel

As noted in Chapter 1, "Project Purpose and Need," the lack of a suitable convention hotel immediately adjacent to the Convention Center has been a long-standing deficiency. Convention center hotels provide for the housing needs of facility users and expand the resources of the facility with additional meeting rooms, ballrooms, and services. As part of Phase I, the Convention Center Expansion would include a new hotel located on the eastern portion of the block between West 41st and West 42nd Streets and Eleventh to Twelfth Avenues (Figures 2-32, 2-33 and 2-41). The proposed 1,500-room hotel (approximately 1.2 million square feet) would be a full-service hotel with lobby and public facilities on the first three floors and an approximately 50-story tower. Phase I would include construction of an elevated pedestrian passage above the Quill Bus Depot connecting the expanded Convention Center and the hotel. In Phase II, there would be a direct internal connection from the hotel to the Convention Center at Levels 2 through 5.

Support and Pre-Function

Convention centers require very large staging support and pre-function set-up areas, because large exhibits are typically being prepared while other shows are finishing or being broken down. Currently, the facility has about 406,723 square feet of support and pre-function space. The new facility will add an additional 592,577 square feet of support and pre-function space including pre-function along West 34th Street above the inner roadway, bringing the combined total to approximately 1 million square feet. The pre-function area provides services to attendees such as way-finding, retail, registration, and coat-check.

Open Space

The Convention Center currently contains approximately 0.76 acres of publicly accessible open space. The plaza is located across from the Convention Center on the eastern side of Eleventh

Avenue between West 35th and West 36th Streets (Figure 2-31). The plaza would be replaced by new commercial development pursuant to the Hudson Yards rezoning proposal. The proposed Convention Center expansion would include approximately five acres of passive publicly accessible open space on the roof of the Convention Center facility. The roof would contain a publicly accessible perimeter esplanade along Twelfth Avenue. In addition to the esplanade, passive recreation would be available in other designated areas on the roof. The roof would also contain approximately 17 acres of planted area or "visual garden" that would not be accessible to the public; however, portions of these areas could be viewed from the publicly accessible areas (Figure 2-40). Access to the open space would be gained from within the Convention Center, Twelfth Avenue, in the hotel, each via stairs and elevators at various locations. The West 34th Street sidewalk would be maintained at 20 feet in width from curb to the existing retaining wall. The existing mature street trees and inner roadway would remain along Eleventh Avenue. The Convention Center would be expanded south to the property line to accommodate pre-function areas for the exhibition halls on Level 3. Retail uses are proposed at the corner of West 34th Street and Eleventh Avenue. Large display cases were vitrines would be used for either electronic or large displays along the West 34th Street façade at grade. The expansion at Level 3 would be clad in aluminum and transparent glass curtainwall with a capability to control daylighting and views into the expansion according to program requirements. A separate entry would be provided to the business center as well as the current administrative space. The exits from the lower roadway and the loading docks would remain near the corner of West 34th Street and Twelfth Avenue. On the roof of the truck marshalling facility would be 3.6 acres of passive publicly accessible open space.

c) Access

Patron Access

When both phases of the Convention Center Expansion are complete, patrons would be able to enter the Convention Center from Eleventh Avenue, West 34th Street, and West 42nd Street. The new West 42nd Street entrance is particularly important for the Convention Center, since this street is a major tourist and visitor thoroughfare, well-known throughout the world. In this location, patrons could enter either through the hotel on West 42nd Street itself, or at the corner of West 42nd Street and Eleventh Avenue, which would be a new "Gateway to New York City" for the Convention Center. This entrance would be approximately one block from the entrance to the new Intermediate Station on the proposed No. 7 Subway Extension.

The current main entrance to the Convention Center, on Eleventh Avenue between West 35th and West 36th Streets, would remain as the primary southerly pedestrian entrance to the facility at Level 3. It is anticipated that there would be a direct connection to the new Terminal Station of the No. 7 Subway Extension at Level 1, just south of the existing Convention Center. Several other entrances from the entrance driveway would be available along the length of the Eleventh Avenue façade (at Level 2), and the existing side entrance on West 34th Street near Twelfth Avenue would remain open. At Level 1, a pedestrian passageway between the Multi-Use Facility and the expanded Convention Center would give a fully enclosed connection below West 34th Street, facilitating pedestrian passage between the Convention Center and the Multi-Use Facility. In addition, a through-block pedestrian passageway would be provided at West 40th Street, which would allow people to walk between Eleventh and Twelfth Avenues with access through the Convention Center from the Hudson Yards area east of Eleventh Avenue to Hudson River Park, the new West Midtown Ferry Terminal at Pier 79, and the tourist attractions along the Hudson River (Figure 2-36 and 2-42).

Truck Marshalling, Parking, and Pre-Function Access

The Convention Center currently uses the entire block between West 33rd and West 34th Streets and Eleventh and Twelfth Avenues for employee and VIP parking and the storage of empty return trailers. Truck marshalling currently takes place along Eleventh and Twelfth Avenues, West 34th Street, and

nearby City streets. The trucks pull out when they are called, line up on Twelfth Avenue in a standing lane provided for that purpose, and enter the building from its northern end to reach the loading docks, which are located on the two exhibition hall levels inside the building along Twelfth Avenue. The trucks exit the building on West 34th Street near Twelfth Avenue.

With the Proposed Action, expanded truck marshalling would be available in a multi-level facility beneath the publicly accessible open space between West 33rd and West 34th Streets. The truck marshalling facility would service the estimated 557 trucks associated with peak operations at the expanded Convention Center in a single 24-hour period. Trucks would access the marshalling yard from an entrance on Twelfth Avenue; once there, they would be processed, security-screened, and directed to a specific waiting area or loading dock, depending on their internal destinations. When Phase II is completed, these trucks would not use the street to get to the Convention Center; instead, they would make use of an existing, unused portion of below-grade rail right-of-way, which extends from the truck marshalling area northward beneath Eleventh Avenue and westward between West 40th and West 41st Streets under the proposed Phase II Convention Center Expansion (Figures 2-43, 2-44, and 2-45). Truck docks would still be located within the existing and extended building on the Twelfth Avenue side at the levels of each exhibition hall, to allow unloading directly into the halls.

In addition, other transportation functions could also be located within this block, including LIRR train storage. These uses would be implemented only upon consideration of the marshalling, parking, and other needs of the Convention Center and would be subject to additional environmental reviews, if necessary.

d) Facility Planning and Design

As shown in Figure 2-34, the tallest component of the proposed expansion would be the 50-story hotel tower on the northeast corner of the site, which would rise approximately 664 feet above West 42nd Street. In general, the Convention Center itself is six levels, including five function levels and a sixth level of roof and mechanical space. The original, I.M. Pei-designed atrium would continue to be the tallest element other than the hotel tower. The entire expanded Convention Center would be a sizeable structure with a long linear presence, approximately 96 feet high, on Eleventh and Twelfth Avenues. The exterior dimensions would be 1,965 feet from West 34th to 42nd Streets and 780 feet from Eleventh to Twelfth Avenues.

e) Materials and Exterior Design

The guest room tower of the hotel would sit atop a glass-curtain-wall-enclosed podium base, with a five-level-high atrium entrance on West 42nd Street and Eleventh Avenue. There would also be retail storefront entrances on West 42nd Street. The tower would be a glass-and-metal curtain wall system with a panelized stone veneer system in some areas. The south face of the hotel has the potential to have building-integrated photovoltaics in the spandrel sections.

f) Sustainable Design

The expanded Convention Center would incorporate sustainable design features including a “green roof.” This roof would have a sloping topography in order to respond to functional requirements. The changes in high points and low points would correlate to locations of mechanical penthouses, interstitial mechanical zones between the exhibit hall ceiling and the roof, passive recreation zones, public access spaces and high reflectance walkways, glass skylights, green roof planted zones, and other programming. The design is intended to tie together all these elements and create a coherent whole out of the 23-acre roof. Also, since most of the surface area of the roof would be a planted, “living” roof, with major environmental benefits, roof slopes would be provided for optimum stormwater management and capture. Stormwater runoff would be captured and used for irrigation and could potentially be filtered and used for greywater and other building systems.

Several measures would also be incorporated into the design to reduce the demand on the City's electrical infrastructure. The shading and evaporative cooling effects from the green roof would limit the heat flow into the facility and lower the summer cooling demand. Ventilation for areas with highly variable occupancy, such as main entry and exhibit halls, grand concourses, and waiting rooms, would be modulated based on the actual level of occupancy. This would reduce cooling and heating requirements and save energy during partial occupancy periods. Day lighting, or natural light, would be brought into the concourse and pre-function areas to decrease energy use and improve indoor air quality. The Eleventh Avenue façade would be composed of a glass curtain wall system that would allow controlled day lighting into the pre-function areas. Additionally, photovoltaic panels that convert light energy to electricity would be placed on the exterior walls along West 34th Street and roof to offset the power requirements of the building.

g) Land Assemblage Necessary to Allow Expansion

The Convention Center Expansion would require the assemblage of land to undertake the expansion, including the complete or partial rights-of-way for West 33rd, West 39th, West 40th, and West 41st Streets between Eleventh and Twelfth Avenues, all parcels not presently owned by the Jacob K. Javits Convention Center Operating Corporation on the block bounded by West 39th Street and West 40th Street between Eleventh and Twelfth Avenues, the eastern portion of the block bounded by West 42nd and West 41st Streets and Eleventh and Twelfth Avenues (Block 1089, Lot 3), and the Quill Bus Depot, currently located between Eleventh and Twelfth Avenues from West 40th to West 41st Streets. The Quill Bus Depot currently houses and provides maintenance for approximately 350 buses. MTA NYCT would relocate the Quill Bus Depot below-grade, between West 30th and West 31st Streets and Tenth and Twelfth Avenues, as described in Sections 2 and 3. The truck marshalling facility would be located on property under control of the Convention Center Development Corporation.

h) Existing and Future Utilization Assumptions

The Convention Center currently hosts a wide range of events, including trade shows, large conventions with exhibits, public (consumer) shows, special events, meetings, and seminars. The public shows draw the largest daily attendees, with the New York International Auto Show historically the largest attended show at the Convention Center. Other public shows at the Convention Center include the New York National Boat Show and the New York International Motorcycle Show. With the exception of these large public shows that draw the largest attendance on weekends, a combination of trade shows (held on both weekdays and weekends) with more than one event scheduled simultaneously has dominated the utilization of the existing Convention Center. Currently, the Convention Center also experiences several "dark days"—days when no events are scheduled. These dark days occur when the Convention Center cannot book back-to-back events due to existing move-in/move-out requirements and the lack of demand to hold events on some holidays.

Future utilization due to the proposed expansion is expected to increase the ratio of trade to public shows. Approximately 81 percent of the projected increase in attendance would be from trade shows and conventions, while an estimated 19 percent of the projected increase would be generated by public shows. Approximately 75 percent of total space demand in the expanded Convention Center would come from events that currently use the Convention Center and would expand into all or part of the new exhibition space. Approximately 7 percent of total space demand would come from new and/or recurring events that do not presently exist, but could be created if the Convention Center expanded. Approximately 13 percent of total space demand would come from an estimated six Tradeshow 200 events that are currently being held elsewhere or are rotating among other venues. Approximately five percent of total space demand would come from an estimated 7 to 10 professional association conventions that are currently being held elsewhere or are rotating among other venues. The proposed expansion would enable existing trade shows, conventions, and other events to expand

their size and attract large trade shows and conventions that cannot presently be accommodated, as well as allow the Convention Center to schedule a greater number of simultaneous medium and small trade shows, conventions, and other events. The proposed expansion would also afford more flexibility in the move-in/move-out and set-up requirements for back-to-back events to minimize "dark days."

2. Multi-Use Facility

a) Overview

The Proposed Action includes construction of a new Multi-Use Facility on a platform above the western portion of Caemmerer Yard, intended to provide a venue for a variety of sports, exhibition, and entertainment events that cannot currently be accommodated in New York City, and to serve as home to the New York Jets football team, who now play their home games in New Jersey due to a lack of a suitable facility in New York City.

Located west of Eleventh Avenue and spanning West 30th to West 33rd Streets (Figure 2-46), the Multi-Use Facility would be oriented in an east-west direction. The Multi-Use Facility would have a retractable roof and movable seats, allowing it to be used year-round for a variety of events. The Multi-Use Facility would be designed so that it could be converted from a large, open-air 75,000 seat stadium that could be used for Jets games and similar events to a smaller-scale, exposition hall configuration containing approximately 180,000 square feet of exhibition floor space, or to a plenary meeting hall able to accommodate up to 40,000 persons. Approximately 18,000 square feet of meeting room space would also be provided, available for use in both the stadium and exposition hall configuration.

The ability to convert the Multi-Use Facility from an open-air stadium to the different functions would allow for special events and optimal use of the Multi-Use Facility, including as a supplement to the immediately adjacent Convention Center. The 180,000 square feet of exhibition space would add to the inventory of space available in the City for certain trade shows, public shows, conventions, and special events that cannot be accommodated at the expanded Convention Center for scheduling or other reasons, or at other City venues, adding jobs and economic activity to the City market. In addition, the Multi-Use Facility's 18,000 square feet of meeting room space would enhance the marketability of its exhibition space to exhibitors and supplement the meeting space available at the expanded Convention Center and other City venues. The plenary hall would be used by conventions or other events that would otherwise not be held in the expanded Convention Center because the expanded Convention Center would not have a plenary hall seating capacity of comparable size.

In addition to providing a venue for a variety of convention, trade show, and assembly events, the Multi-Use Facility would provide a venue for a growing number of large-scale sports and entertainment events, which New York City is presently unable to host because it lacks an appropriate large-scale facility, and would provide a New York City home for the Jets. Because construction of the Multi-Use Facility would commence in 2005, it would serve as a catalyst for other development planned for Hudson Yards.

The Multi-Use Facility would be located to the south of a publicly accessible park between West 33rd and West 34th Streets. In addition, the design of the Multi-Use Facility would include a rebuilt portion of the High Line on the southern side of the Multi-Use Facility, allowing pedestrian access to the facility. This promenade would connect to the High Line to the east if this structure is renovated for public use. The proposed No. 7 Subway Extension, ferry, and bus would provide convenient public transportation to the Multi-Use Facility. On game days, patrons would also access the Multi-Use Facility from mass transportation already available at Penn Station – the Long Island Rail Road, New Jersey Transit, and the subways.

Should New York City be selected as the site for the 2012 (or subsequent) Olympic Games, the capacity of the Multi-Use Facility could be increased by approximately 10,000 seats in order to accommodate the Games' opening and closing ceremonies, after which the additional seats would be removed and the Multi-Use Facility reduced to its permanent size and configuration (see Olympic Conversion, below). As noted in Chapter 1, approval of a summer Olympics is not part of the Proposed Action studied in this FGEIS.

b) Project Components

The proposed Multi-Use Facility would provide three event configurations for three different types of events: Stadium, Exposition, and Plenary. In stadium mode, the facility could seat up to 75,000 guests for football, soccer, concerts, or other events. In order to convert to one of the other two configurations, the field surface would be removed and the lower bowl seating retracted to expose an exhibit floor of 180,000 square feet. The seating bowl could also be reconfigured with a curtaining system or movable end section to create a plenary hall with the capacity to host from 5,000 to 40,000 guests. In total, the Multi-Use Facility would comprise approximately 2.2 million square feet, with the attributes shown in Table 2-8.

TABLE 2-8
PROPOSED MULTI-USE FACILITY COMPONENTS

Components	Number
Stadium Seating	75,000
Plenary Hall Capacity	5,000 – 40,000
Exposition Floor (square feet)	180,000
Meeting Rooms (square feet)	18,000
Locker Rooms	4
Public Concourses	5
Loading Docks	10
Retail (square feet)	50,000

Source: Jets Development LLC. March 2004

Stadium Configuration

The stadium mode for the facility would accommodate a maximum of 75,000 permanent seats (Figure 2-48). It is anticipated that 17 stadium event days would be held each year, including approximately 10 Jets football games (pre-season and regular season) and seven other entertainment or sporting events (such as concerts, soccer, and college football). Most stadium events would be held on Sunday afternoons, although entertainment events would likely be held on weekday or Saturday nights (see Section g, below, for a description of the proposed utilization). The NFL regular season consists of eight regular season home games with an average of six or seven played on Sunday afternoons between Labor Day and Christmas, and two pre-season home games. There could be one or two Monday or Thursday night games per season, as well as playoff games in January. There also could be one or two national events a year, such as a national convention (which may use the Facility in stadium, convention, or plenary mode) or the Super Bowl.

Convention Configuration

The Multi-Use Facility could also be used as a convention or exposition facility, for shows that cannot be accommodated at the Convention Center or in a few instances to provide additional space for Convention Center events. (Figure 2-50). The Multi-Use Facility could be converted from the stadium configuration to 180,000 square feet of exhibition space. (18,000 square feet of meeting rooms, loading docks, and other facilities consistent with a first class convention facility would also be available.) The Multi-Use Facility is projected to attract 38 convention or exposition events per

year that could not be accommodated in the expanded Convention Center, because of scheduling or other conflicts.

Plenary Hall Configuration

The facility would also have the capability to be configured and used for plenary-type events, with a seating capacity of 5,000 to 40,000, depending on the configuration (Figure 2-49), adding to the flexibility of the Facility and providing an additional amenity to attract large shows to the Convention Center. The plenary hall would be expected to be used at close to its maximum capacity approximately three times a year, with an average seating demand of approximately 20,000.

Meeting Room Space

The Multi-Use Facility would also provide approximately 30,000 square feet of permanent meeting room space that would be available for use in any configuration.

Retail

Street level retail shops are expected to be located along Eleventh Avenue. These retail components would be open during normal business hours, as well as during events.

Services

The majority of service functions are expected to be located at the event level (Eleventh Avenue street level). These services would include home and visitor locker rooms and player services, operation storage areas, kitchens, commissary, loading docks, utility and mechanical spaces (electrical substations, cooling plants and fans, solid waste, and recycling areas), press, and media areas. Loading docks would be contained within the building, with the entry visible from the street. Vehicular access to the loading dock would be from Eleventh Avenue near West 30th Street.

Parks and Open Spaces

The proposed Multi-Use Facility would incorporate a southern entry area on West 30th Street with a proposed elevated pedestrian connection to the High Line. As discussed above, a publicly accessible open space is proposed to the north of the Multi-Use Facility above the Convention Center Marshalling Facility, between West 33rd and West 34th Streets. This open space would provide approximately 3.6 acres of publicly accessible open space and contain a raised plaza with a series of plantings, trees, and water features.

High Line

Created in the 1930s as an elevated rail line serving the Gansevoort Meat Market, the High Line originally ended at the St. John's Building at Clarkson Street. It has been unused for over 20 years, and its southern terminus is now at Little West 12th Street. As an action separate from the Proposed Action, it has been proposed that the High Line be incorporated into the federal "rail banking" program. A design competition is currently under way to identify alternatives for its reuse as an open space under that program (refer to Chapter 3, "Analytical Framework," for a detailed description of rail banking). A requirement of this program is that the conversion to open space be reversible; i.e., local sponsors must demonstrate that the right-of-way could be reincorporated into the nation's rail system, if necessary.

The Multi-Use Facility is located at the northern elevated terminus of the High Line; the facility design proposes to integrate a rebuilt section of the High Line above the West 30th Street sidewalk into the building's circulation approach. Since the High Line extends almost two miles south into Chelsea and the Gansevoort meat market, it could be used as an elevated walkway bringing spectators to events. On the southern edge of the site, the High Line could be incorporated into a promenade if it is renovated for public use. The site plan would accommodate the ability to reinstitute rail service, connecting the High Line to the Amtrak Empire Line to the north, to meet federal requirements.

Olympic Conversion

The Multi-Use Facility's design would allow its conversion to an Olympic Stadium if New York City were selected as the site for the 2012 (or subsequent) Olympic Games. The Olympic running track is both longer and wider than a football field; therefore, the Multi-Use Facility would need to be expanded to the west to accommodate the larger field. It is expected that NYC 2012 would construct a platform at Level +32 across Twelfth Avenue/Route 9A to Hudson River Park; to achieve this, the end zone of the stadium would be equipped to permit a portion of the seating bowl to be shifted to the west across Route 9A. The gap in the seating would be filled with temporary seating, and the concourses would be connected to create a complete Olympic Stadium. The Multi-Use Facility could be in an Olympic form from 2011 to 2013 to allow time for construction, Olympic practice events, and dismantling. In the Olympic configuration, the facility could seat 85,000 spectators. After the Olympic Games, the additional seats would be removed and the Multi-Use Facility would be reduced to its permanent size and configuration. The Olympic configuration will be the subject of a separate approval procedure relating to the Olympics more generally, and is not part of the Proposed Action.

Platform Over Caemmerer Yard

The Multi-Use Facility would be built on a platform that would enable the ongoing use of the western portion of Caemmerer Yard for transportation-related purposes, while allowing the Multi-Use Facility to be built at the Eleventh Avenue street level. The platform would serve as the roof for the LIRR Caemmerer Yard and would also accommodate that part of the relocated Quill Bus Depot beneath the platform between West 30th and West 31st Streets.

c) Access

Major street entrances for the Multi-Use Facility would be located on the north and south sides above street level (accessed by ramps, steps, and/or escalators), and an entrance would be located on the east side facing Eleventh Avenue for use by fans with suite or club seats (Figure 2-51). The North Entry would be located on West 33rd Street at Level +34 for access to convention, meeting, and exhibition events and at +60 for access to the concourse level. The entrances would serve patrons arriving from the ferry terminal at West 39th Street and Twelfth Avenue, the No. 7 Subway Extension, and points north, and from Penn Station (other subway lines, LIRR and New Jersey Transit). The south entry would be located along the length of the West 30th Street frontage, but above street level, with access from the rebuilt High Line on West 30th Street at Level +46 via an elevated pedestrian connection. The east entry would be located along the centerline of the building between West 31st and West 32nd Streets on Eleventh Avenue. For use of the Multi-Use Facility as a plenary hall, most guests would be expected to enter from the West 33rd Street side. An underground pedestrian connection would also be provided between the Multi-Use Facility and the Convention Center.

The interior of the north lobby of the building would contain the ticketing area and would be open during normal business hours. Similarly, retail and other commercial facilities in the building would be expected to be open during business hours. It is anticipated that the main lobby would operate in a modular fashion to vary the internal access for specific events.

d) Facility Planning and Design

The Multi-Use Facility would be organized along an east-west axis, between West 30th Street on the south and West 33rd Street on the north with the entry portal along West 33rd Street (Figure 2-52). This orientation would allow the block between West 33rd and 34th Streets above the Convention Center truck marshalling yard to be used for public open space from Eleventh Avenue to Route 9A/Twelfth Avenue.

The Multi-Use Facility structure would be approximately 800 feet long in the east-west direction and 710 feet in the north-south direction (Figure 2-53). The overall roof heights of the main building

would be 208 feet above curb for the fixed roof and 240 feet to the top of the retractable roof. Wind turbines located on the roof along the northern and southern ends of the facility would rise to a height of 311 feet above the elevation of Eleventh Avenue, which is itself approximately 32 feet above sea level (+32). The service and stadium operations level (+32) would contain maintenance, operations, and mechanical services. This level would also contain press and media services, locker rooms and player services, and retail and other amenities. The facility would include a retractable roof; however, it is expected that the roof would be closed for the majority of events. The roof would be retracted only for football games and a few outdoor stadium events (such as summer concerts).

A potential design option under consideration that would provide a small portion of the overall power requirements of the Multi-Use Facility is an on-site cogeneration facility. If an on-site cogeneration plant is to be included in design of the Multi-Use Facility, an environmental review separate from this FGEIS would be required.

e) Materials and Exterior Design

The design of the Multi-Use Facility would reflect the two dominant forms that help define the City's "river architecture"—the piers, which once stretched all along the Hudson River in the Hudson Yards area, and the George Washington Bridge. The piers were characterized by high lattice-like walls formed by steel framing. These walls extended high above the body of the pier enclosures with elements that supported gantry cranes, enabling cargo removal from the ships. The George Washington Bridge is also a skeletal steel structure and the most dominant form on Manhattan's Hudson River waterfront. Its power, delicacy, and grace have influenced the Multi-Use Facility design.

As in the design of the piers, the north and south walls of the Multi-Use Facility would extend above the roof of the structure. Rather than supporting gantry cranes, the exterior walls would support a series of wind turbines. The structure would have an open lattice-like quality, which would act as a veil over the activities within, housing the vertical escalator circulation system. The east and west elevations of the building are expected to appear as a large window flanked by metal louvers shielding ventilation and circulation areas. The window facing Eleventh Avenue would enclose a vertical atrium and would reveal the activity within.

Lighting for the facility would address two primary categories—sports lighting and exterior lighting. All sports lighting would be contained within the building below the roofline, to prevent any direct-beam illumination from leaving the building. Exterior lighting would consist of architectural accent lighting of the building and general ambient lighting in the surrounding open spaces. Primary structural components, wind turbines, and water features would be lighted in a similar fashion to the George Washington Bridge; however, the south façade would be lit in such a way as to avoid impacts on the residential community to the south.

f) Sustainable Design

The facility's central location in Manhattan at the terminus of the No. 7 Subway Extension and its direct connection to the Terminal Station would constitute a basic form of sustainable development. Since the proposed facility would be in a location easily accessible by subway, commuter rail services, and ferry, a high percentage of the facility's patrons and employees would take public transportation. In addition, the building itself would contain several key sustainable components. The facility would be designed to incorporate sustainable sources of power. Location of the Multi-Use Facility on the edge of the Hudson River would be ideal for wind-generated power. To harvest this energy, it is expected that a number of vertical-axis wind turbines would be placed on the upper edges of the north and south walls of the structure, to harness power from prevailing winds. (As turbines, they could capture any prevailing wind condition, regardless of direction.) This type of wind turbine would be efficient in transforming wind energy into electrical energy. Other potential

sustainable features that could be incorporated into the facility include photovoltaic panels, solar tubes, fuel-efficient design, rainwater capture, and use of landscaping to offset carbon dioxide production.

g) Utilization Assumptions

It is estimated that the Multi-Use Facility would be in use 291 days per year, consisting of approximately 130 event days and 161 transition days. The vast majority of the event days would consist of exposition-related events, with 108 event days devoted to this use. In addition, it is expected that the Multi-Use Facility will be used for 17 stadium events annually, including the Jets' home games, up to two national events, and three days of plenary events utilizing the plenary hall in its maximum configuration (see Chapter 3, "Analytical Framework").

3. Accommodations for Other Public Facilities

Accommodations for four other public facilities are addressed in this FGEIS, as discussed below. The Quill Bus Depot relocation is a direct consequence of the Proposed Action. The multi-agency DSNY and NYPD facility could potentially be accommodated within the Hudson Yards area, subject to the City's ULURP process. The PANYNJ bus garage would be an indirect consequence of the Proposed Action.

a) Quill Bus Depot

As discussed above, the expansion of the Convention Center would require that the Quill Bus Depot be displaced from its current site between West 40th and West 41st Streets, Eleventh and Twelfth Avenues and relocated to the two most southerly blocks of Caemmerer Yard—between West 30th and West 31st Streets, Tenth and Twelfth Avenues (Figure 2-55). This relocation is considered to be a consequence of the Convention Center Expansion.

As shown on Figure 2-55, relocation of the Quill Bus Depot would be accommodated within Caemmerer Yard between West 30th and West 31st Streets and Tenth and Twelfth Avenues, beneath the platform and Eleventh Avenue. The western half of the Quill Bus Depot, between Eleventh and Twelfth Avenues, would contain one street level (roughly at grade with Twelfth Avenue) and one basement level. The eastern half of the Quill Bus Depot, between Tenth and Eleventh Avenues, would contain two basement levels and a ramp leading from both basement levels to the street (Figure 2-56).

In its western half, between Eleventh and Twelfth Avenues, the Quill Bus Depot street level would be at elevation +8 feet, the primary elevation of West 30th Street and Twelfth Avenue at this location, and the basement level would be at elevation -12 feet. The -12-foot level would continue eastward under Eleventh Avenue and slope down to connect to the lower basement of the Quill Bus Depot eastern half (Figure 2-57). Street access for the western half would be from West 30th Street and Twelfth Avenue. The access from Twelfth Avenue would also provide access for LIRR staff to Caemmerer Yard and allow LIRR staff vehicular access from the west end of the yard to the east end of the yard. The street level of the western half of the Quill Bus Depot would contain facilities for washing, light maintenance, and refueling, as well as a small storage area. A ramp would connect the street and basement levels. The basement level would be used for overnight bus storage of Manhattan-based buses and for daytime storage of Staten Island express buses between rush hours. All ramps in the Quill Bus Depot would be wide enough to provide two-way traffic for both entering and exiting movements.

As described above, the basement level of the western half of the Quill Bus Depot would continue eastward as it slopes down beneath Eleventh Avenue and connects with the lower basement level of the eastern half of the Quill Bus Depot. This lower basement level in the eastern half would be at elevation -25 feet and would primarily be used for bus storage. The eastern half would also contain

an upper basement level at elevation -5 feet and would primarily be used for maintenance. A ramp would provide access between the upper and lower basements in the eastern half of the Quill Bus Depot. The ramp would also extend up to grade to provide access from the basement levels to West 30th Street. This would require removal of the Metals Purchasing Building and the portion of the High Line between Tenth and Eleventh Avenues.

In total, the relocated Quill Bus Depot would contain facilities for storage and maintenance of up to 350 buses, including regular and articulated buses. Access to this replacement Quill Bus Depot would be from between Tenth and Twelfth Avenues and from West 30th Street.

b) PANYNJ Bus Garage

Because the Proposed Action would provide development opportunities on properties owned by the PANYNJ, it is anticipated that the PANYNJ would, over time, consolidate its bus parking in the Hudson Yards area in one location. Currently, the PANYNJ stores buses on several lots throughout the Hudson Yards area. It is assumed that the new garage would occupy Projected Development Site 21 (between West 38th and West 39th Streets, Ninth to Tenth Avenues) within a 450,000-square-foot structure (see Figures 2-13 and 2-15). The PANYNJ Bus Garage would accommodate the need for additional capacity within the Project Area, and particularly in the area surrounding the PABT. Therefore, it is conservatively assumed, for analytical purposes, in the 2025 Future With the Proposed Action; however, it is not an element of the Proposed Action. The garage is anticipated to include a direct ramp connection to the PABT.

c) DSNY and NYPD Tow Pound Facility

The Proposed Action could also accommodate the relocation and consolidation of other public facilities within Hudson Yards, including the Manhattan Vehicle Tow Pound operated by the NYPD, currently located on Pier 76 at approximately West 36th Street, and a DSNY facility and parking area currently located on the Gansevoort peninsula, between Gansevoort and Bloomfield Streets. Both facilities could be relocated into one shared structure in the Hudson Yards area. As described in Chapter 3, "Analytical Framework," this FGEIS conservatively considers the impacts of relocation of these facilities to the Hudson Yards area.

A multi-agency facility for the DSNY and the NYPD Tow Pound functions could be provided on the full block between West 29th and West 30th Streets, Eleventh and Twelfth Avenues (Figures 2-58 and 2-59). As currently contemplated, it would contain one level for each facility and one level that would be shared by both facilities (Figure 2-60). The lowest level would be below grade at elevation -12 feet and the two above-grade levels would be at elevation +8 feet and +28 feet. The existing ground elevation rises along West 30th Street and Eleventh Avenue as Eleventh Avenue's elevation increases as it approaches the Eleventh Avenue viaduct over the western portion of Caemmerer Yard located between West 31st and West 33rd Streets. The topography varies such that from the street it would appear to be one 20-foot-story building at the corner of Eleventh Avenue and West 30th Street, while appearing to be a two-story building along Twelfth Avenue and West 29th Street.

Access and egress for both facilities would be on the shared level at elevation +8 feet. The eastern portion of this level would be occupied by the Tow Pound and the western portion by the DSNY. Access for both facilities could be gained from both West 30th and West 29th Streets. At this level the Tow Pound facility could accommodate offices including public areas, lockers, vehicle maintenance, overnight storage for tow trucks, and impoundment of oversize vehicles. The Tow Pound could also occupy a basement level at elevation -12 feet, which would primarily be used for storage of impounded vehicles. The DSNY facility could also occupy an upper level at elevation +28 feet.

Two DSNY facilities, i.e., Districts 5 and 2, would be combined into the new building: the DSNY District 5 (Midtown operations) and the District 2 facility, now located at 427 Gansevoort Street on the Gansevoort Peninsula. The District 2 facility currently houses administrative offices, crew locker

rooms, parking for sanitation trucks, and a salt storage area. All of these facilities, except salt storage, could be relocated to the new building, which would be large enough to accommodate trucks from the two DSNY Midtown districts.

The NYPD Manhattan Vehicle Tow Pound, located on Pier 76 near West 35th Street, currently accommodates approximately 300 vehicles. It is anticipated that this number of vehicles and the administrative operations required to support a tow pound of that size would constitute the space requirements for the new tow pound.

If this facility were constructed, a public park would be created at approximately the same elevation as the High Line right-of-way located across the street on the north side of West 30th Street. Due to the rise in elevation at Eleventh Avenue and West 30th Street, the park would be approximately 40 feet above the lowest street level. Public ADA accessibility-compliant access to the park would be gained at West 30th Street and Eleventh Avenue, where the elevation of Eleventh Avenue (+19 feet) is at its highest point. The rooftop park would also be at the approximate elevation of the High Line and the Multi-Use Facility southern access point. As previously described, this park would be publicly accessible open space for active recreation. Development of the multi-agency facility would require site selection and acquisition of the properties listed in Table 2-2. If the multi-agency facility is not constructed, the park would be developed at grade.

E. CONSTRUCTION SCHEDULE AND ACTIVITIES

1. Overview

Implementation of the Proposed Action would involve construction of several major structures on large sites, significant infrastructure improvements over an extended area, and a substantial number of individual buildings throughout the entire Hudson Yards area. The sequencing of this construction would follow the logic of each component's needs and characteristics, but would also need to organize activities in a manner that would minimize environmental impacts while maximizing construction efficiencies to the extent practicable.

The sequencing of each component would be as follows:

- Development arising from the proposed rezoning would occur as market conditions dictate. As noted above, the DCP and EDC have projected an absorption rate of approximately one million square feet of office space per year, and a similar gradual increase for residential, retail, and community facility uses. It is assumed that some of this construction would begin shortly after completion of the City's ULURP, early in 2005, for completion of construction in 2006 or 2007, depending on the type of building (office buildings take longer to construct than residential buildings), and each year would bring new construction starts. These construction activities would not be concentrated in one place, but would be scattered across the Hudson Yards area (see Figures 2-12 and 2-14 for estimates of the locations of new residential and commercial construction.)
- Construction of the boulevard, open space, and parking garage planned for the midblocks between Tenth and Eleventh Avenues would begin once: (a) private property is acquired, through condemnation or negotiation; (b) funds are allocated for the construction; and (c) the program and structural elements of the proposed roadways, open spaces, and below-grade spaces are fully designed with concurrence for portions over the Amtrak right-of-way. It is assumed that the creation of open space would take place in phases, with the first block fully acquired and funding in place by 2007 and construction completed by 2010 (Figures 2-12 and 2-14). The work would then proceed northward in stages until the public parking garage and entire Midblock Park and Boulevard System are complete, by approximately 2017. Other major infrastructure improvements would include the platforms over the eastern and western portions of Caemmerer

Yard. Construction of the platforms would permit construction of new development, a public open space, and the eastern half of the replacement for the Quill Bus Depot on the eastern portion, and construction of the Multi-Use Facility and the remainder of the Quill Bus Depot replacement on the western portion of the Yard.

- The No. 7 Subway Extension is key to supporting and encouraging the private development associated with the rezoning. New access to transit would attract the private real estate market and shape the development of the Hudson Yards area. Following approval of the project by the MTA Board, the tunneling contract would be awarded and final design of other components could proceed to completion. Construction of the subway running tunnels would begin during the first half of 2005. Construction activities for the Terminal Station at Eleventh Avenue and West 34th Street would begin in April 2006 and continue through December 2009. Construction activities for the Intermediate Station at West 41st Street at Tenth Avenue would be completed some time between 2010 and 2025. The No. 7 Subway Extension would begin service in 2010.
- The Convention Center Expansion is scheduled for completion after 2010. Construction could begin during the third quarter of 2005. The Convention Center could acquire by purchase or eminent domain the sites that it does not currently own between West 39th and West 40th Streets and the site for the hotel on West 42nd Street. It would take longer for the site of the Quill Bus Depot to become available for construction, because a replacement facility for the bus depot must first be constructed, the bus operations relocated, and the existing facility demolished. The relocation facility would be constructed in the southern portion of Caemmerer Yard along West 30th Street between Tenth and Twelfth Avenues. A portion of that site is temporarily in use by the NYC Department of Environmental Protection (NYCDEP) for construction of Water Tunnel No. 3. Given the various arrangements and activities that must take place before the replacement facility is completed, the schedule estimates that the existing Quill Bus Depot site will not be available to the Convention Center until after 2010. The expansion of the Convention Center would be completed in two phases—an initial phase between West 33rd and 40th Streets that would be completed in 2010, which would include construction of the marshalling yard and not require the relocation of the Quill Bus Depot, and a post-2010 phase that would extend the Convention Center to West 41st Street, would require the relocation of the Quill Bus Depot, and would include the construction of the connection from the truck marshalling yard to the expanded Convention Center. A new 1,500-room, 1,220,000-square-feet "headquarters" hotel located at the southwest corner of West 42nd Street and Eleventh Avenue would be included in the first phase (Figure 2-32). The hotel would include a 350-car parking facility. The first phase of the Convention Center expansion would require the closure of West 39th Street between Eleventh and Twelfth Avenues. As part of the first phase, an elevated pedestrian walkway would extend over West 40th Street, the existing Quill Bus Depot and West 41st Street, to provide a direct connection between the hotel and the Convention Center (Figure 2-32). The second phase of the Convention Center Expansion would require the closure of West 40th Street and the eastern half of West 41st Street. In addition, the relocation of the Quill Bus Depot to the southern portion of Caemmerer Yard along West 30th Street between Tenth and Twelfth Avenues would occur. Under the second phase the Convention Center Expansion would be completed, as shown in Figures 2-34 and 2-41.
- The New York Jets currently play their home football games at Giants Stadium under a 25-year lease that expires in 2008. The Multi-Use Facility would need to be completed and open for the 2009 New York Jets football season. The platforms over the western Caemmerer Yard and the block immediately south of the Yard would need to be completed prior to construction of the Multi-Use Facility structure, since the facility would be constructed on top of the platforms. Construction on the Multi-Use Facility site would begin in 2005 with construction of the platform.

- Development of the multi-agency parking facility on Block 675, if this site were chosen by the DSNY and NYPD, would occur in the timeframe necessary to complete the segments of Hudson River Park where these facilities are currently located. Acquisition of private property required for the facility, through condemnation or negotiation, would first be required to secure the site. These facilities could be under construction before the Convention Center Expansion and the Multi-Use Facility are complete, but would not be operational before 2010. The Port Authority bus garage, anticipated as a result of the rezoning, would not be completed until well after 2010, as it would be unlikely to be in construction before 2010.

A factor influencing the Proposed Action's construction schedule is the nature of the construction activities themselves. As described in further detail in Chapter 23, "Construction Impacts," many of the specific activities required to build the various components would require substantial amounts of supplies, trucks, or machinery. These items would need to be accommodated somewhere during the construction period for each component. Consideration has been and will continue to be given to identifying means of minimizing the disruptions caused by these activities. For example, construction activities requiring similar types of specialized equipment could be undertaken simultaneously within a concentrated geographic area in an effort to minimize the number and types of staging areas that would be required in the vicinity. The converse could also occur. In that case, components requiring intensive construction periods, by both time (schedule) and space (distance), would be intentionally separated.

As detailed in Chapter 23, much of the construction work for the Proposed Action would occur either below-ground or in areas not currently accessible to the public—for example, the existing Caemmerer and Corona Yards—and therefore in areas where disruption at street level could be minimized to some extent. However, a majority of the work would still occur above ground. Above-ground construction activities would include delivery and storage of materials, hauling away soil and rock from excavating building foundations and from tunneling activities, construction and maintenance of tunnel access shaft sites, the "cut-and-cover" construction that would be necessary for a portion of the subway tunnel and for both stations, and construction of building foundations, structure, and superstructures.

Chapter 23 offers a detailed description of the specific nature and sequence of the individual construction activities. ❖